Energy Market Data Specification

Legacy DTC Additional Information (Annex C)

Version: 1.0 Effective Date: 24 February 2022

Change History

Version Number	Implementation Date	Reason for Change
1.0	24 February 2022	Introduction

1. Introduction

1.1 This document defines rules that are to be adhered to when populating the data flows described in the REC Data Specification.

1.2 The rules may be applicable at the market message, collection, or data item level. Where the rule applies only in certain circumstances, these circumstances are defined.

1.3 The rules have generally been defined and agreed as a result of inter-operational issues. They have been developed to assist the recipient to understand the context of the message and the intent of the originator. Therefore, not every message has a set of rules defined.

1.4 Unless stated otherwise, the rules apply to all versions of the Market Message.

1.5 The receipt of a message where the rule/s as defined in this document have not been adhered to by the originator may result in rejection of the message, a request for further information by the recipient or inappropriate processing of the message.

1.6 Note that where the structure of the message is reproduced in this document, it is done so to clarify the application of the rules and should not be used as the definitive statement of the structure of the message. The REC Data Specification defines the structure of the message.

2. Index

Local Catalogue Reference	Market Message Name
D0002	Fault Resolution Report or Request for Decision on Further Action
D0010	Meter Readings
D0011	Agreement of Contractual Terms
D0055	Registration of Supplier to Specified Metering Point
D0135	Asset Condition Report
D0148	Notification of change to other parties
D0149	Notification of Mapping Details
D0150	Non Half-hourly Meter Technical Details
D0151	Termination of Appointment or Contract by Supplier
D0153	Notification of Data Aggregator Appointment and Terms
D0155	Notification of Meter Operator or Data Collector Appointment and Terms
D0170	Request for Metering System Related Details
D0205	Update Registration Details
D0225	Priority Services Details
D0261	Rejection of Agent Appointment
D0268	Half Hourly Meter Technical Details
D0290	Instruction to Read Meter
D0300	Disputed Readings or Missing Reads on Change of Supplier

D0301	Erroneous Transfer Communication
D0302	Notification of Customer Details
D0303	Notification of Meter Operator, Supplier and Metering Assets installed / removed by the MOP to the MAP
D0305	Notice of Customer Requested Objection
D0306	Request for Debt Information
D0307	Debt Information
D0308	Confirmation of Customer Debt Transfer
D0309	Confirmation of Debt Assigned
D0310	Notification of Failure to Load or Receive Metering System Settlement Details
D0312	Notification of Meter Information to MPAS
D0313	Auxiliary Meter Technical Details
D0367	Smart Meter Configuration Details
D0369	Aggregated Disconnected DUoS Report
D0370	Supplier Half Hourly Demand Disconnection Report
D0371	Supplier - Supplier Disconnection Matrix Report
D0372	Aggregated Embedded Network Disconnected DUoS Report
D0373	GSP Group Demand Disconnection Totals Report
D0374	Supplier BM Unit Demand Disconnection Report
D0375	Disconnected MSIDs and Estimated Half Hourly Demand Disconnection Volumes
D0376	Supplier's Demand Disconnection Volume Data File
D0377	Disconnection Purchase Matrix Data File
D0381	Metering Point Address Update
D0383	Notification of Commissioning Information
D0384	Notification of Commissioning Status
D0386	Manage Metering Point Relationships
-	Error Handling – Notification
-	Error Handling – Whole File Retransmissions
-	Error Handling – Correction of Errors
-	Associated Rules for specific Data Flows and Specific Error Handling

Flow Reference:	**D0002**
Flow Name:	**Fault Resolution Report or Request for Decision on Further Action**
Flow Description:	**Fault Investigation has been carried out and a report on an action taken as being made or a request for a decision on next course of action.**

Rules for completion of D0002

1. When populating Group 760, if Site Visit Check Code is 88, the Additional Information Field (J0012) must be populated.

Flow Reference:	D0010
Flow Name:	Meter Readings
Flow Description:	Cumulative readings and maximum demand readings

Rules for completion of D0010 for DCC-serviced smart meters

1) Where a D0010 candidate reading is sent from the New Supplier to the Old Supplier all time of use registers and the total cumulative register shall be populated as 030 (Register Reading) groups. For the relevant MPAN this will mean the following:
    a. The import MPAN: 48 time of use registers plus the total cumulative register

    b. The secondary MPAN of a twin element smart metering system: 4 time of use registers plus the total cumulative registers

    c. The export MPAN: active export register

2) Where a D0010 midnight SSD reading is sent from the Old Supplier to the New Supplier only the active time of use settlement registers and total cumulative register shall be populated as 030 (Register Reading) groups.

3) Where a D0010 candidate reading is sent to the NHHDC only the active time of use settlement registers shall be populated as 030 (Register Reading) groups.

4) When populating the Meter Register Id (J0010) Supplier shall assign the following values:
    a. The import MPAN: '1' through to '48' for each time of use register logically sequenced in accordance with the 1 x 48 tariff time of use register matrix.

    b. The secondary MPAN of a twin element smart metering system: '1' through to '4' for each time of use register logically sequenced in accordance with the 1 x 4 secondary tariff time of use register matrix.

5) The total cumulative register can be assigned any value other than those defined in paragraph 4.

Flow Reference:	**D0011**
Flow Name:	**Agreement of Contractual Terms**
Flow Description:	**Acknowledgement of appointment and terms or renewal of contractual terms.**

Where the J0274 (Service Reference) and J0275 (Service Level Reference) have been populated on the D0153 or D0155 for the relevant agent, those items must remain unchanged on the D0011 and D0261. Should those values not reflect the commercial agreements between the Supplier and the relevant agent, that agent must send a D0261 with the J1016 (Rejection of Agent Appointment Code) set to 'N' (No Contract).

Flow Reference:	**D0055**
Flow Name:	**Registration of Supplier to Specified Metering Point**
Flow Description:	**Supplier registers metering point and provides any data updates required for MPAS.**

Rules for completion of D0055

1. When allocating an MTC (J0220) for a NHH metered site the following Meter Type (J0483) to MTC Payment Type Id (J1618) mapping shall be used:

Meter Type (J0483)	**MTC Payment Type ID (J1618)**
K	KM
S	SM
T	TL or TS
N	CR
NCAMR	CR
RCAMR	CR
RCAMY	CR
S1	CR
S2A	CR
S2B	CR
S2C	CR
S2AD	CR
S2BD	CR
S2CD	CR
S2ADE	CR
S2BDE	CR
S2CDE	CR
NSS	CR

Flow Reference:	D0135
Flow Name:	Asset Condition Report
Flow Description:	A report to the System Fault Information Centre of a concern with the Service Termination Equipment which does not require emergency attention

Rules:

1. For Data Item J1824 (Asset Condition Code) within the D0135 dataflow valid values are:

    - B01 - Fuse carrier welded in to cut-out base
    - B02 - Cut-out loose
    - B03 - Damaged/missing phase barrier in DB equipment
    - B04 - Damaged/broken cut-out terminal including missing terminal screws
    - B05 - Non-withdrawable fuse by design
    - B07 - DB equipment issue preventing installation/replacement of meter tails
    - B08 - Unhinged metal cut-out cover over un-insulated conductors
    - B10 - Unearthed DB metal-encased equipment
    - B11 - Cut-out with a fused neutral
    - B12 - DB owned CT metering equipment issue
    - C02 - Signs of bitumen compound leaking
    - C03 - Lower rating fuse or cut-out (less than 60A)
    - C06 - Metal-encased cut-out
    - C07 - DB equipment unable to be securely sealed
    - C11 - Asbestos component identified in DB equipment
    - C14 - Fed from distribution board – local/remote from meter
    - C15 - DB cable terminating into DB equipment is VIR/MICC
    - C16 - DB equipment mounted on asbestos board
    - C17 - Black plastic cut-out
    - C18 - Rewirable cut-out fuse
    - C19 - Single insulated DB conductor (phase or non-PME neutral)
    - C20 - Missing combined neutral-earth cover on DB equipment

Flow Reference:	**D0148**
Flow Name:	**Notification of change to other parties**
Flow Description:	**Notification to a MOp or DC of any change to relevant Agent appointments and/or terminations for the metering point for the three functional processes: new connection, change of supplier and change agent(s)**

Rules for completion of D0148 – Part 1

1. Whenever there has been a change of agent within a Supplier registration, the incumbent Supplier will be aware of, and therefore must provide the original appointment date for any existing/incumbent agent.
2. Where there has been a change of HH Data Collector during the Supplier's registration, the Supplier is only required to provide the incoming data collector with the details of the current Data Aggregator. The examples contained in this Annex reflect this. However, the Supplier may choose to provide the HH Data Aggregator history. In such cases, the Supplier should follow the examples for NHH MPANs where there has been a change of Data Aggregator.
3. The Meter Operator is not notified of the details of the Data Aggregator appointment.
4. Where there is a change of Data Aggregator concurrent with Change of Supplier or a New Connection, the new Data Collector will only be informed on the new Data Aggregator appointment.
5. Where there is a Change of Measurement Class concurrent with the Change of Agents, the Effective from date of the new Agent appointments must be the date of the Change of Measurement Class.

Scenarios and Examples to be used:

The following table lists the scenarios where D0148 is used and the example of how D0148 should be populated in that scenario. The detailed rules to be applied for the completion of D0148 in each example are shown in Part 2 of this Annex

	Scenario	Example	Notes
1	**SUPPLIER CHANGES ITS METER OPERATOR**		
1.1	**To New Meter Operator** *(Single Instance)*	A	
1.2	**To Incumbent Data Collector** *(Single Instance)*	B	
2	**SUPPLIER CHANGES ITS DATA COLLECTOR**		
2.1	**To Incumbent Meter Operator** *(Single Instance)*	C	

	Scenario	Example	Notes
2.2a	**To New Data Collector** *(Single Instance applying to:* - *HH MPANs or,* - *NHH MPANs where there has been NO change of Data Aggregator during the Supplier's registration)*	D	
2.2b	**To New Data Collector** *(Single Instance applying to NHH MPANs where there has been a change of Data Aggregator during the Supplier's registration)*	E	
3	**SUPPLIER CHANGES ITS DATA AGGREGATOR**		
3.1	**To incumbent Meter Operator**	Nothing	
3.2	**To Incumbent Data Collector** *(Single Instance)*	F	
4	**SUPPLIER CHANGES ITS METER OPERATOR AND DATA COLLECTOR**		
4.1.1	**To New Meter Operator** *(Single Instance)*	G	
4.1.2	**To New Meter Operator** *(Incremental flows – Sequence 1)* Flow 1: Sent after acknowledgement of appointment from new Meter Operator but prior to acknowledgement of appointment from new Data Collector Flow 2: After acknowledgement of appointment from new Data Collector	A C	1. This sequence of flows assumes that the acknowledgements of appointment are received from the new agents in the following order: (i) new Meter Operator (ii) new Data Collector
4.1.3	**To Old and New Meter Operators** *(Incremental flows – Sequence 2)* Flow 1: Sent to old Meter Operator after acknowledgement of appointment from new Data Collector but prior to acknowledgement of appointment from new Meter Operator	C	1. This sequence of flows assumes that the acknowledgements of appointment are received from the new agents in the following order:

	Scenario	Example	Notes
	Flow 2: Sent to new Meter Operator after acknowledgement of appointment from new Meter Operator	A	(i) new Data Collector (ii) new Meter Operator 2. In both flows of this sequence, details are provided of the new, incoming Data Collector. In Flow 2, this Data Collector is marked as the 'current' data collector
4.2.1a	**To New Data Collector** *(Single Instance applying to:* - *HH MPANs or,* - *NHH MPANs where there has been NO change of Data Aggregator during the Supplier's registration)*	H	
4.2.1b	**To New Data Collector** *(Single Instance applying to NHH MPANs where there has been a change of Data Aggregator during the Supplier's registration)*	I	
4.2.2a	**To New Data Collector** *(Incremental flows – Sequence 1 applying to:* – *HH MPANs or,* – *NHH MPANs where there has been no change of Data Aggregator during the incumbent Supplier's registration)*		1. This sequence of flows assumes that the acknowledgements of appointment are received from the new agents in the following order: (i) new Data Collector (ii) new Meter Operator
	Flow 1: Sent after acknowledgement of appointment from new Data Collector but prior to acknowledgement of appointment from new Meter Operator	D	
	Flow 2: After acknowledgement of appointment from new Meter Operator	B	
4.2.2b	**To New Data Collector** *(Incremental flows – Sequence 1 applying to NHH MPANs where there has been a change of Data Aggregator during the Supplier's registration)*		
	Flow 1: Sent after acknowledgement of appointment from new Data Collector but prior to acknowledgement of appointment from new Meter Operator	E	

	Scenario	Example	Notes
	Flow 2: After acknowledgement of appointment from new Meter Operator	B	
4.2.3a	**To Old and New Data Collectors** *(Incremental flows – Sequence 2 applying to:* – *HH MPANs or,* – *NHH MPANs where there has been no change of Data Aggregator during the incumbent Supplier's registration)*		1. This sequence of flows assumes that the acknowledgements of appointment are received from the new agents in the following order: (i) new Meter Operator (ii) new Data Collector 2. In both flows of sequences 4.2.3 a and b, details are provided of the new, incoming Meter Operator. In Flow 2, this Meter Operator is marked as the 'current' Meter Operator
	Flow 1: Sent to Old Data Collector after acknowledgement of appointment from new Meter Operator but prior to acknowledgement of appointment from new Data Collector	B	
	Flow 2: Sent to New Data Collector after acknowledgement of appointment from new Data Collector	D	
4.2.3b	**To Old and New Data Collectors** *(Incremental flows – Sequence 2 applying to NHH MPANs where there has been a change of Data Aggregator during the Supplier's registration)*		
	Flow 1: Sent to old Data Collector after acknowledgement of appointment from new Meter Operator but prior to acknowledgement of appointment from new Data Collector	B	
	Flow 2: Sent to new Data Collector after acknowledgement of appointment from new Data Collector	E	
5	**SUPPLIER CHANGES ITS METER OPERATOR AND DATA AGGREGATOR**		
5.1	**To New Meter Operator** *(Single Instance)*	A	
5.2.1	**To Incumbent Data Collector** *(Single Instance)*	J	
5.2.2	**To Incumbent Data Collector** *(Incremental flows – Sequence 1)* Flow 1: Sent after acknowledgement of appointment from new Meter Operator but prior to acknowledgement of appointment from new Data Aggregator	B	1. This sequence of flows assumes that the acknowledgements of appointment are received from the new agents in the following order:

	Scenario	Example	Notes
	Flow 2: After acknowledgement of appointment from new Data Aggregator	F	(i) new Meter Operator (ii) new Data Aggregator
5.2.3	**To Incumbent Data Collector** *(Incremental flows – Sequence 2)* Flow 1: Sent after acknowledgement of appointment from new Data Aggregator but prior to acknowledgement of appointment from new Meter Operator Flow 2: After acknowledgement of appointment from new Meter Operator	 F B	1. This sequence of flows assumes that the acknowledgements of appointment are received from the new agents in the following order: (i) new Data Aggregator (ii) new Meter Operator
6	**SUPPLIER CHANGES ITS DATA COLLECTOR AND DATA AGGREGATOR**		
6.1	**To Incumbent Meter Operator** *(Single Instance)*	C	
6.2.1a	**To New Data Collector** *(Single Instance applying to:* - *HH MPANs or,* - *NHH MPANs where there has been NO previous change of Data Aggregator during the Supplier's registration)*	K	
6.2.1b	**To New Data Collector** *(Single Instance applying to NHH MPANs where there has been a previous change of Data Aggregator during the Supplier's registration)*	L	
6.2.2a	**To New Data Collector** *(Incremental flows - Sequence 1 applying to:* - *HH MPANs or,* - *NHH MPANs where there has been NO previous change of Data Aggregator during the Supplier's registration)* Flow 1: Sent after acknowledgement of appointment from new Data Collector but prior to acknowledgement of appointment from new Data Aggregator Flow 2: After acknowledgement of appointment from new Data Aggregator	 D F	1. This sequence of flows assumes that the acknowledgements of appointment are received from the new agents in the following order: (i) new Data Collector (ii) new Data Aggregator

	Scenario	Example	Notes
6.2.2b	**To New Data Collector** *(Incremental flows – Sequence 1 applying to NHH MPANs where there has been a previous change of Data Aggregator during the Supplier's registration)* Flow 1: Sent after acknowledgement of appointment from new Data Collector but prior to acknowledgement of appointment from new Data Aggregator Flow 2: After acknowledgement of appointment from new Data Aggregator	 E F	
6.2.3a	**To Old and New Data Collectors** *(Incremental flows - Sequence 2 applying to HH MPANs)* Flow 1: Sent to the Old Data Collector after acknowledgement of appointment from new Data Aggregator but prior to acknowledgement of appointment from new Data Collector Flow 2: Sent to the New Data Collector after acknowledgement of appointment from new Data Collector	 F D	1. This sequence of flows assumes that the acknowledgements of appointment are received from the new agents in the following order: (i) new Data Aggregator (ii) new Data Collector 2. In both flows of sequences 6.2.3 a, b and c, details are provided of the new, incoming Data Aggregator. In Flow 2 of each sequence, this Data Aggregator is marked as the 'current' Data Aggregator
6.2.3b	**To Old and New Data Collectors** *(Incremental flows - Sequence 2 applying to NHH MPANs where there has been NO previous change of Data Aggregator during the Supplier's registration)* Flow 1: Sent to the Old Data Collector after acknowledgement of appointment from new Data Aggregator but prior to acknowledgement of appointment from new Data Collector Flow 2: Sent to the New Data Collector after acknowledgement of appointment from new Data Collector	 F U	
6.2.3c	**To Old and New Data Collectors** *(Incremental flows – Sequence 2 applying to NHH MPANs where there has been a previous change of Data Aggregator during the Supplier's registration)*		

	Scenario	Example	Notes
	Flow 1: Sent to the Old Data Collector after acknowledgement of appointment from new Data Aggregator but prior to acknowledgement of appointment from new Data Collector Flow 2: Sent to the New Data Collector after acknowledgement of appointment from new Data Collector	F V	
7	**SUPPLIER CHANGES ITS DATA COLLECTOR, METER OPERATOR AND DATA AGGREGATOR**		
7.1.1	**To New Meter Operator** *(Single Instance)*	G	
7.1.2	**To New Meter Operator** *(Incremental flows – Sequence 1)* Flow 1: Sent after acknowledgement of appointment from new Meter Operator but prior to acknowledgement of appointment from new Data Collector Flow 2: After acknowledgement of appointment from new Data Collector	A C	1. This sequence of flows assumes that the acknowledgements of appointment are received from the new agents in the following order: (i) new Meter Operator (ii) new Data Collector The acknowledgement of appointment from the new Data Aggregator could be received at any time.
7.1.3	**To Old and New Meter Operators** *(Incremental flows – Sequence 2)*		1. This sequence of flows assumes that the acknowledgements of appointment are received from the new agents in the following order: (i) new Data Collector
	Flow 1: Sent to the Old Meter Operator after acknowledgement of appointment from new Data Collector but prior to acknowledgement of appointment from new Meter Operator	C	

	Scenario	Example	Notes
	Flow 2: Sent to the New Meter Operator after acknowledgement of appointment from new Meter Operator	A	(ii) new Meter Operator The acknowledgement of appointment from the new Data Aggregator could be received at any time. 2. In both flows of this sequence, details are provided of the new, incoming Data Collector. In Flow 2, this Data Collector is marked as the 'current' Data Collector
7.2.1a	**To New Data Collector** *(Single instance applying to:* - *HH MPANs or,* - *NHH MPANs where there has been NO previous change of Data Aggregator during the Supplier's registration)*	M	
7.2.1b	**To New Data Collector** *(Single Instance applying to NHH MPANs where there has been a previous change of Data Aggregator during the Supplier's registration)*	N	
7.2.2a	**To New Data Collector** *(Incremental flows - Sequence 1 applying to:* - *HH MPANs or,* - *NHH MPANs where there has been NO previous change of Data Aggregator during the Supplier's registration)*		1. This sequence of flows assumes that the acknowledgements of appointment are received from the new agents in the following order: (i) new Data Collector (ii) new Meter Operator (iii) new Data Aggregator
	Flow 1: Sent to the new Data Collector after acknowledgement of appointment from new Data Collector but prior to acknowledgement of appointment from new Meter Operator and new Data Aggregator	D	
	Flow 2: Sent to the new Data Collector after acknowledgement of appointment from new Meter Operator but prior to acknowledgement of appointment from the new Data Aggregator	B	
	Flow 3: Sent to the new Data Collector following receipt of acknowledgement from the new Data Aggregator	F	

	Scenario	Example	Notes
7.2.2b	**To New Data Collector** *(Incremental flows - Sequence 1 applying to NHH MPANs where there has been a previous change of Data Aggregator during the Supplier's registration)*		
	Flow 1: Sent to the new Data Collector after acknowledgement of appointment from new Data Collector but prior to acknowledgement of appointment from new Meter Operator and new Data Aggregator	E	
	Flow 2: Sent to the new Data Collector after acknowledgement of appointment from new Meter Operator but prior to acknowledgement of appointment from the new Data Aggregator	B	
	Flow 3: Sent to the new Data Collector following receipt of acknowledgement from the new Data Aggregator	F	
7.2.3a	**To New Data Collector** *(Incremental flows - Sequence 2 applying to:* - *HH MPANs or,* - *NHH MPANs where there has been NO previous change of Data Aggregator during the Supplier's registration)*		1. This sequence of flows assumes that the acknowledgements of appointment are received from the new agents in the following order: (i) new Data Collector (ii) new Data Aggregator (iii) new Meter Operator
	Flow 1: Sent to the new Data Collector after acknowledgement of appointment from new Data Collector but prior to acknowledgement of appointment from new Meter Operator and new Data Aggregator	D	
	Flow 2: Sent to the new Data Collector after acknowledgement of appointment from new Data Aggregator but prior to acknowledgement of appointment from the new Meter Operator	F	
	Flow 3: Sent to the new Data Collector following receipt of acknowledgement from the new Meter Operator	B	
7.2.3b	**To New Data Collector** *(Incremental flows - Sequence 2 applying to NHH MPANs where there has been a previous change of Data Aggregator during the Supplier's registration)*		

	Scenario	Example	Notes
	Flow 1: Sent to the new Data Collector after acknowledgement of appointment from new Data Collector but prior to acknowledgement of appointment from new Meter Operator and new Data Aggregator	E	
	Flow 2: Sent to the new Data Collector after acknowledgement of appointment from new Data Aggregator but prior to acknowledgement of appointment from the new Meter Operator	F	
	Flow 3: Sent to the new Data Collector following receipt of acknowledgement from the new Meter Operator	B	
7.2.4a	**To Old and New Data Collector** *(Incremental flows - Sequence 3 applying to:* - *HH MPANs or,* - *NHH MPANs where there has been NO previous change of Data Aggregator during the Supplier's registration)*		1. This sequence of flows assumes that the acknowledgements of appointment are received from the new agents in the following order: (i) new Meter Operator (ii) new Data Collector (iii) new Data Aggregator 2. In flows 1 and 2 of sequences 7.2.4 a and b, details are provided of the new, incoming Meter Operator. In Flow 2 of both sequences, this Meter Operator is marked as the 'current' Meter Operator
	Flow 1: Sent to the old Data Collector after acknowledgement of appointment from new Meter Operator but prior to acknowledgement of appointment from new Data Collector and new Data Aggregator	B	
	Flow 2: Sent to the new Data Collector after acknowledgement of appointment from new Data Collector but prior to acknowledgement of appointment from the new Data Aggregator	D	
	Flow 3: Sent to the new Data Collector following receipt of acknowledgement from the new Data Aggregator	F	
7.2.4b	**To Old and New Data Collector** *(Incremental flows - Sequence 3 applying to NHH MPANs where there has been a previous change of Data Aggregator during the Supplier's registration)*		

	Scenario	Example	Notes
	Flow 1: Sent to the old Data Collector after acknowledgement of appointment from new Meter Operator but prior to acknowledgement of appointment from new Data Collector and new Data Aggregator	B	
	Flow 2: Sent to the new Data Collector after acknowledgement of appointment from new Data Collector but prior to acknowledgement of appointment from the new Data Aggregator	W	
	Flow 3: Sent to the new Data Collector following receipt of acknowledgement from the new Data Aggregator	F	
7.2.5a	**To Old and New Data Collector** *(Incremental flows - Sequence 4 applying to HH MPANs)* Flow 1: Sent to the old Data Collector after acknowledgement of appointment from new Meter Operator but prior to acknowledgement of appointment from new Data Collector and new Data Aggregator	B	1. This sequence of flows assumes that the acknowledgements of appointment are received from the new agents in the following order: (i) new Meter Operator (ii) new Data Aggregator (iii) new Data Collector 2. In flow 3 of sequences 7.2.5 a, b and c, details are provided of the new, incoming Meter Operator and Data Aggregator. In both cases these are marked as the 'current' Agent
	Flow 2: Sent to the old Data Collector after acknowledgement of appointment from new Data Aggregator but prior to acknowledgement of appointment from the new Data Collector	F	
	Flow 3: Sent to the new Data Collector following receipt of acknowledgement from the new Data Collector	D	
7.2.5b	**To Old and New Data Collector** *(Incremental flows - Sequence 4 applying to NHH MPANs where there has been NO previous change of Data Aggregator during the Supplier's registration)* Flow 1: Sent to the old Data Collector after acknowledgement of appointment from new Meter Operator but prior to acknowledgement of appointment from new Data Collector and new Data Aggregator	B	

	Scenario	Example	Notes
	Flow 2: Sent to the old Data Collector after acknowledgement of appointment from new Data Aggregator but prior to acknowledgement of appointment from the new Data Collector	F	
	Flow 3: Sent to the new Data Collector following receipt of acknowledgement from the new Data Collector	U	
7.2.5c	**To Old and New Data Collector** *(Incremental flows - Sequence 4 applying to NHH MPANs where there has been a previous change of Data Aggregator during the Supplier's registration)*		
	Flow 1: Sent to the old Data Collector after acknowledgement of appointment from new Meter Operator but prior to acknowledgement of appointment from new Data Collector and new Data Aggregator	B	
	Flow 2: Sent to the old Data Collector after acknowledgement of appointment from new Data Aggregator but prior to acknowledgement of appointment from the new Data Collector	F	
	Flow 3: Sent to the new Data Collector following receipt of acknowledgement from the new Data Collector	V	
7.2.6a	**To Old and New Data Collector** *(Incremental flows - Sequence 5 applying to HH MPANs)*		1. This sequence of flows assumes that the acknowledgements of appointment are received from the new agents in the following order: (i) new Data Aggregator (ii) new Meter Operator (iii) new Data Collector 2. In flow 3 of sequences 7.2.6 a, b and c, details are provided of the new, incoming Meter Operator and Data Aggregator. In
	Flow 1: Sent to the old Data Collector after acknowledgement of appointment from new Data Aggregator but prior to acknowledgement of appointment from new Meter Operator and new Data Collector	F	
	Flow 2: Sent to the old Data Collector after acknowledgement of appointment from new Meter Operator but prior to acknowledgement of appointment from the new Data Collector	B	
	Flow 3: Sent to the new Data Collector following receipt of acknowledgement from the new Data Collector	D	

	Scenario	Example	Notes
7.2.6b	**To Old and New Data Collector** *(Incremental flows - Sequence 5 applying to NHH MPANs where there has been NO previous change of Data Aggregator during the Supplier's registration)*		both cases these are marked as the 'current' Agent
	Flow 1: Sent to the old Data Collector after acknowledgement of appointment from new Data Aggregator but prior to acknowledgement of appointment from new Meter Operator and new Data Collector	F	
	Flow 2: Sent to the old Data Collector after acknowledgement of appointment from new Meter Operator but prior to acknowledgement of appointment from the new Data Collector	B	
	Flow 3: Sent to the new Data Collector following receipt of acknowledgement from the new Data Collector	U	
7.2.6c	**To Old and New Data Collector** *(Incremental flows - Sequence 5 applying to NHH MPANs where there has been a previous change of Data Aggregator during the Supplier's registration)*		
	Flow 1: Sent to the old Data Collector after acknowledgement of appointment from new Data Aggregator but prior to acknowledgement of appointment from new Meter Operator and new Data Collector	F	
	Flow 2: Sent to the old Data Collector after acknowledgement of appointment from new Meter Operator but prior to acknowledgement of appointment from the new Data Collector	B	
	Flow 3: Sent to the new Data Collector following receipt of acknowledgement from the new Data Collector	V	
7.2.7a	**To Old and New Data Collector** *(Incremental flows - Sequence 6 applying to HH MPANs)*		1. This sequence of flows assumes that the acknowledgements of

	Scenario	Example	Notes
	Flow 1: Sent to the old Data Collector after acknowledgement of appointment from new Data Aggregator but prior to acknowledgement of appointment from new Meter Operator and new Data Collector	F	appointment are received from the new agents in the following order: (i) new Data Aggregator (ii) new Data Collector (iii) new Meter Operator 2. In flow 2 of sequences 7.2.7 a, b and c, details are provided of the new, incoming Data Aggregator. In Flow 2, this Data Aggregator is marked as the 'current' Data Aggregator
	Flow 2: Sent to the new Data Collector after acknowledgement of appointment from new Data Collector but prior to acknowledgement of appointment from the new Meter Operator	D	
	Flow 3: Sent to the new Data Collector following receipt of acknowledgement from the new Meter Operator	B	
7.2.7b	**To Old and New Data Collector** *(Incremental flows - Sequence 6 applying to NHH MPANs where there has been NO previous change of Data Aggregator during the Supplier's registration)*		
	Flow 1: Sent to the old Data Collector after acknowledgement of appointment from new Data Aggregator but prior to acknowledgement of appointment from new Meter Operator and new Data Collector	F	
	Flow 2: Sent to the new Data Collector after acknowledgement of appointment from new Data Collector but prior to acknowledgement of appointment from the new Meter Operator	U	
	Flow 3: Sent to the new Data Collector following receipt of acknowledgement from the new Meter Operator	B	
7.2.7c	**To Old and New Data Collector** *(Incremental flows - Sequence 6 applying to NHH MPANs where there has been a previous change of Data Aggregator during the Supplier's registration)*		
	Flow 1: Sent to the old Data Collector after acknowledgement of appointment from new Data Aggregator but prior to acknowledgement of appointment from new Meter Operator and new Data Collector	F	

	Scenario	Example	Notes
	Flow 2: Sent to the new Data Collector after acknowledgement of appointment from new Data Collector but prior to acknowledgement of appointment from the new Meter Operator Flow 3: Sent to the new Data Collector following receipt of acknowledgement from the new Meter Operator	V B	
8	**SUPPLIER CHANGES ITS DATA COLLECTOR, METER OPERATOR AND DATA AGGREGATOR COINCIDENT WITH CHANGE OF SUPPLIER**		
8.1.1	**To New Meter Operator** *(Single Instance)*	G	
8.1.2	**To New Meter Operator** *(Incremental flows – Sequence 1)* Flow 1: Sent after acknowledgement of appointment from new Meter Operator but prior to acknowledgement of appointment from new Data Collector Flow 2: After acknowledgement of appointment from new Data Collector	O C	1. This sequence of flows assumes that the acknowledgements of appointment are received from the new agents in the following order: (i) new Meter Operator (ii) new Data Collector The acknowledgement of appointment from the new Data Aggregator could be received at any time.
8.2.1	**To New Data Collector** *(Single Instance)*	P	
8.2.2	**To New Data Collector** *(Incremental flows - Sequence 1)* Flow 1: Sent to the new Data Collector after acknowledgement of appointment from new Data Collector but prior to acknowledgement of appointment from new Meter Operator and new Data Aggregator Flow 2: Sent to the new Data Collector after acknowledgement of appointment from new Meter Operator but prior to acknowledgement of appointment from the new Data Aggregator Flow 3: Sent to the new Data Collector following receipt of acknowledgement from the new Data Aggregator	Q B F	1. This sequence of flows assumes that the acknowledgements of appointment are received from the new agents in the following order: (i) new Data Collector (ii) new Meter Operator (iii) new Data Aggregator

	Scenario	Example	Notes
8.2.3	**To New Data Collector** *(Incremental flows - Sequence 2)* Flow 1: Sent to the new Data Collector after acknowledgement of appointment from new Data Collector but prior to acknowledgement of appointment from new Meter Operator and new Data Aggregator Flow 2: Sent to the new Data Collector after acknowledgement of appointment from new Data Aggregator but prior to acknowledgement of appointment from the new Meter Operator Flow 3: Sent to the new Data Collector following receipt of acknowledgement from the new Meter Operator	Q F B	1. This sequence of flows assumes that the acknowledgements of appointment are received from the new agents in the following order: (i) new Data Collector (ii) new Data Aggregator (iii) new Meter Operator
8.2.4	**To New Data Collector** *(Incremental flows - Sequence 3)* Flow 1: Sent to the new Data Collector after acknowledgement of appointment from new Meter Operator and Data Collector but prior to acknowledgement of appointment from new Data Aggregator Flow 2: Sent to the new Data Collector after acknowledgement of appointment from new Data Aggregator	R F	1. This sequence of flows assumes that the acknowledgements of appointment are received from the new agents in the following order: (i) new Meter Operator (ii) new Data Collector (iii) new Data Aggregator
8.2.5	**To New Data Collector** *(Incremental flows - Sequence 4)* Flow 1: Sent to the new Data Collector after acknowledgement of appointment from the new Data Collector and new Data Aggregator but prior to acknowledgement of appointment from the new Meter Operator Flow 2: Sent to the new Data Collector after acknowledgement of appointment from new Meter Operator	S B	1. This sequence of flows assumes that the acknowledgements of appointment are received from the new agents in the following order: (i) new Data Aggregator (ii) new Data Collector (iii) new Meter Operator
9	**SUPPLIER APPOINTS ITS DATA COLLECTOR, METER OPERATOR AND DATA AGGREGATOR ON A NEW CONNECTION**		
9.1.1	**To New Meter Operator** *(Single Instance)*	C	

	Scenario	Example	Notes
9.2.1	**To New Data Collector** *(Single Instance)*	J	
9.2.2	**To New Data Collector** *(Incremental flows - Sequence 1)* Flow 1: Sent to the new Data Collector after acknowledgement of appointment from new Meter Operator and Data Collector but prior to acknowledgement of appointment from new Data Aggregator Flow 2: Sent to the new Data Collector after acknowledgement of appointment from new Data Aggregator	 B F	1. This sequence of flows assumes that the acknowledgements of appointment are received from the new agents in the following order: (i) new Meter Operator (ii) new Data Collector (iii) new Data Aggregator
9.2.3	**To New Data Collector** *(Incremental flows - Sequence 2)*		1. This sequence of flows assumes that the acknowledgements of appointment are received from the new agents in the following order: (i) new Data Aggregator (ii) new Data Collector (iii) new Meter Operator
	Flow 1: Sent to the new Data Collector after acknowledgement of appointment from the new Data Collector and new Data Aggregator but prior to acknowledgement of appointment from the new Meter Operator Flow 2: Sent to the new Data Collector after acknowledgement of appointment from new Meter Operator	F B	
10	**SUPPLIER APPOINTS ITS DATA COLLECTOR, METER OPERATOR AND DATA AGGREGATOR ON A CHANGE OF MEASUREMENT CLASS FROM NHH TO HH**		
10.1.1	**To New Meter Operator** *(Single Instance)*	T	1. Where the Supplier chooses not to send the details of the old NHH Data Collector, then example G would be used in this circumstance. In this circumstance, Group 276 would be populated with the Change of Measurement Class date minus one day.
10.1.2	**To New Meter Operator** *(Incremental flows – Sequence 1)* Flow 1: Sent after acknowledgement of appointment from new Meter Operator but prior to acknowledgement of appointment from new Data Collector	 A	1. This sequence of flows assumes that the acknowledgements of appointment are received from the new agents in the following order:

	Scenario	Example	Notes
	Flow 2: After acknowledgement of appointment from new Data Collector	C	(i) new Meter Operator (ii) new Data Collector The acknowledgement of appointment from the new Data Aggregator could be received at any time.
10.2.1	**To New Data Collector** *(Single Instance)*	J	
10.2.2	**To New Data Collector** *(Incremental flows - Sequence 1)* Flow 1: Sent to the new Data Collector after acknowledgement of appointment from new Data Collector but prior to acknowledgement of appointment from new Meter Operator and new Data Aggregator Flow 2: Sent to the new Data Collector after acknowledgement of appointment from new Meter Operator but prior to acknowledgement of appointment from the new Data Aggregator	D B	1. This sequence of flows assumes that the acknowledgements of appointment are received from the new agents in the following order: (i) new Data Collector (ii) new Meter Operator (iii) new Data Aggregator
	Flow 3: Sent to the new Data Collector following receipt of acknowledgement from the new Data Aggregator	F	
10.2.3	**To New Data Collector** *(Incremental flows - Sequence 2)* Flow 1: Sent to the new Data Collector after acknowledgement of appointment from new Data Collector but prior to acknowledgement of appointment from new Meter Operator and new Data Aggregator Flow 2: Sent to the new Data Collector after acknowledgement of appointment from new Data Aggregator but prior to acknowledgement of appointment from the new Meter Operator Flow 3: Sent to the new Data Collector following receipt of acknowledgement from the new Meter Operator	D F B	1. This sequence of flows assumes that the acknowledgements of appointment are received from the new agents in the following order: (i) new Data Collector (ii) new Data Aggregator (iii) new Meter Operator

	Scenario	Example	Notes
10.2.4	**To New Data Collector** *(Incremental flows - Sequence 3)* Flow 1: Sent to the new Data Collector after acknowledgement of appointment from new Meter Operator and Data Collector but prior to acknowledgement of appointment from new Data Aggregator Flow 2: Sent to the new Data Collector after acknowledgement of appointment from new Data Aggregator	R F	1. This sequence of flows assumes that the acknowledgements of appointment are received from the new agents in the following order: (i) new Meter Operator (ii) new Data Collector (iii) new Data Aggregator
10.2.5	**To New Data Collector** *(Incremental flows - Sequence 4)* Flow 1: Sent to the new Data Collector after acknowledgement of appointment from the new Data Collector and new Data Aggregator but prior to acknowledgement of appointment from the new Meter Operator Flow 2: Sent to the new Data Collector after acknowledgement of appointment from new Meter Operator	S B	1. This sequence of flows assumes that the acknowledgements of appointment are received from the new agents in the following order: (i) new Data Aggregator (ii) new Data Collector (iii) new Meter Operator

Rules for completion of D0148 – Part 2

Greyed out cells stating 'Not Present' indicate that this information is not required for the specified context and should, therefore, not be populated/sent.

The Supplier must send only that data specified in the following examples.

Example A

Group	Group Description	Occurrence	L1	L2	L3	L4	L5	L6	L7	L8	Item Name	Rule
270	MPAN Cores	1	G									
				1							MPAN Core	
				1							Effective from Settlement Date {REGI}	SSD of the sending Supplier
271	Data Collector Details	1		G								
					1						Data Collector Id	Id of the **CURRENT** DC
					1						Agent Status	**E** - Existing
272	Effective from Date	1			G							
						1					Effective from Date {DCA}	Original appointment date of the DC
273	*Effective to Date*	*0*			*G*							*Not present*
274	Meter Operator Details	1		G								
					1						Meter Operator Id	Id of the **OLD** Mop
					1						Agent Status	**O** - Old
275	*Effective from Date*	*0*			*G*							*Not present*
276	Effective to Date	1			G							
						1					Effective to Date {MOA}	CoMOp date minus one day
277	*Data Aggregator Details*	*0*		*G*								*Not present*
278	*Effective from Date*	*0*			*G*							*Not present*
279	*Effective to Date*	*0*			*G*							*Not present*

Example B

Group	Group Description	Occurrence	L1	L2	L3	L4	L5	L6	L7	L8	Item Name	Rule
270	MPAN Cores	1	G									

Group	Group Description	Occurrence	L1	L2	L3	L4	L5	L6	L7	L8	Item Name	Rule
				1							MPAN Core	
				1							Effective from Settlement Date {REGI}	SSD of the sending Supplier
271	*Data Collector Details*	*0*		*G*								*Not Present*
272	*Effective from Date*	*0*			*G*							*Not Present*
273	*Effective to Date*	*0*			*G*							*Not Present*
274	Meter Operator Details	1		G								
					1						Meter Operator Id	Id of the **New** MOp
					1						Agent Status	**N** - New
275	Effective from Date	1			G							
						1					Effective from Date {MOA}	Effective from date of New MOp
276	*Effective to Date*	*0*			*G*							*Not Present*
277	*Data Aggregator Details*	*0*		*G*								*Not Present*
278	*Effective from Date*	*0*			*G*							*Not Present*
279	*Effective to Date*	*0*			*G*							*Not Present*

Example C

Group	Group Description	Occurrence	L1	L2	L3	L4	L5	L6	L7	L8	Item Name	Rule
270	MPAN Cores	1	G									
				1							MPAN Core	
				1							Effective from Settlement Date {REGI}	SSD of the sending Supplier
271	Data Collector Details	1		G								
					1						Data Collector Id	Id of the **NEW** DC
					1						Agent Status	**N** - New
272	Effective from Date	1			G							

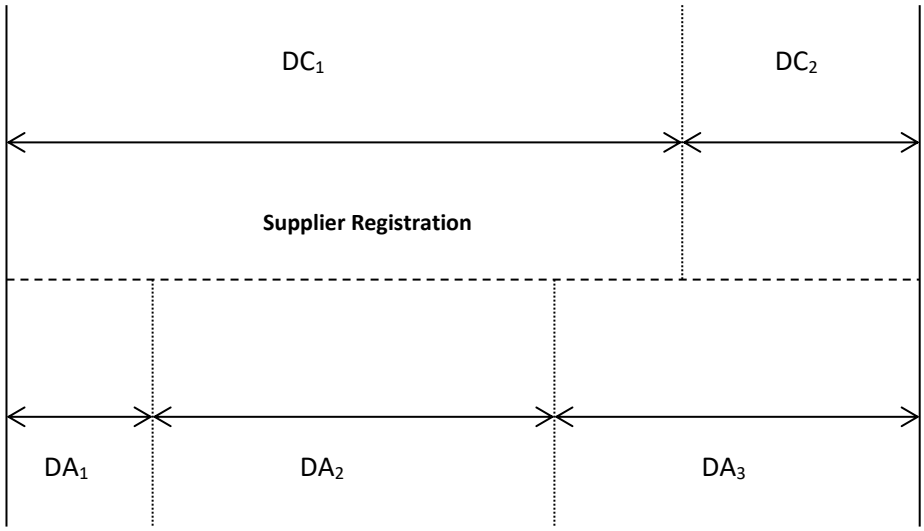
Group	Group Description	Occurrence	L1	L2	L3	L4	L5	L6	L7	L8	Item Name	Rule
						1					Effective from Date {DCA}	Effective from date of New DC
273	*Effective to Date*	*0*			*G*							*Not Present*
274	*Meter Operator Details*	*0*		*G*								*Not Present*
275	*Effective from Date*	*0*			*G*							*Not Present*
276	*Effective to Date*	*0*			*G*							*Not Present*
277	*Data Aggregator Details*	*0*		*G*								*Not Present*
278	*Effective from Date*	*0*			*G*							*Not Present*
279	*Effective to Date*	*0*			*G*							*Not Present*

Example D

Group	Group Description	Occurrence	L1	L2	L3	L4	L5	L6	L7	L8	Item Name	Rule
270	MPAN Cores	1	G									
				1							MPAN Core	
				1							Effective from Settlement Date {REGI}	SSD of the sending Supplier
271	Data Collector Details	1		G								
					1						Data Collector Id	Id of the **OLD DC**
					1						Agent Status	**O** - Old
272	*Effective from Date*	*0*			*G*							*Not Present*
273	Effective to Date	1			G							
						1					Effective to Date {DCA}	CoDC minus one calendar day
274	Meter Operator Details	1		G								
					1						Meter Operator Id	Id of the **CURRENT** MOp
					1						Agent Status	**E** - Existing

Group	Group Description	Occurrence	L1	L2	L3	L4	L5	L6	L7	L8	Item Name	Rule
275	Effective from Date	1			G							
						1					Effective from Date {MOA}	Original appointment date of MOp
276	*Effective to Date*	*0*			*G*							*Not Present*
277	Data Aggregator Details	1		G								
					1						Data Aggregator Id	Id of the **CURRENT** DA
					1						Agent Status	**E** – Existing
278	Effective from Date	1			G							
						1					Effective from Settlement Date {DAA}	Original appointment date of DA
279	*Effective to Date*	*0*			*G*							*Not Present*

Example E



The following example assumes that during the Supplier's registration there have been two previous changes of DA, the first from DA1 to DA2 and the second from DA2 to DA3. If there have been further changes of DA, then details of all of the DAs shall be included in the flow, by repeating groups 277 to 279 as appropriate

Group	Group Description	Occurrence	L1	L2	L3	L4	L5	L6	L7	L8	Item Name	Rule
270	MPAN Cores	1	G									
				1							MPAN Core	
				1							Effective from Settlement Date {REGI}	SSD of the sending Supplier
271	Data Collector Details	1		G								
					1						Data Collector Id	Id of the **OLD DC1**
					1						Agent Status	**O** - Old
272	*Effective from Date*	*0*			*G*							*Not Present*
273	Effective to Date	1			G							
						1					Effective to Date {DCA}	CoDC minus one calendar day
274	Meter Operator Details	1		G								
					1						Meter Operator Id	Id of the **CURRENT** MOp
					1						Agent Status	**E** - Existing
275	Effective from Date	1			G							

Group	Group Description	Occurrence	L1	L2	L3	L4	L5	L6	L7	L8	Item Name	Rule
						1					Effective from Date {MOA}	Original appointment date of MOp
276	*Effective to Date*	*0*			*G*							*Not Present*
277	Data Aggregator Details	1		G								
					1						Data Aggregator Id	**Id of** DA1
					1						Agent Status	**O** - Old
278	Effective from Date	1			G							
						1					Effective from Settlement Date {DAA}	Original appointment date of DA1
279	Effective to Date	1			G							
						1					Effective to Settlement Date {DAA}	Date of CoDA1 minus 1day
277	Data Aggregator Details	2		G								
					1						Data Aggregator Id	**Id of** DA2
					1						Agent Status	**O** - Old
278	Effective from Date	2			G							
						1					Effective from Settlement Date {DAA}	Date of CoDA1
279	Effective to Date	2			G							
						1					Effective to Settlement Date {DAA}	Date of CoDA2 minus 1day
277	Data Aggregator Details	3		G								
					1						Data Aggregator Id	**Id of** DA3
					1						Agent Status	**E** - Existing
278	Effective from Date	3			G							
						1					Effective from Settlement Date {DAA}	Date of CoDA2

Group	Group Description	Occurrence	L1	L2	L3	L4	L5	L6	L7	L8	Item Name	Rule
279	*Effective to Date*	*0*			*G*							*Not Present*

Example F

Group	Group Description	Occurrence	L1	L2	L3	L4	L5	L6	L7	L8	Item Name	Rule
270	MPAN Cores	1	G									
				1							MPAN Core	
				1							Effective from Settlement Date {REGI}	SSD of the sending Supplier
271	*Data Collector Details*	*0*		*G*								*Not Present*
272	*Effective from Date*	*0*			*G*							*Not Present*
273	*Effective to Date*	*0*			*G*							*Not Present*
274	*Meter Operator Details*	*0*		*G*								*Not Present*
275	*Effective from Date*	*0*			*G*							*Not Present*
276	*Effective to Date*	*0*			*G*							*Not Present*
277	Data Aggregator Details	1		G								
					1						Data Aggregator Id	**Id of** NEW **DA**
					1						Agent Status	**N** - New
278	Effective from Date	1			G							
						1					Effective from Settlement Date {DAA}	Effective from Date of New DA
279	*Effective to Date*	*0*			*G*							*Not Present*

Example G

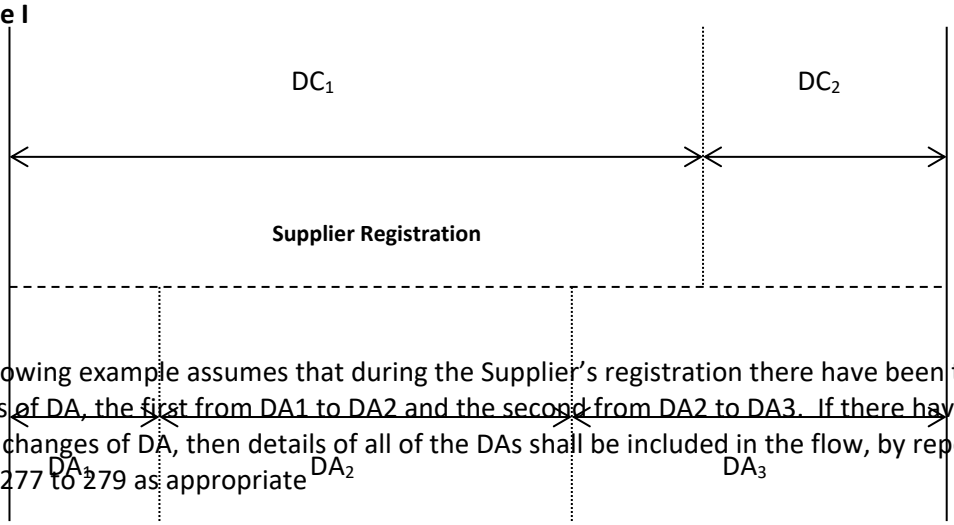
Group	Group Description	Occurrence	L1	L2	L3	L4	L5	L6	L7	L8	Item Name	Rule
270	MPAN Cores	1	G									
				1							MPAN Core	
				1							Effective from Settlement Date {REGI}	SSD of the sending Supplier

Group	Group Description	Occurrence	L1	L2	L3	L4	L5	L6	L7	L8	Item Name	Rule
271	Data Collector Details	1		G								
					1						Data Collector Id	Id of the **NEW** DC
					1						Agent Status	**N** - New
272	Effective from Date	1			G							
						1					Effective from Date {DCA}	Effective from date of New DC
273	*Effective to Date*	*0*			*G*							*Not Present*
274	Meter Operator Details	1		G								
					1						Meter Operator Id	Id of the **OLD** MOp
					1						Agent Status	**O** - Old
275	*Effective from Date*	*0*			*G*							*Not Present*
276	Effective to Date	1			G							
						1					Effective to Date {MOA}	CoMOp date minus one day
277	*Data Aggregator Details*	*0*		*G*								*Not Present*
278	*Effective from Date*	*0*			*G*							*Not Present*
279	*Effective to Date*	*0*			*G*							*Not Present*

Example H

Group	Group Description	Occurrence	L1	L2	L3	L4	L5	L6	L7	L8	Item Name	Rule
270	MPAN Cores	1	G									
				1							MPAN Core	
				1							Effective from Settlement Date {REGI}	SSD of the sending Supplier
271	Data Collector Details	1		G								
					1						Data Collector Id	Id of the **OLD** DC
					1						Agent Status	**O** - Old
272	*Effective from Date*	*0*			*G*							*Not Present*
273	Effective to Date	1			G							
						1					Effective to Date {DCA}	CoDC date minus one day
274	Meter Operator Details	1		G								
					1						Meter Operator Id	Id of the **NEW** MOp
					1						Agent Status	**N** - New
275	Effective from Date	1			G							
						1					Effective from Date {MOA}	Effective from date of New MOp
276	*Effective to Date*	*0*			*G*							*Not Present*
277	Data Aggregator Details	1		G								
					1						Data Aggregator Id	Id of the **CURRENT** DA
					1						Agent Status	**E** - Existing
278	Effective from Date	1			G							
						1					Effective from Settlement Date {DAA}	Original appointment date of the DA
279	*Effective to Date*	*0*			*G*							*Not Present*

Example I



The following example assumes that during the Supplier's registration there have been two previous changes of DA, the first from DA1 to DA2 and the second from DA2 to DA3. If there have been further changes of DA, then details of all of the DAs shall be included in the flow, by repeating groups 277 to 279 as appropriate

Group	Group Description	Occurrence	L1	L2	L3	L4	L5	L6	L7	L8	Item Name	Rule
270	MPAN Cores	1	G									
				1							MPAN Core	
				1							Effective from Settlement Date {REGI}	SSD of the sending Supplier
271	Data Collector Details	1		G								
					1						Data Collector Id	Id of the **OLD DC1**
					1						Agent Status	**O** - Old
272	*Effective from Date*	*0*			*G*							*Not Present*
273	Effective to Date	1			G							
						1					Effective to Date {DCA}	CoDC minus one calendar day
274	Meter Operator Details	1		G								
					1						Meter Operator Id	Id of the **New** MOp
					1						Agent Status	**N** - New
275	Effective from Date	1			G							
						1					Effective from Date {MOA}	Original appointment date of MOp
276	*Effective to Date*	*0*			*G*							*Not Present*
277	Data Aggregator Details	1		G								
					1						Data Aggregator Id	**Id of** DA1
					1						Agent Status	**O** - Old

Group	Group Description	Occurrence	L1	L2	L3	L4	L5	L6	L7	L8	Item Name	Rule
278	Effective from Date	1			G							
						1					Effective from Settlement Date {DAA}	Original appointment date of DA1
279	Effective to Date	1			G							
						1					Effective to Settlement Date {DAA}	Date of CoDA1 minus 1day
277	Data Aggregator Details	2		G								
					1						Data Aggregator Id	**Id of** DA2
					1						Agent Status	**O** - Old
278	Effective from Date	2			G							
						1					Effective from Settlement Date {DAA}	Date of CoDA1
279	Effective to Date	2			G							
						1					Effective to Settlement Date {DAA}	Date of CoDA2 minus 1day
277	Data Aggregator Details	3		G								
					1						Data Aggregator Id	**Id of** DA3
					1						Agent Status	**E** - Existing
278	Effective from Date	3			G							
						1					Effective from Settlement Date {DAA}	Date of CoDA2
279	*Effective to Date*	*0*			*G*							*Not Present*

Example J

Group	Group Description	Occurrence	L1	L2	L3	L4	L5	L6	L7	L8	Item Name	Rule
270	MPAN Cores	1	G									
				1							MPAN Core	
				1							Effective from Settlement Date {REGI}	SSD of the sending Supplier
271	*Data Collector Details*	*0*		*G*								*Not Present*
272	*Effective from Date*	*0*			*G*							*Not Present*

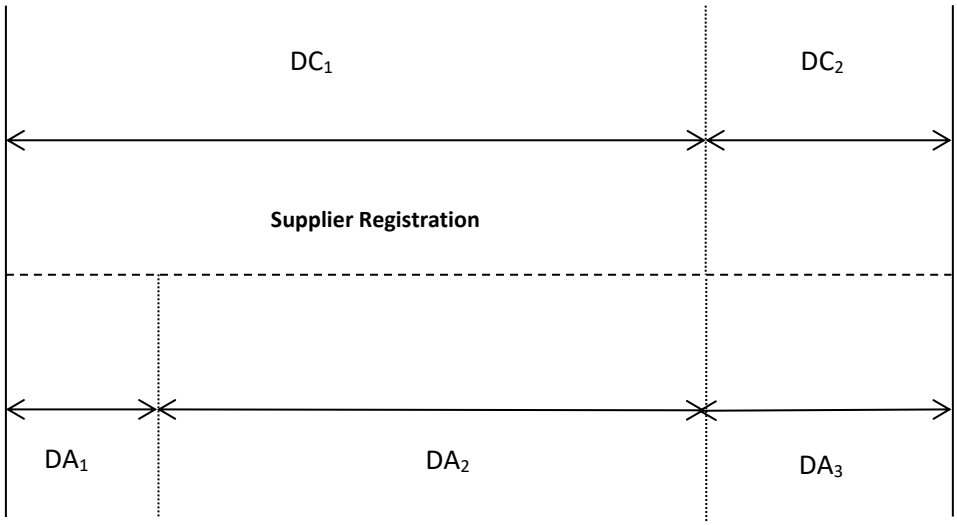
Group	Group Description	Occurrence	L1	L2	L3	L4	L5	L6	L7	L8	Item Name	Rule
273	*Effective to Date*	*0*			*G*							*Not Present*
274	Meter Operator Details	1		G								
					1						Meter Operator Id	Id of the **NEW** MOp
					1						Agent Status	**N** - New
275	Effective from Date	1			G							
						1					Effective from Date {MOA}	Effective from date of the New MOp
276	*Effective to Date*	*0*			*G*							*Not Present*
277	Data Aggregator Details	1		G								
					1						Data Aggregator Id	Id of the **NEW** DA
					1						Agent Status	**N** - New
278	Effective from Date	1			G							
						1					Effective from Settlement Date {DAA}	Effective from date of the New DA
279	*Effective to Date*	*0*			*G*							*Not Present*

Example K

Group	Group Description	Occurrence	L1	L2	L3	L4	L5	L6	L7	L8	Item Name	Rule
270	MPAN Cores	1	G									
				1							MPAN Core	
				1							Effective from Settlement Date {REGI}	SSD of the sending Supplier
271	Data Collector Details	1		G								
					1						Data Collector Id	Id of the **OLD DC**
					1						Agent Status	**O**- Old
272	*Effective from Date*	*0*			*G*							*Not Present*
273	Effective to Date	1			G							
						1					Effective to Date {DCA}	CoDC date minus one day
274	Meter Operator Details	1		G								
					1						Meter Operator Id	Id of the **CURRENT** MOp
					1						Agent Status	**E** - Existing
275	Effective from Date	1			G							
						1					Effective from Date {MOA}	Original appointment date of MOp
276	*Effective to Date*	*0*			*G*							*Not Present*
277	Data Aggregator Details	1		G								
					1						Data Aggregator Id	Id of Old **DA**
					1						Agent Status	**O** - Old
278	Effective from Date	1			G							
						1					Effective from Settlement Date {DAA}	Date of old DA appointment
279	Effective to Date	1			G							
						1					Effective to Settlement Date {DAA}	Date of CoDA minus one day
277	Data Aggregator Details	2		G								

Group	Group Description	Occurrence	L1	L2	L3	L4	L5	L6	L7	L8	Item Name	Rule
					1						Data Aggregator Id	Id of **NEW DA**
					1						Agent Status	**N** - New
278	Effective from Date	1			G							
						1					Effective from Settlement Date {DAA}	Date of CoDA
279	*Effective to Date*	*0*			*G*							*Not Present*

Example L



The following example assumes that during the Supplier's registration there has been one previous change of DA (from DA1 to DA2) prior to the change of DA coincident with the change in Data Collector (the change from DA2 to DA3). If there have been further previous changes of DA, then details of all of the DAs shall be included in the flow, by repeating groups 277 to 279 as appropriate

Group	Group Description	Occurrence	L1	L2	L3	L4	L5	L6	L7	L8	Item Name	Rule
270	MPAN Cores	1	G									
				1							MPAN Core	
				1							Effective from Settlement Date {REGI}	SSD of the sending Supplier
271	Data Collector Details	1		G								
					1						Data Collector Id	Id of the **OLD DC1**
					1						Agent Status	**O** - Old
272	*Effective from Date*	*0*			*G*							*Not Present*
273	Effective to Date	1			G							
						1					Effective to Date {DCA}	CoDC minus one calendar day
274	Meter Operator Details	1		G								
					1						Meter Operator Id	Id of the **CURRENT** MOp
					1						Agent Status	**E** - Existing
275	Effective from Date	1			G							
						1					Effective from Date {MOA}	Original appointment date of MOp

Group	Group Description	Occurrence	L1	L2	L3	L4	L5	L6	L7	L8	Item Name	Rule
276	*Effective to Date*	*0*			*G*							*Not Present*
277	Data Aggregator Details	1		G								
					1						Data Aggregator Id	**Id of** DA1
					1						Agent Status	**O** - Old
278	Effective from Date	1			G							
						1					Effective from Settlement Date {DAA}	Original appointment date of DA1
279	Effective to Date	1			G							
						1					Effective to Settlement Date {DAA}	Date of CoDA1 minus 1day
277	Data Aggregator Details	2		G								
					1						Data Aggregator Id	**Id of** DA2
					1						Agent Status	**O** - Old
278	Effective from Date	2			G							
						1					Effective from Settlement Date {DAA}	Date of CoDA1
279	Effective to Date	2			G							
						1					Effective to Settlement Date {DAA}	Date of CoDA2 minus 1day
277	Data Aggregator Details	3		G								
					1						Data Aggregator Id	**Id of New** DA3
					1						Agent Status	**N** - new
278	Effective from Date	3			G							
						1					Effective from Settlement Date {DAA}	Effective from date of New DA3
279	*Effective to Date*	*0*			*G*							*Not Present*

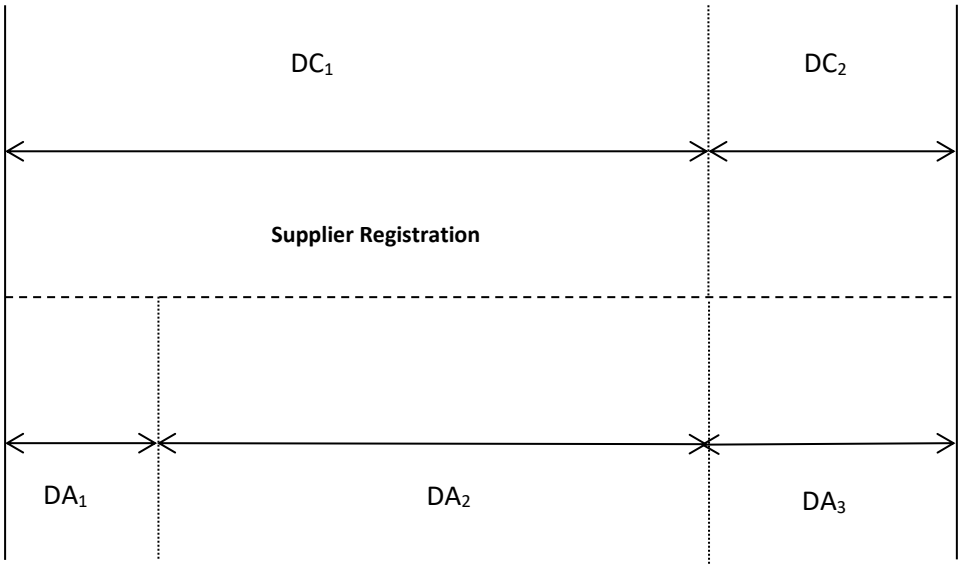
Example M

Group	Group Description	Occurrence	L1	L2	L3	L4	L5	L6	L7	L8	Item Name	Comments
270	MPAN Cores	1	G									

Group	Group Description	Occurrence	L1	L2	L3	L4	L5	L6	L7	L8	Item Name	Comments
				1							MPAN Core	
				1							Effective from Settlement Date {REGI}	SSD of the sending Supplier
271	Data Collector Details	1		G								
					1						Data Collector Id	Id of the **OLD** DC
					1						Agent Status	**O** - Old
272	*Effective from Date*	*0*			*G*							*Not Present*
273	Effective to Date	1			G							
						1					Effective to Date {DCA}	CoDC minus one day
274	Meter Operator Details	1		G								
					1						Meter Operator Id	Id of the **NEW** MOp
					1						Agent Status	**N** - New
275	Effective from Date	1			G							
						1					Effective from Date {MOA}	Effective from date of the New MOp
276	*Effective to Date*	*0*			*G*							*Not Present*
277	Data Aggregator Details	1		G								
					1						Data Aggregator Id	Id of Old **DA**
					1						Agent Status	**O** - Old
278	Effective from Date	1			G							
						1					Effective from Settlement Date {DAA}	Date of old DA appointment
279	Effective to Date	1			G							
						1					Effective to Settlement Date {DAA}	Date of CoDA minus one day
277	Data Aggregator Details	2		G								
					1						Data Aggregator Id	Id of **NEW DA**
					1						Agent Status	**N** - New
278	Effective from Date	2			G							

Group	Group Description	Occurrence	L1	L2	L3	L4	L5	L6	L7	L8	Item Name	Comments
						1					Effective from Settlement Date {DAA}	Date of CoDA
279	*Effective to Date*	*0*			*G*							*Not Present*

Example N



The following example assumes that during the Supplier's registration there has been one previous change of DA (from DA1 to DA2) prior to the change of DA coincident with the change in Data Collector (the change from DA2 to DA3). If there have been further previous changes of DA, then details of all of the DAs shall be included in the flow, by repeating groups 277 to 279 as appropriate

Group	Group Description	Occurrence	L1	L2	L3	L4	L5	L6	L7	L8	Item Name	Rule
270	MPAN Cores	1	G									
				1							MPAN Core	
				1							Effective from Settlement Date {REGI}	SSD of the sending Supplier
271	Data Collector Details	1		G								
					1						Data Collector Id	Id of the **OLD DC1**
					1						Agent Status	**O** - Old
272	*Effective from Date*	*0*			*G*							*Not Present*
273	Effective to Date	1			G							
						1					Effective to Date {DCA}	CoDC minus one calendar day
274	Meter Operator Details	1		G								
					1						Meter Operator Id	Id of the **NEW** MOp
					1						Agent Status	**N** - New
275	Effective from Date	1			G							
						1					Effective from Date {MOA}	Effective from date of new MOp

Group	Group Description	Occurrence	L1	L2	L3	L4	L5	L6	L7	L8	Item Name	Rule
276	*Effective to Date*	*0*			*G*							*Not Present*
277	Data Aggregator Details	1		G								
					1						Data Aggregator Id	**Id of** DA1
					1						Agent Status	**O** - Old
278	Effective from Date	1			G							
						1					Effective from Settlement Date {DAA}	Original appointment date of DA1
279	Effective to Date	1			G							
						1					Effective to Settlement Date {DAA}	Date of CoDA1 minus 1day
277	Data Aggregator Details	2		G								
					1						Data Aggregator Id	**Id of** DA2
					1						Agent Status	**O** - Old
278	Effective from Date	2			G							
						1					Effective from Settlement Date {DAA}	Date of CoDA1
279	Effective to Date	2			G							
						1					Effective to Settlement Date {DAA}	Date of CoDA2 minus 1day
277	Data Aggregator Details	3		G								
					1						Data Aggregator Id	**Id of New** DA3
					1						Agent Status	**N** - new
278	Effective from Date	3			G							
						1					Effective from Settlement Date {DAA}	Effective from date of New DA3
279	*Effective to Date*	*0*			*G*							*Not Present*

Example O

Group	Group Description	Occurrence	L1	L2	L3	L4	L5	L6	L7	L8	Item Name	Rule
270	MPAN Cores	1	G									
				1							MPAN Core	

Group	Group Description	Occurrence	L1	L2	L3	L4	L5	L6	L7	L8	Item Name	Rule
				1							Effective from Settlement Date {REGI}	SSD of the sending Supplier
271	*Data Collector Details*	*0*		*G*								*Not Present*
272	*Effective from Date*	*0*			*G*							*Not Present*
273	*Effective to Date*	*0*			*G*							*Not Present*
274	Meter Operator Details	1		G								
					1						Meter Operator Id	Id of the **OLD** MOp
					1						Agent Status	**O** - Old
275	*Effective from Date*	*0*			*G*							*Not Present*
276	Effective to Date	1			G							
						1					Effective to Date {MOA}	SSD (G270) minus one calendar day
277	*Data Aggregator Details*	*0*		*G*								*Not Present*
278	*Effective from Date*	*0*			*G*							*Not Present*
279	*Effective to Date*	*0*			*G*							*Not Present*

Example P

Group	Group Description	Occurrence	L1	L2	L3	L4	L5	L6	L7	L8	Item Name	Rule
270	MPAN Cores	1	G									
				1							MPAN Core	
				1							Effective from Settlement Date {REGI}	SSD of the sending (New) Supplier
271	Data Collector Details	1		G								
					1						Data Collector Id	Id of the **OLD** DC
					1						Agent Status	**O** - Old
272	*Effective from Date*	*0*			*G*							*Not Present*
273	Effective to Date	1			G							
						1					Effective to Date {DCA}	SSD (G270) minus 1 calendar day

Group	Group Description	Occurrence	L1	L2	L3	L4	L5	L6	L7	L8	Item Name	Rule
274	Meter Operator Details	1		G								
					1						Meter Operator Id	Id of the **NEW** MOp
					1						Agent Status	**N** - New
275	Effective from Date	1			G							
						1					Effective from Date {MOA}	SSD (G270) of the NS
276	*Effective to Date*	*0*			*G*							*Not Present*
						1					Effective to Date {MOA}	
277	Data Aggregator Details	1		G								
					1						Data Aggregator Id	Id of the **NEW** DA
					1						Agent Status	**N** - New
278	Effective from Date	1			G							
						1					Effective from Settlement Date {DAA}	SSD (G270) of the NS
279	*Effective to Date*	*0*			*G*							*Not Present*

Example Q

Group	Group Description	Occurrence	L1	L2	L3	L4	L5	L6	L7	L8	Item Name	Rule
270	MPAN Cores	1	G									
				1							MPAN Core	
				1							Effective from Settlement Date {REGI}	SSD of the sending (New) Supplier
271	Data Collector Details	1		G								
					1						Data Collector Id	Id of the **OLD** DC
					1						Agent Status	**O** - Old
272	*Effective from Date*	*0*			*G*							*Not Present*
273	*Effective to date*	*1*			G							
						1					Effective to Date {DCA}	SSD of new Supplier minus 1 calendar day

Group	Group Description	Occurrence	L1	L2	L3	L4	L5	L6	L7	L8	Item Name	Rule
274	*Meter Operator Details*	*0*		*G*								*Not present*
276	*Effective to Date*	*0*			*G*							*Not Present*
277	*Data Aggregator Details*	*0*		*G*								*Not Present*
278	*Effective from Date*	*0*			*G*							*Not Present*
279	*Effective to Date*	*0*			*G*							*Not Present*

Example R

Group	Group Description	Occurrence	L1	L2	L3	L4	L5	L6	L7	L8	Item Name	Rule
270	MPAN Cores	1	G									
				1							MPAN Core	
				1							Effective from Settlement Date {REGI}	SSD of the sending (New) Supplier
271	Data Collector Details	1		G								
					1						Data Collector Id	Id of the **OLD** DC
					1						Agent Status	**O** - Old
272	*Effective from Date*	*0*			*G*							*Not Present*
273	Effective to Date	1			G							
						1					Effective to Date {DCA}	SSD (G270) minus 1 calendar day
274	Meter Operator Details	1		G								
					1						Meter Operator Id	Id of the **New** MOp
					1						Agent Status	**N** - New
275	Effective from Date	1			G							
						1					Effective from Date {MOA}	SSD of the sending (New) Supplier (G270)
276	*Effective to Date*	*0*			*G*							*Not Present*
277	*Data Aggregator Details*	*0*		*G*								*Not Present*

Group	Group Description	Occurrence	L1	L2	L3	L4	L5	L6	L7	L8	Item Name	Rule
278	*Effective from Date*	*0*			*G*							*Not Present*
279	*Effective to Date*	*0*			*G*							*Not Present*

Example S

Group	Group Description	Occurrence	L1	L2	L3	L4	L5	L6	L7	L8	Item Name	Comments
270	MPAN Cores	1	G									
				1							MPAN Core	
				1							Effective from Settlement Date {REGI}	SSD of the sending Supplier
271	Data Collector Details	1		G								
					1						Data Collector Id	Id of the **OLD** DC
					1						Agent Status	**O** - Old
272	*Effective from Date*	*0*			*G*							*Not Present*
273	Effective to Date	1			G							
						1					Effective to Date {DCA}	CoDC date minus one day
274	*Meter Operator Details*	*0*		*G*								*Not Present*
275	*Effective from Date*	*0*			*G*							*Not Present*
276	*Effective to Date*	*0*			*G*							*Not Present*
277	Data Aggregator Details	1		G								
					1						Data Aggregator Id	Id of New **DA**
					1						Agent Status	**N** - New
278	Effective from Date	1			G							
						1					Effective from Settlement Date {DAA}	Date of old DA appointment
279	*Effective to Date*	*0*			*G*							*Not Present*

Example T

Group	Group Description	Occurrence	L1	L2	L3	L4	L5	L6	L7	L8	Item Name	Rule
270	MPAN Cores	1	G									
				1							MPAN Core	
				1							Effective from Settlement Date {REGI}	SSD of the sending Supplier
271	Data Collector Details	1		G								
					1						Data Collector Id	Id of the **Old (NHH)** DC
					1						Agent Status	**O - Old**
272	*Effective from Date*	*0*			*G*							*Not Present*
273	Effective to Date	1			G							
						1					Effective to Date {DCA}	CoMC date minus one day
271	Data Collector Details	1		G								
					1						Data Collector Id	Id of the **New (HH)** DC
					1						Agent Status	**N - New**
272	Effective from Date	1			G							
						1					Effective from Date {DCA}	CoMC date
273	*Effective to Date*	*0*			*G*							*Not Present*
274	Meter Operator Details	1		G								
					1						Meter Operator Id	Id of the **Old** MOp
					1						Agent Status	**O** - Old
						1					Effective to Date {MOA}	CoMC date minus one day
277	*Data Aggregator Details*	*0*		*G*								*Not Present*
278	*Effective from Date*	*0*			*G*							*Not Present*
279	*Effective to Date*	*0*			*G*							*Not Present*

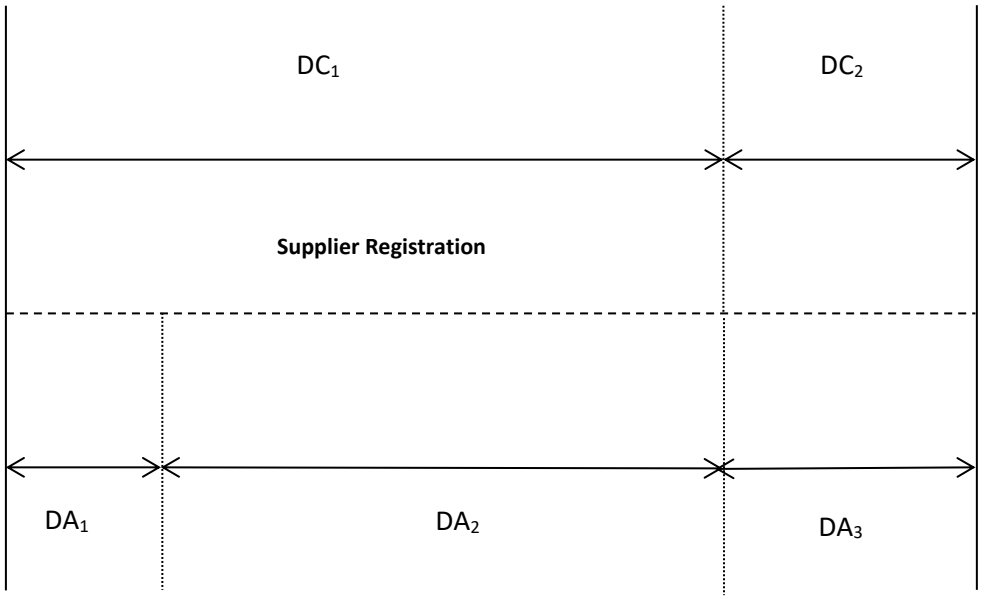
Example U

Group	Group Description	Occurrence	L1	L2	L3	L4	L5	L6	L7	L8	Item Name	Rule
270	MPAN Cores	1	G									
				1							MPAN Core	

Group	Group Description	Occurrence	L1	L2	L3	L4	L5	L6	L7	L8	Item Name	Rule
				1							Effective from Settlement Date {REGI}	SSD of the sending Supplier
271	Data Collector Details	1		G								
					1						Data Collector Id	Id of the **OLD DC**
					1						Agent Status	**O**- Old
272	*Effective from Date*	*0*			*G*							*Not Present*
273	Effective to Date	1			G							
						1					Effective to Date {DCA}	CoDC date minus one day
274	Meter Operator Details	1		G								
					1						Meter Operator Id	Id of the **CURRENT** MOp
					1						Agent Status	**E** - Existing
275	Effective from Date	1			G							
						1					Effective from Date {MOA}	Original appointment date of MOp
276	*Effective to Date*	*0*			*G*							*Not Present*
277	Data Aggregator Details	1		G								
					1						Data Aggregator Id	Id of Old **DA**
					1						Agent Status	**O** - Old
278	Effective from Date	1			G							
						1					Effective from Settlement Date {DAA}	Date of old DA appointment
279	Effective to Date	1			G							
						1					Effective to Settlement Date {DAA}	Date of CoDA minus one day
277	Data Aggregator Details	2		G								
					1						Data Aggregator Id	Id of **CURRENT DA**
					1						Agent Status	**E - Existing**
278	Effective from Date	2			G							

Group	Group Description	Occurrence	L1	L2	L3	L4	L5	L6	L7	L8	Item Name	Rule
						1					Effective from Settlement Date {DAA}	Effective from date of Current DA
279	*Effective to Date*	*0*			*G*							*Not Present*

Example V

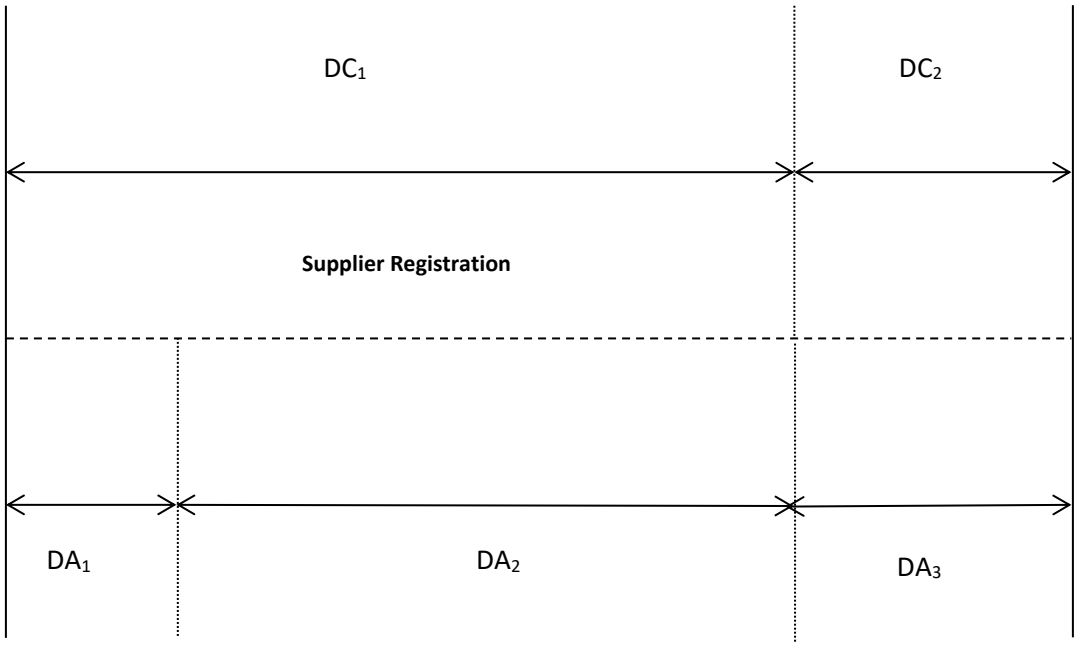


The following example assumes that during the Supplier's registration there has been one previous change of DA (from DA1 to DA2) prior to the change of DA coincident with the change in Data Collector (the change from DA2 to DA3). If there have been further previous changes of DA, then details of all of the DAs shall be included in the flow, by repeating groups 277 to 279 as appropriate

Group	Group Description	Occurrence	L1	L2	L3	L4	L5	L6	L7	L8	Item Name	Rule
270	MPAN Cores	1	G									
				1							MPAN Core	
				1							Effective from Settlement Date {REGI}	SSD of the sending Supplier
271	Data Collector Details	1		G								
					1						Data Collector Id	Id of the **OLD DC1**
					1						Agent Status	**O** - Old
272	*Effective from Date*	*0*			*G*							*Not Present*
273	Effective to Date	1			G							
						1					Effective to Date {DCA}	CoDC minus one calendar day
274	Meter Operator Details	1		G								
					1						Meter Operator Id	Id of the **CURRENT** MOp
					1						Agent Status	**E** - Existing
275	Effective from Date	1			G							

Group	Group Description	Occurrence	L1	L2	L3	L4	L5	L6	L7	L8	Item Name	Rule
						1					Effective from Date {MOA}	Original appointment date of MOp
276	*Effective to Date*	*0*			*G*							*Not Present*
277	Data Aggregator Details	1		G								
					1						Data Aggregator Id	**Id of** DA1
					1						Agent Status	**O** - Old
278	Effective from Date	1			G							
						1					Effective from Settlement Date {DAA}	Original appointment date of DA1
279	Effective to Date	1			G							
						1					Effective to Settlement Date {DAA}	Date of CoDA1 minus 1day
277	Data Aggregator Details	2		G								
					1						Data Aggregator Id	**Id of** DA2
					1						Agent Status	**O** - Old
278	Effective from Date	2			G							
						1					Effective from Settlement Date {DAA}	Date of CoDA1
279	Effective to Date	2			G							
						1					Effective to Settlement Date {DAA}	Date of CoDA2 minus 1day
277	Data Aggregator Details	3		G								
					1						Data Aggregator Id	**Id of** DA3
					1						Agent Status	**E - Existing**
278	Effective from Date	3			G							
						1					Effective from Settlement Date {DAA}	Effective from date of Current DA3
279	*Effective to Date*	*0*			*G*							*Not Present*

Example W



The following example assumes that during the Supplier's registration there has been one previous change of DA (from DA1 to DA2) prior to the change of DA coincident with the change in Data Collector (the change from DA2 to DA3). This flow is sent before the Supplier has received confirmation of appointment from DA3. If there have been further previous changes of DA, then details of all of the DAs shall be included in the flow, by repeating groups 277 to 279 as appropriate

Group	Group Description	Occurrence	L1	L2	L3	L4	L5	L6	L7	L8	Item Name	Rule
270	MPAN Cores	1	G									
				1							MPAN Core	
				1							Effective from Settlement Date {REGI}	SSD of the sending Supplier
271	Data Collector Details	1		G								
					1						Data Collector Id	Id of the **OLD DC1**
					1						Agent Status	**O** - Old
272	*Effective from Date*	*0*			*G*							*Not Present*
273	Effective to Date	1			G							
						1					Effective to Date {DCA}	CoDC minus one calendar day
274	Meter Operator Details	1		G								
					1						Meter Operator Id	Id of the **CURRENT** MOp
					1						Agent Status	**E** - Existing

Group	Group Description	Occurrence	L1	L2	L3	L4	L5	L6	L7	L8	Item Name	Rule
275	Effective from Date	1			G							
						1					Effective from Date {MOA}	Original appointment date of MOp
276	*Effective to Date*	*0*			*G*							*Not Present*
277	Data Aggregator Details	1		G								
					1						Data Aggregator Id	**Id of** DA1
					1						Agent Status	**O** - Old
278	Effective from Date	1			G							
						1					Effective from Settlement Date {DAA}	Original appointment date of DA1
279	Effective to Date	1			G							
						1					Effective to Settlement Date {DAA}	Date of CoDA1 minus 1day
277	Data Aggregator Details	2		G								
					1						Data Aggregator Id	**Id ofT** DA2
					1						Agent Status	**E - Existing**
278	Effective from Date	2			G							
						1					Effective from Settlement Date {DAA}	Date of CoDA1
279	*Effective to Date*	*0*			*G*							*Not Present*

Flow Reference:	**D0149**
Flow Name:	**Notification of Mapping Details**
Flow Description:	**This flow notifies mapping of physical registers to time pattern regimes.**

Rule

1. All data items pertaining to EVERY installed meter defined at the relevant MPAN must be included within Group 281 and Group 23A whether or not they have changed.

2. The MOp must send a D0149 in all cases where the MOp sends a D0150, except where the Supplier has instructed the MOp to remove all meters and/or there are no meters at the metering point in which case only the D0150 is sent.

3. Temporary check meters are not allocated an MPAN and are NOT to be included in the flow.

4. Total cumulative registers of import and secondary MPANs for smart DCC-serviced meters are NOT to be included within the flow.

5. Only the active export register of an export MPAN for smart DCC-serviced meters shall be included within the flow.

6. All Data Items must contain the same values as those equivalent Data Items that appear in the associated D0150.

7. Where a D0367 is received, any Data Items in the NHH Mapping Details, Time Pattern Regimes, Meter Register and Non Settlements Registers Groups must contain the same values and mapping convention as the equivalent Data Items that appear in the associated D0367.

8. Where a D0367 is received, in accordance with the Change of Supplier process in BSCP514, and the value in the Meter Id (Serial Number) is “NK”; the MOP will populate the Meter Id (Serial Number) (J0004) with the value received on the D0150 from the previous MOP. Other relevant Data Items must contain the same values as those received in the D0367 (see rule 7).

Flow Reference:	**D0150**
Flow Name:	**Non Half-hourly Meter Technical Details**
Flow Description:	**Meter technical details for Non Half-hourly.**

Rule

1. All data items pertaining to EVERY installed meter defined at the relevant MPAN must be included within Group 290 whether or not they have changed. This group is therefore the definitive statement of the meters at a Metering Point.

2. Group 290 must only be absent when ALL meters are removed at a Metering Point and are not replaced.

3. Meters which are removed will be included in Group 08A, and are only sent in response to their removal (i.e. the removal of a meter is only notified ONCE)

4. If there is a discrepancy between Group 290 and any metering history derived from Group 08A then Group 290 takes precedence.

5. The MOp must send a D0150 in all cases where the MOp sends a D0149, except where the Supplier has instructed the MOp to remove all meters and there are no meters at the Metering Point in which case only the D0150 is sent.

6. Temporary check meters used for comparative readings for dispute resolution are not allocated an MPAN and are NOT to be included in the flow.

7. Total cumulative registers of import and secondary MPANs for smart DCC-serviced meters are NOT to be included in the flow.

8. Only the active export register of an export MPAN for smart DCC-serviced meters shall be included in the flow.
9. When any data item has changed, the Meter Technical Details are considered to change, consequently J1254 Effective from Settlement Date {MSMTD} must be set to the value of the last date of change. It is the responsibility of the receiving application to determine if any Data Item has changed on receipt of the D0150 and, if so, which Data Item has changed. Note that, where the latest change is prior to 30th August 2001, this rule may not apply.

10. Where Certification Expiry Date (J0463) changes for a set of meters, a D0150 shall be sent for each metering system affected, showing every installed meter in Group 290, not just those affected.

11. All Data Items must contain the same values as those equivalent Data Items that appear in the associated D0149.

12. Distributor to MOp flow will only be used where a Distributor has changed a meter under emergency conditions.

13. Where an MPAN contains more than one meter the same value of CT Ratio or VT Ratio is to be repeated for all meters.

14. For Data Item J0483 (Meter Type) within the D0150 dataflow valid values are:
    K
    S
    T
    N
    NCAMR
    NSS
    RCAMR
    RCAMY
    S1
    S2A
    S2B
    S2C
    S2AD
    S2BD
    S2CD
    S2ADE
    S2BDE
    S2CDE

where N will denote credit meter.

15. The D0150 shall not be used to indicate a change of MAP only. The D0304 shall be used in this instance.

16. Where a D0367 is received, any Data Items in the SSCs and Meter Register Details Groups must contain the same values as the equivalent Data Items that appear in the associated D0367.

17. Where a D0367 is received, in accordance with the Change of Supplier process in BSCP514, and the value in the Meter Id (Serial Number) is “NK”; the MOP will populate the Meter Id (Serial Number) (J0004) with the value received on the D0150 from the previous MOP. Other relevant Data Items must contain the same values as those received in the D0367 (see rule 16).

Flow Reference:	D0151
Flow Name:	Termination of Appointment or Contract by Supplier
Flow Description:	This is a notification that an existing appointment or contract is to be terminated by a Supplier, including the situation when there has been an upheld objection to Change of Supplier.

Termination is deemed to mean the ending of an existing contract for services; cancellation is deemed to mean the notification that an appointment is deemed to have never existed (such as on a failed CoS).
When terminating an Agent appointment using D0151, the ETD{Agent} should be the last calendar day on which the Agent has responsibility for the metering point. The termination takes effect at midnight at the end of the day specified in the ETD{Agent}. On CoS, this will normally be SSD-1 calendar day.
When cancelling an Agent appointment with an EFD{Agent} in the future, again using D0151, the ETD{Agent} should be the calendar day before the EFD{Agent} provided on the original D0155/D0153. The Agent is to interpret a D0151 which contains an ETD{Agent} one calendar day before the EFD{Agent} received on an earlier D0155 as a cancellation of appointment. The 'Termination Reason' shall be populated as follows:

- 'LC' where the Supplier loses the supply contract,
- 'CA' where the Supplier has appointed the Agent in error).
- 'OB' where the New Supplier has appointed the Agent but the registration has been objected to and upheld, or the registration has been successfully withdrawn.

If an Agent acted as the Agent for the previous Supplier for the relevant metering point, the Agent should treat the notification of cancellation, where 'Termination Reason' = 'LC', as a reinstatement of its appointment with the previous Supplier, unless a D0151 has been received from the previous Supplier. (Note that the previous Supplier must re-appoint an Agent if it has earlier terminated the Agent. Such re-appointment (D0155) must ensure continuity of appointment to the metering point, and hence should have an EFD{Agent} = (cancellation D0151) ETD{Agent}+1 (calendar) day) and an EFSD{REGI} = the original EFSD{REGI}).

Flow Reference:	**D0153**
Flow Name:	**Notification of Data Aggregator Appointment and Terms**
Flow Description:	**This is a notification that a data aggregator (HH or NHH) is to be appointed to a metering system and of the contractual terms to be applied.**

Where specified in commercial agreements between a Supplier and their agents, the J0274 (Service Reference) and J0275 (Service Level Reference) must reflect those arrangements and not be used to negotiate different terms.

When appointing an Agent using a D0153 flow, the EFD{Agent} should be the date on which the Agent is to take responsibility for the metering point. The appointment takes effect from midnight at the beginning of the day specified in the EFD{Agent}. On CoS, this will normally be SSD, including where the New Supplier is re-appointing a previously cancelled agent due to objection, that has now been removed.

Flow Reference:	**D0155**
Flow Name:	**Notification of Meter Operator or Data Collector Appointment and Terms**
Flow Description:	**This is a notification of a new or changed appointment to a metering system and of the contractual terms to be applied.**

Where specified in commercial agreements between a Supplier and their agents, the J0274 (Service Reference) and J0275 (Service Level Reference) must reflect those arrangements and not be used to negotiate different terms.

When appointing an Agent using a D0155 flow, the EFD{Agent} should be the date on which the Agent is to take responsibility for the metering point. The appointment takes effect from midnight at the beginning of the day specified in the EFD{Agent}. On CoS, this will normally be SSD, including where the New Supplier is re-appointing a previously cancelled agent due to an objection, that has now been removed.

Flow Reference:	D0170
Flow Name:	Request for Metering System Related Details
Flow Description:	On appointment or change of agent appointment, metering system related details are requested to be transferred.

Rules:

1. The Date Action Required By (J0028) shall be set to the New Supplier's Start Date (Effective from Settlement Date {REGI}) in the following instances:

    a. On Change of Agent coincident with Change of Supplier, where the flow is being sent from new NHH agents to old NHH agents;

    b. On Change of Agent coincident with Change of Supplier, where the flow is being sent from New NHHDC to New Supplier with the Requested Action Code (J0007) set to '22' (New Supplier transfers meter reading history to new Data Collector using D0311 flow);

    c. On Change of Agent coincident with Change of Supplier, where the flow is being sent from the New Supplier to the new agents with the Requested Action Code (J0007) set to '23' (Revert to non-smart Change of Supplier process).

2. The Date Action Required By (J0028) shall be set to the Effective from Date {DCA} or Effective from Date {MOA}, for the new agent, as appropriate, on change of NHH agent where the flow is sent from the Supplier to the old agents.

3. In all other instances, the Date Action Required By (J0028) shall be set to the date on which the requested action is to be completed.

4. When a new agent or Supplier requests information from an old agent or Distributor using flow D170, it identifies the new Agent in J0926 (new Mop) or J0927 (NewDC) as appropriate.

Flow Reference:	**D0205**
Flow Name:	**Update Registration Details**
Flow Description:	**A Supplier initiated update of registration details**

Rules for completion of D0205

1. When allocating an MTC (J0220) for a NHH metered site the following Meter Type (J0483) to MTC Payment Type Id (J1618) mapping shall be used:

Meter Type (J0483)	MTC Payment Type ID (J1618)
K	KM
S	SM
T	TL or TS
N	CR
NCAMR	CR
RCAMR	CR
RCAMY	CR
S1	CR
S2	CR
S2A	CR
S2B	CR
S2C	CR
S2AD	CR
S2BD	CR
S2CD	CR
S2ADE	CR
S2BDE	CR
S2CDE	CR
NSS	CR

2. When exchanging a meter of Meter Type (J0483) of 'NSS', 'S1', 'S2A', 'S2B', 'S2C', 'S2AD', 'S2BD', 'S2CD', 'S2ADE', 'S2BDE' or 'S2CDE' with a meter any Meter Type (J0483) not included in this list then Smart Metering System Operator Id (J1837) and (SMETS Version (J1839) shall be set to the value 'NONE'.
3. When removing all meters of Meter Type (J0483) of 'NSS', 'S1', 'S2A','S2B', 'S2C', 'S2AD', 'S2BD', 'S2CD', 'S2ADE', 'S2BDE' or 'S2CDE' the Smart Metering System Operator Id (J1837) and (SMETS Version (J1839) shall be set to the value 'NONE'.

Flow Reference:	D0225
Flow Name:	Priority Services Details
Flow Description:	Exchange of details between relevant trading participants identifying the contact details and reasons for customers or other members of the household requiring priority services

Rules for completion of D0225

1. When amending any existing information and/or on CoT, the Supplier shall send to all recipients all relevant data1 in Groups 510 and 99C
2. Where priority services exist on CoS the D0225 should be sent to all relevant recipients by the New Supplier, notifying them of all Priority Services information[1] as obtained by the New Supplier.
3. Where priority services exist on CoA the D0225 should be sent to all relevant new Agents by the Supplier notifying them of all Priority Services information[1]. Suppliers should send this information via the DTN unless other means are agreed bilaterally.
4. With effect from 29th June 2017 the Distributor to Supplier instance of this flow will be sent via the DTN. The Distributor should send all relevant data[1] to the current Supplier whenever the Distributor Priority Services Register is changed as a result of information received from a source other than the current Supplier.
5. Suppliers and Distributors should take reasonable steps to gain the informed consent of the data subject to both record the information and to send to the relevant Supplier or Distributor. The J2208 Data Item (Consent to share data) must always be populated according to whether the sender of the D0225 has gained informed consent. Where informed consent has not been gained there is no obligation to send the D0225. If informed consent has not been gained and the D0225 has been sent, there is no requirement for the recipient to process the file.
6. Although Priority Service Contact Address and Primary Priority Service Phone Number[1] are optional, at least one of these data items should be present[1]. This will help ensure the recipient of the flow can contact the correct person regarding Priority Services issues.
7. Although each Metering Point address line and Priority Service Contact address line in this flow is optional, the entire known addresses must be included in the flow.

_____

[1] In so far as permitted by any laws relating to data protection and/or privacy and subject to its own privacy impact assessment and policy. Recipients of Priority Services data shall only use the data insofar that it is necessary to meet relevant Licence Condition requirements.

8. When populating code 17 (Unable to communicate in English) on the J1699 Data Item, the foreign language must be stated in Additional Information field (J0012) where known. If the foreign language is unknown "Unknown" shall be stated.

9. When populating codes 29, 32, 33 or 34 the expected end date of the temporary condition should be stated in Data Item J2209 (PSR code expiry date). Where the end date is known for any other Priority Services Category it should also be stated.

10. When sending the D0225 to amend the Priority Service Details associated with a Metering Point or to add them to a Metering Point that currently has none, then data item J2210 (Delete All PSR Codes) should be populated with 'F' (False – Update all codes) and Group 99C (Priority Services Details) must be present in the flow populated with all PSR codes (J1699) currently associated with the MPAN.

11. When sending the D0225 because there are no longer any Priority Service Details associated with a Metering Point, then data item J2210 (Delete All PSR Codes) should be populated with 'T' (True – Delete all codes) and Group 99C (Priority Services Details) must not be present in the flow.

12. For guidance on PSR codes please refer to the Energy Networks Association website.

Flow Reference:	**D0261**
Flow Name:	**Rejection of Agent Appointment**
Flow Description:	**Rejection of appointment and terms of renewal of contractual terms.**

Where the J0274 (Service Reference) and J0275 (Service Level Reference) have been populated on the D0153 or D0155 for the relevant agent, those items must remain unchanged on the D0011 and D0261. Should those values not reflect the commercial agreements between the Supplier and the relevant agent, that agent must send a D0261 with the J1016 (Rejection of Agent Appointment Code) set to 'N' (No Contract).

Flow Reference:	**D0268**
Flow Name:	**Half Hourly Meter Technical Details**
Flow Description:	**Half Hourly Meter Technical Details are transferred when there is a change in equipment, configuration or upon change of Agent.**

Rules for completion of D0268

1. All data items pertaining to EVERY installed Outstation and Meter defined at the relevant MPAN must be included within Groups 02A and 03A whether or not they have changed. These groups are therefore the definitive statement of the Outstations and Meters at a Metering Point.

2. Groups 02A and 03A must only be absent when ALL Outstations and Meters are removed at a Metering Point and are not replaced.

3. Meters which are removed will be included in Group 81C, and are only sent in response to their removal (i.e. the removal of a meter is only notified ONCE). Please see section 12 – Event Indicator J1689 – for information regarding sending a D0268 for an event which occurs after meters have been removed.

4. If there is a discrepancy between Group 03A with any metering history derived from Group 81C then Group 03A takes precedence.

5. Meter Current Rating must be provided only for a whole current meter.

6. CT Ratio must be provided only for CT meters.

7. VT Ratio must be provided only for VT meters. Wherever possible the Phase/Wire should be populated.

8. Meter COP Issue Number is defined within the flow as optional, where the Meter COP is issued with an Issue Number this item shall be populated.

9. The D0268 shall not be used to indicate a change of MAP only. The D0304 shall be used in this instance.

10. Although data item 'Meter Equipment/Service Location' is optional, where further instructions are required to identify the meter position, then data item 'Meter Equipment/Service Location' (J1025), shall be populated to assist the HHDC and/or subsequent HH MOP to locate the metering equipment.

Rules for Specific Scenarios and Examples:

This section covers examples of HH metering configurations, and provides notes on how the D0268 flow shall be structured and populated in these scenarios.

1. **Multiple MPAN Configurations**

This section provides guidelines to be applied to metering configurations where single physical metering equipment has multiple MPANs associated with it. In all cases, including in the case of BSCP550 (Shared SVA Metering Systems), it is necessary to create a D0268 flow for each MPAN describing the physical details of the meter, by using either the Measurement Quantity Id (J0103) to define which registers are relevant to the particular MPAN, or via use of a Supplementary Information form for Complex Sites.

2. Complex Site Indicator

BSCP502's definition of a Complex Site is "Any site that requires a Supplementary Information Form to enable the Half Hourly Data Collector to interpret the standing and dynamic metered data relating to SVA traded sites for Settlement purposes." There are therefore MPANs that the D0268 by itself cannot describe correctly or in sufficient detail to allow the HHDC to submit the correct half hourly data into Settlements. Therefore in such cases the HH MOP shall set this data item to 'True'.

3. Active Import; Active Export; Active Import & Active Export

The HHDC will assume that any active import/export pairs are to trade as gross import and gross export unless notified by the HH MOP or Supplier.

For a site that has both Active Import and Active Export capability, the Distributor is required to allocate two MPANs: one for Active export energy and one for Active import energy. The HH MOP must provide two D0268 data flows: one for the import MPAN and one for the export MPAN. If the site is metered via a single multi-channel device, the D0268 dataflow must recognise the fact that there is one physical metering system allocated to the two separate MPANs.

Both MPANs shall contain the appropriate information relating to the physical meter installed at the site, so the following data items will be common to both D0268 flows (including all occurrences of those items that appear multiple times within the flow):

Reference	Item Name
J0012	Additional Information
J0476	Associated Meter Id
J0477	Associated Meter Register Id
J1260	Baud Rate
J0382	Channel Number
J0385	Communications Address
J2263	Communications Address B
J0386	Communications Method
J2264	Communications Method B
J1709	Communications Provider
J0454	CT Ratio
J0848	Date of Meter Installation
J1254	Effective from Settlement Date {MSMTD}
J1689	Event Indicator
J1685	Feeder Status Effective from date
J1684	Feeder Status
J0410	Manufacturers Make & Type
J1677	Meter Asset Provider Id

J0418	Meter COP
J0501	Meter Current Rating
J1025	Meter Equipment/Service Location
J0004	Meter Id (Serial Number)
J0010	Meter Register Id
J0475	Meter Register Multiplier
J1691	Modem Type
J0427	Number of Phases
J0478	Number of Register Digits
J0428	Outstation Id
J1688	Outstation Multiplier
J0469	Outstation Number of Channels
J1256	Outstation Number of Dials
J0470	Outstation Password Level 1
J1257	Outstation Password Level 2
J1713	Outstation Password Level 3
J1714	Outstation Username Level 1
J1715	Outstation Username Level 2
J1716	Outstation Username Level 3
J0464	Outstation PIN
J0471	Outstation Type
J2266	Phase/wire
J0432	Pulse Multiplier
J1258	Reader Password
J2265	SIM serial number
J1255	System Voltage
J0455	VT Ratio

Outstation Number of Channels (J0469) shall be populated to accurately reflect the number of channels on the outstation, even if these are not all relevant for the particular MPAN.

The differences in the two flows will be in the Measurement Quantity Id (J0103) of the different register / channels. The active import MPAN will show the AI register / channel with a Measurement Quantity Id of "AI" (Active Import) and the AE register / channel as "UN" (Unassigned). Conversely, the export MPAN will show the AI register / channel as "UN" and the AE register / channel as "AE".

The reactive registers / channels will be mapped to both the import and export MPAN as "RE" and "RI". It should be noted however that the reactive measurements for the two MPANs will not be the same, in accordance with the relevant Code of Practice. For example, in the case of the active Import MPAN, the D0268 flow will contain as a minimum six measurement quantity Ids of AI, RI and RE plus three mapped as "UN", where RI and RE only increment when the site is actively Importing and the "UN" channels correspond to the Export measurement quantities. Conversely the D0268 for the Active Export MPAN will also have six measurement quantities of AE, RI and RE plus three mapped as "UN", where RI and RE increment only when the site is actively exporting and the "UN" channels correspond to the Import measurement quantities.

The resulting D0268s may look something like the following:

Version2 D0268 - Import MPAN

ZHV|REF012345|D0268002|M|XXXX|M|YYYY|20200101090000|||OPER|

01A|MPANXXXXXXXXX|20200101|5|6|F|Customer Switchroom|415|3|E||
02A|E201234567|E10||6|7|001|USERLVL1|PASSLVL1|USERLVL2|PASSLVL2|USERLVL3|PA
SSLVL3||GP|IP|I|07956000000|192.168.8.8:0001|9600|ASLH|894450221100000000|||
03A|201234567|EDMI MK10A LVCT|20200101|||200/5||A|20200101|UKDC|
04A|06|201234567|6|1.000000|1.00|1.0000|RE|7|||
04A|05|201234567|5|1.000000|1.00|1.0000|UN|7|||
04A|04|201234567|4|1.000000|1.00|1.0000|UN|7|||
04A|03|201234567|3|1.000000|1.00|1.0000|RI|7|||
04A|02|201234567|2|1.000000|1.00|1.0000|UN|7|||
04A|01|201234567|1|1.000000|1.00|1.0000|AI|7|||
ZPT|REF012345|9||1|20200101090000|

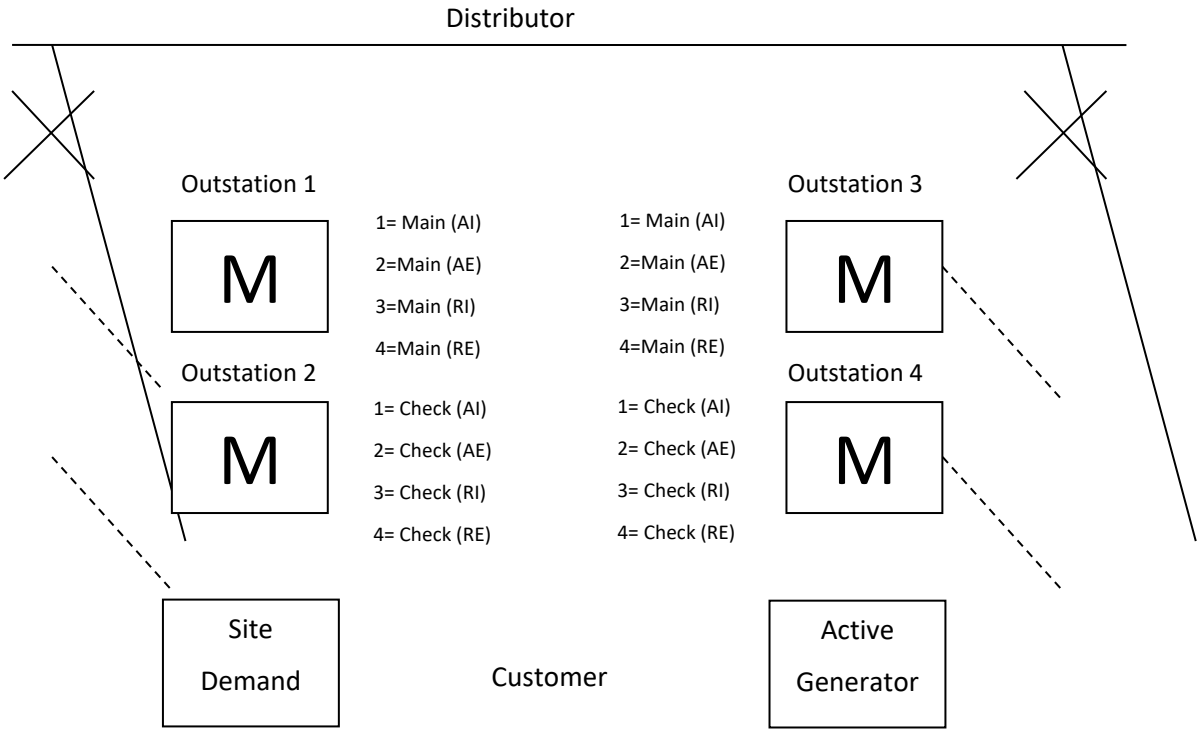
Version2 D0268 - Export MPAN

ZHV|REF012345|D0268002|M|XXXX|M|YYYY|20200101090000||||OPER|
01A|MPANXXXXXXXXX|20200101|5|6|F|Customer Switchroom|415|3|E||
02A|E201234567|E10||6|7|001|USERLVL1|PASSLVL1|USERLVL2|PASSLVL2|USERLVL3|PA
SSLVL3||GP|IP|I|07956000000|192.168.8.8:0001|9600|ASLH|894450221100000000|||
03A|201234567|EDMI MK10A LVCT|20200101|||200/5||A|20200101|UKDC|
04A|06|201234567|6|1.000000|1.00|1.0000|UN|7|||
04A|05|201234567|5|1.000000|1.00|1.0000|RE|7|||
04A|04|201234567|4|1.000000|1.00|1.0000|RI|7|||
04A|03|201234567|3|1.000000|1.00|1.0000|UN|7|||
04A|02|201234567|2|1.000000|1.00|1.0000|AE|7|||
04A|01|201234567|1|1.000000|1.00|1.0000|UN|7|||
ZPT|REF012345|9||1|20200101090000|

4. Net Import / Net Export Sites

The HHDC will assume that any import/export pairs are to trade as gross import and gross export unless notified by the HH MOP as in this example.

This example has two MPANs 1012345678912 (Net Import) and 1098765432101 (Net Export) thus:

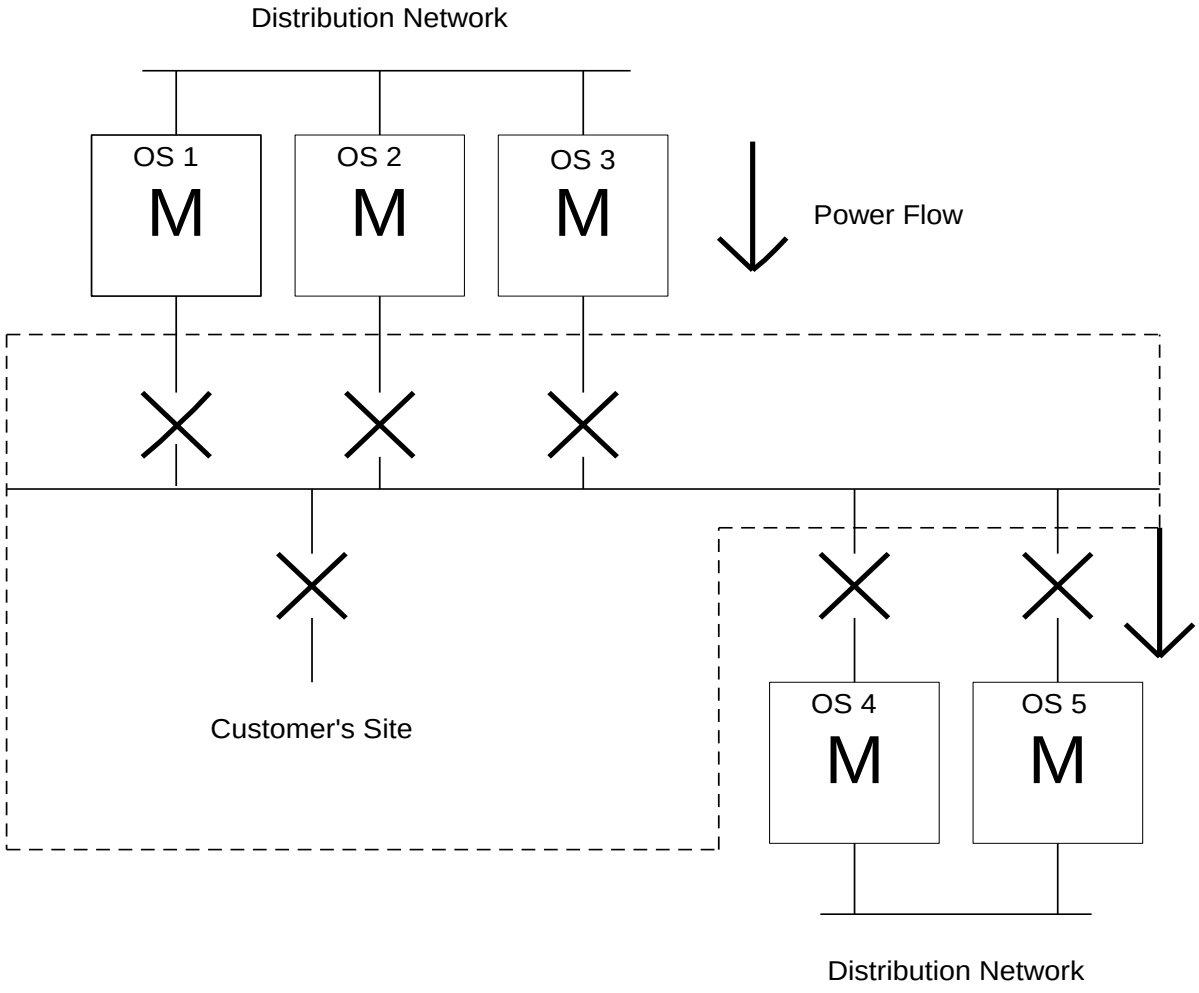


The D0268 for both of these MPANs will be identical (except for the MPAN number). Included in the data item J1687 Complex Site Indicator is an indication that the Data Collector requires an additional form from the HH MOP or Supplier detailing mapping details. The use of Measurement Quantity 'UN' is not appropriate in this example as both import and export channels are to be used in the calculation of the half hourly data to be sent to Settlements. The Supplementary Information forms are sent no later than the sending of the D0268 or preferably in advance of the D0268 flow.

5. Feed Through Sites

Some metering points require to be traded as Net Import or Net Export. The following example has one MPAN (1012345678912) with five feeders. Feeders 1, 2 and 3 have power flowing into the site and feeders 4 and 5 are feeding back onto the local distribution network. The D0268 for this site will show all five feeders as having AI (Active Import) or AE (Active Export) channels. The HHDC would only set this up as Active Import less Active Export if a Supplementary Information form were received, which would be indicated by use of the Complex Site Indicator data item (J1687). Otherwise the HHDC would set it up as either Total Import or Total Export, depending on the use of the 'UN' measurement quantity. The supplemental form indicates to the HHDC that feeders 4 and 5 should be subtracted from the sum of feeders 1, 2 and 3. The forms shall be sent no later than the sending of the D0268 or in advance of the D0268 flow.

The Schematic would appear thus:



Shared SVA Metering Systems

For a site that is subject to Shared SVA Metering Systems (see *BSCP550 – Shared SVA Meter Arrangement of Half Hourly Import and Export Active Energy* for more details of this), the AI and / or AE energy from the site is shared between two or more Suppliers. In order to facilitate this, additional MPANs are generated which will be registered by the Secondary Suppliers and the HHDC splits the energy between the Primary and Secondary Suppliers in proportion to their submitted Allocation Schedule. D0268 flow instances for this scenario are detailed in BSCP550.

It is worth noting that Shared SVA Metering sites may also be sites that have both import and export capability, and hence could fall into the remit of section 3 to 5 above in addition to this section. This means that an import / export site that is subject to Shared SVA Metering Systems may have more than 1 MPANs associated with it (MPANs are required to cover the import and export requirements separately, and the Shared SVA Metering Systems MPANs then require additional secondary MPANs to be created), all referring to a single physical metering system. A D0268 data flow for shared metering might look like the following:

Version2 D0268 – Primary Export MPAN

ZHV|REF012345|D0268002|M|XXXX|M|YYYY|20200101090000|||OPER|
01A|MPANXXXXXXXXX|20200101|5|6|F|Customer Switchroom|415|3|E||
02A|E201234567|E10||6|7|001|USERLVL1|PASSLVL1|USERLVL2|PASSLVL2|USERLVL3|PA

SSLVL3||GP|IP|I|07956000000|192.168.8.8:0001|9600|ASLH|894450221100000000|||
03A|201234567|EDMI MK10A LVCT|20200101|||200/5||A|20200101|UKDC|
04A|06|201234567|6|1.000000|1.00|1.0000|UN|7|||
04A|05|201234567|5|1.000000|1.00|1.0000|RE|7|||
04A|04|201234567|4|1.000000|1.00|1.0000|RI|7|||
04A|03|201234567|3|1.000000|1.00|1.0000|UN|7|||
04A|02|201234567|2|1.000000|1.00|1.0000|AE|7|||
04A|01|201234567|1|1.000000|1.00|1.0000|UN|7|||
ZPT|REF012345|9||1|20200101090000|

6. **Main / Check Meter Mapping**

Associated Meter Id and Associated Meter Register Id shall be populated in the 04A group to identify the presence of a check meter. In this way, the first 04A group provides the main meter register details and identifies the associated check meter registers that are associated with that main meter register. A separate 04A group will contain details relating to the check meter register details, which will be uniquely identified by the meter id / meter register id. This 04A group will not contain details of any Associated Meter registers.

7. **Unused Channels**

Some metering points have separate metering pulsing to an outstation, which contains one to many channels. Particular care needs to be taken when populating the D0268.

Where an Outstation is configured by the HH MOP for idle channels to be visible to the Data Collector, then each unassigned channel shall be identified by the Measurement Quantity Id data item as 'UN' (unassigned). Where the HH MOP has programmed this channel not to be visible to the Data Collector, group 04A is not populated.

For example, an FCL outstation can have up to 16 channels. Where less than 16 channels are being used HH MOP take two alternative approaches, either configure the outstation such that the channel is 'not active' then upon interrogation only the active channels are apparent and able to have data collected from, or the unused channels remain configured but no 'pulses' are fed into these channels.

Where an outstation has channels that are not being used, the D0268 flow shall contain details for all the **active** outstation channels. This is so that the details returned when the HHDC dials the outstation match the expected details as held by the HHDC from the D0268.

Thus, in order for the HHDC to successfully dial the outstation, the Outstation Number of Channels data item must accurately reflect the number of 'active' channels seen by the HHDC when dialling to that Communications Address. It is also a requirement that there must be mapping information for every outstation channel. The HH MOP shall use Measurement Quantity Id "UN" for all active outstation channels that are not assigned to a meter register. However, there are a number of mandatory data items in group 04A which do not apply for any unused channels. These shall be set to dummy values. The following data items shall be populated as detailed below:

Ref	Item Name	Notes
J0382	Channel Number	Must be an entry for every channel as identified in J0469 (i.e. every active channel shall have an entry in the 04A group in the flow)
J0103	Measurement Quantity Id	Set to "UN" for any unused channels

Ref	Item Name	Notes
J0004	Meter Id (Serial Number)	Use a dummy value to allow all unused channels to be mapped (e.g. “DUMMY”)
J0010	Meter Register Id	Set to dummy values for each unused channel (e.g. “U1”, “U2”, “UA”, “UB” etc)
J0475	Meter Register Multiplier	Set to dummy values for each unused channel (e.g. “0.00”)
J0478	Number of Register Digits	Use a dummy value for each unused channel (e.g. “0”)
J0428	Outstation Id	Must be populated
J0469	Outstation Number of Channels	Must be populated with the number of active channels on the outstation visible to the DC
J1688	Outstation Multiplier	Set to zero for each unused channel (i.e. “0.000000”)
J0432	Pulse Multiplier	Set to zero for each unused channel (i.e. “0.000000”) to remove the possibility of readings being passed on by the HHDC

This rule shall be applied to any other outstation types where unused ‘active’ channels exist.

8. **Use of Outstation Passwords and Outstation Usernames**

When Outstation Password Level 1 and/or Outstation Username Level 1 has a value, the HH MOP shall populate this field with that value on all flows to all participants.

When Outstation Password Level 2 and/or Outstation Username Level 2 has a value, the HH MOP shall populate this field completely with asterisks on flow versions sent to any participants other than MOP and DC.

When Outstation Password Level 3 and/or Outstation Username Level 3 has a value, the HH MOP shall populate this field completely with asterisks on flow versions sent to any participants other than MOPs.

Where the Metering System has more than 3 levels of password, the Master/Administrator password and/or username shall be provided to any other MOP in the field Outstation Password Level 3 and/or Outstation Username level 3.

9. **Meter Asset Provider Id(MAP) J1677**

This is for the population of the Meter Asset Provider Id, which is synonymous with the Meter Owner in the Balancing and Settlement Code.

10. **Outstation Multiplier J1688**

The Outstation Multiplier (J1688) shall be populated as shown

Vision meters = 1
Other meter/combined outstations = J0475 (Meter Register Multiplier)
For separate outstations, the Outstation Multiplier will equal the constant required to give the correct outstation cumulative advance when polled by a Data Collector.

11. **Event Indicator J1689**

This data item with its’ range of valid set options, will allow the MO to advise the recipient the reason behind the D0268 data flow submission. When there has been a total removal of meters without any replacement, then option ‘C’ shall be used in addition to the ‘Meters Removed’ group

contained within the D0268. Upon a meter removal/ exchange without a change to the Energisation Status of the MPAN, then the D0139 shall not be sent with the D0268. Below is clarification on the meaning of each Event Indicator code.

Code	Event	Further information
A	New connection	Used for first D0268 for this metering point
B	Addition of Meter(s) and/ or Outstation(s)	Used for the addition of one or more meters or outstations to an existing metering point.
C	Removal of Meter(s) and/or Outstation(s)	**Used for the removal of one or more meters outstations from an existing metering point.**
D	Replacement of Meters and/or Outstation(s)	Used to indicate replacement with the same number of meters or outstations EG removal of one meter for replacement with another.
E	Configuration/Password Change	Used to indicate either a configuration and/or password change, i.e. Any changes that impact on the configuration of the metering point and to indicate that the previous D0268 contained an error.
F	Addition of Comms	
G	Removal of Comms	
H	Replacement of Comms	
I	Change of Agent	Used if meter at metering point
J	Change of Supplier	Used if meter at metering point
K	Both COA and COS	Used if meter at metering point
L	Request from Agent	Used if meter at metering point
M	Request from Supplier	Used if meter at metering point
N	Change of Feeder Status	Used to indicate an energisation change at meter level EG energised to de-energised and vice-versa.
O	Total Replacement of Meter(s) and/or Outstation(s)	Used to indicate complete renewal of the metering point where the number of installed meters or outstations does not equal the number of removed meters.
P	Addition of Meter and Password Change	
Q	Change of Agent (No Meter at Site)	Used when meters have previously been removed and no meters remain on site at the time of the event indicated. A D0268 shall be sent in each of these events, with Group 01A ONLY populated.
R	Change of Supplier (No Meter at Site)	
S	Both CoA and CoS (No Meter at Site)	
T	Request from Agent (No Meter at Site)	
U	Request from Supplier (No Meter at Site)	
Z	Other	Used for multiple events and any events not captured above

12. **Additional Information J0012**

For use of population along with data item Event Indicator (J1689), valid set option 'Z' (Other), which shall be populated to allow for relevant information to be sent to the recipient explaining the reason behind the D0268 submission.

13. **Communications Method (J0386) and Communications Method B (J2264)**

When populating Communications Method or Communications Method B with either HP or HT, the Communications Address Item shall not be populated. The Communications Method option HT, shall only be used for new sites where comms are on order or on sites with recognised comms problems.

The Communications Provider (J1709) should always be populated where Comms have been installed (not HT or HP). Wherever possible, the SIM Serial Number (J2265) should be populated where the Comms type utilises a SIM card.

14. Communications Address (J0385)

The Communications address is often a telephone or Paknet number. When the Communications Address is an IP address then the following format shall be used:

IPV4 addresses should be written in the form:

d8.d8.d8.d8:d16

Where d8 is an 8 bit unsigned integer from 000-255 and d16 is an unsigned integer from 1-65535 identifying the port (port 0 is reserved and should not be used) - leading zeroes can be omitted so 001 is the same as 1

IPV6 addresses should be written in the form:

[h16:h16:h16:h16:h16:h16:h16:h16]:d16

Where h16 is a 16 bit hexadecimal number from 0000-ffff and d16 is an unsigned integer from 1-65535 identifying the port (port 0 is reserved and should not be used) - leading zeroes can be omitted so 0001 is the same as 1

The [] are needed to allow the port to be differentiated from the rest of the IP address

In addition with IPV6 consecutive groups that are 0 can be omitted from the notation and replaced with :: (only one set of :: is needed for all groups omitted).

Meaning [0001:0000:0000:0000:0000:0000:0000:ffff]:12345 is the same as [1:0:0:0:0:0:0:ffff]:12345 and also the same as [1::ffff]:12345

15. Feeder Status J1684

In the event that a Summation CT is being utilised to aggregate two or more Feeders onto one Meter Id (Serial No), then the Feeder Status shall be populated as 'Active' if any one of the Feeders is energised.

16. Additional Data Item Notes

The notes in the following table shall be adhered to when creating a D0268 dataflow:

Ref	Item Name	Notes
J1260	Baud Rate	This shall reflect the baud rate of the modem dialled by the HHDC. Any internal network communications (eg PAKNET) that communicate at other baud rates are not relevant. Shall be populated to facilitate remote dial-up.

Ref	Item Name	Notes
J0382	Channel Number	This shall be populated to reflect the physical set-up of the outstation. Notice should be taken of section 7 for any unused channels (All leading zero's shall be included).
J0103	Measurement Quantity Id	Where the Measurement Quantity is not relevant to that MPAN (Active Import and Active Export), but the HH MOP has set the value to be recorded, then this shall be populated as 'Unassigned'. Except in cases where the J1687 "Complex Site Indicator" is set to "True", it is not permissible to use a Measurement Quantity ID that relates to Active Export, on a MPAN that has been set up to record Import (and vice versa). Except for complex sites (above), where the HH MOP has programmed the channel to be visible to the Data Collector, unused channels must be populated as "Unassigned".
J1025	Meter Equipment/Service Location	Where known, Meter Equipment/ Service Location shall be populated to provide guidance to the HHDC or an incoming HH MOP as to the location of the metering system at the site.
J0004	Meter Id (Serial Number)	As per DTC except when section 7 applies. Should only contain upper case characters.
J0010	Meter Register Id	As per DTC except when section 7 applies. Register channels 1, 2, etc shall be padded with a leading zero to ensure that this field is always 2 characters in length.
J0475	Meter Register Multiplier	As per DTC except when section 7 applies.
J0478	Number of Register Digits	For a metering system that has an integral outstation, J0478 shall be the same as J1256 (Outstation Number of Dials). Otherwise, these items may be different.
J0428	Outstation Id	As per DTC. Note that the HH MOP shall not include any dashes "-" or underscore "_" characters in this field when these characters prefix or suffix the Outstation Id. These will be added by the HHDC when dialling the meter if necessary. Underscores or dashes within the Outstation Id shall be included.
J0464	Outstation PIN	As per DTC, except when Comms Method is LAN for PRI meters as this is a way of achieving multi-dropping.
J0469	Outstation Number of Channels	Shall always reflect the number of active channels on the outstation that are visible to the DC.
J0432	Pulse Multiplier	As per DTC except when section 7 applies.

Flow Reference:	**D0290**
Flow Name:	**Instruction to Read Meter**
Flow Description:	**The Data Processor will inform the Meter Reader of the required Customer, Site, Meter, and Reading details in order for a meter reading site visit to be arranged.**

Rules for completion of D00290

1. Though all of the address data items included in this flow are defined within the structure as being optional, the address itself is mandatory and must be included in the flow. The use of any individual address item cannot be made mandatory as, in the absence of an agreed address structure for all flows, an address may be constructed from any combination of the Address Line and Postcode items.

2. All the following Data Items in Group 86B "MPAN Cores" shall be completed when known/applicable (this will allow the details to be confirmed and amended if necessary by the DR on a D0222).

3a. Reading Window Details – This Group must be completed if no specific appointment has been agreed – i.e. on routine visits when the DR has a window of +/- 5 working days (from the Target Read Date) in which to obtain a reading. The Target Read Date is the date for which all tolerance calculations will be generated. The regular reading cycle may be used by the DP if he wishes to inform the DR when the next request to read (routine) may be issued. It cannot be guaranteed that the DR will receive a request as per the next reading cycle date, and the DR must not assume this to be the case; however, the DR may wish to use this information to schedule work. The Reason for Request field should be completed as per an equivalent D0005 or D0072 flow received by the DP.

3b. Appointment Details – This Group should be completed if an appointment date has been agreed by the Supplier (either with the DR direct or the Customer). Where a timeframe has been agreed this should also be indicated. If the appointment is for a 2-hour time slot then the Supplier must have agreed this with the DR (by Fax/Phone) prior to sending the flow. In this instance the D0290 must be sent as confirmation of the request. The Reason for Request field should be completed as per D0005 or D0072 flow received by the DP.

The above two groups are mutually exclusive. One and only should be completed for any one MPAN.

4. Expected Readings – The Expected Register Reading is the reading value which the DP has estimated will be the reading on the meter at either the appointment date, or the target read date. The DR should use this expected value, together with the tolerance information in order to verify the meter reading obtained on site.

Flow Reference	D0300
Flow Name	Disputed Readings or Missing Reads on Change of Supplier
Flow Description	Notification of a disputed or Missing Meter Reading on Change of Supplier and the associated details

Applicable to all D0300 Instances

- Although each address line in this flow is optional, the address itself is mandatory and must be included in the flow in Standard Address Format (SAF)

- "Reading Type" (J0171) shall be used in both the Supplier Agreed Meter Reading and Disputed MRoCoS processes to identify the type of reading being proposed as the "Proposed Register Reading" (J1659). It **must not** relate to the "Register Reading" (J0040) in the Disputed MRoCoS process.

- Once agreed, the New Supplier must send the agreed reading on a D0300 to their NHHDC. The agreed reading shall be entered under "Proposed Register Reading" (J1659) with the appropriate "Reading Type" (J0171) for the agreed read and with "Status of Proposed Reading(s)" set to 'Y'.

- On receipt of the D0300 from the New Supplier, the NHHDC must use the "Meter Register ID" (J0010), "Reading Type" (J0171) and "Proposed Register Reading" (J1659).

- "Initiating Flow Indicator" shall be populated with '1' in the Initiating Flow and any follow-up to the Initiating Flow. In all other instances, including rejections, it shall be populated with '2'.

Non DCC-serviced CoS Disputed Reads (MPAN Core Process = D) Instances Only

- Where multiple meters provide metering configuration at an MPAN the details of each meter must be included.

- "Register Reading" (J0040) shall only be used in the Disputed MRoCoS Process and shall be populated only with the "Register Reading" from the original D0086 disputed.

- "Change of Supplier Reading Rejection Code" (J1265) shall only be used in the Disputed MRoCoS process and shall be populated only with the rejection reason for the original disputed reading from the D0086.

- The NHHDC **must not use** the "Register Reading" (J0040), as this will relate to the originally disputed read and not the read agreed by the Suppliers.

Smart DCC-serviced CoS Disputed Reads (MPAN Core Process = D)

- Where a D0300 is sent between Suppliers all time of use settlement registers and the total cumulative register shall be populated as 60C (Meter Register Details) groups. For the relevant MPAN this will mean the following:
    - The import MPAN: 48 time of use registers plus total cumulative
    - The secondary MPAN of a twin element smart metering system: 4 time of use registers plus total cumulative
    - Export MPAN: active export register

- Where an agreed D0300 is sent to the NHHDC only the active time of use settlement registers shall be populated as 60C (Meter Register Details) groups.

- When populating the "Meter Register Id" (J0010) Suppliers shall assign the following values:

    - Import MPAN: '1' through to '48' for each time of use settlement register logically sequenced in accordance with the 1 x 48 tariff time of use register matrix.

    - Secondary MPAN: '1' through to '4' for each time of use settlement register logically sequenced in accordance with the 1x4 secondary tariff time of use register matrix.

- The total cumulative register can be assigned any value other than those defined in the paragraph above.

- "Register Reading" (J0040) shall only be used in the Disputed MRoCoS Process and shall be populated only with the "Register Reading" from the D0010 candidate reading.

- "Change of Supplier Reading Rejection Code" (J1265) shall only be used in the Disputed MRoCoS process and shall be populated only with the rejection reason for the original disputed reading from the D0010.

- The NHHDC **must not use** the "Register Reading" (J0040), as this will relate to the originally disputed read and not the read agreed by the Suppliers.

Note: These rules apply where the new or old Supplier disputes the candidate D0010 reading that has been obtained from a smart DCC-serviced meter.

- **Missing Reads (MPAN Core Process = M) Instances Only**
- Justification for Groups 59C & 60C being mandatory groups but with optional meter id & meter register id is: 60C is mandatory because of the existence of item J1660 which is integral to the flow however meter register id may not be known. 59C is mandatory because of the existence of item "Initiating Flow Indicator" which is also integral to the flow however Meter Id may not be known. Populating "Initiating Flow Indicator" in Group 59C ensures that the structure is optimised.

- Where a "Record Rejection Reason Indicator" = '15' (not the New Supplier) is used against any Meter Register Id then this code shall be used consistently for all registers on the same meter.

    - When the initiating flow has been sent to wrong Associated Supplier then the response shall contain the "Record Rejection Reason Indicator" = '16' (Not Associated Supplier).

    - Where a Supplier receiving the flow has already been notified of a MRoCoS, then the response shall contain the "Record Rejection Reason Indicator" = '19' (D0086 has already been issued).

    - Where a NHHDC receiving the flow has notified a MRoCoS, then the response shall contain the "Record Rejection Reason Indicator" = '19' (D0086 has already been issued).

- Where flow is used to initiate a request for Associated Supplier to propose a read in the absence of Initiating Supplier being able to provide one then "Status of Proposed Reading(s)" shall be set to 'R' (reading requested when Initiating Supplier unable to provide).

- When initiating a missing read process and Supplier is proposing a potential read set “Status of Proposed Reading(s)” to ‘P’ (proposed reading submitted by Supplier).

- Where multiple meters provide metering configuration at an MPAN the details of each meter must be included.

Note: These rules apply to missing reads for traditional and smart DCC-serviced meters

Flow Reference	D0301
Flow Name	Erroneous Transfer Communication
Flow Description	Notification / Update of an Erroneous Registration / Transfer

- Although each address line in the flow is optional, the address itself is mandatory and must be included in the flow in Standard Address Format (SAF). The address shall match the MPAN taken in error not the details of any MPAN that should have been taken.
- If Customer Requests No Contact (J1670) field is populated, the initiating Supplier shall provide an alternative contact point (such as telephone number / email address) within their organisation. This information shall be conveyed in the J0012 (Additional Information).
- The meter serial number should only be populated if a meter reading is provided. It is not a validation point for the ET itself.
- J0012 (Additional Information) is mandatory if J1672 (Status of Erroneous Transfer) is populated with 'C' or 'F'.

Flow Reference	**D0302**
Flow Name	**Notification of Customer Details**
Flow Description	**The Supplier will inform the participants of customer contact address and mailing address details**

Rule

1. The Supplier shall send the D0302 to Distributor in the event of a change of Customer Name or Contact Details.

Flow Reference	D0303
Flow Name	Notification of Meter Operator, Supplier and Metering Assets installed / removed by the MOP to the MAP
Flow Description	Notification to the MAP of any change to relevant MOP appointments, Supplier registration and Meter Assets

Where the MOP and MAP are the same commercial entity then, in the circumstances described in rules 1 to 3 below, the use of the D0303 is optional, provided that entity can demonstrate that information contained within the D0303 has been transferred from the MOP to the MAP. Where the MAP is a Customer, or there is a change of MAP, the D0303 is not required.

Rule

2. In all instances where a D0150 is sent by a MOP as a result of a meter removal, exchange or installation, the D0303 shall be sent from the MOP to the MAP.

3. When the existing MOP is de-appointed he must send the D0303 to the MAP with the 'effective to' date populated with the same date as that contained in the D0151.

4. When a New MOP is appointed and on receipt of Meter Technical Details from the Old MOP the new MOP must use the D0303 to notify the MAP of the appointment of MOP and/or appointment of Supplier.

5. Meter Details {Group 74C} for every installed meter defined at the relevant MPAN belonging to that MAP must be included whether or not they have changed.

6. The Date of Meter Installation {J0848} must be populated where the flow is being used to notify the installation of that meter.

7. Meters which are removed will be included in Group 74C, and are only sent in response to their removal (i.e. the removal of a meter is only notified ONCE).

8. Temporary check meters used for comparative readings for dispute resolution are not allocated an MPAN and are NOT to be included in the flow.

9. Date of Installation / Removal of Timing Device / Associated Equipment {J1680} will be populated with the date that an asset, other than the meter, has been installed or removed. It will only be populated when the flow is being used to notify the installation or removal of such an asset.

10. When an existing MOP is de-appointed with a Termination Reason of 'LC' a MOP is obliged to send a D0303 to the MAP. In the D0303 'New Supplier Id' and 'Effective to Date {MOA}' must be populated based on corresponding data provided by the Supplier on D0151. In this scenario there will be no change to the populated 'Effective from Settlement Date {REGI}' as the MAP can calculate the 'Effective from Settlement Date' {REGI} by using the 'Effective to Date{MOA} +1 calendar day from the D0303 Data Flow.

NOTE: The current DTC has no item 1 for these rules.

Flow Reference	**D0305**
Flow Name	**Notice of Customer Requested Objection**
Flow Description	**Notification to New Supplier that an objection has been raised at the request of the customer.**

- When sent as a spreadsheet via email the D0305 flow must take the format of the spreadsheet as shown below (unless otherwise agreed between the relevant parties).
- Though the Postcode (J0757) and Street Name (J1673) data items included in this flow are defined within the structure as being optional, at least one shall be populated in order for the metering point to be identified.

Batch Identifier	Old Supplier Id	New Supplier Id	MPAN Core	House Name/ Number	Postcode	Street Name	Effective from Settlement Date {REGI} for New Supplier	Customer Name	Customer Telephone Number	Date Customer Requested Objection Raised	Additional Information

Flow Reference:	**D0306**
Flow Name:	**Request for Debt Information**
Flow Description:	**Request for debt information upon agreement from Customer**

Rule

1. Where Data Item Customer Forename (J2246) is completed the full name shall be populated where possible.

2. Group 'Rejection Reason' must only be included in the flow where the flow is being sent from the Old Supplier to the New Supplier.

3. Although J2248 'Customer Title' and J2246 'Customer Forename' Data Items included within this Data Flow are defined as being optional, where the "customer's account is in the name of a person these Data Items must be populated.

4. Though all of the address data items included in this flow are defined within the structure as being optional, the address itself is mandatory and must be included in the flow. The use of any individual address item cannot be made mandatory as, in the absence of an agreed address structure for all flows, an address may be constructed from any combination of the Address Line and Postcode items. Postcode should only be omitted if the Post Office has not generated one for the premises.

5. The J0012 (Additional Information) field is Mandatory where the J2249 (DAP Rejection Code) of "Other" is used.

Flow Reference:	**D0307**
Flow Name:	**Debt Information**
Flow Description:	**Estimate of Debt Held on Meter**

Rule

1. Group “Rejection Reason” must only be included in the flow, where the flow is being sent from the New Supplier to the Old Supplier;

2. The J0547 (Debt Recovery Rate) is the rate which has been agreed with the Customer

3. Where the J1694 (Complex Debt Indicator) of “True” is used within Group90C of the Data Flow, the J0012 (Additional Information) field is Mandatory.

4. The J0012 (Additional Information) field is Mandatory where the J2249 (DAP Rejection Code) of “Other” is used.

Flow Reference:	**D0308**
Flow Name:	**Confirmation of Customer Debt Transfer**
Flow Description:	**Confirmation that a transfer of customer debt has been accepted**

Rule

1. Group "Rejection Reason" must only be included in the flow where, the flow is being sent from Old Supplier to New Suppler.

2. Although J2248 'Customer Title' and J2246 'Customer Forename' Data Items included within this flow are defined as being optional, where the customer's account is in the name of a person not a business these data items must be populated.

3. Though all of the address Data Items included in this Data Flow are defined within the structure as being optional, the address itself is mandatory and must be included in the flow. The use of any individual address item cannot be made mandatory as, in the absence of an agreed address structure for all flows, an address may be constructed from any combination of the Address Line and Postcode items. Postcode should only be omitted if the Post Office has not generated one for the premises.

4. The J0012 (Additional Information) field is Mandatory where the J2249 (DAP Rejection Code) of "Other" is used.

Flow Reference:	**D0309**
Flow Name:	**Confirmation of Debt Assigned**
Flow Description:	**Confirmation of the amount of debt to be assigned.**

Rule

1. Group “Response Code” must only be included in the flow where the flow is being sent from the New Supplier to the Old Supplier.

2. The J0012 (Additional Information) field is Mandatory where the J2250 (DAP Response Code) of “N” is used.

MPAN Core	Rejection Row Identifier	Additional Information	Debt Recovery Rate	Estimated Total Debt Outstanding	Total Debt Outstanding	Amount of VAT	Factored Total Payment	Reading Type	Reading Date & Time	Meter Register Id	Register Reading	Meter Register Id	Register Reading

Flow Reference	D0310
Flow Name	Notification of Failure to Load or Receive Metering System Settlement Details
Flow Description	Provides details of any failure to load or receive Metering System Settlement Details by an NHHDC

Rule

1. The ‘MPAN Cores with Settlement Dates from D0052’, ‘Settlement Details from D0052’ and ‘Time Pattern Regime from D0052’ data groups are populated with the original details from the D0052 in respect of any Metering Systems within the D0052 that have failed validation. If this flow is used to indicate no D0052 has been received by NHHDC then this information will not be populated.

2. The Standard Settlement Configuration Id and Effective from Settlement Date {SCON} within the "MPAN Details with NHHDC received data" data group are optional and will be populated with the values from the D0150 flow where these differ from the values in the D0052.

3. Where the GSP Group Id from the D0052 differs from that received by an NHHDC on the D0155, the D0052 should be accepted, however the Supplier should be manually notified of the mismatch so that any necessary further action can be taken.

4. Additional Information within the "Error Details" data group is optional but must be populated where a reason code of ‘Other’ is used.

Flow Reference:	D0312
Flow Name:	Notification of Meter Information to MPAS
Flow Description	Update MPAS with change to non-MPAS sourced data

Rule

1. All data items pertaining to EVERY installed meter defined at the relevant MPAN must be included within Group 12D whether they have changed or not. This group is therefore the definitive statement of meters at a metering point.

2. Group 12D must only be absent when ALL meters are removed at a Metering Point and are not replaced.

3. Meters which are removed will be included in Group 13D, and are only sent in response to their removal (i.e. the removal of a meter is only notified ONCE)

4. Check meters must not to be included in the flow.

5. The MOP must send this flow following a change to any of the data items except where rule 8 takes precedence.

6. If a MOP processes such a change after they have been de-appointed they must still send this flow if the effective date of the change is during their appointment period.

7. The "Meter Type" data item must be set to "H" for all HH MPANs.

8. The D0312 shall not be used to indicate a change of MAP only. The D0304 shall be used in this instance.

9. The "Meter Operator Id" data item in Group 76MX will be populated by MPAS with the MPID of the MOP that sent the D0312.

10. Groups 76M and 77M must only be present in the instance of the flow sent by MPAS.

11. MPAS must send the flow to the MOP as indicated in Group 76M, the current Supplier and the Supplier at the time of the meter work[1]. Where the Supplier at the time of the meter work has been end dated in MDD, the D0312 will only be required to be sent to the MOP and the current Supplier.

[1] 'Meter Work' refers to the date on which the meter work was undertaken (Metering System MTD EFD), i.e. meter installation date, rather than the date on which the update is processed by MPAS.

Flow Reference:	D0313
Flow Name:	Auxiliary Meter Technical Details
Flow Description	Communications and security information to accompany NHH Meter Technical Details for AMR Meter Types

Rules

1. The Meter Operator (MOp) must send a D0313 in all cases where the MOp sends a D0150 and where the meter type is either NCAMR, RCAMR or RCAMY, except where there are no meters at the metering point and/or all meters have been removed, in which case only the D0150 is sent the MOp must send a D0149 / D0150 in all cases where the MOp sends a D0313.

2. All Data Items must contain the same values as those equivalent Data Items that appear in the associated D0150, except where the D0150 data is defined as Null.

3. When Outstation Password Level 1 has a value, the MOp shall populate this field with that value on all flows to all participants.

4. When Outstation Password Level 2 has a value, the MOp shall populate this field completely with asterisk on flow versions sent to any participants other than MOp and DC.

5. When Outstation Password Level 3 has a value, the MOp shall populate this field completely with asterisks on flow versions sent to any participants other than MOps.

6. Where the Metering System has more than 3 or more levels of password, the Master / Administrator password shall be provided in the field Outstation Password Level 3

7. Where a particular level of Outstation Password does not exist, the field – which is mandatory – shall be populated with asterisks.

8. J1689 'Event Indicator' shall only be populated with one of the following sub-set of the standard valid set:

    A New Connection
    B Addition of Meter(s) and/or Outstation(s)
    C Removal of Meter(s) and/or Outstation(s)
    D Replacement of Meter(s) and/or Outstation(s)
    E Configuration/Password Change
    F Addition of Comms
    H Replacement of Comms
    I Change of Agent
    J Change of Supplier
    K Coincident Change of Agent and Supplier
    L Request from Agent
    M Request from Supplier
    O Total Replacement of Meter(s) and/or Outstation(s)
    P Addition of Meter and Password Change

9. Meter Register Description is Optional, except where the Register Description is visible on the meter's physical display, in which case the item is Mandatory and shall exactly reflect the text displayed.

10. For every register in the D0149 / D0150 there shall be at least one corresponding value in group 08G of the D0313.

11. J0386 'Communications Method' shall not be populated with any of the following sub-set of the standard valid set:

    GS Global System for Mobile Communications (GSM) (not to be used for new comms installations after 24th February 2011; use component elements GF, GP, GV, SM).
    HP Permanent Hand Held Reads
    HT Temporary Hand Held Reads

12. Data Item 1717 Remote Disable/Enable Capability shall only be populated with a value of 'T' where all meters associated with the MPAN are of type RCAMY

13. If any of the meters associated with the MPAN are of type NCAMR, RCAMR or RCAMY, then the D0313 is required for those meters.

Auxiliary metering information is the security and communications information not captured in the D0149/D0150 associated with a remotely communicating metering system. The auxiliary metering information needs to be transferred on change of MOp and change of NHHDC. The auxiliary metering information is captured in the MOp system alongside the other meter technical details. The D0313 has been designed to enable this auxiliary metering information to be included in a structured DTC flow and passed between participants in an ordered and auditable way.

Sending/receipt of the D0313 will not be restricted to Profile Classes 5-8 as the MOp does not know the Profile Class that the Supplier & Distributor have recorded against the MPAN, the trigger for its use will be the Meter Type.

The D0313 will be sent every time a D0149 / D0150 is sent, where the Meter Type encompass Automatic Meter Reading (i.e. RCAMR, RCAMY, NCAMR). When a business trigger requires one of the flows to be sent, all three will be sent together.

The flow will be sent between participants using the Data Transfer Service, or as otherwise agreed bi-laterally.

D0313 will be required by the Meter Operator, NHHDC, Distributor and Supplier. Distributors have little business use for the flow, although they have expressed a desire to know about the 'enable/disable capability'.

The information held by appointed Meter Operator will be considered the master copy.

Guidance on Data items within the Flow

The following section provides some guidance about use of certain data included in D0313.

Group 03G Outstation Details

The existing rules for completion of this flow apply to the passwords. Similar conventions should apply to the use of the Outstation Usernames. These should only be populated where the context requires that the recipient is appropriate to have the information to meet their operational and commercial obligations.

In the majority of cases in the use of this flow the Outstation and Meter will be the same physical device, therefore the data items such as Outstation Number of Dials will equal the Number of Register Digits.

Group 04G Communications Details
The D0313 caters for multiple Communications Addresses and associated Methods. Address 1 should be associated to Method 1, and – where applicable - Address 2 associated to Method 2 etc. This is more extensive than the D0268.

Where a new installation of a meter intending to be remotely read occurs but the communications are not operating initially, the Meter Type should be set to 'N', and the D0149/D0150 sent. When the communications are installed and operational on the metering equipment the Meter Type should be changed to RCAMR, RCAMY, or NCAMR, and the D0149/D0150 and D0313 sent.

Where an existing installation of a meter of type RCAMR, RCAMY, or NCAMR suffers a communications failure then if the failure is transient, the meter type remains unchanged and the problem resolved through the fault resolution process.

Where it is determined that communications have failed and they will not be replaced, or have been completely removed, then the Meter Type should be changed to N and the D0149/D0150 (without D0313) should be sent. The change of Meter Type and absence of D0313 will alert the recipient of the change of meter reading capability of that metering system.

Where a metering system has multiple Measurement Quantities (e.g. AI, KW, RI, KV etc.) Groups 04G, 05G and 06G are repeated for each Measurement Quantity/channel combination which can be accessed via the relevant Communications Method and provider in Group 04G. An example of this scenario is included below.

The Communications Provider data item is subject to a parallel BSC change to create a new role code and Market Participants for providers as required

Group 07G Meter Memory Details

BSCP514, section 2.3.2 Installation, Removal and Re-programming of Meters, states:

> "...d) Where multi-register Non-Half Hourly Meters are installed, the MOA shall programme those for which it is responsible so that the physical registers may be mapped using the Meter Technical Details supplied to its Associated Data Collector onto logical registers forming a valid Standard Settlement Configuration.
>
> e) When installing a NHH multi-register Meter, or when attending the site to carry out significant (note 2) work on such a Meter that would require re-registration of the Metering System, the MOA shall ensure that the registers of the metering asset are clearly identified (note 3) and that the Meter Register IDs (J0010) to be used in all relevant data flows clearly identify the registers on the metering asset to be read. (e.g. "L", "N", "R1", "R2", etc.).
>
> note 2: Significant work – means any work carried out on the Metering System by a competent person, that would require re-registration of the Metering System.
>
> note 3: Where the identifier cannot be uniquely identified by a 2-character Meter Register ID (e.g. "CUM 3"), a label shall be applied to, or immediately adjacent to, the Meter that shows the display sequence with the equivalent Meter Register ID for each register (e.g. "CUM 2 – Reg ID = 02" etc.). For two-rate Key Meters only, the only permitted Meter Register IDs are " 1", "1 ", "01"

or “R1” and “ 2”, “2 “, “02” or “R2”. (When installing or attending the site to carry out significant work requiring re-registration). ...”

The BSCP text is based on an eye-ball reading process, where the meter reader can use the label adjacent to the meter to cross refer the settlement register description to that displayed by the meter. This label does not exist when a NHHDC is remotely retrieving register values from a meter.

This group in D0313 is designed to enable the Meter Operator to inform the NHHDC of the correct ‘triangulation’ between the D0149/D0150 register names and where they reside within the meter – the Meter Memory Location (J1710). The NHHDC can then obtain the register values stored in the Meter Memory Location and submit those values associated to the correct settlement registers in the D0010.

An example of the problem is demonstrated by a three-rate meter, where the meter display indicates R1, R2 and R3 as does the internal time of use register values.

Configuration A

If the ‘week day’ consumption was recorded on the R1 register then the NHHDC would recover the data from the meter from wherever they knew the R1 data was stored. Similar for ‘night’ from R2, and ‘weekend day’ from R3.

This group would allow the NHHDC to map the settlement descriptors of DY to the internal (and display) Meter Memory Location of R1, similarly, NT = R2, WE = R3.

Configuration B

If the ‘week day’ consumption was recorded on the R1 register then the NHHDC would recover the data from the meter from wherever they knew the R1 data was stored. Similar for ‘night’ from R3, and ‘weekend day’ from R2.

This group would allow the NHHDC to map the settlement descriptors of DY to the internal (and display) Meter Memory Location of R1, similarly, NT = R3, WE = R2.

If the Meter Operator or NHHDC get the mapping incorrect then the settlement and billing data is incorrect. This is a significant issue today, where NHHDCs are making ‘assumptions’ based on the meter type and the Meter Operator. However, these assumptions are not robust as the same Meter Operator may have meters in their portfolio configured differently due to request by customers or Suppliers. Equally they may have become responsible for a meter, with a different configuration, after a change of Meter Operator. Suppliers have confirmed that they do not want existing meters reconfigured on change of Meter Operator events, as this will further confuse any errors and subsequent corrections to billing and settlement.

Meter Register Description (J1712) is included as an optional field. It should always be populated where the register value is visible on the display. The only circumstance when it should be unpopulated is where a register indicated in the D0149/D0150 is not visible on the display. This group will only include those registers included in the D0149/D0150, but there may be display items (e.g. current power factor or frequency) which are visible on the meter which will not be included in the D0149/D0150/D0313. The field is a CHAR field and can therefore accommodate upper and lower-case letters, and should reflect as accurately as possible the meter display.

Example Flows

These are provided to illustrate how the flow could be used for various meter types and configurations.

Configuration A

IMServ have constructed the following example of the D0150, D0149, and D0313 for a three rate EDMI Mk10 meter without any non-settlement registers.

D0150

ZHV|0031295164|D0150001|M|UKDC|D|SOUT|20091208114331||||OPER|
288|1900000000004|20091207||E|
289|0326|20091207|||
290|209123456|||100|E|EDMI MK10 LVWC
D|UKDC||||||||||RCAMR|20091207|20090714|20190714|||R|20091207|
293|R1|C|AI|1.00||8|||
293|R2|C|AI|1.00||8|||
293|R3|C|AI|1.00||8|||
ZPT|0031295164|6||1|20091208114331|

D0149

ZHV|0031295158|D0149001|M|UKDC|D|SOUT|20091208114331||||OPER|
280|1900000000004|20091207|
281|0326|20091207|
778|00184|
283|209123456|
284|R1|1|
778|00187|
283|209123456|
284|R2|1|
778|00210|
283|209123456|
284|R3|1|
ZPT|0031295158|11||1|20091208114331|

D0313

ZHV|0031295682|DXXXX001|M|UKDC|D|UKDC|20091208134106||||OPER|
02G|1900000000004|20091207|COP 10|6|D|T|
03G|209123456|E10|1|6||1|username|password|username|password|username|********|
04G|CS|07948111222|||ORAN|
06G|209123456|
07G|IN|F061|
08G|R1|1E02|Day|
08G|R2|1E03|Wknd|
08G|R3|1E04|Night|
ZPT|0031295682|8||1|20091208134106|

Configuration B

IMServ have constructed the following example of the D0150, D0149, and D0313 for a three rate EDMI Mk10 meter without any non-settlement registers.

D0150

ZHV|0031295164|D0150001|M|UKDC|D|SOUT|20091208114331||||OPER|
288|1900000000004|20091207||E|
289|0326|20091207|||
290|209123456|||100|E|EDMI MK10 LVWC
D|UKDC||||||||||RCAMR|20091207|20090714|20190714|||R|20091207|
293|R1|C|AI|1.00||8|||
293|R2|C|AI|1.00||8|||
293|R3|C|AI|1.00||8|||
ZPT|0031295164|6||1|20091208114331|

D0149

ZHV|0031295158|D0149001|M|UKDC|D|SOUT|20091208114331||||OPER|
280|1900000000004|20091207|
281|0326|20091207|
778|00184|
283|209123456|
284|R1|1|
778|00210|
283|209123456|
284|R2|1|
778|00187|
283|209123456|
284|R3|1|
ZPT|0031295158|11||1|20091208114331|

D0313

ZHV|0031295682|D0313001|M|UKDC|D|UKDC|20091208134106||||OPER|
02G|1900000000004|20091207|COP 10|6|D|T|
03G|209123456|E10|1|6||1|username|password|username|password|username|********|
04G|CS|07948111222|||ORAN|
06G|209123456|
07G|IN|F061|
08G|R1|1E02|Day|
08G|R2|1E03|Night|
08G|R3|1E04|Wknd|
ZPT|0031295682|8||1|20091208134106|

Example 1

BGlobal have contrasted the following example of the D0150, D0149 and D0313 showing a typical use of the flow for a two rate EDMI Atlas Mk10 meter.

D0150
ZHV|BMFVV07J25|D0150001|M|BMET|D|BMET|20090612143320||||OPER|
288|1000000000001|20081014||E|
289|0244|19970801|||
290|E10BG00000|||100|C|EDMI Atlas Mk10-
3|BMET||||||||||RCAMR|20081014|20070808|20170808|||R|20081014|
293|R1|C|AI|1.00||8|||
293|R2|C|AI|1.00||8|||
ZPT|BMFVV07J25|5||1|20090612143320|

D0149
ZHV|BMFVV02RN5|D0149001|M|BMET|D|BMET|20090612143257||||OPER|
280|1000000000001|20081014|
281|0244|19970801|
778|00040|
283|E10BG00000|
284|R1|1|
778|00206|
283|E10BG00000|
284|R2|1|
ZPT|BMFVV02RN5|8||1|20090612143257|

D0313
ZHV|BMFVV02RNT|D0313001|M|BMET|D|BMET|20090612143257||||OPER|
02G|1000000000001|20091201|5||I|T|
03G|||||||ADMIN|PASSWORD|USER|PASSWORD|||
04G|GP|XXX.XX.XXX.XX|||ORAN|
05G|8|X|AI|
06G|E10BG00000|
07G|IN|F061|
08G|R1|1E02||
08G|R2|1E03||
07G|ST|6200|
08G|R1|1C02||
08G|R2|1C03||
ZPT|BMFVV02RNT|11||1|20090612143257|

Example 2
IMServ have constructed the following example of the D0150, D0149, and D0313 for a single rate EDMI Mk10 meter with MD and reactive register.

D0150
ZHV|0031295164|D0150001|M|UKDC|D|SOUT|20091208114331||||OPER|
288|1600000116210|20091207||E|
289|0393|20091207|MSNFC 98|20091207|
762|20091207|I-RNHH-WC Install - Remote NHH|
290|209147035|||100|E|EDMI MK10 LVWC
D|UKDC||||||||||RCAMR|20091207|20090714|20190714|||R|20091207|
293|UN|C|AI|1.00||8|||
293|CT|C|AI|1.00||8|||

293|MD|M|KW|1.00||8|||
293|TR|C|RI|1.00||8|||
ZPT|0031295164|10||1|20091208114331|

D0149
ZHV|0031295158|D0149001|M|UKDC|D|SOUT|20091208114331||||OPER|
280|1600000116210|20091207|
281|0393|20091207|
778|00001|
283|209147035|
284|UN|1|
23A|MSNFC 98|20091207|
24A|00001|
25A|209147035|
26A|MD|1|
26A|CT|1|
26A|TR|1|
ZPT|0031295158|11||1|20091208114331|

D0313
ZHV|0031295682|D0313001|M|UKDC|D|UKDC|20091208134106||||OPER|
02G|1600000116210|20091207|COP 10|6|D|T|
03G|209147035|E10|1|6||1|username|password|username|password|username|********|
04G|CS|07948111222|||TMOB|
05G|1|1|AI|
06G|209147035|
07G|IN|F061|
08G|UN|1E01|R1|
08G|CT|1E00|CT|
08G|TR|1E20|TR|
07G|ST|6200|
08G|MD|2000|nD|
ZPT|0031295682|11||1|20091208134106|

Example 3
IMServ have constructed the following example of the D0150, D0149, and D0313 for a two rate Elster A1140 meter with MD and reactive register.

D0150
ZHV|0031295688|D0150001|M|UKDC|D|UKDC|20091208134106||||OPER|
288|1412799493120|20091207||E|
289|0051|19970801|||
762|20091207|I-RNHH-WC Install - Remote NHH|
290|K09105777|||100|H|ELSTER
A1140|UKDC|||||||||||RCAMR|20091207|20091007|20191007|||R|20091207|
293|DY|C|AI|1.00||6|||
293|NT|C|AI|1.00||6|||
293|CT|C|AI|1.00||6|||
293|TR|C|RI|1.00||6|||
293|MD|1|KW|1.00||6|||

ZPT|0031295688|9||1|20091208134106|

D0149
ZHV|0031295682|D0149001|M|UKDC|D|UKDC|20091208134106||||OPER|
280|1412799493120|20091207|
281|0051|19970801|
778|00120|
283|K09105777|
284|NT|1|
778|00112|
283|K09105777|
284|DY|1|
23A|MSNFC 98|20091207|
24A|00001|
25A|K09105777|
26A|MD|1|
26A|CT|1|
26A|TR|1|
ZPT|0031295682|14||1|20091208134106|

D0313
ZHV|0031295682|D0313001|M|UKDC|D|UKDC|20091208134106||||OPER|
02G|1412799493120|20091207|COP 10|6|D|T|
03G|K09105777|A11|1|6||1||password||password||**********|
04G|CS|07948111222|||TMOB|
05G|1|1|AI|
06G|K09105777|
07G|IN|A.A.A.A.A.A|
08G|DY|A.A.A.A.A.A|Day|
08G|NT|A.A.A.A.A.A|Night|
08G|CT|A.A.A.A.A.A|Total|
08G|TR|A.A.A.A.A.A|Reactive|
07G|ST|A.A.A.A.A.A|
08G|MD|A.A.A.A.A.A|MD|
ZPT|0031295682|12||1|20091208134106|

Example 4
IMServ have constructed the following example of the D0150, D0149, and D0313 for a two rate Elster AS230 meter.

D0150
ZHV|0031295688|D0150001|M|UKDC|D|UKDC|20091208134106||||OPER|
288|1012799493102|20091207||E|
289|0051|19970801|||
762|20091207|I-RNHH-WC Install - Remote NHH|
290|09105087|||100|H|ELSTER AS230
LVWC|UKDC|||||||||||RCAMR|20091207|20091007|20191007|||R|20091207|
293|DY|C|AI|1.00||6|||
293|NT|C|AI|1.00||6|||
ZPT|0031295688|6||1|20091208134106|

D0149
ZHV|0031295682|D0149001|M|UKDC|D|UKDC|20091208134106||||OPER|
280|1012799493102|20091207|
281|0051|19970801|
778|00120|
283|09105087|
284|NT|1|
778|00112|
283|09105087|
284|DY|1|
ZPT|0031295682|8||1|20091208134106|

D0313
ZHV|0031295682|D0313001|M|UKDC|D|UKDC|20091208134106||||OPER|
02G|1012799493102|20091207|COP 10|6|D|T|
03G|09105087|A23|2|6||1||password||password||**********|
04G|CS|07958111216|||VODA|
05G|1|1|AI|
06G|09105087|
07G|IN|A.A.A.A.A.A|
08G|DY|A.A.A.A.A.A|R2|
08G|NT|A.A.A.A.A.A|R1|
ZPT|0031295682|8||1|20091208134106|

Example 5
IMServ have constructed the following example of the D0150, D0149, and D0313 for a two rate with MD Elster A1700 VISION meter.

D0150
ZHV|0031295688|D0150001|M|UKDC|D|UKDC|20091208134106||||OPER|
288|1900000000013|20091207||E|
289|0244|19970801|MSNSFC 98|20091207|
290|07115087|||100|H|ELSTER A1700
LVWC|UKDC|||||||||||RCAMR|20091207|20091007|20191007|||R|20091207|
293|R1|C|AI|1.00||6|||
293|R2|C|AI|1.00||6|||
293|MD|1|KW|1.00||6|||
ZPT|0031295688|6||1|20091208134106|

D0149
ZHV|0031295682|D0149001|M|UKDC|D|UKDC|20091208134106||||OPER|
280|1900000000013|20091207|
281|0244|19970801|
778|00043|
283|07115087|
284|R2|1|
778|00210|
283|07115087|
284|R1|1|
23A|MSNFC 98|20091207|
24A|00001|

25A|07115087|
26A|MD|1|
ZPT|0031295682|12||1|20091208134106|

D0313
ZHV|0031295682|D0313001|M|UKDC|D|UKDC|20091208134106||||OPER|
02G|1900000000013|20091207|COP 5|6|D|F|
03G|07115087|VIS|2|6||1||password||password||**********|
04G|CS|07975451256|||VODA|
05G|1|1|AI|
05G|2|1|RI|
06G|07115087|
07G|IN|Time|
08G|R1|TOU Register 01|NT|
08G|R2|TOU Register 02|DY|
08G|MD|Maximum Demand 1|MD|
ZPT|0031295682|10||1|20091208134106|

Example 6

Lowri Beck have created this example of the D0313 to show how the flow could be constructed where there are multiple communications methods

Lowri Beck 2 rate EDMI Mk10 Meter with non-settlement registers.

- Two communication methods, GP and GS
- 4 x Measurement Quantity ID's.

ZHV|LBG1OR0DT0|D0313001|M|LBSL|D|LBSL|201002111111||||OPER|
02G|1000000000001|20101001|10||J|T|
03G|XX|XX|X|X||1|USERNAME|PASSWORD|USERNAME|PASSWORD|||
04G|GP|XXX.XX.XXX.XX|||ORAN|
05G|1|1|AI|
06G|E10LB00001|
07G|IN|F061|
08G|R1|1E01||
08G|R2|1E02||
08G|CT|1E00||
07G|ST|6200|
08G|R1|1C01||
08G|R2|1C02||
08G|CT|1C00||
04G|GP|XXX.XX.XXX.XX|||ORAN|
05G|1|1|RI|
06G|E10LB00001|
07G|IN|F061|
08G|TR|1E20||
07G|ST|6200|
08G|TR|1C20||
04G|GP|XXX.XX.XXX.XX|||ORAN|
05G|1|1|KW|
06G|E10LB00001|
07G|IN|F061|
08G|MW|3E40||

07G|ST|6200|
08G|MW|3C40||
04G|GP|XXX.XX.XXX.XX|||ORAN|
05G|1|1|KV|
06G|E10LB00001|
07G|IN|F061|
08G|MV|3E00||
07G|ST|6200|
08G|MV|3C00||
04G|GS|07777777777|||ORAN|
05G|1|1|AI|
06G|E10LB00001|
07G|IN|F061|
08G|R1|1E01||
08G|R2|1E02||
08G|CT|1E00||
07G|ST|6200|
08G|R1|1C01||
08G|R2|1C02||
08G|CT|1C00||
04G|GS|07777777777|||ORAN|
05G|1|1|RI|
06G|E10LB00001|
07G|IN|F061|
08G|TR|1E20||
07G|ST|6200|
08G|TR|1C20||
04G|GS|07777777777|||ORAN|
05G|1|1|KW|
06G|E10LB00001|
07G|IN|F061|
08G|MW|3E40||
07G|ST|6200|
08G|MW|3C40||
04G|GS|07777777777|||ORAN|
05G|1|1|KV|
06G|E10LB00001|
07G|IN|F061|
08G|MV|3E00||
07G|ST|6200|
08G|MV|3C00||
ZPT|BMFVV02RNT|11||1|20090612143257|

Flow Reference:	**D0367**
Flow Name:	**Smart Meter Configuration Details**
Flow Description:	**Notifies how a smart meter is configured.**

Rule

1. When any data item has changed, the Smart Meter Configuration Details are considered to change. Consequently the J1254 Effective from Settlement Date {MSMTD} must be set to the value of the last date of change. It is the responsibility of the receiving application to determine if any Data Item has changed on receipt of the Smart Meter Configuration Details and, if so, which Data Item has changed.

2. Meter Register Description is Optional, except where the Register Description is visible on the meter's physical display, in which case the Supplier shall record exactly the text displayed, where known.

3. When being sent by the New Supplier in accordance with the Change of Supplier process in BSCP514; if the New Supplier does not know the value of the Meter Id (Serial Number) (J0004) Data Item, they can populate this with the value "NK". This will inform the MOP that the Meter Id (Serial Number) (J0004) Data Item is not known but the New Supplier has configured the meter in accordance with BSCP514.

4. Where the J0483 (Meter Type) indicates the meter is compliant with the Smart Metering Equipment Technical Specifications 2 (SMETS2) the J0478 (Number of Register Digits) for all Meter Register's shall be populated with the following values:

Meter Type (J0483)	Number of Register Digits (J0478)
S2A	5
S2B	5
S2C	6
S2AD	5
S2BD	5
S2CD	6
S2ADE	5
S2BDE	5
S2CDE	6

Rules for mapping meter register ids for smart DCC-serviced meters

Enhanced functionality of smart meters means that Suppliers are able to remotely configure up to 48 different tariff registers. On Change of Supplier this may mean the registers on which consumption is recorded may differ between Old and New Supplier and therefore has the potential to cause confusion on opening and closing bills. In order to mitigate any confusion a common set of mapping conventions is used.

1) Meter Register Id (J0010) values will be assigned sequentially in accordance with the number of time of use registers recording consumption, for example:
    a) The import MPAN of a four rate meter will use values '1' through to '4'.
    b) The secondary MPAN of a twin element metering system will use values '1' through to '4' as applicable.
2) Meter Register Id (J0010) values will be assigned by time pattern regime under the following principles:
    a) Single rate and on-peak consumption for multi-rate tariffs will be assigned the '1' register
    b) Off-peak consumption for multi-rate tariffs will be assigned the '2' register
    c) Seasonal/weekend consumption for multi-rate tariffs will be assigned the '3' register
    d) Seasonal consumption for multi-rate tariffs will be assigned the '4' register

Examples

For a single element smart meter, the import MPAN shall be assigned the following Meter Register Id (J0010) mapping:

- Single rate - '1' (e.g. Unrestricted SSC 0393, or 10 hour off-peak SSC 0003)
- Two rate (e.g. Economy 7 SSC 0151):
    - '1' for on-peak consumption (e.g. TPR 00043)
    - '2' for off-peak consumption (e.g. TPR 00210)
- Three rate (e.g. Evening/Weekend Economy 7 SSC 0326)
    - '1' for on-peak consumption (e.g. TPR 00184)
    - '2' for off-peak consumption (e.g. TPR 00210)
    - '3' for weekend consumption (e.g. TPR 00187)
- Four rate (e.g. 4-rate SToD SSC 0136)
    - '1' for on-peak consumption (e.g. TPR 00124)
    - '2' for off-peak consumption (e.g. TPR 00222)
    - '3' for weekend consumption (e.g. TPR 00202)
    - '4' for seasonal consumption (e.g. TPR 00246)

For a twin element smart meter, the import and secondary MPAN shall be assigned the following Meter Register Id (J0010) mapping:

- Three rate (E10 heating SSC 980 paired with 981)
    - '1' for on-peak consumption on the import MPAN (e.g. TPR 00467)

- ‘2’ for off-peak consumption on the import MPAN (e.g. TPR 00466)
- ‘1’ for heating consumption on the secondary MPAN (e.g. TPR 00468)

Flow Reference	**D0369**
Flow Name	**Aggregated Disconnected DUoS Report**
Flow Description	**A report of profiled DPM data by settlement class summed over Data Aggregator and Distributor. The Distributor will receive one report per Supplier. The report also includes domain data. In part one where the information is sent to the Distributor it will contain all Suppliers, whereas where the information is sent to the Supplier it will only contain data pertaining to that Supplier.**

Rules

1. This flow shall be sent alongside the D0030 but only for Settlement Dates which include Settlement Period/s affected by a Demand Control Event.
2. The Start Date and Time (J1577) and End Date and Time (J1578) represent the beginning and end of a Demand Control Event instructed by the Transmission Company.

Flow Reference	D0370
Flow Name	Supplier Half Hourly Demand Disconnection Report
Flow Description	Report for each Supplier containing details of all the half hourly demand disconnection for a Supplier by Consumption Component Class. This will include the profiled and actual demand disconnection.

Rules

1. This flow shall be sent alongside the D0081 but only for Settlement Dates which include Settlement Period/s affected by a Demand Control Event.
2. The Start Date and Time (J1577) and End Date and Time (J1578) represent the beginning and end of a Demand Control Event instructed by the Transmission Company.
3. Part 1 (groups 06K to 09K) contains both the HH and profiled NHH demand disconnection data.
4. Part 2 (groups 10K to 15K) contains the HH demand disconnection data only.

Flow Reference	**D0371**
Flow Name	**Supplier - Supplier Disconnection Matrix Report**
Flow Description	**A report for each Supplier per GSP Group containing the details of the Disconnection Purchase Matrix rows used in the calculation of a settlement run**

Rules

1. This flow shall be sent alongside the D0082 but only for Settlement Dates which include Settlement Period/s affected by a Demand Control Event.
2. The Start Date and Time (J1577) and End Date and Time (J1578) represent the beginning and end of a Demand Control Event instructed by the Transmission Company.

Flow Reference	D0372
Flow Name	Aggregated Embedded Network Disconnected DUoS Report
Flow Description	A report of profiled DPM data by settlement class for Metering Points on embedded networks, summed over Data Aggregator and Supplier. This report is sent to Host LDSOs (as defined in BSC Procedure BSCP128), and includes data for all embedded networks within their distribution services area

Rules

1. This flow shall be sent alongside the D0314 but only for Settlement Dates which include Settlement Period/s affected by a Demand Control Event.
2. The Start Date and Time (J1577) and End Date and Time (J1578) represent the beginning and end of a Demand Control Event instructed by the Transmission Company.
3. The references to Embedded Distributor Id in Group 84G shall be populated with the Distributor identified as operating the relevant sub-network i.e. having the relationship with the Supplier for the Metering Point(s). In all other instances, the Distributor should be populated as that operating as the Host LDSO (as defined in the BSC Procedure BSCP128).

Flow Reference	**D0373**
Flow Name	**GSP Group Demand Disconnection Totals Report**
Flow Description	**Report of consumption component class Demand Disconnection totals for each GSP group.**

Rules

1. This flow shall be sent alongside the D0276 but only for Settlement Dates which include Settlement Period/s affected by a Demand Control Event.
2. The Start Date and Time (J1577) and End Date and Time (J1578) represent the beginning and end of a Demand Control Event instructed by the Transmission Company.

Flow Reference	D0374
Flow Name	Supplier BM Unit Demand Disconnection Report
Flow Description	Report for each Supplier containing details of the Supplier's valid BM Units, GSP Group/BM Unit/Profile Class/Standard Settlement Configuration mappings and Demand Disconnection by BM Unit and Consumption Component Class

Rules

1. This flow shall be sent alongside the D0296 but only for Settlement Dates which include Settlement Period/s affected by a Demand Control Event.
2. The Start Date and Time (J1577) and End Date and Time (J1578) represent the beginning and end of a Demand Control Event instructed by the Transmission Company.
3. The sort order of the repeating group 46K (BM Unit Standing data) is as follows: group 46K (BM Unit Standing Data), group 47K (Profile Class) and group 48K (Standard Settlement Configuration).
4. The sort order of the repeating group 49K (BM Unit Half Hourly and Non-Half Hourly Energy by CCC and Settlement Period) is as follows: group 49K (BM Unit Half Hourly and Non-Half Hourly Energy by CCC and Settlement Period) by J1628 (BM Unit ID), group 50K (Consumption Component Class Half Hourly and Non-Half Hourly Energy) by J0160 (Consumption Component Class Id), group 51K (Settlement Period Half Hourly and Non-Half Hourly Energy) by J0074 (Settlement Period Id), and group 52K (Daily Total 1 BM Unit Half Hourly and Non-Half Hourly Energy).
5. The sort order of the repeating group 53K (BM Unit Half Hourly and Non-Half Hourly Energy by Settlement Period) is as follows: group 53K (BM Unit Half Hourly and Non-Half Hourly Energy by Settlement Period) by J1628 (BM Unit ID), group 54K (Period BM Unit Total Allocated Volume) by J0074 (Settlement Period Id) and group 55K (Daily Total 2 BM Unit Half Hourly and Non-Half Hourly Energy).
6. The sort order of the repeating group 56K (Data Aggregator) is as follows: group 56K (Data Aggregator) by J0183 (Data Aggregator Id), group 57K (BM Unit Half Hourly Energy) by J1628 (BM Unit ID), group 58K (Consumption Component Class Half Hourly Energy) by J0160 (Consumption Component Class Id), group 59K (Settlement Period Half Hourly Energy) by J0074 (Settlement Period Id), and group 60K (Daily Total BM Unit Half Hourly Energy).
7. Group 46K (BM Unit Standing data) will include all BM Units effective in the GSP Group on the Settlement Day for the Supplier. This includes BM Units for which no energy was allocated by the SSR Run.
8. Groups 47K (Profile Class) and 48K (Standard Settlement Configuration) are included only where they have been notified to the SVAA by the Supplier.
9. The 49K (BM Unit Half Hourly and Non-Half Hourly Energy by CCC and Settlement Period) and 53K (BM Unit Half Hourly and Non-Half Hourly Energy by Settlement Period) groups will include only those BM Units for which energy volumes have been allocated by the SSR Run.
10. Data item J1628 (BM Unit Id) in group 57K (BM Unit Half Hourly Energy) will be populated with the BM Unit Id supplied by the HHDA. If the HHDA provides D0376 files (without BMU) then this field will be null.

Flow Reference	D0375
Flow Name	Disconnected MSIDs and Estimated Half Hourly Demand Disconnection Volumes
Flow Description	Communication of MSIDs and Estimates of Half Hourly disconnection values for use in estimating the effects of Demand Control Events.

Rules

1. The Start Date and Time (J1577) and End Date and Time (J1578) represent the beginning and end of a Demand Control Event instructed by the Transmission Company.
2. For each Settlement Date that has a Settlement Period affected by a Demand Control Event, the HHDC or SVAA (as appropriate) will report an Estimated HH Demand Disconnection Volume for each HH of that Settlement Date, even if it is zero or, as the case may be, no volume was reported to the SVAA by the Transmission Company.
3. When sent by the HHDC the Measurement Quantity Id (J0103) and Supplier Id (J0084) must be populated
4. When sent by the SVAA it will not know the Measurement Quantity Id (J0103) or Supplier Id (J0084) details so is not required to populate them.
5. The specific rules for use of this flow are set out in the BSC Procedures.

Flow Reference	D0376
Flow Name	Supplier's Demand Disconnection Volume Data File
Flow Description	Aggregated line loss adjusted HH demand disconnection volumes by Supplier and GSP Group. Where this flow is intended for the Supplier, the set of Suppliers will be limited to that Supplier only.

Rules

1. This flow shall be sent alongside the D0040 but only for Settlement Dates which include Settlement Period/s affected by a Demand Control Event.
2. The Start Date and Time (J1577) and End Date and Time (J1578) represent the beginning and end of a Demand Control Event instructed by the Transmission Company.
3. The flow is only required in relation to Suppliers that have Metering Systems affected by a Demand Control Event.

Flow Reference	D0377
Flow Name	Disconnection Purchase Matrix Data File
Flow Description	Details of NHH Disconnection volumes per Supplier aggregated per GSP Group by profile class, line loss factor class and measurement requirement.

Rules

1. This flow shall be sent alongside the D0041 but only for Settlement Dates which include Settlement Period/s affected by a Demand Control Event.
2. The Start Date and Time (J1577) and End Date and Time (J1578) represent the beginning and end of a Demand Control Event instructed by the Transmission Company.
3. The flow is only required in relation to Suppliers that have Metering Systems affected by a Demand Control Event.

Flow Reference:	**D0381**
Flow Name:	**Metering Point Address Update**
Flow Description:	**Notification of request to update a Metering Point Address and the subsequent response.**

Rules

1. Although each address line in the flow is optional, the Existing and Proposed addresses are mandatory and must be included in the flow in Standard Address Format (SAF).

2. An update to an individual line within an address will require the entire address to be sent.

3. In the Distributor instance of the flow the Response Group must be included.

4. Current Metering Point Address must be that as held by the Distribution Business.

5. Proposed Address are the details requested to be updated.

6. Where Contact Details group is included at least one Data Item in the group must be populated.

7. Where Data Item Response Code is populated with H (Rejected – Other) Additional Information must be populated with a description of the reason for rejection.

8. The Distributor instance of the Data Flow must contain all the data provided by the Supplier instance of the Data Flow.

Flow Reference:	D0383
Flow Name:	Notification of Commissioning Information
Flow Description:	Half Hourly Notification of Commissioning information which is transferred when there is a new connection, change in equipment, configuration or upon change of Agent.

1. Where the D0383 flow is sent from LDSO to MOA group 99L should always be omitted.
2. When populated within the D0383 flow, Data Item J2223 (Commissioning Date) should be taken to refer to the commissioning date of the relevant item of Metering Equipment and not the complete Metering System.
3. Where data item J2220 “VT Commissioning Information Available” is set to Y and group 97L has been repeated twice (once with J2222 “Phase Id” set to “L1” and once with J2222 set to “L3”) the recipient should consider this a full commissioning record.
4. When the D0383 is sent as part of the Change of Agent process (from MOA to MOA) a data group should be sent for each item of Metering Equipment where commissioning is known to have been completed. For example, where an MOA has changed a Meter but does not know the commissioning detail for the measurement transformers then the D0383 should be sent with group 99L populated and groups 97L and 98L omitted.
5. The D0383 should be a full record of all known commissioning information. Where one item of Metering Equipment has been changed (and so commissioned) but commissioning information is known for the other Metering Equipment comprising the Metering System, then all commissioning information should be included.
6. On a Change of Agent where commissioning information is held for some items of Metering Equipment then the D0383 should be sent in conjunction with the D0384 flow (for those items of Metering Equipment where commissioning information is not known.)

Flow Reference:	**D0384**
Flow Name:	**Notification of Commissioning Status**
Flow Description:	**Half Hourly Notification of Commissioning status when there is a new connection, change in equipment, configuration or upon change or change of Agent.**

1. Where the D0384 flow is sent to indicate that there is a defect/omission that has prevented commissioning then group 01M must be included.
2. The MOP should use the D0384 flow to communicate either that full complete commissioning has been completed or that there is a defect/omission that has prevented commissioning to the supplier.
3. Where the D0384 dataflow is used as part of the Change of Agent process (MOA to MOA) then the dataflow should be used to inform the incoming MOP of the current defect/omission that has prevented commissioning. Where a Metering System has been part commissioned on a Change of Agent then the D0384 flow should be sent in conjunction with the D0383 flow.
4. The supplier should use the **D0384** flow to instruct either the MOP or DNO on the required next steps where there has been a defect/omission that has prevented commissioning.

Flow Reference:	**D0386**
Flow Name:	**Manage Metering Point Relationships**
Flow Description:	**Used to initiate a change to a metering point relationship.**

Rules

1. Where Data Item Relationship Action (J2241) is populated with C (Create new relationship) all instances of Data Item MPAN Action (J2242) must be populated with A (Add MPAN to relationship).

2. Where Data Item Relationship Action is populated with D (Delete existing relationship) all Secondary MPANs must be included in the Secondary MPANs Group with Data Item MPAN Action populated with D (Delete MPAN from relationship).

3. Where Data Item Relationship Action is populated with A (Amend existing relationship) all current Secondary MPANs must be included in Secondary MPANs Group with the required MPAN Action value.

4. In the MPAS instance of the flow the MPAS Response Group must be included.

5. The MPAS instance of the Data Flow must contain all the data provided by the Supplier instance of the Data Flow.

Error Handling – Notification

Context:

These rules cover Data Flows between all participants where the recipient has received data files or Data Flows within files containing errors.
Procedure:
Once a recipient is aware that a file or an individual flow is unacceptable to the recipient, recipient should contact the originator out with the DTC process and provide details of:

1. the User File 'file identifier' of the file that is unacceptable, including application specific information such as file sequence number or instruction number wherever possible to aid the originator, and time/date of receipt

2. the reason(s) the file is unacceptable (and whether or not validation stopped on 1st error found) including where appropriate: Group Id, group instance number, flow instance number, J numbers, complete User File header information (included in cases of corruption of file id where the Originator can still be identified)

3. the action(s) the recipient has taken if any

4. the action(s) the recipient requests the originator to take. (The options include whole file re-transmission, re-transmission of corrected flows and method of re-transmission of corrected flows.)

This manual procedure should be used unless there is a more appropriate method in the DTC setting out established flows for the reporting of errors - one example is the interoperation of MPAS and Suppliers, e.g. for the following Data Flow pairs: D0055/D0057, D0064/D0066, D0068/D0069, D0205/D0203, D0271/D0272.

The recipient & originator to maintain log of error handling events for later review, consistent with best practice and at least as comprehensive as their logging of other data transfer events.

Manual Data Flows which are in error should be subject to the same structured processes

Error Handling – Whole File Retransmissions

Context:

This assumes that the originator has received notification that the recipient has rejected the whole file, e.g. has received a data file containing data and/or structural errors. The file may have failed a checksum validation, or some data validation causing whole file rejections.

Procedure:

As soon as a recipient has advised - in line with the rules for Error Handling - Notifications - an originator that the originator's file is in error or is unacceptable and the recipient has requested the re-transmission of a corrected file, the originator shall:
1. Determine what if any data or structure needs to be changed.
2. Advise the recipient manually of the ID of the re-transmission if changed as the same file ID may be appropriate if the file has not been used at all by recipient, and
3. Liaise with the recipient to re-transmit the appropriately corrected file(s).

The default medium for re-transmission will be the same as the original transmission unless mutually agreed between the originator and the recipient.

The recipient & the originator to maintain log of error handling events for later review, consistent with best practice and at least as comprehensive as their logging of other data transfer events.

Manual Data Flows which are in error should be subject to the same structured processes.

Error Handling – Correction of Errors

Context:

These rules cover the correction of flows between Participants where the originator has been informed that a file already sent by it to a recipient is in recipient's opinion in error or unacceptable.

Rules:

When correcting errors found in Data Flows, the originator must be prepared to use reasonable endeavours to provide corrections in a way acceptable to the recipient.

This may include either; whole file re-transmission; or re-transmission of corrected Data Flows, using either manual; or electronic re-transmission of corrected files/Data Flows.

An exception to this is in relation to the Data Flows for which there is agreement between all Participants to a single correction method.

Another exception is where the originator provides recipient, in advance, with auditable authority to make specific data changes to resolve the problem and the recipient subsequently makes the data changes.

Manual notifications for retransmissions should reference notifications for original transmissions (and if a problem still exists, notification of this new problem will be raised as before).

If the originator on inspection remains convinced of the validity of its Data Flows, then the originator shall advise the recipient.

Recipients and originators should maintain a log of error handling events for later review, consistent with best practice and at least as comprehensive as their logging of other data transfer events.

Associated Rules for specific Data Flows and Specific Error Handling

1. Introduction

The purpose of this additional information is to identify the DTC Data Flows for which special treatment is required in relation to error handling. The rules also define the special treatment required in each case, in terms of retransmission of the complete original file or retransmission of corrected next instructions only.

Errors found in any Data Flow where Error Handling is defined in BSCP's, PSL's or the MRA will be handled according to those rules. Errors not specifically covered by the BSCP's, PSL's will be subject to this set of rules.

The reason for identifying specific Data Flows for special treatment is to reduce the potential overhead for Participants of having to make provision in their error handling processes for both types of retransmission, "whole file" and "corrected instructions".

2. Data Flows for Special Treatment

The following table lists the Data Flows for which there is a single correction method for instruction data errors.

In the table below, "Whole file" means that the originator should resend the complete original file containing corrections. "Corrected instructions" means that the originator should send corrected instructions only, although the corrections could be sent with other additional instructions.

The Reason column indicates why the Data Flow has been identified for special treatment. Data Flows have been selected because they are associated with systems in which there is a high degree of commonality between Participants. This is because they relate to new business processes generally, but not exclusively, supported by newer consortium-developed systems rather than by older legacy systems.

Table of Data Flows for Special Treatment

Flow	Name	Originator Resends	Reason
D0018	Daily Profile Data Report	Whole file	Receiving Settlement output (e.g. ECMS, SPS)
D0019	Metering System EAC/AA Data	Corrected instructions	Receiving Settlement data or output (e.g. ECMS, SPS)
D0023	Failed Instructions	Whole file	Includes NHHDA common system output
D0028	Standing Profile Data Report	Whole file	Receiving Settlement output (e.g. ECMS, SPS)
D0029	Standard Settlement Configuration Report	Whole file	Receiving Settlement output (e.g. ECMS, SPS)
D0030	Non-Half Hourly DUoS Report	Whole file	Receiving Settlement output (e.g. ECMS, SPS)
D0036	Validated Half Hourly Advances for Inclusion in Aggregated Supplier Matrix	Whole file	Receiving Settlement data or output (e.g. ECMS, SPS)
D0039	Daily Profile Coefficient Extract	Whole file	Receiving Settlement systems

			output
D0040	Aggregated Half Hour Data File	Whole file	Receiving Settlement data or output (e.g. ECMS, SPS)
D0041	Supplier Purchase Matrix Data File	Whole file	NHHDA common system output
D0043	Supplier Deemed Take Report	Whole file	Receiving Settlement output (e.g. ECMS, SPS)
D0055	Registration of Supplier to specified Metering Point	Corrected instructions	MPAS systems related. O notified via D0057
D0064	Notification of an Objection to Change of Supplier Made By the Old Supplier	Corrected instructions	MPAS systems related. O notified via D0066.
D0068	Removal of Registration Objection	Corrected instructions	MPAS systems related. O notified via D0069.
D0079	Supplier Purchase Report	Whole file	Receiving Settlement output (e.g. ECMS, SPS)
D0081	Supplier Half Hourly Demand Report	Whole file	Receiving Settlement output (e.g. ECMS, SPS)
D0082	Supplier – Supplier Purchase Matrix Report	Whole file	Receiving Settlement output (e.g. ECMS, SPS)
D0083	TUoS Report	Whole file	Receiving Settlement output
D0095	Non-Half Hourly Data Aggregation Exception Report	Whole file	NHHDA common system output
D0204	Selective or Full Refresh of MPAS Details	Corrected instructions	MPAS systems related. Option for subsequent selective refresh
D0205	Update Registration Details	Corrected instructions	MPAS systems related. O notified via D0203
D0209	Instructions to Non-Half Hourly or Half Hourly Data Aggregator	Corrected instructions	MPAS systems related.
D0227	Pool Market Domain Data File	Whole file	MDD system related
D0242	Supercustomer DUoS Daily Statement	Whole file	Consortium developed DUoS system. Similar processing by recipient (e.g. ECMS, SPS)
D0265	Line Loss Factor Data File	Whole file	Consortium developed Distributor system.
D0266	Supplier Settlement Header Report	Whole file	Receiving Settlement output (e.g. ECMS, SPS)
D0269	Market Domain Data Complete Set	Whole file	MDD system related
D0270	Market Domain Data Incremental Set	Corrected instructions	MDD system related
D0271	Request Contact Notice	Corrected instructions	MPAS systems. O notified via D0272

In addition to the Data Flows in the above table, the general rule for resending any report Data Flow is to resend the whole file.