

Public

Code Change and Development Group

Meeting 4

17 March 2020
ELEXON





Introduction, apologies & meeting objectives

Kathryn Coffin

Health & Safety

In case of an emergency

An alarm will sound to alert you. The alarm is tested for fifteen seconds every Wednesday at 9.20am

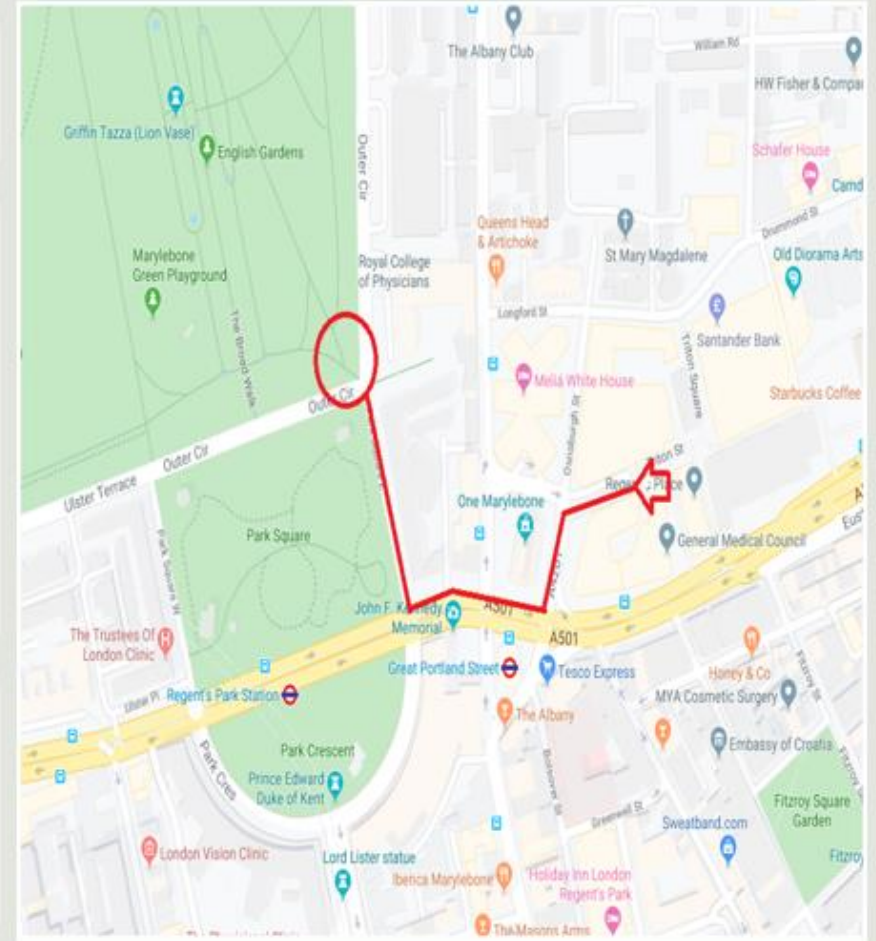
Evacuating 350 Euston Road

- If you discover a fire, operate one of the fire alarms next to the four emergency exits.
- Please do not tackle a fire yourself.
- If you hear the alarm, please leave the building immediately.
- Evacuate by the nearest signposted fire exit and walk to the assembly point.
- Please remain with a member of ELEXON staff and await further instructions from a Fire Warden.
- For visitors unable to use stairs, a Fire Warden will guide you to a refuge point and let the fire brigade know where you are.

When evacuating please remember

- Do not use the lifts.
- Do not re-enter the building until the all clear has been given by the Fire Warden or ground floor security.

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Meeting objectives

- Discuss initial straw man on Settlement run-off arrangements
- Agree/discuss updated straw men for:
 - Exception reporting
 - GSP Group Correction Factors, Consumption Component Classes & Scaling Weights
 - Industry Standing Data
 - Registration (data items, appointments & confirmations)
- Discuss BSC legal drafting questions
- If time allows:
 - Identify any further transition requirements
 - Assess recommendations so far against TOM Design/Development Principles

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Updates from other work streams

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17 March 2020



SCR update

Saskia Barker



Other code bodies

Saskia Barker



Architecture Working Group

Kevin Spencer

ELEXON

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Discuss new straw man

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Settlement run-off arrangements

Matt McKeon

NHH Runoff – context and initial strawman discussion

- Runoff of NHH arrangements was discussed with the Software Technical Advisory Group (STAG) at its meeting on Thursday 20 February 2020.
- In making initial recommendations, the STAG considered software and technology aspects as well as operational impacts related to NHHDC and NHHDA Market Roles.
- The STAG's view was that, as long as the current software components are covered by Extended Support until at least 2023/24, ELEXON and industry should plan to avoid another ~5 year upgrade cycle.
- ELEXON and CGI AMD are in the process of getting confirmation on the latest view of end-of-support dates, and will capture that in the runoff strawman. If any critical software components run out of support before 2024, the STAG will be consulted as to whether that would change its recommendation.

NHH Runoff – application support for NHHDA and EAC/AA

■ Database server

- Solaris 5.11 for SPARC chip-set, Patched to 11.3.21.5.0
- Oracle 12C Server Release **12.2.0.1**
- Pro*C/C++: Release 12.2.0.1
- Oracle Solaris studio 12.3 – 1.0.1.0

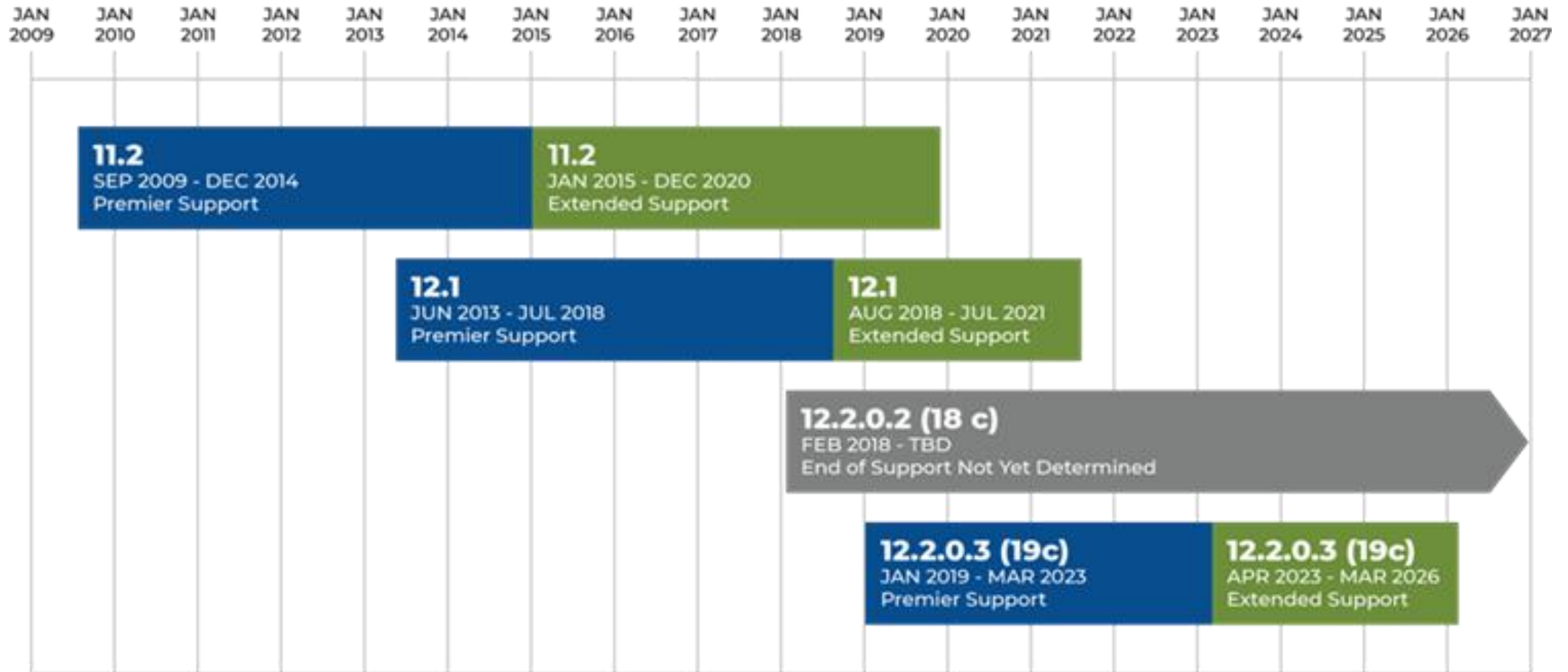
■ Application Server

- Microsoft Windows 2012 with Service Pack 2
- Oracle Application Server 12C (**12.2.1.2**) - Forms & Reports Services

OR

- Oracle Solaris on SPARC (64-bit) Version 5.11 and patched to 11.3.21.5.0
- Oracle Application Server 12C (**12.2.1.2**) - Forms & Reports Services

NHH Runoff – Oracle 12 application support



NHH Runoff – overview of the challenges

- NHH runoff approach must consider all NHH processes and agents.
- The cost of running NHHDA is cross-funded by NHHDC, which derives its revenue from active DC appointments. Separating NHHDA from NHHDC would make the runoff harder to manage and increase exception reporting sent over the DTN.
- As portfolios reduce and customers with legacy meters become fragmented, consolidation will naturally occur in NHHDC as site-based data retrieval becomes uneconomical. As NHHDC consolidates, NHHDA appointments will follow.
- NHHDC is reliant on the EAC/AA calculator to produce new AAs and EACs (and to recalculate erroneous ones), so NHHDCs are exposed to similar software support dependency as NHHDA.
- Once sufficient Smart Meters have been installed and the need for site-based DR visits reduces, a point will be reached when NHHDCs have insufficient revenue from current contracts to maintain a system solely for the purposes of making corrections.
- What options exist for NHH consumption data that has not yet reached RF/DF but may require correction as a result of a Trading Dispute or other identified error?

Options for running off NHH data

1. 'Lock' the NHH data used in Settlement once the NHHDC system is retired.
 - Does not have to mean that corrections are impossible, but they would likely have to be done outside normal reconciliation, such as through ESDs.
2. Centrally appoint a 'caretaker' NHHDC ("DC of last resort") potentially with central funding to allow live data to be maintained for corrections to be made.
 - Would allow one or more NHHDCs of sufficient scale to receive a standing payment in lieu of contract revenue to keep their systems available to make corrections.
 - Unpredictable, with a significant probability that the caretaker NHHDC could be over- or under-compensated.
3. Load a portion of NHH Settlement data into a dedicated area of the Market Wide Data Service (MDS) to allow corrections if needed.
 - Significant effort to extract, translate and load data into the correct format
 - Would allow NHHDCs to end operations once ETL is complete.

Other runoff considerations – e.g. HH aggregation

- HHDA runoff should be more straightforward as HH SPM data has a higher level of actual consumption at earlier runs. Settlement Runs beyond R2 are largely there to make retrospective corrections for Settlement error, rather than get new reads;
- Therefore, the need to keep HHDC systems running without active HHDR contracts will be less acute than in NHH. It could be further minimised if companies currently acting as HHDCs qualify as an ADS under the TOM using adapted systems;
- The MHHS transition expects that NHH settled AMR meters and UMS will migrate to being settled HH before cutting over to the MDS in parallel with HHDA. Therefore, these will fall under the general approach for HHDA runoff described above;
- Use of NHH standing data can be discontinued once no further aggregation runs are needed for Settlement Dates where data is provided by NHHDA.

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Register Read Meters with Switched Load

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Economy 7 and Load Shapes

- The Load Shaping work group identified an initial set of Load Shapes for MHHS
- These were based on the following data that could be obtained from the registration system:
 - Domestic/ non-Domestic;
 - Active Import/ Active Export; and
 - GSP Group

These arrangements were intended for the 'small' number of customers remaining on register reads in the Target End State

Some Suppliers have suggested that for opted-out Domestic Customers or those with non-smart Meters they would not wish to bill the customers based on the ToU registers if they were being settled on a Domestic load shape

Those suppliers favour having an Economy 7 specific load shape.....

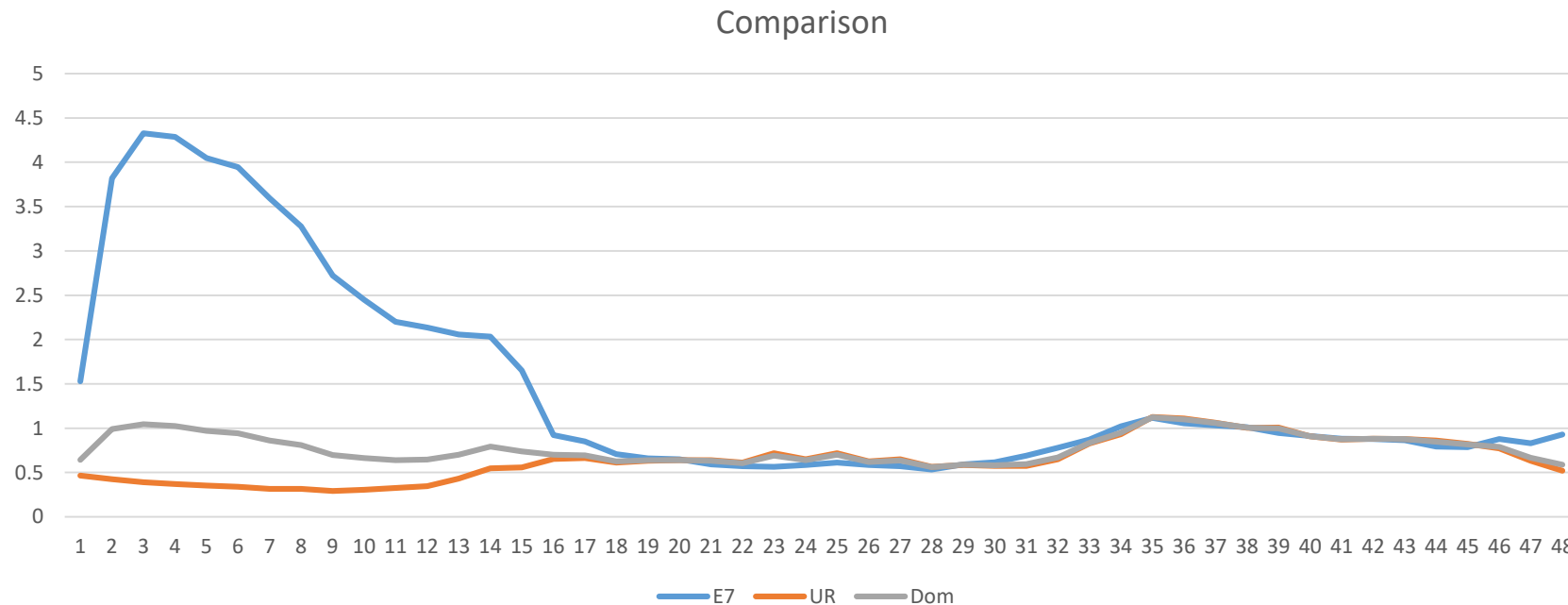
Economy 7 Load Shape: considerations

- In order to create an Economy 7 load shape the registration data would require a field to identify that customers are on an Economy 7 tariff (whether they are being settled using HH data or not)
- The Supplier would have to populate the field in the registration data for each MPAN indicating that it is E7 (Possibly with a switched load indicator in ISD. N.B. a lot of existing E7 customers do not have switched load)
- The registration data would be used by the Load shaping Service to create a Load Shape using data for MPANs where valid HH data had been collected
- The Smart Data Service would then summate the meter advances for each ToU register and apply it to the E7 Load shape

Economy 7 Load Shapes: Issues

- There are many types of E7 regimes which differ in timing and some are split regimes. Consideration of which types of E7 require a Load Shape
- Other types of MPANs currently in Profile Class 2 would still be included in the 'Domestic' load shape (e.g. Economy 10, 8.5 WM and other many switching lengths)
- The E7 Load shape will still smear the Off peak and daytime load across the Settlement Day
- The Super customer Domestic Load shape would not be different than currently proposed (i.e. it is within the Supplier's gift to address the issue without having this data split out)
- Settlement does not split out customers with other specific loads e.g. Electric Cookers as the impact is reflected in the Super Customer
- The introduction would also add complexity to a process designed for small numbers of customers

Economy 7 Load Shapes: How different would the Load shapes be?



The load shapes for E7 and UR look different as expected. The Domestic shape reflects both the E7 storage load and the UR night load shape. If volumes were separately applied to the UR and E7 shapes the outturn 'Super Customer' load shape used in imbalance settlement would look like the domestic shape above.

Question: What would a Supplier do with the split out E7 data that would warrant the extra complexity of creating an E7 load shape?



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Discuss updated straw men from CCDG03

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Exception Reporting

Mark De Souza-Wilson

Exception reporting: Principles

- Prescribing exception reporting for MDS only
- Data Services notify issues to Suppliers, Metering Service etc. according to their commercial contracts
- Exception reporting does not mean that a data flow has been rejected
- Suppliers could subscribe to detailed or summary exception reports whilst Data Services would receive the detailed reports.

Exception reporting: on receipt of Registration Rata

- Validation against Industry Standing Data
- Check for inconsistencies eg. Effective To Date earlier than Effective From Date
- Any failure triggers rejection along with exception report

Exception reporting: to Data Service on Ingestion

For a given settlement date

- Mismatch with registration data
 - Data rejected & exception report
- Consumption data profile appears inconsistent with domestic/non-domestic flag
 - Exception report & data processed
- Non-zero data for a de-energised MPAN
 - Data rejected & exception report
- Data resubmitted for an MPAN changes from Actual to Estimate
 - Exception report & data processed

Exception reporting: to Data Service before/at Aggregation

- There should be an interim information run, before SF, to allow the Data Service a change to improve the accuracy and completeness of their data
- Exception reports should identify the MPANs for which data is missing or estimated
- Similar exception reports should also be produced at each aggregation run



CCCs, GCF and Scaling Weights

Kevin Spencer

CCCs, GCF and Scaling Weights

- At Meeting 3 we agreed the new GCF Calculation (Option 1)
- We need to agree the final set of New CCCs
- We need to agree the scaling weights for the New CCCs and the scaling weights for the existing CCCs (to be used during the transition)

New CCCs

- See CCC Spreadsheet:

CCC	Segment Indicator	Measurement Quantity	Consumption/ line loss	Connection Type Indicator	Estimate/ Actual	Quality Rating (Actuals and estimates)	Network Quality Rating	Scaling Weight (Total)
1	U	AI	C	W	A	0.2	1	1.2
2	U	AI	L	W	A	0.2	1	1.2
3	U	AE	C	W	A	0.2	1	1.2
4	U	AE	L	W	A	0.2	1	1.2
5	U	AI	C	W	E	0.4	1	1.4
6	U	AI	L	W	E	0.4	1	1.4
7	U	AE	C	W	E	0.4	1	1.4
8	U	AE	L	W	E	0.4	1	1.4
9	S	AI	C	W	A	0	1	1
10	S	AI	L	W	A	0	1	1
11	S	AE	C	W	A	0	1	1
12	S	AE	L	W	A	0	1	1
13	S	AI	C	W	E1, E2, E3 and E6	0.2	1	1.2
14	S	AI	C	W	E4, E5 and E7	0.4	1	1.4
15	S	AI	C	W	E8	0.6	1	1.6

Quality Rating (Actuals and estimates)	Scaling Weight
Actual	0
Estimate using Meter Advance/ UMS as Actual	0.2
Estimate using Meter Advance Unavailable/ losses	0.4
Default	0.6
Network Quality Rating	Scaling Weight
EHV CT	0
HV CT	0.4
LV CT	0.8
W	1

CCDG Scaling Weight Principles

The CCDG agreed the following principles to be followed when setting scaling weights:

- Scaling weights should reflect the volume error in each CCC (if known or can be estimated);
- If volume error not known (or cannot be estimated) the scaling weight should be equated with similar CCCids;
- Scaling weights should be higher for estimated volumes such as estimates and losses;
- Scaling weights should not disincentive transition to the new MHHS TOM; and
- Scaling weights should not unduly impact 'late movers' to the new arrangements.



CCDG Action 03/02 (Scaling Weight granularity)

Kevin Spencer

CCC and Scaling weight application

- In the current Settlement Arrangements consumption data is received against EACs and AAs or aggregated against CCCs that are either Actual and Estimates
- In the TOM for MHHS data will be received at SP Level. Potentially each Settlement Period can be flagged as either Actual (A) or a specific type of estimate as defined in the TOM Requirements
- The current requirements are not explicit on the flagging of Actuals or Estimates when estimating data. i.e. if for a Settlement Day only certain periods are estimated then they could be treated differently when allocating the data to the defined CCCids
- This would allow different scaling weights to be applied to the CCCid data on a SP Levels
- However, this could have unintended consequences.
- Action 03/02 looks at the pros and cons of an SP level approach to CCC data.

D0379 data

- Data format will be similar to D0379 HH Advances UTC

Elxon Intranet x My Vault x Data Flow x D0379V001 (6).pdf x +

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D0379V001 (6).pdf 1 / 1

MRA VERSION 12.7 MRA Data Transfer Catalogue

Flow Reference: **D0379**
Flow Version: **001** Status: Operational

Flow Name:	Half Hourly Advances UTC	
Flow Description:	Half Hourly consumption values from smart meters specified in UTC.	
Flow Ownership:	MRA	
From	To	Version
HHDC	Supplier	11.9
Supplier	HHDC	11.9

Data Items:

Reference	Item Name
J0020	Actual/Estimated Indicator
J0018	Date (Midnight to Midnight UTC)
J0103	Measurement Quantity Id
J0003	MPAN Core
J2207	Smart Metered Period Consumption
J0084	Supplier Id
J2206	Supplier Validated Flag

Flow Structure:

Group	Group Description	Range	Condition	L1	L2	L3	L4	L5	L6	L7	L8	Item Name
25B	MPAN Cores	1..*		G								MPAN Core
					1							Measurement Quantity Id
					1							Supplier Id
26B	Date	1..*		G								Date (Midnight to Midnight UTC)
66L	Half Hour Periods in UTC	48			G							Actual/Estimated Indicator
						1						Smart Metered Period Consumption
64L	Validation Flag	1	If Supplier to HHDC	G								Supplier Validated Flag
					1							

Notes:

Version History:

Catalogue release change takes effect	CP No.	Brief description of the change and its reason
Version 11.9	3496	New Data Flow created.

CCC and Scaling weight application

- SP Level application of data to CCCid and Scaling. Incoming data would need to be flagged at Settlement Period level as per D0379.

Pros	Cons
More accurate application of scaling weights to estimated volumes	CCCid consumption data for a Settlement day would contain variation as based mixed numbers of metering systems MSID counts would need to be reported a CCCid/ SP level Reporting for MSID numbers against estimates might not be whole numbers

Quarterly Volume Report

- The approach could cause issues when reporting Quarterly Volumes and Market Shares (e.g. If you add up MSID by and divide by 48 you may not get a whole number!). ELEXON internal monitoring systems also report daily MSID counts by CCCid:

BSC/V47.0

Table X-9

List of Supplier Volume Reporting Groups and associated relationships used for the purposes of the Supplier Quarterly Volume Report determined according to paragraph 9A of Annex S-2:

Supplier Volume Reporting Group	Consumption Component Classes	Profile Classes (where used and/or applicable)
1	17, 18, 20, 21	1, 2
2	17, 18, 20, 21	3, 4
3	17, 18, 20, 21	5, 6, 7, 8
4	19, 22	Not used
5	32, 33, 34, 35	Not used
6	1, 3, 4, 9, 11, 12, 23, 25, 26, 28, 30, 31, 42, 43, 44, 45, 46, 47, 54, 55, 56, 57, 58, 59	Not applicable
7	2, 5, 10, 13	Not applicable
8	6, 7, 8, 14, 15, 16, 36, 37, 38, 39, 40, 41, 48, 49, 50, 51, 52, 53, 60, 61, 62, 63, 64, 65	Not applicable

For the Supplier Quarterly Volume Report as set out in paragraph 4.2.10 of Section V, the Supplier Volume Reporting Groups with the numbers in the far left column of the table above shall be given the following descriptive labels in the actual report:

1. "Non half hourly metered import, Profile Classes 1 and 2";
2. "Non half hourly metered import, Profile Classes 3 and 4";
3. "Non half hourly metered import, Profile Classes 5, 6, 7 and 8";
4. "Non half hourly unmetered import";
5. "Non half hourly metered export";
6. "Half hourly metered import";
7. "Half hourly unmetered import"; and
8. "Half hourly metered export".

CCC and Scaling weight application

- It is worth noting mixed actuals and estimates only applies where:
 - the ARP estimates data where Two or three Settlement Periods missing or incorrect for prime Meter register or one Settlement Period missing or incorrect where a prime Meter register reading cannot be taken (EA1)

OR

- Where PSS estimates data for smart meter where there is more than one missing settlement period; daily meter advance available (E1)

ELEXON recommends either way that the TOM Requirements are updated to make this requirements explicit.



Industry Standing Data

Kevin Spencer



Industry Standing Data (1 of 2)

At CCDG Meeting 3 we agree that:

- existing Market Domain Data (MDD) items will be required until the end of the transition from the existing Settlement arrangements to the TOM. It agreed that Industry Standing Data is therefore best described as a broader set of data that includes MDD.
- The ISD table has been update to identify data items to be kept until the end of transition and data items to be reviews at the end of transition.
- Two new items have been added as 'Must Haves':

ISD1.62	Advanced Market Segment Default Load Shapes	Must Have	To be based on data collected from the ADS
ISD1.63	Valid Set of Load Shape Categories	Must Have	

Industry Standing Data (2 of 2)

- Some UMS Data has now been set to 'Won't Have':

ISD2.5	Motorway Sign Charge Codes	Won't Have	Kept until end of Transition
ISD2.6	Non-standard conversion Charge Codes	Won't Have	Kept until end of Transition
ISD2.7	UMS Motorway hours	Won't Have	Kept until end of Transition

We still need to bottom out the LLF/ LLFC decision: Are we creating a new LLF category and letting DNO's rebrand the LLFCid if they wish to.....

OR

Recommend that a new DUoS tariff ID data item is created that is populated with LLFCids

Either way how do we transitions.....assuming that new LLF files would need to be submitted against the revised identifiers.



Registration: Data Items, appointments and confirmations

Matt McKeon

Appointment process for TOM Services

- Added more context about the "why?" (explaining that it's an optional feature)
- Set out the 'single source of truth' argument, and what the current problems are.
- Explained that it is driven by Faster Switching and sorter timetable.
- Explained that it's modelled on the DA appointment process but with objections.
- Explained that it's a consequence of removing DAs as the 'last line of defence'.
- Complete process diagram and re-integrate into Working Document A for review.

Registration Standing Data – now part of ISD section

- Propose table of *all* data items currently held in the Registration Service (SMRS).
- Highlight which of those are TOM-impacted, i.e. of relevance to Settlement.
- Of those Settlement-relevant, indicate New, Enduring, Transition, Re-purpose.
- Include J-items for existing items (DTC will eventually be re-defined as EMDS).
- Include new Switching Programme data items as understood from St Clements.
- Space permitting, retain 'Updated by' and MoSCoW fields from original ISD table.





BSC legal drafting questions

Kevin Spencer

BSC legal drafting questions (1 of 4)

- Consideration of the future of the Small Scale Third Party Generating Plant Limit (SSTPGPL) will also be needed as NHH meters will not exist under the TOM.
- Requirement for customer consent to register customer owned Meters (Section K2.4.6)
- HH metering equipment definitions needs consideration in context of the TOM: References to SVA Half-Hourly Metering Systems need consideration in light of TOM where most customers will be HH, References to >100kW, NHH and HH Metering Systems need consideration

BSC legal drafting questions (2 of 4)

- Consideration required as to whether to retain MOA as BSC term, align with other Code definitions (e.g. MEM or MOP) or align with TOM terminology.
- Requirements around the provision of data will need consideration. (Section S2.6)
- Notification of ABMUs under the MHHS TOM. The Supplier will need to send notification of ABMU allocations to the MDS. Likewise the process for removal or transfer of the allocation will need to be set out.
- The term Equivalent Unmetered Supply needs revision
- Consideration of how demand disconnection events are handled under the MHHS TOM needs to be undertaken.

BSC legal drafting questions (3 of 4)

- Consideration of how data is accessed for balancing services under the TOM (needs to be defined in requirements).
- Consideration needs to be given as to what delays and failures could occur under the TOM where data is being held by BSC Central Services. (Currently BSC sets out requirements on Agents)
- Consideration needs to be given to the reporting requirements for MHHS TOM data subject to the new CCCs to be defined
- Consideration of data retention timescales under the BSC (needs to be defined in requirements).
- The DUoS Report and TUoS report may need to be adapted or changed depending in Access and Forward Looking Charging requirements.

BSC legal drafting questions (4 of 4)

- Need to include requirement for MDS to provide data for EII Assets to an EMR Settlement Service Provider
- Provision of data for the Capacity Market by Data Aggregators which will not exist under the MHHS TOM (Section S2.9)
- Long Term Vacant Sites in NHH Market. Section will need to remove/replace NHH references but section will still be required (Section S2.8)
- Transitional requirements to undertake existing and new requirements in parallel need consideration. (Section S7)
- Consideration of how SVAA (VAS) accesses data for MSID pairs from the MDS for allocation to secondary BMUs (needs to be defined in the requirements).





New transitional requirements

Kevin Spencer



Alignment of CCDG recommendations with Design/Development Principles

Kevin Spencer



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Other business and next steps

CCDG Meeting 4

17 March 2020

Open actions

Action no.	Action	Owner	Due date	Action update	Status
03/07	ELEXON and CCDG members to consider other potential ways of addressing the E7 tariff concern (e.g. by extending the Settlement run-off arrangements or other means) and revisit this at CCDG04.	Kevin Spencer / Matt McKeon / CCDG members	17/03/20	Ongoing. Further comments/suggestions received from a CCDG member and circulated with CCDG04 papers. Agenda item at CCDG04.	Open
03/04	ELEXON to update the Registration straw man based on the discussions at CCDG03, circulate to the relevant CCDG members for further discussion and bring the outputs to CCDG04.	Matt McKeon	17/03/20	Ongoing. Update circulated with CCDG04 papers. Agenda item at CCDG04.	Open
02/07	ELEXON to check with St Clements whether any of the following data items are already held in SMRS: GSP Group, AI/AE indicator and domestic/non-domestic indicator.	Matt McKeon	17/03/20	Ongoing. Update provided at CCDG03. GSP Group is already held in SMRS. The Switching Programme will introduce Domestic Premises Indicator, Metered Indicator and Energy Flow. ELEXON to clarify these data items' on-going SMRS governance with St Clements and give an update at CCDG04.	Open
02/05	ELEXON to clarify what data item outputs the AWG needs from the CCDG and when.	Kevin Spencer	17/03/20	Ongoing. ELEXON gave an update at CCDG03. ELEXON to provide more clarity on what level of detail/certainty the AWG needs from the CCDG and when.	Open
01/02	Ofgem to clarify whether the legal text for MHHS should be drafted against the current Industry Codes baseline or new consolidated REC baseline.	Saskia Barker	15/01/19	Ongoing. Update provided at CCDG02. Ofgem is still considering this, and a representative from Ofgem's REC team will be attending future Code bodies meetings.	Open

Next steps

- ELEXON and volunteer members to complete any straw men still requiring further refinement, for agreement at CCDG05
- Next meeting 21 April 2020
- CCDG05 activities (as per work plan):
 - Review Working Document C (Settlement run-off arrangements)
 - Review of Code Change Matrices completed by code bodies (BSC, MRA, SEC, DCUSA)
 - Agree approach to packaging and sequencing of legal text drafting / reviews
 - Agree consultation questions

Volunteers so far

Detailed work area	Member volunteers
Redefinition of existing industry data items	Aaron Dickinson Dom Bradbury James Murphy Steven Bradford Tom Chevalier
Registration and Data Service interactions	Aaron Dickinson James Murphy Lorna Mallon Paul Saker Steven Bradford Tom Chevalier
Exception reporting for Data Services	Aaron Dickinson James Murphy Paul Saker Steven Bradford Terry Carr

Volunteers so far

Detailed work area	Member volunteers
GSP Group Correction Factors & Scaling Weights Export Settlement	Aaron Dickinson Derek Weaving Dom Bradbury James Murphy Paul Saker Tom Chevalier
Settlement 'run-off' arrangements	Derek Weaving Paul Saker Seth Chapman Terry Carr (+STAG)

