Public

ELEXON - Settlement process

ELEXON view of what needs to be considered for Mandatory Half Hourly Settlement design

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Introduction

- Work already done in this area

- What is the size and scope of mandatory HHS?

- What does the current Supplier Volume Allocation process look like?

- What needs to be considered for the Target Operating Model?
Recap of ELEXON work

ELEXON has been providing leadership in this area since 2010:

- Profiling and Settlement Review Group (PRSG) looked at HHS for customers with Advanced Meters (resulting in P272)

- PSRG also undertook and initial consultation on moving smaller customers to HHS

- The PSRG also undertook a project on reducing settlement timescales

- The Settlement Reform Advisory Group looked at new processes for ‘elective’ HHS which have now been progressed and are awaiting implementation
What is the size and scope of mandatory HHS?
Settlement - simplified

- Meter Operator
- Supplier
- Data Collector
- Registration Service
- Data Aggregator
- Supplier Volume Allocation Agent (SVAA)
Imbalance Settlement

Compare what a Generator agreed to sell...
With what a Generator actually produced...
And calculate payments where the two don’t match

Compare what a Supplier agreed to buy...
With what a Supplier actually consumed...
And calculate payments where the two don’t match
Central Volume Allocation (CVA) and Supplier Volume Allocation (SVA)

Transmission Network
‘The Grid’

CVA

SVA

Grid Supply Points

Distribution Network

Grid Supply Point (GSP) Group

Generation

Supply
## CVA and SVA

<table>
<thead>
<tr>
<th></th>
<th>CVA</th>
<th>SVA</th>
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</thead>
<tbody>
<tr>
<td>Meter Points</td>
<td>440 generating units (200 stations)</td>
<td>30 million customers</td>
</tr>
<tr>
<td>Registration</td>
<td>central (CRA)</td>
<td>20 SMRAs (1 per DNO/IDNO)</td>
</tr>
<tr>
<td>HH / NHH</td>
<td>HH</td>
<td>HH &amp; NHH</td>
</tr>
<tr>
<td>Meter Operator</td>
<td>competitive</td>
<td>competitive</td>
</tr>
<tr>
<td>Data Collector</td>
<td>central (CDCA)</td>
<td>competitive</td>
</tr>
<tr>
<td>Data Aggregator</td>
<td>N/A</td>
<td>competitive</td>
</tr>
</tbody>
</table>
Half-Hourly Vs Non-Half Hourly

- NHH energy
- HH energy
- UMS energy

- NHH customers
- HH customers
- UMS customers
What does the current system look like?
The Supplier Hub Model

- Meter Operator
- Supplier
- Data Collector
- Registration Service
- Data Aggregator
- Supplier Volume Allocation Agent (SVAA)
The meter to bank process

Meter → DC → DA → SVAA → SAA → FAA

- **Aggregated demand**
- **Supplier BMU volumes**
- **Daily profiles**

**Readings**
- AA / EAC or HH advances
- GSP Group Takes

**CDCA**

**Note:** DA, SVAA, SAA & FAA are all scheduled runs
Getting the elective Smart Meter data into Settlement

**DCC**
- DCC Interface (HH in Wh in UTC)

**Supplier**
- Appointments
- Validated Reads, Schedule, MC and default data

**SMRS**
- Meter registration data

**DC**
- Line Loss Factors
- Meter Readings

**DA**
- HH advances

**SVAA**
- Aggregated demand

**SAA**
- Supplier BMU volumes
- Imbalance/balancing charges

**FAA**
- GSP Group Takes

**LDSO**
- Line Loss Factors
- Meter Readings
What needs to be considered for the Target Operating Model?
What needs to be considered for the HHS Target Operating Model?

- **Roles and responsibilities**
  - Who does what and when?

- **Data Collection and Data Aggregation**
  - How do we allow data to be flexibly aggregated to encourage innovation?

- **Smart Rollout timescales**
  - When can we start (before it is complete)?

- **Transitioning of NHH Customers to HH**
  - Can we move them early to avoid dual processes

- **Access to HH data**
  - Who can access this level of data, what are the safeguards?

- **Settlement Timescales**
  - Can we settle customers in a more timely manner?
Roles and responsibilities: Developing Strawmen TOMs

Strawman X: Pros and Cons..........................

Data Retrieval via DCC
DP and DA

<-Supplier/ DNO access
-> Meter Data

->HH Data

->HH and NHH meter reads

Data Retrievers
(Supplier Appointment)

<-Access + reg. LLFs -> Aggregated HH Data per Supplier/ per area

<-Access + reg. ->Aggregated Data per MPAN/ per Customer

<-Services DSM? -> Meter Data

-> Aggregated HH Data by BMU id

ESCOs

Settlement

Distribution Businesses

Smart Meter

Non-Smart Meter

MOAs

UMS MAs

Installation and Maintenance

-Supplier Appointment

->HH and NHH meter reads

->HH Data

>HH and NHH meter reads

->HH Data
Data Aggregation: Who needs what?

Supplier A
Supplier B
Supplier C
Supplier D
Supplier E
Community Energy Scheme

BMU_XX2013_A - 1 April 2020
Smart Rollout timescales, data access and transition

- Will the Smart Meter roll-out go as planned?

- How many customers will never have a smart meter?

- What we do with remaining NHH may be different depending on the size of the rump:
  - Less sophisticated profiling if small volume

- How do we incorporate these without retaining existing NHH Processes
Settlement Timescales

1. Information run
2. Settlement run

5 WD  10 WD  1 month  3 months  6 months
Summary

- ELEXON settlement expert
- Settlement Design – many factors
  - Roles and responsibilities
  - Access to HH data
  - Settlement process and timescales
- Transition approach (NHH to HH)
- Interactions
  - Smart meter rollout
  - Export
  - Demand Side Flexibility work
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