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.

Our team on reception is here to help you, if you have any questions, please do ask them.
Welcome and Introductions

- Present Today
- Suppliers, Meter Operators, LDSOs, Generators, the TAA and ELEXON
  - Sarah Fuller (ELEXON)
  - Mike Smith (ELEXON)
  - Paul Gregory (TAA)
P283
So What's all the Fuss?

- Sarah Fuller/Mike Smith/Paul Gregory
Commissioning of Metering Systems

- BSC Section L /Code of Practice Four (CoP4) requirement

- To be performed on all new metering equipment which is to be used in Settlement
Code Of Practice 4 Requirements

- Commissioning
  - Testing
    - Meter
    - CTs/VTs
    - Record keeping
    - Procuring records
  - Records
What is commissioning?

Commissioning is a series of site tests and checks to confirm that the Metering Systems is accurately recording the flows of electricity at the Defined Metering Point.

Without commissioning there can be no certainty; and

If there is an underlaying error it may not be seen for years.
It is up to the MOA to carry out and record tests which PROVE compliance

CoP4 Section 5.5.2
That the current transformers are of the correct ratio and polarity and correctly located to record the required power flow;

1. Correct ratio: Injection Test either on the primary circuit or on a test bench.

2. Polarity: DC flick test, Buck and Boost test etc.

3. Location: are the CTs at the DMP as in appendix A of the relevant CoP. Visual confirmation

WARNING
Labels can be wrong
## Sample commissioning report

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Method</th>
<th>Result</th>
<th>Pass / Fail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confirm the CT ratio</td>
<td>Injected 10A in primary circuit</td>
<td>Output of 0.25A confirms ratio of 200/5A</td>
<td>Pass</td>
</tr>
<tr>
<td>Confirm the CT polarity</td>
<td>Inject 10A in primary circuit which includes a standard CT (200/5). Combine the secondary outputs (S1 to S1 and S2 to S2) to give 0.5A – Boost test</td>
<td>Output of 0.5A confirmed</td>
<td>Pass</td>
</tr>
<tr>
<td></td>
<td>Reverse the standard CT output and combine to give 0A – Buck test</td>
<td>Output of 0A recorded</td>
<td>Pass</td>
</tr>
<tr>
<td>CT Correctly located</td>
<td>Visually inspection. The CTs are located in the CT chamber above the cut out.</td>
<td>This is the DMP</td>
<td>Pass</td>
</tr>
</tbody>
</table>
Background to P283 - why the need for a Modification?
Issues

- Lack of / Incomplete Records
- Compensation not applied for losses
- Calibration errors/phase rotation
- CT/VT Incorrectly Installed
- CT Ratios Incorrect

Background to P283 - why the need for a Modification?
Background to P283 - why the need for a Modification

Results of the 2013/14 TAA Annual Report

Health of the Market

**SVA**
- 71% of HHMS audited had no evidence of or incomplete commissioning;
- There are commissioning issues for all HHMS where a Category 1 non-compliance was recorded.

**CVA**
- Commissioning non-compliances have reduced from 40 in 2012/13 to 32 in 2013/14 BUT sample size increases from 5% to 14.75% this year.
Background to P283 - why the need for a Modification

BSC Audit

2012/2013
- Extrapolating errors due to installation and commissioning of Metering Systems would give an error of between 1.5 to 2.4 TWh. Audit Qualification.

2013/2014
- Mentioned in BSC Audit report but extrapolated error < 1.5 TWh
What is P283?

- Intended to reinforce Commissioning processes
- Places new Commissioning obligations on System Operator
- Obligation to notify where records incomplete
- Solve access issue - obligation on equipment owners
What do the new arrangements mean for you?
MOA Commissions
Evaluates overall accuracy
Output: Commissioning Report & calibration records
Post P283: The new arrangements

MOA Commissions Equipment
Output: Commissioning Report & calibration records

MOA evaluates overall accuracy

MOA notifies Registrant of Commissioning results

In case of failure of, or gap in, Commissioning process, Registrant notifies LDSO or Transmission Company as appropriate

System Operator Commissions Equipment
Output: Commissioning Report & calibration records

Test Terminal Block

CTs

VT

Meter
What do the new arrangements mean for you?

**Supplier**
- Receive Commissioning notification from MOA
- Assess for risk to Settlement
  - Commissioning complete - no risk
  - Commissioning incomplete
    - Escalate gap in process to System Operator (LDSO)
    - Agree appropriate steps to be taken to minimise risk to Settlement

**Generator**
- Receive Commissioning notification from MOA
- Assess for risk to Settlement
  - Commissioning complete - no risk
  - Commissioning incomplete
    - Escalate gap in process to System Operator (LDSO/Transmission Company)
    - Agree appropriate steps to be taken to minimise risk to Settlement
What do the new arrangements mean for you?

MOA

Receive Commissioning & calibration records from LDSO/TSO
Assess for completeness and accuracy clarifying anything incorrect or unclear

Records complete - commission Metering equipment in accordance with CoP4
Inform Registrant and retain copy of records for life of Metering Equipment
Records incomplete
Escalate gap in process to Registrant

System Operator

Ensure calibration records for CTs & VTs are available
Record the CT & VT serial numbers, class accuracy, burden, makes & models.

Provide copy of Commissioning & Calibration records to relevant MOA & Supplier and retain copy for life of Metering Equipment
Communications under P283
Communications under P283

- We have provided sample forms in guidance for people to use
- Initial communications are likely to be via E-mail
- We will be providing a list of specific e-mail and telephone contacts for Suppliers, MOAs, LDSOs and the Transmission System Operator on our Portal
- We anticipate these requirements will evolve and improve over time
- TAMEG is looking at potential further developments.
- DTN? Electronic Forms? What do YOU think?
Questions and Open Forum