

An aerial night photograph of New York City, showing the Hudson River winding through the city. The Manhattan skyline is visible in the foreground, with numerous skyscrapers illuminated. The city lights reflect on the water, and the sky is dark with some clouds. A green banner is overlaid on the bottom right of the image.

Capacity Market – DSR Workshop Tuesday 22 March 2016

Capacity Market: DSR Workshop Agenda

| 22 March 2016 | Agenda | Presenter |
|-----------------------|--|--|
| 13:30 – 13:40 | Introductions | |
| 13:40 – 14:00 | Overview of the DSR Test Process <ul style="list-style-type: none">▪ What needs to happen▪ Time line based on the current Rules▪ Q&A | Ben Smith, National Grid - EMR Delivery Body |
| 14:00 – 14:15 | Metering Assessment process <ul style="list-style-type: none">▪ Who needs to provide this and when▪ How do applicants do this▪ Q&A | Ben Smith, National Grid - EMR Delivery Body |
| 14:15 – 15:00 | Metering Test Process <ul style="list-style-type: none">▪ Who needs to complete this▪ How this is undertaken and timelines▪ Q&A | Iain Nicholl, EMRS |
| 15:00 – 15:15 ~ Break | | |
| 15:15 – 15:40 | DSR Test <ul style="list-style-type: none">▪ How this is undertaken and timelines▪ Q&A | Ben Smith, National Grid - EMR Delivery Body |
| 15:40 – 16:00 | Wrap Up & Final Q&A | |
| 16:00 ~ Close | | |

DSR Tests – TA Applicants

| | | | |
|--------|-----------------------------|--------|----------|
| 2015_2 | Tata Steel UK Limited | 15.000 | Deferred |
| AMER01 | Ameresco Limited | 3.450 | Deferred |
| AMER02 | Ameresco Limited | 3.450 | Deferred |
| AMER03 | Ameresco Limited | 2.600 | Deferred |
| AMER04 | Ameresco Limited | 2.600 | Deferred |
| AMER05 | Ameresco Limited | 2.600 | Deferred |
| AMER06 | Ameresco Limited | 2.600 | Deferred |
| CENEST | GB Gas Holdings Ltd | 5.105 | Deferred |
| CM_LJ7 | Limejump Ltd. | 6.770 | Deferred |
| DSR001 | E.ON UK plc | 2.600 | Deferred |
| DSR002 | E.ON UK plc | 2.600 | Deferred |
| DSR003 | E.ON UK plc | 2.600 | Deferred |
| DSR004 | E.ON UK plc | 2.600 | Deferred |
| ECMU04 | EnerNOC UK Limited | 21.700 | Deferred |
| ECMU05 | EnerNOC UK Limited | 21.700 | Deferred |
| ECMU06 | EnerNOC UK Limited | 21.700 | Deferred |
| EPO001 | Energy Pool UK limited | 43.340 | Deferred |
| EPO002 | Energy Pool UK limited | 16.492 | Deferred |
| ESR16B | EDF Energy Customers plc | 23.870 | Deferred |
| ESR16C | EDF Energy Customers plc | 23.870 | Deferred |
| FLEX61 | Flexitricity Limited | 2.604 | Deferred |
| FLEX62 | Flexitricity Limited | 3.222 | Deferred |
| FLEX63 | Flexitricity Limited | 2.778 | Deferred |
| FLEX64 | Flexitricity Limited | 5.208 | Deferred |
| FLEX66 | Flexitricity Limited | 12.586 | Deferred |
| FLEX67 | Flexitricity Limited | 11.544 | Deferred |
| KIWI63 | KiWi Power Limited | 34.720 | Deferred |
| KIWI64 | KiWi Power Limited | 34.720 | Deferred |
| KIWI65 | KiWi Power Limited | 34.720 | Deferred |
| KIWI66 | KiWi Power Limited | 34.720 | Deferred |
| KIWI67 | KiWi Power Limited | 17.360 | Deferred |
| KIWI68 | KiWi Power Limited | 17.360 | Deferred |
| MIXUNP | REstore Flexpond UK Limited | 1.990 | Yes |
| SMART3 | SmartestEnergy Limited | 15.624 | Deferred |
| SMART4 | SmartestEnergy Limited | 4.340 | Deferred |
| TLGUK1 | BOC Ltd | 14.000 | Yes |

36 Unproven CMUS were awarded agreements

This spans across 13 companies

Has a combined 475MW of capacity

34 CMUs need to complete the metering assessment – 2 need to undertake a metering test

DSR Tests after Prequalification

Step 1: Complete Metering Assessment

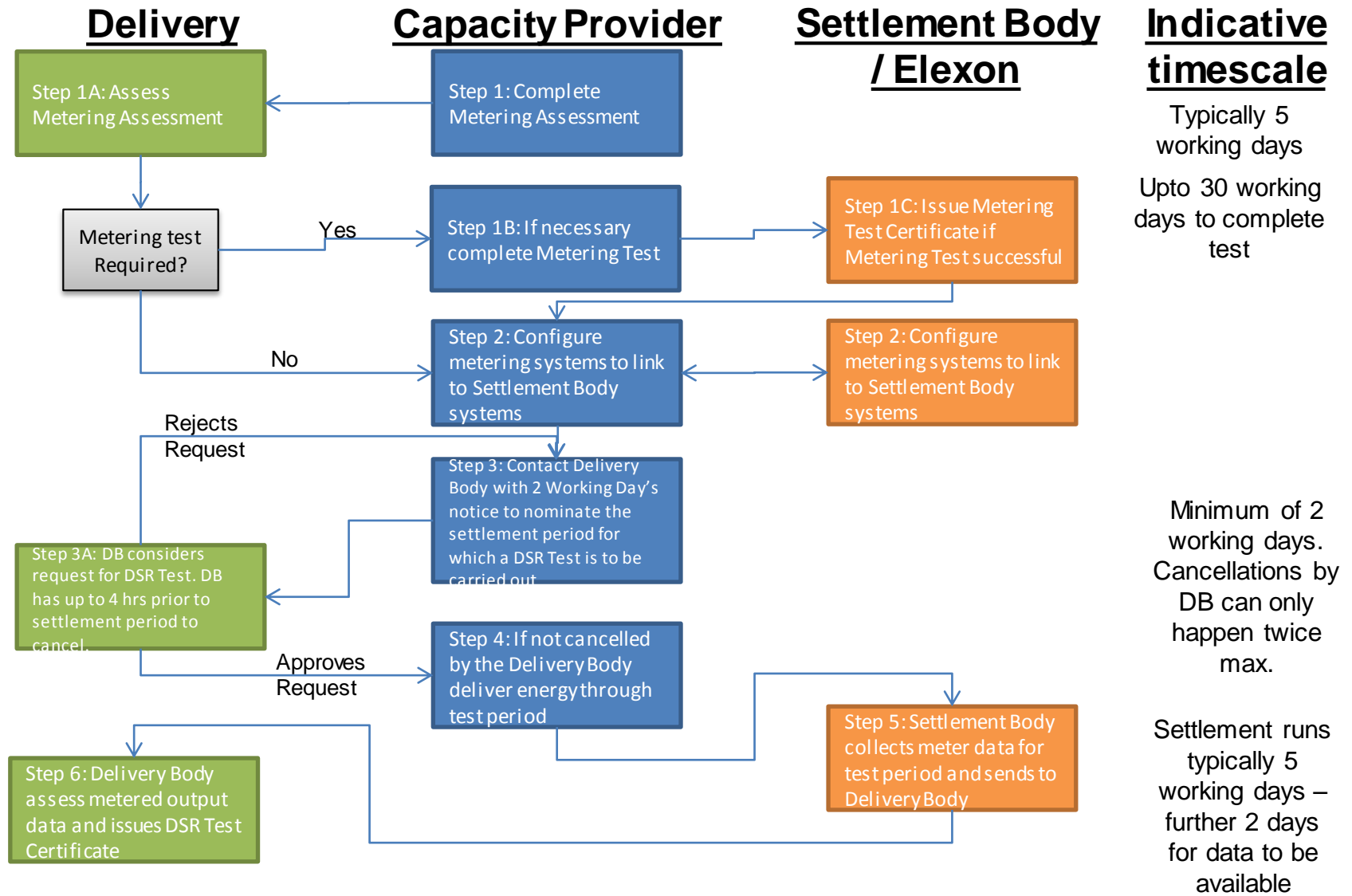
Step 1A: If necessary complete Metering Test and be issued with Metering Test Certificate

Step 2: Configure metering systems to link to Settlement Body systems

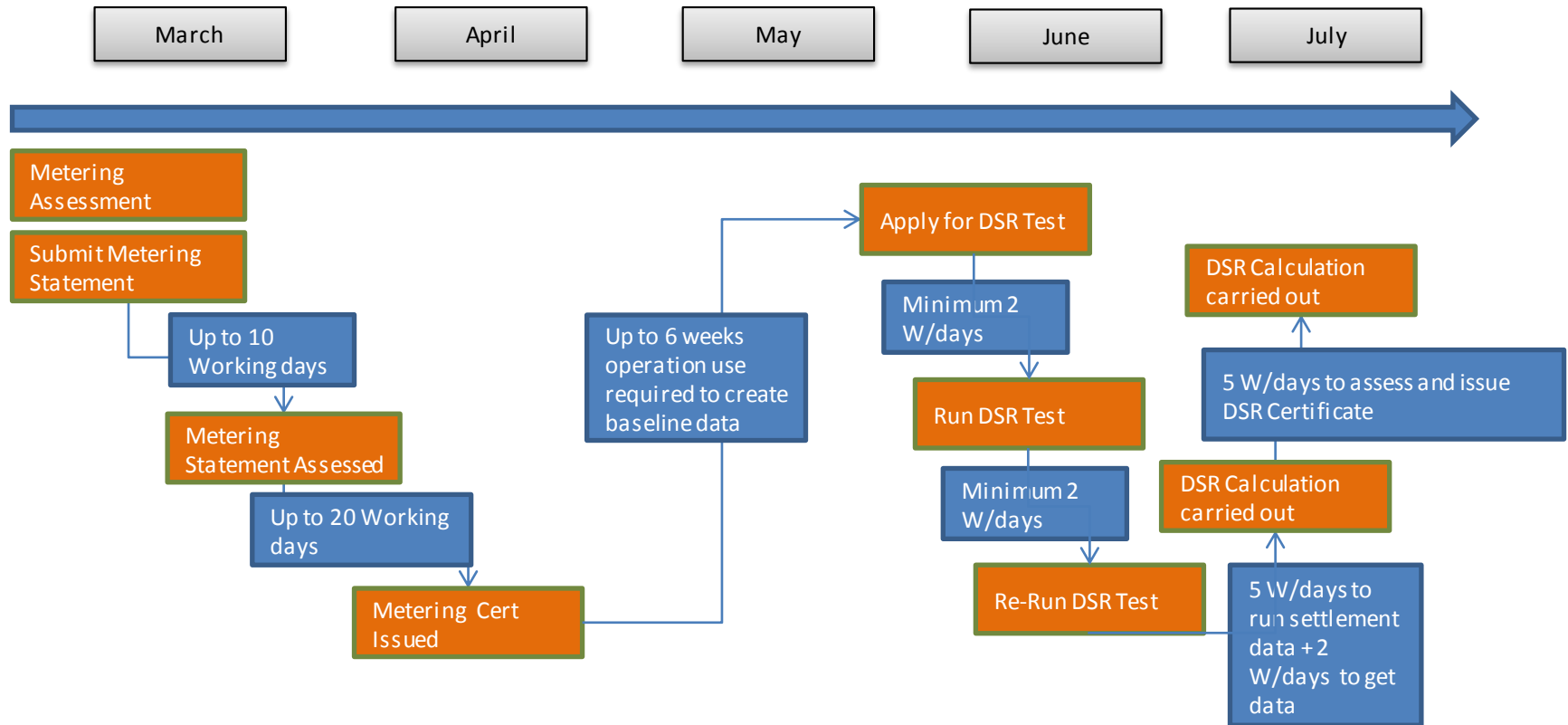
Step 3: Contact Delivery Body with 2 Working Day's notice to nominate the settlement period for which a DSR Test is to be carried out

Step 4: If not cancelled by the Delivery Body run through

DSR Tests after Prequalification



DSR Tests - Timeline



This process above according to the CM Rules is likely to take circa of 15 weeks – therefore if applicants submit their Metering Statements at the beginning of March then they could expect to complete the process by the end of June!

Currently it is expected that the process will need to be completed by the end of August (based on a similar timing of Prequalification from 2015)!

Metering Assessment Tool - Demo

Metering Assessment Tool TA 2015.xlsm - Microsoft Excel

File Home Insert Page Layout Formulas Data Review View Developer

Clipboard Font Alignment Number Styles Cells Editing

XFD1048576

Complete all steps

- 1. Company & CMU Details
- 2. Metering Information
- 3. Summary

HELP & GUIDANCE

Questions in **black** are compulsory and must be answered before you can progress

Questions in **orange** do not need to be answered. These questions can become compulsory depending on the type of CMU and your selected answers. If these questions become compulsory they will change to **black**

Use the **back** and **next** buttons below to navigate through the tool. You will be given the opportunity to save the details for the selected CMU in the **Summary** section.

If you wish to create a new line in a text box please use **ALT + Enter**.

1. Company & CMU Details

Select Bidding Company:

Select CMU:

Selected CMU Name:

Final Auction Status:

CMRS Status:

Transmission / Distribution:

< Back Next >

Ready 100%

DSR: The Capacity Market Rules



Each DSR CMU must carry out a DSR test in accordance with rule 13.2 of 'The Capacity Market Rules'.

The DSR test can be obtained prior to the prequalification window, in which case the applicant can apply as a proven DSR CMU; or

After the award of the capacity agreement but no later than one month prior to the delivery year, in which case the applicant can apply as an unproven DSR CMU.

A DSR test may not take place during the prequalification assessment window. The DSR test will be the same for all applicants.

DSR Test: What is required

A **Metering Point Administration Number(s)** of the meters for the site

A **Metering Test Certificate**

2 working days' notice of your intention to **test activate** the DSR CMU together with the settlement period in which the activation will be carried out (Activation Test).

DSR Test: The Process

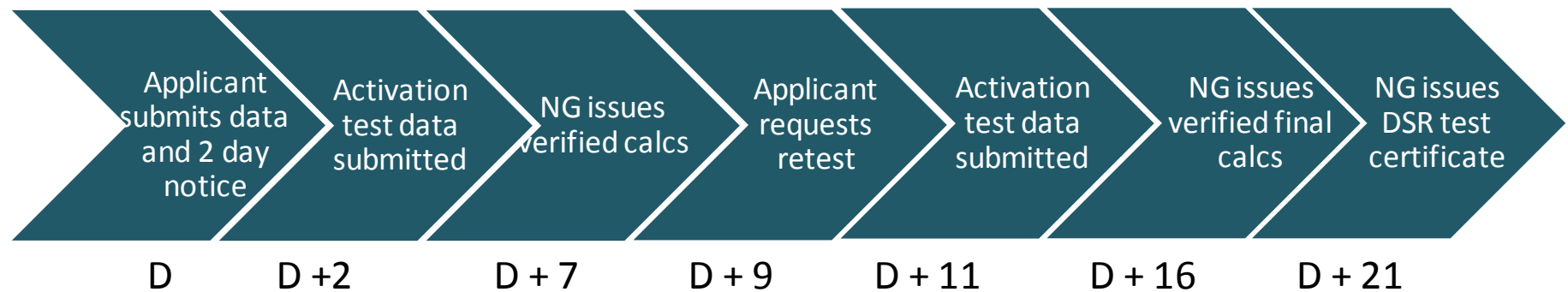
Within 5 working days of NG receiving all the data we will notify the applicant of verified calculations of:

1. Baseline Demand
2. The DSR evidenced; and
3. The proven DSR Capacity

Applicants who have carried out an activation test, have 2 working days of receiving this information to request a retest of the activation test, in which case the verified calculations above will be run again and become conclusive (even if the second tests output is lower).

Within 5 working days of receipt of the above information being issued to the applicant, NG will issue the applicant with a DSR test certificate.

DSR Test: The Process



Activation Test - the above applicant has to carry out an activation test. The result of the verified calculations were challenged and an activation retest undertaken. They receive the DSR test certificate within 21 working days after submission.

DSR Test: Further Guidance



DSR Test Guidance Document is available on our website.

Email Address: emr@nationalgrid.com

Capacity Market Telephone helpline: **01926 655300**

Please contact us should you need any further help or guidance

- Public

Metering Tests in the TA

- EMR Capacity Market
 - 22 March 2016
 - Iain Nicoll

Agenda

- What is the purpose of the Metering Test?
- What standard is the Metering System being checked against?
- When do I have to complete the Metering Test?
- What is being checked?
- What is the process for?
 - Desk based Metering Test
 - Onsite Metering Test
- How long is the Metering Test Certificate valid?
- What other metering information do I have to provide?

What is the purpose of the Metering Test?

To determine whether or not the metering arrangements for each Generating Unit, Interconnector or DSR CMU Component comprised in a CMU constitutes an Approved Metering Solution

Where an Approved Metering Solution is a Metering Configuration Solution approved by ESC which is an arrangement of Metering Equipment for:

- A Generating Unit that is not a BMU
- A DSR CMU Component
- A CMU that is a partial BMU

What is it being tested against?

- The relevant governing standards for the Metering Configuration Solution

BSC Metering

Balancing
Services
Metering

Bespoke
Metering

■ Codes of Practice

At time of Registration
for Settlement

■ Balancing Services
Agreement

Short Term Operating
Reserve (STOR)

Frequency Control by
Demand Management
(FCDM)

Firm Frequency
Response (FFR)

■ Bespoke Technical
Requirements

Schedule 7 Capacity
Market (Amendment)
Rules 2015

When do I have to complete my Metering Test?

- Depends on Type of CMU and Auction

| Auction | CMU Type | Deadline |
|----------|----------------------------|--|
| T-1 (TA) | Existing CMU or Proven DSR | 1 month prior to start of 1st Delivery Year |
| Any | Unproven DSR | 1 month prior to start of relevant Delivery Year |
| Any | Prospective CMU | By the Long Stop Date ¹ |

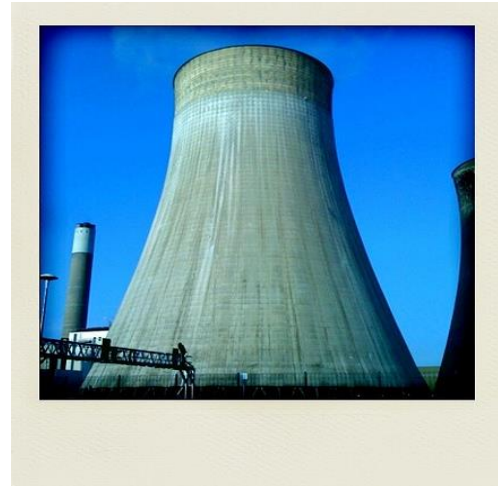
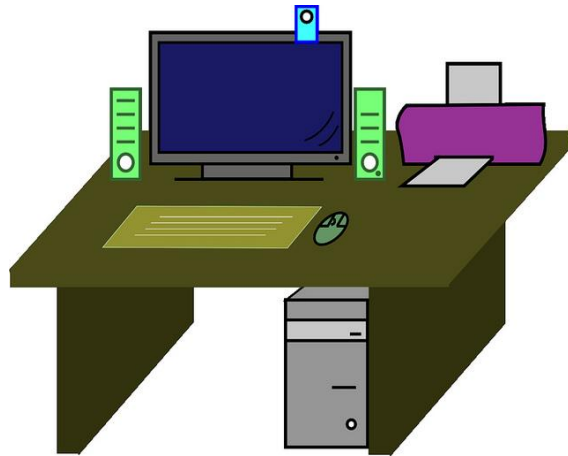
¹ The Long Stop Date is different depending on whether the CMU is New Build or Refurbishing. In the case of a Refurbishing CMU it is the date falling at the start of the Delivery Year and for a New Build CMU it is the date falling 12 months after the start of the first scheduled Delivery Year

What is being checked?

- The main objectives of the Metering Test is to determine whether:
 - The Metering System is only recording the net output for a Generating CMU or for a permitted on-site generating unit DSR CMU or the drop in import demand for a DSR CMU
 - Determine the overall accuracy for the Metering System from the information on errors provided for Current Transformers, Voltage Transformers and Metering Devices
 - Confirm the method that the Capacity Provider is using to get data from the Metering Device to the EMR Settlement System in Half Hour period energy format

Desk Based or Onsite?

- All CMUs requiring a Metering Test will have a desk based test
 - A percentage of those will have an additional onsite test

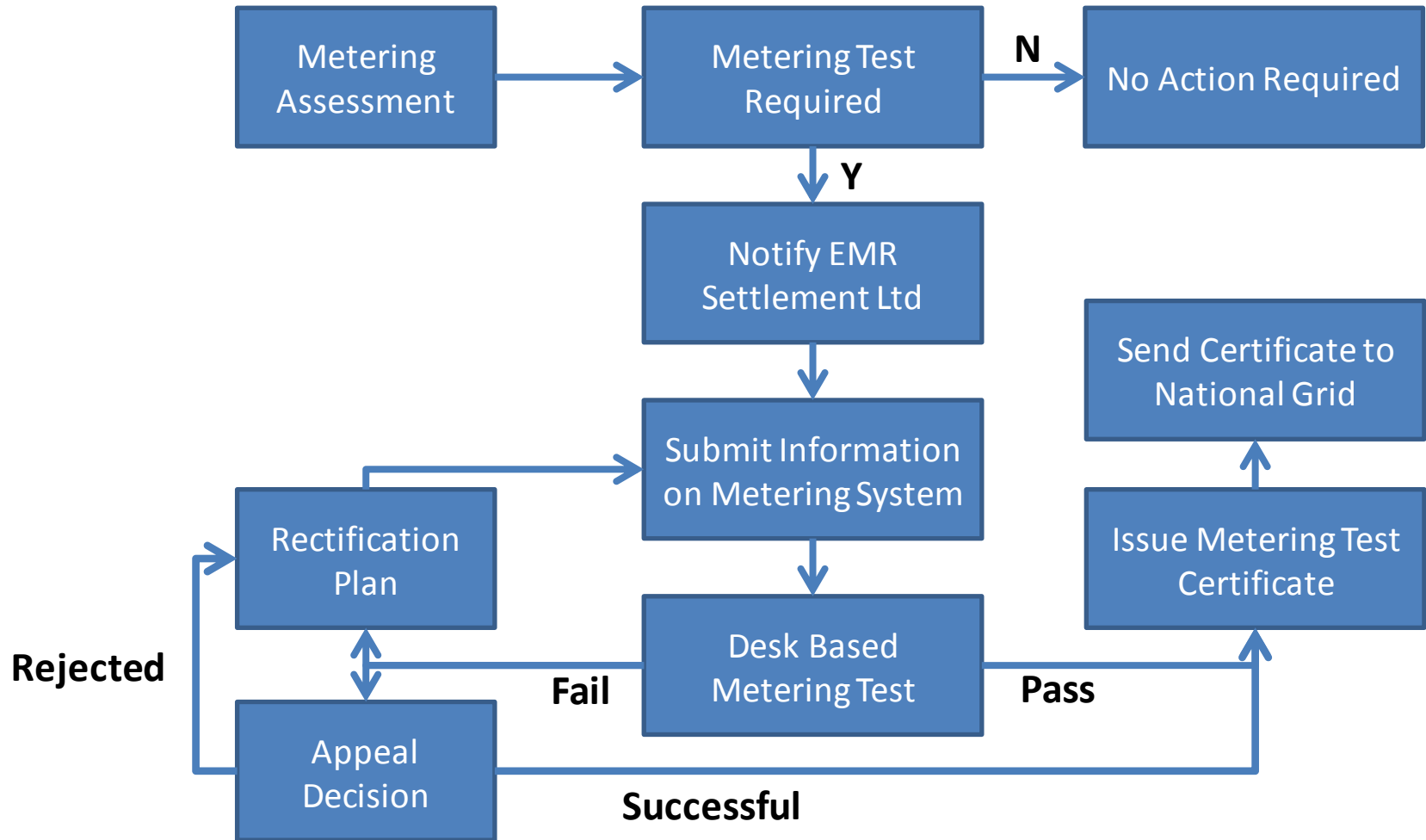


- Suitably qualified and authorised to work on HV installations
- Will comply at all times with the Health & Safety rules of the Capacity Provider

Onsite Assurance

- The onsite assurance may be carried out as Delivery Year Site Audit
 - As per Rule 13.5
 - Metering Recovery Payment Notice if Site Audit Failure
 - Failure to notify a change to the metering configuration
 - Errors with the submission of data
 - Faulty Metering Equipment
 - Submission of incorrect information
 - Failure of the Site Audit can result in the Metering Test Certificate being invalidated

Desk Based Test Process



Starting the process

- Submit a Metering Test request and a Metering Statement to EMRS at contact@emrsettlement.co.uk
 - Only for Components that have triggered a Metering Test
 - Must include details on all Components and Metering Configuration Solutions used (and what Balancing Services Agreement e.g. STOR)

| Component ID | Metering Configuration Solution | Metering System Identifiers | Metering Test Required |
|--------------|---------------------------------|-----------------------------|------------------------|
| Component 1 | Supplier Settlement | All MPANs | No |
| Component 2 | Supplier Settlement | All MPANs | No |
| Component 3 | Supplier Settlement | All MPANs | No |
| Component 4 | Balancing Services | All Metered Entity IDs | Yes |
| Component 5 | Bespoke | All Metered Entity IDs | Yes |

Metering System Information

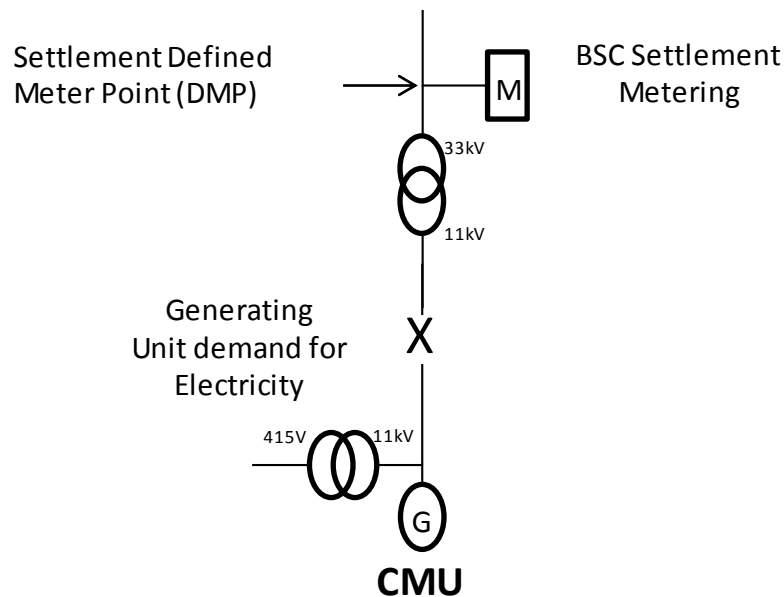
- Metering Statement specified in Schedule 6 of the Rules
 - CMU and Metering System details
 - Technical Specifications
 - Equipment certificates (e.g. meters, measurement transformers)
 - Commissioning evidence (e.g. proving measurement transformer ratios applied correctly)
 - Data Provision

What will happen during the desk based test?

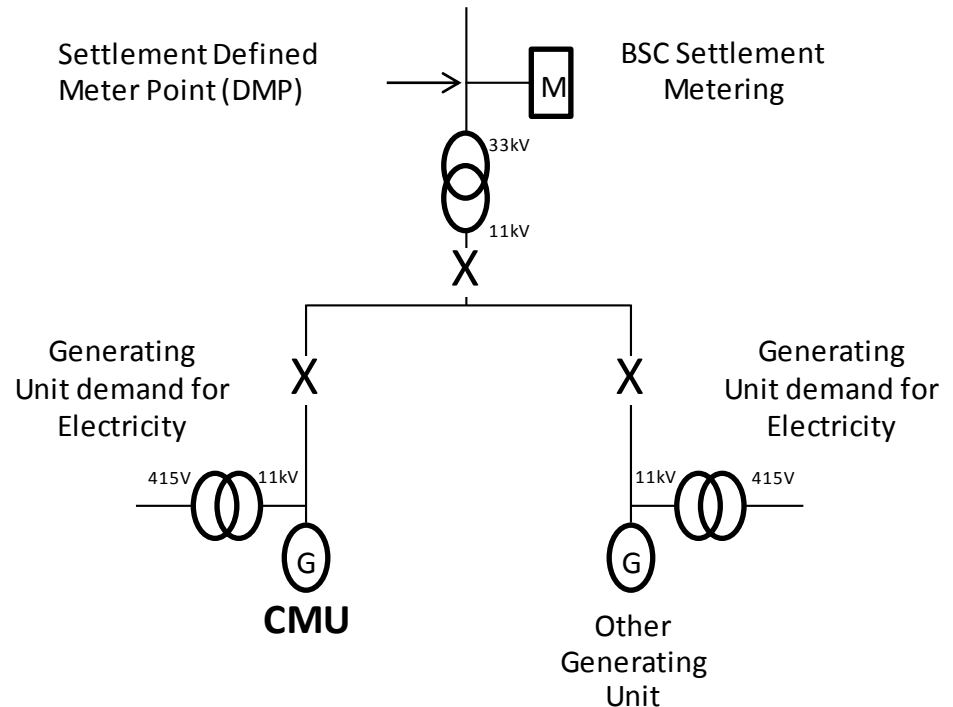
- Check Metering System compliance against relevant governing documents and Capacity Market Rules
- Check net output from the line diagram
- Determine the overall accuracy of the Metering System
- Check the method the Capacity Provider is using to submit Metered Volumes to EMRS

How do we check net output from the line diagram?

Compliant



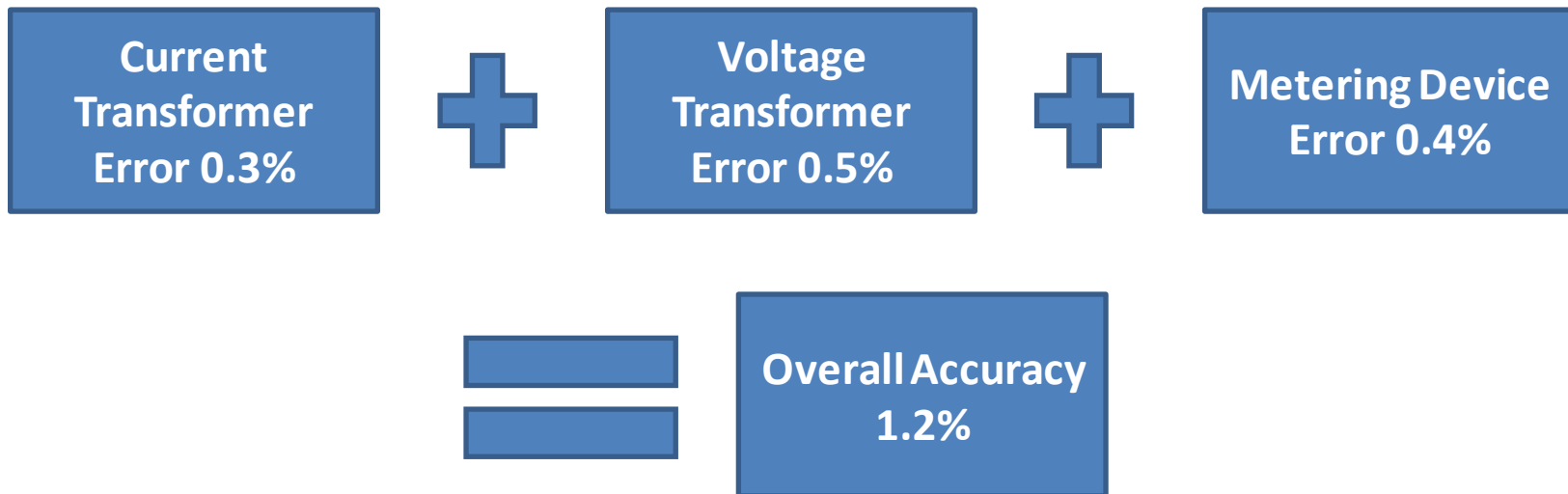
Compliant



Why non-compliant? Other load or generation on site

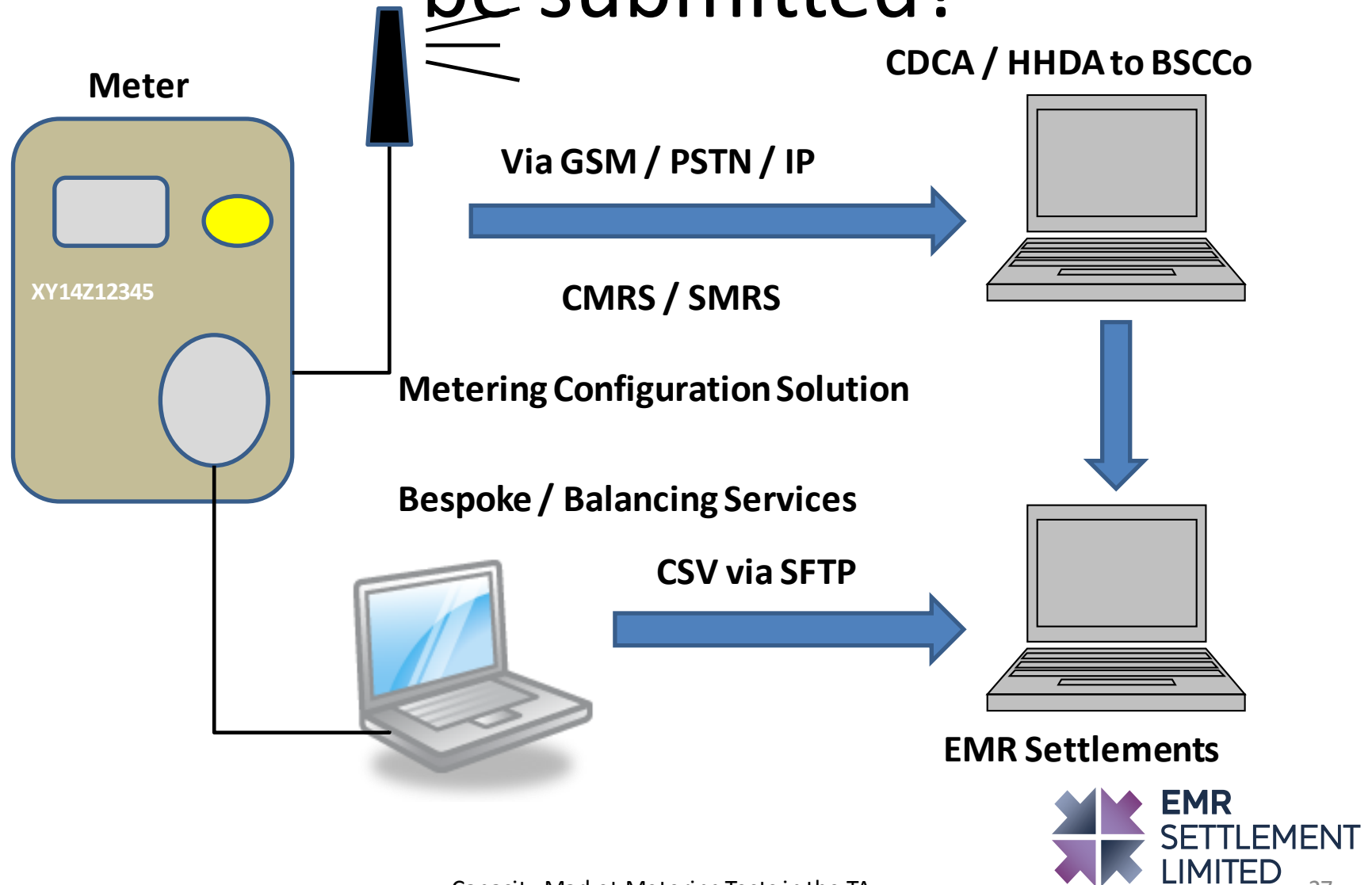
How do we determine the overall accuracy?

- From the error figures provided by the Capacity Provider



- The overall accuracy can be reduced by compensating the Metering Device for transformer errors

How do we check that data can be submitted?



Onsite Metering Test - Percentages

TA 2016 Auction

- Agreed onsite Metering Test percentages:

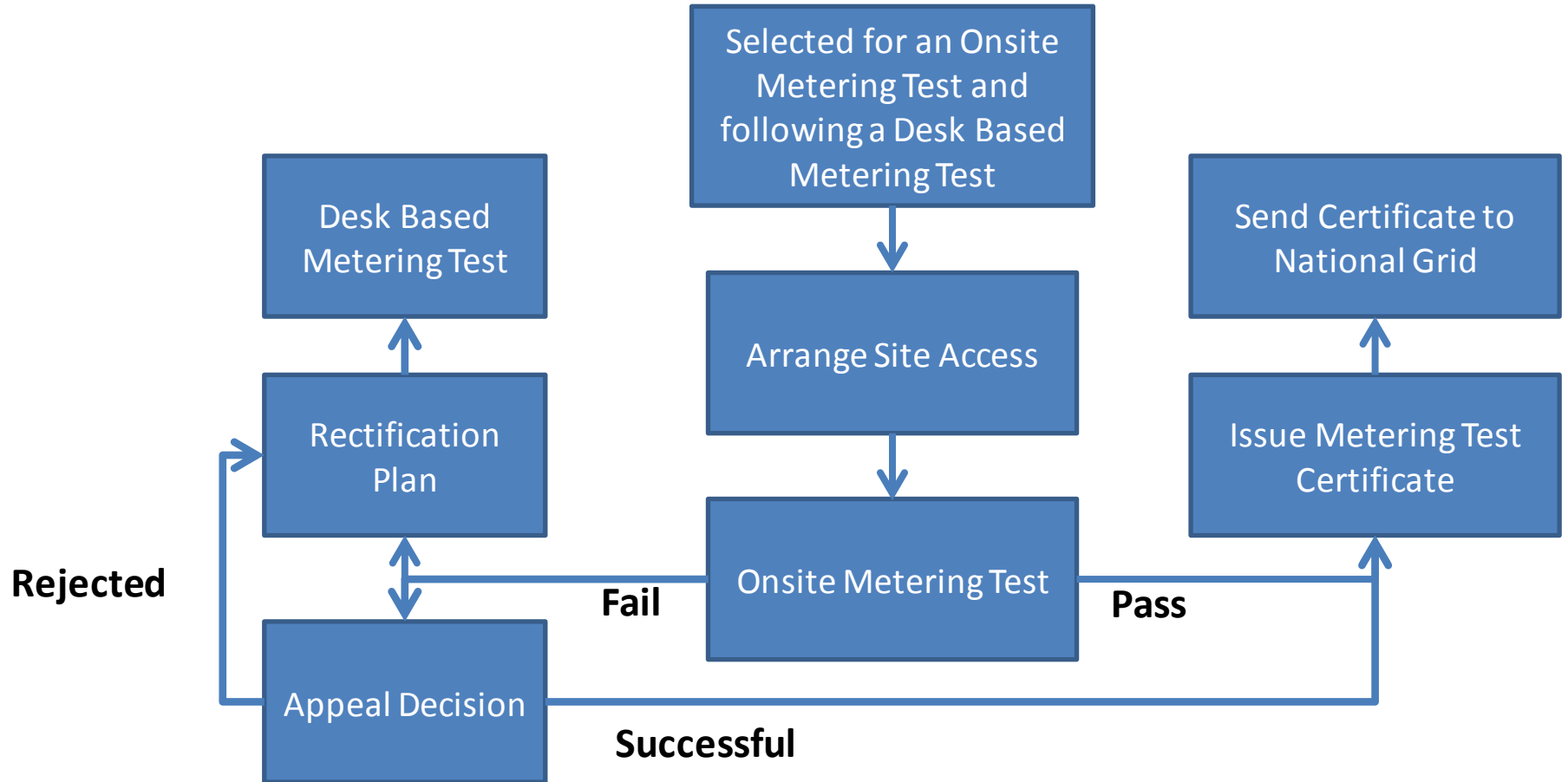
| Metering Configuration Solution | % |
|---------------------------------|------------------------|
| BSC SMRS CMU | 50% |
| Balancing Services CMU | 100% |
| Bespoke CMU | 100% |
| Aggregating CMU | 25 or 10% ¹ |

- Percentages agreed with Electricity Settlements Company

¹ 25% of CMU Components making up the CMU where there are less than 30 to be tested; 10% of CMU Components where there are 30 or above to be tested.

All CMU Components will have a desk based Metering Test

Onsite Test Process

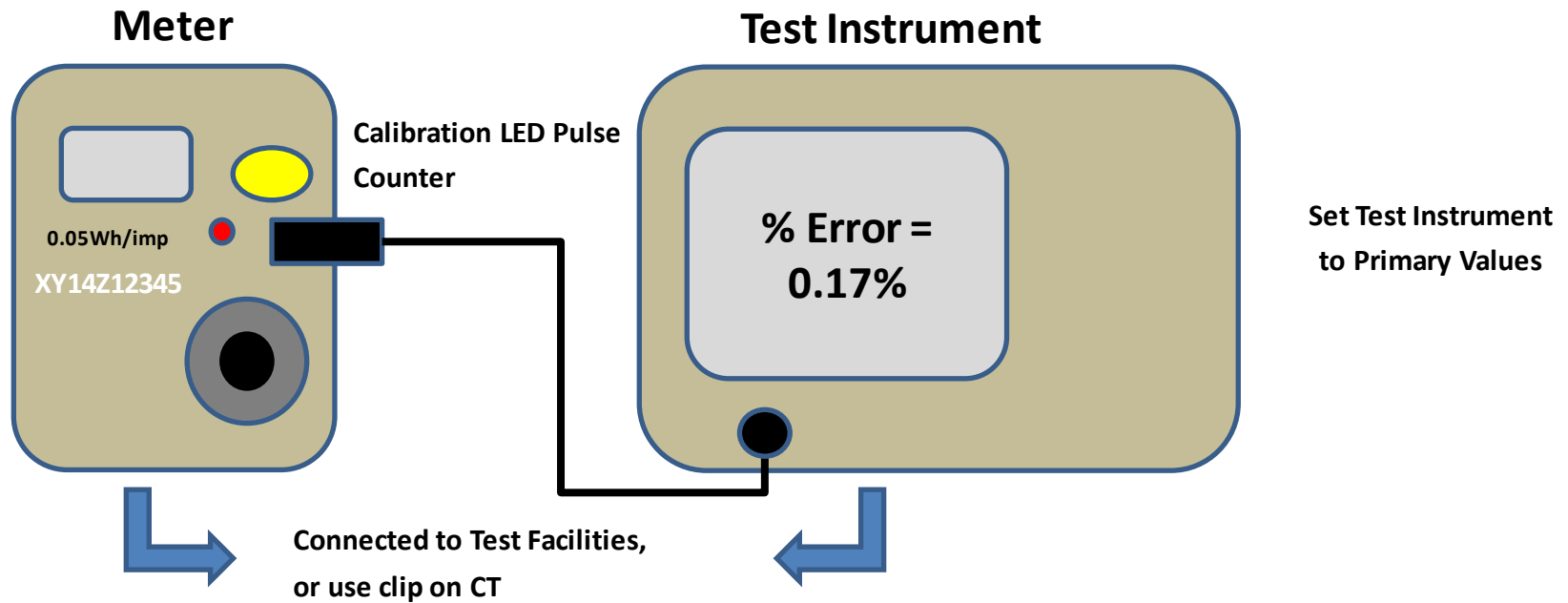


What will happen during the onsite test?

- Confirm the assets in the Metering System match the technical details submitted by the Capacity Provider
- Check accuracy class of assets in the Metering System
- Determine the overall accuracy of the Metering System
- Physical checks on the Metering System:
 1. Check the accuracy of the Metering Device
 2. Check Primary Energy is being recorded correctly
 3. Confirm a half hour of energy recorded by the Metering Device can be submitted to EMRS

1. Check the accuracy of the Metering Device

- Test the Meter with a Test Instrument



- Meter and Test Instrument both connected to Secondary Voltage / Current
- Test Instrument compares Energy measured by the Meter against the Energy recorded by itself over a period of time

2. Primary Energy Check

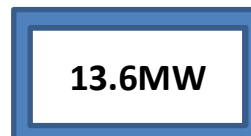
- Compare Instantaneous Parameters on Meter to the Test Instrument and an Independent Primary Indication (e.g. substation protection and instrumentation panel).

For example:

- Compare:

- Primary Voltage
- Primary Current
- Primary Active Energy
- Primary Reactive Energy
- Power Factor

Meter



Test Instrument



Panel Instrument



Compliant



3. Half Hour Period Check

- Does the Half Hourly advance match?

Independent Primary Indication

Take a Meter reading

11:00 000027 kWh

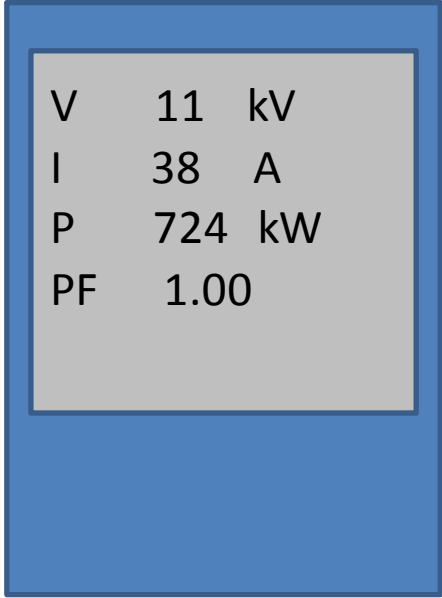
Take another Meter reading

11:30 000394 kWh

What is the increase?

Advance 367 kWh

How do we know it is accurate?



| | | |
|----|------|----|
| V | 11 | kV |
| I | 38 | A |
| P | 724 | kW |
| PF | 1.00 | |

- Check value with Data Collector or Capacity Providers Balancing Services Installation

4. Metered Volumes (Non-BSC process)

- If a Capacity Provider needs to submit data using a non-BSC process (i.e. for Balancing Services or Bespoke Metering Configuration Solutions)
 - Use a defined CSV format and submit over SFTP

HDR|STEP001|ABCD1234|20141211121500

MID|MSID|XY14Z12345NET00000|20141210

VAL|1|A|-26.4

VAL|2|A|-25.9

.

.

VAL|47|A|410.8

VAL|48|A|427.5

END|51

■ Where,

- HDR – File header (one record per file)
- MID – Meter Identifier (one record per day and one meter identifier)
- VAL – Half hour values (48 per day)
- END – End file record with number of lines included
- Meter Identifier Type – MSID
- Metered Entity Identifier – Up to 18 characters

How long is the Metering Test

Certificate valid?

- A Metering Test Certificate will be valid in subsequent Capacity Auctions
- As long as the Metering Configuration Solution for the CMU hasn't changed (e.g. from Bespoke Solution to BSC SMRS Solution)
- Prior to any change the Capacity Provider must inform National Grid and the Electricity Settlements Company
- If the Metering Configuration Solution has changed a new Metering Test Certificate is required
- A Metering Test may be required following a Site Audit where a non-compliance has been identified

Metering Information

- For settlement of Metered Volumes in the Capacity Market EMRS needs information on the Metering System
- Capacity Providers need to complete a form on their CMU Components

| Row No. | CMU ID | Component ID | Effective Date | Metered Entity Type | Metered Entity Id | Multiplier | Distributor ID | LLFC ID | Boundary Point MPAN / MSID | Balancing Services ID |
|---------|---------|--------------|----------------|---------------------|-------------------|------------|----------------|---------|----------------------------|-----------------------|
| 1 | ABCD | Unit1 | 01/10/2018 | MPAN | 1200087654321 | 1.00 | | | | |
| 2 | ABCD | Unit1 | 01/10/2018 | MPAN | 1200012345678 | 1.00 | | | | |
| 3 | ABCD | Unit2 | 01/10/2018 | MPAN | 1200043218765 | 1.00 | | | | |
| 4 | ABCD | Unit2 | 01/10/2018 | MPAN | 1200056781234 | 1.00 | | | | |
| 5 | EFGH001 | | 01/10/2018 | MSID_NON_BSC | EFGH001NET | 1.00 | LOND | 123 | 1200055555555 | ABCD1234 |

How will we communicate this?

- **EMR Settlement Website**

- <http://emrsettlement.co.uk/>
- News
- EMR Circular
- Calendar
- Events
- Working Practice
- Guidance documentation

EMR SETTLEMENT LIMITED

Subscribe here to receive the latest Circulars

HOME ABOUT PUBLICATIONS CHANGE STAKEHOLDER SUPPORT NEWS CALENDAR WHO WE ARE CONTACT US

We are the EMR Settlement Services Provider and will deliver settlement for the Contract for Difference (CFD) and the Capacity Market (CM). We have been appointed by DECC, and are acting on behalf of the Low Carbon Contracts Company (the CFD Counterparty) and the Electricity Settlements Company (the CM Settlement Body).

Google Custom Search SEARCH

News

[Invoicing the CFD Operational Costs Levy to Suppliers](#)

We have issued [EMR Circular 42](#) which informs Suppliers that due to delays experienced during User Acceptance Testing of the EMR settlement system, there is a high probability that EMR Settlement Ltd will not be in a position to go live with the settlement system in time for automated invoicing of the CFD Operational Costs Levy 2015/16 to Suppliers from 29 April 2015.

We may therefore have to invoke manual invoicing contingency arrangements in order to issue invoices

Calendar: Apr

| MON | TUE | WED | THU | FRI | SAT | SUN |
|-----|-----|-----|-----|-----|-----|-----|
| | | 1 | 2 | 3 | 4 | 5 |
| 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 |

Any questions?

- Request a Metering Test
 - contact@emrsettlement.co.uk
 - 020 7380 4333
- Metering Test Queries
 - iain.nicoll@elexon.co.uk
 - 020 7380 4162