

Capacity Market Operational Coordination Event



19 May 2015

Agenda

Session	Timings
Welcome and Introductions	9.30
Operational Plan Update	9.35
IS Update and Registration Demo	9.45
Break	10.45
DECC Transitional Arrangements	11.15
Monitoring Construction Progress	11.30
Metering	11:40
Q&A	12.20
Lunch	12.30

Operational Plan Update

Ian Nicholas

Milestones Achieved

T-4 ref	TA ref	Deliverable	Scope	Date requirement from CM Rules/Regs	T-4 Auction	DSR Transitional Auction	Dependencies	Owner
3		SoS provides Data and assumptions to the Delivery Body	The SoS provides final data and assumptions to the Delivery Body to enable preparation of the Electricity Capacity Report (ECR)	No later than the 22 nd April	Friday 17 th April 2015	n/a		DECC

Received the assumptions – We are currently working on the ECR ready for submission on Friday 29 May.

4		Ofgem CM Rule change consultation closes	Consultation closes		May 2015	May 2015	DECC CM rule changes in force	Ofgem
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The Consultation closed on Tuesday 5 May – Ofgem are working through the responses.

Upcoming Milestones

T-4 ref	TA ref	Deliverable	Scope	Date requirement from CM Rules/Regs	T-4 Auction	DSR Transitional Auction	Dependencies	Owner
5		Submit Electricity Capacity Report to SoS	Submit report to SoS including a recommendation on the target volume to procure.	Before the 1 st June	Friday 29 th May 2015	n/a	Input assumptions from DECC.	NG
6		SoS publishes determination on auctions being held	The SoS determines whether a T-4 auction and DSR TA are to be held.	By the 15 th June	Friday 12 th June 2015	Friday 12 th June 2015	Electricity Capacity Report	DECC
7		Ofgem publish final revised CM Rules	Following consultation, Ofgem publish final updated version of CM Rules.		June 2015	June 2015	Ofgem Consultation process	Ofgem
8		Provide Auction Parameters to NG	Provide updated demand curve & target volume based on NG ECR. Also provide Net CONE, Auction Price Cap, Min/Max capacity to procure, Price Duration curves & Price decrement schedule.	As soon as practical after 15 th June	Wednesday 24 th June 2015	Wednesday 24 th June 2015	Electricity Capacity Report	DECC

Delivery Body Activities

- Developing System Operator Procedures for Stress Events
- Recruitment
- Stakeholder/Customer Meetings
- LOTS of IT work (to be covered in the IS update)
- Responded to Ofgem Rules consultation
- Ongoing Agreement Management activities
- Continuing project work to deliver the “Electricity Capacity Report” incorporating the recommendation on volume to procure through the 2019/20 T-4 Auction

Questions?

IS Update

Karthick Iyemperumal

Admin System Current Position

- Portal live

- Capacity Market solution on track for go-live 23rd June 2015
 - All requirements and design complete
 - User/Company Registration, Security, Password Management;
 - UAT2 complete, UAT3 (and final) started 18th May, due to complete 20th
 - CM development complete;
 - UAT started 14th May – on plan
 - **Plan incorporates proposed DECC/Ofgem rule changes**

So what does it look like

- Live Demonstration
 - User and Company Registration
 - Password and PIN Management
 - Upload of company documents
 - Secure Messaging

- Your Feedback is welcome. We will consider all feedback and endeavour to incorporate as appropriate.

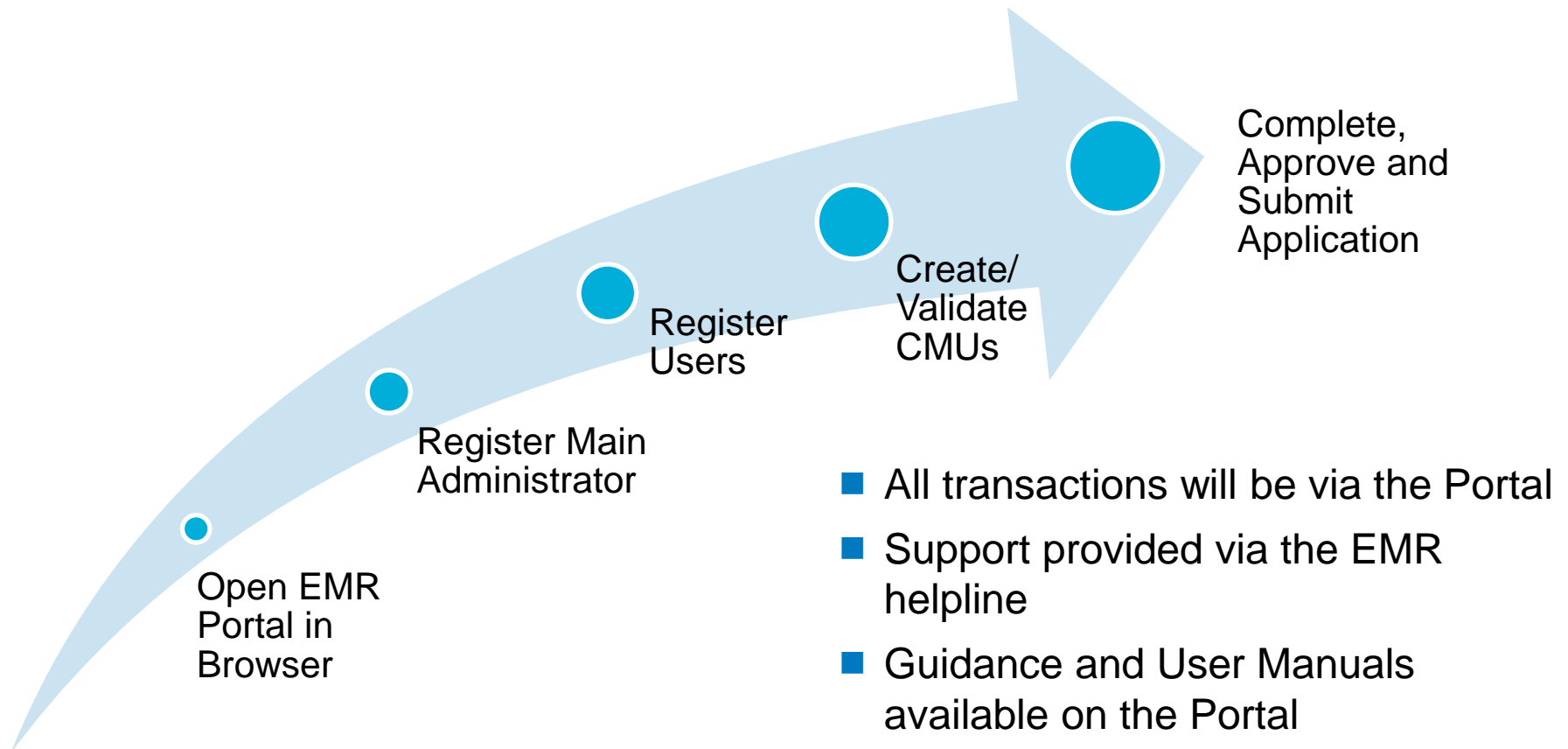
Live Demonstration



19th May 2015

High Level Process

- The high level process for Prequalification through the Portal



So what does it look like


- The following slides are screenshots from the Prequalification system (Currently in test)
- Our objectives are;
 - To give confidence of progress
 - To give early sight of look, feel and structure
 - Seek constructive feedback

Prequalification Look and Feel

■ View / Create CMU related to a company

My CMUs

MY COMPANIES

 MY CMUS

MY APPLICATIONS / OPT-OUTS

MY DISPUTES

MY AUCTIONS

MY AGREEMENTS

REPORTS

NOTIFICATIONS

TECHNOLOGY CLASS MANAGEMENT

CMU Identifier	CMU Name	Type of CMU	Generating Technology Cl...	
<input type="text"/>	<input type="text"/>	New Build Interconnector	Oil Gen & Recip	<input type="button" value="EDIT"/> <input type="button" value="DELETE"/> <input type="button" value="CLONE"/>
<input type="text"/>	<input type="text"/>	Refurbishing Generating	CCGT	<input type="button" value="EDIT"/> <input type="button" value="DELETE"/> <input type="button" value="CLONE"/>
<input type="text"/>	<input type="text"/> ...	Refurbishing Generating	CCGT	<input type="button" value="EDIT"/> <input type="button" value="DELETE"/> <input type="button" value="CLONE"/>
<input type="text"/>	Existing Unit 1	Existing Generating	CCGT	<input type="button" value="EDIT"/> <input type="button" value="DELETE"/> <input type="button" value="CLONE"/>
<input type="text"/>	Existing Unit 1	Existing Generating		<input type="button" value="EDIT"/> <input type="button" value="DELETE"/> <input type="button" value="CLONE"/>
<input type="text"/>	Existing Unit 4	Existing Generating	OCGT & Gas Recip	<input type="button" value="EDIT"/> <input type="button" value="DELETE"/> <input type="button" value="CLONE"/>

Previous Next Show entries
Showing 1 to 14 of 14 entries

Prequalification Look and Feel

■ Create a new prequalification application

My Applications / Opt-outs

MY COMPANIES

MY CMUS

MY APPLICATIONS / OPT-OUTS

MY DISPUTES

MY AUCTIONS

MY AGREEMENTS

REPORTS

NOTIFICATIONS

TECHNOLOGY CLASS MANAGEMENT

CMU Identifier

Type of C...

Generatin...

De-Rated Capacity

Auction Type

Delivery Year

Existing Gen...

CCGT

0

T-4

2015

EDIT

SUBMIT

REVIEW

Create New Prequalification Application for an Auction

Select Auction

Select the Auction that you wish to prequalify for

Auction_1

Select Applicant Company

Select the name of the Company that is to act as the Applicant for this Application

Select the CMU

Select the name of the CMU for which the Prequalification Application is to be made

Create

Cancel

Auction Type

Delivery Year

Showing 1 to 1 of 1 entries (filtered from 14 total entries)

Add New Application

Prequalification Look and Feel

■ *Populate required modules of prequalification application*

Joint Owner Declaration

If applying as a Joint Owner and are required to provide a Joint Owner Declaration as part of the Application please upload it here
Not yet uploaded

Applicant Type

Legal Owner

Connection Arrangement Declaration

Please specify if the CMU is a Transmission or Distribution CMU

Transmission

Generating History

Has the CMU been operational in the 24 months prior to the start of the Prequalification Window?

Yes No

Description of Metering Arrangements

Please provide a brief description of the metering arrangements including their main intended purpose (for example Operational, STOR, Landlord/Tenant billing etc.) and any standards/specification which are applicable

Metering System Accuracy

Please provide information required in relation to accuracy of metering (as set out in the Auction Guidelines)

If this does not apply to you, please put N/A

Proposed Metering Option?

Please select which of the three metering pathways is to be used to monitor the performance of the proposed CMU connection.

Prequalification Decision Reasons / Comments

Prequalification Verification Comments

Credit Cover Required

Yes No

Credit Cover Amount

Price Maker / Taker Status

Price Maker

Maximum Obligation Period

Prequalification Look and Feel

■ View list of all applications and Opt-outs

My Applications / Opt-outs

MY COMPANIES

MY CMUS

MY APPLICATIONS / OPT-OUTS

MY DISPUTES

MY AUCTIONS

MY AGREEMENTS

REPORTS

NOTIFICATIONS

TECHNOLOGY CLASS MANAGEMENT

CMU Identifier	Type of C...	Generatin...	De-Rated Capacity	Auction Type	Delivery Year	
<input type="text"/>	Existing Gen...	CCGT	0	T-4	2015	<input type="button" value="EDIT"/> <input type="button" value="SUBMIT"/> <input type="button" value="REVIEW"/>



Filter by CMU Ide	Any	Generatin...	De-Rated Capacity	Auction Type	Delivery Year
Previous	<input type="text" value="1"/>	Next	Show	<input type="text" value="30"/>	entries
					Showing 1 to 1 of 1 entries (filtered from 14 total entries)

Add New Application

CM Data and Training

- Data;
 - We will prepopulate the system with;
 - Company details, including Main Admin (not Users)
 - CMU data
 - Please validate that all data is accurate and current

- Training
 - We will provide;
 - Demonstrations of all components at Stakeholder events
 - User guides and manuals for the system
 - Webinar style training sessions for all system components
 - Training will be run between 25th and 30th June
 - Detail to be confirmed but at least 2 sessions

CM Admin system - Plan on a Page

All "End" Dates	2015											2016
	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan
Admin System Development												
Design/Requirements												
Development												
Test Preparation												
UAT												
Training												
Environments												
Go Live												
Regime Cycle	Key:											
System training (ext)	Portal Milestones											
Familiarisation	CM Milestones											
Window opens	CM Milestones updated Includes rules changes											
Window closes	Regime/Rule Milestones											
Stakeholder Events												
Assessment												

Portal 04/03, CM 10/04

Portal 16/03, CM 13/05

Portal 11/03, CM 12/05

Portal 02/04, CM 11/06

Now 12/06

Portal 03/04, CM External 29/06

Now 30/06

Live 24/03

Portal 10/04

CM 23/06

Unchanged

Pre-Qual open 20/07

Pre-Qual closes 14/08

Results 25/09

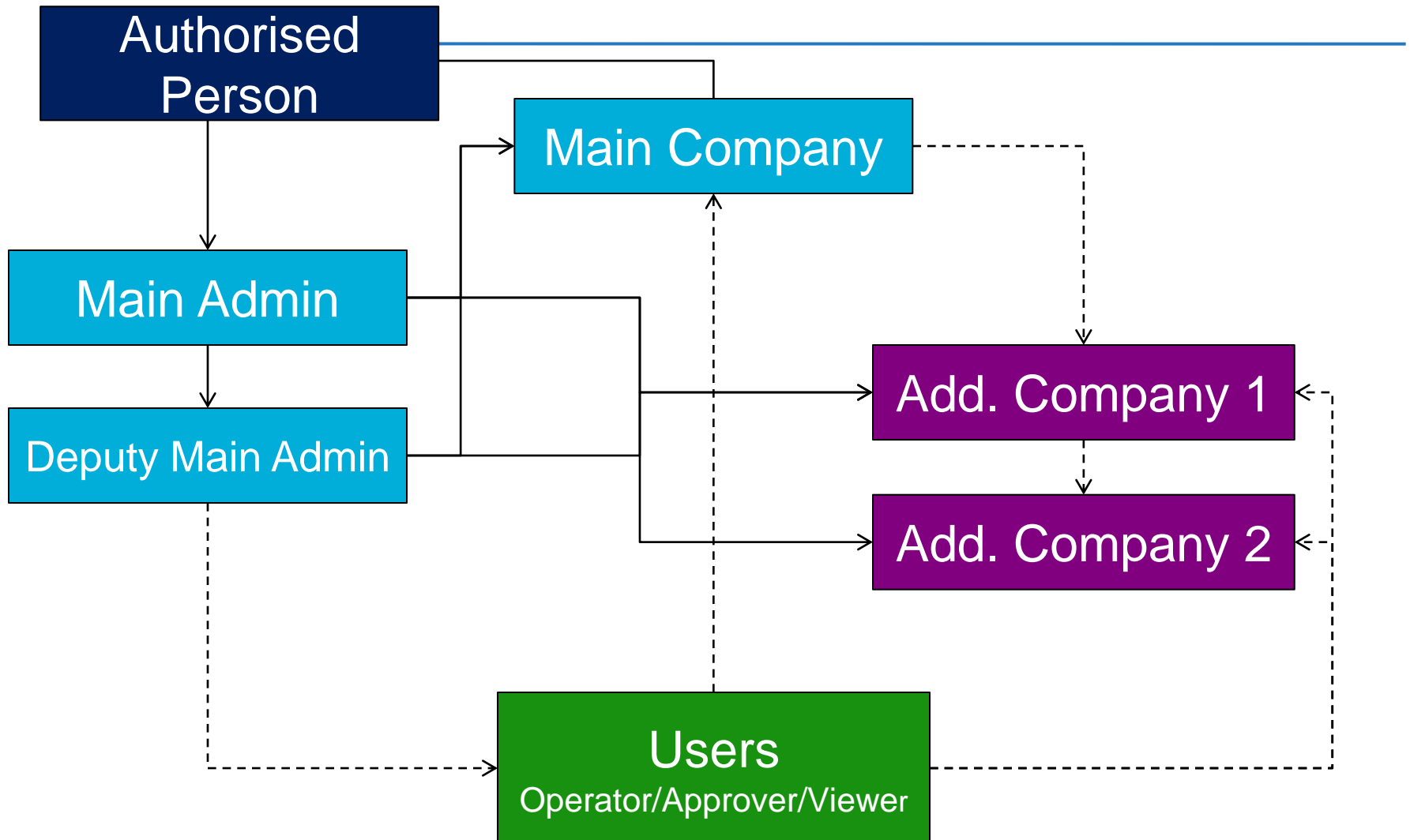
Questions?

Break

Changing Main Admin/Authorised Person

Robyn Jenkins

Registration



Change of persons

■ **To change the Main Admin -**

- Ask current Main Admin to request change (in writing – email is sufficient)
- Confirm contact details of new MA
- Confirm companies to which this change should apply
- Copy in Authorised Person and new MA

■ **To change the Authorised Person -**

- Current Authorised Person or Main Admin to request change
- Confirm contact details of new AP
- Confirm companies to which this change should apply
- Copy in Authorised Person and Main Admin

Questions?



Department
of Energy &
Climate Change

The Capacity Market: Transitional Arrangements

Tom Slater

19th May 2015



Sector

Help grow the DSR and small scale generation sectors prior to the first delivery year by:

- Limiting risk by reducing entry cost
- Encouraging enterprise
- Building confidence
- Experience of Capacity Market processes

Government

Learning from the TA on:

- The current composition of DSR in GB.
- How the DSR sector responds to the transitional arrangements.
- Inform thinking over potential future changes to regs/rules.
- The readiness of the DSR sector to move onto the enduring Capacity Market terms.



Eligibility and Pre-qualification

Eligible

- Non-CMRS generation under 50MW
- Demand response (inc. embedded generation)
- Electricity storage under 50MW
- Participation in the balancing services*
- New and existing resources permitted

Ineligible

- Capacity receiving low carbon support (e.g. Contracts for Difference)
- Participants in UK's CCA Storage commercialisation programme
- Capacity below 2MW (although may aggregate to qualify)
- CMUs with CM agreement from T-4 auctions

Interactions

- Units can move from TA to enduring, but not vice versa.
- *Units can move from DSBR to TA and vice versa, but are not expected to be able to participate in both in the same year.

Specific features for Transitional Arrangements

- Collateral set at £500/MW - 10% of the Capacity Market level
- Additional time banded product – 9-11am and 4-8pm on winter weekdays

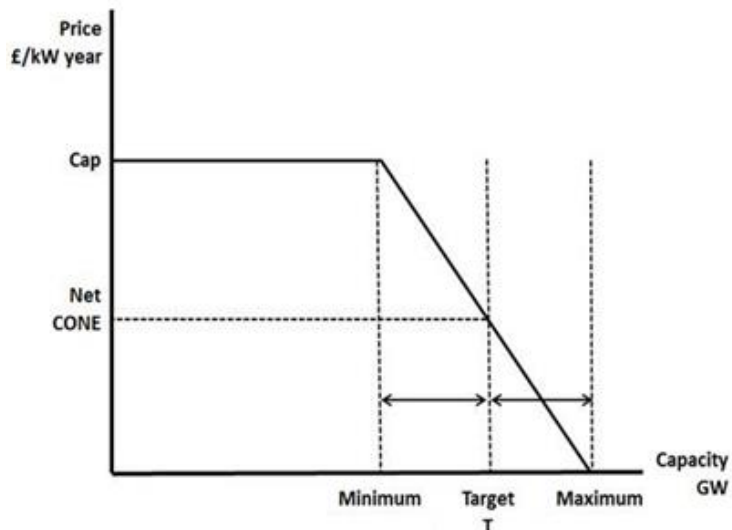


Auction amount and format

Auction Amount

Secretary of State will publish auction parameters at the end of June:

- Target Volume
- Price Cap
- Net CONE
- Permissible range around the Target
- Price Taker Threshold



Auction Format

- Pay-as-clear descending clock auction format. Technology neutral
- Offers in auction – price (£/MW)
- Auction monitor will be appointed to verify that auction rules were followed.
- There is one auction for both products and bidders will need to inform the DB as to which product they are going to bid for prior to the auction and confirm again after the auction.



Requirements and delivery

Requirements

- **DSR Test** – prior to prequalification ‘historic’ test or post auction ‘live’ test.
- **Metering Assessment** – to be completed as part of prequalification.
- **Collateral** - Unproven DSR and new build must lodge collateral after prequalification.
- **Metering Test** – undertaken post auction, but no later than end of August 2015.

Delivery

- National Grid will issue a Capacity Market ‘warning’ four hours prior to an anticipated stress event.
- Financial penalties for delivery failures set at the same level as the enduring regime.
- Over-delivery rewarded.
- Testing regime.



Next Steps

Deliverable	Provisional Dates
SoS publishes Auction Parameters	Friday 26th June 2015
DB Publishes "Formal" Auction Guidelines	Tuesday 30th June 2015
Pre-qualification window opens	Monday 20th July 2015
Pre-qualification window closes	Friday 14th August 2015
Pre-qualification Results Day	Friday 25th September 2015
NG Appeal submission window	Friday 25th September 2015
Provide updated Auction parameters	Friday 2nd October 2015
Last date for lodging Credit Cover to the ESC	Friday 16th October 2015
Publish "Final" Auction Guidelines & Bidder details	Tuesday 5 th January 2016
Start Auction	Tuesday 26th January 2016
Complete Auction	Friday 29th January 2016
Auction Results Day	Wednesday 10th February 2016



Survey and other links

Survey:

<https://www.surveymonkey.com/s/HQ2RVBV>



Helpful links:

DECC Capacity Market webpage:

<https://www.gov.uk/government/collections/electricity-market-reform-capacity-market>

Capacity Market Regulations

http://www.legislation.gov.uk/ukxi/2014/2043/pdfs/ukxi_20142043_en.pdf

Capacity Market Rules

<https://www.gov.uk/government/publications/capacity-market-rules>

National Grid's Capacity Market Operation Plan -

https://www.emrdeliverybody.com/Capacity%20Markets%20Document%20Library/DSR%20Transitional%20Auction%20Capacity%20Market%20Operational%20Plan%202015_27%20March%202015.pdf

Prospective Generator Progress Report

Robyn Jenkins

Monitoring of Construction Progress (Rule 12.2)

- The Capacity Provider of any New Build or Refurbishing CMU must (every 6 months from the date of the auction) provide a progress report for each Generating Unit in the CMU comprising
 - A schedule of earliest and latest dates for construction milestones (with an explanation of any material change to the last report)
 - Any material changes to the works described in the construction plan
- The report must be accompanied by
 - An assessment from an Independent Technical Expert
 - A certificate from 2 directors that they believe the report is an accurate and fair view of the matters described
- The report, assessment and director certificate is required **every 6 months** until the CMU meets Substantial Completion Milestone or the Capacity Agreement Terminates
- **First report due no later than 16 June 2015** – 6 months from the date of the Capacity Auction.

Independent Technical Experts

- **The following are the requirements for an Independent Technical Expert**
- **Independent**
 - Not in the same Group
 - Neither engaged on terms nor party to any other arrangements which could allow the Capacity Provider or any member of its group to exercise undue influence on any article prepared by the ITE or otherwise compromise the objectivity.
- **Independent Technical Expert**
 - International Experience
 - Expertise in construction and operation of generating units
 - Engaged by the capacity provider at its expense
- **Required Technical Standard**
 - To the best of the ITEs knowledge and belief all information provided is accurate, complete and not misleading
 - Any opinions or forecasts have been conservatively prepared on assumptions it considers fair and reasonable.

DB Assessment Criteria – 6 monthly report

Required		Assessment Criteria	
Submitted on or before 16 June 2015		Date ok?	✓ / ✗
Construction Milestones	Financial Commitment Milestone	Does this match the construction plan/CM Register	✓ / ✗
	Commencement of Construction Works	Does this match the construction plan/CM Register	✓ / ✗
	Achievement of Back-feed Milestone (N/A for Refurbishing CMUs)	Does this match the construction plan/CM Register	✓ / ✗
	Achievement of Substantial Completion Milestone*	Does this match the construction plan/CM Register	✓ / ✗
	Explanation of any material change in the dates since the last report	Have any of the above dates changed, does this explain why?	✓ / ✗
Any Material changes to the works described in the construction plan		Does the report confirm that the works are the same or is there an explanation of any change?	✓ / ✗

* If this date is later than 30/9/2018 we will require a Remedial Plan (accompanied by ITE commentary and Directors Cert³¹) to be completed within 120 days of our request – if you fail to do so the DB will inform the Secretary of State and Authority.

DB Assessment Criteria – 6 monthly report

Required		Assessment Criteria	
Certificate signed by two directors confirming report is accurate and a fair view of the matters described		Certificate signed and declarations made?	✓ / ✗
Assessment by Independent Technical Expert		See below	
ITE Report	Independent	Have they declared they are independent – DB to verify	✓ / ✗
	Engaged by the capacity provider at its own expense	Has the ITE confirmed this	✓ / ✗
	International Experience and Technical Expertise	Evidence of international experience and expertise provided?	✓ / ✗
	ITE should provide commentary on the construction progress and confirm that the 6 monthly report is a true reflection of the progress	Has the necessary commentary been provided?	✓ / ✗
	Statement that <i>“To the best of the ITEs knowledge and belief all information provided is accurate, complete and not misleading”</i>	Has the statement been made	✓ / ✗
	Statement that <i>“Any opinions or forecasts have been conservatively prepared on assumptions it considers fair and reasonable.”</i>	Has the statement been made	✓ / ✗

Questions?

Metering Assessments

Robyn Jenkins

Metering Assessments

- Deadline: 31 September 2015 (T-4 2014 Successful Applicants)
- Who: Successful Applicants who deferred their metering assessment. (See column AK from the capacity market register)
- Option 1 - We have developed an excel form which applicants can complete and submit. This was made available on Friday 13 February on our portal website: www.emrdeliverybody.com

The screenshot shows a web-based form titled "Complete all steps" for "1. Company & CMU Details". On the left, a progress indicator shows three steps: "1. Company & CMU Details" (active), "2. Metering Information", and "3. Summary". Below this is a "HELP & GUIDANCE" box with instructions on question colors (black for compulsory, orange for optional) and navigation buttons for "< Back" and "Next >". The main form area contains several dropdown menus: "Select Bidding Company:", "Select CMU:", "Selected CMU Name:", "Final Auction Status:", "CMRS Status:", and "Transmission / Distribution:". Each dropdown menu currently displays "Please Select..." or "Please Select Company".

- Option 2 – The new online system will be available over the summer which will allow applicants to log in and complete their metering assessment.
- **Applicants who deferred in 2014 will have to complete during 2015 Prequalification and also complete the form for the 2014 CMUs**

Scenario 1 – CMRS Transmission Connected Generator

CMU Type and description	Metering Assessment
<p>An Existing Generating CMU consisting of 4, transmission connected Generating Units.</p> <p>The 4 units are at the same site and will be combined into a single Transmission Connected Generating CMU making each of them a CMU component</p> <p>All 4 units are registered Balancing Mechanism Units (BMU)</p>	<p>Generating Units with Associated Load? Please specify whether the Generating Units comprising the CMU have associated load other than auxiliary load of the generating unit.</p> <p>If YES – a Metering Test will be required</p> <p>If No - a Metering Test will not be required</p>

Scenario 2 – One CMRS Distribution Connected Generator

CMU Type and description	Metering Assessment
<p>Existing Generating CMU consisting of a CMRS Distribution connected Generating Unit</p>	<p>Answer all of the following: Meter location – Are the meters on the boundary with the Distribution Network (as opposed to embedded within the site)? Answer “Yes” if they are on the boundary and “No” if they are embedded within the site.</p> <p>If YES – a Metering Test will not be required If No - a Metering Test will be required</p>
<p>A CMRS Distribution CMU is a Generating Unit which exports to the Distribution Network where the Metering System for the corresponding BMU is registered in the Central Meter Registration Service in accordance with the BSC.</p>	<p>Multiple Connections - Does the site have additional connections to the Distribution Network (other than the connection used by the CMU Component)? Answer “Yes” if the CMU has additional connections to the Distribution Network and “No” if it does not.</p> <p>If YES – a Metering Test will be required If No - a Metering Test will not be required</p>
	<p>Generating Units with associated load - Is there other load or generation on site (other than the CMU generating units and their associated demand)? Answer “Yes” if there is any other load or generation on site, and details of the associated load can be entered in the CMU Component details under Description and Location of the CMU. If there is no other generation or load on site, answer “No”.</p> <p>If YES – a Metering Test will be required If No - a Metering Test will not be required</p>

Scenario 3 – Non-CMRS Distribution Connected Generator or Proven DSR CMU using Half Hourly Data

CMU Type and description	Metering Assessment
<p>Existing Non-CMRS Distribution Connected Generating CMU comprising single component</p> <p>Or</p> <p>Proven DSR CMU</p> <p>Selecting Metering Option A.</p> <p>A Non-CMRS Distribution CMU is a Generating CMU connected to the Distribution Network which does not have metering registered with the Central Meter Registration Service.</p> <p>A Proven DSR CMU is a DSR CMU which has evidenced its capability and is in possession of a DSR Test Certificate.</p>	<p>Complete as per Scenario 2 plus the following.</p> <p>Information on which of the metering pathways will be used – the Proposed Metering Option <i>Answer a), b) or c).</i></p> <p><i>The applicant chooses Option a) - The Applicant will request that the relevant data collector (appointed by its supplier) passes the half hourly, non-aggregated BSC metered data for the relevant CMU</i></p> <p>By choosing Option A, the applicant must also answer questions regarding Metering Dispensations/Complex sites</p> <p>Does the CMU Component have a Metering Dispensation or is it classified as a complex site under BSCP514? If yes further information must be provided <i>The applicant must answer “No” if the component does not have a Metering Dispensation or is not a complex site. If the component has a Metering Dispensation, or is a complex site, the applicant should answer “Yes” and provide further details in accordance with the BSC.</i></p> <p>If YES – a Metering Test will be required If No - a Metering Test will not be required</p>

Scenario 4 – Non CMRS Distribution Connected Generator or Proven DSR CMU installing half hourly meter



CMU Type and description	Metering Assessment
<p>Existing Non CMRS Distribution Connected Generating CMU comprising single component</p> <p>Or</p>	<p>Complete as per Scenario 2 plus the following.</p> <p>Information on which of the metering pathways will be used – the Proposed Metering Option <i>Answer a), b) or c).</i> <i>The applicant chooses Option b) – The Applicant will install /has installed appropriate half-hourly metering to measure delivery and provide the data to the settlement agent.</i></p> <p>Option B requires a Metering Test</p>
<p>Proven DSR CMU</p> <p>Selecting Metering Option B</p>	<p>By choosing Option b), the applicant must also answer the following questions</p> <p>A brief description of the metering arrangement <i>The Applicant should describe the metering, for example is it operational, STOR, Landlord/Tenant billing. The Applicant should also explain any standards or specifications which are relevant.</i></p> <p>What is the overall accuracy of your metering system (including any CTs, VTs and any other connected equipment)? <i>The Applicant should provide the percentage accuracy figure, e.g. accurate to 5%</i></p> <p>Are your meters used for any other purposes? If yes please specify. <i>The Applicant should answer “Yes” if any of the meters are used for other purposes and provide further details, otherwise the Applicant should answer “No”.</i></p> <p>Has your metering system been commissioned to verify correct operation? <i>The Applicant should answer “Yes” if all of the meters have been commissioned to verify correct operation if any of the meters have not been, the Applicant should answer “No”.</i></p> <p>Are your meters, current and/or voltage transformers calibrated to a reference standard? <i>The Applicant should answer “Yes” if all of the meters and CT/VT have been calibrated to a reference standard, otherwise the Applicant should answer “No”.</i></p>

Scenario 5 – Non CMRS Distribution Connected Generator or Proven DSR CMU using Balancing Services Metering

CMU Type and description	Metering Assessment
<p>Existing Non CMRS Distribution Connected Generating CMU comprising single component</p> <p>Or</p> <p>Proven DSR CMU</p> <p>Selecting Metering Option c)</p>	<p>Complete as per Scenario 2 plus the following.</p> <p>Information on which of the metering pathways will be used – the Proposed Metering Option <i>Answer a), b) or c).</i> <i>The applicant chooses Option c) - The appropriate metering will be provided using existing balancing services metering used to monitor the provision to the System Operator of a Short Term Operating Reserve (STOR) service, or relevant balancing services.</i></p> <p>Option C requires a Metering Test By choosing Option c) the applicant must also answer the following questions</p> <p>A brief description of the metering arrangement <i>The Applicant should describe the metering, for example is it operational, STOR, Landlord/Tenant billing. The Applicant should also explain any standards or specifications which are relevant.</i></p> <p>What is the overall accuracy of your metering system (including any CTs, VTs and any other connected equipment)? <i>The Applicant should provide the percentage accuracy figure, e.g. accurate to 5%</i></p> <p>Are your meters used for any other purposes? If yes please specify. <i>The Applicant should answer “Yes” if any of the meters are used for other purposes and provide further details, otherwise the Applicant should answer “No”.</i></p> <p>Has your metering system been commissioned to verify correct operation? <i>The Applicant should answer “Yes” if all of the meters have been commissioned to verify correct operation if any of the meters have not been, the Applicant should answer “No”.</i></p> <p>Are your meters, current and/or voltage transformers calibrated to a reference standard? <i>The Applicant should answer “Yes” if all of the meters and CTs/VTs have been calibrated if any of the meters have not been, the Applicant should answer “No”.</i></p>



Public

Metering Test

EMR Capacity Market

19 May 2015

Iain Nicoll

Agenda

- What are the Metering Test Arrangements?
- 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 are the Metering Test Arrangements?

- Metering Test Arrangements **until 1 April 2016**
 - The process is managed by EMR Settlement Ltd (EMRS) on behalf of the Electricity Settlements Company (ESC)
 - EMRS will confirm who will be the Metering Agent in the next month
- Metering Test Arrangements **post 1 April 2016**
 - A procurement will be run by ESC to appoint parties to run the Capacity Market Metering Assurance

What are the Metering Test Arrangements?

(2)

- Capacity Provider will:
 - Follow National Grid Metering Assessment process
 - Contact EMRS to request a Metering Test (contact@emrsettlement.co.uk)
 - Detail the Metering Configuration Solution used by the CMU (for each component)
 - Submit a Metering Statement as per Schedule 6 of the Draft Capacity Market (Amendment) Rules 2015 (<https://www.gov.uk/government/publications/capacity-market-rules>)
- EMRS will:
 - Appoint a Metering Agent
 - Arrange the desk based Metering Test
 - Randomly select CMUs to have an onsite Metering Test
 - Arrange the onsite Metering Test
 - Issue the Metering Test Certificate
 - Review rectification plans



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)

- Bespoke
Technical
Requirements

Schedule 7 Draft
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-4	Existing CMU or Proven DSR	18 months prior to start of 1st Delivery Year
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

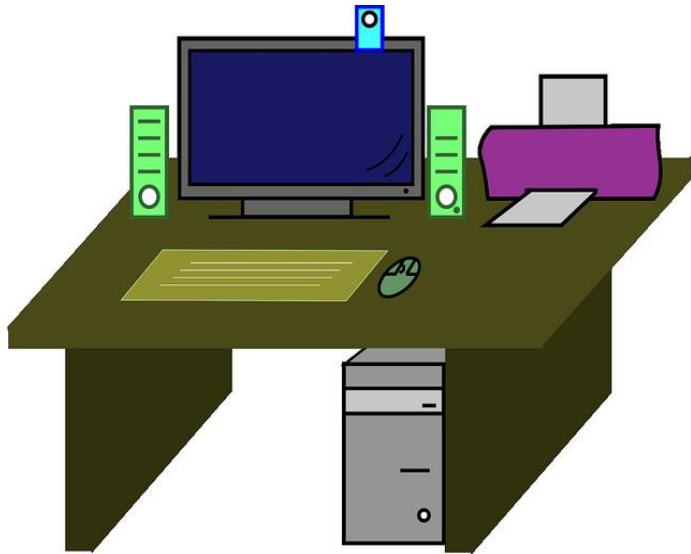
¹ The Long Stop Date is different depending on whether the CMU is New Build or Refurbishing. In the case of a Refurbishing CMU it is the date falling at the start of the Delivery Year and for a New Build CMU it is the date falling 12 months after the start of the first scheduled Delivery Year

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

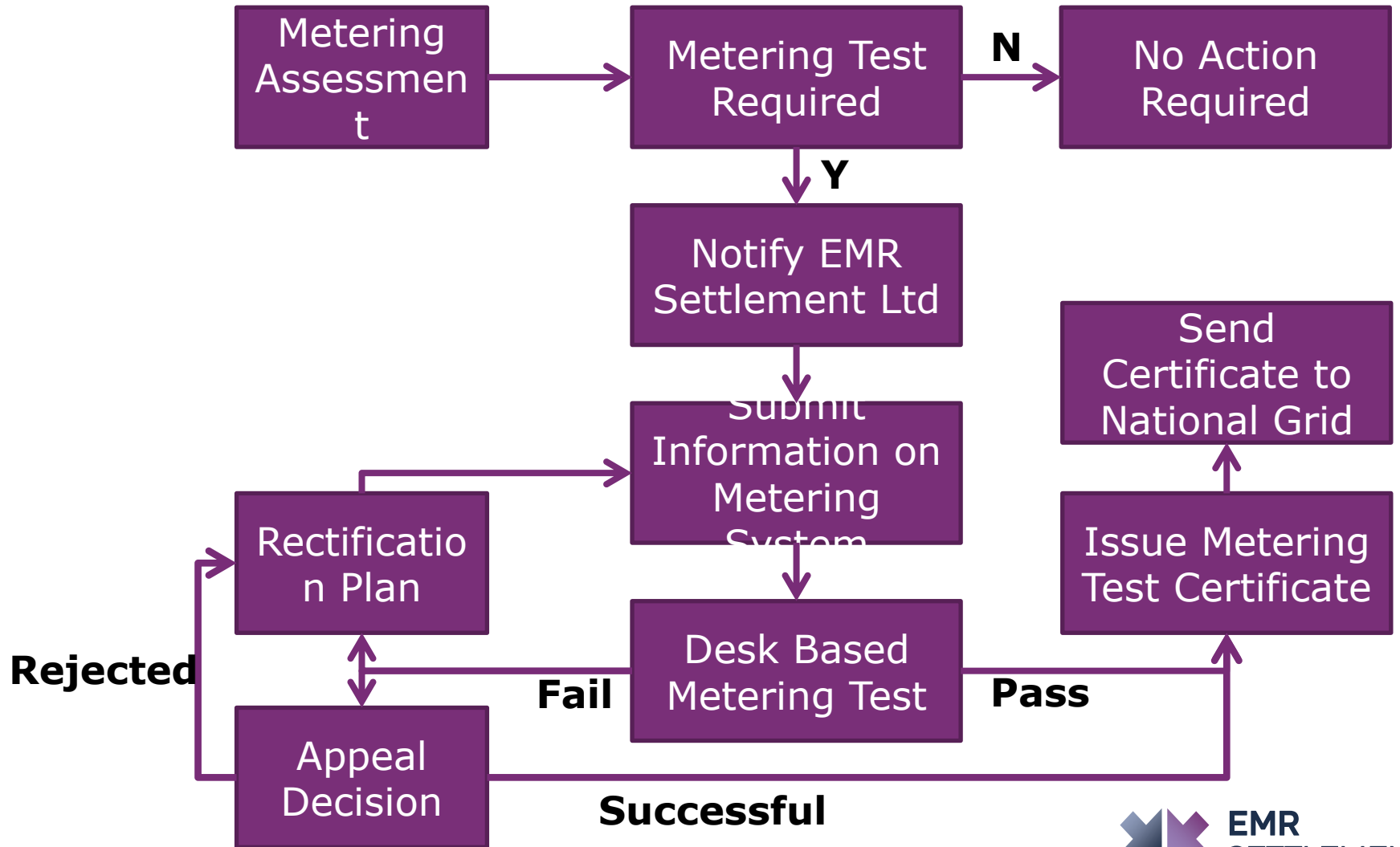
Desk Based or Onsite?

- 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

Desk Based Test Process

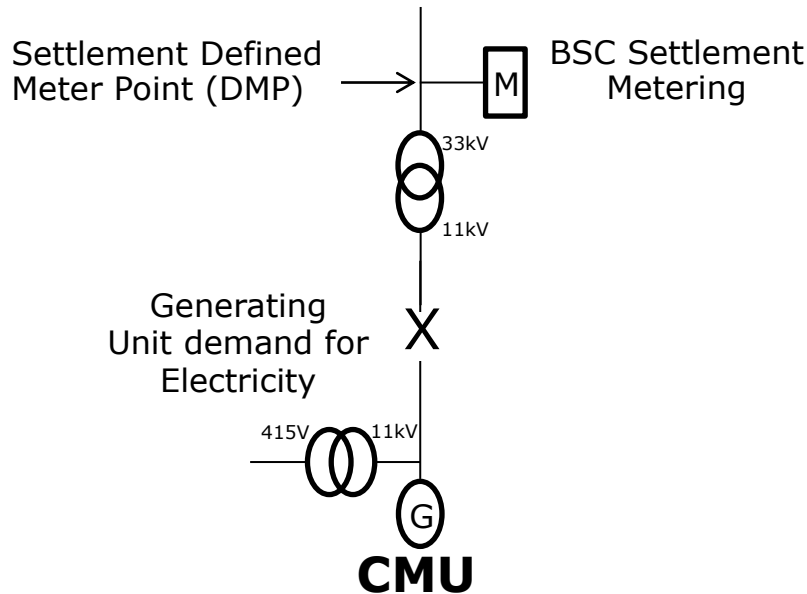


What will happen during the desk based test?

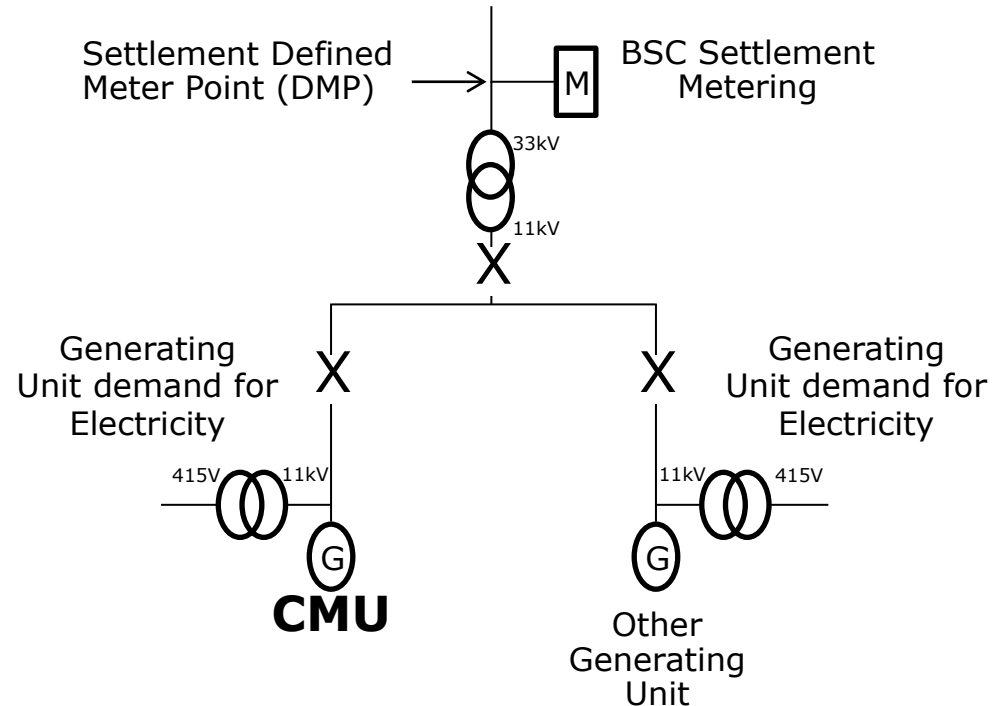
- Check net output from the line diagram
- Determine the overall accuracy of the Metering System
- Check the method the Capacity Provider is using to submit Metered Volumes to EMRS

How do we check net output from the line diagram?

Compliant



Compliant

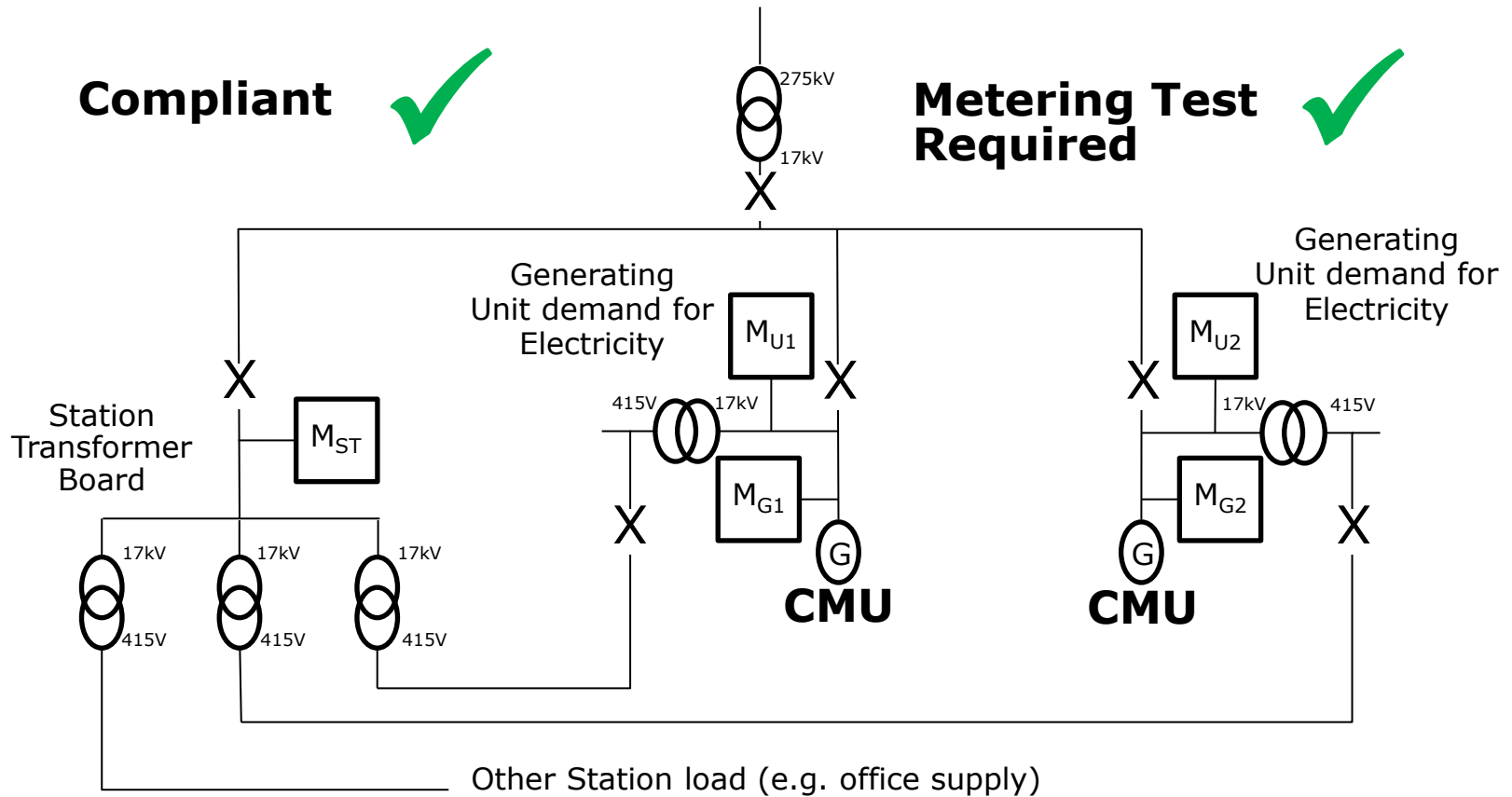


Why non-compliant?

Other load or generation on site



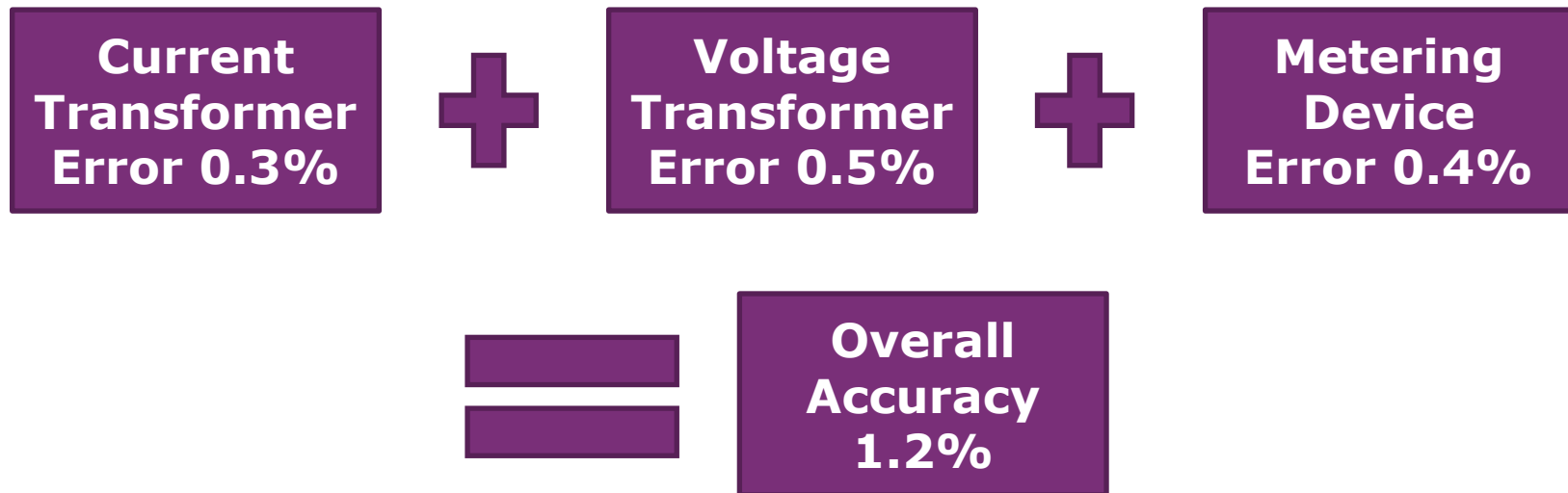
How do we check net output from the line diagram?



Auxiliary Load not used by the Generator for purposes directly related to its
Apportion Station Transformer Load if multiple CMUs

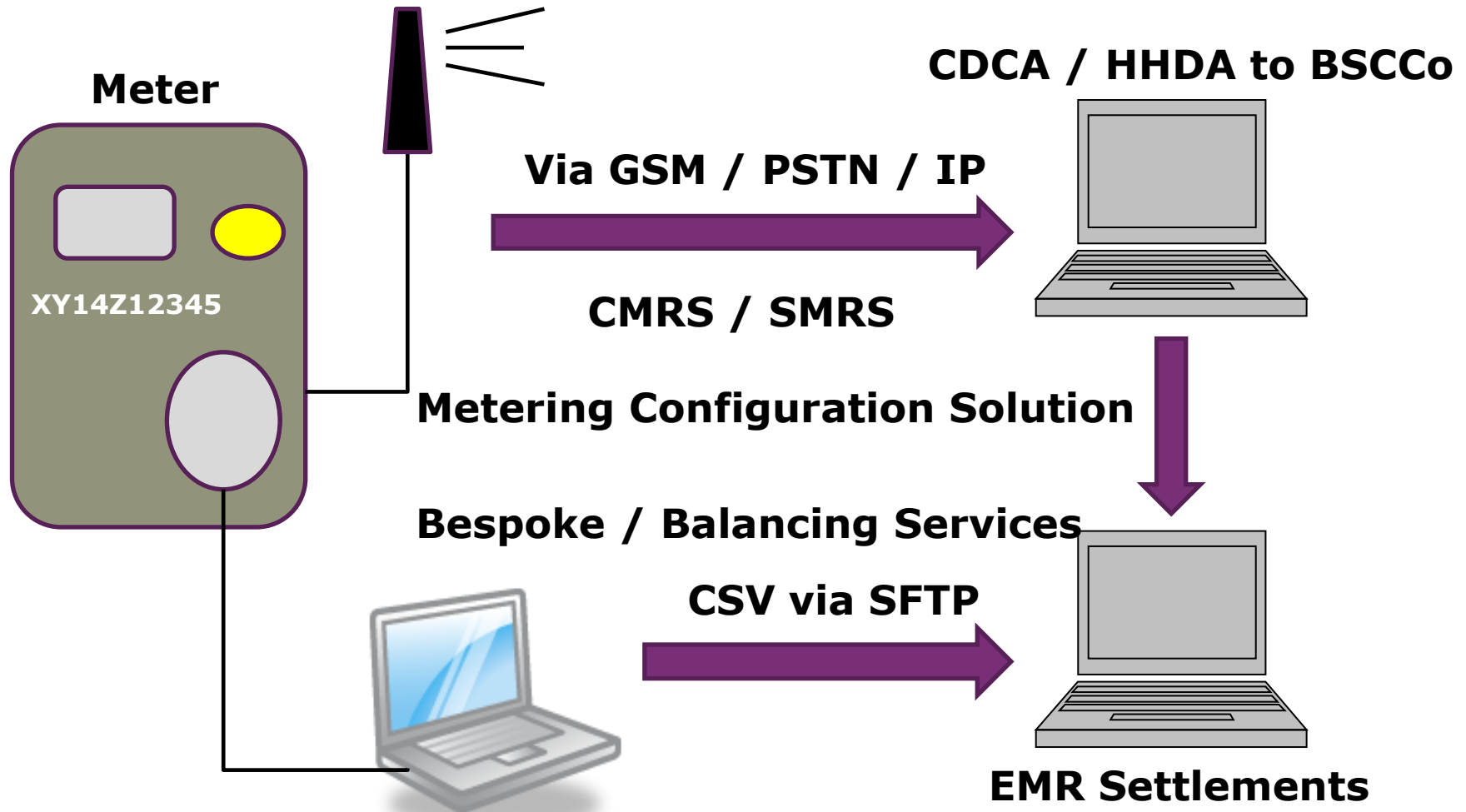
How do we determine the overall accuracy?

- 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 T-4 2018 Auction

- Agreed onsite Metering Test percentages:

Metering Configuration Solution	%
BSC CMRS CMU	25%
BSC SMRS CMU	50%
Balancing Services CMU	100%
Bespoke CMU	100%
Aggregating CMU	25% ¹

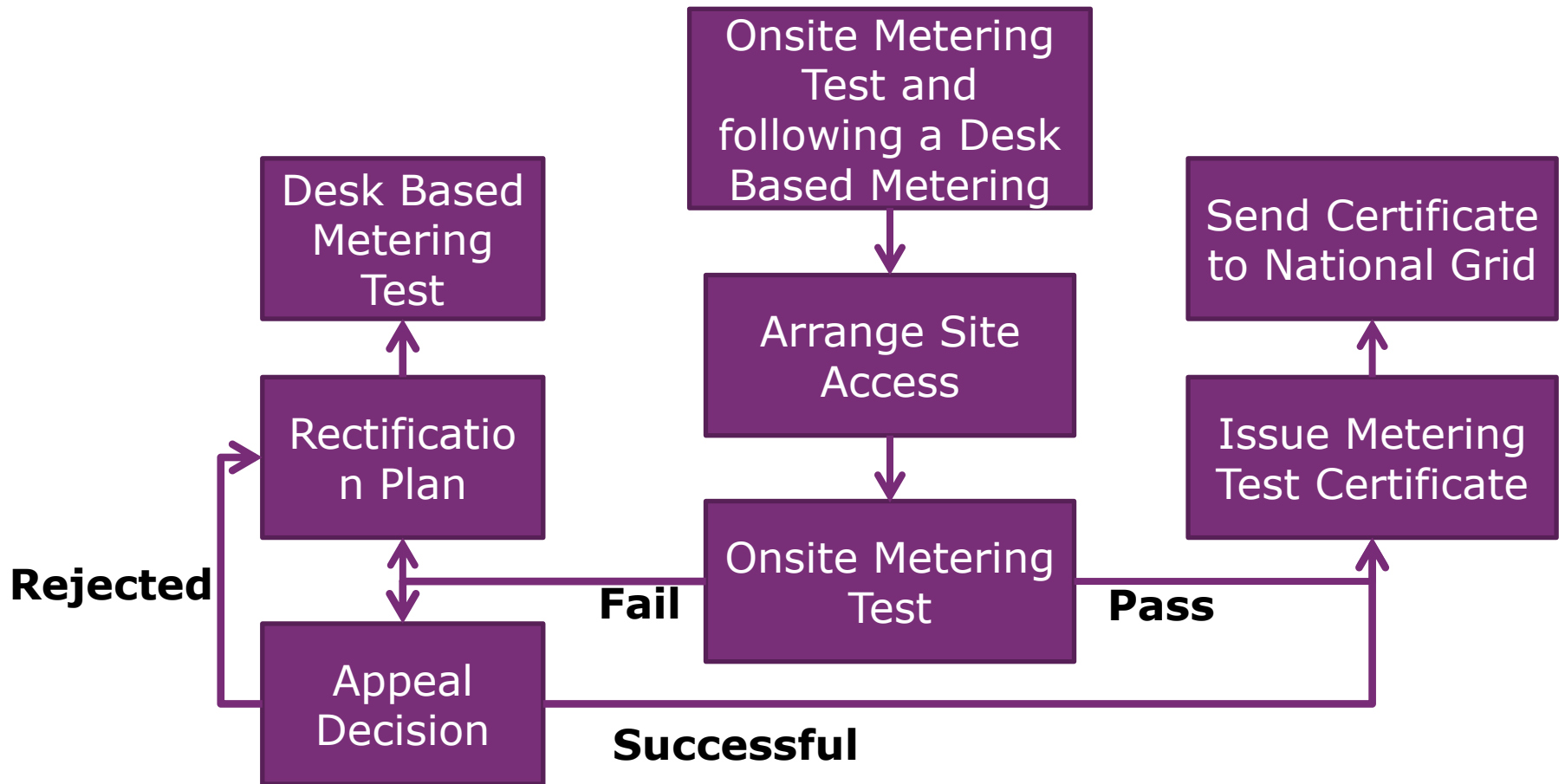
- Percentages agreed with Electricity Settlements Company

¹ 25% of CMU Components making up the CMU will have an onsite Metering Test. All CMU Components will have a desk based Metering Test

- T-1 (TA) Percentages to be agreed with ESC



Onsite Test Process

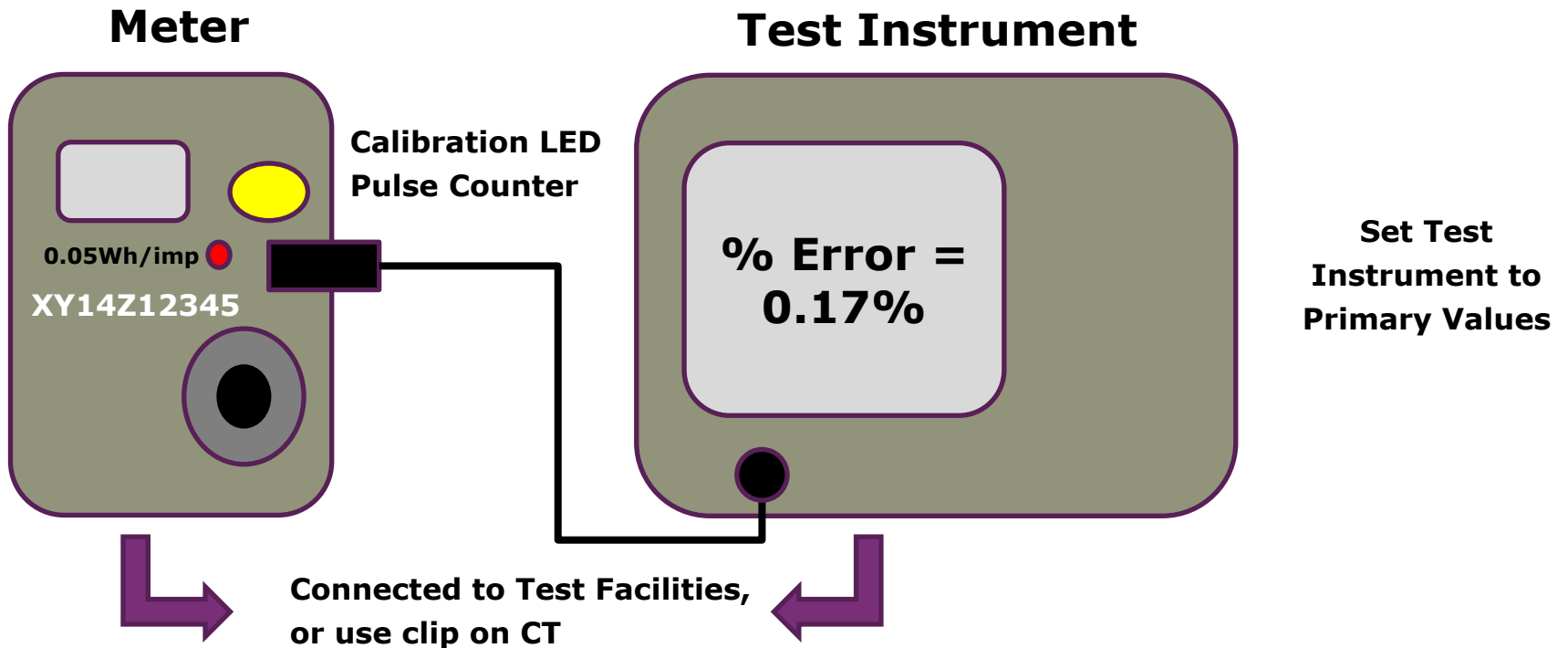


What will happen during the onsite test?

- 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
- 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).

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

For example:

Meter	Test Instrument	Panel Instrument
13.6MW	27.1MW	27 MW

Compliant



3. Half Hour Period Check

- Does the Half Hourly advance match?

Take a Meter reading

11:00 000027 kWh

Take another Meter reading

11:30 000394 kWh

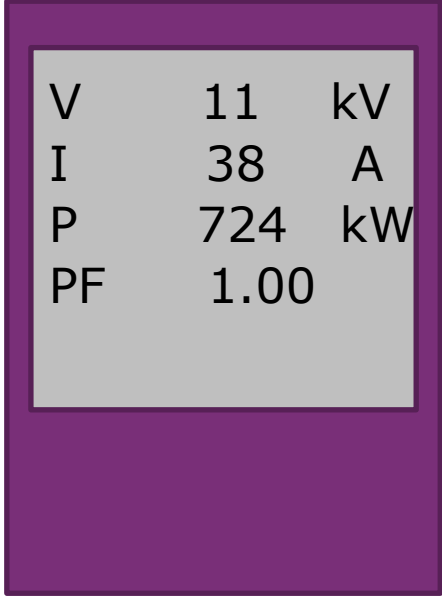
What is the increase?

Advance 367 kWh

How do we know it is accurate?

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

Independent Primary Indication



V	11	kV
I	38	A
P	724	kW
PF	1.00	

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

What's coming up?

Summer 2015

- Credit Cover Working Practice
- Capacity Provider Registration Working Practice
- Metering Test Guidance
- Metering Test Working Practice
- EMR Metered Data Guidance
- EMR Metered Data Working Practice

How will we communicate this?

■ EMR Settlement Website

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

The screenshot shows the EMR Settlement Limited website. At the top right, there are links for LCCC, ESC, and ELEXON. The main header features the EMR Settlement Limited logo and a 'Subscribe here' button. Below the header is a navigation menu with links for HOME, ABOUT, PUBLICATIONS, CHANGE, STAKEHOLDER SUPPORT, NEWS, CALENDAR, WHO WE ARE, and CONTACT US. The main content area has a purple background with white text stating: '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)'. Below this is a search bar with the text 'Google™ Custom Search' and a 'SEARCH' button. On the left side, there is a 'News' section with a link to 'Invoicing the CFD Operational Costs Levy to Suppliers'. The text below the link reads: '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'. On the right side, there is a calendar for the month of April, showing days from Monday to Sunday.

Any questions?

- Request a Metering Test

- contact@emrsettlement.co.uk
 - 020 7380 4333

- Metering Test Queries

- iain.nicoll@elexon.co.uk
 - 020 7380 4162



EMR
SETTLEMENT
LIMITED

Metering Questions

If a Prequalified Existing Generating CMU from the 2014 T-4 process which did not go on to secure a capacity agreement at the Auction wishes to acquire an obligation through secondary obligation trading, is it required to have a metering assessment/test?

We know that a metering assessment/test is not required if a CMU does not hold a capacity agreement but I wonder if this is different if it wishes to then participate in obligation trading.

Will Elexon perform the metering tests for CMUs that do not currently hold a capacity agreement?

Will metering assessments/tests undertaken as part of prequalification for the 2015 T-4 process suffice for obligation trading in relation to the 2014 process?

Does a Metering Test require an independent meter?

-
- DECC Stakeholder Bulletins
 - contact Harry Bannister harry.bannister@decc.gsi.gov.uk

 - National Grid
 - Portal <https://www.emrdeliverybody.com>
 - Mail list emr@nationalgrid.com
 - Helpline 01926 655300

 - Date of Next Event – 2 June 2015 at the Charing Cross Hotel