



Housekeeping













Capacity Market 2015

Second T-4 Auction, together we have

Moved **467** Capacity Market Unit (CMU) applications through pre-qualification

Helped **381** CMUs to enter the T-4 Auction with **309** receiving agreements

T-4

Got **46.4GW** of capacity with an agreement for delivery in 2019/20 at a clearing price of **£18/kW**

Capacity Market 2015

First TA Auction, together we have

Moved **109** Capacity Market Unit (CMU) applications through pre-qualification

Got **78** CMUs to enter the TA Auction with **57** receiving agreements

TA

Got **803** MW of DSR Capacity with an agreement for delivery in 2016/17 at a clearing price of **£27.50/kW**

Capacity Market 2015

- How did we all do this?
 - Ran and attended 9 operational co-ordination events
 - Completed and assessed 576 applications
 - Trained over 300 people on the auction system
 - Spent 34 hours in auction conditions
 - Issued 366 number of Capacity Agreement Notices

Look forward to the capacity market this year

DECC consultation on the Capacity Market

- Buy more capacity and buy it early
- Tighten delivery incentives
- Hold a new auction to bring forward the first Capacity Market delivery year to 2017/18

Challenges for all of us this year

- Ensure that the EMR Delivery Body;
 - systems,
 - process and
 - documentation

meet your needs

- Ensure that we get as many applicants through to T-4, Additional and Transitional Arrangement auctions
- First delivery year for the Transitional Arrangement auction

Key objectives for this year/agenda

- EMR Process for the three 2016 Auctions
 - EMR Regulations DECC
 - EMR Rules Ofgem
 - EMR Delivery Body Systems National Grid IS
 - EMR Delivery Body Processes and Documentation You said, we did
- Ensuring that everything is in place for the first delivery year
 - Meter Data and Meter Test EMRS
 - DSR Testing This afternoons testing
 - Bringing forward Secondary Trading for the additional auction

Capacity Market: Operational Coordination Event Agenda

22 March 2016	Agenda	Presenter		
09:00 - 09:30	Registration and Refreshments			
09:30 – 10:00	Welcome, Agenda & Objectives Look back at 2015 and our key achievements Look forward into 2016 and what it means to us	Matthew Magill, National Grid - EMR Delivery Body		
10:00 – 10:30	IS Update Timeline for Delivery	Thomas Kingston, National Grid (IS)		
10:30 – 10:45	DECC update on Policy and RegulationsCurrent consultation process and timelines	Charles Phillips, DECC		
	10:45 – 11:00 ~ Break			
11:00 – 11:15	Ofgem update on Rules Update on proposals received Next steps and Timelines	David ONeill, Ofgem		
11:15 – 12:00	Metering Requirements • Metering Test & Information for Settlement	Matthew Johnson, ESC and Iain Nicoll, EMRS		
12:00 – 12:15	You Said, We Did Follow up your feedback Customer & Stakeholder Satisfaction Research	John Prime, National Grid - EMR Delivery Body		
12:15 – 12:45	General Q&A Wrap Up and Close Future 2016 Events	Matthew Magill, National Grid - EMR Delivery Body		
	12:45 – 13:30 ~ Lunch and Networking			

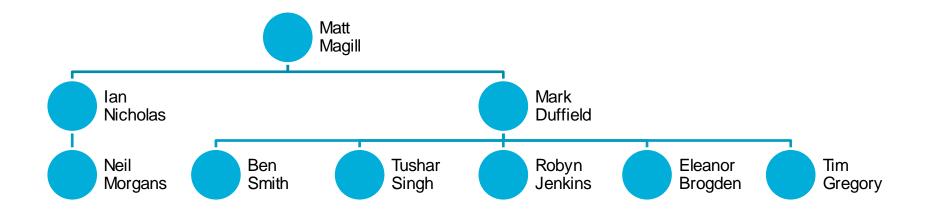
Capacity Market: DSR Workshop Agenda

22 March	Agenda Presenter						
2016							
13:30 – 13:40 Introductions							
13:40 – 14:00	Overview of the DSR Test Process What needs to happen Time line based on the current Rules Q&A	Ben Smith, National Grid -					
14:00 – 14:15	Metering Assessment process Who needs to provide this and when How do applicants do this Q&A	EMR Delivery Body					
14:15 – 15:00	Metering Test Process 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 15:40 – 16:00	DSR Test How this is undertaken and timelines Q&A Wrap Up & Final Q&A	Ben Smith, National Grid - EMR Delivery Body					
16:00 ~ Close							

What is the Delivery Body doing at the moment?

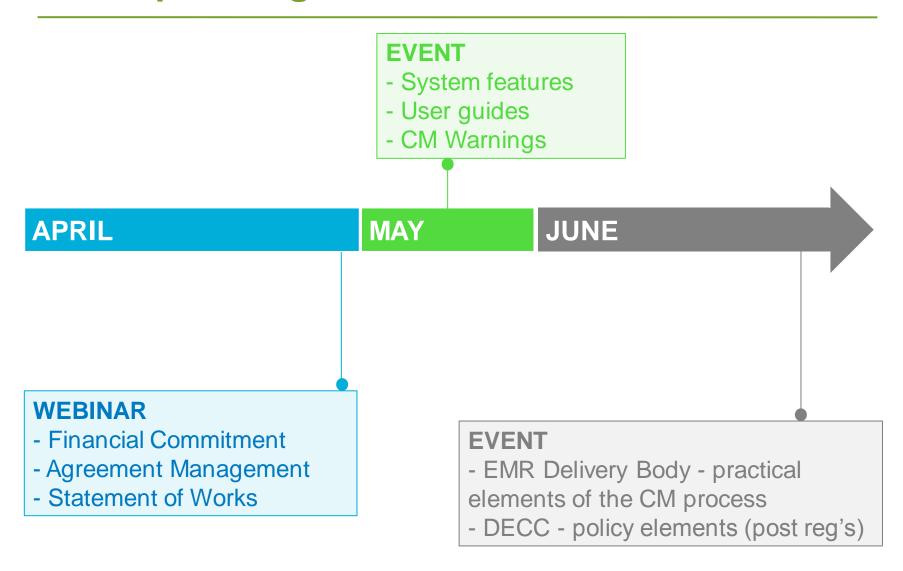
- Expanding the size of the team for an additional auction
- Developing System Operator Procedures for Stress Events
- Recruiting for the enduring team
- Liaising with Stakeholders & Customers
- Developing and Testing Systems
- Preparing for Ofgem's Rules consultation
- Responding to DECCs consultation on the Capacity Market
- Running the ongoing Agreement Management activities

Who is in the EMR CM Delivery Body

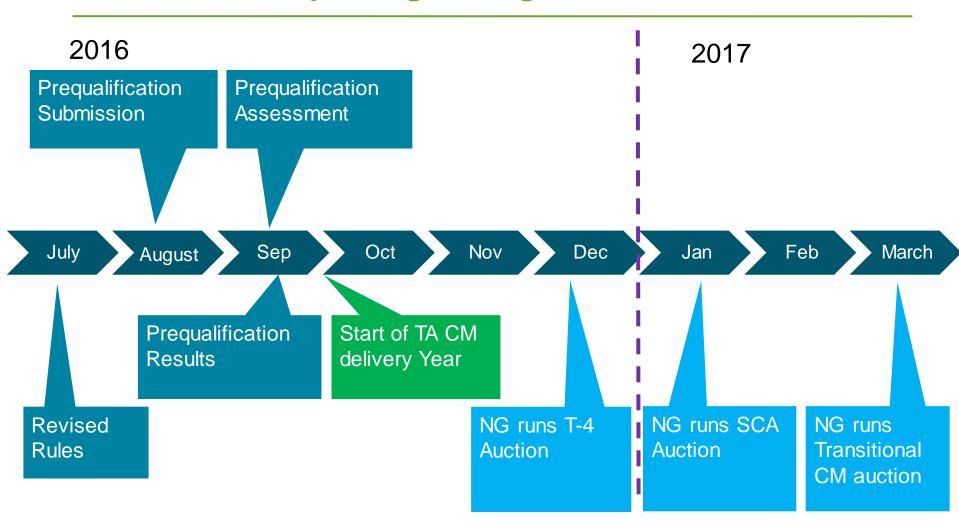


- Changes
 - Robyn Jenkins
 - Ben Smith
- We also have a number of vacancies, careers.nationalgrid.com

2016 Upcoming Events



When are we expecting the big items to occur?





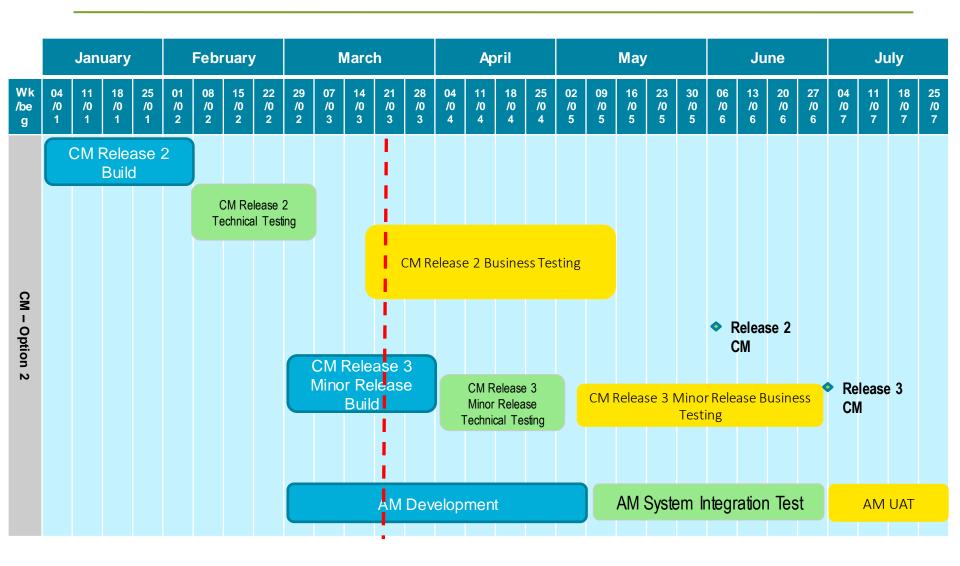
IS Objectives for 2016

Remediation of defect fixes from 2015

Delivery of Agreement Management

Impact Analysis of the DECC and OFGEM proposed new changes and delivery where possible

CM / AM Delivery Plan



Improvements to Ways of Working

New procedures implemented

- Release notes
- Test exit
- Agreed defect levels

Use case and test script review Extensive Negative testing

- Change Control process implemented
- Embedding planning cultureAdditional

Communication

- Weekly
 Headlines to all teams
- Co-ordinated external engagement

Team

- Additional resources recruited
- RACI & Roles & Responsibilities agreed



Electricity Settlements Company Role and responsibilities



ESC – The Settlement Body set up by DECC

Capacity Market financial transactions

- Auction Credit Cover collection / approval
- Invoicing suppliers for Capacity Market costs
- Payment to capacity providers

EMR Settlements Ltd operates as our settlement agent covering day to day activities.

Capacity Market metering configuration assurance

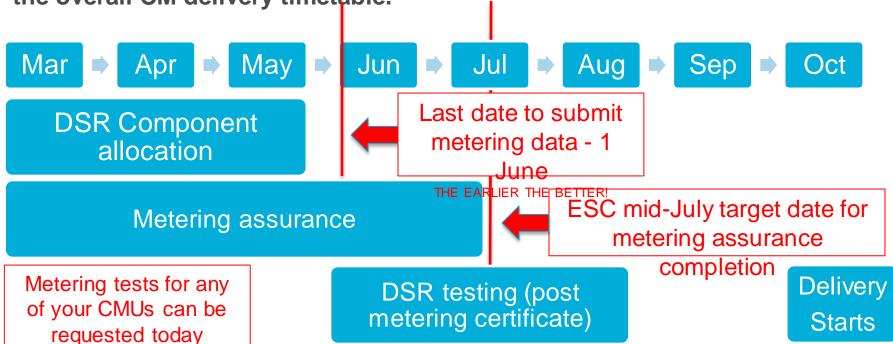
EMR Settlements Ltd operates as our metering services provider covering day to day activities.



Electricity Settlements Company TA metering assurance timeframe



Current timescales in the CM rules – complete metering test 1 month prior to delivery year i.e. 1 September. However this needs to be considered in the overall CM delivery timetable.





Electricity Settlements Company Metering test time / resource required



One desktop metering test = circa 2 hours

One FTE = 80 metering per month

From now to mid July = 4 months

4 months = 320 metering test per FTE

Estimated components = ?,000s



Electricity Settlements Company TA metering test contact details



We are open for business:

Request a Metering Test

- <u>contact@emrsettlement.co.uk</u>
- **020 7380 4333**

Metering Test Queries

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





Public

Metering Requirements

- Metering Test & Information for Settlement
- 22 March 2016
- Iain Nicoll

Agenda

- What are the Metering Test Arrangements?
- What is the purpose of the Metering Test?
- When do I have to complete the Metering Test?
- What is being checked?
- How long is the Metering Test Certificate valid?
- What information do I have to provide for EMR Settlement purposes?



What are the Metering Test Arrangements? (1)

- 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)
 - Where this is Balancing Services what the Agreement is (e.g. STOR)
 - Submit a Metering Statement as per Schedule 6 of the Capacity Market (Amendment) Rules 2015 (https://www.gov.uk/government/publications/capacity-market-rules)
 - This is only for Components that have triggered the Metering Capacity. Market Metering Requirements

What are the Metering Test Arrangements? (2)

- Metering Agent will perform the desk based Metering Test
 - Against the relevant governing documents of the Metering System; and
 - The requirements in the Capacity Market Rules
- EMRS will randomly select CMUs to have an onsite Metering Test
 - Based on the risk category the site falls into
- Metering Agent will arrange the onsite Metering Test (if required)
- EMRS will issue the Metering Test Certificate
 - If CMU has passed the Metering Test



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



When do I have to complete my Metering national grid 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 compliant with relevant governing documents and Capacity Market Rules
 - 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 Capacity Market Metering Requirements



Onsite Metering Test - Percentages

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	25/10% ¹

- Percentages agreed with Electricity Settlements Company
- ¹ 25% of CMU Components T-4 and TA (< 30 Components)
 10% TA (>=30 Components)



How long is the Metering Test Certificate national grid 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 MINITED EMR



Metering Information for Settlement

- A Capacity Provider must complete the Metering System Information table (see below)
- This is to be completed for each CMU they are responsible for and for each Component making up those CMUs
- The information provided will be used as the basis for aggregating Metered Volumes in the EMR Settlement System

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										





Metering Information for Settlement

- The CMU ID is as specified in the Capacity Market Register
- The CMU Component ID will consist of Unit# (where # starts at one and increments for each Component making up the CMU)
- The effective date is the start date of the relevant Delivery Year
- The Metered Entity Type will be one of three options:
 - BMU for all CVA Metering Systems
 - BMUs being split will be treated as Bespoke (i.e. MSID_NON_BSC)
 - MPAN for the Supplier Settlement Metering Option
 - MSID_NON_BSC for Balancing Services and Bespoke Metering Options



Metering Information for Settlement

- The Metered Entity ID will be:
 - The BMU ID for BMU Type
 - The MPAN for Supplier Settlement Metering Option
 - The identifier for the Metering System for MSID_NON_BSC
- The multiplier will be:
 - -< 1.00 for a shared demand BMU
 - -+1.00 for everything else (except non-CM generation that needs to be netted off, e.g. ineligible low carbon generation, then it would be -1.00)
- The Distributor ID is a four character reference to identify the Distributor of the Boundary Point Metering System
 - -Only required for Bespoke or Balancing Services



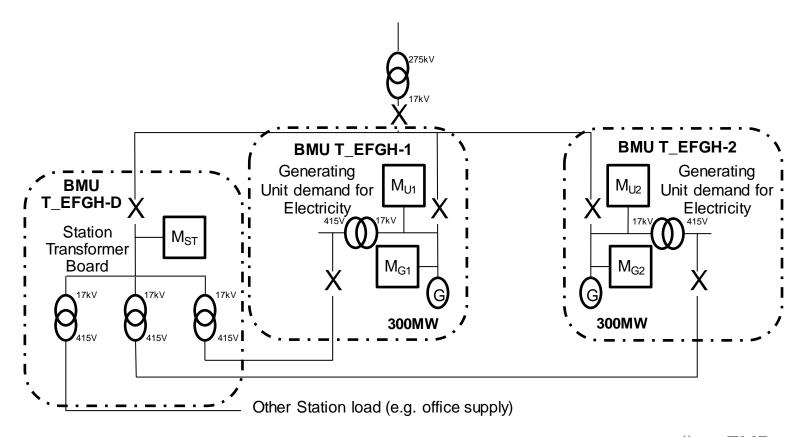


Metering Information for Settlement

- The Line Loss Factor Class (LLFC) ID is a three digit reference that identifies the Line Loss Factor (LLF) to be applied to Metered Volumes
 - Only required for Bespoke or Balancing Services Metering Option
- The Boundary Point MPAN / MSID is the identifier for the Boundary Point Metering System
 - Only required for Bespoke or Balancing Services Metering Option
 - MSID is only relevant if CMU is embedded within a BMU connected to a Distribution System
- The Balancing Services ID is the reference identifier for any Component that has a Balancing Services agreement with National Grid



A Generating Station made up two CMUs





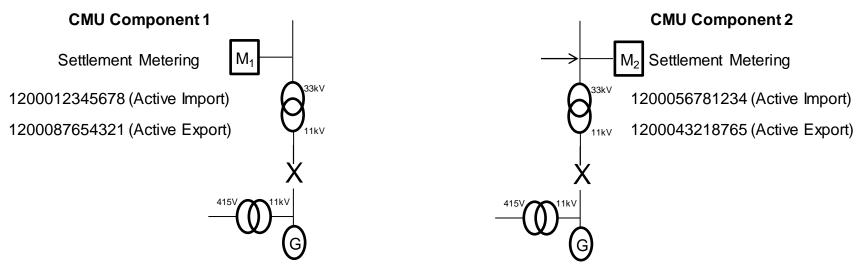
- Each Generating Unit is a CMU
 - CMU ID1 is EFGH-1 (Generating Unit 1 T_EFGH-1)
 - CMU ID2 is EFGH-2 (Generating Unit 2 T_EFGH-2)
 - –The Demand BMU ID is T_EFGH-D
- The same Demand BMU ID is used by multiple CMUs

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	EFGH-1		01/10/2018	BMU	T_EFGH-1	1.00				
2	EFGH-1		01/10/2018	BMU	T_EFGH-D	0.50				
3	EFGH-2		01/10/2018	BMU	T_EFGH-2	1.00				
4	EFGH-2		01/10/2018	BMU	T_EFGH-D	0.50				



2

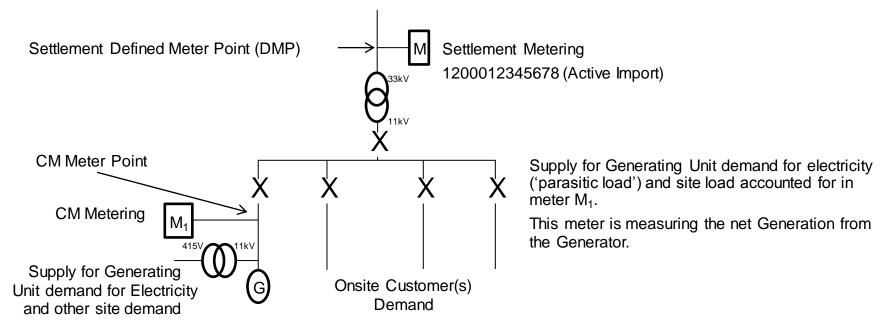
 Two Components making up the CMU, each with an Import and Export MPAN



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				



A Bespoke or Balancing Services Metering System submitted as Net



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	ABCD001		01/10/2018	MSID_NON_BSC	ABCD001NET	1.00	LOND	123	1200012345678	ABCD1234



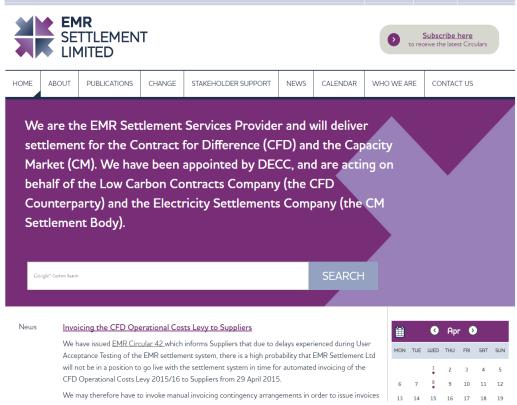
ELEXON

LCCC

How will we communicate this?

EMR Settlement Website

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





Any questions?

- Request a Metering Test
 - <u>contact@emrsettlement.c</u>
 <u>o.uk</u>
 - **020 7380 4333**

- Metering Test Queries
 - iain.nicoll@elexon.co.uk
 - **020 7380 4162**









Capacity Market Update

March 2016



Background to the consultation

Context of the publications:

(Learnings from 2 auctions, CM Review, market developments)

What was published:

- Response to October consultation
- New March consultation

Key messages:

- Securing more capacity and earlier
- Tightening delivery incentives
- Early CM auction for 2017/18
- Interaction with other policies (diesel engines, embedded benefits)

Link: https://www.gov.uk/government/news/reforms-to-capacity-market-to-improve-energy-security-for-families-and-businesses



Buying more capacity, and earlier

More capacity

- Experience of the last two auctions has shown us that new risks need be taken into account:
 - Early coal closure
 - Risk of new large plant not coming forward
 - But reliability standard doesn't change

...and earlier

- We have previously held back 2.5 GW to secure at the T-1 auction
- This reduces the capacity requirement that new build can compete for
- We plan to buy more of the requirement at the T-4 stage which will also help to reduce the risk of plant not coming forward



Tightening delivery incentives

Penalty regime

- When companies take on an obligation, crucial that they deliver or we face capacity shortfalls. Also unfair to other bidders.
- Need a robust system of checks but important that sanctions are not so punitive to dissuade legitimate projects.
- We are now implementing the following changes:
 - a ban on failed projects from participating in future auctions,
 - increased monitoring and reporting milestones,
- Consulting on:
 - increases in credit cover for projects that cannot demonstrate sufficient progress after 11-months. If plant will fail, they fail early.
 - higher termination fees for existing plant who renege on agreements, to ensure that they fulfil their commitments.



Early capacity auction for 2017/18

The issue

- Worsening dark spreads and some closures announced earlier than expected
- Previous CM auctions have not brought on significant amounts of new capacity to replace the closures
- One plant that announced closure has a CM agreement for 2018/19

Our response

- Bring the CM forward by one year
- The rationale for the CM hasn't changed, we just need it sooner than expected due to worsening market conditions
- Consulting on an auction in Jan 2017 for delivery in Oct '17- Sept '18
- State aid approval will be needed



Interaction with other policies

Diesel

CM is technology neutral but we receive many complaints about participation of diesel engines:

NGOs:

emissions, 2020 targets, decarbonisation objectives, local air quality impact, etc.



Other market participants:

unfair advantage, embedded benefits, avoidance of transmission charges etc.



 Ofgem will review charging regime to ensure that charges are reflective of the costs that distributed generation places on the system.



Preventing overcompensation

The issue

- DECC must ensure the rules of the Capacity Market (CM) scheme prevent companies from benefitting from more State aid than is allowed under State aid rules.
- The CM auction is deemed to set the proportionate amount of aid.

Our response

- Amend the eligibility criteria for future auctions to exclude participants who have raised finance under the Enterprise Investment Scheme ("EIS") or Venture Capital Trust Scheme ("VCT").
- By way of declaration during prequalification.



Transitional Arrangements – changes for second auction

Official - Sensitive



Results of 2016 TA Auction

Clearing Price = £27.50/kW

Total Volumes

- 1110MW participated in auction
- 803MW successful (72% successful)
 - Lower than central target volume of 900MW (due to low liquidity of the auction)

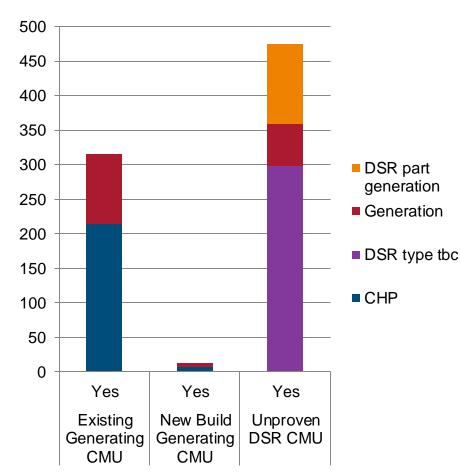
Successful CMU's

- 474.7 MW of Unproven DSR
- 315.2 MW of existing small scale generation including 215.8MW of CHP
- 7MW new CHP and 6MW new engine (likely diesel)
- Of identified generation, 84MW is diesel (with 114MW unknown also potentially diesel)

Unsuccessful CMU's

- 146.4 MW of Unproven DSR
- 160.9 MW of Small Scale Generation (CCGT and large OCGT)

Successful Auction Volume



Source: National Grid: Provisional Results



Policy Issues with the TAs

Key Objectives

- The main aim of the TA is to encourage enterprise, build DSR capability and improve its ability to participate in the main CM
- A secondary aim was for 'additional' resources to come forward in the TAs to secure the electricity system in in 2016/17 and 2017/18

Issues:

- 'Additionality' difficult to assess whether the capacity that has come forward in the TA provides additional capacity to that in balancing services
- TA is supporting an arguably mature generation sector that is fast-growing, and can already compete in the main CM e.g. Distributed Diesel Generation



TA Amendment Options

Options	Rationale	Implications
Remove all small generation	 Evidence suggests that small generation is mature enough to compete. 2015 CM min 2.3GW of generation eligible for TAs awarded contracts. 2015 CM rise in DSR participation to 475MW, mostly generation 	 Supports the part of DSR sector that needs help the most. New 'turn-down' DSR most likely to be 'additional' capacity. Better VFM case - not procuring from providers that don't need help.
Require a minimum amount of 'turn-down' DSR	 Generation is part of DSR aggregators business model. Taking this revenue away may impact upon development of 'load-reduction DSR' Minimum requirement to encourage more 'turn-down' 	 Still gives more support the part of the DSR sector that needs help the most. New 'turn-down' DSR still likely to be 'additional' capacity. VFM not as good because we are still supporting some generation



Timing

October 2015

- consulted on changes

1 March 2016

- published response to the October consultation

- published a consultation proposing further changes

1 April 2016

- the March consultation closes

July 2016

- new Regulations and rules in place





Ofgem update on the CM Rules.

NGET CM event, 22/3/16 David O'Neill, Ofgem

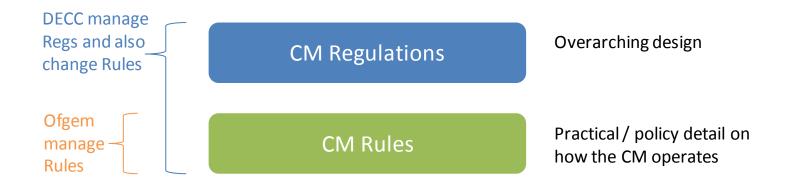


Today:

- 1. Overview of the rule change process
- 2. The process this year
- 3. Next steps



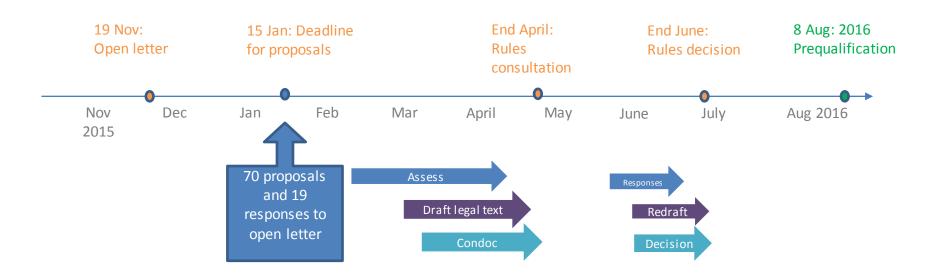
Overview of process





This year's process

- Open letter in November:
 - Simplify and clarify
 - Need for well-justified proposals
 - Consider further: connection capacity; reallocation of DSR components; Definition of stress event; three other minor issues



We are looking at moving away from an annual cycle of rule changes.



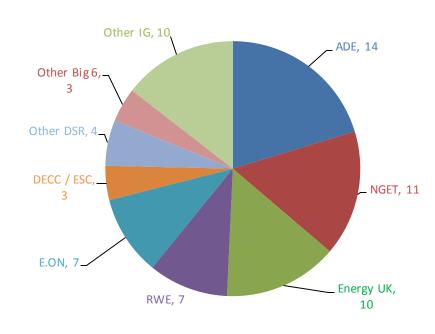
Proposals received this year

- Received 70 stakeholder proposals
- Assessing them against the CM objectives: promote investment in capacity; efficient operation of the CM, and; compatibility with the Regs.
- We are also taking forward some changes.
- All will be consulted on including rejections

What:

Connection capacity and de-ratings Other Flexibility to swap and move components Prequalification process Secondary trading Clarifying and simplifying Metering_ prequalification requirements requirements Capacity Market Register

Who:





Taking your proposals forward

Context:

- It's been and will continue to be a busy year:
 - DECC's review of the CM: Reg and Rule changes
 - A new auction for 17/18: More Reg and Rule changes and more work for applicants and delivery partners

What we will do:

- Focus on changes that are well-justified and clearly beneficial.
- Consider system implications for NGET and ESC



Next Steps

- Consultation published late April
- 4 week consultation
- Consultation event in May (Purdah?)
- Final Rules: end July

Thank You



You said... we're listening... so we're doing...

We would like to have a timetable of engagement events?

Updates at stakeholder events & on our website.

- Introduced stakeholder event for post auction actions these will continue
- The team is here to help
- Focussed workshops linked to key milestones
- DSR Test workshop this afternoon
- What other workgroups would help?

I have Conditionally
Prequalified / a Capacity
Agreement... What do I
do next?

DECC participation in stakeholder events

What are DECC /
Ministers considering
for EMR?

continued....

No major changes to portals & CM framework

- Improvements to the portal system without major changes
- To include industry requests on style and format
- It will also include changes to statutory framework
- All suggestions welcome!

Pro formas & certificates will be published on the website as soon as finalised.

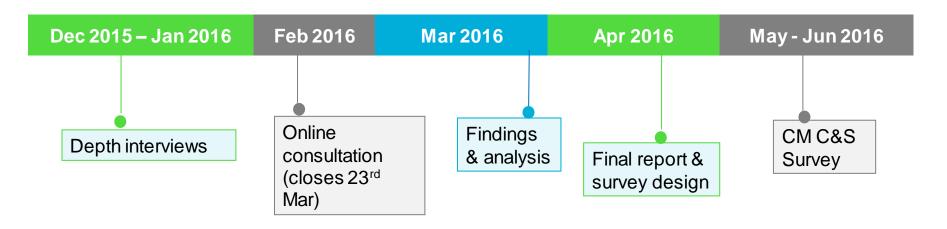
- Auction system will remain unchanged
- Auction system will be covered at future events (to include Demos)
- We'll continue to hold mock auctions for this years auctions

System warnings need to be communicated clearer / earlier / better

E-mails and text messages included in CM warnings as well as updates on our website

EMR Customer & Stakeholder Satisfaction Research

- Commissioned Populus (an independent research organisation) to support us with developing the survey
- To help us understand what is important to our Stakeholders and Customers and how they perceive our performance
- It will guide the content and focus of the enduring C&S Survey
- Appreciate the input and feedback we've received in the interviews and online survey so far – THANK-YOU!





continued....

Please provide us with feedback – what do you want to see and hear about.....?







Contact us



emr@nationalgrid.com



https://www.emrdeliverybody.com/cm/home.aspx



@EMRDeliveryBody



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