Capacity Market Operational Coordination Event

6 July 2015

Agenda

Session	Timings
Welcome and Introductions	9.30
Operational Plan Update	9.35
IS Update	9.45
Auction Parameters	10.15
Break	10.55
Electricity Capacity Report	11.15
Lunch	12.30
ESC	1.15
Ofgem	1.30
Prequalification	1.50
Break	2.45
Auxillary Load	3.00
Credit Cover	3.20
Q&A and Close	3.45

Operational Plan Update

James Greenhalgh

Milestones Achieved

T-4 ref	TA ref	Deliverable	Scope	Date requirement from CM Rules/Regs	T-4 Auction	DSR Transitional Auction	Dependencies	Owner
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

Ofgem published the CM Rules and their decision document on 19 June.

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 15th June	Wednesday 24th June 2015 (DB will receive them on this day)	Wednesday 24th June 2015	Electricity Capacity Report	DECC
9	SoS publishes Auction Parameters	SoS publishes the final auction parameters		Friday 26th June 2015	Friday 26th June 2015		DECC

The Auction Parameters were provided to the Delivery Body on the 24 June and published on Monday 29 June.

Upcoming Milestones

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T-4 ref	TA ref	Deliverable	Scope	Date requirement from CM Rules/Regs	T-4 Auction	DSR Transitional Auction	Dependencies	Owner
12		Prequalification window opens	IT systems "active" and applicants submit formal registration and data submission	T – 20 weeks	Monday 20th July 2015	Monday 20th July 2015		NG/ App
13		Prequalification window closes	Last date for applications to be submitted	T – 16 weeks	Friday 14th August 2015	Friday 14th August 2015	Window open for 4 weeks	NG/ App
14		Prequalification Results Day	Inform applicants of the outcome of assessment and update the Capacity Market Register Provide SoS with aggregate de-rating capacity for each category of applicant (except Interconnectors) & any recommendation for adjusting the demand curve (from plant opting out & still operational). Send copies of completed applicant metering assessments to ESC.	T – 10 weeks - PQ	Friday 25th September 2015	Friday 25th September 2015		NG
15		Start of NG Appeal submission window	Opening date for applicants to raise an appeal with National Grid against the pre-qualification outcome		Friday 25th September 2015	Friday 25th September 2015		App
16		NG Appeal window closed	Closing date for applicants to raise an appeal with National Grid against the pre-qualification outcome		Friday 2nd October 2015	Friday 2nd October 2015		App

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Delivery Body Activities

- Developing System Operator Procedures for Stress Events
- Developed and published the Auction Guidelines
- Stakeholder/Customer Meetings
- IT work (to be covered in the IS update)
- Registration and User Management support material
- Developing guidance to support Prequalification
- Ongoing Agreement Management activities

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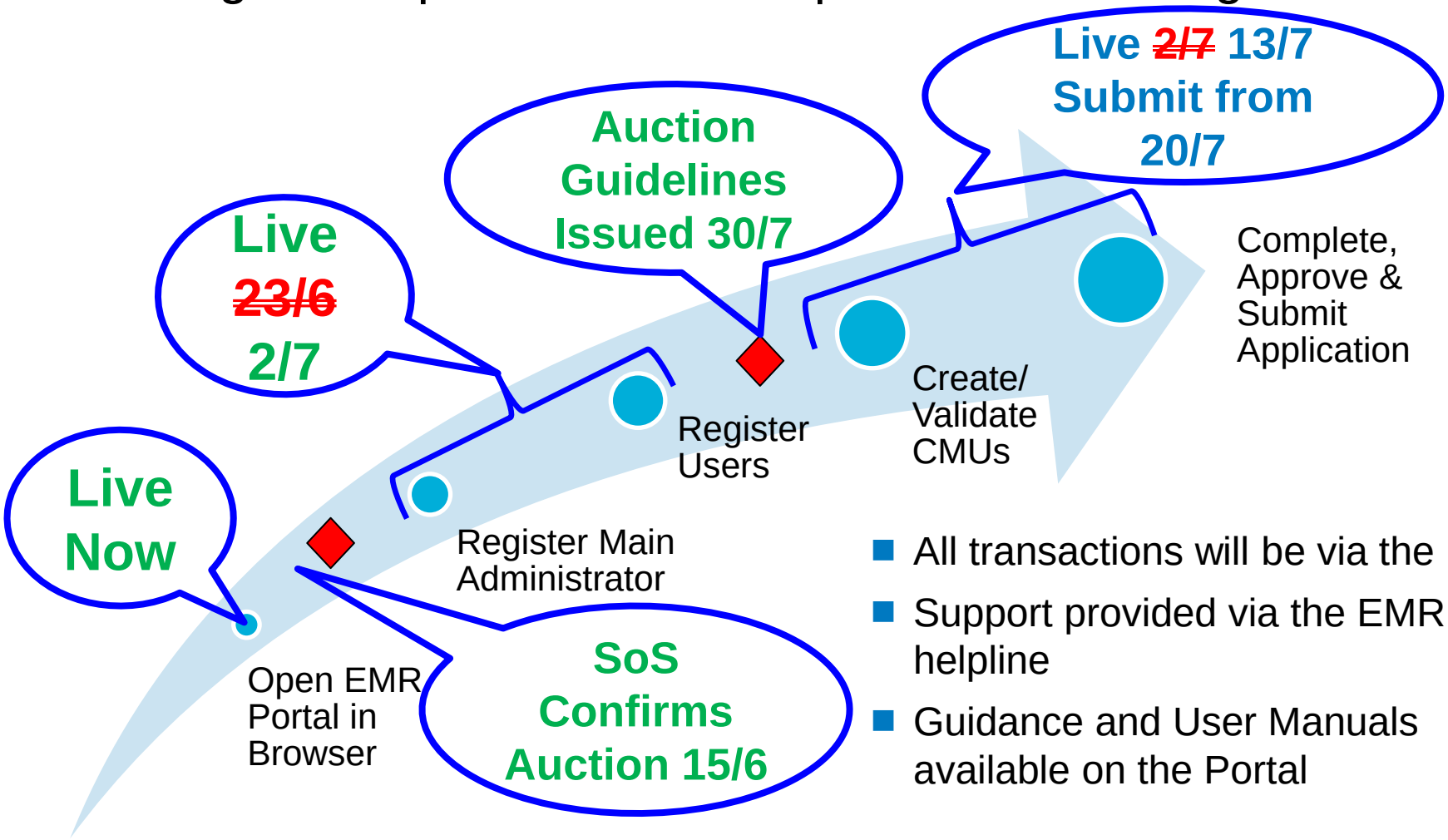
Questions?

IS Update

Duncan Burt
Ian Woolley

High Level Process Timeline

- The high level process for Pre-qualification through the Portal



- All transactions will be via the Portal
- Support provided via the EMR helpline
- Guidance and User Manuals available on the Portal

System Timeline

- Portal: Live 10 April
- Company/User Registration, Security, Password Management (“Shared”); Live 2 July
- Capacity Market Module;
  - Planned go live of 2 July impacted by delay to “Shared”
  - Now planned for go-live on 13 July
    - 3 rounds of UAT of CM only functionality completed
    - End –to-End (E2E) round of merged CM and Shared functionality running 5-6 July
    - Final round E2E planned 10-11 July
    - Go-live planned 13 July

Training

- Training
  - Demonstrations of all components at Stakeholder events
  - User guides and manuals;
    - Registration User Guide live on Portal
    - CM User Guide will be published on Portal in parallel with Go-live
  - Webinar style training sessions
    - CM Webinar materials will be published on Portal in parallel with go-live
    - Training sessions will be scheduled for the week following go-live
  - All material will also be available online to access in your own time

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Questions?

Capacity Market Auction Guidelines and Auction Parameters

Ian Nicholas

Content

- Summary of Information
- Auction Timetable 2015
- Demand Curve
- Auction Results
- Auction Process Overview

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Summary of information published

- Rules final (Auction specific; DBA definition, public info between rounds, min level for spare capacity 'below1GW')
- Confirmation of Auction 12th June
- Auction Parameters
- De-rating factors for Technology types (covered in the Electricity Capacity Report)
- De-rating factors for Interconnectors (covered in the ECR)
- Transitional specific (time banded prod)

Summary of information published

- Electricity Capacity Report
- summarises the modelling analysis undertaken by National Grid to support the decision by the Government on the amount of capacity to procure through the Capacity Market auction for delivery in 2019/20.
- Auction Parameters published 29th June for T-4 and TA
  - -target volume
  - -price cap
  - -PTT
  - -De-rating all technology types and interconnectors

Timetable

Prequalification Window opens	**20th July**	**20th July**
Prequalification Window closes	14th August	14th August
Prequalification Results Day	25th September	25th September
Notification of updated Auction Parameters and confirmation of the conditional Prequalified Applicants which have fully Prequalified pursuant to Rule 4.6.3	19th October	19th October
Notification of Prequalified CMUs pursuant to Rule 5.5.10(b) and associated update of affected Auction Parameters	17th November	5th January 2016
Confirmation of Entry and decisions under Rules 5.5.11, 5.5.13 and 5.5.14 notified to DB	24th November (T-10)	12th January 2016
Auction start	**December 8th 2015**	**January 26th 2016**

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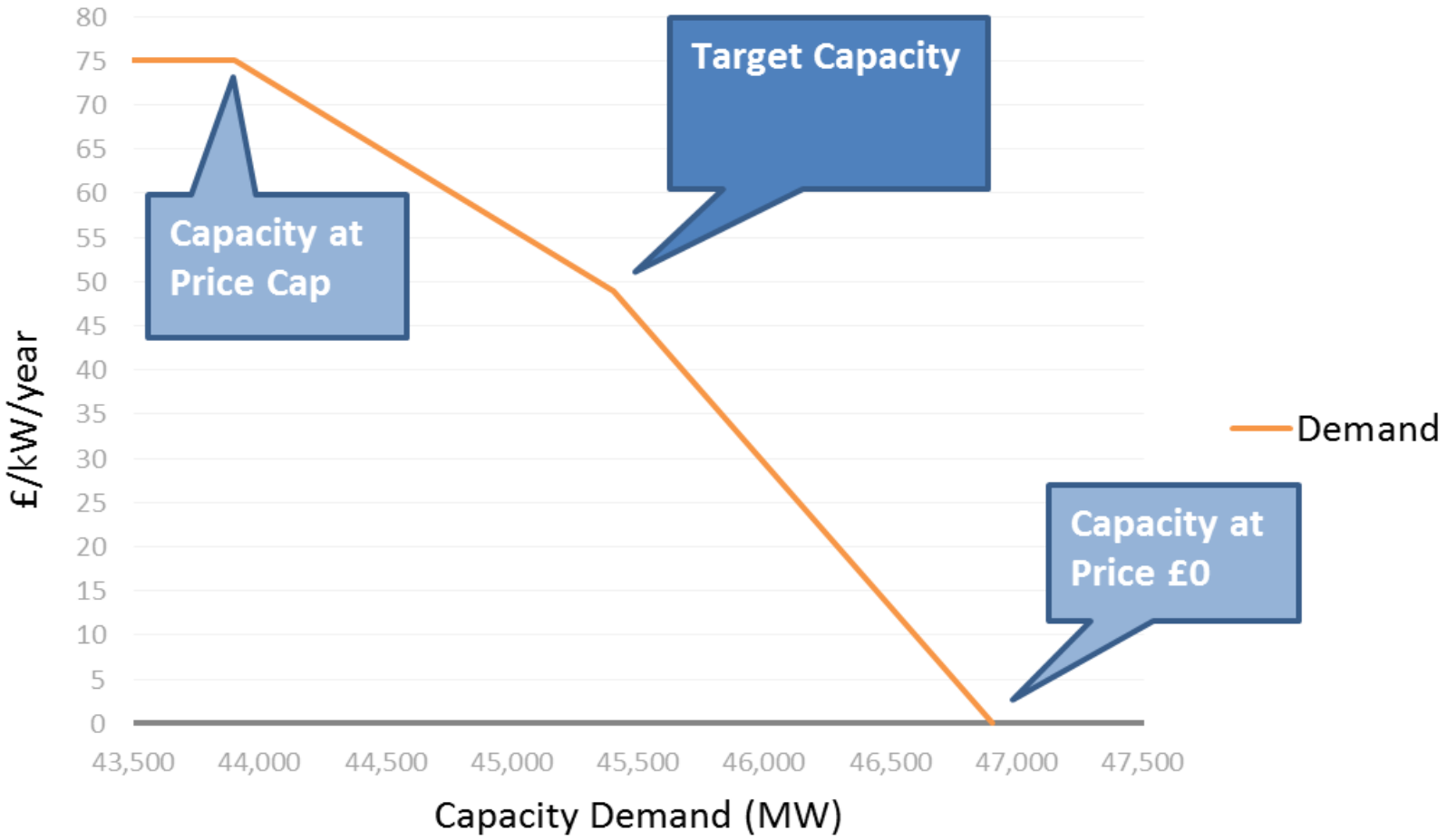
Parameters T-4

Target capacity for 2015 T-4 Capacity Auction	**45,400 MW**
Demand curve coordinate – target volume at price cap	43,900 MW
Demand curve coordinate – target volume at £0/kW	46,900 MW
Price cap	£75/kW/year
Net Cone	£49/kW/year
Price Taker Threshold	£25/kW/year
15 Year Minimum £/kW Threshold	£255/kW De-rated capacity
3 Year Minimum £/kW Threshold	£130/kW De-rated capacity
Indexation base period	2014/15

T-4 Capacity Demand



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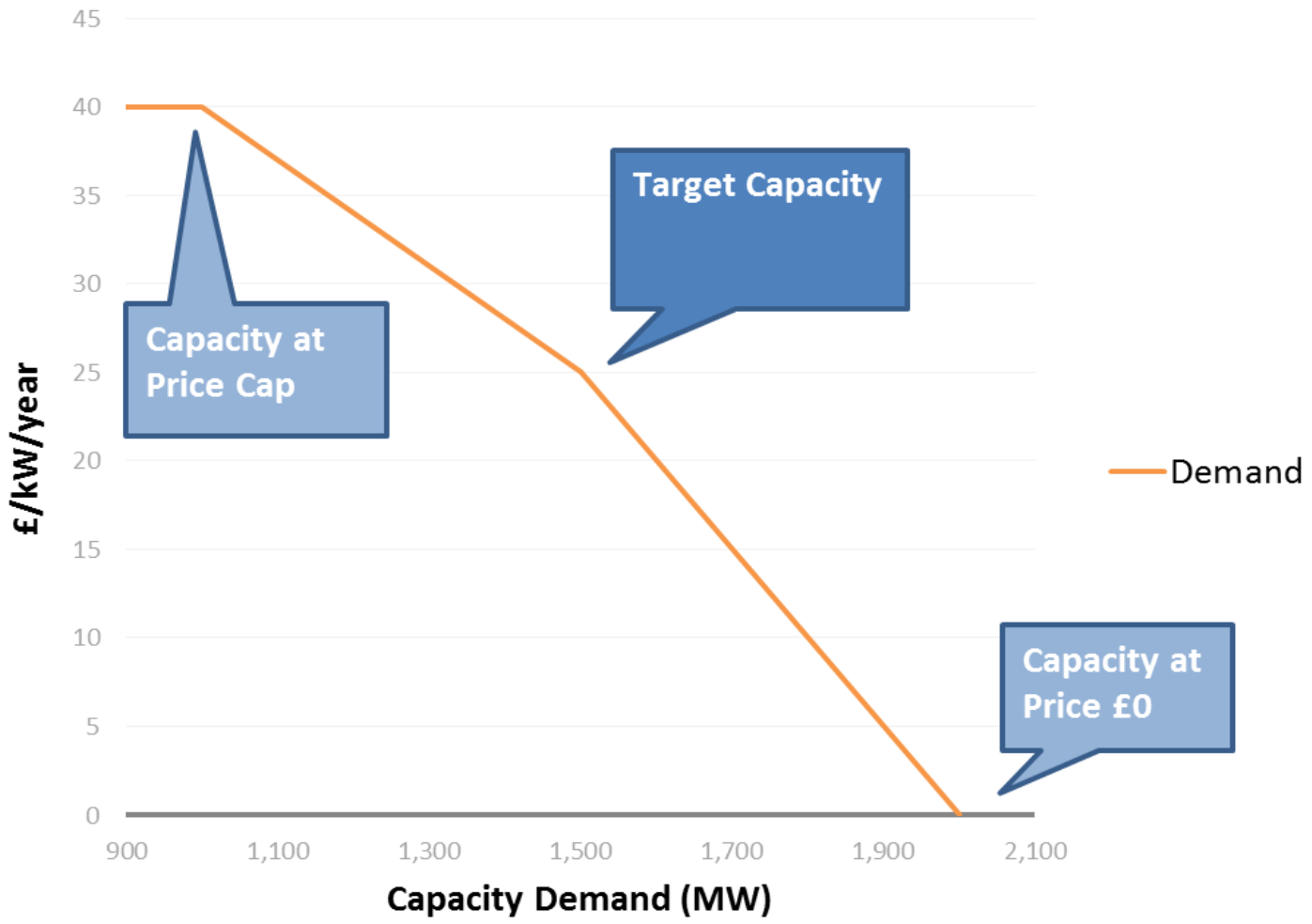
Parameters TA

Target capacity for 2016 Transitional Auction	**1500 MW**
Demand curve coordinate – target volume at price cap	1000 MW
Demand curve coordinate – target volume at £0/kW	2000 MW
Price cap	£40/kW/year
Net Cone Proxy	£25/kW
Price Taker Threshold	£15/kW/year
Time banded discount to the clearing price	70%
Indexation base period	2014/15

TA Capacity Demand



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Auction Timetable T-4 December 2015 (current)

Round	Price range (£/kW/year)	Round Start	Round End	Recess
Day 1 (8th Dec)				
R1	75-70	09:00	10:30	30mins
R2	70-65	11:00	12:30	30mins
R3	65-60	13:00	14:30	30mins
R4	60-55	15:00	16:30	30mins
Day 2 (9th Dec)				
R5	55-50	09:00	10:30	30mins
R6	50-45	11:00	12:30	30mins
R7	45-40	13:00	14:30	30mins
R8	40-35	15:00	16:30	30mins
Day 3 (10th Dec)				
R9	35-30	09:00	10:30	30mins
R10	30-25	11:00	12:30	30mins
R11	**25**-20	13:00	14:30	30mins
R12	20-15	15:00	16:30	30mins
Day 4 (11th Dec)				
R13	15-10	09:00	10:30	30mins
R14	10- 5	11:00	12:30	30mins
R15	5-0	13:00	14:30	30mins

T-4

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Auction Timetable 2016 TA (current)

Round	Price range (£/kW/year)	Round Start	Round End	Recess
Day 1 (26th January)				
R1	40.00-37.50	09:00	10:30	30mins
R2	37.50-35.00	11:00	12:30	30mins
R3	35.00-32.50	13:00	14:30	30mins
R4	32.50-30.00	15:00	16:30	30mins
Day 2 (27th January)				
R5	30.00-27.50	09:00	10:30	30mins
R6	27.50-25.00	11:00	12:30	30mins
R7	25.00-22.50	13:00	14:30	30mins
R8	22.50-20.00	15:00	16:30	30mins
Day 3 (28th January)				
R9	20.00-17.50	09:00	10:30	30mins
R10	17.50-15.00	11:00	12:30	30mins
R11	**15.00**-12.50	13:00	14:30	30mins
R12	12.50-10.00	15:00	16:30	30mins
Day 4 (29th January)				
R13	10.00-7.50	09:00	10:30	30mins
R14	7.50-5.00	11:00	12:30	30mins
R15	5.00-2.50	13:00	14:30	30mins
R16	2.50-0.00	15:00	16:30	30mins

TA

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Auction Timetable 2015 T-4 (proposed)

Round	Price range (£/kW/year)	Round Start	Round End	Recess
Day 1 (8th Dec)				
R1	75-70	09:00	10:30#	30mins
R2	70-65	11:00	11:30	30mins
R3	65-60	12:00	12:30	30mins
R4	60-55	13:00	13:30	30mins
R5	55-50	14:00	14:30	30mins
R6	50-45	15:00	15:30	30mins
R7	45-40	16:00	16:30	30mins
Day 2 (9th Dec)				
R8	40-35	09:00	09:30	30mins
R9	35-30	10:00	10:30	30mins
R10	30-25	11:00	11:30	30mins
R11	**25**-20	12:00	12:30	30mins
R12	20-15	13:00	13:30	30mins
R13	15-10	14:00	14:30	30mins
R14	10-5	15:00	15:30	30mins
R15	5-0	16:00	16:30	30mins
# first round 90min				

T-4

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Auction Timetable 2016 TA (proposed)

Round	Price range (£/kW/year)	Round Start	Round End	Recess
Day 1 (26th January 2016)				
R1	40.00-37.50	09:00	10:30#	30mins
R2	37.50-35.00	11:00	11:30	30mins
R3	35.00-32.50	12:00	12:30	30mins
R4	32.50-30.00	13:00	13:30	30mins
R5	30.00-27.50	14:00	14:30	30mins
R6	27.50-25.00	15:00	15:30	30mins
R7	25.00-22.50	16:00	16:30	30mins
Day 2 (27th January)				
R8	22.50-20.00	09:00	09:30	30mins
R9	20.00-17.50	10:00	10:30	30mins
R10	17.50-15.00	11:00	11:30	30mins
R11	**15.00**-12.50	12:00	12:30	30mins
R12	12.50-10.00	13:00	13:30	30mins
R13	10.00-7.50	14:00	14:30	30mins
R14	7.50-5.00	15:00	15:30	30mins
R15	5.00-2.50	16:00	16:30	30mins
R16	2.50-0.00	16:00	16:30	30mins
# first round 90min				

TA

Reporting round info

- As per Rule 5.5.18; prior to start of round the Auctioneer will publish;

  -bidding Round Price Spread,

  -Potential Clearing Capacity at the price floor for that round

  -excess Capacity rounded to 1GW for T-4 and rounded to 100MW for TA.

  -announce when the round is below the above i.e. the ‘below 1GW’

Reporting following auction Clearing

- Within 24 hours of the Capacity Auction clearing notify Bidders whether, based on the provisional results, they have been successful in a Capacity Agreement with respect to a Bidding CMU. Such notification is provisional only and does not constitute notification of a Capacity Agreement

Diary dates

- Auction Training material Oct
- Screen casts Oct
- Next update of AG-19th October
- Final AG 17th November/(5th January TA)
- Mock Auction T-9 (25th November/13th January)

Overview of 2015 Capacity Market process

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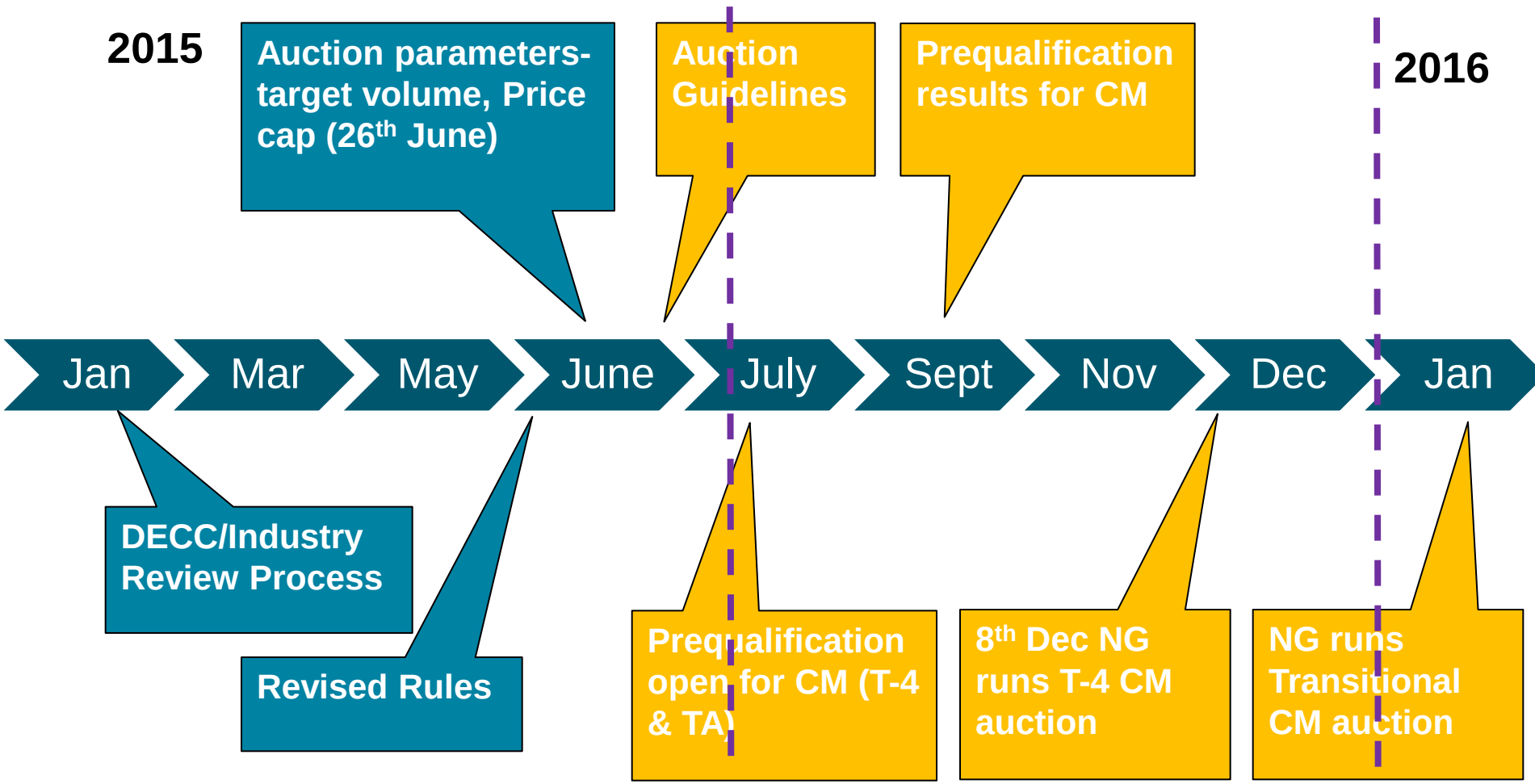

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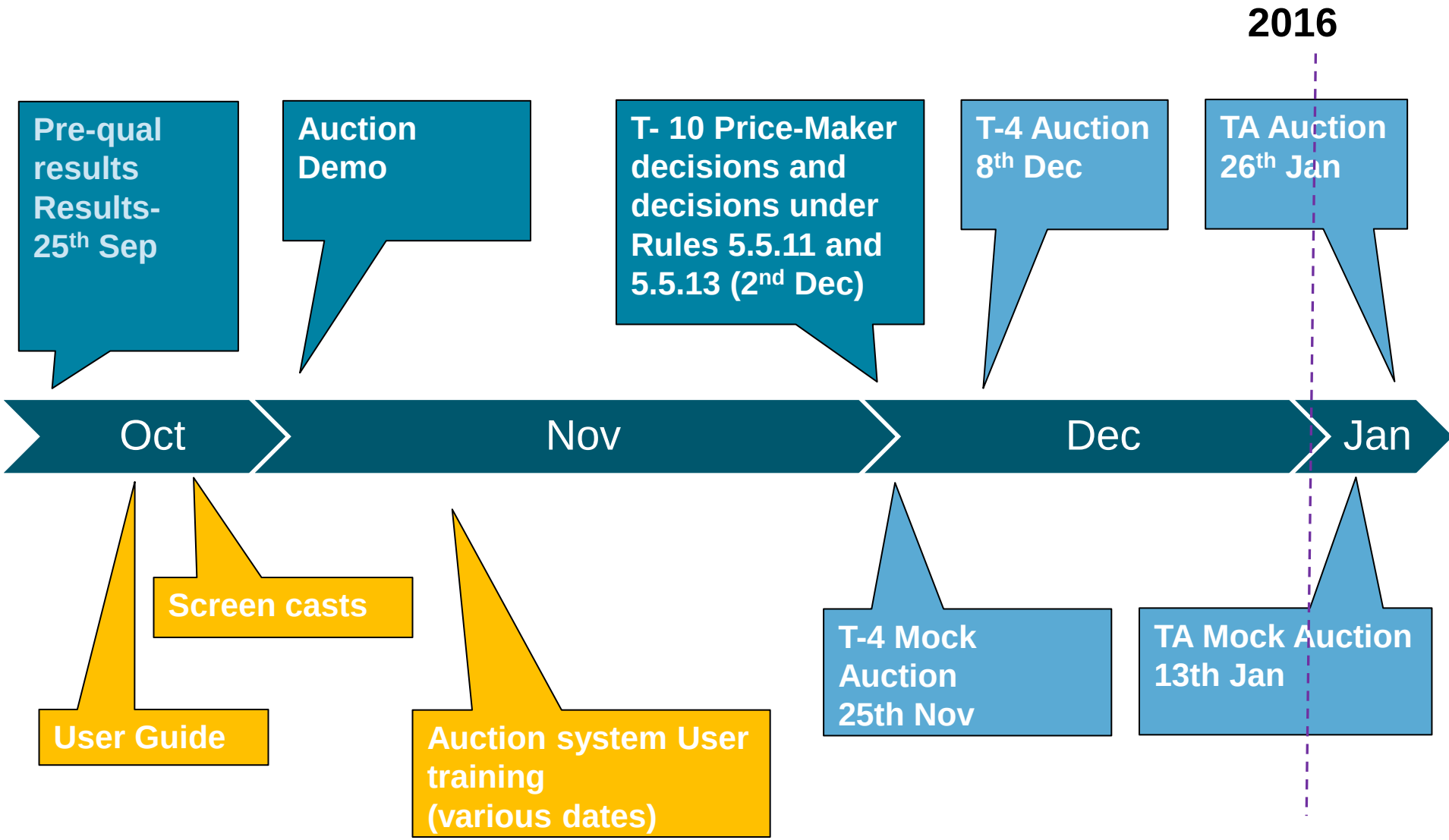
Timeline 2015 (as per project plan)



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Questions?

Break

2015 Electricity Capacity Report

Duncan Rimmer and Simon Geen

Agenda

- Executive Summary
- Capacity to Procure analysis
- Interconnector De-rating factors
- Recap
- Questions

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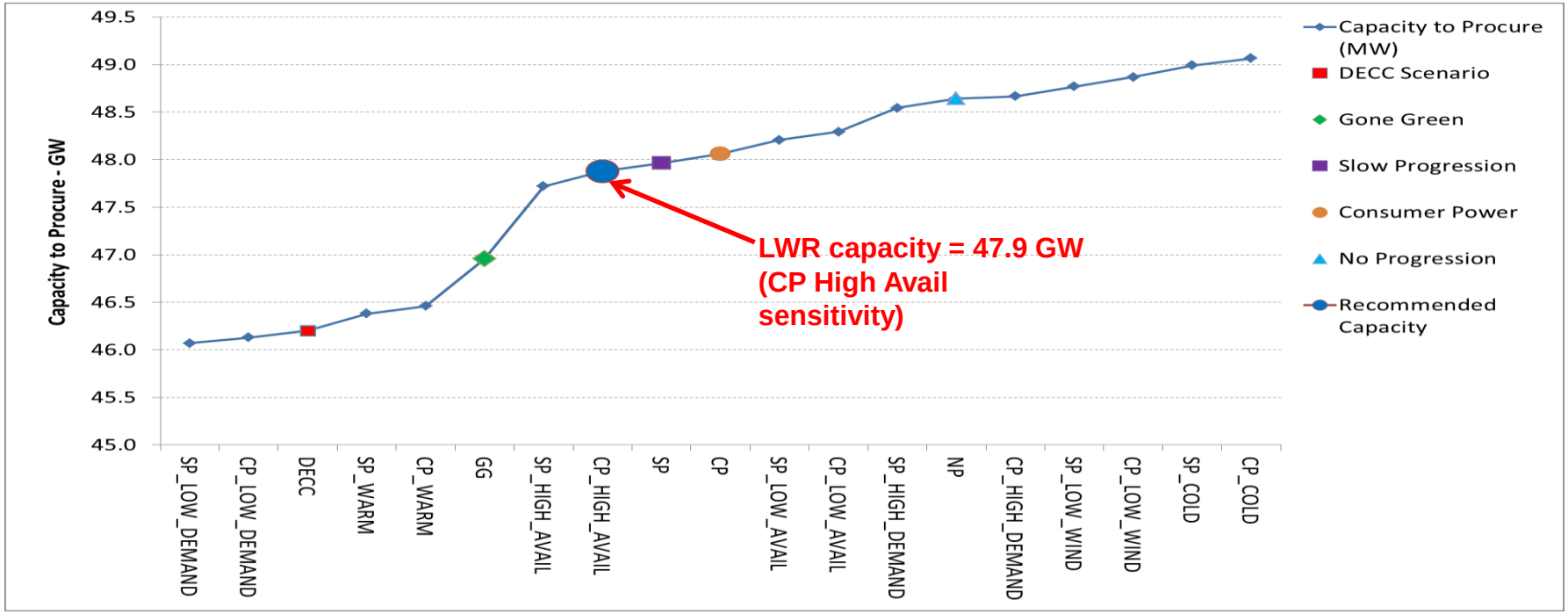
EXECUTIVE SUMMARY

Capacity Market Modelling Obligations – 2019/20

- National Grid to recommend
  - a capacity to procure
  - a range for interconnector de-rating factors at the country/market level
- Secretary of State to determine
  - the capacity to procure
    - split into T-4
    - and T-1 auctions
  - auction parameters including
    - parameters for demand curve
    - de-rating factors for each interconnector

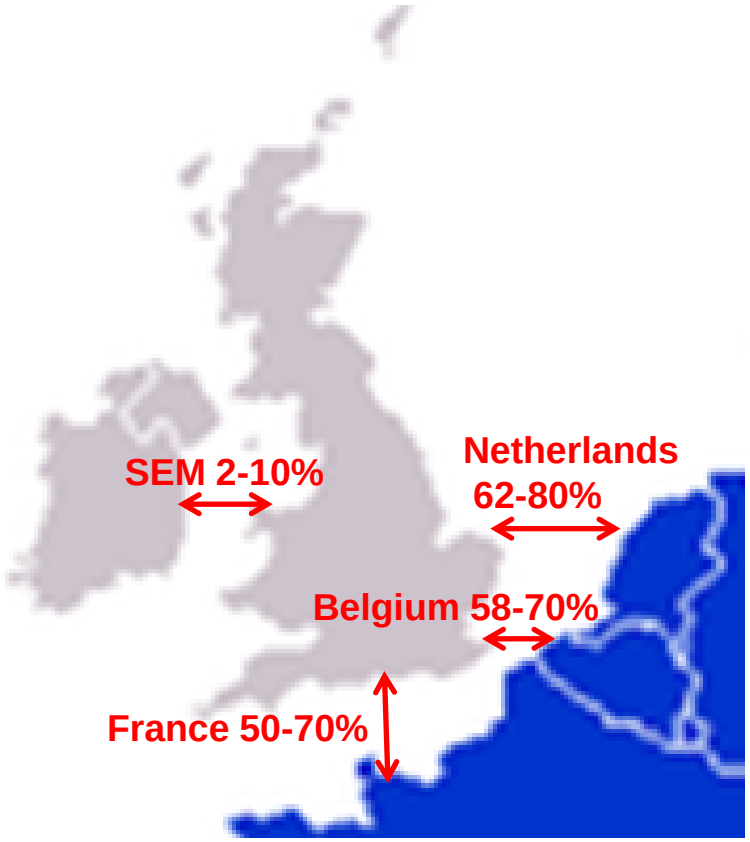
2019/20 Capacity to procure

- CM eligible capacity equates to total capacity minus capacity receiving support via RO, CfD or FiTs incentives.
- The chart shows the level of CM capacity required in each scenario and sensitivity to meet the Reliability Standard of 3 hours LOLE in 19/20. It excludes the CM plant with 3, 14 or 15 year contracts (total 5.5 GW) from the18/19 auction.
- Using the Least Worst Regret (LWR) tool the recommended capacity to procure is 47.9 GW



De-rating factor ranges

- Interconnectors can take part in the capacity market auctions for 2019/20
  - National Grid to recommend a range of de-rating factors for each country
  - DECC to decide on de-rating factor to apply for each interconnector
- Ranges shown in illustrative diagram



CAPACITY TO PROCURE ANALYSIS

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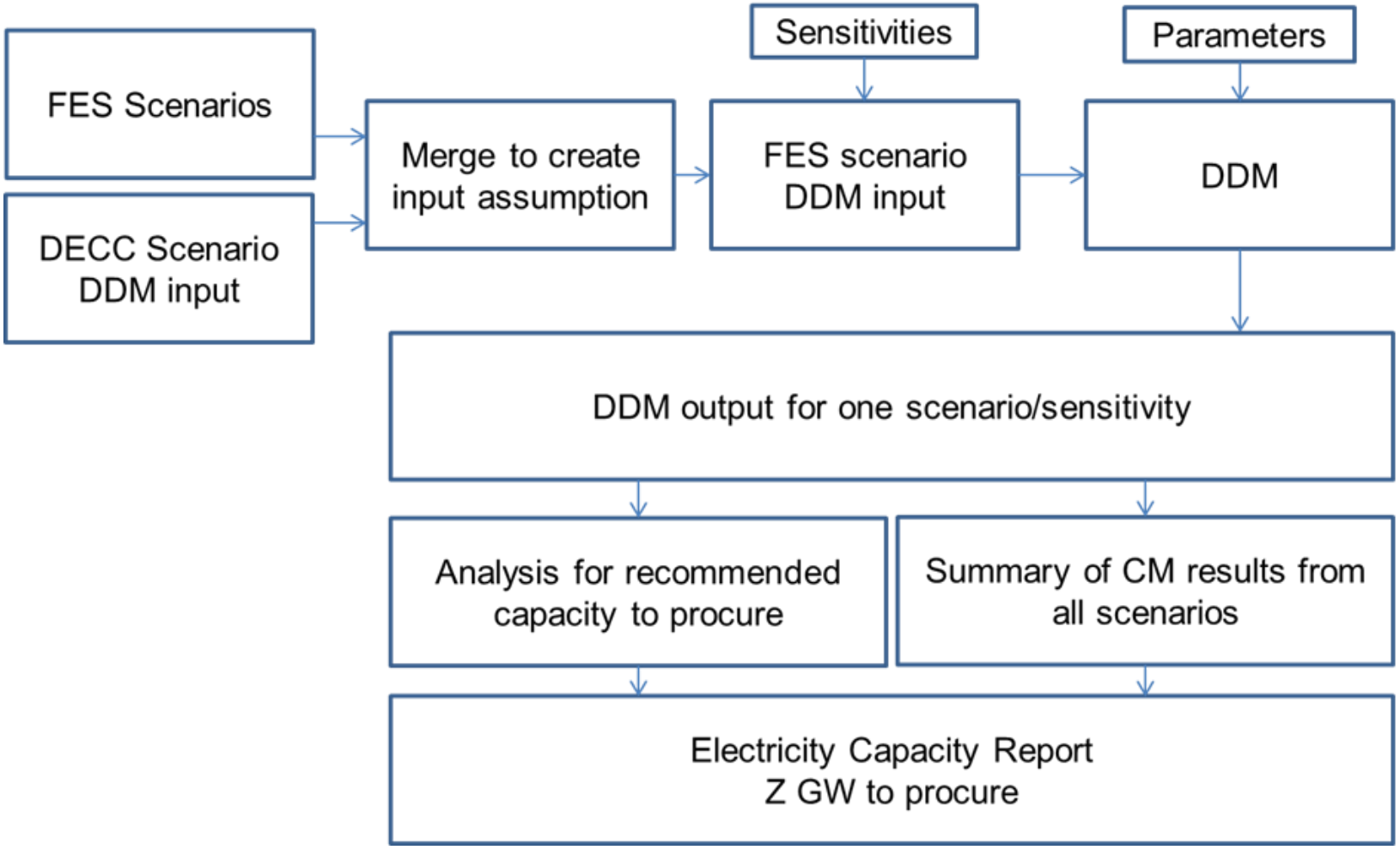
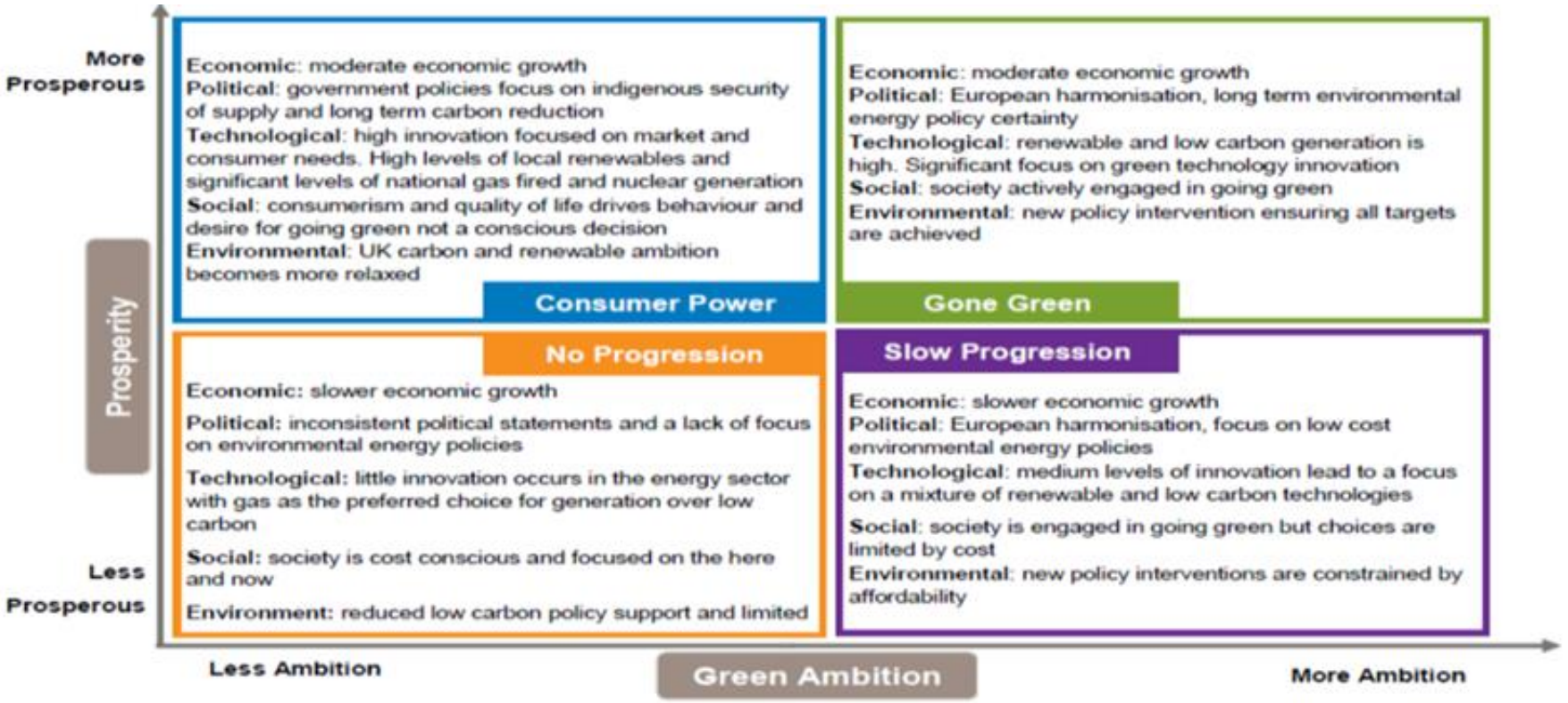
Concept diagram of modelling process



Future Energy Scenarios

- January 2015 stakeholder feedback document outlined proposed scenarios for 2015 (see below)

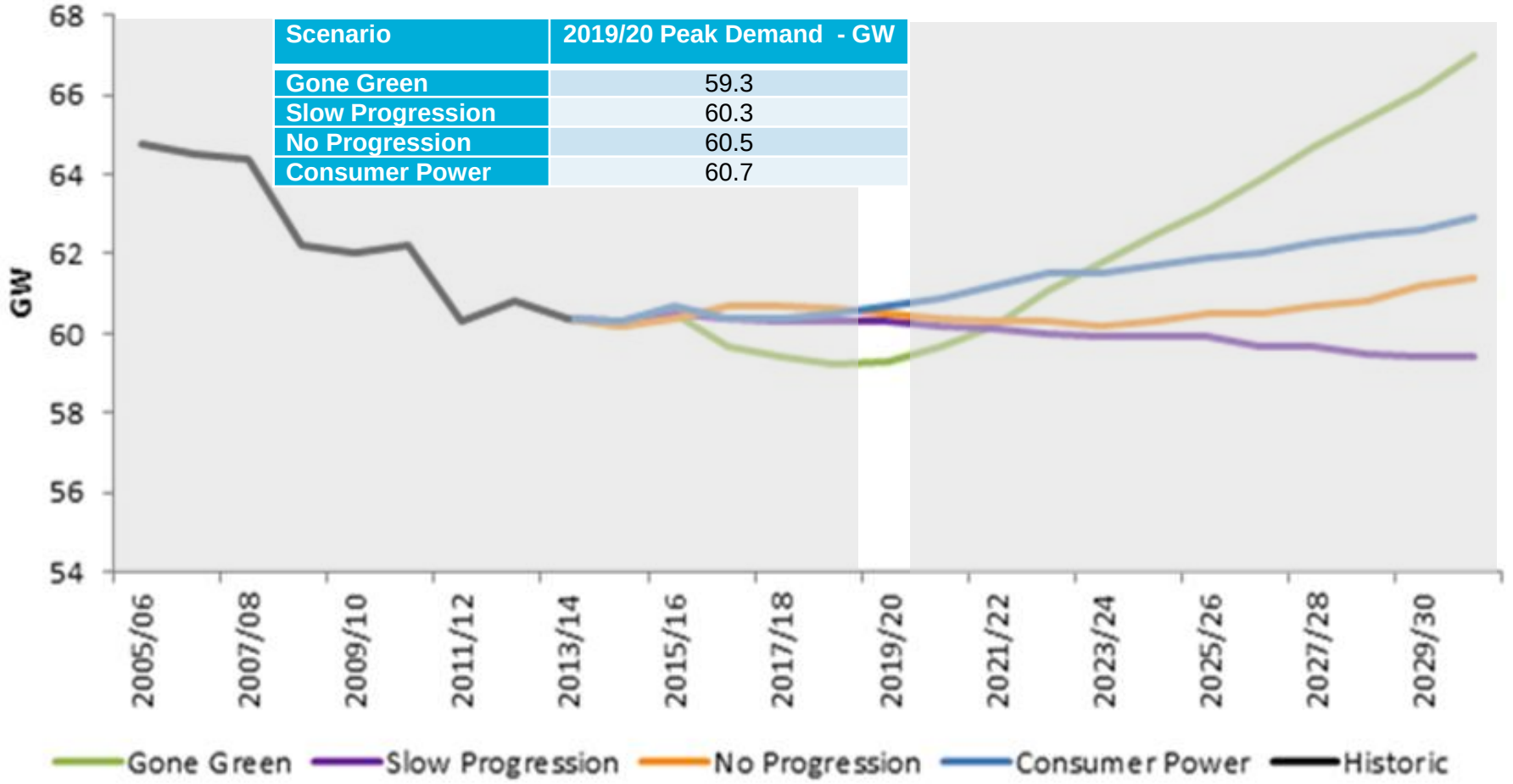


- 2015 Future Energy Scenarios will be published on July 15th 2015

FES peak demand

- Demand is on end consumer basis i.e. that met by both transmission and distribution network connected generators. Historic values and future range across scenarios shown below.

Scenario	2019/20 Peak Demand - GW
Gone Green	59.3
Slow Progression	60.3
No Progression	60.5
Consumer Power	60.7



- Demand sensitivities in 2019/20 cover range from 58.3 GW to 61.2 GW

FES generation mix – nameplate capacity

	Outside of Capacity Market (GW)	Capacity Market Eligible (GW)
Gone Green 2015/16	17.5	65.9
Gone Green 2019/20	27.1	Model to determine
Slow Progression 2015/16	17.6	65.9
Slow Progression 2019/20	25.8	Model to determine
No Progression 2015/16	17.3	66.8
No Progression 2019/20	24.0	Model to determine
Consumer Power 2015/16	17.8	65.9
Consumer Power 2019/20	26.9	Model to determine

- Not Eligible for Capacity Market
  - Existing or New Support
    - Contract for Difference
    - Renewable Obligation
    - Feed in Tariff
  - Small Generation (<2MW)
  - e.g. Wind, Solar, New Nuclear, Biomass, Most Hydro, Tidal, Waste, CCS

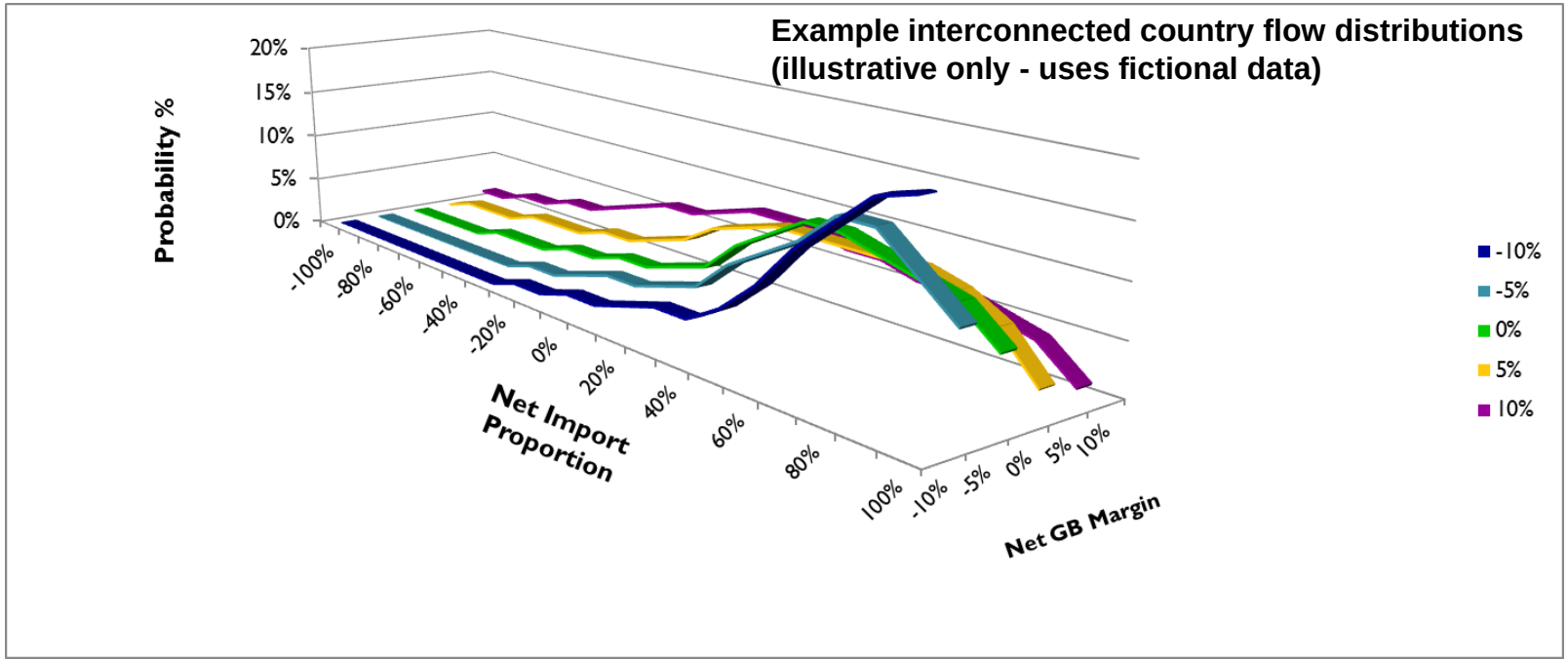
- Eligible for Capacity Market
  - Not getting any other support, including when generating beyond support timeline
  - Available to generate at peak demand
  - Demand side response
  - Interconnectors (from 2019/20)
  - Coal, Gas, CHP, Oil, Pumped Storage, Existing Nuclear, Some Hydro

Interconnector assumptions

- FES Interconnector capacities higher in 2015 than 2014:

	Gone Green		Slow Progression		No Progression		Consumer Power	
	FES 2015	FES 2014	**FES 2015**	FES 2014	**FES 2015**	FES 2014	**FES 2015**	FES 2014
2018/19	6	5	5	4	4	4	4	4
2019/20	**7**	**6**	**6**	**5**	**6**	**4**	**6**	**5**
2020/21	10.8	6	8.4	6	6	5	6	5
2030/31	17.7	11.8	14.2	8.4	9.8	7.4	10.8	7.4

- In the 2014 ECR, the contribution of interconnectors at peak was modelled via sensitivities. This year, interconnector flows at peak modelled using probability distributions derived from Baringa analysis
- Interconnector capacity and distribution assumptions have no material impact on capacity to procure



CM-Eligible Plant Peak Availabilities

- These availabilities are updated from the 2014 analysis based on a rolling 7 years
- These availabilities are consistent with the de-rating factors in the auction
- CCGT increase over time, from 87% now, to reach the 90% international benchmark calculated by ARUP in 2020/21. The increasing CCGT availability reflects the introduction of the Capacity Market in 2018/19 and a three year maintenance cycle for the CCGT fleet to improve its availability once spark spreads rise.

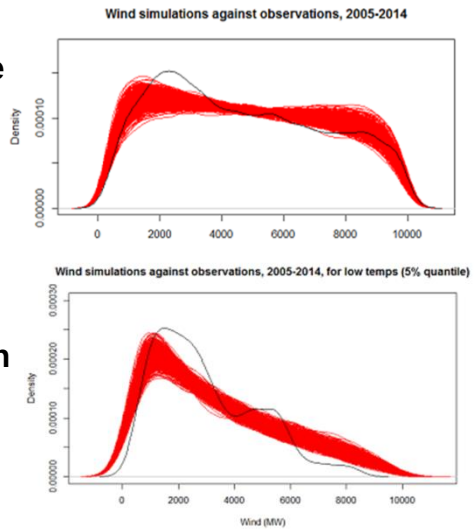
Generation Type	Availability %
CHP / Autogeneration	90.00%
CCGT 2019/20	89.00%
Coal / Biomass / Energy from waste	87.86%
DSR	86.80%
Hydro	84.87%
Nuclear (Existing)	82.31%
OCGT / reciprocating engines	94.54%
Oil fired	84.61%
Pumped Storage	96.63%

Sensitivities to cover other uncertainties

1 Low wind

Scenarios assume wind generation independent of demand.

Evidence of wind drop-off at times of high demand supports inclusion of sensitivity with lower wind output at times of high demand.



2 Plant availability (high & low)

Station availabilities are based on analysis of the last 7 years observed availability when demand is high. This sensitivity flexes CCGT & nuclear plant availability by +/– 1 std. dev. For gas range is from 87% (low) to 91% (high) in 2019/20.

Plant type	Historic Range	Arup
CCGT	85% - **87%** - 89%	90%
Nuclear	76% - **82%** - 89%	77%

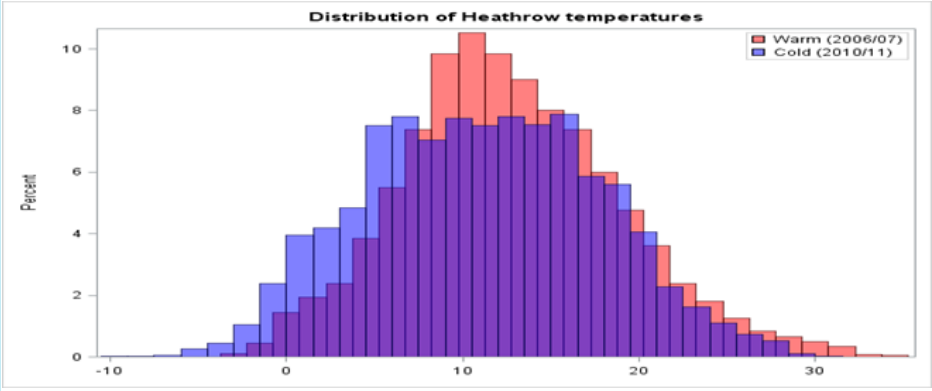
3 Peak Demands (high & low)

Covers the demand uncertainty due to the underlying ACS peak demand forecast performance. Based on the average winter ahead (T-0) forecast errors over the last 7 years. Asymmetric range from +0.9% (high) to -3.3% (low).

Forecast Year	Average Forecast Error (GW)	Average Forecast Error %
Overall Average	0.66	1.2%
Standard Deviation	1.21	2.1%

4 Weather (warm : 2006/07; cold :2010/11)

Individual winters can be modelled, showing the impact of single year winter conditions, rather than mean winter. conditions.



- **Sensitivities take account of statistical / market uncertainties not explicitly modelled**
- **Other sensitivities considered but rejected (mothballed plant, nuclear type fault, CM and CfD Plant Slippage).**

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Loss Of Load Expectation (LOLE) overview

- LOLE represents the number of hours per year on average in which supply is expected to be lower than demand as described below.

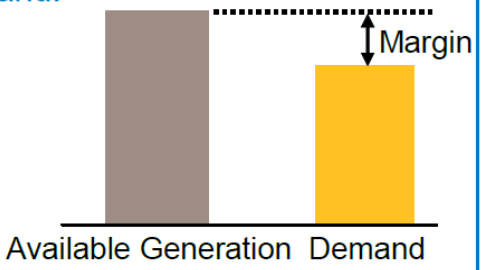
What is LOLE?

- Loss of Load Expectation (LOLE) is used to describe electricity security of supply.
- It is an approach based on probability and is measured in hours/year.
- It measures the risk across the whole winter of demand exceeding supply under normal operation.
- It does not mean there will be blackouts for X hours; it gives an indication of the amount of time across the whole winter when we will need to call on balancing tools such as voltage reduction.
- In most cases, loss of load would be managed without significant impact on end consumers.
- The standard for Great Britain is set by the government at 3hours/year LOLE.

LOLE v Capacity Margin

Security of supply has traditionally been measured using the *capacity margin*, comparing average available generation with peak demand.

This works well for a generation mix largely made up of conventional fuel sources such as nuclear and fossil fuels.



However, it only applies to a single point of time and does not reflect the uncertainty of our changing energy landscape that now has higher amounts of variable generation, such as wind.

Using LOLE is a better way to reflect this uncertainty.

LOLE calculation

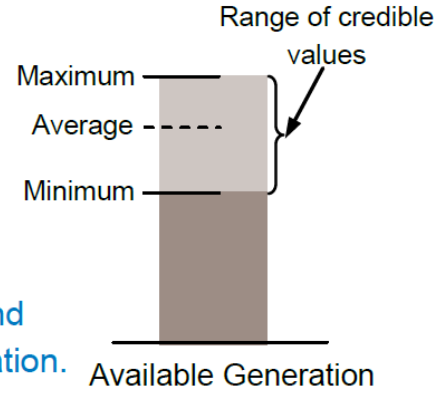
- LOLE is calculated using a probabilistic model such as the DDM

What is included in calculation

We combine historical values with future projections to get a range of values for both available generation and demand for each case.

Each case will have a maximum, minimum and average value for both generation and demand.

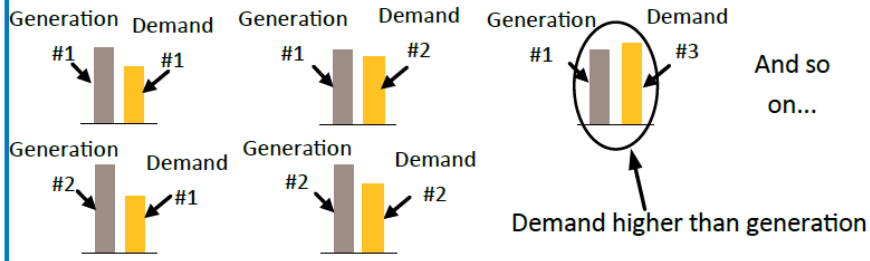
We need to include lots of values of both generation and demand in the LOLE calculation.



Most of the values we include are close to the average ones as these are most likely to occur, but we also include a few less likely values near the extremes to cover the full range.

How LOLE is Calculated

For each case we include thousands of values for both available generation and demand and we compare each value of generation with each value of demand.

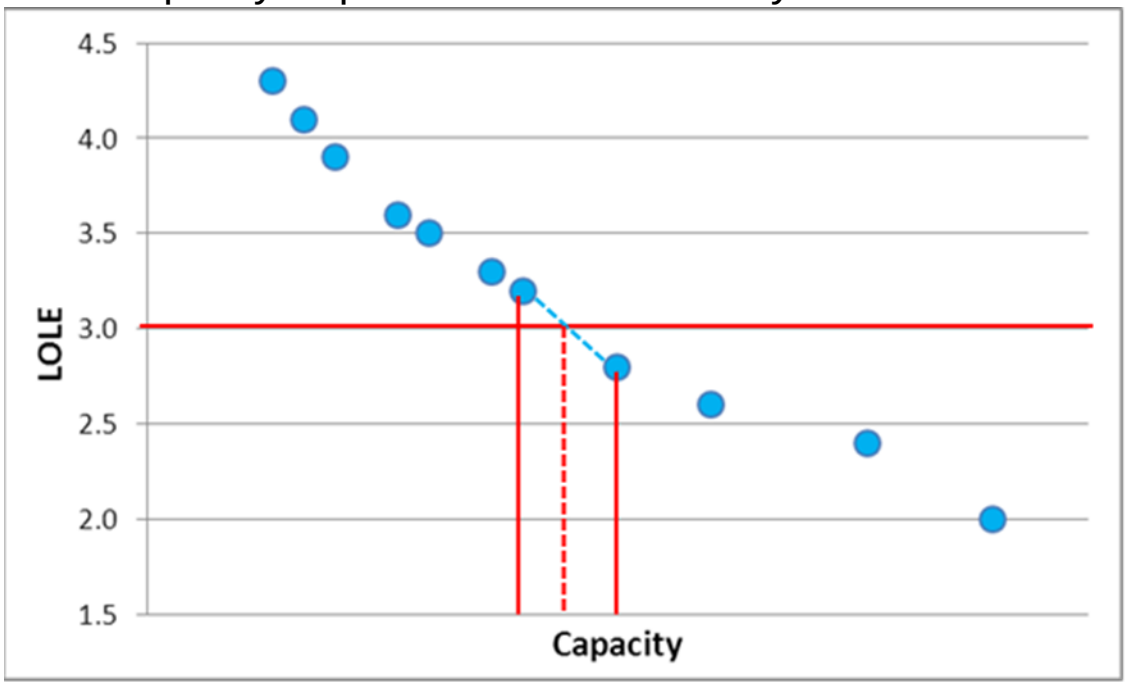


We count all the instances when demand is higher than the available generation and divide by the total number of combinations to get the loss of load probability.

This is multiplied by the number of hours in a year to get the LOLE for each case.

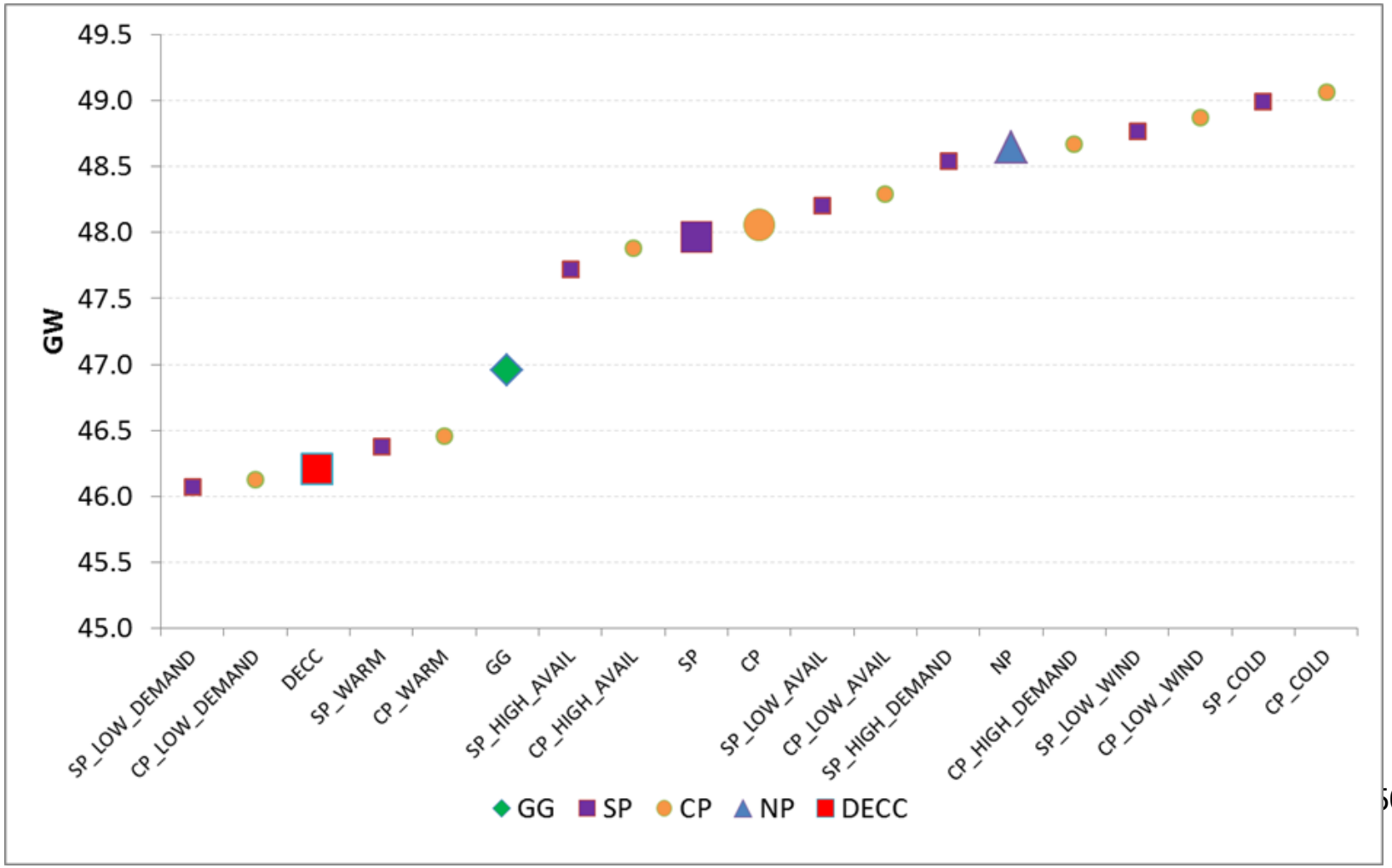
Dynamic Dispatch Model (DDM)

- The DDM models the Capacity Market for each scenario / sensitivity.
- Existing and potential new capacity is ranked by their bids into the auction based on modelled revenues and expenditure.
- Calculates LOLE associated with each increasing bid in the Capacity Market auction, accounting for non-eligible capacity first.
- Interpolates between the two marginal plants around 3 hours LOLE to determine the exact capacity required to meet Reliability Standard

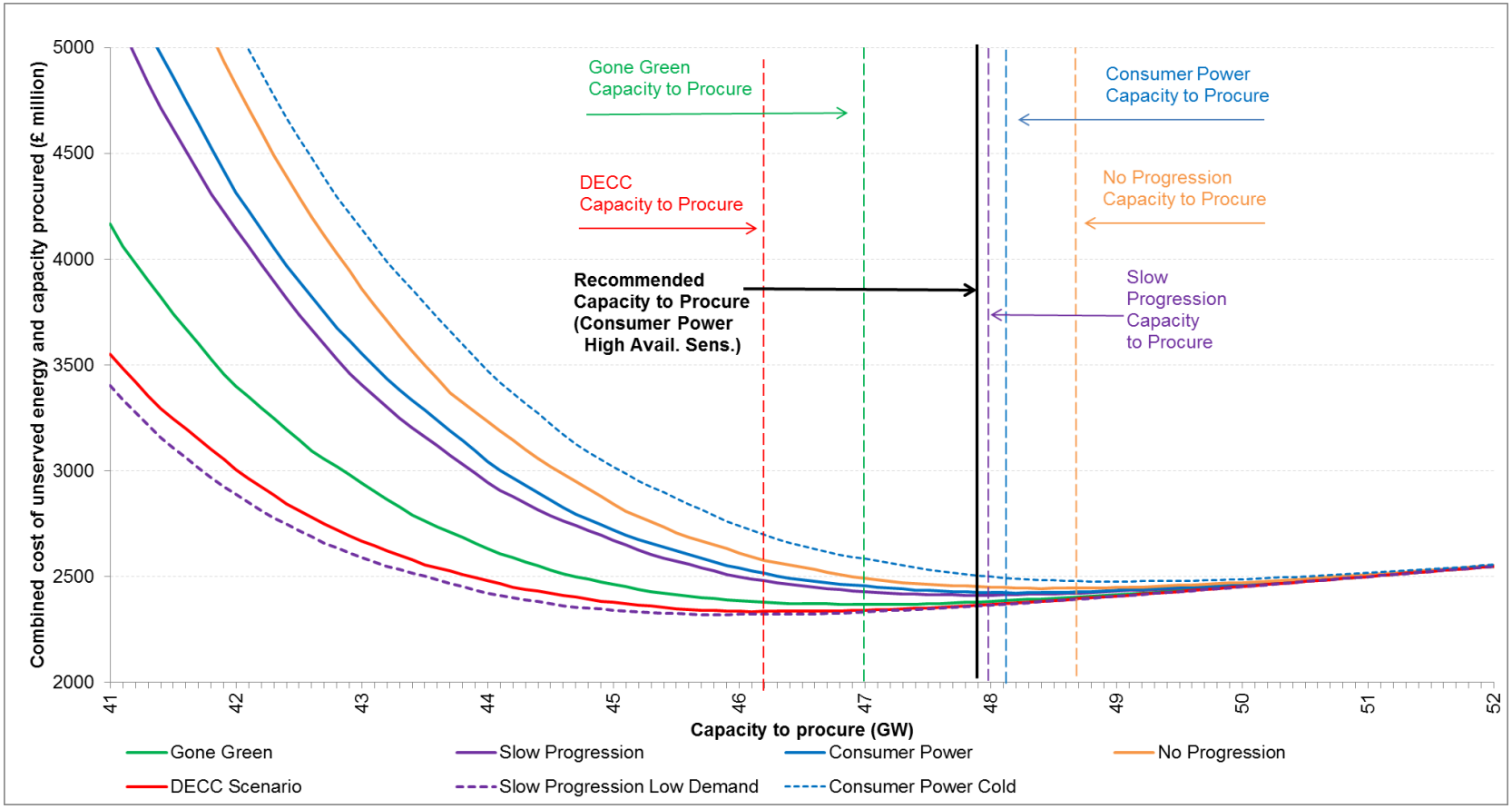


Capacity to procure range

- The following chart shows capacity requirement for all scenarios and sensitivities.
- Low demands and cold winters define the extremes of the capacity to procure range.



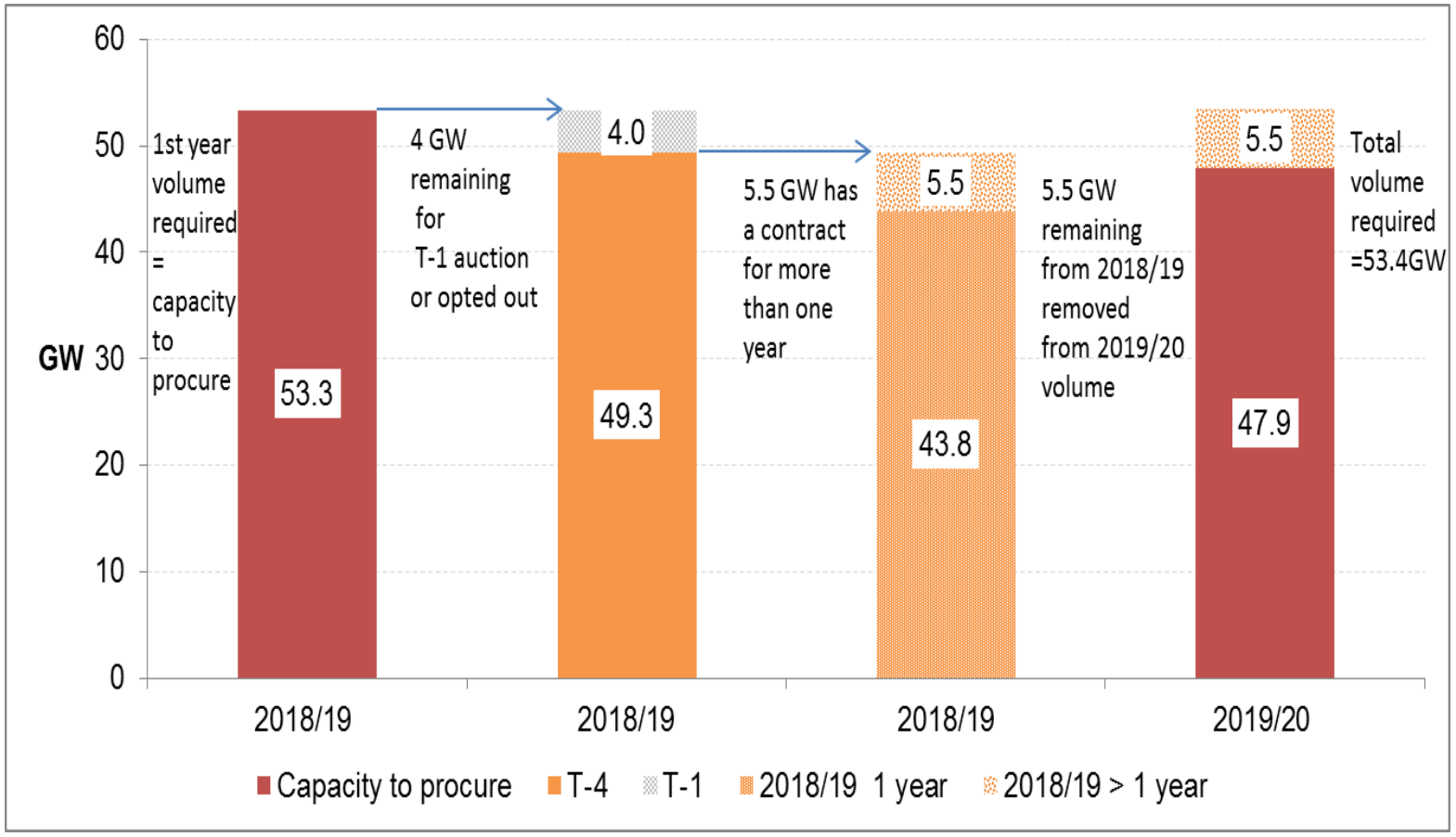
Calculating recommended capacity to procure



- Chart shows combined cost of unserved energy and procured capacity against capacity to procure for scenarios
- Least worst regret (LWR) approach is a cost benefit tool that aims to select the option that causes the least regret if the future turns out differently – in this case, it aims to minimise the highest cost resulting from under or over procurement.
- The LWR recommended capacity to procure in 2019/20 is 47.9 GW (53.4 GW including capacity already procured).

Comparison to 2018/19 recommended capacity

- Following trace is from 18/19 recommendation to 19/20 recommendation



Note: 4 GW makes allowance for the extra 0.7 GW procured in the 2018/19 T-4 auction as the clearing price was low and therefore economic to buy early rather than wait for the T-1 auction.

2019/20 T-4 Target Capacity

- Recommended Requirement in 2019/20:

Total requirement	**53.4 GW**
of which already procured	5.5 GW
Recommended capacity	**47.9 GW**

- T-4 auction for 2019/20:

Recommended capacity	**47.9 GW**
set aside for T-1 auction	2.5 GW
T-4 auction target capacity	**45.4 GW**

- Following pre-qualification, T-4 target of 45.4 GW could be amended e.g. to take account of capacity that is opted-out but operational in 2019/20

INTERCONNECTOR DE-RATING FACTORS

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Introduction

- It was not possible to purchase a pan-European model for 2019/20 analysis
- A perfect methodology does not exist
- Reviewed a range of options, each with different strengths and weaknesses
- Discussed with DECC and PTE
- Agreed the following five models:

Range of methods (1)

- Baringa
  - Pan-European model (Plexos)
  - Only 100 simulations of November to February for each scenario.
  - Baringa scenarios mapped to FES and adjusted for FES fuel prices and interconnector capacities.
  - Only 4 years of demand history
  - Produced a distribution of flows against GB capacity margin
- Pöyry
  - Commissioned by DECC to produce conservative de-rating factors based on an analysis of historical flows.
  - Limited historical data
  - Not full market coupling
  - Not restricted to periods of low GB capacity margin

Range of methods (2)

- FES
  - Based on the Pöyry analysis
  - Less conservative figures for France
- Diversity benefit
  - Uses capacity assessment model
  - Calculates the difference in LOLE from modelling Great Britain on its own and with an interconnector to one other country
  - Reflects coincidence of demand and generation availability
  - Wind diversity not modelled – UK wind load factors used for both countries
- Weather analysis
  - High level analysis of coincidence of extreme weather at evening peak
  - Based on reanalysed weather history from 1957
  - Temperature and temperature and wind
  - Single weather station per country

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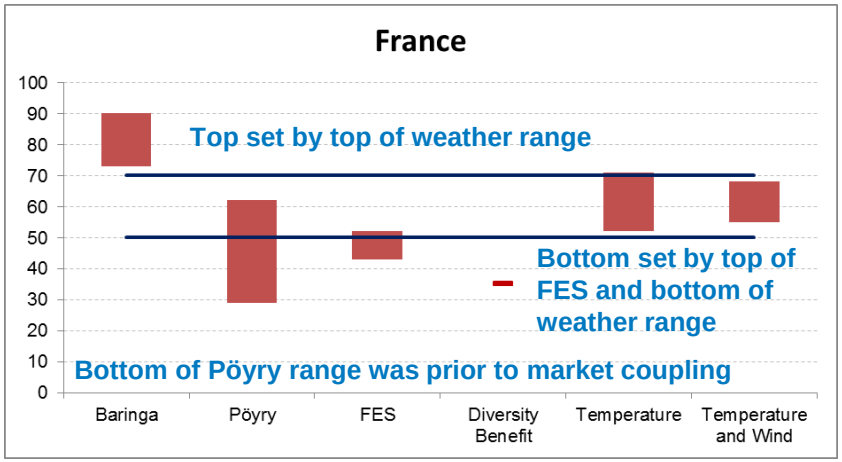
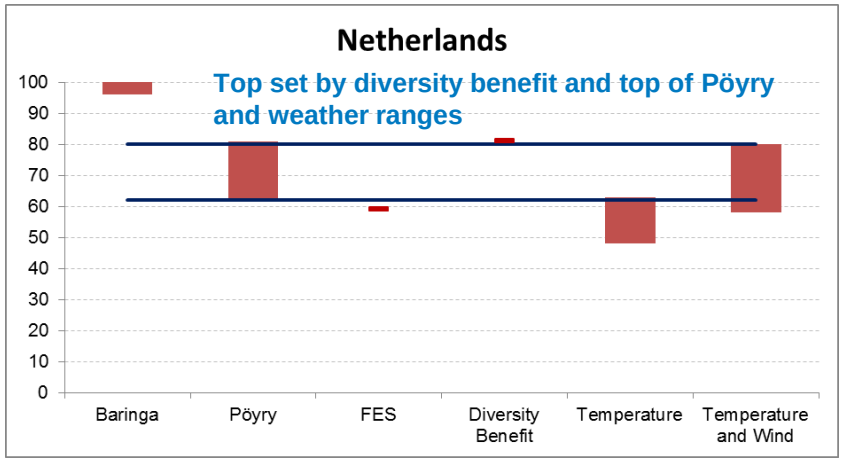
Comparison table

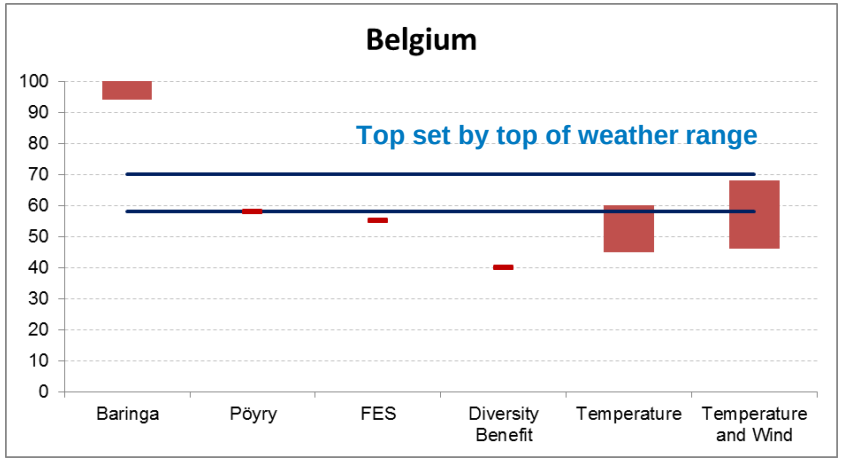
	Baringa	Pöyry	FES	Diversity Benefit	Weather
Time or flow based	Flow	Time	Both	Flow	Time
History or future	Future	History	History	Future	History
Includes technical de-rating	✓	mixed	✓	✓	x
Stochastic	✓	x	x	✓	x
Long temperature/demand history	x	x	x	medium	✓
Long wind speed history	medium	x	x	GB only	✓
FES price assumptions	✓	x	x	x	x
FES generation capacities	GB mapped to 2014 FES	x	x	Based on 2014	x
FES interconnector capacities	✓	x	x	✓	x

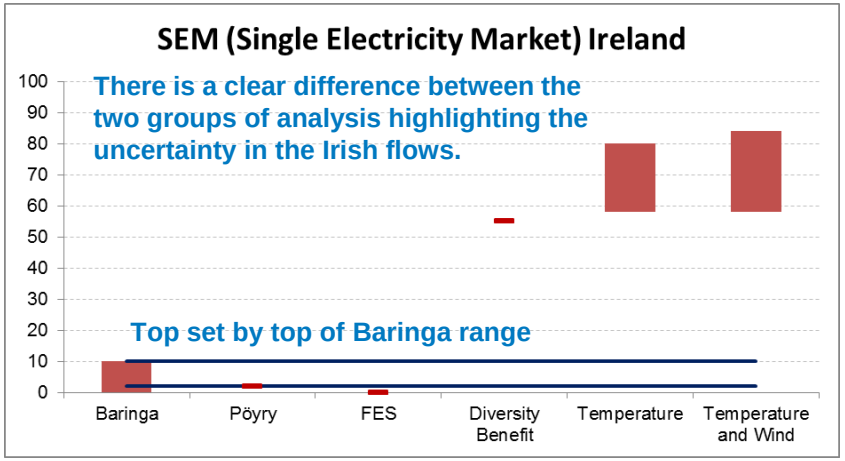
National Grid Ranges

Pöyry sets bottom of the range except for France.









DECC and Ofgem de-rating factors compared to National Grid range

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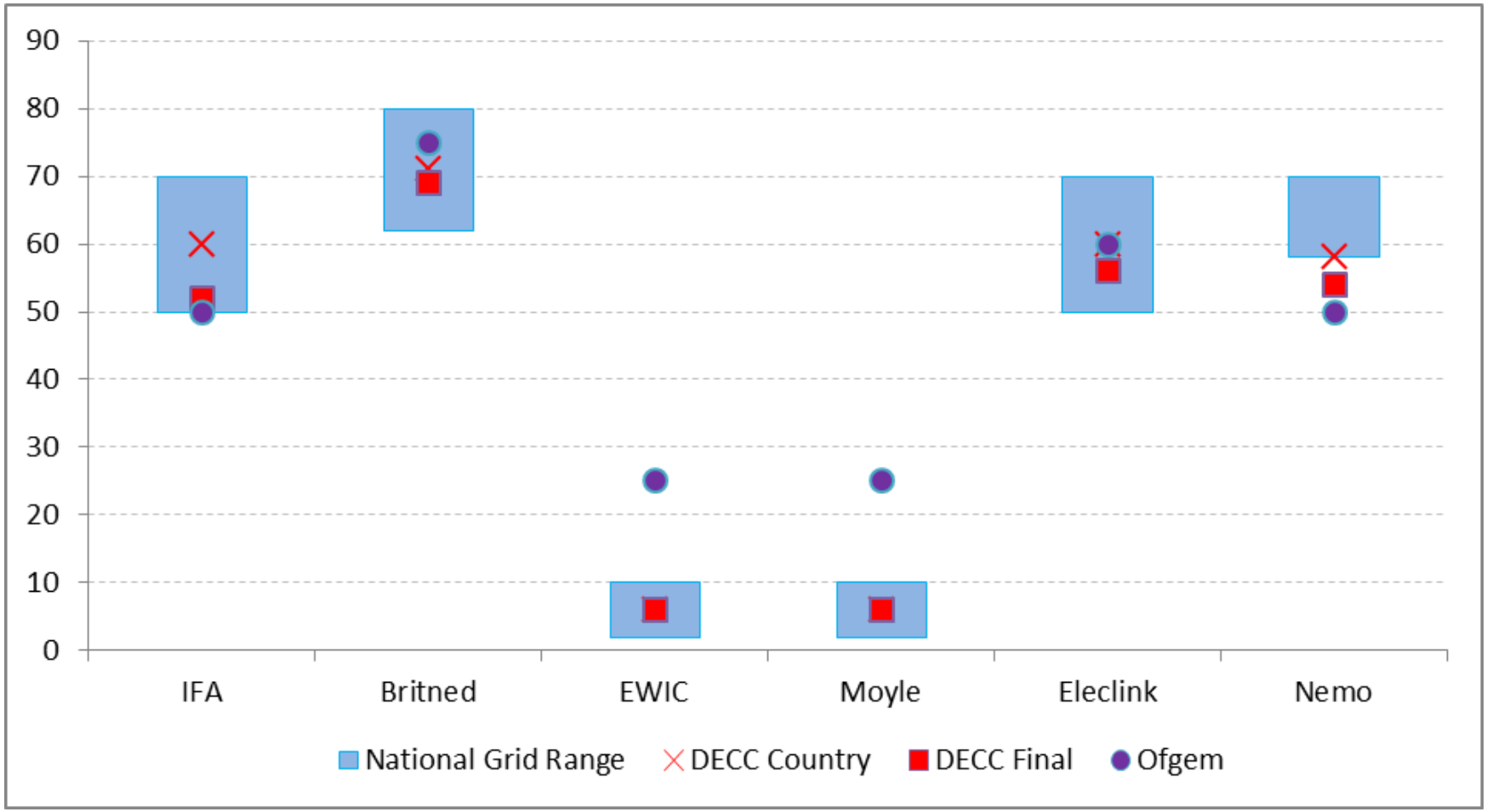
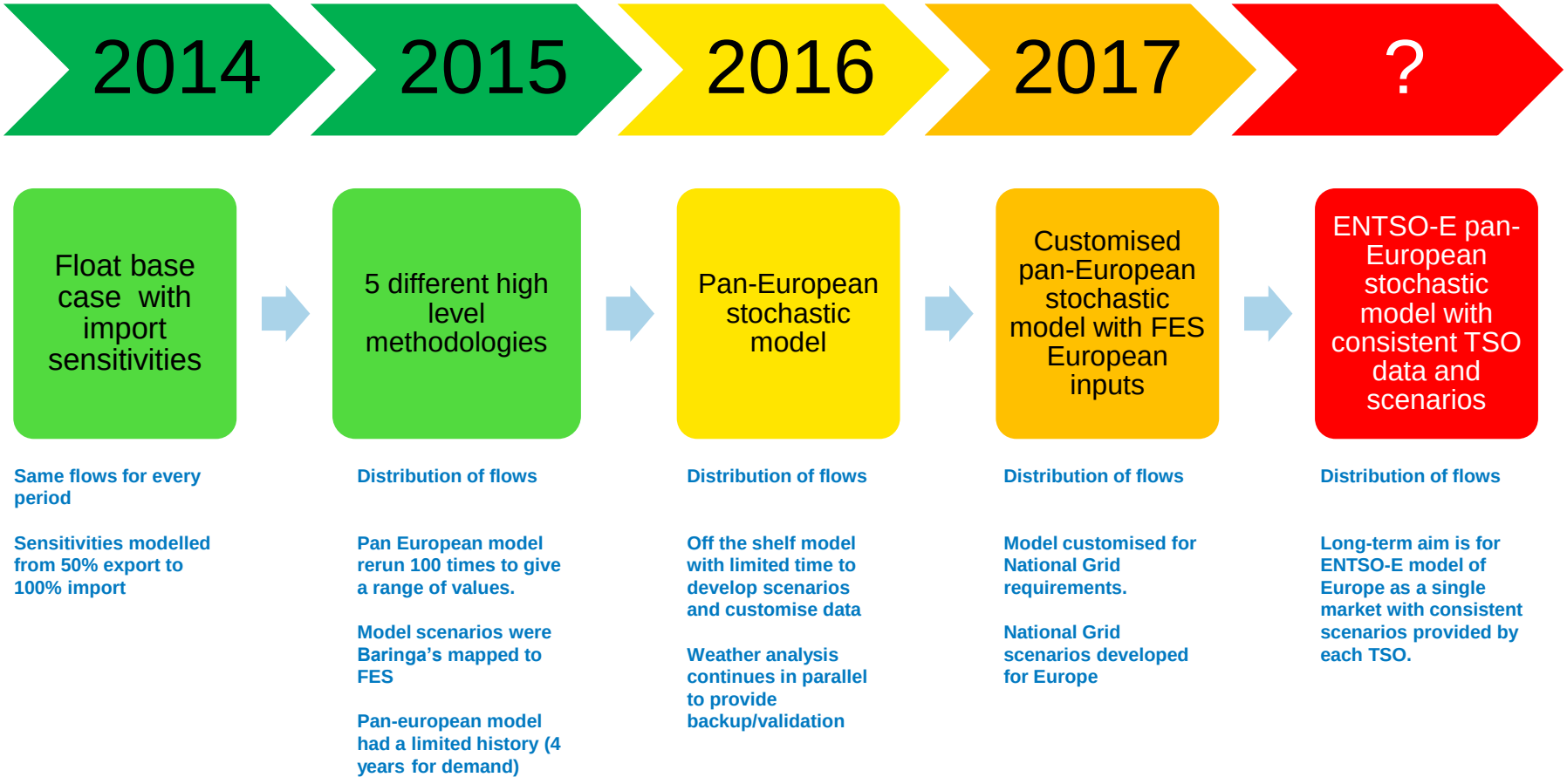


The National Grid range and DECC Country values are for all interconnectors in a country/market
The DECC Final and Ofgem values are for individual interconnectors and include technical de-rating
The DECC Final figures will be applied in the auction

EMR Interconnector Analysis Timeline



Future developments are indicative only and are subject to change

Recap

- National Grid to recommend
  - a capacity to procure
    47.9 GW
  - a range for interconnector de-rating factors at the country/market level

France	**50-70%**
Netherlands	**62-80%**
Belgium	**58-70%**
Ireland	**2-10%**

- Secretary of State to determine
  - the capacity to procure
    - split into T-4 **45.4 GW**
    - and T-1 auctions **2.5 GW**
  - auction parameters including
    - parameters for demand curve
    - de-rating factors for each interconnector

IFA 52% Eleclink 56%
BritNED 69%
NEMO 54%
Moyle & EWIC 6%

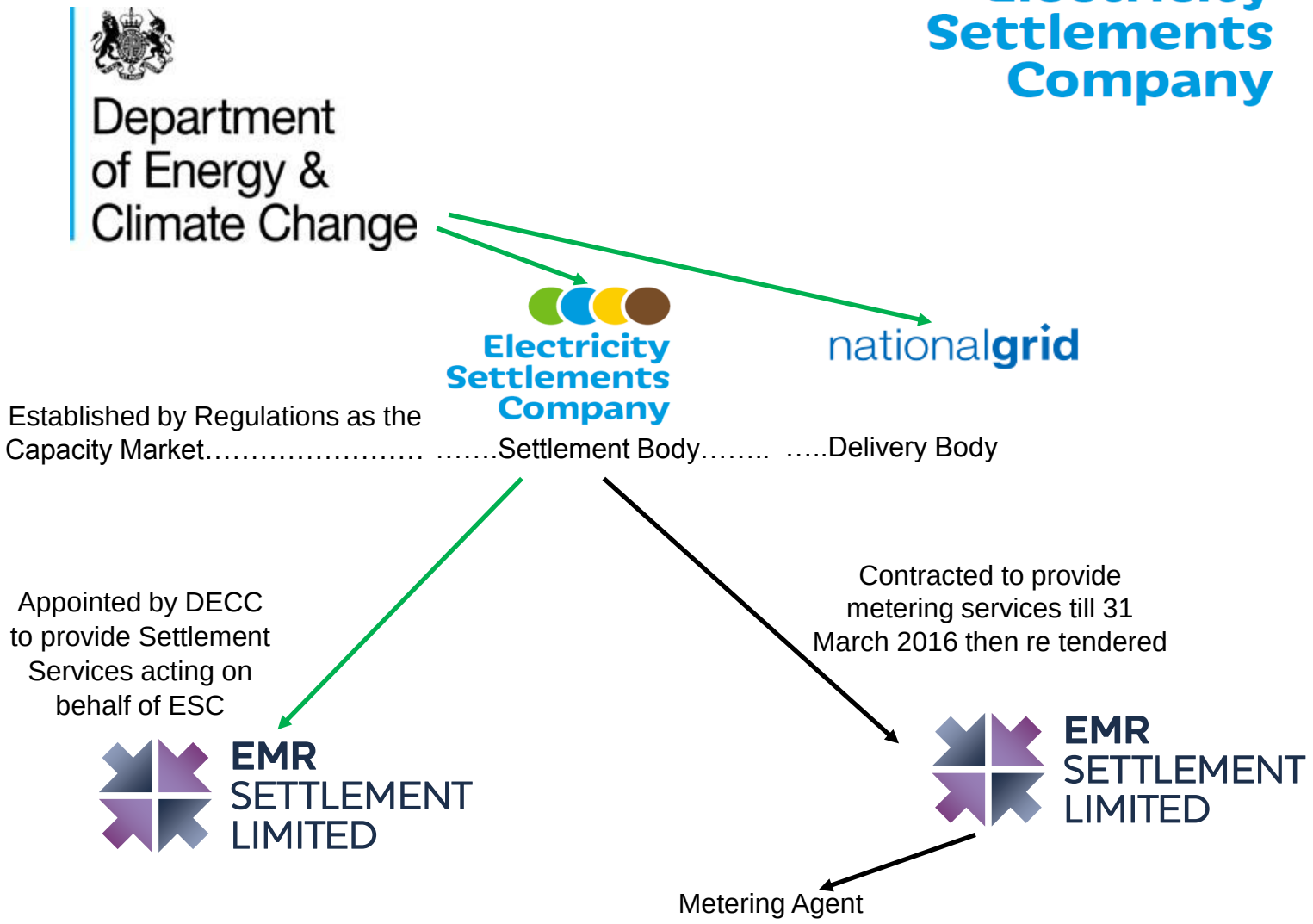

Questions

Lunch

Capacity Market Metering

Nic Rigby – Electricity Settlements Company
Iain Nicoll – EMR Settlements Ltd

Governance


Department of Energy & Climate Change
Electricity Settlements Company
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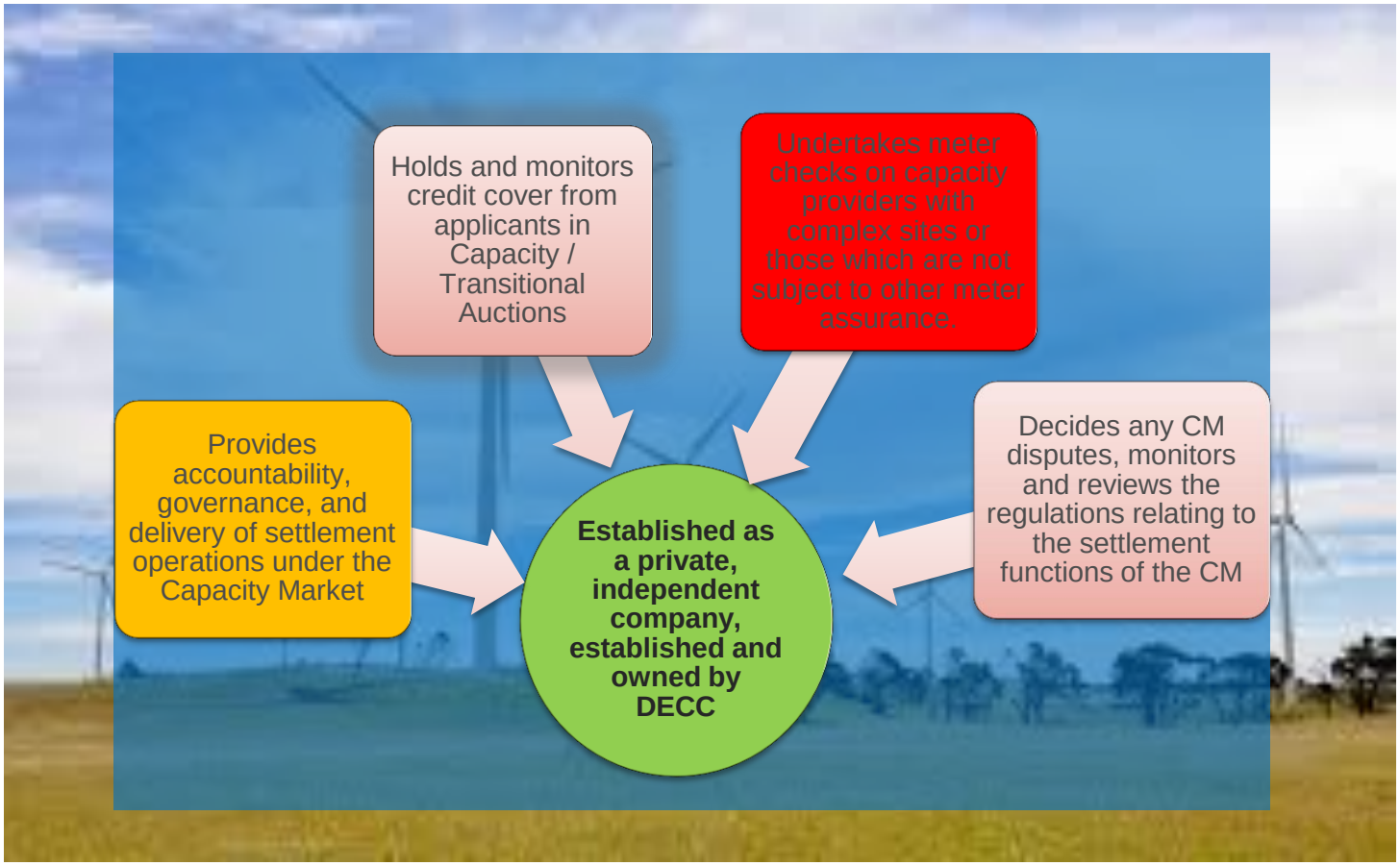
Established by Regulations as the Capacity Market……
…….Settlement Body……..
…..Delivery Body
Appointed by DECC to provide Settlement Services acting on behalf of ESC
Contracted to provide metering services till 31 March 2016 then re tendered
EMR SETTLEMENT LIMITED
EMR SETTLEMENT LIMITED
Metering Agent

ESC's Role in the Capacity Market



ESC's Guiding Principle is to maintain market participants' confidence in the Capacity Market settlement process and minimise costs to consumers

Agenda

- What are the Metering Test Arrangements?
- What is the purpose of the Metering Test?
- When do I have to complete the Metering Test?

Metering Test Arrangements?

- Metering Test Arrangements **<u>until 1 April 2016</u>**
  - 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 **<u>post 1 April 2016</u>**
  - A procurement will be run by ESC to appoint parties to run the Capacity Market Metering Assurance

Metering Test Activities?

Capacity Provider will:

1. Follow National Grid Metering Assessment process
2. Contact EMRS to request a Metering Test (contact@emrsettlement.co.uk)
3. Detail the Metering Configuration Solution used by the CMU (for each component)
4. 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:

1. Appoint a Metering Agent
2. Arrange the desk based Metering Test
3. Randomly select CMUs to have an onsite Metering Test
4. Arrange the onsite Metering Test
5. Issue the Metering Test Certificate
6. Review rectification plans

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	■ Balancing Services Agreement	■ Bespoke Technical Requirements
At time of Registration for Settlement	Short Term Operating Reserve (STOR) Frequency Control by Demand Management (FCDM) Firm Frequency Response (FFR)	Schedule 7 Draft Capacity Market (Amendment) Rules 2015

By when complete 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

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Capacity Market Rules changes: Prequalification

6 July 2015

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Our consultation

- Consultation on proposed Rules changes closed 5th May
- Our final decisions published 19th June at:

https://ofgem.gov.uk/publications-and-updates/decision-statutory-consultation-amendments-capacity-market-rule

- Of the 91 submitted proposals and our own 3 amendments
  - Made amendments in respect of 43
  - Rejected 51 (will review some of these and may make amendments in 2016)
- Today we will briefly run through the changes relating to prequalification

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Key Messages

- Simplification and clarification will be one of our priorities for 2016
- Continue to welcome rule change proposals, which can be submitted at any time (sooner gives us more time to consider them)
- There is a form for submitting them, which can be found on our website
- Important to include justification and evidence

- Please send them or any further questions to **EMR_CMRules@ofgem.gov.uk**

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Simplification

Proposal	Rule change	Effect
CP23	Amend 3.4.2	Removes requirement to submit Legal Opinion
CP62	Revoke 3.4.6 & 3.4.9	Removes declarations of Solvency and Conduct of the Applicant from within the application (these still appear in Exhibits A and C)
CP66	Amend 3.4.1, 3.4.2; Revoke 3.6.2	Removes requirement to state applicant has a generation licence, will be Grid Code compliant and to provide details of corporate form and legal status (Cert of Incorporation still required)
CP67	Amend 3.4.1	Removes requirement to provide bank account details during prequalification

These numbers refer to the numbers on our website, where you can find more information

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Information requirements (1)

Proposal	Rule change	Effect
CP04	Amend 3.4.5	The applicable de-rating factor should be specified for each unit in a Generating CMU consisting of multiple units
CP17	Amend various	Specify capacity/outputs in MW/MWh to 3 decimal places
CP30/60(i)	Amend 3.4.3	CMU description to include postal address, post code and OS grid ref (6 figs)
CP47	Amend 1.2, 3.6.1	Line Loss Factors defined and must be applied to outputs specified by Existing Generating CMUs
CP60(iv)	Amend 3.6.1	Existing Generating CMUs to identify the 24 month period containing the 3 Settlement Periods of highest outputs
CP61	Amend 3.6.1	Non-CMRS Distribution CMU using the Supplier Settlement Metering Configuration Solution must provide a supplier letter confirming net output for each Generating Unit
CP69	Amend 3.5.2	Allows info contained in Distribution Connection Agreement, connection offer or DNO letter to be used to calculate registered capacity if this is not explicitly stated

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Information requirements (2)

Proposal	Rule change	Effect
CP73	Amend 3.3.3 & 4.2.3	Allows participants to change their mind about opting-out during prequalification - but not if a CMU has opted out in a previous prequalification round, for the same delivery year
CP79/91	Amend 3.6.3 & 3.7.3	Allows plant on private wires to participate. New provisions to allow letter from the network owner (to which CMU will be connected) confirming they have connection agreement with DNO – Existing Generating and New Build CMUs
CP80/81	Amend 3.7.1 & 4.7.1	New Build CMUs to declare they have the Legal Right to use the land and provide documentary evidence of planning consent
CP83	New rule 3.5B, Amend 1.2, 3.6.3 & 3.7.3	Clarifications to connection capacity: - Connection offers/agreements mean those in force at time of application - if a range of values is stated for registered capacity or inverter rating, the lowest will apply - Figures must be stated net of Auxiliary load

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Revisions

Proposal	Rule change	Effect
CP01, 06, 07, 25, 34, 41 & 50	Amend 1.2, 3.7.2, 3.8.1	Qualifying Capital Expenditure: • For New Build – start date is the date 77 months prior to the relevant delivery year (1/5/13 this year) • For Refurbishing CMUs – start date is Auction results day for the relevant delivery year
CP86	Amend 3.6.1	Highest outputs now specified in 24 month period ending one month before prequalification opens (ie, moved back by a month compared to 2014)

Prequalification

Mark Duffield

Prequalification Overview

- Prequalification is required to "verify" that potential sources of capacity are genuine physical resources
- Key considerations for a Prequalification Application
  - The Applicant must be either the **Legal Owner** of the asset or its **Despatch Controller** (with agreement from the Legal Owner)
  - Must be accompanied by **declarations signed by two directors or officers** of the Applicant
  - Applications must be submitted by the end of the Prequalification Window, currently planned for **5pm on Friday 14 August**

Prequalification Overview

- Key prequalification dates for 2015
  - System available – 13 July 2015
    - Applications can start to be built as soon as system is available
  - Prequalification Submission Window Opens: Monday 20 July
  - Prequalification Submission Window Closes: 5pm Friday 14 August
  - Prequalification Results Day: Friday 25 September

Prequalification Overview

- Prequalification process “user driven”
  - System is being designed to guide parties through the prequalification process and the data required
  - National Grid is able to answer general queries about the prequalification system
  - National Grid will not be available to give “advice” about how a project should be presented into prequalification
  - No contact with National Grid after prequalification window shuts and we are assessing Applications to verify submitted in accordance with Rules (14 Aug - 25 Sep)

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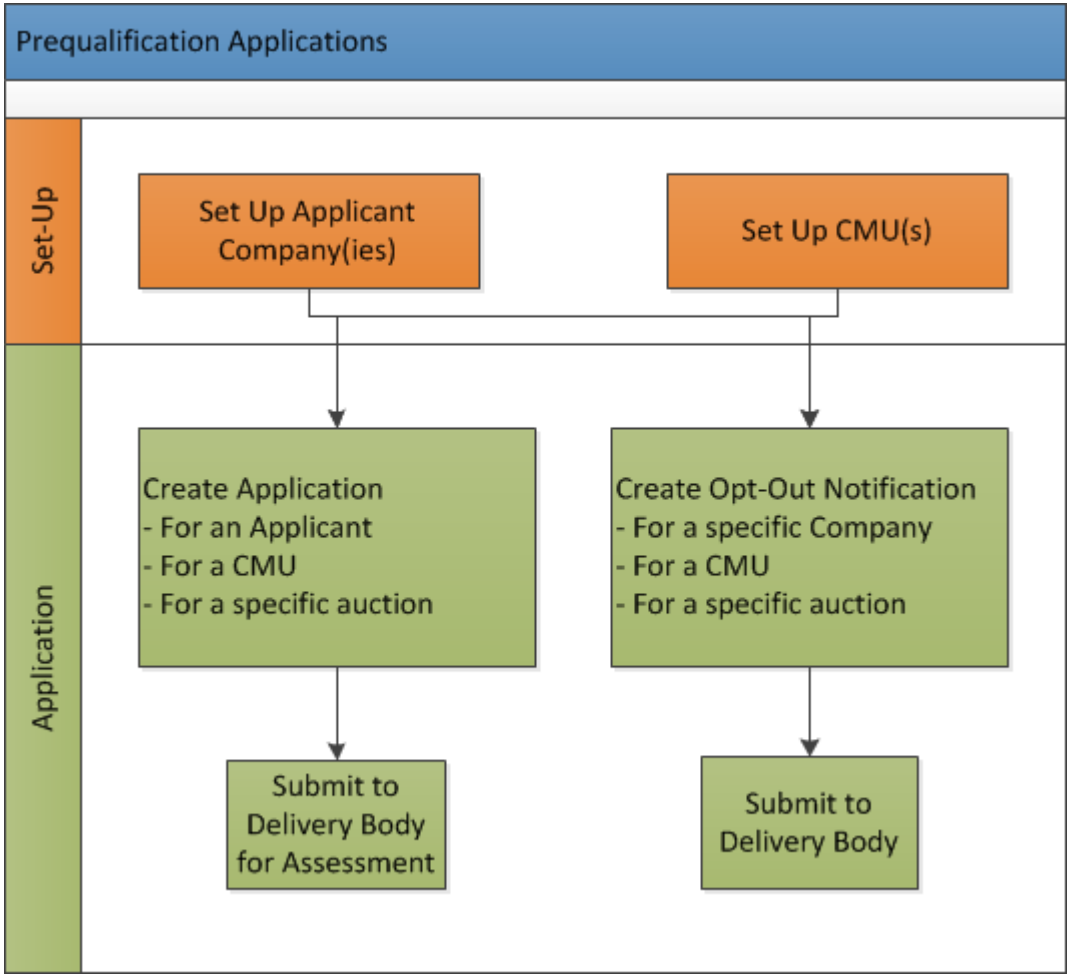
Generic Structure of an Application

- Applications submitted in respect of a CMU and an Applicant Company
- Data and documents for these are inputted prior to the Application being created
- Data then transferred from CMU and Company into the Application (and can be reused for other future Applications)



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Set Up Applicant Company(ies)

Setting up a Company

- Basic company information created through a company registration process
- Following documentation also able to be uploaded against a company where it is required
  - A copy of the company's Certificate of Incorporation
  - Prequalification Certificate
  - Certificate of Conduct
  - Where applicable, confirmation of an interconnection licence
  - ~~Legal Opinion~~
  - ~~Bank Account details~~

CMU Type and Classification

- CMU Type is defined in the Regulations and the Rules
- The Applicant must select the correct CMU Type as you will be assessed as the Type you select
- The CMU type selected drives the rest of the application
- CMU type CANNOT be changed during appeals

If CMRS CMU	If Non- CMRS
Existing Generating CMU	Existing Generating CMU
Existing Interconnector CMU	New Build Generating CMU
New Build Generating CMU	Refurbishing Generating CMU
New Build Interconnector CMU	Proven DSR CMU
Refurbishing Generating CMU	Unproven DSR CMU
Refurbishing Interconnector CMU	

CMU Classification - CMRS and Non-CMRS

CMRS CMUs	Non CMRS CMUs
Transmission CMU A Generating or Interconnector CMU, each Unit of which Exports to the Transmission Network. The Metering System for the corresponding BMU is registered in the Central Meter Registration Service in accordance with the BSC. Or **CMRS Distribution CMU** A Generating or Interconnector CMU, each Unit of which Exports to a Distribution Network. The Metering System for the corresponding BMU is registered in the Central Meter Registration Service in accordance with the BSC.	**Non-CMRS Distribution CMU** A Generating Unit, each Generating Unit of which supplies Electricity to a Distribution Network. The Metering System is not registered with the Central Meter Registration Service. **Proven DSR CMU** A DSR CMU for which a DSR test has been carried out. **Unproven DSR CMU** A DSR CMU for which a DSR test has not been carried out.

Generating CMU Types

CMU Type	Definition
Existing Generating CMU	Regulation 4 – An Existing Generating Unit (or combination of two of more units) which provides electricity, is capable of being controlled independently from any other generating unit, net output is measured by half-hourly meters and has a connection capacity not less than the minimum capacity threshold (2MW).
New Build Generating CMU	Regulation 4 – a Prospective Generating Unit (or combination of 2 or more units) which, when commissioned, will be capable of being controlled independently from any other generating unit, net output is measured by half-hourly meters and has a connection capacity not less than the minimum capacity threshold (2MW). A Prospective Generating Unit means a generating unit or proposed generating unit that has not been commissioned.
Refurbishing Generating CMU	CM Rules and Regulation 4 – an Existing Generating Unit which is the subject of an Application as a Prospective Generating CMU by virtue of an improvements programme that will be completed prior to the commencement of the first Delivery Year.

Interconnector CMU Types

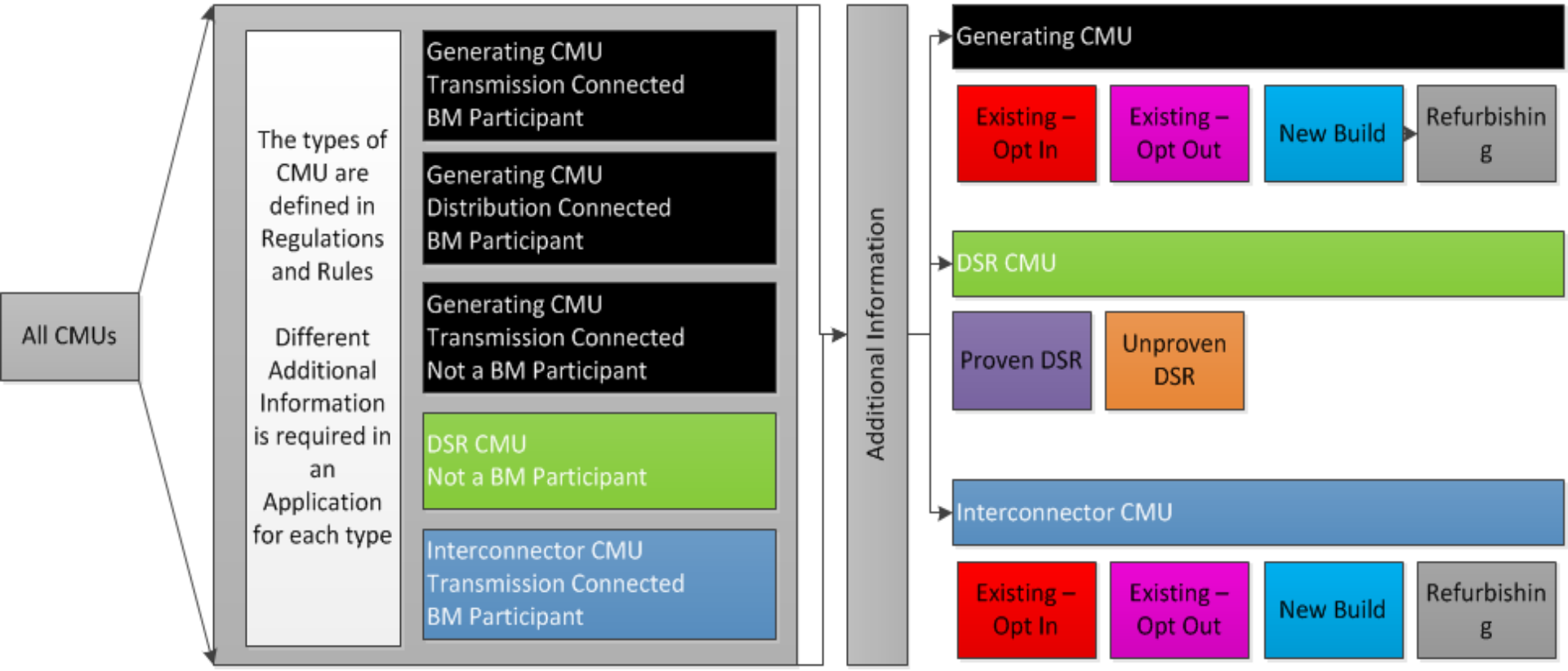
CMU Type	Definition
Existing Interconnector CMU	Regulation 5A – An Interconnector that has been commissioned, has a connection capacity greater than 2MW and the net output is measured by one or more half hourly meters.
New Build Interconnector CMU	Regulation 5A – an electricity interconnector or prospective interconnector which is not yet commissioned and, when commissioned, will have a connection capacity greater than 2MW and the net output is measured by one or more half hourly meters.
Refurbishing Generating CMU	CM Rules and Regulation 5A – an Existing Interconnector which is the subject of an Application as a Prospective Interconnector CMU by virtue of an improvements programme that will lead it to be recommissioned prior to the start of the Delivery Year.

DSR CMU Types

CMU Type	Definition
Proven DSR CMU	Regulation 5 - A DSR CMU for which a DSR test has been carried out. The DSR provider must, in relation to each component, be the DSR customer, own the DSR customer or have contractual control over the DSR Customer.
Unproven DSR CMU	Regulation 5 - A DSR CMU for which a DSR test has not been carried out. The DSR provider must, in relation to each component, be the DSR customer, own the DSR customer or have contractual control over the DSR Customer.

Setting up a CMU: Data Requirements

Set Up CMU(s)



The Prequalification System will “walk the user through” the data entry process

Setting up a CMU
All CMUs – CMU Information

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Set Up CMU(s)

Information	Details	Comment
Nomination relating to the CMU	Name of CMU Type of CMU – which sets the Additional Information Required	System generated Drop-Down Box

CMU Component Information

Information	Details	Comment
Nomination relating to the CMU Component	Description of and location of the CMU component MPAN numbers and other relevant meter numbers BMU ID or Balancing Services ID (if applicable)	Data to be entered in Prequalification System
Connection Capacity & Tech. Class	Connection Capacity or DSR Capacity of a component Technology Class of a component	(The system aggregates these to give CMU Connection Capacity)

Metering Information

Information	Details	Comment
Metering Assessment	Questions to establish if the Settlement Body will need to carry out a further detailed check of metering arrangements	
Metering Info	Line Diagrams and other data on the CMU's metering set-up	
Metering Config.	**Confirmation of CMU's Approved Metering Configuration**	

Setting up a CMU
Existing Generating CMU

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Set Up CMU(s)

Information	Details	Comment
~~Grid Code Compliance (If applicable)~~	~~Declare compliant, and whether reliant on any derogations~~ **~~(Only where not generated in previous two years)~~**	~~To be removed should Ofgem approve a proposed change to the Rules~~
Connection Agreements	Transmission Connected: Copy of one or more Grid Connection Agreement for at least the De-rated capacity by the start of the Delivery Year, or confirmation that they will have TEC by no later than 18 months prior to the delivery year Distribution Connected – one of: a)Copy of one or more Distribution Connection Agreement for at least the de-rated capacity during the Delivery Year b)Copy of one or more Distribution Connection Offer for at least the de-rated capacity during the Delivery Year **For Private Network connections – a letter from the owner of that private network confirming the full output that CMU is able to export to the network and that the owner of the Private Network has a Distribution Connection Agreement or Offer.**	This must be uploaded in electronic copy

Setting up a CMU
New Build Generating CMU

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Set Up CMU(s)

Information	Details	Comment
Planning Consents	**Legal right to use the land and all Relevant Planning Consents obtained (or able to defer declaration in 2015 to 17 days before auction) Documentary evidence of Planning Consents**	Declaration, evidence of Consents, and confirmation of right of use of land.
Construction Plan	Brief description of the works Schedule identifying : a) start of construction works b) Back-feed Milestone c) Substantial Completion Milestone Amount of Capital Expenditure proper to be incurred within 77 months of the commencement of the Delivery Year. That the expected Capital Expenditure exceeds 3 or 15 year thresholds **(£130/kw and £255/kw)**	Data to be entered directly in Prequalification System

Setting up a CMU
New Build Generating CMU

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Set Up CMU(s)

Information	Details	Comment
Connection Agreement	Transmission Connected: Copy of one or more Grid Connection Agreement for at least the De-rated capacity by the start of the Delivery Year, or confirmation that they will have TEC by no later than 18 months prior to the delivery year Distribution Connected – one of: a)Copy of one or more Distribution Connection Agreement for at least the de-rated capacity by the start of the Delivery Year b)Copy of one or more Distribution Connection Offer or at least the de-rated capacity by the start of the Delivery Year c)Declare the CMU will have such a connection offer at least 18 months prior to start of Delivery Year **d) (For private wire connections) Confirmation that the owner of the Private Network will have an agreement with the relevant DNO at least 18 months prior to the start of the Delivery Year.**	Soft Copy to be uploaded with application
Credit Support	Credit support to cover Termination Fee (New Build only) *To be provided to Settlement Body*	*Follows after Prequalification Results Day*

Setting up a CMU
Refurbishing Generating CMU

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Set Up CMU(s)

- A Refurbishing CMU must provide Additional Information to cover both possible states of the CMU or submit an “Opt-Out Declaration for the “Pre-Refurbishment CMU” if it is a “Mandatory CMU”:
  - Additional Info for an “Existing Generating CMU” for the “Pre-Refurbishment” CMU
  - Additional Info for a “New Build CMU” for the Refurbishing CMU
  - Exceptions
    - Planning Consents dec. not needed if no further consents required
    - Construction Plan need not specify a “Back-Feed Milestone”
    - Capital Expenditure allowed is that spent from Auction Results Day to start of Delivery Year
- Must also make additional statement in Prequalification Certificate that multi-year agreement is needed to undertake the refurbishment

Setting up a CMU
Proven DSR

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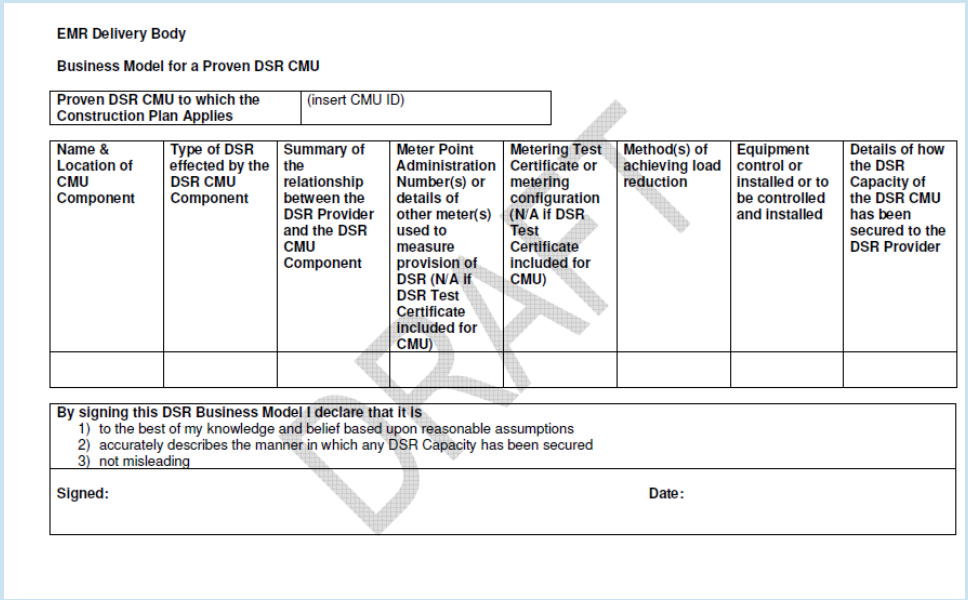
Set Up CMU(s)

Information	Details	Comment
DSR Test Certificate	DSR Test required to be completed prior to the commencement of the Prequalification Window – successful completion of which will see a DSR Test Certificate being issued	Upload of scanned document
Permitted On-Site Gen Units	Details of all such generating units and their electrical connections to the site where DSR Capacity is being provided	Data to be entered directly in Prequalification System
Business Model		Data to be entered directly in Prequalification System

EMR Delivery Body

Business Model for a Proven DSR CMU

Proven DSR CMU to which the Construction Plan Applies	(insert CMU ID)

Name & Location of CMU Component	Type of DSR effected by the DSR CMU Component	Summary of the relationship between the DSR Provider and the DSR CMU Component	Meter Point Administration Number(s) or details of other meter(s) used to measure provision of DSR (N/A if DSR Test Certificate included for CMU)	Metering Test Certificate or metering configuration (N/A if DSR Test Certificate included for CMU)	Method(s) of achieving load reduction	Equipment control or installed or to be controlled and installed	Details of how the DSR Capacity of the DSR CMU has been secured to the DSR Provider

By signing this DSR Business Model I declare that it is

1) to the best of my knowledge and belief based upon reasonable assumptions
2) accurately describes the manner in which any DSR Capacity has been secured
3) not misleading

Signed: **Date:**

DRAFT

Setting up a CMU
Unproven DSR (1 of 2)

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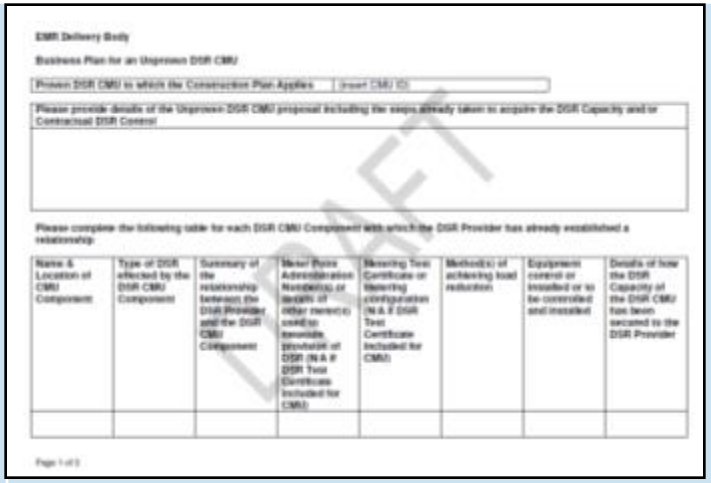
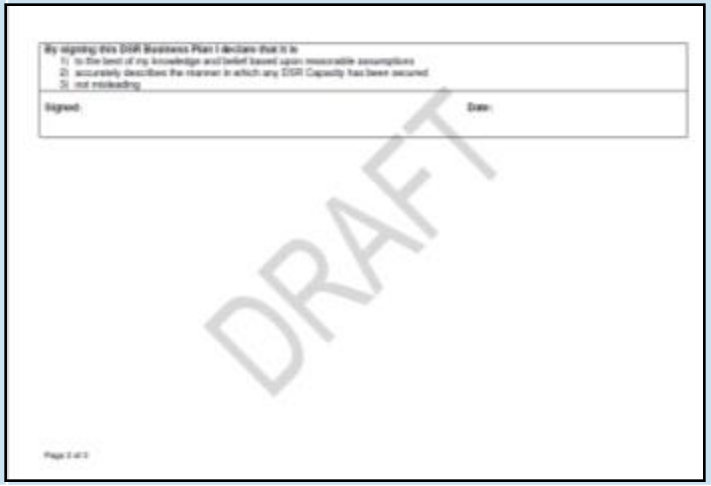
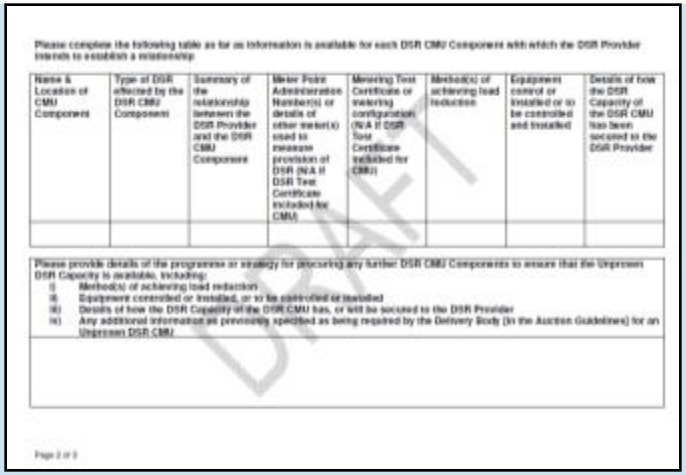
Set Up CMU(s)

Information	Details
Business Plan	   Data to be entered directly in Prequalification System

Setting up a CMU
Unproven DSR (2 of 2)

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Set Up CMU(s)

Information Relating to:	Details	Comment
DSR Test Certificate	Confirmation that the a DSR Test will be completed prior to the start of the relevant Delivery Year	
Metering Assessment	Confirmation the a Metering Assessment will be completed and if necessary a Metering Test will be completed in each case prior to the start of the relevant Delivery Year	
Credit Support	Credit support to cover Bid Bond *To be provided to Settlement Body*	

Setting up a CMU
Existing Interconnector CMU

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Set Up CMU(s)

Information	Details	Comment
Interconnector Licence	Declare whether the Applicant holds an Interconnector Licence at time of applying.	
Connection Agreements	Provide copy of Connection Agreement (Grid Connection Agreement(s) or Distribution Connection Agreement(s) or letter from DNO) confirming that they permit the Generating Unit in the CMU in aggregate to export at least the Anticipated De-rated Capacity of the CMU	This must be uploaded in electronic copy
Technical Data	- Technical specifications of the Interconnector - Country interconnector connects to GB - Forecast technical reliability for the relevant Delivery Year	Data to be entered directly in Prequalification System

Setting up a CMU
New Build Interconnector CMU

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Set Up CMU(s)

Information	Details	Comment
Planning Consents	Legal right to use the land and all Relevant Planning Consents obtained (or able to defer declaration in 2015 to 17 days before auction) Documentary evidence of Planning Consents	Declaration, evidence of Consents, and confirmation of right of use of land.
Construction Plan	Brief description of the works Schedule identifying : a) start of construction works b) Back-feed Milestone c) Substantial Completion Milestone The Total Project Spend for the construction of the New Build Interconnector CMU.	Data to be entered directly in Prequalification System
Technical Data	- Technical specifications of the Interconnector - Country interconnector connects to GB - Forecast technical reliability for the relevant Delivery Year	Data to be entered directly in Prequalification System

Setting up a CMU
New Build Interconnector CMU

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Set Up CMU(s)

Information	Details	Comment
Connection Agreement	A copy of one or more Grid Connection Agreements with sufficient Transmission Entry Capacity for at least the De-Rated capacity secured by the start of the Delivery Year	Soft Copy to be uploaded into Auction System
Credit Support	Credit support to cover Non-Completion Fee @ £5,000/MW *To be provided to Settlement Body*	*Follows after Prequalification Results Day*

Setting up a CMU
Refurbishing Interconnector CMU

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Set Up CMU(s)

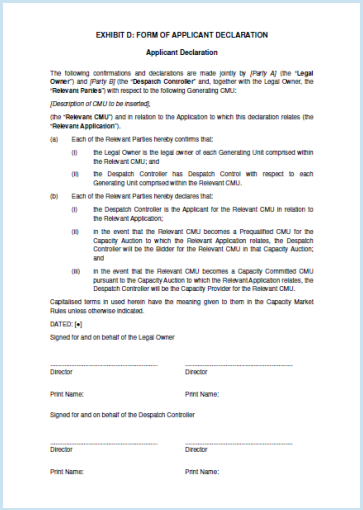
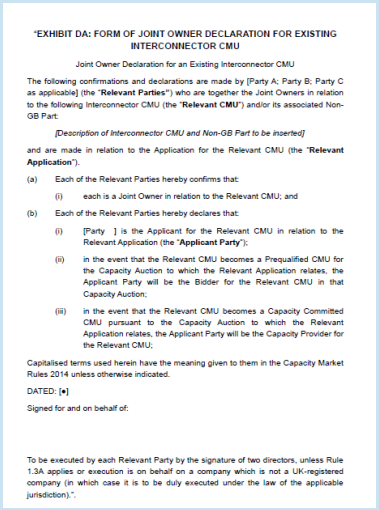
- A Refurbishing Interconnector CMU must provide Additional Information to cover both possible states of the CMU; or submit an "Opt-Out Declaration for the "Pre-Refurbishment Int. CMU":
  - Additional Info for an "Existing Interconnector CMU" for the "Pre-Refurbishment" CMU
  - Additional Info for a "Prospective Interconnector CMU" for the "Post Refurbishment" CMU
  - Exceptions
    - Planning Consents dec. not needed if no further consents required
    - Construction Plan need not specify a Back-Feed Milestone
    - Capital Expenditure allowed is that spent from Auction Results Day to start of Delivery Year
- Must also make additional statement in Prequalification Certificate that multi-year agreement needed to undertake the refurbishment

Setting up a CMU & Application / Opt-Out

- Bulk of all data required is set up against a CMU and, when completing the Application / Opt-out Notification, the system will copy all of the appropriate CMU and company data into the Application / Opt-out.
- This data once set-up can be reused each year if it has not changed.
- If some data changes then the new data can be updated without having to upload all of the unchanged data again.

Creating an Application

Create an Application

Information	Details	Comment
If the Application is from a company acting as the Despatch Controller or Joint Owner for the CMU then an Applicant Declaration signed by Directors of both the Legal Owner and the Despatch Controller / Joint Owners is required	 **EXHIBIT D: FORM OF APPLICANT DECLARATION** **Applicant Declaration** The following confirmations and declarations are made jointly by *[Party A]* (the "**Legal Owner**") and *[Party B]* (the "**Despatch Controller**" and, together with the Legal Owner, the "**Relevant Parties**") with respect to the following Generating CMU: *[Description of CMU to be inserted]*; (the "**Relevant CMU**") and in relation to the Application to which this declaration relates (the "**Relevant Application**"). (a) Each of the Relevant Parties hereby confirms that: (i) the Legal Owner is the legal owner of each Generating Unit comprised within the Relevant CMU; and (ii) the Despatch Controller has Despatch Control with respect to each Generating Unit comprised within the Relevant CMU; (b) Each of the Relevant Parties hereby declares that: (i) the Despatch Controller is the Applicant for the Relevant CMU in relation to the Relevant Application; (ii) in the event that the Relevant CMU becomes a Prequalified CMU for the Capacity Auction to which the Relevant Application relates, the Despatch Controller will be the Bidder for the Relevant CMU in that Capacity Auction; and (iii) in the event that the Relevant CMU becomes a Capacity Committed CMU pursuant to the Capacity Auction to which the Relevant Application relates, the Despatch Controller will be the Capacity Provider for the Relevant CMU. Capitalised terms in used herein have the meaning given to them in the Capacity Market Rules unless otherwise indicated. DATED: [•] Signed for and on behalf of the Legal Owner Director Director Print Name: Print Name: Signed for and on behalf of the Despatch Controller Director Director Print Name: Print Name:  **"EXHIBIT DA: FORM OF JOINT OWNER DECLARATION FOR EXISTING INTERCONNECTOR CMU** Joint Owner Declaration for an Existing Interconnector CMU The following confirmations and declarations are made by [Party A; Party B; Party C as applicable] (the "**Relevant Parties**") who are together the Joint Owners in relation to the following Interconnector CMU (the "**Relevant CMU**") and/or its associated Non-GB Part: *[Description of Interconnector CMU and Non-GB Part to be inserted]* and are made in relation to the Application for the Relevant CMU (the "**Relevant Application**"). (a) Each of the Relevant Parties hereby confirms that: (i) each is a Joint Owner in relation to the Relevant CMU; and (b) Each of the Relevant Parties hereby declares that: (i) [Party] is the Applicant for the Relevant CMU in relation to the Relevant Application (the "**Applicant Party**"); (ii) in the event that the Relevant CMU becomes a Prequalified CMU for the Capacity Auction to which the Relevant Application relates, the Applicant Party will be the Bidder for the Relevant CMU in that Capacity Auction; (iii) in the event that the Relevant CMU becomes a Capacity Committed CMU pursuant to the Capacity Auction to which the Relevant Application relates, the Applicant Party will be the Capacity Provider for the Relevant CMU; Capitalised terms used herein have the meaning given to them in the Capacity Market Rules 2014 unless otherwise indicated. DATED: [•] Signed for and on behalf of: To be executed by each Relevant Party by the signature of two directors, unless Rule 1.3A applies or execution is on behalf on a company which is not a UK-registered company (in which case it is to be duly executed under the law of the applicable jurisdiction).".	
Previous Performance (Existing Generating CMUs, Existing Interconnector CMUs or pre-refurbishing element of Refurbishing CMUs only)	Identify 3 Settlement Periods of highest metered output in two most recent calendar years of operation (up to 1 month before the start of the Prequalification Window) when de-rated capacity was delivered **Confirmation of output and line loss factor methodology applied for non-CMRS generating CMUs**	If a plant has been mothballed, then this could be in the last two years of operation, but it is key that the dates are identified for National Grid.

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Creating an Application

Create an Application

- Finally a set of declarations must be completed within the Application

Information	Details	Comment
~~Application Declaration~~	~~Statement, signed by two directors that Applicant or person submitting Opt-Out Notification has:~~ ~~1) Complied with all laws prohibiting anti-competitive practises~~ ~~2) Not engaged in any Market manipulation~~ ~~3) Not breached the Bribery Act 2010~~ ~~4) Not offered any inducement to any Administrative Party~~ ~~5) Not disclosed Confidential Information other than where permitted~~	~~Tick Box Declarations in Application~~ ~~***Planned to be removed pending an Ofgem change as already within the Certificate of Conduct***~~
STOR Declaration	Applicant must also declare that either: a) It is not the subject of a Relevant STOR Contract or b) It is the subject of a Relevant STOR Contract but irrevocably undertakes to withdraw from the contract should it be awarded a Capacity Agreement	Tick Box Declarations in Application

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Create an Opt-Out Notification

Creating an Opt-Out Notification

- For an Opt-Out Declaration a CMU must be created and CMU Component data submitted (as if for an Existing CMU) before its Opt-Out Status is confirmed

Information	Details	Comment
Status Details	Must declare whether and provide reason for: a)Will be permanently non-operational by the start of the Delivery Year b)Will be temporarily non-operational for all the Winter of the Delivery Year c)Will remain operational for the Delivery Year	Data to be entered directly in Pre-Qual System
~~Application Declaration~~	~~Statement, signed by two Directors that Applicant or person submitting Opt-Out Notification has:~~ ~~1) Complied with all laws prohibiting anti-competitive practises~~ ~~2) Not engaged in any Market manipulation~~ ~~3) Not breached the Bribery Act 2010~~ ~~4) Not offered any inducement to any Administrative Party~~ ~~5) Not disclosed Confidential Information other than where permitted~~	~~Upload copy into system~~

National Grid Prequalification Assessment

- **Items that National Grid will be focussing on in the 6 week Application assessment period**
  - Ensure that all of the required Additional Information has been submitted by the Applicant
  - Check that a Generating CMU is not a Defaulting CMU or an Excluded CMU
  - Verify that the three highest metered output figures provided by an Existing Generating CMU are accurate
  - That the Connection Capacity figure – if calculated – has been done so in accordance with the Rules
  - That any documentary evidence provided corroborates the statements made in the application – e.g. Low Carbon Support does expire by the date stated
  - that no other application has been submitted in respect of the generating unit(s) or MPAN(s) in a CMU and that is does not already hold an agreement for the Relevant Delivery Year.

National Grid Prequalification Assessment

- **Items that National Grid will NOT be focussing on in the 6 week Application assessment period**
  - Whether the Applicant is the legal owner or despatch controller
  - That any declarations made by an Applicant are indeed truthful – e.g. no disclosure of Confidential Information, compliance with Bribery Act, no receipt of Low Carbon Support etc
  - That any documentary evidence provided alongside the application is genuine

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Prequalification Results Day

- **National Grid will provide a notification to each party that submitted an Application informing them if they were successful or otherwise by 5pm on Prequalification results day. It will contain:**
  - Whether the unit has prequalified, and if it has
  - The De-rated capacity of the CMU
  - If New Build or Unproven DSR or if TEC deferred that Prequal status is provisional pending Credit Support
  - If Planning Consents deferred that Prequal status is provisional pending declaration that Consents obtained
  - That the CMU is a Price-Taker if Existing Generating CMU or an Interconnector CMU, Price-Maker if otherwise
  - The maximum period the CMU may bid for a Capacity Agreement
  - Whether the CMU is a Transmission CMU, a CMRS Distribution CMU, a non-CMRS Distribution CMU, an Interconnector CMU or a DSR CMU

Prequalification Results Day

- **National Grid will provide a notification to each party that submitted an Application informing them if they were successful or otherwise by 5pm on Prequalification results day. It will contain:**
  - If a generating CMU, whether the CMU is an Existing CMU, a New Build CMU or a Refurbishing CMU
  - Whether a Metering Test will be required in the event the CMU successfully bids for a capacity agreement

Prequalification Results

Notice of Prequalification success	
Prequalification Decision	Prequalified or Conditionally Prequalified
Applicant	Applicant xxxa
Identity of CMU	CMU xx1
Type of CMU	CMU Type
De-rated Capacity	XMW
Whether the unit is currently prequalified as a Price-Maker or Price-Taker	Price-Maker/ Taker
If successful at Auction is the CMU subject to a Metering Test	Metering test required/not required
Whether Prequalification is conditional on providing credit support pursuant to Rule4.5.1 (b) (ii) or 4.5.1 (b) (iii) or 4.5.1 (b) (iv)	Conditional – Please provide [the required amount of collateral] to the Settlement Body.
Whether Prequalification is conditional on providing Planning Consents requirement of Rule 4.7	Conditional - Planning consent declaration required
The Maximum Obligation Period of the Capacity Agreement it may bid for	Agreement duration x years
Additional Information	Any other pertinent information.

Notice of Prequalification Rejection	
Prequalification Decision	Rejected
Applicant	Applicant xxxa
Identity of CMU	CMUxx1
Type of CMU	CMU Type
De-rated Capacity	XMW
Additional Information	The reasons for rejection

- The Capacity Market Register will also be published containing the information specified in chapter 7 of the Capacity Market Rules.

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Auxiliary Load

EMR Capacity Market

6 July 2015

Iain Nicoll

Agenda

- What is the issue?
- What are the definitions in the Regulations?
- What support functions can be included?
- What would the line diagram look like?
- How do I apportion demand?
- Has the Metering Assessment changed?

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What is the issue?

- What can be included as Auxiliary Load in the calculation of Net Output of a Generating CMU?

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What is the definition in the Regulations?

- "net output", in relation to a generating CMU or a generating unit, means the amount of electricity produced by the CMU or unit minus its auxiliary load

- "auxiliary load" means, in relation to a generating CMU or a generating unit, the total amount of electricity used by that unit for purposes directly related to its operation (including for fuel handling, fuel preparation, maintenance and the pumping of water), whether or not that electricity is generated by the unit or used while the unit is generating electricity

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What support functions can be included?

- Auxiliary Load definition in the regulations is the minimum that must be accounted for in the submitted Metered Volumes
- Up to the applicant to decide what else is included
- This is applicable to Station and Unit Transformers
- If non-directly related auxiliary load is always accounted for in the Metered Volume by the Metering System it is acceptable
- The applicant can choose to install metering for non-directly related auxiliary load to Net it off Demand Transformer Metered Volumes – But this would make the Metering System a Bespoke solution

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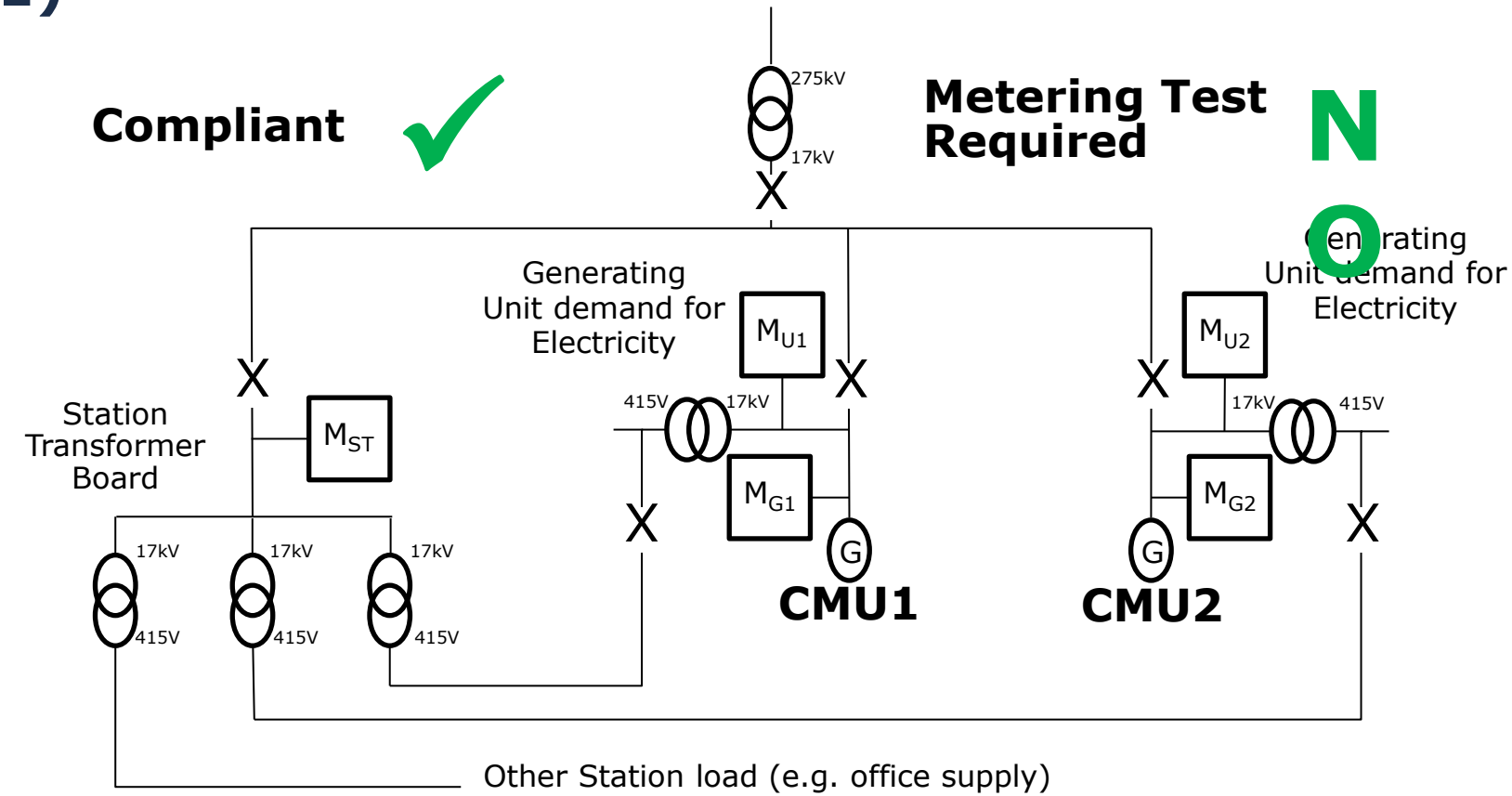
What would the line diagram look like? (1)



Auxiliary Load used by the Generator for purposes directly related to its operation and other purposes

Apportion Station Transformer Load if multiple CMUs

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How do I apportion Station Transformer Demand? (1)

- The Power Station has 3 BMUs
  - T_ABCD-1 BMU ID for Generator 1 Active Export
  - T_ABCD-2 BMU ID for Generator 2 Active Export
  - T_ABCD-D BMU ID for Station Transformer Demand

- Each Generator is identical, e.g. 300MW capacity and same technology. So 50:50 split

$$\text{CMU1} = \frac{\text{CMU1 Generator Rated Capacity}}{\text{Total Station Generator Rated Capacity}} \quad \& \quad \text{CMU2} = \frac{\text{CMU2 Generator Rated Capacity}}{\text{Total Station Generator Rated Capacity}}$$

- CMU1 = T_ABCD-1(Active Export) + 0.5(T_ABCD-D(Active Import))
- CMU2 = T_ABCD-2(Active Export) + 0.5(T_ABCD-D(Active Import))

- Demand BMUs return negative values for Active Import; Therefore '+' in aggregation rule

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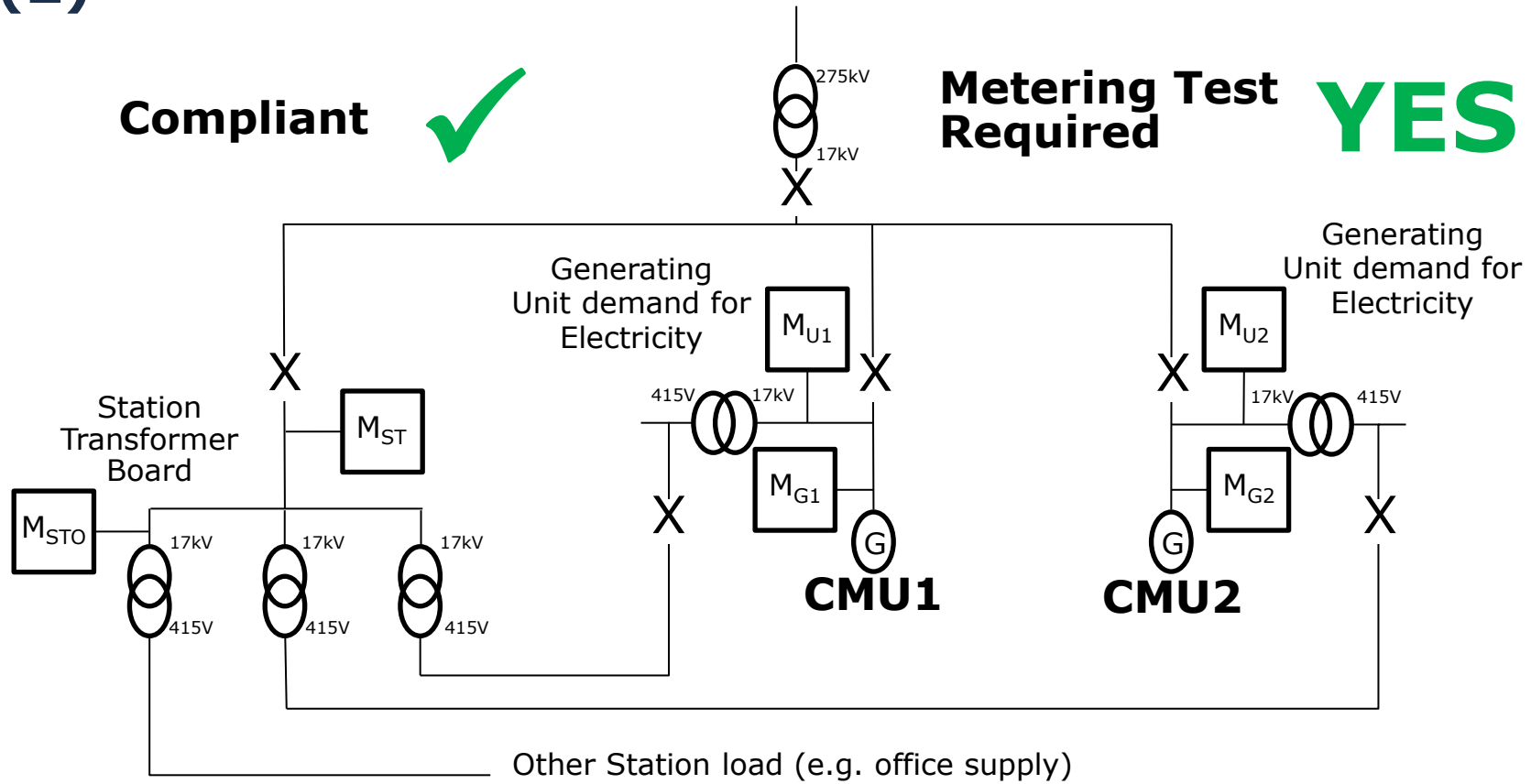
What would the line diagram look like? (2)

Compliant ✓

Metering Test Required **YES**



Auxiliary Load = M_{ST}(Active Import) – M_{STO}(Active Import)

Apportion Station Transformer Load if multiple CMUs

Metering System is now a Bespoke Solution

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How do I apportion Station Transformer Demand? (2)

- The Power Station has 2 CMUs
- Each Generator is identical, e.g. 300MW capacity and same technology. So 50:50 split

$$\text{CMU1} = \frac{\text{CMU1 Generator Rated Capacity}}{\text{Total Station Generator Rated Capacity}} \quad \& \quad \text{CMU2} = \frac{\text{CMU2 Generator Rated Capacity}}{\text{Total Station Generator Rated Capacity}}$$

- CMU1 = [M_{G1}(Active Export) – M_{U1}(Active Import)] - 0.5(Auxiliary Load(Active Import))
- CMU2 = [M_{G2}(Active Export) – M_{U2}(Active Import)] - 0.5(Auxiliary Load(Active Import))
- Where, Auxiliary Load = M_{ST}(Active Import) – M_{STO}(Active Import)

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Has the Metering Assessment changed?

Original Question

- Generating Units with associated load
  - Is there other load or generation on site (other than CMU Generating Units and their associated demand)?

New Question

- Other generating units on site
  - Is there other generation on site (other than CMU Generating Units)?

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What's coming up?

- Capacity Market Metering Assurance documents published on Electricity Settlements Company website
  - https://electricitysettlementscompany.uk/

Summer 2015

- Metering Test Working Practice
- Other Metering Assurance Working Practices

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How will we communicate this?

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

- **Electricity Settlements Company Website**
  - https://electricitysettlementscompany.uk/
  - Governance changes including parties appointed to carry out roles
    - Management
    - Agent

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Any questions?

- Request a Metering Test
  - contact@emrsettlement.co.uk
  - 020 7380 4333
- Governance Queries
  - nic.rigby@lowcarboncontracts.uk
  - 020 7211 8136
- Metering Test Queries
  - iain.nicoll@elexon.co.uk
  - 020 7380 4162

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Capacity Market

Applicant's Credit Cover Process

Monday 6 July 2015

Jo Alexander
joanna.alexander@elexon.co.uk

What we'll cover

- Who are we? What is our role?
- What can I lodge as credit cover and how?
- How much credit cover do I need to lodge?
- What is the process?
- What is the timeline?
- What will we need from you?
- Publications
- Contact Details

EMR SETTLEMENT LIMITED

Who are we and what does our role involve?

Role	Company Title
Settlement Body	Electricity Settlements Company (ESC)
Settlement Agent/EMR Settlement Services Provider	**EMR Settlement Limited (EMRS)**

- We'll take care of your EMR payments and this includes:
  - Collecting metered data
  - Calculating payments and charges
  - Invoicing and collecting payments due
  - Managing settlement and reconciliations of payments
  - Managing credit

EMR SETTLEMENT LIMITED

Who are we and what does our role involve?

Role	Company Title
Settlement Body	Electricity Settlements Company (ESC)
Settlement Agent/EMR Settlement Services Provider	**EMR Settlement Limited (EMRS)**

- We'll take care of your EMR payments and this includes:
  - Collecting metered data
  - Calculating payments and charges
  - Invoicing and collecting payments due
  - Managing settlement and reconciliations of payments
  - **Managing credit**

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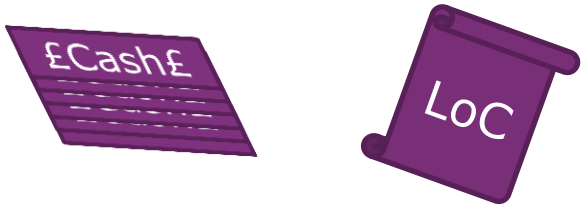
What can I lodge as credit cover and how?

1 **What types of credit cover can be used?**	
2 **How do I lodge credit cover?**	Funds Transfer **'cash'** to a specified GBS bank account Submit a **'Letter of Credit'** (LoC) to specified address

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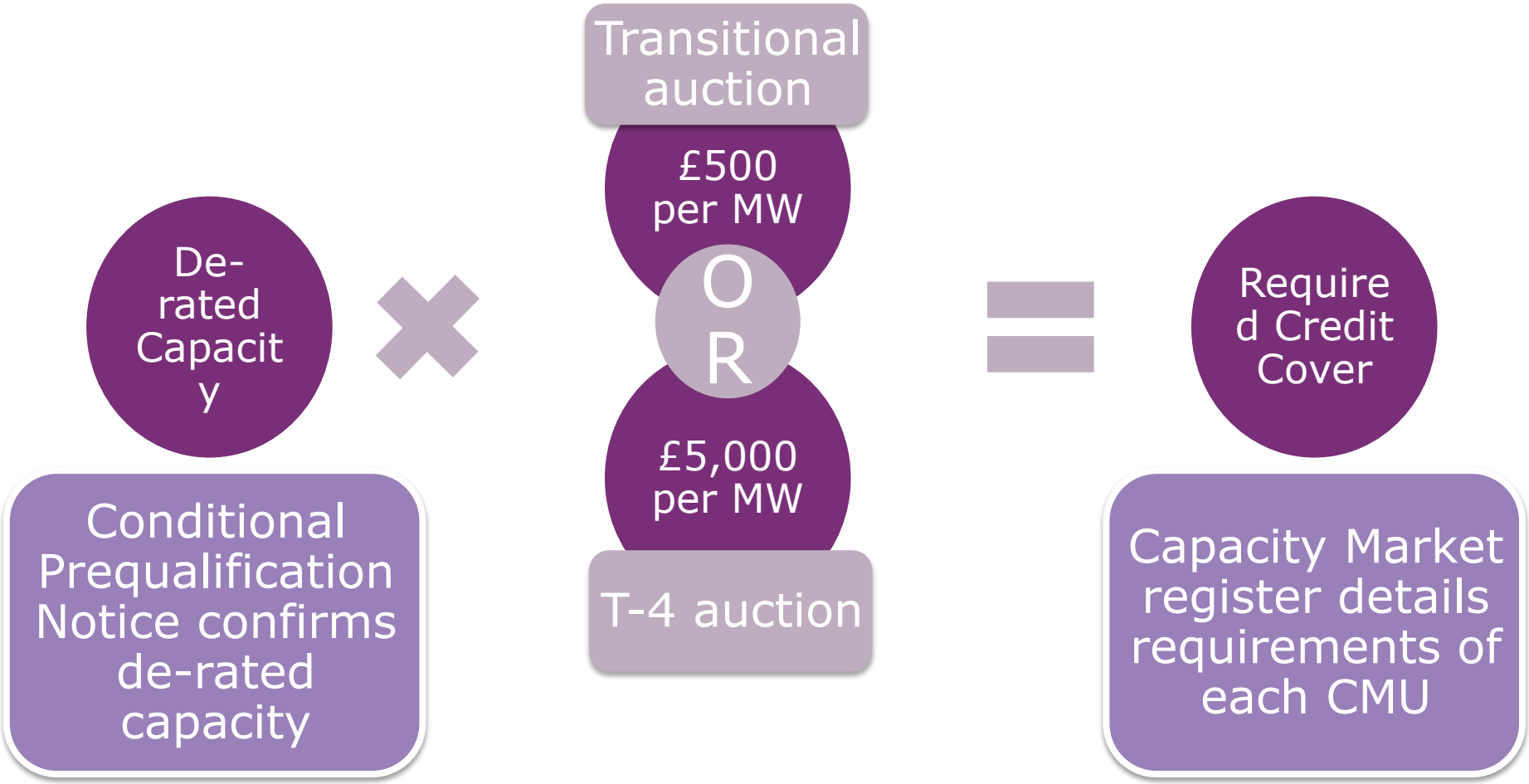
How much credit cover do I need to lodge?



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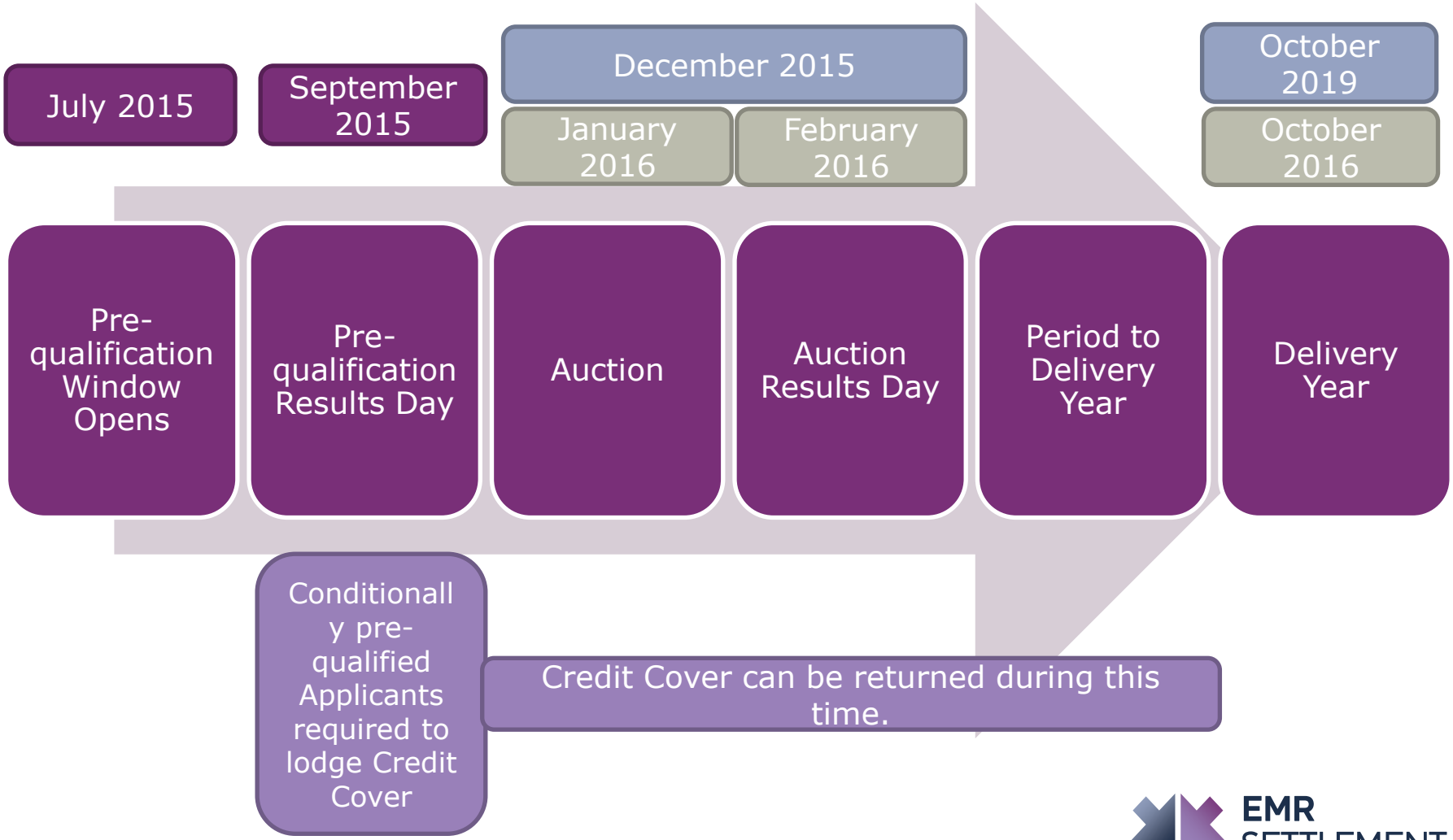
Timeline – T-4 (2019) and TA (2016)



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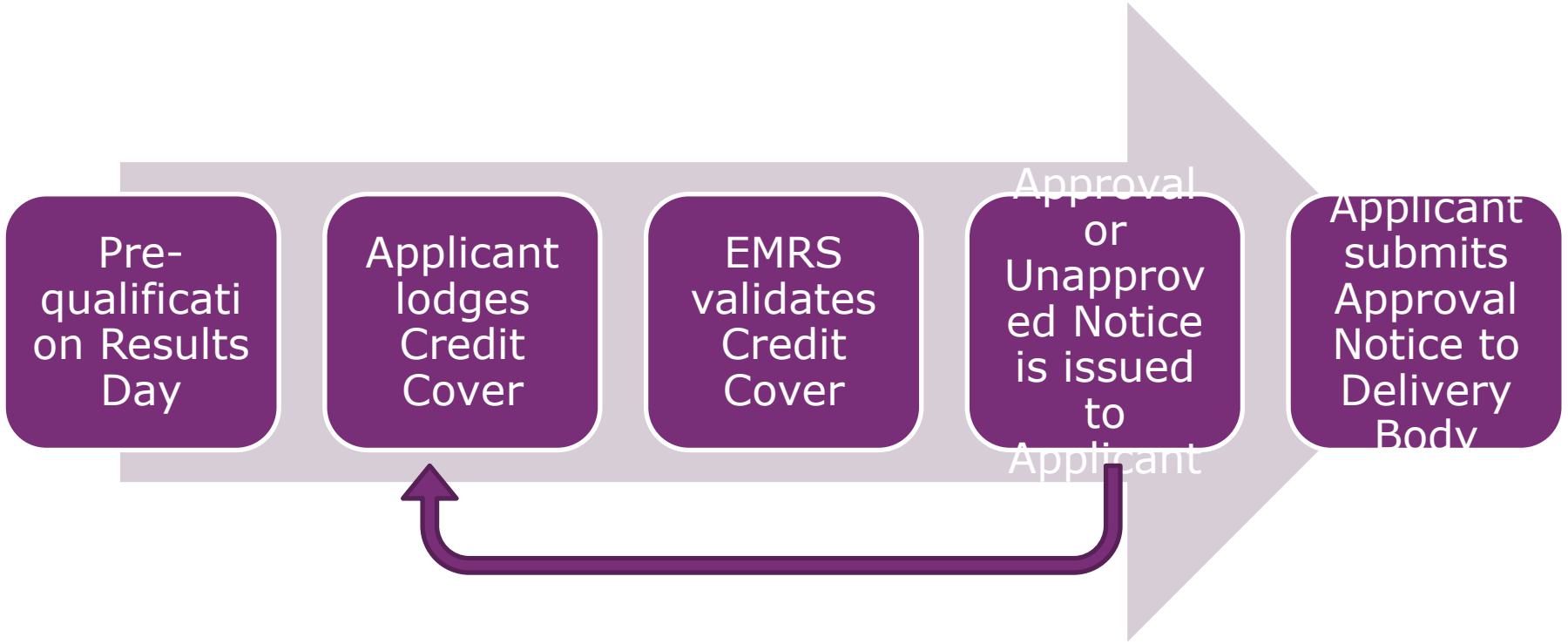
What is the process for credit cover?



- If an unapproved notice is received, an Applicant may have the opportunity to re-submit Credit Cover as long as the overall timescales are met.

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What is the credit cover timeline?

Friday 25 September	• Prequalification Results Day
No later than Friday 2 October	• Applicant lodges Credit Cover
No later than Friday 6 November	• Receive 'Notice of Approved Credit Cover' or 'Notice of Unapproved Credit Cover' from EMRS
No later than Tuesday 10 November	• The latest date the Applicant can provide a copy of the Credit Cover approval notice to the Delivery Body

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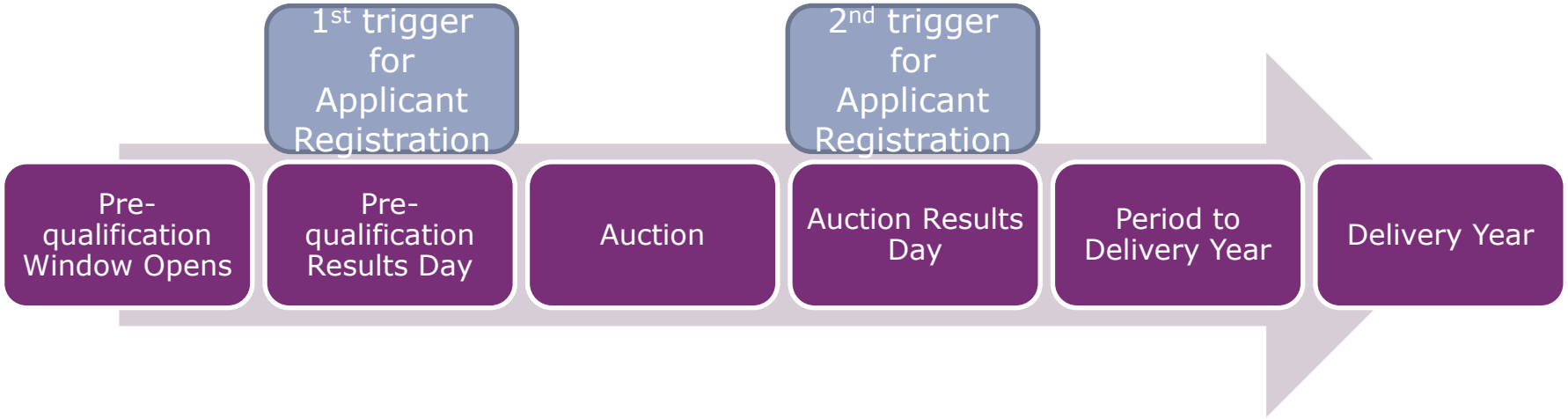
What will we need from you?

- Completed Applicant Registration Form
  - Contact details
  - CMU ID/'s
  - Bank account details
  - Authorised contacts



- Lodge Credit Cover

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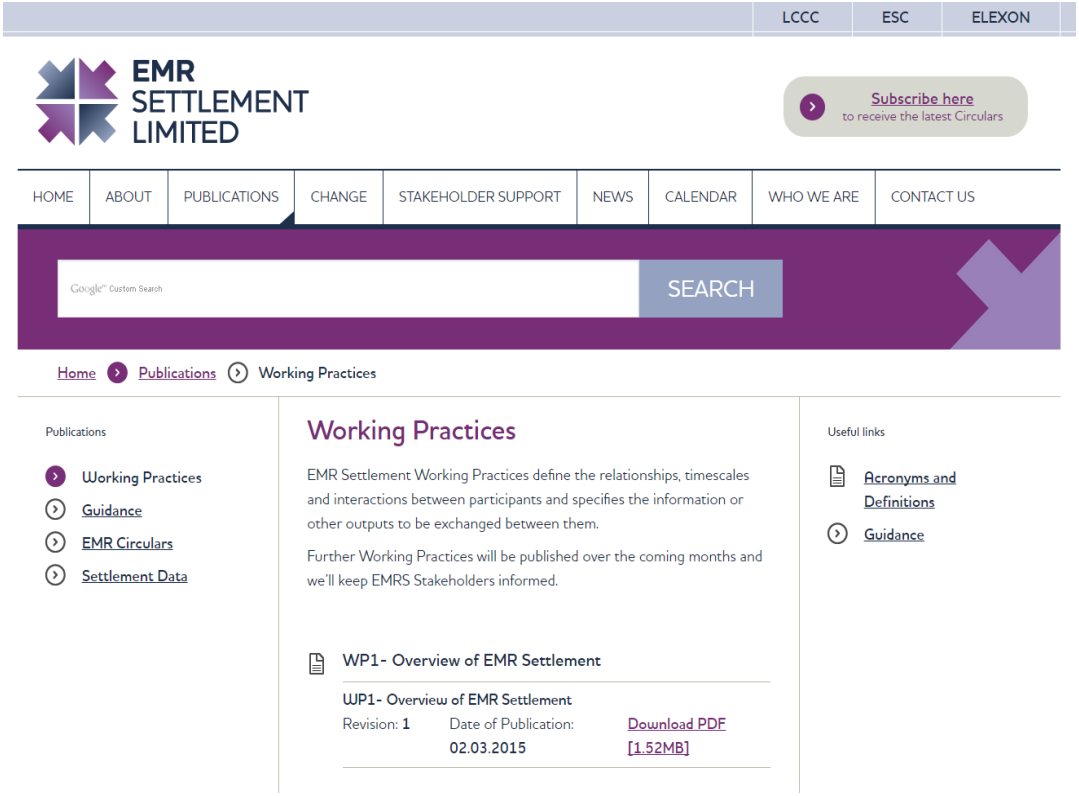
Publications

Slides will be published on our website along with:

- Credit cover WP
  - Letter of Credit address
  - GBS Bank Account
- Registration WP
  - Applicant Registration Form

You can also register for **Circulars** on our website.



EMR SETTLEMENT LIMITED

Contact Information

- **All queries**
  - contact@emrsettlement.co.uk
  - 0207 380 4333

- **EMR Settlement Website**
  - http://emrsettlement.co.uk/

EMR SETTLEMENT LIMITED

EMR
SETTLEMENT
LIMITED

Contact Information

- DECC Stakeholder Bulletins
  - Contact Corinne Jenkinson: corinne.jenkinson@decc.gsi.gov.uk

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