nationalgrid

Capacity Market User Support Guide

Guidance document for Capacity Market participants

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10th July 2014

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This User Support Guide must be used in conjunction with the Electricity Capacity Regulations 2014, the Capacity Market Rules 2014 and the Capacity Market Auction Guidelines. Failure to do so may result in unsuccessful Prequalification or failure to gain a capacity agreement in the Capacity Auction.

Table of Contents

Introduction 3

Overview 4

Registration 7

Prequalification applications 11

Prequalification results 21

Prequalification appeals 23

Pre-auction submissions 24

Auction 28

Update registration 35

Access CM register 36

Delivering Capacity Obligations 37

Trading 41

Appendix 1 – Templates for Prequalification 43

Appendix 2 – De-rating Factors for CMU Components 49

Appendix 3 – Further information 50

Introduction

1. This User Support Guide has been prepared by National Grid to provide an overview of the Capacity Market and the key process steps required for participation. It forms part of a suite of legal, regulatory and training documentation including:

    - The Electricity Capacity Regulations ("the Regulations")
    - The Capacity Market Rules ("the Rules")
    - Auction Guidelines
    - System training material
    - Government's consultation response document and Implementing EMR Handbook

2. The Rules and the Regulations set out the legal requirements for market participants wishing to enter the Capacity Market Auction or discharge their mandatory obligations as licensed generators.

3. National Grid, in its role as Delivery Body, is legally obliged to publish Auction Guidelines describing the timeline, parameters and instructions for participation in advance of each capacity auction. We also publish specific training material to guide participants using the online Prequalification and auction systems for the Capacity Market.

4. This User Support Guide is intended to aid participants in developing their understanding of the Capacity Market, with case studies to illustrate potential customer journeys. We have prepared this document on a non-legal basis, and it should not be taken as legal or investment advice. In the event of any conflict or inconsistency between this document and the Regulations, the Rules or the Auction Guidelines those documents take precedence over this one.

5. Capitalised terms used in this User Support Guide shall have the same meanings given in the Rules.

6. Boxed text is used in the document to highlight where further information is available. Blue boxes indicate the referred documents are legal text, with informal support documents in green boxes.

Overview

7. The Capacity Market is being introduced by DECC as part of the Electricity Market Reform programme to ensure the future security of our electricity supply. The Capacity Market offers all capacity providers (new and existing power stations, electricity storage and capacity provided by voluntary demand reduction) a steady, predictable revenue stream on which they can base their future investments. In return for Capacity Payments revenue, providers must deliver energy at times of system stress, or face penalties.

8. Potential providers secure the right to receive capacity revenues by participating in a competitive auction process which will set the level of Capacity Payments. The first Capacity Auction is due to take place in December 2014, for delivery obligations beginning in October 2018.

Capacity resources and CMU types

9. Generating and Demand Side resources participating in the Capacity Market are termed 'Capacity Market Units' or CMUs. A number of different generating and Demand Side Response (DSR) CMU types are defined in the Rules and Regulations, with generators categorised by their connection / settlement arrangements as well as by their existing / new status. The CMU type for distribution-connected generation resources distinguishes whether or not the Generating Unit is registered in the Central Meter Registration Service (CMRS). The Regulations set out criteria for each type of CMU.

10. The terminology for CMU types is summarised below.

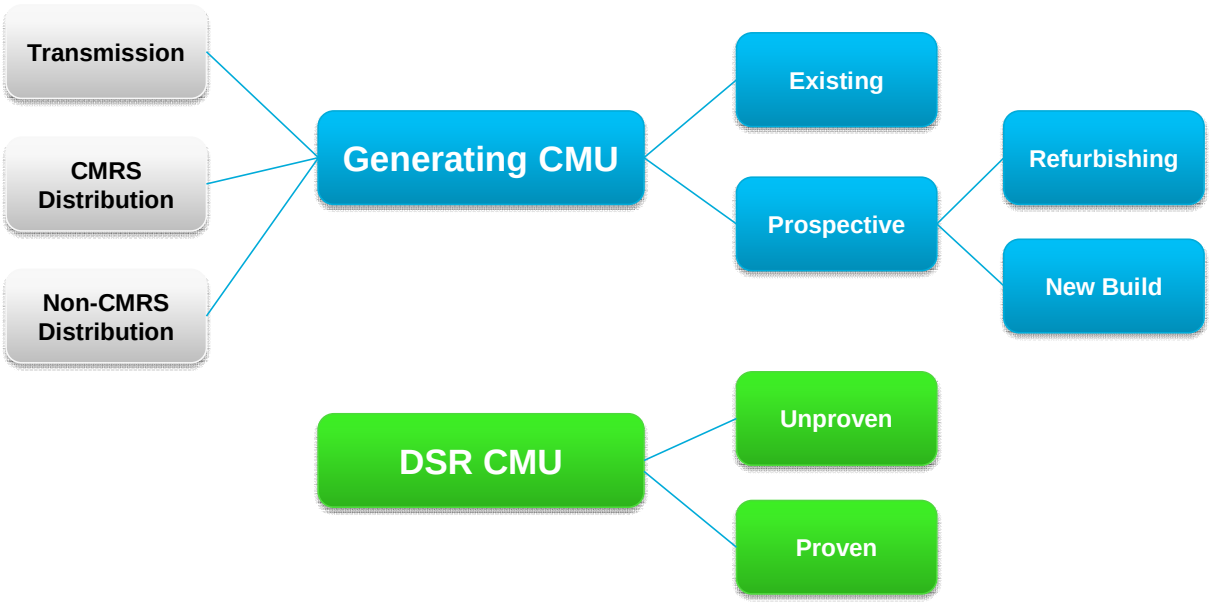


Figure 1 CMU types

11. A CMU in turn may comprise multiple Generating Units or DSR components, provided these are all of the same type. For example all Generating CMU components within a single CMU must be Transmission connected, or CMRS Distribution Connected or non-CMRS Distribution Connected or all components within a DSR CMU must be eligible DSR

resources. The Rules and Regulations provide participants with some flexibility to determine the most appropriate configuration of CMUs and components for their resources.

Options for participation

12. The Capacity Market design provides a wide range of options for companies to participate. Capacity Agreements of between 1 and 15 years duration will be allocated to eligible resources through the Prequalification and auction process. Potential capacity providers will likely wish to explore the available options before commencing the formal Prequalification procedure. This document, which does not provide investment or legal advice, considers a number of case studies to illustrate some of the options available, while Appendix 3 provides links to the comprehensive suite of published material on the Capacity Market.

13. Participation in the Prequalification process will be mandatory for licensable Generating Units that are eligible to participate in the Capacity Market. However, a number of routes will be open to these Mandatory CMUs, and they are not obliged to participate in the auction.

14. Figure 2 presents a number of potential scenarios for existing and planned capacity resources, each of which can be considered as a case study for Capacity Market participation. We will revisit these case studies throughout this document to highlight some of the key features for different participation options.

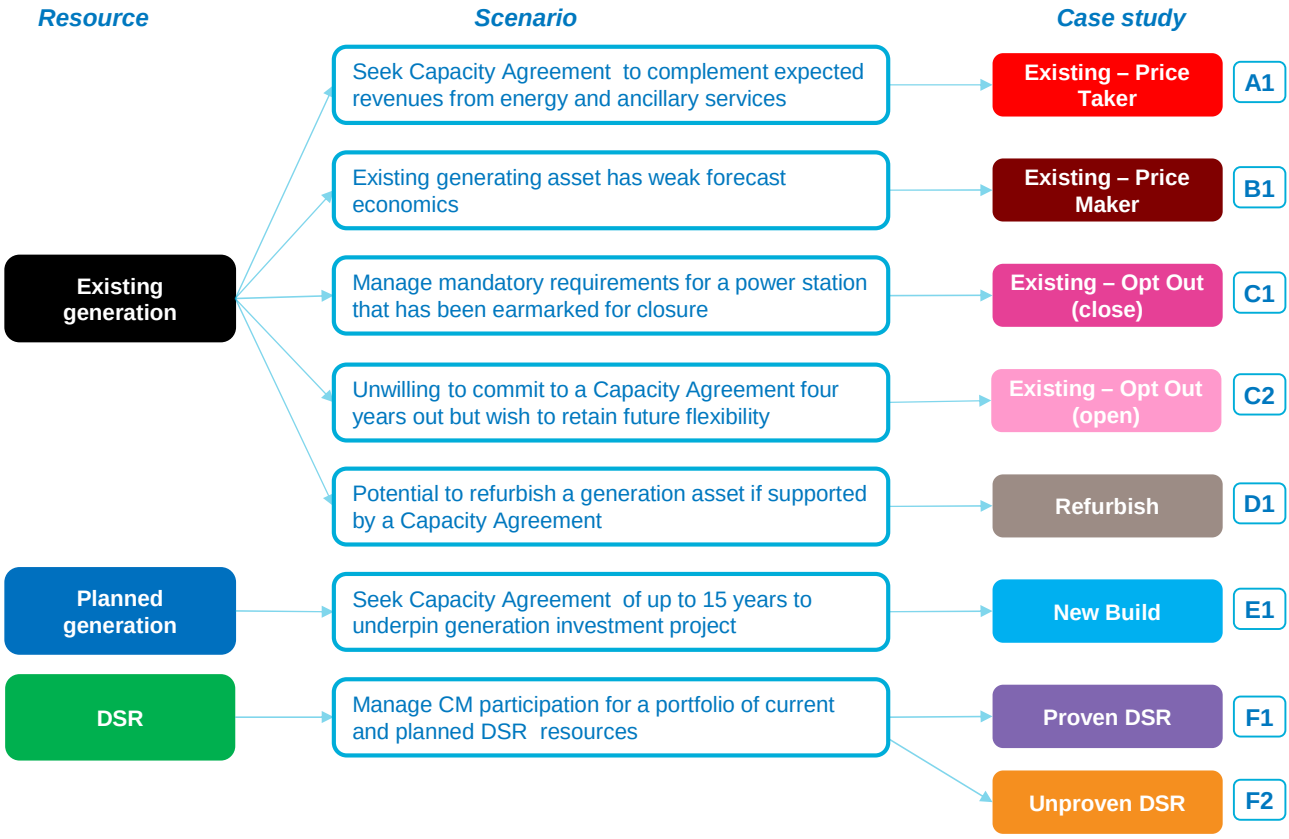


Figure 2 Potential scenarios and case studies

Overview

Key Capacity Market activities

15. In this document, we describe ten key steps for participants in the Capacity Market:

Figure 3 Key Capacity Market steps

16. This document largely focuses on the steps required to participate in Prequalification and auctions. We do not cover in detail the post-auction processes associated with delivery, secondary trading, settlement and penalties.

1 – Registration

17. All companies that wish to participate in the Capacity Market will first need to register to set up an account on the EMR Delivery Body Portal (www.emrdeliverybody.com).

18. The registration process controls access to the online Prequalification and auction systems, and seeks to ensure that only legitimate representatives of a company may act on its behalf in the Capacity Market.

19. To register, companies should complete an online registration form. This will be available on the EMR page of the National Grid's website and via email from the EMR Delivery Body in July. From August 2014 this form will be hosted online on the EMR Delivery Body Portal.

20. The registration form asks for details of the Authorised Person (e.g. Company Secretary) and the Main Company Administrator for the Portal. The Authorised Person should be the Company Secretary or a Director who can be verified against public information. The Main Company Administrator will have the appropriate level of authority to issue/rescind company user access, from the EMR Delivery Body Portal and IT Auction System, and act as the main point of contact.

21. Once completed the registration form should be printed on company letter headed notepaper, signed by the Authorised Person and the Main Company Administrator, scanned and then either emailed to National Grid or from [August 2014] uploaded on the EMR Delivery Body Portal.

22. We will cross-check the Authorised Person against public records, and once validated, set up an account on the EMR Delivery Body Portal.

23. The EMR Delivery Body Portal is centred around Capacity Market Units (CMUs) that are associated to the companies that are acting as the Applicant for the CMU. An Applicant company may be the Main Company – established through the initial company registration process – or a "sub-company" – a subsidiary company to the Main Company – created by the Main Company Administrator.

24. The Main Administrator may also create other log-in IDs with a specific role in order to assist in the preparation of Capacity Market Prequalification Applications or Opt-Out Notifications. Each of these roles must be given "privileges" to act for the Main Company or any Sub-Company. The different roles available are as follows:

    - Deputy Main Administrator: Is able to act on behalf of all companies and users. Has all of the same functionality as a Main Administrator, and thereby provides cover for the Main Administrator, may create sub-companies and user roles, de-activate companies and user roles and administer change password requests.

    - Administrator: Is able to act on behalf of companies to which it has been assigned privileges by a Main or Deputy Main Administrator. May create User log-in IDs but

can then only assign privileges to that User for the Main or Sub-Companies for which the Administrator can itself act for.

- User: Is able to act on behalf of the Main or Sub-Companies that it has been assigned privileges for. It cannot create, amend or delete any companies or log-in IDs.

25. Figure 4 below illustrates a potential structure of users for company CC.

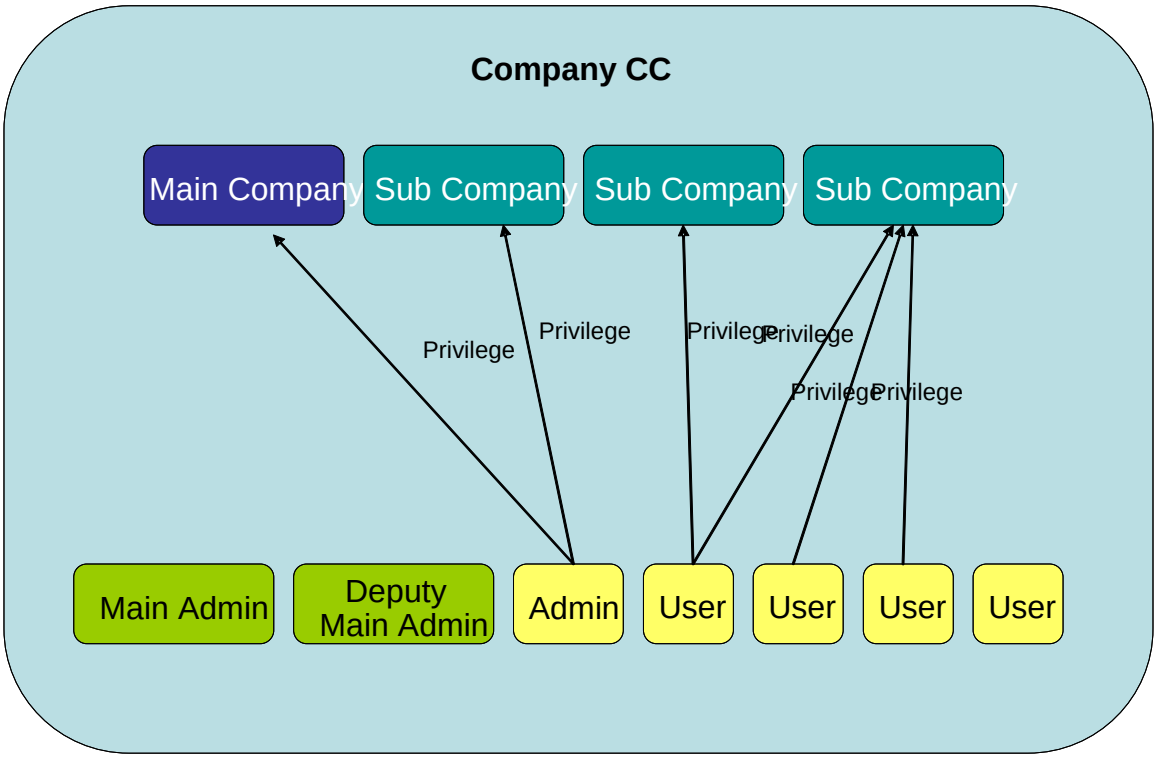


Figure 4 Illustrative company user structure

26. The companies which have registered will become Applicants for assets participating in the Capacity Market. There can only be one applicant for a Capacity Market Unit. This is the legal owner by default.

27. The legal owner can elect that the Despatch Controller should enter the asset to the Capacity Market instead. To do so, the form given as Exhibit D of the Rules must be submitted during Prequalification.

28. Where signatures and declarations from company directors are required as part of the Prequalification process, these must be from the board of directors of the company taking on the role of Applicant (this cannot be delegated to an Agent). There may be several options as to which company within a corporate structure becomes the Applicant, as illustrated by the example below.

29. An Agent can be appointed to act on behalf of the Applicant. The legal owner may nominate an Agent subject to the completion of Declaration form “Exhibit E: Form of Agent Nomination Form”. An Agent can act only for one Applicant (with the exception of Applicants within the same corporate group). Only one Agent can be appointed for each CMU.

30. Figure 5 below shows a potential structure of a company seeking to enter the Capacity Market. The parent company ‘AAA’ owns a trading company ‘AT1’ and a Generation Company ‘AG1’. This generation company holds Special Purpose Vehicles containing assets capable of meeting the obligations of the Capacity Market and which will become Capacity Market Units, CMU_A, CMU_B and CMU_C.

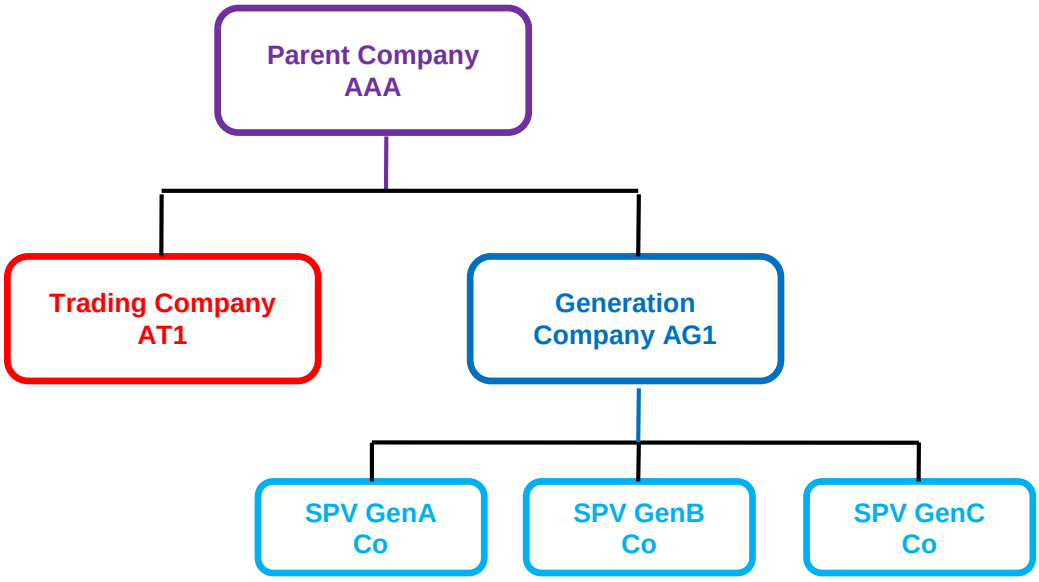


Figure 5 Illustrative parent, subsidiary and SPV company structure

31. In this example, there are several options as to who could be the Applicant for the CMUs. These are presented in

	AAA	AT1	AG1	GenA Co	GenB Co	GenC Co
CMU_A	Could be Applicant, subject to it being the only Applicant per CMU	Could not be the Applicant. Could be nominated as Agent	Could be Applicant, subject to it being the only Applicant per CMU	Could be Applicant		
CMU_B	Could be Applicant, subject to it being the only Applicant per CMU	Could not be the Applicant. Could be nominated as Agent	Could be Applicant, subject to it being the only Applicant per CMU		Could be Applicant	

CMU_C	Could be Applicant, subject to it being the only Applicant per CMU	Could not be the Applicant. Could be nominated as Agent	Could be Applicant, subject to it being the only Applicant per CMU			Could be Applicant

32. Table 1 below. Note that while all these options can be accommodated, the company and user setup within the registration system only distinguishes Main or Sub-Companies, rather than multiple tiered corporate structures.

1 – Registration

	AAA	AT1	AG1	GenA Co	GenB Co	GenC Co
CMU_A	Could be Applicant, subject to it being the only Applicant per CMU	Could not be the Applicant. Could be nominated as Agent	Could be Applicant, subject to it being the only Applicant per CMU	Could be Applicant		
CMU_B	Could be Applicant, subject to it being the only Applicant per CMU	Could not be the Applicant. Could be nominated as Agent	Could be Applicant, subject to it being the only Applicant per CMU		Could be Applicant	
CMU_C	Could be Applicant, subject to it being the only Applicant per CMU	Could not be the Applicant. Could be nominated as Agent	Could be Applicant, subject to it being the only Applicant per CMU			Could be Applicant

Table 1 Illustrative Applicant options per CMU

➲ See Rules & Regulations:

Capacity Market Rules – Chapter 3

➲ See support & training materials:

Capacity Market system specific training

2 – Prequalification applications

33. Before participating in a Capacity Auction, companies need to prequalify the generation or DSR resources for which they are seeking Capacity Agreements. We will use the information submitted during Prequalification to verify that generation and DSR Capacity Market Units (CMUs) are eligible to participate in the auction and to establish the size of individual CMUs. The Prequalification process also enables licensed owners of existing licensable generation units to notify their intention to Opt-out of a Capacity Auction should they not wish to enter.

34. The following forms of capacity are not eligible to participate in the Capacity Market:

- Capacity receiving low carbon support (e.g. through the Renewables Obligation, Contracts for Difference, or small-scale Feed in Tariffs FIT)
- Capacity with long-term contracts to provide Short-Term Operating Reserve (STOR) unless an irrevocable declaration is made to terminate the STOR contracts if awarded a capacity agreement
- Interconnected non-GB capacity, and the interconnectors themselves (it is intended that this capacity will be eligible to participate from 2015).

35. The Prequalification window for a given Capacity Auction opens several weeks before the auction, as specified in the timeline published in the Auction Guidelines. Applications for Prequalification are made via the EMR Delivery Body Portal, and must either be from the legal owner of the CMU or the Despatch Controller, or an Agent appointed to act on their behalf.

36. A separate Application is required for each CMU, although a bulk upload facility will be available to facilitate the submission of multiple applications. The information submitted via the EMR Delivery Body Portal to support each Application comprises:

- General information about the Applicant and its legal status
- Common information about the CMU and its components
- Additional information depending on the type of CMU

37. Before submitting an Application, a set of declarations, including the Prequalification Certificate and Certificate of Conduct, must be completed signed by two directors of the Applicant (or two officers if the Applicant is not a company). These declarations, set out in the Rules, certify that the Applicant is solvent, is seeking a Capacity Agreement in good faith, and has complied with all laws intended to prohibit or restrict anti-competitive practices relevant to its Application to participate in the Capacity Market.

38. The Prequalification requirements for each CMU type are summarised in Table 2 below. Further details are provided in the case studies. The Construction Plan templates which New Build and Refurbishing CMUs must submit are given in Appendix 1. The Appendix also includes templates which DSR CMUs must submit: the Business Plan for Unproven DSR and the Business Model for Proven DSR CMUs.

2 – Prequalification applications

	Common information	Common declarations

All CMUs	• Application from either Legal Owner or the Despatch Controller
	• Further details about the applicant
	  o Corporate registration number (if relevant)
	  o Contact details
	  o Bank account details
	  o Generation Licence status
	• Legal status
	  o Certificate of incorporation
	  o Legal opinion confirming corporate form and power to enter Capacity Agreements
	• Nomination relating to the CMU
	  o CMU type
	• Nomination relating to the CMU component
	  o Relevant meters and Meter Point Administration Numbers (MPANs)
	  o BM Unit Identifiers (if applicable)
	  o Generating Technology Class
	• Connection Capacity and De-rated Capacity
	• Metering Assessment
		• Application or Opt-Out Declaration
		• Low Carbon Exclusion / Grant Declaration
		• STOR Declaration
		• Prequalification Certificate
		• Certificate of Conduct

	New Build	DSR unproven	DSR proven	Refurbishing	Existing	Existing- Opt-out
Additional Information	Planning consents	Business Plan	DSR Test Certificate	Info for Refurbishing CMU	Previous Performance	Status Details
	Construction plan	DSR Test Certificate	Permitted On-Site Gen Units	Info for Pre-Refurbishment CMU	Grid Code Compliance (If applicable)	
	Connection agreement		Business Model	Existing CMU Application or Opt-Out Declaration	Connection Agreements	

Table 2 Summary of common and additional information requirements

2 – Prequalification applications

39. The Capacity Market Rules provide participants with a range of options for determining the capacity of a CMU. As summarised in Table 3 below, the options differ for generation Connection Capacity (transmission or distribution-connected) and for DSR Capacity. Note that Options 2 and 3 for transmission and distribution-connected generators only apply to Existing Generating CMUs.

Transmission-connected Generating CMU		
Option 1 Unit level Connection Entry Capacity (CEC) as set out in the appropriate Bilateral Agreement	**Option 2** Average of three highest metered outputs of the generating units in previous 24 months	**Option 3** The Transmission Entry Capacity (TEC) of the Power Station split across all the generating units at the Power Station pro-rata according to the unit level CEC figures
Distribution-connected Generating CMU		
Option 1 Unit Level Registered Capacity as set out in the appropriate Connection Agreement	**Option 2** Average of three highest metered outputs of the generating units in previous 24 months	**Option 3** The Maximum Export Capacity (MEC) of the Power Station split across all the generating units at the Power Station pro-rata but no more than the unit level Registered Capacity
DSR CMU		
Proven DSR Capacity The Proven DSR Capacity evidenced by a DSR Test Certificate obtained prior to the Pre-Qualification Window	**Unproven DSR Capacity** The Applicant's reasonable estimate of the DSR Capacity that will be evidenced by a DSR Test carried out after the award of any Capacity Agreement	

Table 3 Options for determining Connection and DSR capacity

40. Generator and DSR capacities are de-rated for consideration in a Capacity Auction. The De-rating Factor applied to the Connection Capacity of a Generation CMU component will depend on its Generating Technology Class specified in the Prequalification Application. A CMU may comprise multiple components of different technologies, provided all the components are of the same type of CMU. Appendix 2 provides an example of De-rating Factors being applied to CMU components of different technologies.

41. Our tasks in reviewing the Applications submitted will include:

- Ensuring that all of the required Additional Information has been submitted
- Verifying that the three highest metered output figures provided by an Existing Generating CMU are accurate (only in the case of CMRS generators)

- Checking that the Connection Capacity figure – if calculated – has been calculated in accordance with the Rules, re-calculating where necessary
- Verifying that any documentary evidence provided corroborates the statements made in the Application
- Checking that no other application has been submitted in respect of the Generating Unit(s) or MPAN(s) in a CMU
- Reviewing the Connection Agreement or DNO letter
- Checking that a Generating CMU is not a Defaulting CMU or an Excluded CMU (this will not apply for the first auction in 2014 but relates to CMUs that are retiring or disqualified from bidding)
- Reviewing the Metering Assessment to determine whether a more detailed check of metering arrangements (a Metering Test) will be required prior to the Delivery Year

➲ See Rules & Regulations:

Capacity Market Rules – Chapter 3
Auction Guidelines

➲ See support & training materials:

Capacity Market system specific training

42. We now consider each case study in turn, the options open to participants and the additional information required for Prequalification.

Case study A: Existing generator – Price-Taker

43. Company AA owns an existing transmission-connected Generating Unit, A1. The Additional Information required to support the Prequalification Application for A1 is as follows:

Information	*Details*	*Case study A1*
Previous Performance	Identify 3 Settlement Periods of highest metered output in two most recent calendar years of operation when De-rated Capacity was delivered	✓
Grid Code Compliance (If applicable)	Declare compliant, and whether reliant on any derogations *(Only where not generated in previous two years)*	Not applicable as A1 has generated
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	Grid Connection Agreement (as transmission-connected)

Table 4 Additional information for case study A

44. The Metering Assessment for an existing transmission-connected generation unit such as A1 will be limited to submitting the MSID details for the Balancing Mechanism Units making up the CMU.

45. Note that for the first Capacity Auction in 2014 only, existing transmission-connected generators may defer the requirement to confirm that Transmission Entry Capacity (TEC) has been secured under a Grid Connection Agreement until 18 months before the Delivery Year. Credit support will need to be provided for CMUs that have deferred securing TEC.

Case study B: Existing Generator – Price-Maker

46. Company BB is the Despatch Controller for the distribution-connected existing Generating Unit, B1, and is also a shareholder in the legal owner of the asset.

47. The forecast economics for B1 are such that it may not remain viable if Capacity Agreements are priced at or below the Price-Taker Threshold. BB has estimated the net revenue requirements for B1 by projecting its future costs and expected revenues from energy and ancillary services, and concluded that Capacity Payments would need to exceed the Price-Taker Threshold for B1 to break even. The shareholders of B1 are therefore considering an application for Price-Maker status such that the unit can exit the Capacity Auction at a higher price. Price-Maker applications are made outside the Prequalification process, as set out in the section on pre-auction submissions below.

48. The Additional Information required in this case largely follows that for case study A. Since the application is made by BB as the Despatch Controller, an "Applicant Declaration" signed by directors of both the legal owner and the Despatch Controller is also required. The Metering Assessment questionnaire for a distribution-connected CMU such as B1 is more comprehensive than that for the transmission-connected A1, as outlined in the Auction Guidelines.

Case study C: Existing generator – Opt-out

49. Company CC owns an existing Generating Unit, C1, which it intends to close before the Delivery Year of the forthcoming Capacity Auction. As a Mandatory CMU which must participate in Capacity Market Prequalification, Company CC submits an Opt-out declaration for unit C1. Having declared that C1 will be permanently non-operational, the unit is not expected to generate in the Delivery Year, and cannot participate in the year-ahead (T-1) Capacity Auction or secondary trading. If C1 does ultimately generate during the Delivery Year, it may be subject to investigation by Ofgem.

50. CC also owns a second generator, C2, for which the future operating status is under review. The forecast economics for C2 are such that the unit may be considered for closure or mothballing. Given this uncertainty, CC is unwilling to commit to a Capacity Agreement

four years out for the T-4 Delivery Year. By electing to Opt-out and declaring that C2 will remain operational, the company retains the flexibility to either run without a Capacity Agreement, or prequalify and participate in the T-1 Capacity Auction for the Delivery Year. C2 does not face any Capacity Market penalty if it does not generate during a system stress event.

51. Data for the CMUs must be submitted (per case study A) before Opt-Out status is confirmed, this is shown in Table 5 below.

Information	*Details*	*Case Study C*
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	✓ (C1) ✓ (C2)

Table 5 Additional information for case study C

Case study D: Existing generator – refurbish

52. Company DD owns a transmission-connected existing generator, D1, which it plans to refurbish in advance of the Delivery Year of the forthcoming Capacity Auction if it can secure a multi-year Capacity Agreement at an appropriate price level. The planned capital expenditure exceeds the 3 year threshold of £125/kW but not the 15 year threshold of £250/kW set out in the Auction Guidelines. DD envisages that it would postpone the refurbishment project if failed to secure a Capacity Agreement, but that the D1 unit would remain available to operate in its current state.

53. By submitting a Refurbishing CMU application for D1, DD is not obliged to enter the Refurbishing CMU in the Capacity Auction if it prequalifies (as explained below, it may be obliged to enter the existing generator). Refurbishing CMUs only need confirm whether they are participating 10 working days (WD) before the Capacity Auction.

54. A Refurbishing CMU must provide Additional Information to cover both possible states of the CMU (pre- and post-refurbishment) and also has the option to submit an Opt-Out Declaration for the 'Pre-Refurbishment CMU'. In this case, DD envisages that the Generating Unit could continue to remain open without refurbishment and therefore submits the Additional Information required for the 'Pre-refurbishment' CMU. Note that having made this election for the existing generator, the 'Pre-refurbishment' CMU is then obliged to participate in the Capacity Auction if it is a Mandatory CMU. DD can apply for Price-Maker status for the 'Pre-Refurbishment CMU', but does not plan to do so in this case.

55. The Refurbishing CMU need not have the same capacity as the existing 'Pre-refurbishment' CMU. However, if the 'Pre-refurbishment' CMU is larger, its De-rated Capacity will be capped at that of the Refurbishing CMU for the purposes of Capacity Market participation.

Information	Details	*Case Study D*
'Refurbishing' CMU	Additional Information for a 'New Build CMU' per case study E, with two exceptions: • Planning Consents declaration not needed if no further consents required • Construction Plan need not specify a "Back-Feed Milestone"	✓
'Pre-Refurbishment' CMU	Additional Information for an 'Existing Generating CMU' per case study A *or* Opt-Out Declaration	Per Existing Generating CMU

Table 6 Additional information for case study D

Case study E: New build

56. Company EE has plans to develop a new transmission-connected Generating Unit, E1, which it plans to commission in advance of the Delivery Year of the forthcoming Capacity Auction. Since the planned capital expenditure exceeds the 15 year threshold set out in the Auction Guidelines, E1 is eligible to prequalify as a New Build CMU and seek a Capacity Agreement of up to 15 years in duration.

57. By choosing to participate in the Prequalification process, EE is not committed to participate in the Capacity Auction itself. As described later, prequalified New Build CMUs only need confirm whether they are participating 10 working days (WD) before the Capacity Auction.

58. In general, New Build CMUs will need to declare at the Prequalification stage that all Relevant Planning Consents have been obtained for the proposed investment. For 2014, participants have the option of deferring this declaration, in which case their Prequalification will be conditional on confirming their planning status before the Capacity Auction. A new plant must obtain planning permission for the size stated at Prequalification to be eligible to participate in the Capacity Auction.

59. In this case study, the planning declaration for E1 is deferred.

Information	Details	Case E1
Planning Consents	Declare all Relevant Planning Consents obtained (or able to defer declaration for 2014 until 17 days before auction)	Deferred for 2014
Construction Plan	Brief description of the works and schedule identifying : a) start of construction works b) Back-feed Milestone c) Substantial Completion Milestone Amount of Capital Expenditure proper to be incurred within 12 months of auction Statement that the expected Capital expenditure exceeds the 15 year threshold set out in Regulations	✓
Connection Agreement	Transmission Connected: Copy of one or more Grid Connection Agreement(s) for at least the De-rated Capacity by the start of the Delivery Year Distribution Connected – one of: a) Copy of one or more Distribution Connection Agreement(s) for at least the De-rated Capacity by the start of the Delivery Year b) Copy of one or more Distribution Connection Offer(s) for 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	Grid Connection Agreement (as transmission-connected)

Table 7 Additional information for case study E

Case study F: DSR

60. Company FF is an aggregator with a portfolio of Demand Side Response resources and back-up generation, having contractual control over the DSR resource. These resources are of varying size, between 0.1MW and 49MW. The generation runs periodically rather than as baseload, and does not have a connection agreement to export onto the Distribution Network. FF intends to expand the portfolio if successful in the Capacity Auction, and so wishes to prequalify some existing and new DSR resources.

61. The aggregator may determine the most appropriate configuration of CMUs and CMU components across its portfolio, subject to the following rules:

- All components within a CMU must be of the same type (e.g. DSR or existing generation)
- Resources should be aggregated to meet the CMU minimum size threshold of 2MW

- CMUs comprised of aggregated resources should not exceed 50MW in size

62. In this case, the generation units do not export directly to the Distribution System, and can therefore be treated as part of a DSR CMU. The Rules and Regulations also allow DSR CMUs to incorporate 'permitted on-site generating units', which are primarily used for on-site supply and only export electricity after meeting on-site requirements.

63. Prequalification Applications for DSR resources can be made for either Proven or Unproven capacity. To prequalify as a Proven DSR CMU, a DSR test must be completed prior to the Prequalification Window. Alternatively, DSR resources may qualify as Unproven and commit to complete a DSR Test at least one month before the Delivery Year. Credit cover for Unproven DSR resources will need to be posted with the Settlement Body following Prequalification.

64. In order to minimise its credit cover requirements, aggregator FF submits a Proven CMU Application for its existing resources (F1) and a separate Unproven CMU Application for its new DSR resources (F2), having already completed DSR Tests for the existing resources.

65. DSR Capacity can demonstrate capability via delivery of a Balancing Service. For the 2014 four year ahead Capacity Auction, National Grid is working to provide a DSR Test Certificate to DSR resources which have been called off under a Balancing Services contract for submission in the Prequalification Window.

66. The Metering Assessment for DSR CMUs provides for a choice of metering pathways. The information required for each metering pathway option is set out in the Auction Guidelines. Proven CMUs will complete the Metering Assessment during Prequalification, while Unproven CMUs must confirm that a Metering Assessment will be completed prior to the Delivery Year.

67. The Additional Information required to support the Proven DSR Prequalification application for F1 is as follows:

2 – Prequalification applications

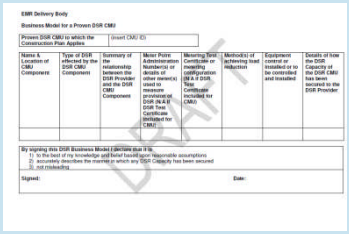
Information	Details	Case F1
DSR Test Certificate	DSR Test required to be completed prior to the commencement of the Prequalification Window – successful completion of which will see a DSR Test Certificate being issued	✓
Permitted On-Site Gen Units	Details of all such generating units and their electrical connections to the site where DSR Capacity is being provided	✓
Business Model		✓

Table 8 Additional information for case study F1

68. The Additional Information required for the Unproven DSR unit, F2, is as follows:

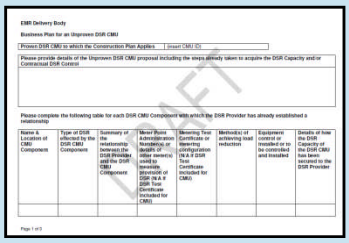
Information	Details	Case F2
DSR Test Certificate	Confirmation that the a DSR Test will be completed prior to the start of the relevant Delivery Year	✓
Metering Assessment	Confirmation a Metering Assessment, and if necessary a Metering Test, will be completed prior to the start of the relevant Delivery Year	✓
Business Plan		✓

Table 9 Additional information for case study F2

3 – Prequalification results

69. On Prequalification Results Day, National Grid will inform Applicants of the outcome of our assessment of their Prequalification Applications. We will issue Prequalification Decisions, update the Capacity Market Register and share information with Ofgem and Elexon as required to fulfil our duties as EMR Delivery Body.

70. At this time, we will provide Government with aggregate de-rating capacities for each category of applicant. We will also recommend any adjustment required to the demand curve for capacity to be procured in the Capacity Auction (as a result of plant electing to Opt-out during Prequalification whilst still operational).

71. Each party that submitted an Application will receive a notification from us by 5pm on Prequalification Results Day. For successful Applications, the notice will take the following form as shown in figure 6:

Notice of Prequalification success	
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 Rule 4.5.1 (b) (ii) or 4.5.1 (b) (iii) or 4.5.1 (b) (iv)	Conditional and provide the amount of collateral required
Whether Prequalification is conditional on providing Planning Consents requirement of Rule 4.7	Conditional and Planning consent required
The Maximum Obligation Period of the capacity agreement it may bid for	Agreement duration x years

Figure 6: Notice of Prequalification success:

72. The notified Price-Maker/ Taker status at this stage reflects the default for the CMU Type. All CMUs other than existing generators prequalify as Price-Makers. Existing Generating CMUs default to Price-Takers but may request Price-Maker status, as described in case study B.

3 – Prequalification results

73. Notices for unsuccessful applications will detail the reasons for failure. This is shown in table 7 below:

Notice of Prequalification failure	
Applicant	Applicant xxxa
Identity of CMU	CMU xx2
Failure criteria	'did not supply information X or information Y was insufficient'
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 Rule 4.5.1 (b) (ii) or 4.5.1 (b) (iii) or 4.5.1 (b) (iv)	Conditional and provide the amount of collateral required
Whether Prequalification is conditional on providing Planning Consents requirement of Rule 4.7	Conditional and Planning consent required
The maximum obligation period of the capacity agreement it may bid for	Agreement duration x years

Figure 7: Notice of Prequalification success:

74. As set out in the notification, Prequalification may be conditional on the provision of credit support. There are a number of circumstances under which collateral will be required:

- New Build CMU (prior to satisfying its Financial Commitment Milestone)
- Unproven DSR CMU (prior to completing DSR Test)
- Distribution-connected New Build CMU, if deferred Distribution Connection Agreement
- Transmission-connected Existing Generating CMU, if deferred TEC (2014 only)

➲ See Rules & Regulations:

Capacity Market Rules – Chapter 4
Auction Guidelines

4 – Appeals

75. Applicants can raise an appeal with National Grid against the Prequalification outcome.

76. The window for raising an appeal closes 5 Working Days (WD) after Prequalification Results Day. Appellants will need to raise the appeal via the EMR Delivery Body Portal and submit any additional information to support the appeal. In general, National Grid cannot consider any information or evidence during the appeal which the appellant should have provided in the Prequalification Application but failed to do so. However, this restriction does not apply for the first Capacity Auction in 2014 with regards to Existing Generating CMUs evidencing TEC or New Build Generating CMUs providing planning consents.

77. We will complete an assessment of the appeal against the Prequalification criteria and notify appellants of the appeal outcome within 5 WD. We will also update the Capacity Market Register at this time and inform Government and Ofgem of the appeal outcome.

78. Having been notified of the appeal outcome, applicants have a further 5 WD to consider whether to raise a Stage 2 appeal with Ofgem against the Prequalification outcome. Ofgem will then consider the appeal and inform the appellant and National Grid of the outcome. We will update the Capacity Market Register accordingly.

79. While Applications are subject to appeal, appellants will be able to participate in mock auctions alongside participants with prequalified CMUs. Full access to the IT Auction System will only be provided if the appeal is successful.

80. Note that we will only assess Applications against the Prequalification criteria for the CMU type specified by the Applicant during Prequalification. If an Application is unsuccessful, it cannot appeal to be re-considered against the criteria for a different CMU type. For example, if a DSR resource fails to prequalify as a Proven DSR CMU, it cannot appeal to be treated as an Unproven DSR CMU for the same auction and commit to undertake a DSR Test and Metering Assessment at a later date. The applicant may reapply for the year ahead auction or the next delivery year as a different CMU type.

➲ See Rules & Regulations:

Electricity Capacity Regulations – Part 10

5 – Pre-auction submissions

81. A number of information exchanges occur in the pre-auction period:

- We will publish information confirming the Capacity Auction timing and Auction Parameters.
- CMUs that received conditional Prequalifications must submit the information required to confirm their eligibility to participate in the Capacity Auction.
- Depending on the CMU type, Applicants can notify us whether and how they wish to participate in the Capacity Auction.

82. No later than 15 WD in advance of the Capacity Auction, we will publish information confirming the Capacity Auction date and time. We will also publish the identity of the CMUs that have prequalified for the Capacity Auction and their aggregate De-rated Capacity. At this time, we will also confirm the identity of the Auction Monitor that National Grid has appointed to verify that the Capacity Auction has been conducted in accordance with the Rules and Regulations.

83. CMU Prequalifications that were conditional on Applicant Credit Cover must provide confirmation to us that the credit cover required has been lodged with the Settlement Body. We will confirm the CMU's Prequalification status within 5 WD of receiving notice of Applicant Credit Cover.

84. CMU Prequalifications that were conditional on planning must provide confirmation to us that all Relevant Planning Consents have been obtained, no later than 17 WD before the first round of a Capacity Auction. We will then confirm the CMU Prequalification status.

85. Applicants with prequalified New Build, Refurbishing and DSR CMUs may choose whether or not to participate in the Capacity Auction. These CMUs must confirm to us their intention to participate between 15 and 10 WD before the start of the Capacity Auction.

86. Prequalified Existing Generator CMUs must participate in the Capacity Auction but do have the option of seeking Price-Maker status. Applicants with Existing Generating CMUs must provide evidence of their eligibility to participate as Price-Makers at least 10 WD before the Capacity Auction, as described in case study B below. We will confirm Price-Maker status within 2 WD of receiving this notification.

87. Note the Demand Curve, setting the required capacity to procure, does not change in light of CMUs decision not to participate in the Capacity Auction.

➲ See Rules & Regulations:

Capacity Market Rules – Chapter 5

88. We now consider the pre-auction submissions relevant to each case study. Note that further submissions are not required at this stage under case studies A and C.

Case study B: Existing generator – Price-Maker

89. Existing Generating CMUs are automatically classified as Price-Takers. Following Prequalification Results Day, Applicants with prequalified Existing Generating CMUs may seek Price-Maker status by lodging a Price-Maker Memorandum with the Authority. This Memorandum should contain a statement approved by the Applicant's board of directors (or officers if the Applicant is not a company) declaring that the CMU is likely to require a capacity price above the Price-Taker Threshold to remain operational, together with supporting analysis and information. The Authority will acknowledge receipt of the Price-Maker Memorandum, although there is not a prescribed timetable for the Authority to provide this receipt. The Applicant must submit this receipt and a Price-Maker Certificate (as set out in Exhibit B of the Rules) to National Grid between 10 and 15 working days before the Auction.

Information	Details
Price-Maker Memorandum	Evidence of Board's decision to be a PM and reasons, including analysis, supporting that decision to be lodged with the Authority in sufficient time to provide receipt to Delivery Body 10 working days ahead of auction
Price-Maker Certificate	To be provided to Delivery Body 10 working days ahead of auction

Table 10 Pre-auction submissions for case study B

Case study D: Existing generator – refurbish

90. If they wish to participate in the Capacity Auction, Refurbishing CMUs must notify the duration of the Capacity Agreement they are seeking in the first round of Capacity Auction. This must be done between 10 and 15 working days before the Auction. The duration must be less than or equal to the Maximum Obligation Period.

91. Irrespective of whether or not the 'Post-refurbishment' CMU chooses to participate in the Capacity Auction, the 'Pre-refurbishment' CMU must follow the election made during Prequalification if it is a Mandatory CMU. Unless an Opt-out Declaration was made at Prequalification, the 'Pre-refurbishment' CMU is obliged to enter the Capacity Auction, as per prequalified Existing Generating CMUs.

Information	*Details*
Confirm participation	Confirmation that the Refurbishing CMU will participate in the auction
Capacity Agreement duration	Duration of Capacity Agreement sought in the first round of the auction (1 to 3 years)

Table 11 Pre-auction submissions for case study D

Case study E: New build

92. If they wish to participate in the Capacity Auction, New Build CMUs must notify the duration of the Capacity Agreement they are seeking in the first round. Participants may revise this duration in subsequent Capacity Auction rounds if desired.

93. In this case study, the planning declaration for CMU E1 was deferred at the Prequalification stage, and so must be made in advance of the auction. The Prequalification for E1 is also conditional on the posting of credit cover, given that the project has not yet satisfied its Financial Commitment Milestone.

Information	Details
Planning consents	*For conditional Prequalifications* Declaration that all Relevant Planning Consents have been obtained for the CMU Director's certificate confirming that the Applicant can correctly make such declaration
Applicant Credit Cover Notice	*For conditional Prequalifications* Notice from the CM Settlement Body that the Applicant Credit Cover provided by the Applicant has been approved
Confirm participation	Confirmation that the New Build CMU will participate in the auction
Capacity Agreement duration	Duration of Capacity Agreement sought in the first round of the auction (1 to 15 years)

Table 12 Pre-auction submissions for case study E

Case study F: DSR

94. If they wish to participate in the Capacity Auction, DSR CMUs also have the option of nominating the level of capacity to bid into the Capacity Auction (to the extent this is less than or equal to their De-rated Capacity).

95. In this case, aggregator FF notifies that its two prequalified DSR CMUs (F1, F2) will both participate in the Capacity Auction, and confirms that credit cover has been posted for the Unproven DSR (F2).

5 – Pre-auction submissions

Information	Details
Applicant Credit Cover Notice	*For conditional Prequalifications* Notice from the CM Settlement Body that the Applicant Credit Cover provided by the Applicant has been approved
Confirm participation	Confirmation that the DSR CMU will participate in the auction
DSR capacity	Nominate DSR Bidding Capacity if it is less than or equal to De-rated Capacity (this is optional, the default is the De-rated Capacity)

Table 13 Pre-auction submissions for case study F

6 – Auction

96. The Capacity Auction will be run in a descending clock format with multiple rounds. The first round starts with the price set at the Price Cap. The price is then progressively reduced in each round until the auction discovers the minimum price at which there is sufficient capacity. Bidders can respond to the round price and withdraw capacity from the auction by submitting an Exit Bid. Price-Taker CMUs can only be withdrawn from the auction when the price is below the Price-Taker Threshold.

97. The capacity sought in the auction is described by the Demand Curve which captures the trade-off between the cost of capacity and security of supply according to the Auction Parameters specified in the Auction Guidelines, available on the EMR page of the National Grid website.

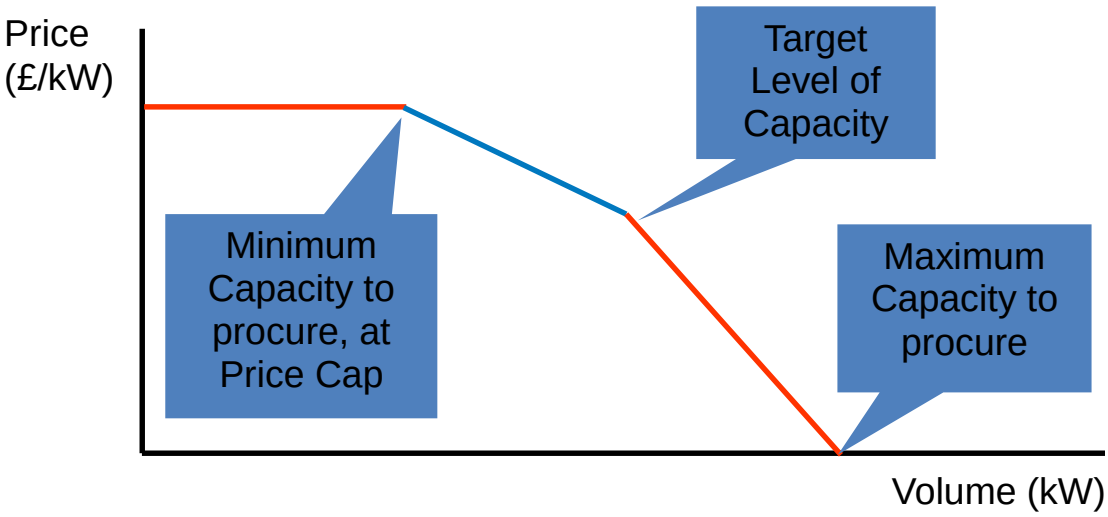


Figure 6 Illustrative auction Demand Curve

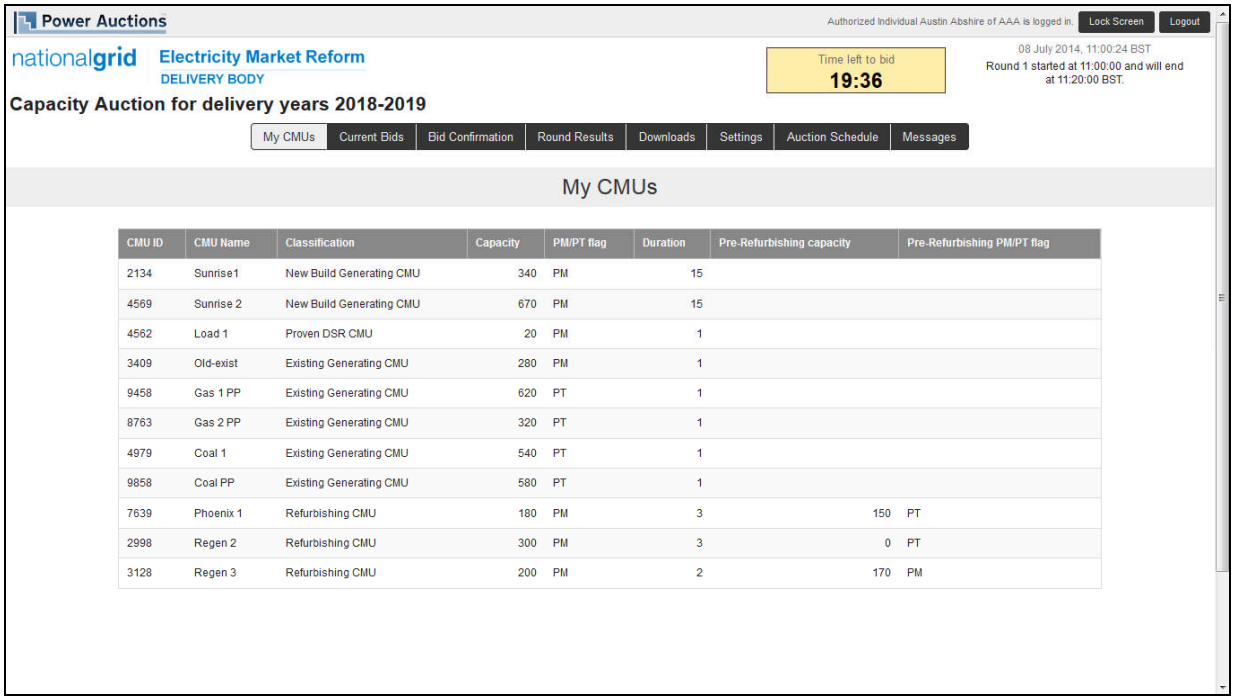
98. Participants log in to the IT Auction System using the login details provided by National Grid after the Prequalification process. Auction roles are assigned to individual users by a participant's Main Company Administrator for the EMR Delivery Body Portal.

99. CMU details will be pre-populated in the system by National Grid based on the Prequalification results, and can be confirmed by bidders during the mock auction to be held prior to the first round of the Capacity Auction proper.

100. The full, one-day mock auction will be open for all authorised bidders using actual CMU data. The Auctioneer (National Grid or a third party appointed to act on our behalf) will hold a number of dummy CMUs to control this event.

101. The IT Auction System will display information on the current round and details of the participant's CMUs.

6 – Auction



CMU ID	CMU Name	Classification	Capacity	PM/PT flag	Duration	Pre-Refurbishing capacity	Pre-Refurbishing PM/PT flag
2134	Sunrise1	New Build Generating CMU	340	PM	15		
4569	Sunrise 2	New Build Generating CMU	670	PM	15		
4562	Load 1	Proven DSR CMU	20	PM	1		
3409	Old-exist	Existing Generating CMU	280	PM	1		
9458	Gas 1 PP	Existing Generating CMU	620	PT	1		
8763	Gas 2 PP	Existing Generating CMU	320	PT	1		
4979	Coal 1	Existing Generating CMU	540	PT	1		
9858	Coal PP	Existing Generating CMU	580	PT	1		
7639	Phoenix 1	Refurbishing CMU	180	PM	3	150	PT
2998	Regen 2	Refurbishing CMU	300	PM	3	0	PT
3128	Regen 3	Refurbishing CMU	200	PM	2	170	PM

Figure 7 Illustrative screenshot of participant CMU data

102. The Auctioneer will observe participant activity, and respond to any messages raised by participants in the event of a problem. The independent Auction Monitor will have full read-only access to the IT Auction System to view all bids submitted and communications between the Auctioneer and National Grid.

103. During auction rounds, participants will have the opportunity to:

- Revise the Exit Bid price for Price-Maker CMUs
- Specify or revise the Exit Bid price for Price-Taker CMUs for rounds once the price is below the Price-Taker Threshold; Exit Bids can be submitted in advance of the round where the Price-Taker Threshold is reached
- Enter the price at which to reduce the agreement length for New Build or Refurbishing CMUs
- Specify the minimum price acceptable for a refurbishing CMU before switching to a pre-refurbishment state.

6 – Auction

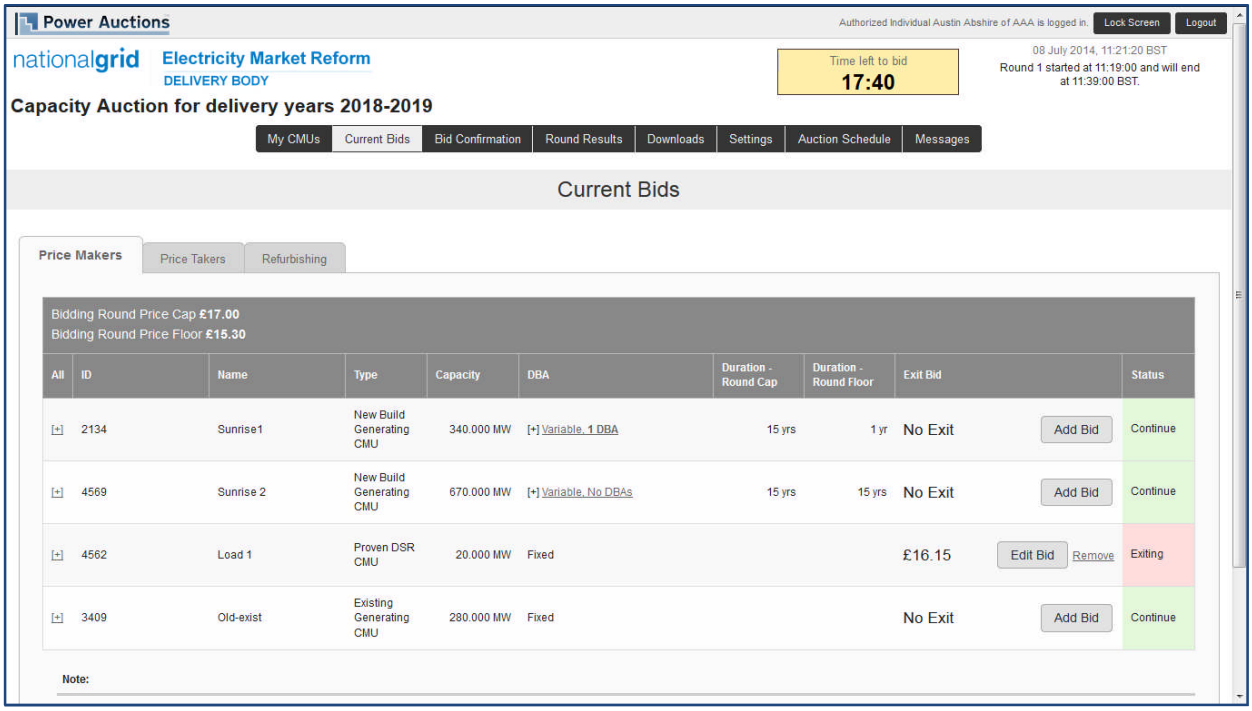


Figure 8 Illustrative screenshot of participant CMU bids

104. Note that the Rules do provide for a variant of the auction design, a Variable Price-Duration Auction, in which different prices can be considered for different agreement lengths. The auction systems have been designed with the functionality to support this alternative bidding format for New Build and Refurbishing CMUs. However, the first Capacity Auction will not use this format, and so we have not covered it in greater detail here.

105. At the end of each round, the excess capacity at the Bidding Round Floor Price will be published to the Bidders (rounded to the nearest 1 GW in a 4 year Auction and the nearest 100 MW in a 1 year Auction). Shortly afterwards, the Bidding Round Floor Price for the next round will be announced, applying a prescribed price decrement from round to round. The Auctioneer will update the capacity required in line with the Demand Curve to reflect the capacity sought at the end of round price. The next round will then be opened for Bidders.

106. The Capacity Auction will clear when the supply (remaining capacity) is less than or equal to the demand at the Bidding Round Price Floor. All cleared CMUs will receive the Clearing Price set by the highest accepted Bid, subject to tie break rules.

107. If there are two or more marginal CMUs at the same price, the tie will be broken by accepting the CMU seeking the shorter contract duration (in the non variable price duration auction). If the marginal CMUs are seeking the same contract duration, the tie will be broken by random number allocation.

108. There may not be an exact match between the supply capacity and the Demand Curve, owing to the 'lumpy' nature of individual CMU capacities. Where this occurs, the Clearing Algorithm is used to determine the Clearing Price and volume. The algorithm compares the

merits of over-procuring or under-procuring capacity by considering the integral of the Demand Curve at the two points that are above and below the target volume and subtracting the additional costs associated with over-procurement. This is illustrated by the example shown in Figure 9.

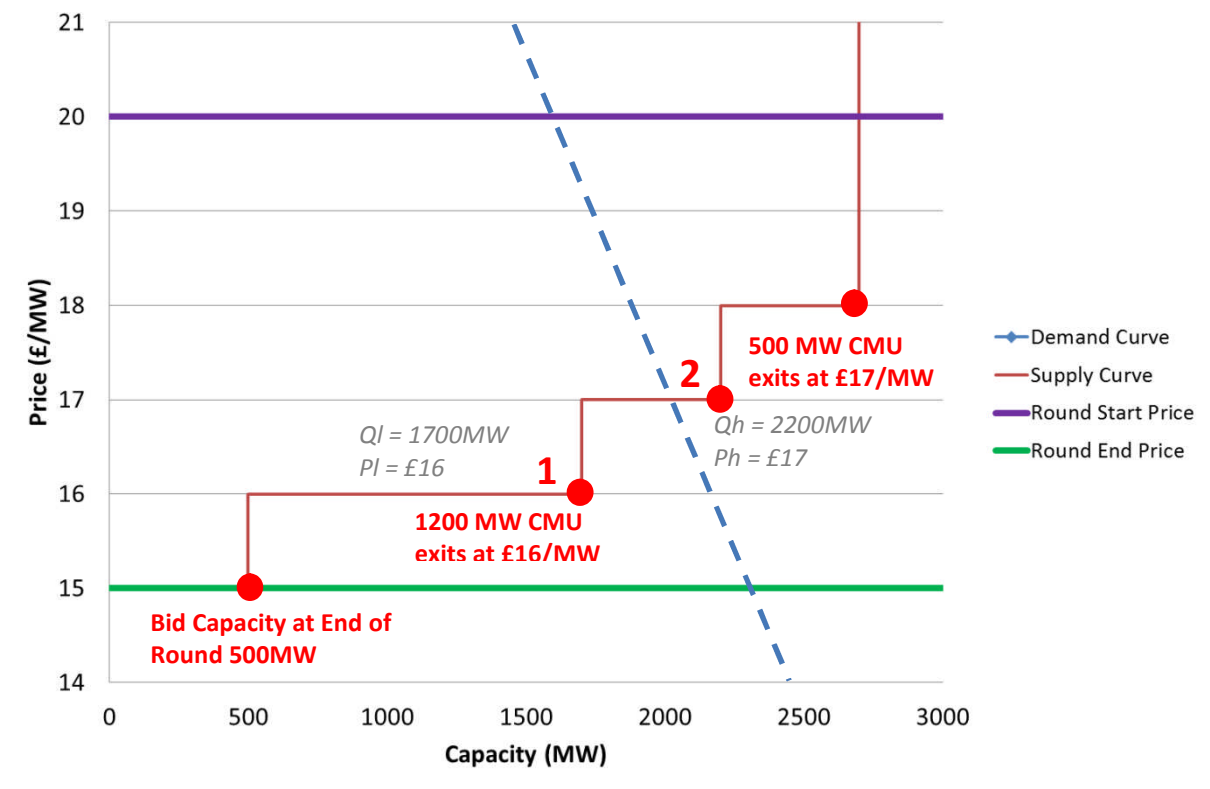


Figure 9 Auction clearing example

In this example of a non-matched clearing round, the Demand Curve intersects supply between two CMU exit bids:

- A 1200 MW CMU exiting at £16 is ranked 1
- A 500 MW CMU exiting at £17 is ranked 2

The clearing algorithm evaluates the following:

$$\int_{Ql}^{Qh} P(Q)dQ \; - (QhPh \; - QlPl)$$

In this case, the calculation results in a negative value which implies that the clearing volume should be rounded down (below the Demand Curve target volume) rather than up. The auction therefore clears at the price Pl of £16 and the quantity Ql of 1700 MW. The CMU ranked 1 receives a Capacity Agreement but the CMU ranked 2 will not.

6 – Auction

109. It should be emphasised that entering the Capacity Auction is a binding commitment. Any CMU that has not submitted an Exit Bid will be awarded a Capacity Agreement, subject to tie break rules, even if the participant has not logged in to the IT Auction System at any point in the auction process.

110. Within 24 hours of the Capacity Auction closing, we will notify Bidders whether, based on provisional results, they have been awarded a Capacity Agreement (with the details). We will also notify Government and Ofgem of the provisional results.

111. Within 2 WD of the Capacity Auction closing, the Auction Monitor must report to the Secretary of State on whether the procedures in the Rules and Auction Guidelines have been properly followed in the conduct of the Capacity Auction.

➲ See Rules & Regulations:

Capacity Market Rules – Chapter 5
Auction Guidelines

➲ See support & training materials:

Capacity Market system specific training

112. We now consider the potential Capacity Auction outcomes and consequent implications for each case study (noting that auction participation does not feature in case study C).

Case study A: Existing generator – Price-Taker

113. As a Price-Taker, the existing generator A1 may not exit the Capacity Auction until the round price has fallen below the Price-Taker Threshold. In this case, we assume that A1 has not submitted an Exit Bid before the auction clears, and will therefore receive a one year Capacity Agreement at the Clearing Price.

114. Having obtained a Capacity Agreement, the generator A1 will be obliged to deliver according to its obligation during System Stress Events in the Delivery Year, or face penalty charges. The generator will also be eligible to receive over-delivery payments (if it delivers in excess of its Capacity Obligation during a System Stress Event) and to participate in secondary trading.

6 – Auction

Case study B: Existing generator – Price-Maker

115. Having qualified as a Price-Maker, the Exit Price submitted for the existing generator B1 is not restricted by the Price-Taker Threshold. In this case, we assume that B1 exits the Capacity Auction before the clearing round and does not receive a Capacity Agreement.

Case study D: Existing generator – refurbish

116. The Exit Price and agreement length for the Refurbishing CMU, D1, may be revised during the Capacity Auction. In this case, we assume that the auction price falls below the Exit Price submitted for the Refurbishing CMU. At this point, the pre-refurbishment CMU takes its place in the auction. Assuming D1 clears the auction as a pre-refurbishment CMU, it will receive a one year Capacity Agreement, as in the case of A1 above.

117. D1 could enter Prequalification and the Capacity Auction again as a Refurbishing CMU in the next T-4 Capacity Auction.

118. Following the Capacity Auction, capacity providers with Refurbishing CMUs must provide us with a progress report every 6 months setting out the schedule for achieving their construction milestones. Failure to meet the Financial Commitment Milestone obligation within 18 months of the Capacity Auction is considered a Termination Event under the Capacity Agreement.

119. Prior to the start of the first Delivery Year, a Refurbishing CMU holding a multi-year Capacity Agreement must provide us with a certificate from an Independent Technical Expert confirming that the capital expenditure incurred has exceeded the appropriate minimum threshold set out in the Regulations. If the capital expenditure incurred is below the 3 year minimum threshold, the duration of the Capacity Agreement for the Refurbishing CMU will be reduced to 1 year.

Case study E: New build

120. As a New Build CMU, the bidder representing E1 may revise the Exit Price and agreement length during the auction. In this case, we assume that E1's Exit Price is below the auction clearing price, and that E1 receives a Capacity Agreement for the maximum permitted duration of 15 years.

121. Following the Capacity Auction, capacity providers with New Build CMUs must provide us with a progress report every 6 months setting out the schedule for achieving their construction milestones. Failure to meet the Financial Commitment Milestone obligation within 18 months of the Capacity Auction is considered a Termination Event under the Capacity Agreement.

122. Prior to the start of the first Delivery Year, a New Build CMU holding a multi-year Capacity Agreement must provide us with a certificate from an Independent Technical Expert confirming that the capital expenditure incurred has exceeded the appropriate minimum

threshold set out in the Regulations. If the capital expenditure incurred is below the 15 year minimum threshold but exceeds the 3 year threshold, the duration of the Capacity Agreement for the New Build CMU will be reduced to 3 years.

123. A New Build CMU is not entitled to any payments under the Capacity Agreement until it has reached its Substantial Completion Milestone and achieved operational generating capacity (on a de-rated basis) equivalent to at least 90% of its Capacity Obligation

Case study F: DSR

124. As Price-Makers, DSR CMUs may submit Exit Bids which are not restricted by the Price-Taker Threshold if they wish to do so. In this case, aggregator FF submits different Exit Bids for its two prequalified DSR CMUs (F1, F2). Both CMUs are cleared in the auction and are awarded one year Capacity Agreements at the clearing price.

125. Having been awarded a Capacity Agreement, the Unproven DSR CMU (F2) will need to complete a DSR test. A DSR Test Certificate evidencing the DSR Capacity for F2 will need to be provided no later than one month prior to the start of the Delivery Year.

126. Both Proven and Unproven DSR CMUs will need to complete a Metering Assessment before the Delivery Year, as well as a Metering Test if required.

7 – Update registration

127. Having initially set up company and user details on the EMR Delivery Body Portal (see Step 1), participants may wish to update their registration from time to time; for example, to add a new user or amend an email address.

128. Updates to company and user details, including password and PIN resets for these users, can be managed directly on the EMR Delivery Body Portal by the Main Company Administrator.

129. Contact us, via the EMR Delivery Body Portal, to revise the registration for the Main Company Administrator. We will update contact details and re-set passwords or PINs for the Main Company Administrator.

➲ See support & training materials:

Capacity Market system specific training

8 – Access CM Register

130. Entries on the Capacity Market Register will be publicly available with the following exceptions:

- Participant's bank account details
- Any Exit Bids
- The Price-Maker or Price-Taker status of a CMU

131. Where a Capacity Provider considers that an entry relating to it in the Capacity Market Register is factually inaccurate, they may ask us to amend or delete the entry. We will accept the request and rectify the relevant entry within 5 WD, or refuse with reasons for our decision.

132. Where we refuse to update the Capacity Market Register the Capacity Provider may dispute that decision and request that we review our decision as per Regulation 69.

133. We cannot update information which would change the Prequalification results without potentially triggering termination of the Capacity Agreement.

➲ See Rules & Regulations:

Electricity Capacity Regulations - Part 10

Capacity Market Rules – Chapter 6 and 7

➲ See support & training materials:

Capacity Market system specific training

9 – Delivering Capacity Obligations

134. CMUs which have secured a Capacity Agreement at the auction must deliver against their capacity obligation at times of system stress, or face a financial penalty. Capacity providers will not be 'called upon' to deliver capacity or receive an individual despatch instruction. The Capacity Market Warning is a signal to all providers that system stress is anticipated.

135. Providers can deliver the obligation by scheduling generation or proactively reducing consumption to deliver sufficient electricity to meet the Adjusted Load Following Capacity Obligation (ALFCO) following the Capacity Market Warning, or via the provision of a contracted balancing service in line with obligation.

136. Penalties, set at 1/24th of the Capacity Auction Clearing Price, are levied on participants who fail to meet their obligation.

137. The volume of capacity to be delivered is set out in the Capacity Agreement and the Rules. The basic obligation is the De-rated Capacity of the CMU bid into the Capacity Auction which is awarded a Capacity Agreement. This capacity obligation is that needed to meet peak demand. This volume is amended to reflect any physical trading of obligations. In the event of any Capacity Agreements being suspended, as set out in the Rules, there is a further adjustment.

138. This Capacity Obligation (CO) modulates with underlying system demand for electricity. The formula is structured so that a provider's obligation will not be more that the De-rated Capacity it bid into the Capacity Auction.

139. Provision of some balancing services contracts to the System Operator (SO) may impede a provider's ability to deliver the obligation, as some volume may be restricted from delivery or effectively be under SO control. The Load Following Capacity Obligation (LFCO) will also be modified to reflect such contracts with and instructions from the SO. This ensures that the capacity market incentives are consistent with actions required for efficient system operation.

140. The System Operator will issue a Capacity Market Warning (CMW) when the anticipated system margin in four hours' time is less than 500MW. In the event of a System Stress Event starting which was not forecast, a CMW will also be issued. The CMW remains in force until the forecast available margin is greater than the trigger level of 500MW. The SO has no discretion with regard to issuing or cancelling the Capacity Market Warning.

141. This warning is not a despatch instruction to capacity providers, but a signal that providers must deliver their obligation in four hours' time if a System Stress Event is prevailing at that time in order to avoid Capacity Market penalties. The CMW will be published to all market participants and CMUs. The System Operator will also use all existing electronic communication routes in place to issue the CMW.

142. A System Stress Event is deemed to have occurred if, and only if the following criteria have been met:

- The System Operator has issued, manually or automatically, instruction to Distribution Network Operators to reduce demand on their networks in accordance with OC6 of the Grid Code (an "Involuntary Demand reduction"). Such demand control measures include those implemented by load shedding or voltage reduction
- The instructions issued are not found to be solely the result of a failure of any part of the transmission network or any part of any distribution network.
- The volume of Involuntary Demand Control instructions issued under OC6 in any settlement period is in excess of the volume of any Bid Acceptances issued under the Balancing and Settlement Code to BM units in order to reduce their export of electrical energy onto the total system.

143. CMUs which are comprised of one or more Balancing Mechanism Units should continue to submit information to the BM systems as required by the Balancing and Settlement Code. Such CMUs must deliver in line with Final Physical Notifications (FPNs) submitted and respond to Bid-Offer Acceptances and all other System Operator instructions in line with normal operating procedure.

144. When a CMW is issued, providers must deliver their ALFCO in four hours' time to avoid CM penalties should a System Stress Event be active at that time. They do not have a liability for penalties unless there is System Stress Event when a CMW is in force. There is also the potential for payments to providers delivering more than obligated during periods where penalties apply. This is illustrated further in the diagrams below.

145. In Figure 10 below a CMW has been issued, taking effect in 4 hours time. However, there is no Involuntary Demand Reduction until later. It is assumed that the whole period of Involuntary Demand is subsequently classified as a System Stress Event.

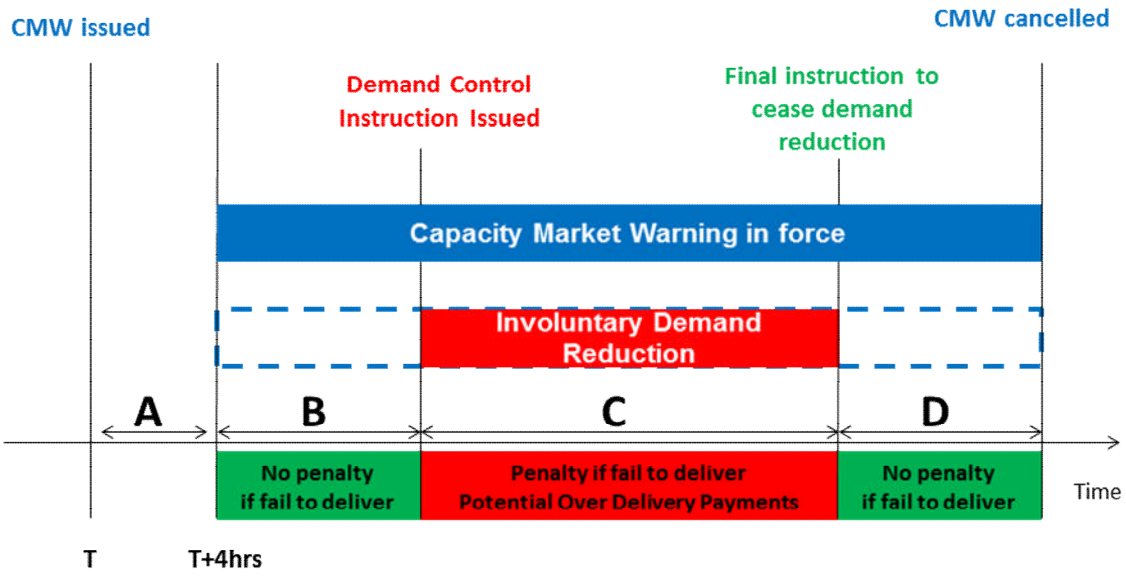


Figure 10 Stress Event after CMW takes effect

146. During Period A, the four hours immediately after the warning has been issued, there is no requirement for capacity providers to deliver. This does not impact ongoing BSC and electricity market obligations.

147. During Period B, the CMW is in force and so had a stress event occurred by this point providers would need to ensure that each CMU is delivering its ALFCO in order to avoid penalties. However as the stress event has yet to start in Period B there is no consequential penalty liability for a failure to deliver against the ALFCO.

148. During Period C, the System Operator has issued a Demand Reduction Instruction to the DNO, or there has been an Automatic Low Frequency Demand Disconnection. The settlement services provider will levy penalties to providers who do not deliver against their ALFCO if subsequently this period meets the requirements to be classified as a System Stress Event.

149. During Period D, while the CMW remains in force providers who fail to deliver their ALFCO will not be liable for penalties as there is no system Stress Event.

150. Figure 11 shows the scenario of the period of Involuntary Demand Control starting within the four hour period immediately following the issuing of the Capacity Market Warning. Again it is assumed that the entire period of Involuntary Demand Control is subsequently classified as a System Stress Event.

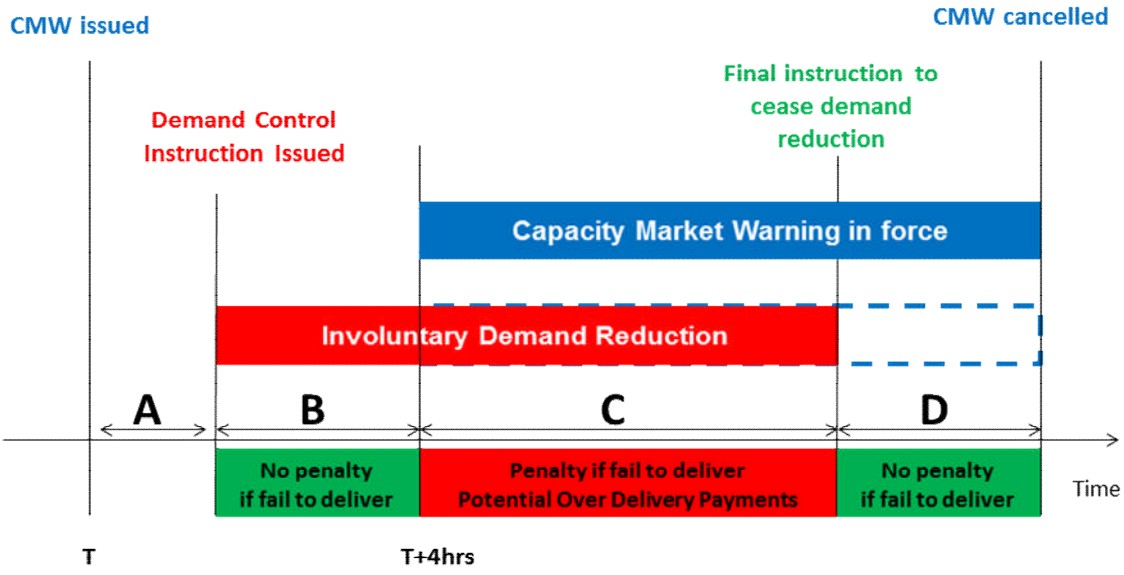


Figure 11 Stress event before CMW takes effect

151. During Period A, the period immediately after the warning has been issued, there is no requirement for capacity providers to deliver to avoid penalties as neither the CMW nor a System Stress Event is active. This does not impact ongoing BSC and electricity market obligations.

152. During Period B, in this case, the CMW is not yet in force, though the System Stress Event has begun. Therefore because the CM Warning is not yet active, providers are not obliged to deliver their ALFCO and have no liability for penalties

153. During Period C, the System Operator has issued a Demand Reduction Instruction to the DNO, or there has been an Automatic Low Frequency Demand Disconnection, and the CMW is in force. The settlement services provider will levy penalties to providers who do not deliver against their ALFCO.

154. During Period D, while the CMW remains in force providers who fail to deliver their ALFCO will not be liable for penalties as the System Stress Event has ended.

155. Figure 12 shows the scenario of the period of Involuntary Demand Control starting where no CMW has been issued. In this case, the start of the demand control event triggers the issuing of the CMW. Again it is assumed that the entire period of Involuntary Demand Control is subsequently classified as a System Stress Event.

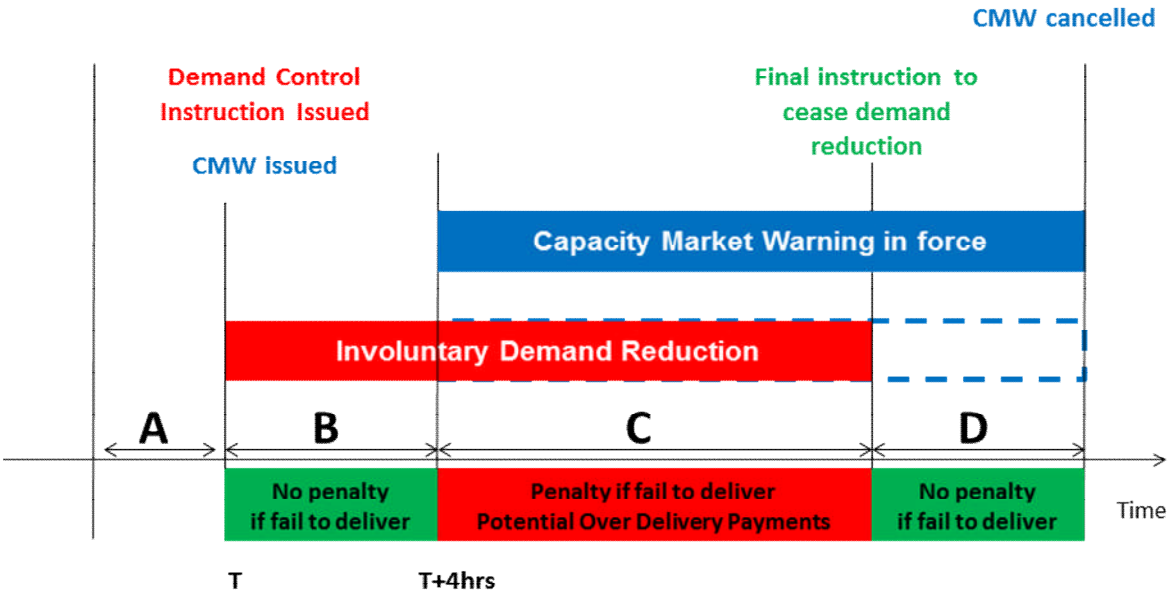


Figure 12 Demand control triggers CMW

156. In this case, the start of the demand control event triggers the issuing of the CMW. The obligations and potential liability for penalties of providers is unchanged from the situation described above where the System Stress Event has commenced before the CMW is in force.

➲ See Rules & Regulations:

Electricity Capacity Regulations – Part 6

Capacity Market Rules – Chapter 8

10 – Trading

157. Auction participants who are successful in the Capacity Auction will be awarded a Capacity Agreement. The Regulations and Rules include two methods for providers to mitigate the risk of penalties if they are unable to meet their obligation, physical secondary trading and Volume Reallocation. The design also supports a third option, where parties can procure a financial hedge.

Physical trading:

158. Capacity Providers with an active Capacity Obligation may transfer that obligation subject to the conditions set out in Chapter 9 of the Rules. However, a change to the Regulations is required to enact this chapter. Once this change takes effect, this will offer risk mitigation to capacity providers by allowing them to transfer the Capacity obligation to another party; the original holder no longer receives Capacity Payments and has no exposure to penalties if there is a System Stress Event.

159. The receiving party must have successfully prequalified for an auction for that Delivery Year, or for secondary trades for that Delivery Year. They cannot have received an obligation via the Capacity Auction.

160. Requests to enact a trade are submitted via the EMR Delivery Body Portal. [We] will confirm the trade and parties that meet the criteria and update the Capacity Market Register accordingly.

161. Trading can start after the year ahead auction for the Delivery Year and continue throughout the Delivery Year, up to five working days before the transfer of obligations becomes effective.

Volume Reallocation:

162. Following a stress event, volume reallocation allows capacity providers who have over delivered to transfer excess output of a CMU to a separate CMU. Where a CMU has delivered more than its Adjusted Load Following Capacity Obligation, ALFCO, (‘the seller’) would be permitted to reallocate the excess output to another CMU which did not deliver all or part of its ALFCO (‘the buyer’).

163. The obligation of either CMU is not changed by the trade. The buyer would be considered to have met its ALFCO via a combination of any output of its own and that nominated from other CMUs. The seller would not receive over delivery payments for any MW transferred to another CMU. In volume reallocation ‘the seller’ is called the Capacity Market Volume Reallocation Transferor (CMVR Transferor) and ‘the buyer’ is called the Capacity Market Volume Reallocation Transferee (CMVR Transferee).

164. The CM Settlement Body administers this process, ensuring that limits on the volume to be reallocated and controls around which parties can reallocate excess output in the CM Rules are followed. Following a stress event the CM Settlement Body maintains a Capacity

Volume Register which contains information on a CMU's performance in relation to its ALFCO. This information may be used by a capacity provider to determine whether a CMU qualifies as a CMVR Transferee or a CMVR Transferor. In order to participate in volume reallocation capacity providers must submit notices to reallocate volume to the CM Settlement Body in line with the timetable set out in the Regulations and CM Rules.

Financial Hedge:

165. The Regulations and Rules do not describe a process for putting arrangements in place to mitigate the risk of penalties via a hedge product. The inclusion of payments to providers who deliver more than obligated supports the development of such a market.

166. This would not move the Capacity Agreement, and associated rights and obligations, from the capacity provider. The capacity provider agrees to pay another party, the hedge provider, a premium and this hedge provider agrees to pay the capacity provider an amount sufficient to cover their penalty (or some portion of that) in the event of a stress event. The details of the trade would be agreed privately between the parties on a bilateral basis.

167. Parties looking to be a hedge provider would not need to qualify for participation in the capacity market. There is no requirement to demonstrate access to a physical asset in operation in the energy market. It is not anticipated (although it is possible) that hedge providers would offer a naked hedge, rather it is considered more likely that they would have a physical asset, or contract with a physical asset, eligible for capacity market 'over delivery' payments.

➲ See Rules & Regulations:

Capacity Market Rules – Chapters 9 & 10

Appendix 1 – Templates for Prequalification

Template for Construction Plan for New Build CMU

New Build CMU to which the Construction Plan Applies	

Please provide a high level description of the construction, repowering or refurbishment works

Please provide the earliest and latest planned dates for the completion of the following milestones		
	Earliest Date	**Latest Date**
Commencement of Construction Works		
Achievement of the Back-Feed Milestone		
Achievement of the Substantial Completion Milestone		

Please provide details of the Total Project Spend	**£**

Please mark with an "x" whether the Qualifying £/kW Capital Expenditure is:	
Equal to or greater than the Fifteen Year Minimum £/kW Threshold	
Greater than or equal to the Three Year Minimum £/kW Threshold but less than the Fifteen Year Minimum £/kW Threshold	
Less than the Three Year Minimum £/kW Threshold	

By signing this Construction Plan I declare that it is 1) to the best of my knowledge and belief based upon reasonable assumptions 2) an accurate summary of the planned works 3) is not misleading
Signed: **Date:**

Appendix 1 – Templates for Prequalification

Template for Construction Plan for Refurbishing CMU

Refurbishing CMU to which the Construction Plan Applies	

Please provide a high level description of the construction, repowering or refurbishment works

Please provide the earliest and latest planned dates for the completion of the following milestones		
	Earliest Date	**Latest Date**
Commencement of Construction Works		
Achievement of the Substantial Completion Milestone		

Please provide details of the Total Project Spend	**£**

Please mark with an "x" whether the Qualifying £/kW Capital Expenditure is:	
Equal to or greater than the Fifteen Year Minimum £/kW Threshold	
Greater than or equal to the Three Year Minimum £/kW Threshold but less than the Fifteen Year Minimum £/kW Threshold	
Less than the Three Year Minimum £/kW Threshold	

By signing this Construction Plan I declare that it is

1) to the best of my knowledge and belief based upon reasonable assumptions
2) an accurate summary of the planned works
3) is not misleading;

Signed: **Date:**

Appendix 1 – Templates for Prequalification

Template for Business Model for a Proven DSR CMU

Proven DSR CMU to which the Business Model 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) an accurate description of the manner in which any DSR Capacity has been secured
3) not misleading

Signed: **Date:**

Appendix 1 – Templates for Prequalification

Template for Business Plan for an Unproven DSR CMU

Unproven DSR CMU to which the Business Plan Applies	(insert CMU ID)

Please provide details of the Unproven DSR CMU proposal including the steps already taken to acquire the DSR Capacity and/or Contractual DSR Control

Please complete the following table for each DSR CMU Component with which the DSR Provider has already established a relationship

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

Appendix 1 – Templates for Prequalification

Please complete the following table as far as information is available for each DSR CMU Component with which the DSR Provider intends to establish a relationship

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

Please provide details of the programme or strategy for procuring any further DSR CMU Components to ensure that the Unproven DSR Capacity is available, including: **i) Method(s) of achieving load reduction** **ii) Equipment controlled or installed, or to be controlled or installed** **iii) Details of how the DSR Capacity of the DSR CMU has, or will be secured to the DSR Provider** **iv) Any additional information as previously specified as being required by the Delivery Body [in the Auction Guidelines] for an Unproven DSR CMU**

Appendix 1 – Templates for Prequalification

By signing this DSR Business Plan I declare that it is 1) to the best of my knowledge and belief based upon reasonable assumptions 2) an accurate description of the manner in which any DSR Capacity has been secured 3) not misleading
Signed: **Date:**

Appendix 2 – De-rating Factors for CMU Components

Case study G: Existing generator – CMU Components of different technologies

168. Company GG owns an Existing Generator comprising two coal Generating Units and one OCGT Generating Unit. GG wishes to prequalify the three units as a single CMU. Each unit has a separate BMU ID but is located at the same site with a single transmission connection point.

169. The coal units are 500MW each and the OCGT is 280MW with a De-rating Factor of 87.64% and 93.61% respectively. The De-rated Capacity is calculated by multiplying the Connection Capacity of a Generating Unit (in Megawatts) and the De-Rating Factor.

170. The De-rating Factor is applied to the CMU Component, so AA can calculate each component's De-rated Capacity individually and the aggregate of the three provides the total CMU De-rated Capacity..

CMU Component	*Calculation*
CMU Component 1 Coal	500MW multiplied by 0.8764 = 438.2MW
CMU Component 2 Coal	500MW multiplied by 0.8764 = 438.2MW
CMU Component 3 OCGT	280MW multiplied by 0.9361 = 262.108MW
Total CMU De-rated Capacity	438.2MW + 438.2MW + 262.108 = **1138.508MW**

Appendix 3 – Further Information

Regulations, Rules and Guidelines

DECC website

The Electricity Market Reform (General) Regulations 2014
http://www.legislation.gov.uk/id/ukdsi/2014/9780111116791

The Electricity Capacity Regulations 2014:
http://www.legislation.gov.uk/ukdsi/2014/9780111116852/

The Capacity Market Rules
https://www.gov.uk/government/publications/draft-capacity-market-rules-2014

Implementing EMR
https://www.gov.uk/government/publications/implementing-electricity-market-reform-emr

Associated documents.
https://www.gov.uk/government/policies/maintaining-uk-energy-security--2/supporting-pages/electricity-market-reform

National Grid DB website

Auction Guidelines
http://www2.nationalgrid.com/UK/Our-company/Electricity/Electricity-market-reform

Ofgem website

https://www.ofgem.gov.uk/electricity/wholesale-market/market-efficiency-review-and-reform/electricity-market-reform

Help and Training

Delivery Body Portal

www.emrdeliverybody.com

Available during 2014

How to complete Registration (webinars and training manuals)

Bulk upload facility to enable early preparation of Registration and Application data

- Company and Main Administrator Registration
- User and Sub-company Registration
- Prequalification Data
- CMU Data

How to submit application to Prequalify

- System Specific Training
- System user manuals

IT Auction System training

- Screencast
- Bidder manual
- User Trials
- Telephone Training

Mock Auction

National Grid EMR page

For Information on all National Grid's Capacity Mechanism Implementation Coordination events, including copies of the materials presented, please follow this link :

http://www2.nationalgrid.com/UK/Our-company/Electricity/Electricity-market-reform

For automatic notification on updates to our web pages, please subscribe via the link on our web page or via the link below.

http://nationalgrid.us5.list-manage.com/subscribe?u=d919930dfbffc8e4d3684958d&id=0f71e5a893

Elexon

EMR Circulars and Stakeholder engagement

http://www.elexon.co.uk/reference/electricity-market-reform/