Department of Energy & Climate Change

ELECTRICITY MARKET REFORM ANNUAL UPDATE 2014

Electricity Market Reform Annual Update 2014

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Executive summary

Electricity Market Reform (EMR) is the biggest change to the electricity market since privatisation. This Government's reforms have aimed to tackle the huge challenges facing the electricity sector – ensuring security of supply and decarbonising our power sector at an affordable cost to consumers. Following the inception of EMR in late 2010, through the introduction of legislation and Royal Assent of the enabling Energy Act in 2012-13, 2014 has been the year where EMR has moved from the drawing board to delivery. This first EMR Annual Update provides detail to Parliament and other stakeholders on the progress of our reforms and the path ahead.

Reforming the electricity market has been a key priority for the Government. The Energy Act 2013, which implements EMR, introduced innovative institutional and market arrangements to secure the investment that the UK needs. The reforms are intended to:

- maintain security of supply, ensuring that the lights will stay on;
- make progress towards our decarbonisation and renewables targets; and
- ensure that consumers pay a fair price for low carbon electricity.

To meet these objectives for EMR, Government has put in place the following measures:

- **Contracts for Difference,** to drive investment in low carbon electricity generation, with the first contracts awarded through the **Final Investment Decision Enabling for Renewables process;**
- an **Offtaker of Last Resort** to ensure independent renewable generators have access to market;
- The **Capacity Market** to ensure security of supply;
- **Emissions Performance Standard** to implement a regulatory backstop on the amount of carbon emissions that new fossil fuel power stations are allowed to emit;
- A pilot to incentivise **Electricity Demand Reduction**, to test the ability of energy efficiency reductions to compete with generation capacity in providing security of supply.

The Energy Bill received Royal Assent in December 2013. This report summarises the progress on EMR since then. The Government has delivered all major milestones in order to allocate Contracts for Difference (CFDs) for renewables and run the first Capacity Market (CM) auction by the end of this year. This has included finalising the policy design; delivering the necessary secondary legislation and supporting measures needed to enable the CFD and CM to work; and securing European Union State aid approval for the key components of the reforms.

EMR's success is ultimately based on delivering investment – and we are seeing strong evidence that our reforms are already starting to deliver the investment the UK needs:

- the first set of CFD contracts, awarded under the Final Investment Decision Enabling for Renewables process, mean that by 2020, the projects will provide up to £12 billion of private sector investment, supporting 8,500 jobs. The projects could add a further 4.5GW of low-carbon electricity to Britain's energy mix (or around 4% of capacity), generating enough clean electricity to power over three million homes.
- £300m has been made available for the CFD allocation round this autumn. We intend that this budget will be allocated competitively, driving down costs for consumers and accelerating the move towards technology-neutral competition;
- Over 62 GW of capacity has pre-qualified for the Capacity Market auction in December – helping to ensure we will have a competitive auction which means our security of supply needs can be met at lower cost.

Table 1:key EMR deliverables; these are set out in further detail later

Deliverable	Achieved	When
Energy Bill received Royal Assent	✔	December 2013
Transitional arrangements from the Renewables Obligation	✔	March 2014
First Contracts for Difference awarded under Final Investment Decision Enabling for Renewables process	✔	April 2014
State aid approval for • Contracts for Difference for Renewables, • Capacity Market and • 5 Final Investment Decision (FID) Enabling for Renewables projects	✔	July 2014
Electricity Demand Reduction Pilot opened	✔	July 2014
EMR implementing regulations entered into force and delivery bodies' functions conferred	✔	August 2014
Contracts for Difference allocation round opened	✔	October 2014
Capacity Market auction	On track	December 2014
Emission Performance Standard implementation	On track	January 2015

Contracts for Difference

Introduction

Deliverable	Achieved	When
First CFD awarded under FID Enabling for Renewables	✔	23 April 2014
State aid approval received	✔	23 July 2014
Allocation technology groupings published	✔	24 July 2014
Regulations entered into force	✔	01 Aug 2014
CFD contract published	✔	29 Aug 2014
CFD Allocation Framework published	✔	02 Oct 2014
CFD budget published	✔	02 Oct 2014
Offtaker of Last Resort regulations entered into force	✔	14 Oct 2014
CFD allocation round opened	✔	16 Oct 2014
CFD application closing date	✔	30 Oct 2014
Delivery Body publish auction notice	On track	2 Dec* 2014
Sealed bid submission closing date	On track	9 Dec* 2014
LCCC issue contracts for signature	On track	20 Jan 2015*
Deadline for contract signature	On track	3 Feb 2015*

Table 2: CFD deliverables since December 2013

*Earliest possible date for milestone; may be later e.g. in event of applicants appealing eligibility decisions

1. The Contract for Difference (CFD) is an innovative new instrument aimed at driving deployment of low carbon electricity at lower cost to consumers. The CFD is a private law contract between a low carbon electricity generator and the Low Carbon Contracts Company (LCCC). A generator with a CFD is paid the difference between the 'strike price[1]'

[1] The EMR Delivery Plan was published in December 2013 included the administrative strike prices for renewable technologies for CFD commissioning during the period 2014/15-2018/19

– a price for electricity reflecting the cost of investing in a particular low carbon technology – and the 'reference price'– a measure of the average market price for electricity in the GB market (calculated differently depending on whether the generator is intermittent or baseload). It gives greater certainty and stability of revenues to electricity generators by reducing their exposure to volatile wholesale prices, whilst capping the amount consumers pay for support costs when electricity prices are high. CFDs will be funded by a levy on all licensed electricity suppliers (the 'supplier obligation'). Further details on CFDs can be found in Chapter 2 in the Implementing EMR handbook.

Awarding the first CFDs: Final Investment Decision (FID) Enabling for Renewables

2. The aim of the FID Enabling for Renewables process was to support projects facing investment hiatus ahead of the implementation of EMR. Eight renewable electricity projects were awarded Investment Contracts (early CFDs) in April 2014. These have now been signed and were laid before Parliament on 4 June 2014. This is the first support offered under the EMR programme and it will provide up to £12 billion of private sector investment by 2020. These projects include biomass conversion, dedicated biomass with Combined Heat and Power (CHP) and offshore wind[2].

3. On 23 July 2014, the European Commission gave State aid approval to the five offshore wind projects which were awarded Investment Contracts. The Government is still in a dialogue with the European Commission regarding State aid approval for the three other projects that were awarded Investment Contracts in April: two biomass conversions and a dedicated biomass plant with CHP. The Government transferred the management of offshore wind Investment Contracts to the LCCC on 1 August 2014.

CFD enduring regime

CFD technology groupings and the move to competitive allocation

4. Allocation of CFDs under the enduring regime will be subject to competition – with renewable electricity projects competing for support in order to drive innovation and reduce costs to consumers. We have been able to introduce competition more rapidly than originally intended, enabled by the success of the FID Enabling for Renewables process and the strong pipeline of renewable electricity projects.

5. To reflect the different levels of technology development in renewable electricity, and enable a range of renewable technologies to receive CFDs, the Government has confirmed that

    a. the CFD budget will be split into budget groups or 'pots':

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https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/268221/181213_2013_EMR_Delivery_Plan_FINAL.pdf. Strike prices can also be competitively set.

[2] A full list of the successful FID Enabling for Renewables projects can be found at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/305781/Successful_Projects.pdf

- a group of 'established' technologies (Onshore Wind (>5 MW), Solar Photovoltaic (PV) (>5 MW), Energy from Waste with CHP, Hydro (>5 MW and <50 MW), Landfill Gas and Sewage Gas;
- a group of 'less established' technologies (Offshore Wind, Wave, Tidal Stream, Advanced Conversion Technologies, Anaerobic Digestion, Dedicated biomass with CHP and geothermal), Scottish Islands onshore wind[3]; and
- a group for biomass conversions.

b. A 100MW minimum threshold will apply for wave and tidal stream technologies (i.e. not including tidal lagoon or tidal barrage) across both the RO and CFD schemes for the duration of the first Delivery Plan period.

First allocation round

6. The first application window opened for CFD applicants on 16 October 2014. The application process is being administered by National Grid, the EMR Delivery Body. The LCCC will offer contracts to successful CFD applicants following the allocation process.

7. The final CFD budget[4] notice for this allocation round was published on the 2 October 2014 and allows for projects commissioning between 2015/16 and 2018/19 to compete for £300m of annual support.

    - The budget for pot 1 (established technologies) provides for projects commissioning in 2015/16 to compete for £50m of annual support payments. A further £15m will be placed in the budget from 2016/17 which allows for projects commissioning between 2016/17 and 2018/19 to compete for up to £65m of annual support payments.

    - The budget for pot 2 (less established technologies) provides for projects commissioning in 2016/17 to compete for £155m of annual support. A further £80m will be placed in the budget from 2017/18 which allows for projects commissioning between 2016/17 and 2018/19 to compete for up to £235m of annual support.

    - No budget is available for Group 3 (biomass conversions) in this allocation round.

8. The budgets for the 2015 allocation round will be confirmed next year, but £50 million per annum more has already been provisionally allocated for established technologies, with significant further funding potentially available to fund further projects, including renewables and Carbon Capture and Storage, by 2020-21.

9. On 2 October 2014 the final CFD Allocation Framework for the first allocation round was published[5]. It set out the terms by which the first allocation round would operate; the auction process, the rules for the competitive allocation procedures, and the valuation formula that will be used to assess the value of applications in respect of the 2015/16 budget year. The key next steps in the allocation process are set out in Table 2.

10. The Government has also published supply chain plan guidance[6]. The aim of the supply chain plan assessment process is to encourage the effective development of low carbon

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[3] This technology remains subject to State Aid approval.

[4] See https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/360129/CFD_Budget_Notice.pdf

[5] See https://www.gov.uk/government/publications/electricity-market-reform-contracts-for-difference

[6] See https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/340033/Supply_chain_plan_guidance.pdf

electricity generation supply chains. It will do this by encouraging open and competitive supply chains and the promotion of innovation and skills. The plan requires projects of 300MW generating capacity or more who intend to enter the allocation round to submit a supply chain plan and receive DECC's approval before they are able to take part in the generic allocation process for a CFD. The guidance sets out the process for submitting and assessing supply chain plans.

Paying for CFDs: The Levy Control Framework

11. The costs of the CFD form part of the Levy Control Framework (LCF). The LCF enables the Government to control the costs of supporting low carbon electricity paid for through consumers' energy bills. It reflects the importance Government places both on delivering low carbon electricity generation, and keeping consumer bills affordable[7].

12. The LCF sets annual limits on the projected costs of all DECC's low carbon electricity levy-funded schemes until 2020/21. The annual cap rises to £7.6 billion (in 2011/12 prices) in 2020/21, a level which will enable us to cost-effectively meet our low carbon and renewables ambitions.

13. The Government's levy-funded schemes – whose costs are captured in the LCF – are the Renewables Obligation (RO), the small-scale Feed-in Tariffs scheme and CFDs, including Investment Contracts awarded under the FID Enabling for Renewables process (or early CFDs)[8].

14. The Government has now updated and improved the governance arrangements for the LCF to incorporate CFDs. These arrangements oversee the strategy for all low carbon electricity levy schemes in the LCF, including the release of the CFD budget to National Grid. If spend under one scheme in the LCF increases unsustainably, it will increase pressure on bills unless it is matched by cost reductions elsewhere. The Government takes potential risks to the LCF very seriously and will act where necessary to ensure that costs are contained and that consumers receive value for money from schemes supported by the LCF.

15. The latest spend, outcomes and projections for schemes supported by the LCF can be found in Annex A of the Annual Energy Statement, 'DECC's Consumer Funded Policies', published alongside this EMR Annual Update 2014.

The CFD supplier obligation

16. CFDs will be funded through a levy on all licensed electricity suppliers in Great Britain (the 'supplier obligation'). This levy will be collected by the EMR Settlements Services Provider (a subsidiary of ELEXON) on behalf of the LCCC from 1 April 2015. Further details are set out in section 2.3 of the Implementing EMR handbook.

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[7] The LCF also currently includes the Warm Home Discount. However the costs of this scheme are not included in the ring-fenced funds for low carbon electricity.

[8] For the LCF profile to 2020/21, see Annex D of the draft Delivery Plan. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/223654/emr_consultation_annex_d.pdf

17. The LCCC will publish its determination of the first interim levy rate and reserve amount before 1 January 2015, and will publish forecasts for the interim rate and reserve amounts for the following three quarters. It will also publish a longer term forecast for CFD payments over the subsequent five years.

18. The LCCC will use a forecasting model to update forecasts on a regular basis. It will publish its forecasts and the underlying assumptions through a web-based transparency tool. It has established two working groups of industry experts to help guide the development of the model and the transparency tool[9].

Exemption for imported renewable electricity

19. In order to comply with the conditions of the European Commission's State aid decision on the CFD for renewables, the Government will be making some changes to the design of the CFD supplier obligation to exempt renewable electricity imported from other EU Member States from contributing to CFD costs.

20. The Government intends to implement this exemption by adjusting the way in which electricity suppliers' liabilities for CFD payments are calculated to exclude eligible renewable electricity generated in other EU Member States and supplied to customers in Great Britain (and in Northern Ireland from April 2017 when the supplier obligation is planned to start operating in Northern Ireland).

21. This exemption will only apply to imported renewable electricity generated by a plant which is commissioned after the CFD regime comes into effect (1 April 2015). A consultation on how the Government proposes to implement this exemption closed on 5 November 2014[10].

22. The Government intends to lay the amended regulations in Parliament in early 2015, to enable them to come into force by 1 April 2015, subject to Parliamentary approval.

Exemption for Energy Intensive Industries (EIIs)

23. The Government has announced that it will exempt the most electricity intensive and trade exposed industries from some of the costs of CFDs, subject to State aid approval. This exem55ption should ensure that — compared to other countries — UK electricity intensive industries are not made uncompetitive because of the impact of policy on electricity costs.

24. We are currently consulting on two aspects of this exemption.

    - The first consultation[11] proposes that eligibility will be determined by a sector-level and business-level test. The eligibility has been revised following publication of the European Commission's updated Energy and Environmental aid Guidelines on 9 April 2014. Responses were invited by 23 October 2014.

    - The second consultation[12] outlines how the exemption will be implemented. In particular, this consultation sets out the application process and the method for identifying exempt electricity in detail.

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[9] See https://lowcarboncontracts.uk/system/files/Low%20Carbon%20Contracts%20Company%20Newsletter%20Issue%202.pdf

[10] See https://www.gov.uk/government/consultations/emr-changes-to-the-cfd-supplier-obligation

[11] See https://www.gov.uk/government/consultations/electricity-intensive-industries-relief-from-the-indirect-costs-of-renewables

[12] See https://www.gov.uk/government/consultations/emr-changes-to-the-cfd-supplier-obligation

25. The Government intends to lay regulations before Parliament in early 2015, with the exemption to commence no earlier than October 2015, subject to Parliamentary and State aid approval.

Low Carbon Contracts Company's operational cost levy

26. Operational costs incurred by the CFD Counterparty (the LCCC) will be recovered through a levy paid by suppliers to the LCCC. Requirements to make operational cost levy payments, as set out in regulations, will be enforceable as if they are relevant requirements of the Electricity Act 1989.

27. From 1 April 2015, when payment systems are in place, suppliers will pay their share of the operational costs on a daily basis alongside the supplier obligation. Government consulted on the operational cost levy for 2014/15 which was set at £0.079/MWh, and reflected in the Contracts for Difference (Supplier Obligation) Regulations 2014.

28. A consultation on the operational cost levy rate for 2015/16 will be carried out in autumn 2014 with the rate following consultation being included in an amendment to the Regulations.

Access to market

29. The Government has developed the Offtaker of Last Resort (OLR) to ensure that independent renewable generators with CFDs can secure access to market.

30. The OLR is designed to ensure that eligible renewable generators have access to a 'backstop' Power Purchase Agreement (PPA) on specified terms with a credit worthy offtaker. Generators will be paid by offtakers at a discount to the market reference price in their CFD, with the discount significantly larger than those expected to be available in the open market, ensuring that this is a 'last resort'. This should make lenders more comfortable accepting alternative routes-to-market for independent renewable generator projects, such as shorter term contracting strategies.

31. The Government established two working groups in 2013 to assist independent developers in understanding and preparing for the transition from the RO to the CFD. Outputs from the groups were published in August 2014[13].

32. Consultation on the high-level policy design and detailed implementation options for the OLR shaped the final policy design and fed into the OLR legal framework established through the Power Purchase Agreement Scheme Regulations, Backstop PPA (BPPA) contract and Supply Licence Modifications.

33. Secondary legislation was laid in September 2014, meeting Ministerial commitments to have the OLR in place by the commencement of the first CFD allocation round in October 2014.

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[13] https://www.gov.uk/government/groups/electricity-market-reform-emr-cfd-market-readiness-working-groups

34. The OLR is now entering its implementation phase. The Government will continue to assist Ofgem to establish and promote the scheme, as they develop and publish guidance ahead of the mechanism opening to applications for BPPAs in October 2015.

Renewables Obligation transition

35. Following consultation in July and November 2013 on proposals for the operation of the RO during the transition period the Government set out its decision in a combined response to the consultations in March[14].

Impact on new applicants or additional capacity

36. Until the RO closes on 31 March 2017, generators bringing forward new renewable generating capacity will have a choice between either CFDs or the RO support mechanisms, subject to succeeding in the application processes and other requirements of the chosen scheme.

37. Generators putting in place additional capacity (to existing plant) of more than 5MW will also have the choice of applying to register that additional capacity under the RO or apply for a CFD. A generating station with some capacity accredited under the RO and some supported by a CFD, will become a 'Dual Scheme Facility' and will be expected to treat the capacity in each scheme as distinct and separate through separate metering and fuel data arrangements.

38. Additional capacity of 5MW or less added to RO accredited stations after 31 March 2017 will not be supported. This is primarily because there is no proportionate and viable mechanism for providing support to this additional capacity that is consistent with overall transition policy.

Impact on existing RO generators

39. Generators already accredited within the RO and those which accredit during the transition period will continue to receive support in the 'vintaged' scheme for a full 20 years or until 31 March 2037, whichever is sooner.

40. Grace periods will be offered to generators in certain circumstances who are expected to deploy prior to the RO closure date, but were delayed. Generators will be entitled to choose which grace period best meets their needs and circumstances, subject to their meeting the detailed eligibility criteria and any application requirements or timeframe for each grace period.

Technology specific measures

41. There are two specific measures for operators of biomass co-firing stations or unit(s), and offshore wind stations:

    - To incentivise full biomass conversion as a transitional technology, operators of an RO accredited biomass co-firing stations or unit(s) will be able to apply for a CFD as a biomass conversion and to leave the RO if successful. In addition, operators

[14] https://www.gov.uk/government/consultations/renewables-obligation-ro-grace-periods

of co-firing stations or unit(s) will also be able to bid in to the Capacity Market and leave the RO if successful in that bid.

- To provide maximum flexibility and minimise the risk of an investment hiatus, offshore wind generators which are already accredited under the RO at the point of closure, and which are commissioning in phases will be able to register any unregistered turbines under the RO, the CFD or a combination of both schemes, subject to the application processes and other requirements of the chosen scheme. Generators will be unable to register any turbines under the RO after the schemes closes on 31 March 2017 or once turbines have been registered under the CFD.

42. The Government indicated in October 2014 that the RO will be closed to new solar PV generating stations above 5MW from 1 April 2015, and to additional capacity added to existing accredited stations from that date, where the station is, or would become, above 5MW[15].

CFD for Carbon Capture and Storage and nuclear

Nuclear

43. The Government has been in discussion with NNB Genco, a subsidiary of EDF Energy, about a CFD for its Hinkley Point C new nuclear power plant project. In October 2013 commercial agreement was reached on key terms, including strike price, for Hinkley Point C and on 8 October 2014 the European Commission announced that is has approved the Hinkley Point C State aid case, which is an important step forward for the project.

44. Negotiations are on-going, and the Government has always made clear that any contract will only be offered if it is fair, affordable, offers value for money to the consumer and is in line with government policy, including the policy of not providing a public subsidy for new nuclear unless similar support is also made available more widely to other types of generation[16].

45. Government's intention is that future CfD allocation for nuclear projects takes place through competitive project selection processes, wherever practical and effective. This is in line with Government policy of increasing competition within and between low-carbon technologies, which over time will assist with meeting Government's goals for least-cost decarbonisation of the power sector over the longer term, and should also facilitate more effective management of the Levy Control Framework.

46. Bilateral negotiation remains an alternative for nuclear CfD allocation where competitive processes are not practical. In such circumstances, any final allocation decision would still be subject to strict value for money considerations and an assessment of overall budget constraints. It is open to Government to amend any budget allocation between

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[15] See https://www.gov.uk/government/consultations/consultation-on-changes-to-financial-support-for-solar-pv

[16] For the fuller statements of this policy, see:https://www.gov.uk/government/news/written-ministerial-statement-on-energy-policy-the-rt-hon-chris-huhne-mp-18-october-2010

https://www.gov.uk/government/speeches/edward-davey-speech-to-the-commons-on-new-nuclear-power

technologies, which may be an important way to foster inter-technology competition and maximise value for money.

Carbon Capture and Storage (CCS)

47. As part of the CCS Commercialisation Programme the Government signed Front End Engineering Design (FEED) Contracts with White Rose in December 2013 and Peterhead in February 2014, investing around £100m. Future work involves:

    - obtaining the necessary planning permission and consents;
    - extensive public consultations;
    - detail of commercial structures for delivering the projects;
    - engagement with the investment and finance communities.

48. In parallel, the Government is currently in the process of negotiating the terms of support through CFDs and the remainder of £1bn capital grant with the two projects. We expect this process to allow the companies to take Final Investment Decisions at the end of 2015, with Government taking decisions shortly afterwards, subject to State aid approval.

49. Significant work is also underway to encourage the wider commercialisation and deployment of CCS. The Government has set out plans to engage with developers outside of the CCS Competition[17] over the remainder of 2014 and 2015 on the design of a generic CCS CFD and options for how these might be allocated in future. As with nuclear the Government's intention is to use more competitive projection selection processes wherever practical and effective.

Future work

Timing of next allocation round

50. The Government intends to run a second allocation round in October 2015.

Changes to the allocation process

51. The Government will amend regulations[18] to include a policy that will deter gaming and speculative bidding behaviour in the allocation process. The amendments will set out that any application for a CFD (in respect of a generating station situated on a particular site) will be excluded from future allocations for up to 13 months from the date of CFD notification where:

    - an applicant has failed to sign a CFD for a generating station on the same site having been offered a contract; or
    - a CFD for a generating station on the same site entered into a previous allocation round was terminated prior to the Milestone Delivery Date (which occurs one year

[17] "Next Steps in CCS: Policy Scoping Document," 7 August 2014: https://www.gov.uk/government/publications/ccs-policy-scoping-document

[18] https://www.gov.uk/government/consultations/emr-contracts-for-difference-allocation-regulations-consultation-on-non-delivery-disincentive-exemptions

after contract signing), unless the reason for that termination is found by the LCCC to be a Qualifying Change in Law or Relevant Construction Event.

52. This measure is designed to discourage gaming and applications from spurious or highly speculative applications, which if allowed to participate without deterrent could potentially distort auction outcomes and block budget that would otherwise have been available to more credible projects.

CFD for non-UK renewable electricity projects

53. Once the CFD regime is implemented across the UK, the Government intends to extend the CFD to renewable electricity projects located outside the UK and connected to the electricity systems of Great Britain or Northern Ireland[19]. The Government acknowledges that developing this new policy will be a complex and lengthy process and therefore has set an indicative start date of 2018 at the earliest for the CFD regime to open to eligible non-UK projects.

[19] CFD for non-UK Renewable Electricity Projects https://www.gov.uk/government/publications/CFDs-for-non-uk-renewable-electricity-projects

Capacity Market

Introduction

Deliverable	Achieved	When
Publication of enduring reliability standard	✔	19 Dec 2013
Publication of target capacity for the first four year ahead auction	✔	30 June 2014
State aid approval received	✔	23 July 2014
Regulations entered into force	✔	01 Aug 2014
Pre-qualification results day	✔	03 Oct 2014
Dispute resolution process complete	On track	21 Nov 2014
Capacity Market auction opens	On track	16 Dec 2014
Capacity Market auction results day	On track	05 Jan 2015

Table 3: Capacity Market deliverables since December 2013

54. The Capacity Market is designed to ensure sufficient reliable capacity during periods of system stress, for example during cold, still periods where demand is high and wind generation is low. It works by giving eligible capacity providers a steady payment to ensure enough capacity is in place to meet demand. Capacity providers will face penalties if they fail to deliver electricity (or temporary demand reduction) when needed.

55. The Capacity Market allows the market to competitively set a price for capacity. Capacity agreements are offered to providers of existing and new capacity four years ahead of the year capacity must be delivered, giving investors certainty over part of the future revenues they will receive.

56. There will be a further auction one year ahead of delivery to enable the participation of Demand Side Response (DSR) and provide an opportunity to refine the level of capacity for which capacity agreements are issued. The Capacity Market operates alongside the electricity market and the existing services National Grid contracts to ensure moment to moment balancing of the system. More information on the Capacity Market can be found in the Chapter 3 of the the Implementing EMR handbook.

57. The Capacity Market is a technology neutral mechanism as existing generating capacity will compete against new build, DSR and storage, with the auction procuring whatever mix of capacity provides best value for consumers.

Capacity Market auction

Volume of capacity to procure and reliability standard

58. The Secretary of State establishes and publishes an enduring reliability standard which provides an indication of the acceptable level of security of supply for the GB system – bearing in mind the likely costs of providing that level of security. This is expressed as a loss of load expectation (LOLE[20]) and has been set to 3 hours/year. The Government will review the reliability standard as appropriate.

59. The reliability standard guides how much capacity is auctioned in the Capacity Market. Each year, the Delivery Body (National Grid) will set out how much capacity needs to be procured for a particular delivery year in order to meet the reliability standard. This will be based on National Grid's assessment of different scenarios for the level of electricity demand and the amount of capacity currently available which is not eligible for capacity payments, e.g. low carbon generation. The Government will ultimately take the final decision over how much capacity to procure for each capacity year.

60. In June the Government wrote[21] to National Grid confirming the demand curve parameters for the first Capacity Market auction. The target capacity for the first four year ahead auction is 50.8GW, with 2.5GW set aside for the first one year ahead auction[22].

Pre-qualification

61. The pre-qualification stage of the Capacity Market confirms the eligibility and bidding status of all potential capacity. Pre-qualification ensures that:

    - participants in the Capacity Market auction can deliver the capacity they offer;
    - the Government, based on a recommendation from the Delivery Body, is able to assess whether an adjustment is needed to the amount to procure in the Capacity Market auction.

62. The Prequalification Results Day was on 3 October 2014[1]. The prequalification results were positive, indicating that the auction will be oversubscribed and will be competitive. Over 62 GW have already been accepted by National Grid as eligible to participate[23]. The results demonstrate that a wide range of plant types and technologies want to participate in the Capacity Market. The Capacity Market has the potential to bring forward significant new investment with approximately 9GW new build Capacity Market Units prequalified to participate in the first four year ahead auction, of which 7GW are new large gas plants from both existing incumbents and independent generators.

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[20] LOLE represents the number of hours/periods per annum in which, over the long-term, it is statistically expected that supply will not meet demand.

[21] https://www.gov.uk/government/publications/letter-from-edward-davey-about-the-electricity-market-reform-capacity-market-auction

[22] This is subject to change as the Secretary of State, based on advice from National Grid, determines whether the target capacity for the auction (or other auction parameters) needs to be adjusted.

[1] See http://www2.nationalgrid.com/UK/Our%20company/Electricity/Market%20Reform/Announcements/3%20Oct%202014%20CM%20Prequal%20Results/

[23] This is the "initial" figure accepted by NG and that unsuccessful applicants can appeal.

63. All unsuccessful applicants have the opportunity to have their pre-qualification decision reviewed as part of a two-tier dispute resolution process – initially by the Delivery Body (Tier 1) and subsequently with Ofgem (Tier 2).

First Capacity Market auction

64. National Grid published auction guidelines for the Capacity Market auction on 1 August 2014, which included the target amount of capacity to be auctioned in the first capacity auction. The first auction will be held on 16 December 2014, for delivery of capacity in 2018/19.

Timing of next Capacity Market auction

65. The second Capacity Market auction will take place in December 2015 for delivery of capacity in 2019/20. The process and timings are comparable with the first auction in 2014. The volume to be procured in this auction and auction guidelines will be published before the prequalification window opens.

Emissions Performance Standard

66. The Emissions Performance Standard (EPS) limits carbon emissions to around half that produced by unabated coal. The EPS provides a regulatory backstop on the amount of carbon emissions that new fossil fuel power stations are allowed to emit. It has been set at a level which supports the planning requirement that any new coal fired power stations can only be built if equipped with CCS.

67. The Government launched a consultation setting out detailed arrangements for fully implementing the EPS on 25th September[24]. The implementing regulations are expected to come into force on 1 April 2015, subject to Parliamentary approval, and will give certainty to investors on the detailed aspects of the EPS regime.

68. The UK is the first country in the EU to adopt an EPS and the Government will review the key elements on a regular basis. Further information on the EPS can be found on the www.gov.uk website.

[24] https://www.gov.uk/government/consultations/implementing-the-emissions-performance-standard

Electricity Demand Reduction Pilot Scheme

Introduction

Deliverable	Achieved	When
Scheme opened for expressions of interest	✔	29 July 2014
Application window opened	✔	01 Sept 2014
Expression of interest deadline	✔	30 Sept 2014
Application submission deadline	✔	31 Oct 2014
EDR Pilot Auction	On track	Jan 2015

Table 4: Electricity Demand reduction Pilot scheme deliverables since December 2013

69. The Electricity Demand Reduction (EDR) Pilot Scheme will provide financial support to organisations which deliver electricity savings at peak times by installing more efficient equipment.

70. The purpose of the EDR Pilot Scheme is to understand whether capacity savings resulting from the installation of more efficient equipment (which provide lasting rather than temporary reductions) could also participate in the Capacity Market, and to learn lessons for Government and wider stakeholders about the delivery of any enduring scheme. EDR projects could contribute to the Capacity Market as they reduce the demand placed on the electricity system and in turn lower the amount of generation capacity that needs to be delivered to meet that demand.

71. Organisations which have registered, and whose projects qualify, will be invited to take part in a competitive auction. The first auction within the scheme is for a total of up to £10 million and subject to the outcome a further auction may follow. The total budget for the EDR Pilot is £20 million.

72. Those wishing to participate in the first auction within the EDR Pilot Scheme were invited to submit formal expressions of interest between 29 July and 30 September. Full applications, including measurement and verification plans were submitted by 31 October 2014.

Institutional Frameworks

Introduction

Deliverable	Achieved	When
Low Carbon Contracts Company designated and operational	✔	01 August 2014
Electricity Settlements Company appointed and operational	✔	01 August 2014
Delivery Body-National Grid fully designated and operational	✔	01 August 2014
Modifications to NGET licence	✔	01 August 2014

Table 5: Institutional framework deliverables since December 2013

73. An effective institutional structure is a key element of successful delivery of EMR. A number of parties are involved in the delivery of the market reforms summarised below.

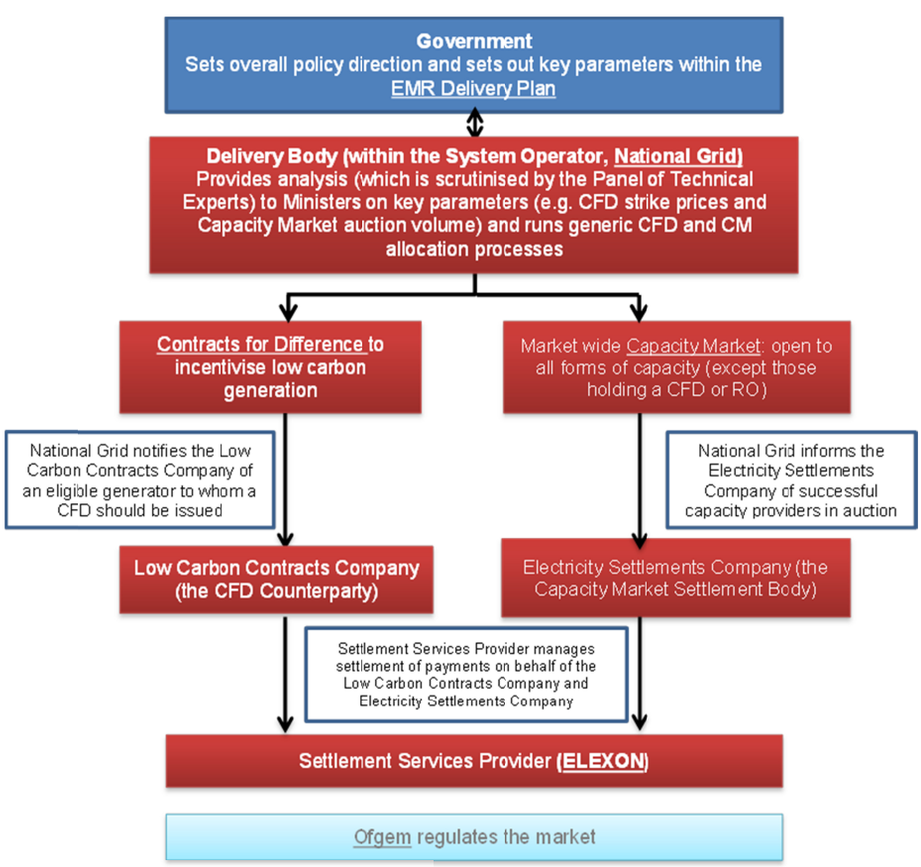

Figure 1: EMR institutional framework

Delivery Body

74. In its role as System Operator, National Grid Electricity Transmission plc has been appointed as the Delivery Body. It was chosen to help deliver the reforms due to the strong synergies between its current role and the requirements of both CFDs and CM.

75. The Delivery Body's role can be summarised as:

- Providing analysis to inform ministers' key decisions, for example, on the level of support for low carbon technologies in the case of CFD and how much capacity to contract for in the case of the Capacity Market;
- Administering the two new mechanisms: Establishing whether projects meet eligibility criteria to receive CFDs and running auctions for CFDs and capacity agreements.

76. Delivery of these two mechanisms by a single organisation ensures a joined up approach to the CFD and the Capacity Market and, combined with National Grid's current roles, will provide value for money for consumers.

77. National Grid was fully designated and operational as the EMR Delivery Body on 1 August 2014 when it was formally conferred the power through the secondary legislation and associated modifications to its transmissions licence. Since August 2014 National Grid has run number EMR implementation sessions on the capacity market and CFDs.

Managing conflicts of interest

78. To avoid conflicts that may arise between its new public function and its private business interests, modifications have been made to National Grid's transmission licence.

79. A more detailed explanation of the Delivery Body's role in administering CFDs and the Capacity Market is set out in Chapters 2 and 3 in the Implementing EMR handbook.

Low Carbon Contracts Company and Electricity Settlements Company

80. The LCCC is a Government owned company created to act as the counterparty to, and to manage, CFDs, and also to manage the collection and payment of monies for CFDs.

81. The ESC is also a Government owned company and its key role is to make capacity payments and to retain overall control of the Capacity Market settlement process.

82. Both the LCCC and the ESC are limited by shares and wholly owned by the Secretary of State for Energy and Climate Change. The companies became operational on 1 August and operate within two main frameworks: EMR legislation (the Energy Act 2013 and the relevant regulations made under the Act) and the corporate and company law framework.

83. The purpose and remit of the LCCC and the ESC, the manner in which they will operate and the basis of their respective relationships with the Government, is set out in detail in the LCCC and ESC framework documents[25].

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[25] The framework documents are available at:
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/338353/FINAL_LCC_Co_FWD__2_.pdf and
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/338356/FINAL_ESC_Framework_Document.pdf

EMR Programme update

Introduction

Deliverable	Achieved	When
Appointment of the Panel of Technical Experts	✔	25 Feb 2014
State aid approval received for key components of the EMR Programme	✔	23 July 2014
EMR implementing regulations came into force	✔	01 Aug 2014
First evaluation of reforms	On track	Summer 2015

Table 6: EMR Programme Update deliverables since December 2013

89. Since Royal Assent of the Energy Act in December 2013 the EMR programme has delivered the necessary secondary legislation and supporting documentation, secured European State aid approval for the key components of the reforms and continued to collaborate with the Devolved Administrations. Plans are also in place for the evaluation of the first CFD allocation, the first capacity auction and the FID Enabling for Renewables process.

Legal framework

84. The Secretary of State has exercised his powers under the Energy Act 2013 to set out the implementing details for EMR in secondary legislation. This legislation came into force in August 2014 and is supported by the Capacity Market rules, the CFD Allocation Framework and also through licence modifications. Full details of the implementing legislation and wider legal framework can be found in Chapter 1 of the Implementing EMR handbook.

85. Further details have been set out in a series of notices, as enabled by the secondary legislation. Key notices include:

On the CFD:

- Contract for Difference: Final Allocation Framework for the October 2014 Allocation Round
- The Contracts for Difference (Allocation) Regulations 2014 Framework Notice
- The Contracts for Difference (Standard Terms) Regulations 2014 - CFD Standard Terms Notice

On the Capacity Market

- Letter from Edward Davey about the Electricity Market Reform capacity market auction
- Capacity Market Auction Guidelines

86. Two further sets of regulations are being introduced before the end of 2014: The Power Purchase Agreement Scheme Regulations (which implement the Offtaker of Last Resort) were laid in Parliament in September, and the Electricity Capacity (Supplier Payment) Regulations are expected to be laid later in November.

87. Additionally, the Government is consulting on supplementary design proposals for the Capacity Market, changes to the CFD supplier obligation, and on the Non-Delivery Disincentive for the CFD through three consultation documents.

88. The changes and supplementary design proposals outlined in the documents implement provisions required as part of successfully receiving State aid clearance, and implement policies we have committed to introducing. The changes also include a number of minor and technical amendments which are required to ensure that the legislation gives effect to the policy intent, as set out in previous EMR publications.

89. Following consultation, the changes will be reflected in amending secondary legislation, which we expect to lay in Parliament in early 2015. Final decisions will be set out in the Government responses to these consultations, which will be published to coincide with the laying of legislation.

EMR in the Devolved Administrations

90. The reforms have been developed to incentivise investment in low carbon generation that is applicable and usable by all financiers and investors, and beneficial to all UK consumers.

91. Significant parts of the UK's low carbon generation capacity, including substantial potential onshore and offshore renewable resources, are located within Northern Ireland, Scotland and Wales. It is by harnessing natural resources and technical expertise from across the UK that we will be able to deliver the required new generation of secure low carbon power.

92. The Northern Ireland Executive and Scottish and Welsh Governments have been closely involved in the development of the reforms and this collaboration will continue throughout their delivery.

Northern Ireland

93. The Northern Ireland Executive has consented to the CFD and Investment Contracts provisions of the Energy Act 2013 applying to Northern Ireland, while taking into account both Northern Ireland's devolved competencies and Northern Ireland's position within the Single Electricity Market in Northern Ireland and the Republic of Ireland. Due to the on-going reform of the Single Electricity Market the Government is working with the Department of Enterprise, Trade and Investment (DETI) to design a CFD and supplier obligation implementation programme in Northern Ireland.

94. The underlying policy for the Northern Ireland CFD and supplier obligation will be the same as for Great Britain, but adapted to fit within the Northern Irish market. The Government is

working closely with the EMR delivery partners and colleagues in Northern Ireland to design a CFD implementation programme in Northern Ireland that starts from April 2017.

95. We are working with the DETI in Northern Ireland as well as delivery partners, and intend to publish an update and call for evidence in early 2015.

State aid

96. On 23 July 2014, the European Commission adopted State aid decisions approving the Capacity Market, CFD for Renewables and five FID Enabling for Renewables offshore wind projects. The Capacity Market decision has been published on the Commission's website[26]. On 8 October 2014 the European Commission announced that is has approved the Hinkley Point C State aid case.

97. We are still in dialogue with the European Commission regarding State aid approval for the three other projects that were awarded Investment Contracts in April, two biomass conversions and a dedicated biomass plant with combined heat and power. The UK Government is continuing to work with the Commission to secure approval for these cases as soon as possible.

98. As part of the State aid approval process for EMR, it has been necessary to make a few commitments for the future. The key commitments are as follows:

- **Biomass conversions:** We will individually notify biomass conversion projects which are successful in an auction under the enduring CFD regime. We will also evaluate the allocation rounds to determine whether and how increased competition can be introduced by 1 January 2017, for example, reviewing whether pot 1 and pot 3 might be merged.

- **Negative prices:** We will make a modification for contracts allocated from the start of 2016. This will introduce a new cap on CFD payments at zero for any consecutive period of six hours or longer when day-ahead power auction hourly prices are and remain negative.

- **Imported renewable electricity exemption:** Eligible renewable electricity generated in other EU Member States and supplied to customers in Great Britain will not be counted towards suppliers' market share of their supplier liabilities. This will only apply to imported renewable electricity generated by a plant which is commissioned after the CFD regime comes into effect (1 April 2015).

- **Interconnected capacity:** We have committed to including interconnected capacity in the Capacity Market from the second auction in 2015. The amount to procure for the first capacity auction in December 2014 will remain unaffected by the decision to include interconnection in future years.

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[26] http://ec.europa.eu/competition/index_en.html

99. The State aid decision for the CFD for Renewables did not include the Government's policy on Scottish Islands, specifically a separate strike price and the inclusion of this technology in pot 2 (less established technologies). As announced in the Government Response to the May consultation on the treatment of biomass, Scottish Islands and maxima and minima[27], our policy intent is that projects of this type will be eligible for the enhanced CFD strike price for onshore wind, and will be included in the "less developed technology" pot for the allocation process, subject to State aid approval. In order to deliver this intent, we are working to secure State aid approval for this technology in time for when these projects will be ready to apply for a CFD.

Panel of Technical Experts

100. The Government appointed an independent Panel of Technical Experts on 25 February 2014 to scrutinise the analysis carried out by National Grid in its role as EMR Delivery Body. The Panel of Technical Experts impartially scrutinised and quality assured the analysis underpinning National Grid's recommendations for 'Capacity to Procure' for the GB Capacity Market auction scheduled for December 2014[28].

Evaluation and review

101. Evaluation will help to provide evidence on whether EMR processes are as efficient and effective as possible and on whether the benefits of the new arrangements are being achieved. The evaluation will also include the Investment Contracts awarded under the FID Enabling for Renewables process.

102. The Government has commissioned independent contractors with appropriate expertise to provide evaluation of the first CFD allocation, first Capacity Market auction and the FID Enabling for Renewables process. The outcome of this evaluation will help inform future decisions in relation to the delivery of EMR and DECC's policies more broadly.

Broad aims of EMR evaluation

103. Evidence on some of the impacts of EMR will only become available over time as the mechanisms bed in. Evaluation will be staged to the available evidence, rather than attempting to answer questions prematurely.

104. The Government currently envisages that evaluation work over the lifetime of the instruments will include (but not be confined to);

- an assessment of the extent to which the first round of awards of CFDs under the enduring regime have furthered the UK's low carbon energy objectives at least cost to consumers;

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[27] https://www.gov.uk/government/consultations/electricity-market-reform-further-consultation-on-allocation-of-contracts-for-difference

[28] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/324976/EMR_Panel_s_Final_Report_on_National_Grid_s_ECR.pdf

- the extent to which the FID Enabling for Renewables process has prevented investment hiatus;
- the extent to which the first Capacity Market auction has met expectations of providing security of supply;
- and an assessment of whether the institutional framework underlying the programme is fit for purpose and;
- an evaluation of the early impacts of the programme.

105. The timing of these reviews and their outputs are still being considered.

Evaluation of the first round of EMR delivery, and FID Enabling for Renewables process

106. The Government plans to evaluate the first round of EMR delivery (the first CFD allocation process and the first Capacity Market auction) and the process for allocating Investment Contracts under the Final Investment Decision (FID) Enabling for Renewables process. This evaluation will be completed in summer 2015.

107. The key aims and objectives of the evaluation are to provide:

- Assurance and lessons learned on the allocation of Investment Contracts through the FID Enabling for Renewables process.
- Assurance and lessons-learned on the first year operation of EMR processes.
- Evidence-based advice on EMR policy and processes to inform the second year of operation.
- Scoping and an initial examination of the extent to which EMR and FID Enabling for Renewables are on track to meet objectives.
- Identification of any gaps in the supply of data and any other issues that will be required to evaluate the programmes over the longer-term.

Future plans

Forward look to 2015

108. The following table sets out key milestones in EMR going forward into 2015:

Milestone	Planned date
CFD sealed bids submission closing date	09* Dec 2014
Opening of Capacity Market auction	16 Dec 2014
Capacity Market auction closes	19 Dec 2014
LCCC publish first interim levy rate and reserve amount	Before 1 January 2015
Capacity Market auction results day	05 January 2015
Capacity agreements issued to successful applicants	30 January 2015
EDR Pilot auction	January 2015
Deadline for successful CFD applicants to sign contracts	03* Feb 2015
Secondary legislation amendments	Early 2015
Second CFD allocation round	October 2015
Second Capacity Market Auction	December 2015

Table 7: EMR Programme milestones 2014/15

*Earliest possible date for milestone; may be later e.g. in event of applicants appealing eligibility decisions

EMR Long-term vision up to and beyond 2030

109. The Government's long-term vision for EMR is for a secure, low carbon electricity market, which is attractive to investors and delivered at the lowest possible cost to consumers.

110. The future electricity market should provide:

- **Security of supply**, helping to keep the lights on and protecting consumers from black-outs, initially through the Capacity Market.
- **A decarbonised power system,** a sustainable pathway for decarbonising our power systems, supporting delivery of UK and EU carbon emissions targets.
- **Affordability for consumers,** helping to reduce household and business electricity bills over the period to 2030 and contribute to tacking fuel poverty in the UK.

111. It will also be important for our market structures to bring forward a clean, diverse, competitive mix of electricity generation, open to both large and small generators, and to enable a dynamic and responsive mix of capacity, connected to a smarter grid system, where demand and supply can be balanced efficiently.

Pathway into the future

112. Our current long-term vision is for a decreasing role for the Government over time. To achieve this, EMR needs to deliver a liquid market where cost of capital reductions are achieved for low carbon technologies so they become scalable.

113. Initially, Government support will be provided for low carbon generation through CFDs with renewables competing (within technology groupings) from the outset. The Government has ambitions to move to competitive CFD allocation and price discovery processes for all low carbon technologies as soon as is practical. We have introduced competition for renewable technologies, earlier than expected, to ensure value for money. It is anticipated that there will be a move towards technology neutral auctions where all low carbon technologies compete against each other. The final stage, once low carbon technologies have matured, is to transition to an electricity market where low carbon technologies can compete fairly on price with all forms of generation, including fossil fuel plant, without Government support.

114. The Capacity Market will provide security of supply by providing retainer payments for supply and demand reduction at times of system stress. There will also be increasing roles for EDR, DSR, and interconnection.

115. The following four stages set out the high level pathway to 2030 and beyond:

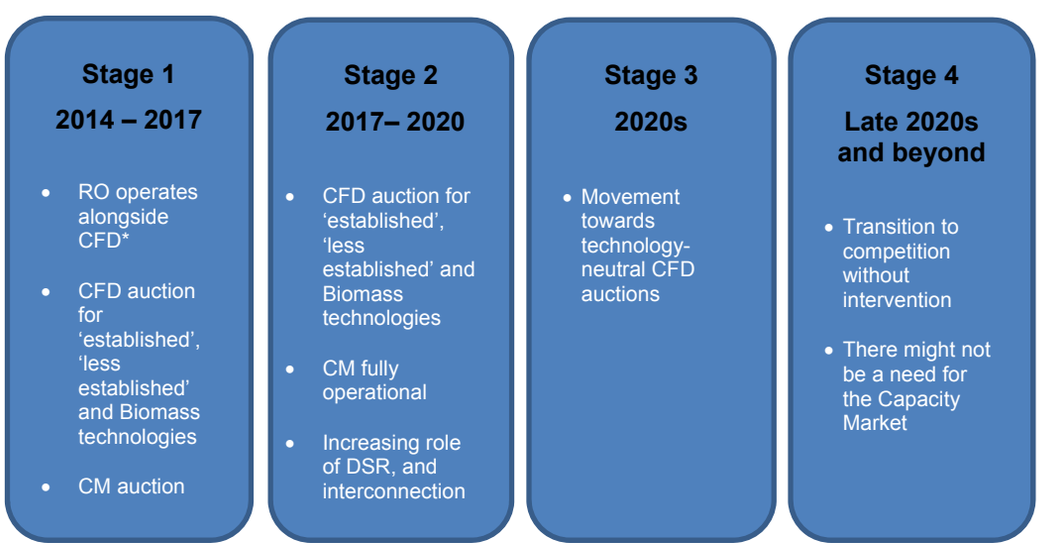

Figure 2: pathway to 2030 and beyond

* RO closes to new applicants in March 2017, with the potential for generators to receive support until 2037 since payments are for a 20 year period.

Glossary

BPPA	Backstop Power Purchase Agreement
CCS	Carbon Capture and Storage
CCGT	Combined Cycle Gas Turbine
CFD	Contract for Difference
CM	Capacity Market
DECC	Department of Energy and Climate Change
DETI	Department of Enterprise, Trade and Investment
DSR	Demand Side Response
EDR	Electricity Demand Reduction
EMR	Electricity Market Reform
EPS	Emissions Performance Standard
ESC	Electricity Settlements Company
EU	European Union
FEED	Front End Engineering Design
FID	Final Investment Decision
GW	Gigawatt
KW	Kilowatt
LCCC	Low Carbon Contracts Company
LCF	Levy Control Framework
LOLE	Loss Of Load Expectation
MW	Megawatt
OLR	Offtaker of Last Resort
PPA	Power Purchase Agreement
PV	Photovoltaic
RO	Renewables Obligation
UK	United Kingdom

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