

Contracts for Difference and Capacity Market Scheme Update Report 2018

Presented to Parliament pursuant to Section 5(4) of the Energy Act 2013

Ordered by the House of Commons to be printed 5 November 2018





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Executive summary

- 1. This is the fifth annual update outlining the progress that has been made on the policy mechanisms implemented under the Electricity Market Reform (EMR) programme, which closed in 2015. The key mechanisms are the Contracts for Difference (CfD) scheme and the Capacity Market (CM). Both are designed to incentivise the investment required in the UK's energy infrastructure and to deliver low carbon and reliable energy supplies, while minimising costs to consumers.
- 2. This document sets out the headline achievements over the past 12 months in the following areas:
 - The Contracts for Difference (CfD) scheme, enabling investment in low-carbon electricity generation;
 - The Capacity Market (CM), ensuring electricity capacity during periods of system stress;
 - The Electricity Demand Reduction (EDR) pilot, providing financial support to organisations to deliver electricity capacity savings at peak times.

Key progress since the 2017 update

- 3. The government is conducting a review of the Capacity Market (CM), the Emissions Performance Standard (EPS) and the Contracts for Difference (CfD) Scheme, as it is five years since the legislation introducing these policies the Energy Act 2013 was passed. It is intended that the outcomes of these reviews will be reported to Parliament in summer 2019.
- 4. Following the successful conclusion of the second CfD Allocation Round in September 2017, which resulted in contracts being awarded to around 3.3GW of new renewable electricity capacity and significant cost savings for consumers, government has made good progress in preparing for the third Allocation Round. Ministers from the Department for Business, Energy and Industrial Strategy (BEIS) announced in July 2018 that the next CfD allocation round for less established technologies, such as offshore wind, will open by May 2019 and that government will hold another allocation round in 2021 and auctions around every two years after that.
- 5. The fourth four year ahead (T-4) Capacity Market auction concluded in February 2018, securing 50.4GW of capacity at a clearing price of £8.40/kW. Just over 74.2GW of capacity entered the auction, of which 67.9% received capacity agreements for delivery in 2021/22. The one year ahead (T-1) Capacity Market auction, which tops up the capacity secured through an earlier T-4 auction for delivery in 2018/19, concluded in January 2018, securing 5.8GW of capacity at a clearing price of £6.00/kW.
- 6. The first phase of the Electricity Demand Reduction pilot scheme led to £1.28m of funding being awarded in the January 2015 auction. A variety of public and private organisations secured funding to install more efficient equipment and deliver electricity savings of 5,589kW of winter peak capacity.

Contracts for Difference Scheme

Deliverable	Achieved	When
Government launches consultation on proposed changes to the CfD scheme	V	Dec 2017
for the third Allocation Round		2017
Government publishes Part A	→	June
response (legislative changes) to the	•	2018
December 2017 consultation and lays draft regulations in Parliament		
The CFD (Miscellaneous Amendments)		July
Regulations 2018 implementing	•	2018
several CfD scheme changes come into force		
		Λιια
Government publishes Part B response (policy and contract	~	Aug 2018
changes) to the December 2017		2010
consultation and further consultation		
on revised CfD contract documents		
Anticipated publication of		Nov
government's final policy decisions on		2018
change to the CfD scheme for the third Allocation Round		

Introduction

- 1. The Contracts for Difference (CfD) scheme is the government's main mechanism for supporting low-carbon electricity generation projects. Contracts for renewable electricity generation projects are awarded in a series of competitive auctions, with the lowest price bids being successful, which drives efficiency and cost reduction. CfDs give greater certainty and stability of revenues to electricity generators by reducing their exposure to volatile wholesale prices, while protecting consumers from paying for higher support costs when electricity prices are high.
- 2. The scheme has been a success, delivering substantial new investment and helping deliver significant reductions in the costs of some renewable technologies. The second CfD auction in 2017 saw the clearing price for offshore wind (£57.50/MWh in 2012 prices) halved compared to the first auction (2015) and secured 3.3 GW of renewable electricity capacity.
- 3. The CfD scheme currently supports 42 renewable electricity projects across a range of technologies, totalling nearly 10GW of new renewable electricity capacity. CfD contracts are managed by the Low Carbon Contracts Company (LCCC), a

Government-owned company. Information on the CfD projects managed by the LCCC is published on their CfD Register¹.

Preparations for the Third CfD Allocation Round

- 4. At the launch of the Clean Growth Strategy² in October 2017, government confirmed it would be making up to £557m (2011/12 prices) of annual support available for further Contracts for Difference, providing industry with the certainty they need to invest in bringing forward new projects.
- 5. On 23 July 2018³, government confirmed that the next CfD allocation round for less established technologies, such as offshore wind, will open by May 2019. The government also committed to holding another allocation round in 2021 and auctions around every two years after that. Depending on the price achieved, these auctions are expected to deliver between 1 to 2GW of offshore wind each year in the 2020s.
- 6. Government held several public consultations during 2018 on proposed amendments to the CfD scheme, intended to enable it to continue supporting new generation and provide best value for bill payers in coming years. A first consultation⁴ held between December 2017 and March 2018 outlined the Government's intention to support the development of onshore wind projects on remote islands. This consultation invited views on a proposed definition of remote islands wind as a new technology, to allow it to compete in future auctions for 'less established' technologies. This consultation also proposed:
 - refinements to the eligibility criteria and technical requirements for Advanced Conversion Technologies, to ensure that only more innovative and efficient plants receive support;
 - changes to the overall efficiency requirements for Combined Heat and Power generating stations, to ensure that CfD-supported plants are of a suitably high overall efficiency;
 - updated greenhouse gas emissions criteria to ensure that new projects using solid and gaseous biomass as feedstock can continue to deliver significant carbon savings as a condition of receiving CfD support;
 - new measures to facilitate more accurate forecasting of scheme expenditure, and
 - a range of potential changes to the CfD standard terms and conditions in order to ensure the scheme continues to operate effectively.

¹ LCCC CfD Register: https://lowcarboncontracts.uk/cfds

² Press release on the Clean Growth Strategy published on GOV.UK - https://www.gov.uk/government/news/government-reaffirms-commitment-to-lead-the-world-in-cost-effective-clean-growth

³ Press release published on GOV.UK - https://www.gov.uk/government/news/energy-minister-claire-perry-hails-success-story-of-offshore-wind-in-newcastle-today

⁴ Consultation on proposed amendments to the CfD scheme published on GOV.UK https://www.gov.uk/government/consultations/contracts-for-difference-cfd-proposed-amendments-to-the-scheme

- 7. In June 2018, government published Part A of the government response⁵ to the December 2017 consultation. This dealt mainly with those proposals requiring legislative amendments to the scheme and confirmed the government's decisions on:
 - the definition of remote island wind, to differentiate it from other onshore wind so that it can compete in future auctions for 'less established' technologies;
 - the new requirements on Combined Heat and Power projects, and
 - a minor change to the definition of 'waste' used in CfD projects to prevent substances that have been intentionally modified or contaminated from being considered waste.
- 8. The Contracts for Difference (Miscellaneous Amendments) Regulations 2018 giving effect to these changes were approved by Parliament and came into force on 24 July 2018.
- 9. In August 2018, government published Part B of its response⁶ to the December 2017 consultation setting out its policy decisions on the wider range of issues set out in that earlier consultation. The Part B response also serves as a follow-on consultation on how some of the changes proposed in December 2017 will be implemented (including through amendments to the CfD contract documentation), to address several associated issues that arose as a result of engagement during the consultation process, on proposed changes to Combined Heat and Power guidance and on a number of minor and technical changes to the CfD standard terms and conditions to ensure that the contract terms remain effective.
- 10. Government expects to publish before the end of 2018 its final decisions on the amendments to the CfD scheme, along with other allocation round parameters, including the a draft budget notice, allocation process and delivery years for successful projects, as well as revised CfD standard terms and conditions for new contracts awarded through the third CfD Allocation Round.

Hinkley Point C

- 11. On 29 September 2016 the Government signed a Contract for Difference for Hinkley Point C, the first new nuclear plant in the UK for more than 20 years⁷.
- 12. Hinkley Point C will provide 3.2GW of secure, base-load, low carbon electricity for at least 60 years, meeting around 7% of the UK's energy needs and powering nearly 6 million homes. It will boost the local and national economy, providing 26,000 job opportunities and apprenticeships during construction and 900 jobs once running.

⁵ Government response Part A on proposed amendments to the CfD scheme published on GOV.UK - https://www.gov.uk/government/consultations/contracts-for-difference-cfd-proposed-amendments-to-the-scheme

⁶ Government response Part B on proposed amendments to the CfD scheme published on GOV.UK https://www.gov.uk/government/consultations/contracts-for-difference-cfd-proposed-amendments-to-the-scheme

⁷ Available at: https://www.gov.uk/Government/publications/hinkley-point-c-documents

- 13. Significant progress has been made in the early stages of construction. Twenty percent of the journey to the Commercial Operations Date has been completed with over 3,000 people now working on the site. The developer has informed the Department that they are on schedule for the first major milestone, the construction of the common raft of the nuclear island for reactor 1 in 2019.
- 14. On 17 July, the government published the HPC Wider Benefits Realisation Plan⁸. This plan, which has been produced with support from EDF Energy, sets out how the wider benefits of the project will be delivered over its construction period.

⁸ https://www.gov.uk/government/publications/hinkley-point-c-wider-benefits-realisation-plan

Capacity Market

Introduction

Deliverable	Achieved	When
Capacity Market 2015 T-4 auction opened	~	8 Dec 2015
Capacity Market 2015 T-4 auction results published	~	22 Dec 2015
Capacity Market 2016 Transitional Arrangements auction opened	~	26 January 2016
Capacity Market 2016 Transitional Arrangements auction results published	~	8 February 2016
Capacity Market 2016 T-4 auction opens	✓	06 Dec 2016
Capacity Market 2016 T-4 auction results published	~	16 Dec 2016
Capacity Market Early Auction opens	~	31 Jan 2017
Capacity Market Early Auction results published	~	24 Feb 2017
Capacity Market 2017 Transitional Arrangement auction opens	~	22 Mar 2017
Capacity Market 2017 Transitional Arrangement results published	~	12 Apr 2017
Capacity Market 2018/19 T-1 auction opens	~	30 Jan 2018
Capacity Market 2021/22 T-4 auction opens	~	6 Feb 2018
Capacity Market 2018/19 T-1 results published	~	13 Feb 2018
Capacity Market 2021/22 T-4 results published	~	23 Feb 2018
Capacity Market 2019/20 T-1 auction opens	On track	29 Jan 2019
Capacity Market 2022/23 T-4 auction opens	On track	5 Feb 2019

1. The Capacity Market is intended to ensure long-term security of supply at least cost to consumers, by enabling adequate investment in the overall level of reliable capacity needed to provide secure electricity supplies. It is designed to ensure sufficient reliable capacity is available during periods of system stress. It works by giving eligible capacity providers, who have bid into a competitive auction declaring that they will be able to provide capacity when needed, a steady payment to ensure enough capacity is in place to meet demand. Capacity providers face penalties if they fail to deliver electricity (or temporary demand reduction) when needed.

- 2. The Capacity Market allows the market to set a price for capacity competitively. Auctions are held four years (T-4) and one year (T-1) ahead of the year capacity must be delivered, giving investors certainty over part of the future revenues they will receive.
- 3. The Capacity Market is required to be technology neutral provided the technology can demonstrate sufficient technical performance to contribute to security of supply. Existing generating capacity competes against new build, Demand Side Response (DSR) and storage, with the auction procuring whatever mix of capacity provides best value for consumers.

Capacity Market Delivery Year 2017/18

- 4. 2017/18 was the first full Capacity Market delivery year. The Supplementary Capacity Auction which concluded in February 2017 secured 54.4GW of capacity for delivery in 2017/18.
- 5. National Grid's margin forecast as set out in the 2017/18 Winter Outlook publication was 10.3% (on an underlying demand basis)⁹. There were no system stress events during winter 2017/18. Even with the prolonged period of cold weather in late February / early March, margins were healthy.
- 6. Electricity Settlement Company records show that over £220.7m was paid out to capacity market agreement holders during the 2017/18 financial year¹⁰.

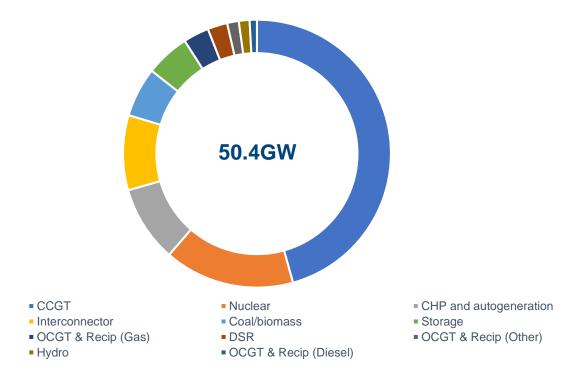
T-4 Auction for 2021/22

- 7. The fourth T-4 Capacity Market auction concluded in February 2018, securing 50.4GW of capacity at a clearing price of £8.40/kW. Just over 74.2GW of capacity entered the auction, of which 67.9% received capacity agreements for delivery.
- 8. Figure 1 shows the breakdown of Capacity Agreements awarded by technology type in terms of capacity (MW).

⁹ National Grid Winter Outlook 2017

¹⁰ Electricity Settlements Company Annual Report and Accounts 2017/18



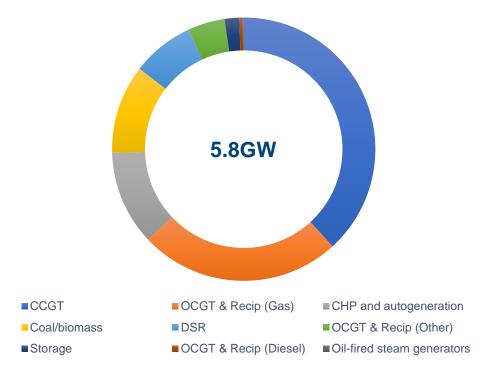


9. The total forecast cost of capacity agreements awarded in this auction is £423.4m (in 2017 prices).

T-1 Auction for 2018/19

- 10. The T-1 Capacity Market auction for delivery in 2018/19, which tops up the capacity secured through an earlier T-4 auction, concluded in January 2018 securing 5.8GW of capacity at a clearing price of £6.00/kW. Just over 10.6GW of capacity entered the auction, of which 54.2% received capacity agreements for delivery.
- 11. Figure 2 shows the breakdown of Capacity Agreements awarded by technology type in terms of capacity (MW).





12. The total forecast cost of capacity agreements awarded in this auction is just short of £34.7m (in 2017 prices).

Appeals Processes for T-4 Auction for 2021/22 and T-1 Auction for 2018/19

13. All unsuccessful applicants for pre-qualification had the opportunity to have the decision reviewed as part of a two-tier dispute resolution process – initially by the Delivery Body, National Grid (Tier 1) and subsequently by Ofgem (Tier 2). During the 2021/22 T4 and 2018/19 T-1 pre-qualifications the majority of Capacity Market Units (CMUs) were successful in overturning the initial prequalification rejections through Tier 1 appeals. Of the 52 Tier 2 disputes received, ten decisions were overturned.

Changes to Capacity Market Rules and Regulations

 After consultation a series of changes were made to the Capacity Market under the Capacity Market (Amendment) (No. 4) Rules 2017¹¹ and Ofgem's Capacity Market (Amendment) Rules 2018¹².

State Aid

15. In December 2014 Tempus Energy brought a challenge against the European Commission's decision in 2014 to grant State Aid approval to the Capacity Market. The General Court of the Court of Justice of the European Union heard the case on 11th July 2017. The UK intervened as an interested party. The Government is awaiting the judgment. The operation of the Capacity Market is unaffected unless and until there is an adverse judgment.

Panel of Technical Experts

16. The Panel of Technical Experts is an independent group which is tasked with scrutinising the analysis that National Grid provides to Government on how much capacity to auction. Their remit does not include policy decisions, outcomes or costs to consumers. The Panel's 2018 report¹³ commented in particular on National Grid's capacity assessments for the 2022/23 T-4 and 2019/20 T-1 auctions and on de-rating factors for interconnectors¹⁴.

¹¹ Capacity Market (Amendment) (No. 4) Rules 2017

¹² Capacity Market Amendment Rules 2018

¹³ Available at: https://www.gov.uk/government/publications/national-grid-electricity-capacity-report-2018-findings-of-the-panel-of-technical-experts

¹⁴ Derating factors adjust the assumed deliverable capacity to take account of reliability and other factors. Different derating factors are applied to different technologies at different rates.

The Emissions Performance Standard

- 1. The Emissions Performance Standard (EPS) is a regulatory backstop on the amount of carbon emissions that new fossil fuel power stations are allowed to emit. The EPS is set at a level around half that produced by unabated coal, which supports the planning requirement that any new coal-fired power stations can only be built if equipped with Carbon Capture and Storage. The EPS limit applies at individual plant level and is an absolute limit, so provides no facility for a plant to exceed its annual limit either by way of trading or year to year carry over.
- 2. All generation plants in scope of the EPS that have been constructed since its introduction are compliant.

Electricity Demand Reduction Pilot Scheme

Introduction

- 1. The Electricity Demand Reduction (EDR) Pilot Scheme provides financial support to organisations which deliver electricity savings at peak times by installing more energy efficient equipment.
- 2. The purpose of the EDR Pilot Scheme is to understand whether the installation of more efficient equipment (which provides lasting, rather than temporary, reductions) could cost effectively participate in the Capacity Market; alongside generation, demand side response and storage, and to learn lessons on energy efficiency. EDR projects could potentially 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. The timetable for the EDR Pilot Scheme is shown below.

Deliverables Phase I Auction	Achieved	When
EDR auction held	~	29 Jan 2015
EDR auction results published	~	4 Feb 2015
Final reports and EDR payments made to	~	1 Dec 2016
successful participants		

Deliverables Phase II Auction	Achieved	When
EDR auction held	✓	21 Jan 2016
EDR auction results published	~	29 Jan 2016

For 16/17 delivery year	Achieved	When
Major measurement and verification updates	✓	31 Aug 2016
completed		
Operational verification of projects	✓	31 Mar 2017

For 17/18 delivery year	Achieved	When
Major measurement and verification updates	✓	31 Aug 2016
completed		
Operational verification of projects	✓	31 Mar 2017

For 17/18 delivery year	Achieved*	When
Major measurement and verification updates	✓	30 Jun 2018
completed		
Operational verification of projects nearing	✓	30 Sep 2018
completion		

^{*}for 8 out of the 9 participants

Results of Phase I of the EDR Pilot

3. As previously reported, funding of £1.28m was awarded in the January 2015 auction to 18 organisations to deliver electricity savings of 5,589kW over the winter peak. Funding covered 22 separate projects spanning a range of organisations across the public and private sector at a variety of scales from 100kW to 823kW and with an average bid price of £229/kW¹⁵. Lighting and lighting control systems were the most successful technologies in winning bids. Projects in Phase I of the Pilot, delivered their winter peak capacity savings during the 2015/16 winter peak (start of November to end of February). Phase I completed on the 1st December 2016, with a total of 13 projects receiving full or partial payment; £560,000 for 2.2MW of demand reduction.

Results of Phase II of the EDR Pilot (to date)

- 4. The second EDR Pilot auction¹⁶ took place on 21 January 2016. Funding of £4.74m was offered to 24 lead organisations for 37 individual projects across Great Britain. A total of 23.3MW of savings has been committed to at auction from Phase II projects. Participants could choose to deliver their savings over the 2016/17 or 2017/18 winter peak. Currently there are 33 participants split over the 2 delivery periods.
- 5. Participants were given the opportunity to make updates to their projects before September 2016 and those with unspecified elements of their project were required to detail these at this time.
- 6. Since the start of September 2017 participants have been undertaking Operational Verification of their projects. Participants are asked to provide proof that they have purchased and installed the measures they were planning to. Once the Department for Business, Energy and Industrial Strategy (BEIS) has verified the installed equipment, participants will be paid the first of their three payments (up to 20% of the total project value). This change to the payment structure from Phase I is to help participants with the cost of installation.
- 7. Projects that delivered during the 2016/17 winter peak have now submitted their Final Reports. This report allows for evaluation information to be gathered and enables the final 20% payment to be processed upon satisfactory completion (December 2017). The initial 20% payment was made upon verification of the installation of the measures (Operational Verification), with the second 60% payment made upon production of the Winter Capacity Savings Report to prove the project has delivered the capacity savings committed to.
- 8. Projects delivering during 2017/18 will go through the same process, with final payments due to be processed by December 2018.
- 9. A number of Site Inspections have also been carried out as a means of quality assurance of operational verification data, data submitted in measurement and

¹⁵ Weighted average

¹⁶ Phase II of the pilot was granted State aid approval in February 2016.

verification plans and confirmation of time of use of equipment installed as detailed in the Winter Capacity Savings Report.

EDR Evaluation

- 10. Evaluation is a key component of the EDR pilot scheme. BEIS has put in place a significant external contract for evaluating the pilot, which is being conducted alongside the delivery of the pilot. An Interim Evaluation Findings report and a pilot data report were published in February 2017, summarising the key findings and pilot outcomes to date.¹⁷ The evaluation led to a number of changes to Phase II of the pilot (e.g. the changes to payment schedules as mentioned above).
- 11. In addition, BEIS commissioned a contract to assess the accuracy of the deemed approach to monitoring and verifying kW savings by installing metering equipment.
- 12. A final evaluation report will be published, summarising all the evaluation evidence from the external evaluation contract.

Next steps for the EDR pilot

13. BEIS is continuing to administer the scheme until the end of Phase II in 2018. Findings and conclusions from the final stages of the evaluation will be published; drawing upon the interim findings report, and incorporating findings from the phase II participants. The evaluation of the EDR Pilot will provide a robust evidence base to inform the decision-making process on EDR related policies and generating wider lessons on energy efficiency for the department. It will also be used to fulfil the obligation to report the outcomes of the EDR Pilot to Parliament.

Low Carbon Contracts Company (LCCC) and Electricity Settlements Company (ESC)

- 1. LCCC and ESC are responsible for helping Government to deliver key elements of the Capacity Market and Contracts for Difference (CfDs), which are Government schemes designed to incentivise the significant investment required to keep energy supplies secure and affordable, as well as help meet our climate change targets
- 2. LCCC, as counterparty to CfDs (including the Investment Contracts which have been transferred to LCCC¹⁸), enters into and manages long-term contracts with low carbon generators, awarding top-up payments for qualifying generation. The details of these projects are listed on the CfD Register¹⁹, available on the LCCC website.
- 3. The ESC is responsible for all financial transactions relating to the Capacity Market, including managing capacity payments, credit cover, penalties, and volume reallocation.
- 4. Both the LCCC and ESC are companies limited by shares and wholly owned by the Secretary of State for Business Energy and Industrial Strategy. The companies became operational on 1 August 2014 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 frameworks.
- 5. In the past year, there have been a number of highlights across CFD and CM Schemes. This has involved:
 - 438 CM agreements under settlement and 6.6TWh of low carbon generation produced in year from 8 operational projects;
 - Signed 16 new contracts with successful Allocation Round 2 projects and increased CFD generator engagement through workshops and publication of guidance;
 - Delivered over 50 discrete changes to our settlement operations;
 - Provided technical and contractual supported to BEIS in the drafting of AR3 contracts and advised BEIS on operational improvements to the CFD Standard Terms;
 - Submitted 16 CM change request and advised Ofgem on settlement impacts of current and proposed changes to the CM.

¹⁸ Investment contracts, which have been transferred to LCCC, are treated by virtue of regulation 2(4) of the Contracts for Difference (Electricity Supplier Obligations) Regulations 2014 as CfDs for various purposes. Any reference to a CfD in this document is to be treated as including any such Investment Contracts.

¹⁹ The CfD register on the LCCC website

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