Department for
Business, Energy
& Industrial Strategy

Five Year Review of the Energy Act 2013

May 2022

Five Year Review of the Energy Act 2013

Presented to Parliament pursuant to Sections 66, 144 and 149 of the Energy Act 2013

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Contents

Introduction

This review was completed in 2019 and should be read as such. Publication of this review has been delayed for several reasons, including the UK's withdrawal from the European Union and the COVID-19 pandemic. Some aspects of the review have been updated (for example, to reflect more recent climate change targets). However, it has not been possible to update the full review because this would have added significant further delay to publication.

The Energy Act 2013 introduced a legislative framework for delivering secure, affordable and low carbon energy. One of the aims of the Act is to ensure that, as older power plants are taken offline, the UK remains able to meet its energy demands whilst decarbonising.

Section 66 of the Act contains an obligation:

> As soon as reasonably practicable after the end of the period of 5 years beginning with the day on which this Act is passed, the Secretary of State must carry out a review of the provisions of the following Chapters of this Part—
>
> (a) Chapter 2 (Contracts for Difference);
> (b) Chapter 3 (capacity market);
> (c) Chapter 5 (conflicts of interest and contingency arrangements);
> (d) Chapter 6 (access to markets);
> (e) Chapter 7 (the renewables obligation: transitional arrangements);
> (f) Chapter 8 (emissions performance standard).

The Secretary of State must set out the conclusions of the review in a report.

The report must, in particular—

> (a) set out the objectives of the provisions of each Chapter subject to review,
> (b) assess the extent to which those objectives have been achieved, and
> (c) assess whether those objectives remain appropriate and, if so, the extent to which those objectives could be achieved in a way that imposes less regulation.

The Secretary of State must lay the report before Parliament.

Section 151 of the Act also contains an obligation to review:

(a)section 144 and Schedule 14 (consumer redress orders);

(b)section 149 (fees in respect of decommissioning etc).

EMR statement

Electricity Market Reform (EMR) was designed to enable the UK to develop a clean, diverse and competitive mix of electricity generation that will ensure we meet our targets on decarbonisation and security of supply, while keeping bills as low as possible for consumers now and in the future. Without reform, it was assessed that electricity prices would have become increasingly volatile, the risks of the lights going out would have increased and significant volumes of low carbon electricity generation at lower prices may not have come forward.

EMR introduced two major policies to deliver these aims:

- **Capacity Market (CM):** To ensure security of electricity supply at the least cost to the consumer.
- **Contracts for Difference (CfD):** To provide long-term revenue stabilisation for new low carbon electricity generation in Great Britain (GB).

Both schemes are administered by delivery partner National Grid Electricity System Operator as the EMR Delivery Body. The Low Carbon Contracts Company (LCCC) manage CfD contracts and the Electricity Settlement Company handle CM payments.

These two major policies are supplemented by the smaller policies of Conflicts of Interest and Contingency arrangements, Access to Markets, Renewables Obligation Transitional Arrangements and Emissions Performance Standard (EPS).

What has EMR achieved?

Decarbonisation

Under the CfD scheme, three allocation rounds have been held to date. This review focuses on allocation round 1 (AR1) and allocation round 2 (AR2), as these have taken place in the 5 years since the 2013 Energy Act was introduced. The externally led CfD Evaluation will continue to review the outcome of Allocation Round 3 (AR3), which awarded contracts to 5.8GW of new renewable electricity capacity that will be added to the grid by 2025.

For CfD AR1 and AR2, in total 5.48GW of capacity has been awarded. The capacity awarded in AR1 and AR2 CfD will contribute 1.3% of all electricity generation by 2020, based on the January 2019 CfD register, and by 2025 this is estimated to increase to 6% of the UK's total electricity generation. Furthermore, the scheme has contributed to the UK currently being on track to meet the government's aim of generating 30% of electricity from renewable sources by 2020. As a result of a bi-lateral CfD, the UK's first nuclear project in a generation is in the process of being built.

Since the introduction of the Emissions Performance Standard (EPS), which complements decarbonisation measures such as the carbon price support scheme and the National Planning Policy framework, and places an emissions limit on new fossil fuel plants, no new coal plants have been constructed.

The CM has ensured that an adequate level of security of electricity supply is delivered in a way that is cost-effective and complementary to decarbonisation policies. To ensure that the CM can continue to achieve its objective to complement decarbonisation policies, and to maintain technology neutrality within the CM, in June 2019 we made changes to enable certain renewables that are not in receipt of other forms of subsidy to compete in the auctions. In July 2019 we made changes to introduce a carbon emissions limit into the CM. The limit applied to new build plants from July 2019 and will apply to existing plants from 1 July 2025 at the latest.

On 15 November 2018, the General Court of the Court of Justice of the European Union annulled the European Commission's July 2014 State aid approval of Great Britain's (GB's) CM[1]. This judgment resulted in the imposition of a standstill period on the CM while the European Commission carried out an in-depth investigation to gather more information on certain elements of the CM. On 24 October 2019 the European Commission satisfactorily concluded its investigation and concluded that the CM (as it had operated since 2014, including during the investigation period) complied with EU State aid rules[2], bringing the standstill period to an end.

Security of supply

To date the CM has run eleven rounds of auctions, including two dedicated auction rounds for demand side response (DSR) and distribution connected generation. The auctions have secured the large majority of our capacity needs out to 2022/23 at low clearing prices (the remaining capacity needed for each delivery year will be secured through the upcoming auctions held one year before delivery (T-1)). There have been no electricity stress events since the implementation of EMR and we have consistently met our reliability standard[3].

Keeping bills as low as possible for consumers

The CfD 15-year price stabilisation mechanism has contributed to the scheme meeting its initial policy objectives of increasing investor confidence. This has provided more certainty over future revenue, reducing risks for investors, and therefore leading to lower cost of capital for developers.

Clearing prices for future offshore wind projects have fallen from £114.39/MWh in the 2015 allocation round to £57.50/MWh in 2017 (2012 prices). This reduction was faster than historical or international trends.

AR3 results have shown that clearing prices for offshore wind have reduced by around 30% since AR2 and around 65% since AR1 (to £39.65/MWh in 23/24 and £41.611/MWh in 24/25).

In comparison to the predecessor policy of the Renewables Obligation, CfD projects in AR1 and AR2 are estimated to deliver a saving of around £3bn up to 2050 (with a range of £1bn to £4bn in tested scenarios)[4].

[1] http://ec.europa.eu/competition/state_aid/cases/253240/253240_1579271_165_2.pdf
[2] https://europa.eu/rapid/press-release_IP-19-6152_en.htm
[3] For the GB electricity market, the reliability standard required is 3 hours LOLE per year (providing a system security level of 99.97%). It is expressed as LOLE i.e. the number of hours/periods per annum in which it is statistically expected that supply will not meet demand.
[4] In Phase 2 of the CfD Evaluation this analysis was repeated to include AR3 projects based on updated 2019 assumptions of potential future wholesale electricity prices under a scenario which is consistent with the Government's commitments to Net Zero. Phase 2 analysis found a saving of around £3bn for AR1, AR2 and AR3 projects with a range of £2bn to £5bn in scenarios tested. See the CfD Phase 2 evaluation report for the full analysis: https://www.gov.uk/government/publications/evaluation-of-the-contracts-for-difference-scheme

Since its implementation, the CM has been highly cost effective. Liquidity and competition within the capacity auctions have been high and auction clearing prices have been lower than expected. The most recent main auction (T-3 held in January 2020) cleared at £6.44/kW and the most recent top-up auction (T-1 held in February 2020) cleared at just £1.00/kW. This has resulted in low costs to the consumer.

In terms of the achievements of the smaller supporting policies of EMR, many have not yet been used. Given that these are deterrent or contingency policies, it is thought that as there has not been a requirement to use these policies, they are achieving their intended objectives.

Next steps

This review has evidenced that the EMR policies remain fit for purpose. The cost of renewables has fallen and is anticipated to fall further, however there is still expected to be a need for government support going forward.

By 2050 the UK will need to have met our world leading net zero emissions target; the power sector is vital to that. Whilst we cannot predict today exactly what the generating mix will look like in 2050, we can be confident that renewables will be the foundation of this, alongside firm or flexible low carbon generating capacity such as carbon capture and storage technology and nuclear power stations.

Net zero defines what we must achieve by 2050, and the Net Zero Strategy sets out how to get there. We must take the necessary decisions now to deliver the low cost and secure low carbon power system we will need to reach net zero.

To build on the success of the CfD scheme, the fourth allocation round (AR4) was launched on 13 December 2021.

To ensure security of supply there is a strong need to maintain the CM going forward, given that many of the underlying issues that led to its introduction continue. In particular, the significant coal and nuclear plant closures expected in the 2020s, the persistence of the 'missing money[5]' problem and the rapid evolution of the electricity system in GB.

A call for evidence held in 2018[6] highlighted several areas for minor improvement in the CM, in particular, to ensure that competition in the CM continues to be based on a level playing field between technologies, to further improve the cost-effectiveness of the scheme and to make simplifications where possible. Full details of our plan for making these minor improvements to the CM can be found in the Five-Year Review of the CM which we published in July 2019[7].

[5] The missing money problem refers to the lack of financial incentives to build new generators or refurbish existing generators to provide capacity caused by generators' and investors' uncertainty about whether the prices they would eventually receive for generating electricity and selling it in the wholesale electricity market would cover the costs of those activities.

[6] https://www.gov.uk/government/consultations/capacity-market-and-emissions-performance-standard-review-call-for-evidence
https://www.gov.uk/government/publications/capacity-market-5-year-review-2014-to-2019 This was published ahead of the Energy Act Review in order to meet the requirements in the secondary legislation which implements the CM (the Electricity Capacity Regulations 2014).

Many of the smaller, supporting policies of EMR have not yet been used. However, given that these are deterrent or contingency policies, it is thought that even though there has been no requirement for their use, they are still fit for purpose.

We are continually seeking to understand whether we should adapt and improve our policy mechanisms, and the findings of this review have been integrated into work assessing how our policy framework can best deliver a net zero consistent power sector, including informing:

- consultations on the design of AR4[8];
- the call for evidence on enabling a highly renewable electricity systems, which focused on broader, longer-term issues beyond AR4, including introducing greater exposure to market price signals[9];
- the Energy White Paper, which was published in December 2020 and set out an ambitious policy programme to put us on track to delivering net zero emissions by 2050[10]; and
- the Net Zero Strategy, which was published in October 2021 and built on the Energy White Paper, setting out how we will decarbonise all sectors of the UK economy.

[8] https://www.gov.uk/government/collections/contracts-for-difference-cfd-allocation-round-4
[9] https://www.gov.uk/government/consultations/enabling-a-high-renewable-net-zero-electricity-system-call-for-evidence
[10] https://www.gov.uk/government/publications/energy-white-paper-powering-our-net-zero-future

Annex

Chapter	Policy Overview
Contracts for Difference	The Contract for Difference (CfD) scheme aims to tackle the lack of **investment in low carbon electricity generation** allowing the Government to achieve its objectives under the Electricity Market Reform to: • ensure the future security of electricity supplies, • drive the decarbonisation of our electricity generation, and • minimise costs to the consumer.
Capacity Market	The Capacity Market was introduced to mitigate future risks to the **security of electricity supplies**.
Conflicts of interest	This policy gives the Secretary of State **power to amend the national system operator's transmission licence to introduce business separation** or ring-fencing measures.
Access to markets	This policy enables the government to intervene in the market to address the problem of low levels of **liquidity in the wholesale power market** and the difficulties faced by **independent generators in securing long-term contracts** for the sale of their electricity.
Renewables Obligation: Transitional arrangements	**The Renewables Obligation** (RO) was the main financial mechanism by which government incentivised deployment of large-scale renewable electricity projects in the United Kingdom. It came into effect in 2002 in Great Britain and 2005 in Northern Ireland. It closed to new capacity on 31 March 2017 (with exceptions that extended the deadline for certain projects to January 2019 in GB, and March 2019 in NI). Newly accredited capacity will receive support for 20 years or until the final closure of the scheme on 31 March 2037, whichever is the earlier.
Emissions Performance Standard	The **Emissions Performance Standard** (EPS) imposes an "emissions limit duty" on operators of new fossil-fuel plant.
Policy and Strategy Statement	This chapter introduces a strategy and policy statement, which will set out the **government's strategic priorities for the energy sector in Great Britain**, describe the roles and responsibilities of various players who implement, or are affected by, GB energy policy and describe policy outcomes which are to be achieved by the Authority and the Secretary of State when regulating the sector.
Consumer Protection and Miscellaneous	This policy provides Ofgem with powers to compel energy companies found to be in **breach of licensing conditions to issue redress to affected consumers**. This section also covers the fees in respect to nuclear decommissioning.

Contracts for Difference

Title: Contracts for Difference	Post-Implementation Review
PIR No: BEIS012(PIR)-22-RE	**Date**: 17/06/2019
Original IA/RPC No: DECC0144	**Type of regulation**: Domestic
Lead department or agency: BEIS	**Type of review**: Statutory
Other departments or agencies: N/A	**Date measure came into force**: 18/12/2013
	Recommendation: Keep
Contact details for enquiries: BEISContractsforDifference@beis.gov.uk	**RPC Opinion**: N/A

1. What were the policy objectives of the measure?

The CfD scheme is the government's main mechanism for supporting low carbon electricity generation.

The objectives of the CfD were to:

- Ensure sufficient investment in sustainable low carbon technologies to put us on a path consistent with our 2020 renewables targets and our longer-term target to reduce carbon emissions by at least 80% of 1990 levels by 2050; and
- Maximise benefits and minimise cost to the economy as a whole and to taxpayers and consumers – maintaining affordable electricity bills while delivering the investment needed.

2. What evidence has informed the PIR?

This is a high evidence PIR because in allocation rounds 1 and 2 (AR1 and AR2) the annual budget allocated has exceeded £490 million. Furthermore, the scheme is strategically important in bringing forward low carbon electricity technologies in Great Britain and therefore has a high impact.

The PIR has been informed by an externally commissioned evaluation of the CfD covering the first two competitive allocation rounds. Semi-structured telephone interviews were conducted with 23 of the 38 CfD projects. 17 semi-structured telephone interviews were also carried out with wider developers of low carbon electricity projects who did not have a CfD contract. The analysis also compared the cost of the current CfD scheme with a modelled counterfactual scenario of subsidising the same level of generation under the previous Renewables Obligation policy.

The review has also been informed by a stakeholder workshop in January 2019. This brought together 24 stakeholders including academics, industry, investors and trade associations to discuss whether the scheme had met its original objectives and if these objectives were still valid.

The review of the nuclear CfD has been informed by the experience of BEIS officials working on this policy.

Phase 2 of the CfD Evaluation will explore Allocation Round 3 and Evaluation Phase 3 will synthesise the results of Phases 1 and 2.

3. To what extent have the policy objectives been achieved?

Overall the evidence suggests that the policy objectives are being met:

- In total through AR1 and AR2 5.48GW of renewables capacity has been awarded contracts through the scheme. The capacity awarded in CfD projects from AR1 and AR2 are expected to contribute 1.3% to all electricity generation by 2020, based on the January 2019 CfD register. The capacity from the first two allocation rounds is estimated to provide around 6% of the UK's total electricity generation by 2025.
- Furthermore, the UK's first nuclear project in a generation is in the process of being built as a result of a bi-lateral CfD.
- The 15-year price stabilisation mechanism has contributed substantially in meeting the policy aims of increasing investor confidence.
- Analysis suggests that in comparison to the RO, CfD projects in AR 1 and AR2 are estimated to deliver a saving of around £3 billion (present value) up to 2050[11].

We recommend that the policy is kept.

4. What were the original assumptions?

The July 2011 impact assessment12 reported that the expected economic impact of the CfD would lead to a more efficient allocation of risk among investors, consumers and government, by allocating risk to those parties best able to manage or control it. In particular, the CfD was assumed to be able to:

insulate investors in low carbon generation from fossil fuel price risk, which they are unable to control, thereby leading to a reduction in the cost of capital to investors relative to alternative support mechanisms and, in turn, reductions in the costs to society and consumers of securing this investment; but

maintain exposure to a fluctuating wholesale price for those technologies that are able to respond to this signal in their operational decisions.

[11] In Phase 2 of the CfD Evaluation this analysis was repeated to include AR3 projects based on updated 2019 assumptions of potential future wholesale electricity prices under a scenario which is consistent with the Government's commitments to Net Zero. Phase 2 analysis found a saving of around £3bn for AR1, AR2 and AR3 projects with a range of £2bn to £5bn in scenarios tested. See the CfD Phase 2 evaluation report for the full analysis: https://www.gov.uk/government/publications/evaluation-of-the-contracts-for-difference-scheme

[12] CfD impact assessment: https://www.legislation.gov.uk/ukia/2016/176/pdfs/ukia_20160176_en.pdf

5. Were there any unintended consequences?

Overall the evidence suggests that the scheme has met its initial aims. However, through the review process areas were identified which stakeholders suggested if addressed could improve the effectiveness of the scheme. In particular, these relate to:

- The pay-as-clear scheme design makes speculative bidding feasible
- Impacts of Milestone Delivery Dates on procurement practices and project risk assessments
- The implications of not re-running pot 1 (for established technologies) since AR1
- The ability of the CfD to support innovation.

6. Has the evidence identified any opportunities for reducing the burden on business?

The CfD is an opt-in scheme for low carbon project developers, therefore any opportunities to reduce burden on businesses would be around the information and guidance association with the scheme. The majority of applicants (both successful and unsuccessful) found the information and guidance provided in advance of application was clear and sufficient to understand the requirements of participation.

7. For EU measures, how does the UK's implementation compare with that in other EU member states in terms of costs to business?

N/A

1. What were the policy objectives of the measure?

Electricity Market Reform (EMR) was introduced as part of the Energy Act 2013. EMR aimed to incentivise investment in secure, low carbon electricity, increase the security of Great Britain's electricity supply and improve affordability for consumers. The largest components of EMR were the Capacity Market (CM) and the Contracts for Difference (CfD). The CfD scheme is the government's main mechanism for supporting low carbon electricity generation, following on from the Renewables Obligation (RO) which closed to new applications in March 2017.

The objectives of the CfD were to:

- Ensure sufficient investment in sustainable low carbon technologies to put us on a path consistent with our 2020 renewables targets and our longer-term target to reduce carbon emissions by at least 80% of 1990 levels by 2050; and
- Maximise benefits and minimise cost to the economy as a whole and to taxpayers and consumers – maintaining affordable electricity bills while delivering the investment needed.

The CfD aims to give developers of large-scale low carbon projects a higher level of confidence and certainty to invest in low carbon electricity generation, by agreeing to a fixed price for the electricity output. The scheme aims to support investment in a wide range of low carbon technologies with different levels of maturity. The scheme allows investment to come forward at a lower cost of capital and uses an auction mechanism to deliver investment at a lower cost to consumers. For technologies such as nuclear, a bilateral CfD has been awarded.

Generators are awarded a 15-year CfD, with payments indexed to inflation, and a set of obligations to deliver the contracted capacity within a specified time period. The basic premise is as follows: the contract guarantees additional revenue to developers when the wholesale market price, the "reference price", is below the "strike price", which is a measure of the cost of investing in low carbon technology. At times when the reference price exceeds the strike price, the generator is required to pay back the difference, thus protecting consumers from over-payment.

As well as bringing forward low carbon projects, the scheme also encourages open and competitive supply chains, in which innovation and skills are promoted to drive down the cost of low carbon electricity generation over the long term, and lower costs for consumers. To facilitate this BEIS made the provision of an adequate supply chain plan a pre-condition for projects of 300MW and above to enter the CfD allocation process.

To deliver this scheme BEIS works with:

- **The Low Carbon Contracts Company (LCCC).** Successful developers of low carbon projects enter into a private law contract with the LCCC[13], a government-owned company. The LCCC is counterparty to the CfD contracts, and its primary role is to issue and manage the contracts and make CfD payments.
- **National Grid Electricity System Operator (ESO).** As the Delivery Body for the CfD scheme, National Grid ESO[14] is responsible for running the CfD allocation process.

[13] https://www.lowcarboncontracts.uk/
[14] https://www.emrdeliverybody.com/SitePages/Home.aspx

- **Ofgem.** Ofgem[15] is responsible for hearing certain appeals during the allocation process.

2. What evidence has informed the PIR?

This is a high evidence PIR because for AR1 and AR2 the annual budget allocated has exceeded £490 million (£315 million[16] in AR1 and £176 million[17] in AR2; 2011/12 prices). AR3 opened in May 2019, with an allocated budget of £65m (2011/12 prices) and overall capacity cap of 6GW. Furthermore, the scheme is strategically important in bringing forward low carbon electricity technologies in Great Britain and therefore has a high impact on delivering decarbonisation.

An external independent evaluation of CfD AR1 and AR2 was commissioned by BEIS to inform this PIR. The evaluation assesses the extent to which the CfD scheme is meeting its intended objectives and identifies how and why any intended and unintended outcomes are materialising for different technologies and developers. The evaluation provides an evidence base that can inform the ongoing design and delivery of the scheme, and addresses 5 high level questions:

1. To what extent, how and why is the CfD scheme contributing to its intended objectives, and do its outcomes, both intended and unintended, differ for different groups (project developers, investors, technology types)?

2. Are the design parameters of the CfD scheme, including the allocation process, appropriate for achieving the intended objectives?

3. Is the CfD scheme being delivered as intended?

4. Does the CfD scheme present good value for money?

5. What are the implications of the findings for the future contribution of renewable technology to the electricity market?

Addressing these questions required a mix of impact, process and economic evaluation. The evaluation is theory-based, adopting principles of realist approaches to address questions around how differences in context influence how developers respond to the scheme. The evaluation used a combination of qualitative and quantitative data collection, and analysis to provide synthesised findings.

See the Evaluation Report and Annexes with further information on the methodology and results.

Evidence sources

The following sources were used in the evaluation:

[15] https://www.ofgem.gov.uk/
[16] https://www.gov.uk/government/publications/contracts-for-difference-cfd-allocation-round-one-outcome
[17] https://www.gov.uk/government/publications/contracts-for-difference-cfd-second-allocation-round-results

Scheme composition analysis:

This work package provided an initial analysis of the levels of electricity generation that CfD contracted projects are forecast to deliver to date.

Analysis of renewable energy investment trends:

Through analysis of existing secondary data sources (primarily the Bloomberg Terminal[18]) this strand provided an analysis of trends in renewable investment between 2004-2018 to assess whether different types of firms have invested more/less in different technologies since the CfD scheme was introduced.

Rapid Evidence Assessment (REA):

The REA was used to consolidate existing evidence on the extent to which the CfD is delivering against its objectives, or ways in which processes for delivery may be improved. This strand reviewed international literature to give examples of how the design of renewable energy auctions has influenced the type of outcomes obtained.

Key stakeholder interviews:

Prior to mainstage fieldwork with low carbon project developers, an initial round of face-to-face interviews was carried out with CfD scheme policy leads and representatives of delivery partner organisations. This built understanding of the scheme's design, its intended policy objectives, and the details involved in processes for delivering the scheme, including the roles of different delivery bodies. Eight key informant interviews were carried out in total, covering CfD policy and analyst leads in BEIS, and representatives of the LCCC, Ofgem and the National Grid ESO.

Interviews with CfD project developers:

Semi-structured telephone interviews were carried out with representatives of 23 of the 38 CfD projects awarded contracts in AR1 and AR2 (see Table 1), including non-signatories and terminated projects. Some developer firms held contracts for more than one CfD generation unit. In addition, some offshore wind 'projects' are phased over time, which means that they are split into up to 3 individual generation units each with their own contract. In these cases, interviews were used to gather information on more than one project and generation unit per interview.

[18] https://www.bloomberg.com/professional/solution/bloomberg-terminal/

Technology	AR1 Projects covered through interviews (Total awarded projects in brackets)	AR2 Projects covered by interviews (Total awarded projects in brackets)	Total projects covered by interviews (Total awarded projects in brackets)
Advanced Conversion Technologies	1 (3)	4 (6)	**5 (9)**
Dedicated Biomass with CHP	0 (0)	0 (2)	**0 (2)**
Energy from Waste with CHP	0 (2)	0 (0)	**0 (2)**
Offshore wind	2 (2)	3 (3)	**5 (5)**
Onshore wind	10 (15)	0 (0)	**10 (15)**
Solar PV	3 (5)	0 (0)	**3 (5)**
Total	**16 (27)**	**7 (11)**	**23 (38)**

Table 1. Overview of interviews with CfD developers

Interviews with non-participating low carbon energy developers:

In addition to the interviews with developers who held a CfD, 17 semi-structured telephone interviews were carried with developers of low carbon electricity projects in GB who do not have a CfD contract (either because of failure at auction or because they had not applied to the CfD scheme at all).

	ACT	Biomass and CHP	EfW and CHP	Hydro	Offshore	Onshore	Solar	Tidal Power
Number technologies covered by the 17 interviewed companies	2	5	2	1	4	9	10	2

Table 2. Types of technologies covered by interviewed non-CfD developers

Quantitative online survey with developers and private investors:

After the in-depth interviews a follow-up self-completion online survey was sent to developers to provide a standardised template for capturing detailed information to inform our estimates of

costs of debt and equity for different technologies, and the minimum rate of return required to make a project viable (hurdle rates). This was sent to all 34 developer companies of CfD projects, achieving 20 responses in total, although with relatively high rates of non-response to certain questions. Respondents represented 15 separate CfD projects, because for some projects more than one member of the project's consortium of developer firms responded.

Cost-effectiveness analysis:

This addressed the evaluation question "Does the CfD scheme represent good value for money?" The analysis compared outcomes of the current CfD scheme with a modelled counterfactual scenario of subsidising the same level of generation under the RO. The rationale for using a scenario whereby the RO continued as the counterfactual was primarily that it is reasonable to assume that if the CfD scheme had not been introduced then the RO would likely to have continued (rather than a "do nothing" scenario of no form of support). This approach to counterfactual comparison was taken in DECC's pre-implementation Impact Assessment to estimate the Net Present Value of the CfD scheme.

The modelling required developing estimates of the cost to consumers per MWh of electricity produced, by each technology. This was used to compare overall support costs to a counterfactual scenario assuming the CfD scheme had not been introduced and the RO continued out to 2050. The BEIS Dynamic Dispatch Model (DDM) was used as the basis of this modelling work.

Stakeholder workshop

Separate from the commissioned evaluation, BEIS held a stakeholder workshop in January 2019. This brought together 24 stakeholders including academics, industry, investors and trade associations to discuss whether the scheme had met its original objectives and if these objectives were still valid. Representatives from the Committee on Climate Change, Legal & General, Anaerobic Digestion and Bioresources Association, Technopolis, Energy Technologies Institute, RenewableUK, Citizens' Advice, Aurora, Solar Trade Association, Copenhagen Economics, Burges Salmon, Renewable Energy Association, Frontier Economics, Baringa, SocGen, Low Carbon Contracts Company, National Grid ESO, KPMG, Element Energy, Vivid Economics, Energy UK were in attendance.

For nuclear projects, the experience of BEIS officials working on this policy area was used as evidence.

Limitations of data collected

When forming conclusions on the evidence gathered, the following limitations of the underlying data were taken into account:

Interviews with CfD developers

Overall, respondents reflected a good range of most of the different types of technologies developed under AR1 and AR2. However, developers of CfD projects with Energy from Waste with CHP and Dedicated Biomass with CHP were not included due to non-response.

Interviews with developers of low carbon projects without a CfD

It is not known how representative the 17 interviews with developers of low carbon electricity projects without a CfD are of the wider population of unsuccessful applicants, because data on the number and profile of unsuccessful applicants is kept confidential. In addition, the relatively small number of interviews included in this qualitative sample should not be considered

statistically representative of the wider population of firms who develop low carbon electricity across GB.

Online survey

There was a higher proportion of respondents representing offshore and onshore wind projects, and a relative under-representation of other technologies. There was a high rate of non-response to certain questions. Findings from the survey have been reported if the questions were answered by at least 50% of respondents. Some questions, for example around hurdle rates, received very few responses which was likely to be due to commercial sensitivity. Findings from these questions have not been included in the analysis.

Estimates of CfD scheme on cost reduction

As with all modelling of future outcomes, there is a significant degree of uncertainty in the projections. This analysis has focused on estimating the changes in cost of supporting a fixed level of low carbon deployment under the two regimes. The level of deployment, and the mix of technologies deployed, has been held constant, in line with BEIS's latest reference case. The magnitude of the savings under the CfD scheme would likely vary materially under a different level and mix of low carbon deployment.

Approach to quality assurance

Internally the CfD evaluation and PIR have been reviewed by analysts working on low carbon electricity, the Dynamic Dispatch Model and evaluation in the Energy and Security Analysis team as well as the head of Energy Evaluations. Policy officials in the Clean Electricity Directorate, including the Senior Responsible Owner have also reviewed both documents. External peer review of the CfD evaluation was undertaken by Professor Derek Bunn, with expertise of energy economics, and Dr Barbara Befani and Charles Michaelis both with expertise in theory-based evaluation. Where relevant to the first phase of the evaluation, all of the peer review comments have been addressed. Peer review comments relevant to future phases of the evaluation will be addressed in phases two and three of the CfD evaluation. The Hinkley Point C CfD review was given Senior Civil Service clearance.

3. To what extent have the policy objectives been achieved?

At the time the CfD was launched, its objectives were to:

- Ensure sufficient investment in sustainable low carbon technologies to put us on a path consistent with our 2020 renewables targets and our longer-term target to reduce carbon emissions by at least 80% of 1990 levels by 2050[19]; and
- Maximise benefits and minimise cost to the economy as a whole and to taxpayers and consumers – maintaining affordable electricity bills while delivering the investment needed.

Overall evidence suggests the policy objectives have been met. This view was supported by stakeholders who were interviewed as part of the CfD Evaluation and those who took part in

[19] In 2019, the government set a legally binding target to reach net zero emissions by 2050. In 2021, the government committed to reducing emissions by 78% by 2035 compared to 1990 levels, taking the UK more than three-quarters of the way to reaching net zero by 2050.

the workshop. More information on the extent to which they have been met can be found in the CfD Phase 1 Evaluation report.

Low carbon projects

This PIR focuses on CfD AR1 and AR2. The results of AR1 can be found here, and AR2 here.

In total 5.48 GW of capacity was originally awarded (2.14 GW in AR1 and 3.35 GW in AR2)[20]. The LCCC's CfD Register[21] estimates a combined generation capacity of 5.26 GW, equating to 96% of initially awarded capacity, is currently on track to be delivered (See Figure 1).

Out of the 38 CfD projects that have been awarded a CfD in these two allocation rounds, developers of seven projects either did not sign their offered contracts or their contracts have been terminated. In all cases, these were solar PV and bioenergy projects. Of these projects which did not go forward, all but one were projects with an initial estimated capacity below 50MW.

Whilst the capacity awarded in AR1 and AR2 will contribute around 1.3% to all electricity generation by 2020, based on the January 2019 CfD register, when all projects are operational this is estimated to increase to around 6% of the UK's total electricity generation between 2025 and 2030.

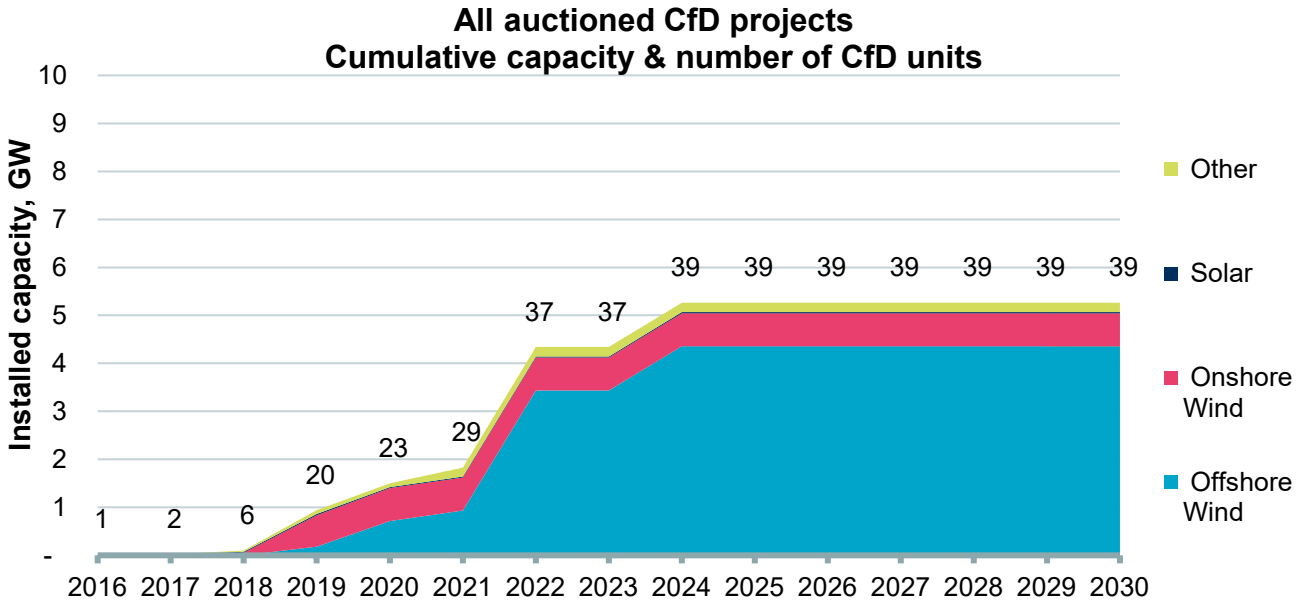

Figure 1. All auctioned (AR1 and AR2) CfD projects, cumulative capacity and number of units (phased projects counted as multiple units) and their expected commissioning dates. Source: CfD Register. LCCC 25/01/2019

The first nuclear project in a generation is in the process of being built as a result of a bilateral CfD. The CfD provided the certainty needed for EDF and China General Nuclear Power Corporation (CGN) to finance the Hinkley Point C project. The offer of a CfD was also an important part of the negotiations between government and Hitachi with regards to the Wylfa Newydd project. Bilateral CfDs have only led to the development of one new nuclear project, although this will make up significant capacity when it is built. Bilateral CfDs have received

[20] Due to rounding the totals presented for AR1 and AR2 do not add up to 5.48 GW
[21] https://www.lowcarboncontracts.uk/cfds (January 2019)

criticism for not delivering value for money for the consumer, in comparison to the decreasing price of renewables.

Investment

Evidence suggests that the 15-year price stabilisation mechanism has contributed substantially to meeting the policy aim of increasing investor confidence. Stakeholders and developers interviewed reported that this provides more certainty over future revenue, reduces risks for investors, and leads to a lower cost of capital.

In recent years we have seen a slight shift towards more international utility backed developer companies investing in UK renewables development. This is primarily driven by the profile of offshore wind developers.

AR1 secured investment enabling deployment of 750MW of 'Established Technologies'. Since 'Established Technologies' were last able to compete for CfDs in AR1, a small number of projects have come through without support, such as Clayhill solar PV farm in Milton Keynes which opened in 2017 and is considered the UK's first subsidy-free solar PV farm. Some reports[22] suggest the co-location of the site with a 6MW battery storage facility may have strengthened their business case. This will enable the owners to be eligible to bid for ancillary services from National Grid.

Low cost, low carbon projects

The strike prices for future offshore wind projects fell by around half between AR1 in 2015 and AR2 in 2017; in AR2 the lowest clearing price that two projects received was £57.50/MWh, compared to £114.39/MWh (2012 prices) in AR1. This reduction in prices for offshore wind was faster than historical or international trends, as evidenced in the CfD Evaluation Phase 1 report.[23]

Consumer savings

Based on our modelling estimates, the CfD scheme will reduce the impact of low carbon projects' deployment on consumer bills under all scenarios, as compared with the RO policy that preceded it.

The reduction in costs to the consumer due to the CfD projects auctioned in AR1 and AR2 is estimated at around £3 billion (in present value terms) in comparison with supporting the same projects under the RO. The scenarios tested produced upper and lower bound estimates of £1 billion and £4 billion respectively.

The lower support costs under the CfD regime are primarily driven by the lower hurdle rates assumed compared to under the RO. With projected future CfD projects (excluding nuclear and carbon capture and storage (CCS)) also included, the consumer cost savings of the CfD regime through to 2050 are estimated at around £9 billion compared to the RO scheme, with a range of £4 billion to £14 billion in the scenarios tested.

For further details see section 5 on Value for Money of the CfD Evaluation Report.

[22] *Inside Clayhill, the UK's first subsidy-free Solar farm*. Solar-PV Power Portal report. 2017.
[23] https://www.gov.uk/government/publications/evaluation-of-the-contracts-for-difference-scheme

4. What were the original assumptions?

The July 2011 impact assessment[24] reported that the expected economic impact of the CfD led to a more efficient allocation of risk among investors, consumers and government, by allocating risk to those parties best able to manage or control it. In particular, the CfD was intended to:

- insulate investors in low carbon generation from fossil fuel price risk, which they are unable to control, thereby leading to a reduction in the cost of capital to investors relative to alternative support mechanisms and, in turn, reductions in the costs to society and consumers of securing this investment; but
- maintain exposure to a fluctuating wholesale price for those technologies that are able to respond to this signal in their operational decisions.

The original impact assessment can be found here. We advise caution with direct comparisons as the underlying assumptions used in the impact assessment are different from the assumptions used in the evaluation.

In the case of the nuclear power station at Hinkley Point C, it was decided to opt for a bilateral CfD. A large volume of work was necessary on the part of the developer to progress the first nuclear power project in a generation to the point where contracts were ready to be entered into and information could be provided to enable the Government to perform a credible value-for-money assessment. While developers were prepared to accept the risk that if their final proposition did not give consumers value-for-money no CfD would be awarded, they were extremely unlikely to participate in a competitive auction. As for other low carbon energy technologies, a CfD was considered an effective way to provide certainty on the returns per unit of electricity. Without this certainty on the level of returns, it is unlikely that investors or developers would have taken on the risk of construction, completion and plant performance onto their balance sheet.

5. Were there any unintended consequences?

Overall the evidence suggests the scheme has met its initial aims, however, there are some outcomes which those interviewed perceived as unintended, or unexpected.

Pay-as-clear[25] auction design and speculative bidding

There was little evidence to suggest that speculative bidding was widespread. However, the interview findings suggest that some developers perceived that two elements of scheme design, a) pay-as-clear bidding and b) a relatively weak Non-Delivery Disincentive (NDD) by international standards, have made speculative bidding feasible.

The pay-as-clear approach incentivises bidders to bid their lowest possible strike price, in comparison to pay-as-bid where bidders may try to anticipate the expected clearing price and include a margin in their bid. Pay-as-bid therefore has potential to increase the strategic

[24] CfD impact assessment: https://www.legislation.gov.uk/ukia/2016/176/pdfs/ukia_20160176_en.pdf

[25] Pay-as-clear auctions, also known as uniform price auctions, describe where each of the successful bidders is paid the price equal to the bid of the last successful project in the auction (known as the clearing price) rather than the price of their individual bids.

complexity of the auction and could result in pushing up the price of all bids, and therefore the cost to the consumer.

The NDD aims to incentivise applications to be made only for projects likely to be delivered and meet their Milestone Delivery Date (MDD). The MDD is the date by which developers have to demonstrate that they have made substantial progress with their project and occurs 12 months after contract signature. The NDD provides for an exclusion from further application for the site of a project that was awarded a CfD where (i) the applicant in respect of that project failed to sign, or (ii) the CfD was terminated prior to, or due to, a failure to meet the MDD.

The exclusion applies for up to 24 months from the date of the CfD notification for that project and aims to exclude such sites from being used for an application for the next CfD allocation round. When the exclusion period was extended in 2016, there was no clear evidence of the need for further measures to strengthen the NDD. We will keep its ongoing efficacy under review in order to ensure that it operates most effectively and proportionately.

Impacts of the Milestone Delivery Date (MDD)

Procurement practices

The MDD is the date by which the Milestone Requirement (MR) must be satisfied. This is a requirement for developers to have made substantial progress with their project. The MDD occurs 12 months after project signature. Developers can satisfy the MR by either the 10% spend route (evidence that the developer has spent 10% or more of the total project pre-commissioning costs on the project) or the project commitments route (evidence of compliance with or fulfilment of the project commitments). The MDD is intentionally ambitious to ensure prompt delivery of projects which helps to achieve better value for money for consumers. Whilst ambitious, the MDD has been successfully met by most CfD developers.

However, developers of a variety of different projects suggested that 12 months is too short a window to demonstrate spending of 10% of total pre-commissioning project costs. Many developers indicated this led to a rush to spend money or sign contracts in the period approaching MDD. It was argued by some developers that this resulted in procurement practices that developers would not normally undertake, which were less cost-effective and potentially created risks in quality and timeliness of construction works delivered (for example by paying large sums for construction works in advance of its completion).

There were instances where developers felt that the MDD put them in a difficult position when negotiating contracts. For example, where the supplier knew the project was reaching the MDD, and time was running short, the supplier could charge higher prices as the developer was in a rush to get contracts agreed. This was reported by developers, but we do not have any direct evidence of this occurring in practice. It should also be noted that the MDD was met by the majority of developers.

Risk Assessment of Projects

Having been through the process in AR1, some offshore wind developers felt that the renewables industry was now aware of the challenges of spending 10% of total project pre-commissioning costs in 12 months and would plan in advance to condense work within this period. However, this meant that pre-development feasibility work, that would normally have been carried out in advance of putting a project forward for a CfD auction, could be being delayed, posing some construction risks and cost uncertainties.

If the 10% spend route for meeting the MR exposes developers to undue risks, they may consider the project commitments route as an alternative.

For further details, see section 3 on CfD scheme Delivery Processes in the CfD Evaluation Phase 1 main report.[26]

Impacts of not re-running Pot 1

Since AR1 there has been no further allocation round for Pot 1 'Established Technologies'. Developers interviewed as part of the independent CfD Evaluation reported that the lack of further Pot 1 auctions led to a relative fall in investment in these technologies. Despite these reports, there has been some evidence of an emerging 'subsidy free' established renewables market, albeit limited at this stage, with Clayhill solar PV Farm in Milton Keynes opening in 2017 as the UK's first subsidy-free solar PV farm. However, some reports[27] suggest the co-location of the site with a 6MW battery storage facility may have strengthened their business case. This will enable the owners to be eligible to bid for ancillary services from National Grid ESO.

Furthermore, some developers felt that not re-running pot 1 could lead to promotion of Corporate Power Purchase Agreements (CPPAs). Some stakeholders felt that this may not be an equitable way of spreading the costs of renewables across wider consumers, reporting that onshore wind and solar PV developers may look for private deals to supply to industrial firms. Stakeholders stated that this could result in the cost of renewables being split between a smaller pool of customers. Whilst there was little evidence of CPPAs being common practice, it could be argued that consumers may still benefit from these contracts through lower wholesale prices and their contribution to decarbonising the electricity system.

For further details, see section 4 on CfD scheme Design Features in the CfD Evaluation Phase 1 main report.

CfD as a mechanism for supporting innovation

The CfD has contributed to the reduction in costs of certain low carbon technologies and reduced costs for consumers. However, some developers felt that there was a gap in subsidy provision to support commercialisation of newer emerging technologies, with the potential for greater cost reduction in the future, possibly undermining opportunities to secure even greater value for money in the longer term.

CfDs are allocated on a competitive process, helping to maximise value for money for consumers. Where appropriate, BEIS can deploy additional tools such as the use of minima capacity requirements in auctions to support specific technologies. Such use must be weighed against the impact on value for money and previous uses of maxima and minima have had to be compatible with EU State Aid rules.

For further details, see section 4 on CfD scheme Design Features in the CfD Evaluation Phase 1 main report.

[26] https://www.gov.uk/government/publications/evaluation-of-the-contracts-for-difference-scheme
[27] *Inside Clayhill, the UK's first subsidy-free Solar farm*. Solar-PV Power Portal report, 2017.

6. Has the evidence identified any opportunities for reducing the burden on businesses?

The CfD is an opt-in scheme for low carbon project developers, therefore any opportunities to reduce burden on businesses would be around the information and guidance associated with the scheme.

Both successful and unsuccessful applicants interviewed as part of the CfD Evaluation found that information and guidance provided in advance of applying to the scheme was clear and sufficient.

In the application phase, some developers reported difficulties around requirements to demonstrate certain eligibility criteria. However, it was felt that this may have been a result of the learning curve between AR1 and AR2. Where developers had applied to both rounds, they felt the second allocation round was clearer as they knew what to expect.

Developers also reported that they considered 12-month Milestone Delivery Date (MDD) as too short to complete sufficient development work to demonstrate the necessary 10% spend. Smaller firms, which cannot pay for costs of initial development work until they reach Financial Close, can struggle to meet the required MDD spending target. For larger firms (e.g. offshore wind developers) challenges were more around the large scale of construction works required in the 12-month period and the administrative challenge of collating financial information to demonstrate 10% had been spent. Despite this perceived challenging milestone, many projects have been able to meet the target.

For further details see section 3 on CfD scheme Delivery Processes in the CfD Evaluation Phase 1 main report.

Recommendation

Evidence from interviews with developers, plus economic modelling, suggests that the introduction of the CfD scheme has supported cost reduction in low carbon technologies deployment and helped bring down the level of subsidies. A number of CfD scheme design features have played a role, including:

- the certainty provided by the price stabilisation contract, which reduces risks for investors and costs of capital for developers;
- competitive pressure at auctions, which encourage lower strike price bids;
- the response from wider supply chains to the reduced levels of subsidy on offer, which encourages innovation and further cost reductions.

Findings from this report corroborate other evidence received by BEIS that support the claim that the CfD is still required to deliver the level of low carbon technologies deployment required to meet our decarbonisation targets. Furthermore, signalling future CfD allocations gives developers and investors the certainty needed to develop a supply chain that ultimately benefits the UK consumer.

As situations change however, it is right that government considers how mechanisms should evolve to best meet the overall needs of the consumer. We will explore whether the current level of price insulation is optimal, and whether providing developers with price signals to react

to market needs can reduce overall system costs. When considering this question, we will also consider the advances in the flexibility technologies and services that offer means for developers to meet system needs.

Capacity Market

Title: The Capacity Market	Post-Implementation Review
PIR No: BEIS012(PIR)-22-RE	**Date**: 22/07/2019
Original IA/RPC No: DECC0076/DECC0103/ DECC0151	**Type of regulation**: Domestic
Lead department or agency: BEIS	**Type of review**: Statutory
Other departments or agencies: N/A	**Date measure came into force**: 31/07/2014
	Recommendation: Keep
Contact for enquiries: Simon Dawes – Simon.Dawes@beis.gov.uk	**RPC Opinion**: N/A

1. What were the policy objectives of the measure?

The Capacity Market (CM) has three objectives:

- *Security of supply*: to incentivise sufficient investment in capacity to ensure security of electricity supply;
- *Cost-effectiveness*: to ensure the most efficient level of capacity is secured at minimum cost to consumers; and
- *Avoiding unintended consequences*: to minimise design risks and complement the decarbonisation agenda.

In addition to the requirement to review the CM after five years contained in the Energy Act 2013, a near identical review requirement appears in the secondary legislation that implements the CM (The Electricity Capacity Regulations 2014). These Regulations require that the first five yearly review is published before 1 August 2019. A Five-Year Review of the CM was, therefore, published on 22 July 2019[28].

We have determined it proportionate to refer to the already published Five-Year Review of the CM for the purpose of fulfilling the Secretary of State's obligation to review the CM under the Energy Act 2013. This cover sheet relies upon this earlier review publication, the findings of which remain accurate at the time of publication of this document.

[28] https://www.gov.uk/government/publications/capacity-market-5-year-review-2014-to-2019

2. What evidence has informed the PIR?

The review was carried out by BEIS officials through a Call for Evidence exercise held in August 2018[29] and the collection of data from published sources such as the CM auction registers and relevant reports from National Grid, Ofgem and BEIS. For example, the evaluation of the transitional arrangement auctions[30] and the Electricity Capacity Reports[31]. Responses to the call for evidence were received from 83 stakeholders such as electricity generators/ developers, trade associations, interconnections, DSR providers and consultants[32].

3. To what extent have the policy objectives been achieved?

Overall the evidence suggests the CM's policy objectives have been achieved, with some room for improvement going forward. The reliability standard for security of supply has been comfortably met. Auctions have been liquid, and the gross cost of the CM is at the lower end of the range predicted in the original IA. Whilst there have been some unintended consequences, amendments to the CM and other policies have been made to address these consequences as they emerged. Further incremental improvements are planned to ensure the CM continues to meet its objectives in future.

4. What were the original assumptions?

The September 2014 IA estimated that the change in net welfare of introducing a CM to be +£346m between 2012 and 2030 (£762m benefit from reducing unserved energy, £264m energy system costs, £41m institutional costs and £112m administrative costs). The net impact on the average annual domestic electricity bill was estimated at £2/year. Gross capacity revenues going to providers of capacity were estimated at between £0.7bn and £1.8bn per annum.

5. Were there any unintended consequences?

High numbers of diesel reciprocating engines won agreements in the early auctions leading to concerns about air quality impacts. BEIS worked with Ofgem, Defra and the Environment Agency to remove a loophole in environmental emission control regulations which addressed this distortion. BEIS also ensured that certain diesel engine operators were not being overcompensated by receiving funding through finance schemes in addition to the CM.

6. Has the evidence identified any opportunities for reducing the burden on business?

A broadly held view across respondents to the Call for Evidence was that the CM would benefit from simplification in a number of areas. For example, simplification of the Regulations and Rules, simplification of the prequalification process, greater clarity of information on stress events and greater clarity about the roles of delivery partners, BEIS and Ofgem. We are committed to considering the case for simplification.

[29] https://www.gov.uk/government/consultations/capacity-market-and-emissions-performance-standard-review-call-for-evidence
[30] https://www.gov.uk/government/collections/transitional-arrangements-auction
[31] https://www.emrdeliverybody.com/CM/CMDocumentLibrary.aspx
[32] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/784315/cm-and-eps-review-summary-of-cfe-responses.pdf

7. For EU measures, how does the UK's implementation compare with that in other EU member states in terms of costs to business?

N/A

The Capacity Market Review can be found here[33].

[33] https://www.gov.uk/government/publications/capacity-market-5-year-review-2014-to-2019

Conflicts of Interest

Title: Energy Act 2013 Review Chapter 5 – Conflicts of Interest	Post-Implementation Review
PIR No: BEIS012(PIR)-22-RE	**Date**: 31/01/2019
Original IA/RPC No: N/A	**Type of regulation**: Domestic
Lead department or agency: BEIS	**Type of review**: Statutory
Other departments or agencies: Ofgem	**Date measure came into force**: 23/12/2013
	Recommendation: Keep
Contact details for enquiries: Renewable.Electricity.Correspondence@beis.gov.uk	**RPC Opinion**: N/A

1. What were the policy objectives of the measure?

The powers introduced by chapter 5 of the Energy Act 2013 were intended to mitigate potential conflicts of interest between National Grid's delivery roles for Contracts for Difference (CfD) allocation and Capacity Market (CM) auctions, and their other regulated or commercial businesses. The regulations also allow the change of designated bodies for CfD or CM functions, and effect minor technical amendments to Energy Administration Orders. On the basis of this review and the evidence considered, these objectives remain appropriate.

2. What evidence has informed the PIR?

This is a low evidence review of the Conflicts of Interest chapter of the Energy Act. The review has been carried out by BEIS and has been informed by:

- Consultation and responses on a more independent system operator (2018)[34].
- BEIS conversations (in person and by email) with National Grid and Ofgem staff.
- Discussions with BEIS policy teams for CfD and CM.
- Discussions with the BEIS shareholder team.

A low evidence review was considered proportionate for this policy because the annual impact was estimated to be less than £5 million.

[34] https://www.ofgem.gov.uk/publications-and-updates/ofgem-s-response-electricity-system-operator-s-forward-plan-consultation-2018-19

3. To what extent have the policy objectives been achieved?

Analysis suggests that the policy objectives have been met. The policy has been used to enable the Transmission licence to be modified allowing the following:

- Creation of a **data handling facility** to ensure commercially sensitive data is protected;
- **business separation** of some functions to reduce the risk of conflicts of interest arising;
- a **duty on the National Grid Director** responsible for EMR analysis to ensure that it is not unduly influenced for the benefit of their other interests;
- **restrictions on EMR information** leaving the System Operator business; and
- **managerial, information, physical, employee and legal separation** of certain competitive businesses that present potential conflicts of interest.

Government and Ofgem agreed that the ringfencing enforced through the above represented a comprehensive and reasonable response to the potential conflicts of interest identified.

The power to allow the change of designated bodies for CfD or CM functions has not yet been used but remains necessary.

4. What were the original assumptions?

A modification to National Grid's Electricity Transmission Licence, Special Licence Condition 2N was laid before Parliament on 19 June 2014 and came into force on 1 August 2014. Special Condition 2N was drafted following publication in April 2013 of an assessment of the potential synergies and conflicts of interest arising as a result of National Grid Electricity Transmission plc (NGET) taking on the Electricity Market Reform (EMR) delivery role.

The power to allow the change of designated bodies for CfD or CM functions was considered necessary to respond to future changes in circumstances that might make those bodies unavailable, unsuitable or inefficient for the delivery of those functions.

On the basis of this review and the evidence considered, these assumptions remain valid.

5. Were there any unintended consequences?

None. It was understood that the restrictions would increase the cost of National Grid undertaking its functions, but this effect was considered to be necessary in order to reassure the industry that no conflicts of interest would be allowed to arise.

6. Has the evidence identified any opportunities for reducing the burden on business?

Burden on business is negligible. Administrative costs of the licence conditions imposed are minimal and these are regulated by Ofgem as part of the electricity transmission price control.

The costs to business are negligible and the intervention was a defensive one to mitigate potential conflicts of interest arising out of National Grid's EMR roles. No IA was deemed necessary. The recent changes to a more independent electricity system operator (ESO) are not considered to have altered the case for the 2014 licence modifications but this will be kept under review by Ofgem (see Annexes B & C for more detail). If ESO separation from 1 April 2019 is found to be effective, then allowing certain information to flow more freely within the ESO (but not outside) may lead to efficiencies resulting in slightly reduced cost and increased effectiveness. In that case, these powers may be required to amend the ESO licence conditions.
7. For EU measures, how does the UK's implementation compare with that in other EU member states in terms of costs to business? Not applicable.

1. What were the policy objectives of the measure?

The powers introduced by chapter 5 of the Energy Act 2013 were intended to mitigate potential conflicts of interest between National Grid's delivery roles for Contracts for Difference (CFD) allocation and Capacity Market (CM) auctions, and their other regulated or commercial businesses. The regulations allow the change of designated bodies for CfD or CM functions, and to effect minor technical amendments to Energy Administration Orders. On the basis of this review and the evidence considered, these objectives remain appropriate.

A modification to National Grid's Electricity Transmission Licence, Special Licence Condition 2N was laid before Parliament on 19 June 2014 and came into force on 1 August 2014. Special Condition 2N was drafted following publication in April 2013 of an assessment of the potential synergies and conflicts of interest arising as a result of National Grid Electricity Transmission plc (NGET) taking on the Electricity Market Reform (EMR) delivery role. This report was followed by a public consultation published in October 2013 and the Governments response, published on 23 June 2014. These publications contained a package of mitigation measures to manage those conflicts.

In summary the measures sought to achieve the following.

- Creation of a data handling facility within NGET to ensure that commercially sensitive data submitted to NGET is protected.
- Business separation of some of the EMR functions within NGET and from the rest of NG's businesses to reduce the risk of conflicts of interest arising between the EMR 'administrative' functions and NG's other interests.
- A duty on the NGET Director responsible for the EMR analytical function to ensure that the EMR analysis it supplies for the delivery plan has not been unduly influenced for the benefit of NG's other interests.

- Restrictions on EMR information leaving the System Operator business within NGET (SO) – to ensure that information the SO has access to through carrying out the EMR delivery role does not pass to other NGET staff.
- Managerial, information, physical, employee, and legal separation of certain National Grid 'competitive businesses' from NGET, that present potential conflicts of interest with the EMR delivery role.

2. What evidence has informed this PIR?

This is a low evidence review of the Conflicts of Interest chapter of the Energy Act. The review has been carried out by BEIS and has been informed by the following.

- Consultation and responses on a more independent system operator (2018)[35].
- BEIS conversations (in person and by email) with National Grid and Ofgem staff.
- Discussions with BEIS policy teams for CfD and CM.
- Discussions with the BEIS shareholder team.

A low evidence review was considered proportionate for this policy because the annual impact was estimated to be less than £5 million.

3. To what extent have the policy objectives been achieved?

Analysis suggests that the policy objectives have been met. The policy has been used to enable the Transmission licence to be modified allowing the following:

- creation of a data handling facility within National Grid to ensure commercially sensitive data is protected;
- business separation of some functions within National Grid to reduce the risk of conflicts of interest arising;
- a duty on the National Grid Director responsible for EMR analysis to ensure that it is not unduly influenced for the benefit of their other interests;
- restrictions on EMR information leaving the System Operator business; and
- managerial, information, physical, employee and legal separation of certain competitive businesses within National Grid that present potential conflicts of interest.

Government and Ofgem agreed that the ringfencing enforced through the above represented a comprehensive and reasonable response to the potential conflicts of interest identified.

The power to allow the change of designated bodies for CfD or CM functions has not yet been used but remains necessary.

[35] https://www.ofgem.gov.uk/publications-and-updates/ofgem-s-response-electricity-system-operator-s-forward-plan-consultation-2018-19

Ofgem considers that special condition 2N, which was transferred to the ESO's new transmission licence when ESO separation took effect on 1 April 2019, is still needed in the short term whilst it is observed how effective the ESO separation is. In the medium term it is more nuanced, and it is probable that aspects of special condition 2N may be unnecessary following ESO separation. There are some aspects of 2N that will be required indefinitely. Any future modifications to 2N could be made in the standard way Ofgem makes licence modifications, in accordance with section 11A of the Electricity Act under which the licensee has certain defined rights of appeal. Alternatively, the Energy Act powers may need to be used.

There have been a small number of data breaches with restricted data inadvertently shared outside NGET. These contravened NGET's normal procedures as well as the EMR license condition. In each case NGET acted as soon as they became aware of the breach and initiated compliance audits thereafter. The auction bid stack ringfence is considered to be effective. Penalties for non-compliance under the transmission license are up to 10% of global turnover.

Responses from the Electricity System Operator's consultation highlighted that:

"With respect to the structure of the ESO, stakeholders generally agreed that increased separation of the ESO within the National Grid Group, with a separate licence for the transmission owner and system operator parts of the Group was a significant step forward. A key message from stakeholder responses was that the separation needed to be, and be perceived to be, as robust as possible."

"There was widespread support for further separation between the ESO and electricity TO functions of National Grid and generally stakeholders felt that our suggested minimum standards for separation were a significant step forward in terms of independence of the ESO. Some stakeholders felt that in some areas stronger separation measures were appropriate. Stakeholders were also clear that the separation would need to be robust in order to address any actual or perceived conflicts, and that there needed to be a clear cultural shift within the ESO in order to facilitate this."

This evidence from Ofgem's consultation in 2017 on the System Operator demonstrates that the industry continues to have concerns about potential conflicts of interest between National Grid's different roles. It therefore remains valuable to have safeguards in place to ensure EMR commercial information remains ringfenced, even within a legally separate System Operator.

4. To what extent have the policy objectives been achieved?

A modification to National Grid's Electricity Transmission Licence, Special Licence Condition 2N was laid before Parliament on 19 June 2014 and came into force on 1 August 2014. Special Condition 2N was drafted following publication in April 2013 of an assessment of the potential synergies and conflicts of interest arising as a result of National Grid Electricity Transmission plc (NGET) taking on the Electricity Market Reform (EMR) delivery role.

The power to allow the change of designated bodies for CfD or CM functions was considered necessary to respond to future changes in circumstances that might make those bodies unavailable, unsuitable or inefficient for the delivery of those functions.

On the basis of this review and the evidence considered, these assumptions remain valid.

5. Were there any unintended consequences?

None. It was understood that the restrictions would increase the cost of National Grid undertaking its functions, but this effect was considered to be necessary in order to reassure the industry that no conflicts of interest would be allowed to arise.

6. Has the evidence identified any opportunities for reducing the burden on business?

Burden on business is negligible. Administrative costs of the licence conditions imposed are minimal and these are regulated by Ofgem as part of the electricity transmission price control.

The costs to business are negligible and the intervention was a defensive one to mitigate potential conflicts of interest arising out of Grid's EMR roles. No IA was deemed necessary.

The recent changes to a more independent electricity system operator (ESO) are not considered to have altered the case for the 2014 licence modifications but this will be kept under review by Ofgem (see Annexes B & C for more detail). If ESO separation from 1 April 2019 is found to be effective, then allowing certain information to flow more freely within the ESO (but not outside) may lead to efficiencies resulting in slightly reduced cost and increased effectiveness. In that case, these powers may be required to amend the ESO licence conditions. BEIS should meet at least annually with Ofgem to consider this question.

7. For EU measures, how does the UK's implementation compare with that in other EU member states in terms of cost to business?

N/A

Recommendation

For the policy to be kept.

Access to markets

Title: Energy Act 2013 Review Chapter 6 – Access to Markets	Post-Implementation Review
PIR No: BEIS012(PIR)-22-RE	**Date**: 22/02/2019
Original IA/RPC No: DECC0156	**Type of regulation**: Domestic
Lead department or agency: BEIS	**Type of review**: Statutory
Other departments or agencies: N/A	**Date measure came into force**: 23/12/2013
	Recommendation: Keep
Contact for enquiries: Renewable.Electricity.Correspondence@beis.gov	**RPC Opinion**: N/A

1. What were the policy objectives of the measure?

The changes introduced through chapter 6 of the Energy Act 2013 were intended to promote liquidity in the wholesale power market, allowing government to intervene if necessary, and to introduce a scheme to ensure that independent renewable electricity generators could access the market under Contracts for Difference (CFD) despite not having access to secure offtake arrangements for the electricity generated.

On the basis of this review and the evidence considered, these objectives remain appropriate.

2. What evidence has informed the PIR?

This is a low evidence review of Access to Markets policy. Justification for a low evidence review is that the liquidity powers have not been used and the access to markets powers have been used successfully in the implementation of the Offtaker of Last Resort (OLR) policy.

The review was carried out by BEIS officials using evidence from the following sources:

- Evidence from CfD allocation rounds;
- State of Energy Market reports; and
- Offtaker of Last Resort reports.

3. To what extent have the policy objectives been achieved?

Overall the general policy objectives have been met as follows.

Improved market liquidity has promoted competition and increased the robustness of the Contracts for Difference reference prices, a crucial element of Electricity Market Reform (EMR) programme. The 'Secure and Promote' licence condition was introduced by Ofgem in 2014 under Electricity Act powers, which meant that these parallel Energy Act powers have not yet been required.

Action to improve the Power Purchase Agreement (PPA) market has made it easier for independent generators to develop projects and has improved the cost-effective delivery of EMR.

On the basis of the information provided by Ofgem, we consider that the Offtaker of Last Resort (OLR) is operating well and that no changes are required. It is designed carefully to be a last resort, so there have been no applications as yet under the scheme, as would be expected.

4. What were the original assumptions?

Liquidity in the GB electricity market was in a period of decline since 2001 and is lower than other energy and commodity markets, including a number of European electricity markets.

The government was committed to ensuring that the electricity market under EMR was open to independent generators, important for promoting innovation and competition and for ensuring least-cost decarbonisation.

5. Were there any unintended consequences?

None.

6. Has the evidence identified any opportunities for reducing the burden on business?

Burden on business is negligible.

7. For EU measures, how does the UK's implementation compare with that in other EU member states in terms of costs to business?

N/A

1. What were the policy objectives of the measure?

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On the basis of this review and the evidence considered, these objectives remain appropriate.

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The review was carried out by BEIS officials using evidence from the following sources.

- Evidence from CfD allocation rounds (AR). AR1 pots 1 (established technologies) and 2 (less-established technologies), and AR2 pot 2 have all attracted better than expected numbers of bidders and have resulted in highly competitive allocations.
- Evidence from CfD reference prices. CfD reference prices have been reviewed periodically and been found to be robust and reliable (though one of the component indices ceased operation).
- Ofgem reports on overall market liquidity. These indicate that liquidity is broadly sufficient for market participants. These are:
    - State of the energy markets 2018
    - State of the energy markets 2017
    - Wholesale energy markets in 2016
    - Wholesale power market liquidity: Annual report 2016
    - Wholesale energy markets in 2015
    - Wholesale power market liquidity: Annual report 2015
- The review has also used the Competition and Markets Authority Market Investigation of the electricity market, which found wholesale markets to be broadly satisfactory.
- In addition, conversations have been had between relevant BEIS and Ofgem officials to inform the review.
- The report has also been informed by published Offtaker of Last Resort updates:
    - **24 April 2020**. The Secretary of State undertook a review of the Offtaker of Last Resort, considered that no changes were required at that time, and confirmed that the mutualisation lower limit should remain at zero for 2020 to 2021. Ofgem published the Annual Report

of the Offtaker of Last Resort for the period 1 April 2018 to 31 March 2019 in January 2020.

- **7 March 2019**. The Secretary of State has undertaken a review of the Offtaker of Last Resort, considers that no changes are required at this time, and confirms that the mutualisation lower limit should remain at zero for 2019 to 2020. Ofgem published the Annual Report of the Offtaker of Last Resort for the period 1 April 2017 to 31 March 2018 in December 2018.
- **28 March 2018**. The Secretary of State has undertaken a review of the Offtaker of Last Resort and considers that no changes are required at this time. Ofgem published the Annual Report of the Offtaker of Last Resort for the period 1 April 2016 to 31 March 2017 in December 2017
- **2 February 2017**. The Secretary of State has undertaken a review of the first Offtaker of Last Resort year and considers that no changes are required at this time. Ofgem published the first Offtaker of Last Report Annual Report for the period 1 October 2015 to 31 March 2016 in December 2016
- **30 September 2015**. In accordance with regulation 25 of the Power Purchase Agreement Scheme Regulations 2014, the Secretary of State makes the following determination: Mutualisation lower limit (regulation 25(1)) – the mutualisation lower limit for the OLR year ending on 31st March 2016, and each subsequent OLR year, is zero.

3. To what extent have the policy objectives been achieved?

Overall the objectives have been met as follows:

Improved market liquidity has promoted competition and increased the robustness of the Contracts for Difference reference prices, a crucial element of Electricity Market Reform (EMR) programme.

The ‘Secure and Promote’ licence condition was introduced by Ofgem in 2014 under Electricity Act powers, which meant that parallel Energy Act powers have not yet been required.

Action to improve the Power Purchase Agreement (PPA) market has made it easier for independent generators to develop projects and has improved the cost-effective delivery of EMR.

In April 2013, DECC initiated a CfD market readiness project to help independent developers understand and prepare for the introduction of CfDs. This consisted of two working groups reporting to a steering board. The groups included large and small suppliers, independent generators, legal firms, lenders, and others active in the market. Their work complemented the rest of Electricity Market Reform Package, particularly the Offtaker of Last Resort mechanism which supports independent developers in finding a route to market under CFDs.

Working Group One: Sample contracts

The first group considered how power purchase agreement (PPA) contracts will need to change to complement CfDs. PPAs will need to look slightly different under CFDs, and the outputs of this group will help ensure that financiers are familiar with the structures before the first CFDs are entered into. This will also help to reduce costs for the first movers, which can be a significant barrier for smaller market participants.

Securing a PPA, or another route to market, is a vital step in developing and financing energy projects and facilitating this process should reduce barriers for smaller independent generators and help to encourage investment in the UK energy sector. These benefits would be particularly notable for early CfD projects and smaller projects, for which legal costs are a more significant proportion of their development costs. Sample power purchase agreement heads of terms

Working Group 2: Code of practice

The second group developed a set of best practice guidelines for the PPA market. This included a description of the process for negotiating a PPA and what is expected from each party at each stage. The guidelines are intended to reduce barriers to entry for small independents and help them contribute to a healthier market. Best practice guidelines

Offtaker of Last Resort

The OLR policy, which was given effect by the Power Purchase Agreement Scheme Regulations 2014 ("the Regulations"), ensures that eligible renewable generators have access to a 'Backstop' Power Purchase Agreement ("BPPA") on specified terms with a credit-worthy Supplier (the offtaker) throughout the duration of their CFD. By ensuring a route-to-market for the generator's output on known (albeit below-market) terms, the OLR makes lenders more comfortable accepting alternative routes-to-market for independent renewable projects, including shorter-term contracting strategies. This stimulates a wider market in offtake for independents and reduces the cost of investment in renewable electricity, boosts competition in offtake and lowers costs to consumers.

In the unlikely event that generators seek a BPPA, Ofgem is required to obtain bids from Suppliers to manage the contract to purchase power from the generator and the costs of the lowest bid would then be shared among all Suppliers (according to their share of the electricity market by a levelisation process). Should a Supplier be unable to meet their liabilities under the scheme (for example in the event of insolvency), any shortfall is covered by the remaining Suppliers through mutualisation provisions in the Regulations.

However, to reduce unnecessary administrative costs through the mutualisation of very small amounts, we included provisions in the Regulations for a floor below which mutualisation would not be triggered and Ofgem would carry the cost: the mutualisation lower limit.

Ofgem must provide to the Secretary of State such information in connection with the power purchase agreement scheme as the Secretary of State may require for the purposes of conducting the review. Ofgem published the third OLR annual report in December 2018 (in respect of the OLR year that ended on 31st March 2018) and the fourth OLR annual report in January 2020.

Ofgem introduced the 'Secure and Promote' licence condition in 2014 by placing an obligation on the large, vertically integrated electricity suppliers to trade with voluntary participation by

smaller suppliers. The purpose was to promote liquidity, also to secure the move to trading on auction platforms that had occurred voluntarily prior to the intervention. With the licence modifications having been introduced under the Electricity Act, licensees had the opportunity to refer the matter to the CMA, or indeed to request a Judicial Review.

On the basis of the information provided by Ofgem, we consider that the scheme is operating well and that no changes are required. It is designed carefully to be a last resort, so there have been no applications as yet under the scheme, as would be expected.

4. What were the original assumptions?

Liquidity in the GB electricity market was in a period of decline since 2001 and is lower than other energy and commodity markets, including a number of European electricity markets. Ofgem's Energy Supply Probe in 2008 found that low liquidity in the electricity market was a concern, particularly as a barrier to new entry into supply markets and a source of competitive disadvantage for independent suppliers.

The government was committed to ensuring that the electricity market under EMR was open to independent generators, important for promoting innovation and competition and for ensuring least-cost decarbonisation. A Call for Evidence in July 2012 showed it had become harder to secure viable long-term PPAs which are typically needed to secure funding. The OLR would ensure that generators with a CfD have a 'backstop' route to market at a specified discount to the market price.

On the basis of this review and the evidence considered, these assumptions remain appropriate.

5. Were there any unintended consequences?

No unintended consequences have been identified.

6. Has the evidence identified any opportunities for reducing the burden on business?

Burden on business is negligible.

The liquidity powers have not been used, so costs to business are negligible as the intervention was defensive. No IA was deemed necessary.

As intended and designed as a last resort, the OLR policy has not been used and there are no policy costs to be covered by licensed electricity suppliers. Administrative costs are minimal as the Ofgem team responsible for a pre-existing policy also administers the OLR. Ofgem estimates the cost of OLR to be half of one full-time equivalent staff member. The OLR was estimated to have a business impact of less than £5m as evidenced in the IA here.

7. For EU measures, how does the UK's implementation compare with that in other EU member states in terms of cost to business?

N/A

Recommendation

For the policy to be kept.

The Renewables Obligation: Transitional Arrangements

Title: Review of the Energy Act 2013 – Part 2, Chapter 7 (Renewables Obligation transitional arrangements)	Post-Implementation Review
PIR No: BEIS012(PIR)-22-RE	**Date**: 01/03/2019
Original IA/RPC No: DECC0086	**Type of regulation**: Domestic
Lead department or agency: BEIS	**Type of review**: Statutory
Other departments or agencies: Ofgem	**Date measure came into force**: 18/12/2013
	Recommendation: Keep
Contact details for enquiries: RO@beis.gov.uk	**RPC Opinion**: N/A

1. What were the policy objectives of the measure?

The 2013 Act covered two measures relevant to the Renewables Obligation (RO) scheme. The first was the transition from the demand-led RO to the new competitive (and so better value for money), Contracts for Difference (CfD) support mechanism. The second was the provision of a framework for a certificate purchase scheme aimed at reducing the risk of volatility in the value of support in the final years of the RO.

2. What evidence has informed the PIR?

Views on how the transitional arrangement worked were sought from the BEIS team responsible for RO scheme policy and from the scheme's administrator, the Office for Gas and Electricity Markets (Ofgem). Stakeholder responses to previous consultations on the closure of the RO were also taken into account. Statistics on the number of accreditations and accredited capacity were taken from Ofgem's published reports.

3. To what extent have the policy objectives been achieved?

This review covers implementation of the 2013 Act in England and Wales only. The first policy objective has been met as the RO is now closed to all new applications in Great Britain. On the second objective to introduce a certificate purchase scheme in 2027, government intends to issue a call for evidence on the introduction of a certificate purchase scheme in due course.

4. What were the original assumptions?

The assumption was that closing the RO and moving to CfDs would make the development of low carbon generation cheaper for both investors and consumers (details are given in the

PIR of the Contracts for Difference provisions in the Energy Act 2013). The transition arrangements aimed to give clarity to investors to allow investment to continue without interruption. The certificate purchase scheme was intended to reduce the risk of volatility in the final years of the RO.

5. Were there any unintended consequences?

Anecdotal evidence suggests that a small number of developers sped up their projects so that they completed in a shorter period than usual to accredit by the closure deadline. Although unintended, it was anticipated that this would occur. But the practical impacts were likely to be minimal as such projects would have been balanced by those that hit unexpected delays and failed to accredit in time.

6. Has the evidence identified any opportunities for reducing the burden on business?

No opportunities have been identified. The closure requirements were designed to be as light touch as possible, whilst requiring sufficient evidence to be submitted by applicants to ensure they complied with the stated criteria. Any measures to relax these requirements would have allowed ineligible projects to accredit and would have increased the overall cost of the RO.

7. For EU measures, how does the UK's implementation compare with that in other EU member states in terms of costs to business?

N/A

1. What were the policy objectives of the measure?

Background on the operation of the Renewables Obligation (RO)

Until the introduction of the Contracts for Difference (CfD) support mechanism, the Renewables Obligation (RO) was the main financial mechanism by which Government incentivised deployment of large-scale renewable electricity generation in the UK. It was set up to play a key role in keeping the UK on track to deliver its legally binding EU targets to produce 15% of UK energy, and 30% of UK electricity, from renewable sources by 2020.

The RO came into effect in 2002 in England, Wales and Scotland, and in 2005 in Northern Ireland. Originally, the scheme was due to end in 2027 across the UK but in April 2010 the end date was extended to 2037 in Great Britain. In Northern Ireland, it was extended in two stages, moving to 2033 in April 2010 and 2037 in May 2013.

The RO does not provide direct cash payments to renewable generators. Instead, it operates as a market-based mechanism through a system of tradable green certificates called "Renewables Obligation Certificates" (ROCs). It works by placing an obligation on UK electricity suppliers to present a certain number of ROCs to the Office of Gas and Electricity Markets (Ofgem), the administrator of the scheme, in respect of each megawatt hour of electricity supplied to customers during the obligation year.

Suppliers buy these ROCs from renewable generators (or traders). Generators obtain them free of charge from Ofgem in relation to the renewable electricity they generate. Generators sell their ROCs with or without the electricity generated. This allows them to receive a premium in addition to the wholesale price of their electricity. The value of a ROC is a matter for negotiation between generator and supplier/trader.

Suppliers present ROCs to Ofgem to demonstrate their compliance with the Obligation or make a payment per ROC into a buy-out fund. After Ofgem's administration costs have been deducted, the money from the buy-out fund is recycled on a pro-rata basis to suppliers who presented ROCs. This encourages suppliers to choose ROCs over the buy-out fund. It is assumed that suppliers pass a proportion of the recycled buy-out fund payments back to the renewable generators. It is also assumed that the cost of the RO to suppliers is passed on to consumers through their energy bills.

An accredited station receives support for up to 20 or 25 years, depending on its accreditation date.

The scheme was very successful in bringing forward deployment, with UK-wide capacity increasing from 3.1GW in 2002 to 29.2GW in March 2017. 65.2TWh of renewable electricity was generated in 2016-17 under the RO, representing 22.2% of total UK electricity generation (compared to 1.8% in 2002).

Electricity Market Reform proposals for the RO

In the annual energy statement to Parliament on 27 July 2010[36], the Department of Energy and Climate Change's Secretary of State announced that the government intended to publish a consultation document on electricity market reform to examine the reforms necessary to deliver secure, affordable and low carbon energy.

[36] Annual energy statement 2010: https://www.gov.uk/government/publications/annual-energy-statement-2010

In December 2010, Government launched a consultation on the reform proposals[37]. One aspect was the transition from the demand-led RO to the new competitive (and so better value for money), Contracts for Difference (CfD) scheme.

The consultation explained that changes would need to be made to the RO to enable a transition to the new scheme. It recognised that investors were making decisions at that time on the basis of the current support available under the RO, and some had already committed to projects on the basis of the current support. They therefore needed clarity about when the new scheme would be introduced and how existing investment plans would be affected.

Following the consultation, Government published a White Paper in July 2011[38] setting out the preferred arrangements to ensure that the period of transition between the RO and CfD ran smoothly and allowed investment to continue without interruption. The key points were as follows:

- The RO would close to new accreditations on 31 March 2017. No generation would be able to accredit under the RO from that date;
- All support under the RO would cease by the existing end date of 31 March 2037;
- Limited grace periods would extend the accreditation deadline in specific circumstances. These were aimed at protecting generators who were unable to meet the deadline due to factors beyond their control;
- Provisions would be made for additional capacity to be added after 31 March 2017 (e.g. to allow for offshore wind phasing where operators accredited the total intended capacity of the wind farm by the deadline and registered uncompleted turbines so that they could be commissioned later);
- To provide flexibility, new renewable generation would have a one-off choice between the RO and CfD for the period between the introduction of CfD in 2014 and the 31 March 2017 closure date of the RO;
- To ensure ongoing stability of the RO, already accredited generation would continue to be supported under the RO and would not be permitted to transfer to CfD;
- RO support for all technologies would be grandfathered[39] at the rate applicable on 31 March 2017; and
- In order to reduce the risk of volatility in the value of a ROC certificate in the final years of the RO, the obligation on electricity suppliers to submit ROCs would be replaced in 2027 by an obligation on an administrator to purchase certificates at a fixed price. The Technical Update published in December 2011[40] proposed that the

[37] Electricity Market Reform Consultation Document: https://www.gov.uk/government/consultations/electricity-market-reform

[38] Planning our electric future: a White Paper for secure, affordable and low-carbon electricity: https://www.gov.uk/government/publications/planning-our-electric-future-a-white-paper-for-secure-affordable-and-low-carbon-energy

[39] Grandfathering is a policy intention that the support levels applicable at the time of full accreditation of the generating station under the RO will be maintained for the lifetime of that capacity's support.

[40] Planning our electric future: technical update:

https://www.gov.uk/government/publications/planning-our-electric-future-technical-update

cost of purchasing the certificates should be funded by a levy on electricity suppliers in line with market share.

Following debates in the Houses of Parliament, the power to implement the details of the transition arrangements, via secondary legislation, were set out in Part 2, Chapter 7 of the Energy Act 2013. In summary, this chapter gave the power to:

- Make a Renewables Obligation Closure Order. This would prevent ROCs from being issued under any RO Order (whether made by the Secretary of State or by Scottish Ministers) in respect of electricity generated after a specified date. Different closure dates could be specified for different cases or circumstances, and transitional provisions and savings could be made. The same powers were given to the Department for Enterprise, Trade and Investment in Northern Ireland (now the Department for the Economy) to amend corresponding legislation in relation to the Northern Ireland RO;

- To set up a certificate purchase scheme. It gave the power to make an Order to impose an obligation on a purchasing body to purchase certificates which had been issued to generators in respect of renewable electricity. With the consent of the relevant Northern Ireland Department, the Secretary of State was given the power to put a similar obligation on a Northern Ireland purchasing body. The Act set out the basic framework for the scheme. Key points were that certificates were intended to be issued in place of ROCs and to be issued in similar circumstances, but the price at which the certificates were purchased by the purchasing body would be fixed. Different purchase prices could be set for different periods of time, and adjustments could be made for inflation. It made a provision for an Order to impose a levy, charged in respect of supplies of electricity.

2. What evidence has informed the PIR?

This is a medium evidence review of the power granted in the Energy Act 2013 to allow secondary legislation to be brought in to enable the RO to be closed, and a certificate purchase scheme to be set up.

The justification for a medium evidence review is that:

- The total impact of the provisions is less than £50 million and a medium evidence review was considered proportionate;

- The review of the measures to close the scheme will have no impact on the future operation of the RO scheme as it is now closed to new applications; and

- The previous Government had announced the intention to bring the certificate purchase scheme into force in 2027[41]. It is too soon to conduct a review of the provisions for such a scheme.

The review was led by BEIS officials. Views on how the transitional arrangement had worked were sought from the BEIS team responsible for the policy of the RO scheme and from the scheme's administrator, Ofgem. Statistics on the number of accreditations and accredited

[41] Planning our electric future: a White Paper for secure, affordable and low-carbon electricity - Annex D - Renewables Obligation Transition: https://www.gov.uk/government/publications/planning-our-electric-future-a-white-paper-for-secure-affordable-and-low-carbon-energy

capacity were taken from Ofgem's published reports. Stakeholder responses to the following previous consultations on the closure of the RO were also taken into account:

- Transition from the Renewables Obligation to Contracts for Difference (July 2013)[42];
- RO grace periods consultation (Nov 2013)[43];
- Changes to financial support for solar PV. Part A: Controlling spending on large-scale solar PV within the Renewables Obligation (closure to over 5MW solar) (May 2014)[44];
- Further consultation on changes to financial support for solar PV. Part A: Introduction of a possible grid delay grace period under the Renewables Obligation (Oct 2014)[45];
- Changes to financial support for solar PV - Controlling spending on solar PV projects of 5MW and below within the Renewables Obligation (July 2015)[46].

The RO works on the basis of three complementary obligations: one covering England and Wales, and one each covering Scotland and Northern Ireland. This PIR looks only at the RO that BEIS is responsible for, that is, the RO for England and Wales.

The evidence relates to the period from 2013 up to the final closure of the RO in England and Wales to new applications on 31 January 2019.

3. To what extent have the policy objectives been achieved?

Summary

This review covers the implementation of the Energy Act 2013 in England and Wales only. The objective in the 2013 Act to close the scheme has been achieved as it is now closed to all new applications for accreditation. For certain projects in specific circumstances, exceptions extended the 31 March 2017 accreditation deadline up to 31 January 2019. This allowed developers who had made a significant commitment prior to the closure announcements to still come forward, whilst stopping excessive deployment and so protecting consumers, who fund the RO through their energy bills.

The 2013 Act also set out the basic framework for a certificate purchase scheme to come into effect in 2027. The government will engage with stakeholders on the scheme in due course.

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42 Consultation on the transition from the Renewables Obligation to Contracts for Difference: https://www.gov.uk/government/consultations/transition-from-the-renewables-obligation-to-contracts-for-difference

43 RO grace periods consultation**:** https://www.gov.uk/government/consultations/renewables-obligation-ro-grace-periods

44 Consultation on changes to financial support for solar PV. Part A: Controlling spending on large-scale solar PV within the Renewables Obligation: https://www.gov.uk/government/consultations/consultation-on-changes-to-financial-support-for-solar-pv

45 Further consultation on changes to financial support for solar PV. Part A: Introduction of a possible grid delay grace period under the Renewables Obligation: https://www.gov.uk/government/consultations/consultation-on-further-changes-to-financial-support-for-solar-pv

46 Consultation on changes to financial support for solar PV - Controlling spending on solar PV projects of 5MW and below within the Renewables Obligation: https://www.gov.uk/government/consultations/changes-to-financial-support-for-solar-pv

Closure of the RO using powers conferred by the Energy Act 2013

Following the Energy Act 2013, the Government launched a public consultation in July 2013[47] setting out detailed proposals for the operation of the RO during the transition period from the introduction of CfD in 2014 to the closure of the RO to new capacity on 31 March 2017.

That was followed by a further consultation in November 2013[48], proposing detailed arrangements for the eligibility criteria and duration of grace periods. These allowed certain projects to gain accreditation under the RO after 31 March 2017.

The final details were set out in the Renewables Obligation Closure Order 2014[49]. The grace periods relevant to England and Wales are set out in Ofgem's guidance[50]. Each grace period had strict eligibility requirements to ensure that only those projects the exception was intended to help would be able to make use of the exception.

Early closure of the RO to solar PV and onshore wind using powers conferred by the Energy Act 2013 and under the Energy Act 2016

As a separate measure to the EMR transition, a consultation was launched in May 2014[51] to close the RO early to large-scale solar PV (over 5MW) in England and Wales. A subsequent consultation in October 2014[52] focused on a proposal for an additional grace period. This was followed by a consultation in July 2015[53] to close the RO early to small-scale solar PV (up to 5MW) in England and Wales. These measures were taken because solar PV was deploying much faster than previously expected, and the increased capacity under the RO would have significantly increased costs for consumers.

In May 2015, the previous Government was elected with a manifesto commitment to end new subsidies for onshore wind and announced on 22 June 2015[54] that the RO would close early to onshore wind in Great Britain. The technology had deployed successfully and was projected to meet the Electricity Market Reform Delivery Plan's range of 11 to 13GW by 2020 that was needed to meet the UK's 2020 renewable electricity generation objective, whilst remaining within the limits of what was affordable. Without early closure, there was a risk of deploying beyond this range, which would have added more costs to consumer bills or required a

47 Consultation on the transition from the Renewables Obligation to Contracts for Difference: https://www.gov.uk/government/consultations/transition-from-the-renewables-obligation-to-contracts-for-difference

48 RO grace periods consultation: https://www.gov.uk/government/consultations/renewables-obligation-ro-grace-periods

49 Renewables Obligation Closure Order 2014: http://www.legislation.gov.uk/uksi/2014/2388/contents/made

50 Ofgem's Renewables Obligation: Guidance on closure of the scheme in England, Scotland and Wales: https://www.ofgem.gov.uk/publications-and-updates/renewables-obligation-guidance-closure-scheme-england-scotland-and-wales

51 Consultation on changes to financial support for solar PV. Part A: Controlling spending on large-scale solar PV within the Renewables Obligation: https://www.gov.uk/government/consultations/consultation-on-changes-to-financial-support-for-solar-pv

52 Further consultation on changes to financial support for solar PV. Part A: Introduction of a possible grid delay grace period under the Renewables Obligation: https://www.gov.uk/government/consultations/consultation-on-further-changes-to-financial-support-for-solar-pv

53 Consultation on changes to financial support for solar PV - Controlling spending on solar PV projects of 5MW and below within the Renewables Obligation: https://www.gov.uk/government/consultations/changes-to-financial-support-for-solar-pv

54 Statement on ending subsidies for onshore wind: https://www.gov.uk/government/speeches/statement-on-ending-subsidies-for-onshore-wind

reduction in support for other renewables technologies. Following debates in the Houses of Parliament, a new Energy Act 2016 was introduced to implement that commitment.

As with the 2014 announcement of the closure of the RO, exceptions were made available for certain solar PV and onshore wind projects which extended the closure date by a year. The final details were set out in the Renewables Obligation Closure Order 2014 (as amended by the Renewables Obligation Closure (Amendment) Order 2015[55] and 2016[56], and Part 5 of the Energy Act 2016[57]:

- The 2015 amendment was for solar PV above 5MW;
- The 2016 amendment was for solar PV up to 5MW; and
- Part 5 of the Energy Act 2016 was for onshore wind.

Solar PV and onshore wind grace periods

In England and Wales, solar PV above 5MW had three grace periods that all ran from 1 April 2015 to 31 March 2016. Similar grace periods for solar PV up to 5MW ran from 1 April 2016 to 31 March 2017. Onshore wind in England and Wales had five different grace periods that ran across different periods. The full details are set out in Ofgem's guidance on solar PV above 5MW [58], solar PV up to 5MW[59] and onshore wind[60].

55 Renewables Obligation Closure (Amendment) Order 2015: http://www.legislation.gov.uk/uksi/2015/920/contents/made

56 Renewables Obligation Closure Etc. (Amendment) Order 2016: http://www.legislation.gov.uk/uksi/2016/457/contents/made

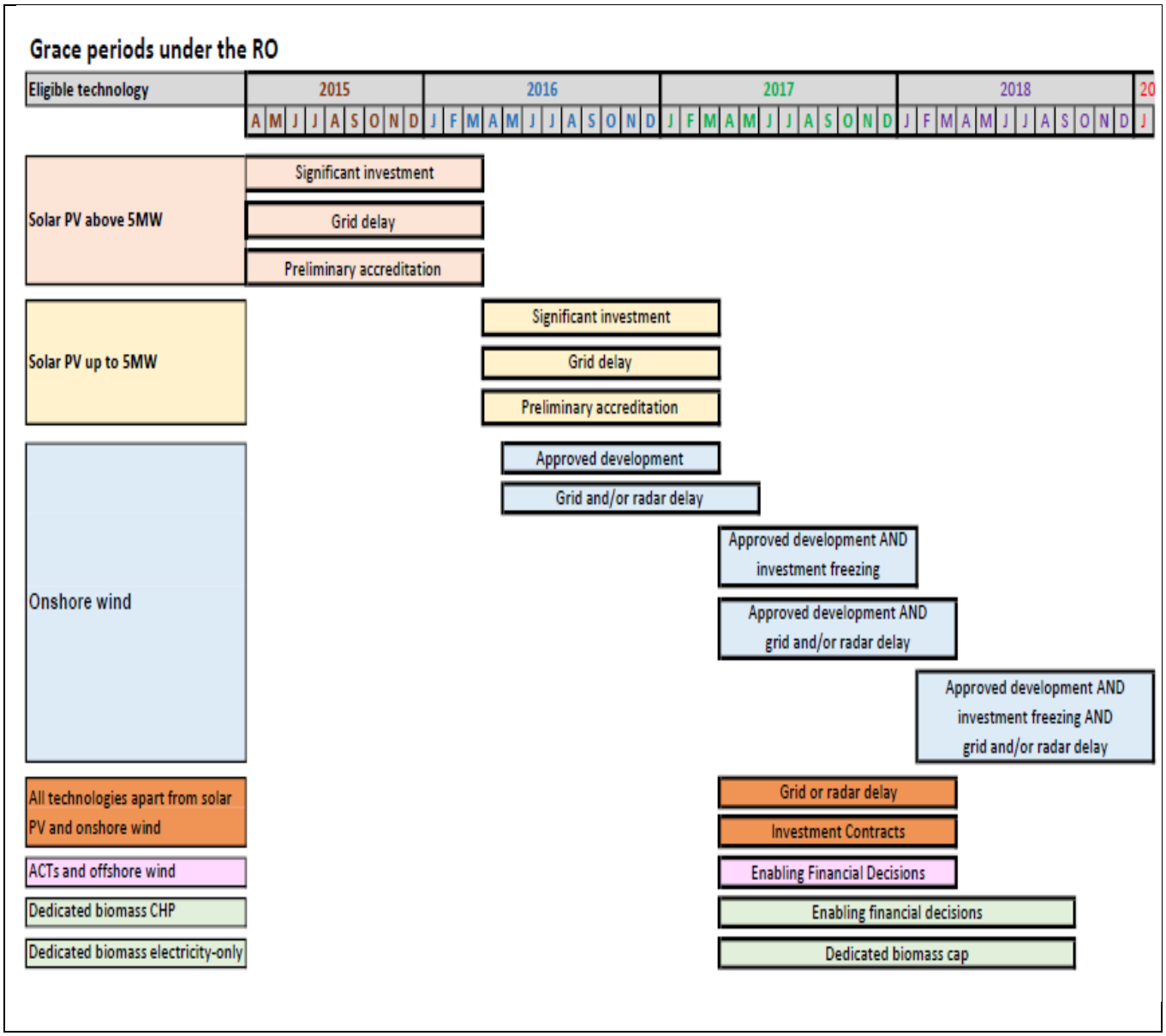
57 Energy Act 2016: https://www.legislation.gov.uk/ukpga/2016/20/contents

58 Ofgem's Renewables Obligation (RO): Guidance on the closure of the scheme to large-scale solar PV: https://www.ofgem.gov.uk/publications-and-updates/renewables-obligation-ro-guidance-closure-scheme-large-scale-solar-pv

59 Ofgem's Renewables Obligation: Closure of the scheme to small-scale solar PV; https://www.ofgem.gov.uk/publications-and-updates/renewables-obligation-closure-scheme-small-scale-solar-pv

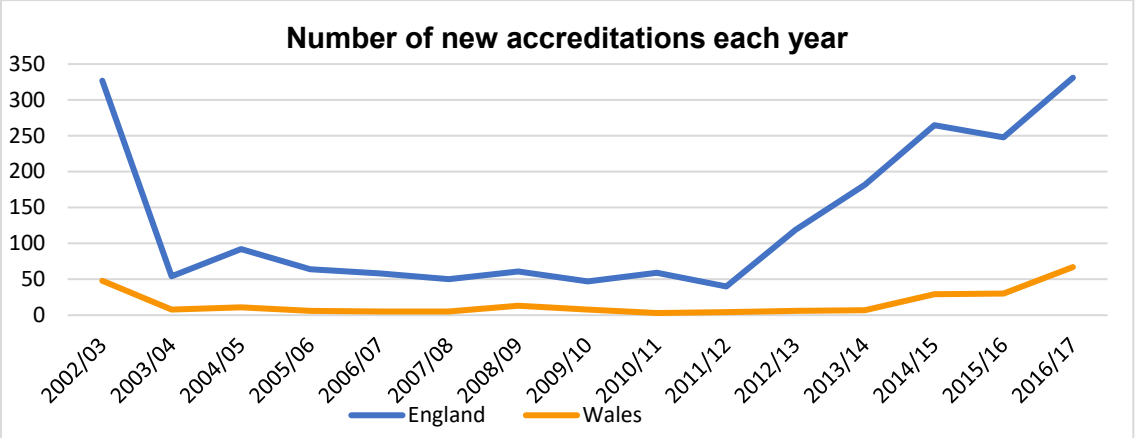
60 Ofgem's Renewables Obligation: Closure of the scheme to onshore wind in England, Scotland and Wales: https://www.ofgem.gov.uk/publications-and-updates/renewables-obligation-closure-scheme-onshore-wind-england-scotland-and-wales

The various grace periods can be summarised as follows:



Number of accredited stations and capacity each year

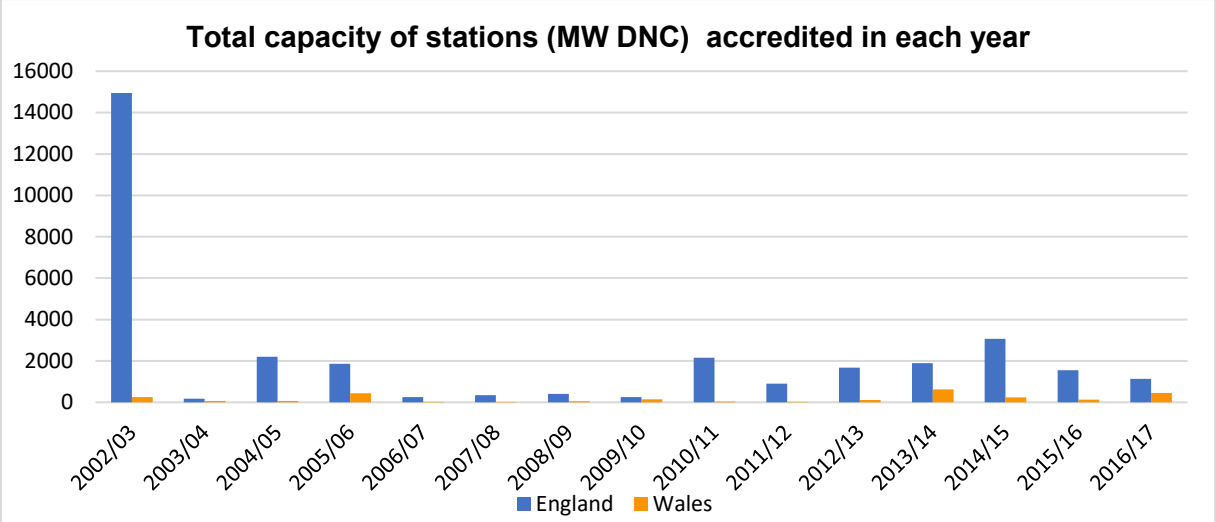
The graph below shows the number of new accreditations each year for stations in England and Wales up to 31 March 2017.



Data as at 31 January 2019 from Ofgem's accredited stations report61

The peak at the start of the scheme was due to stations accrediting on 1 April 2002, the day the RO come into force - 89% of the total stations for 2002/03 accredited on that day and just over half of these were landfill gas stations. The rise in accreditations from 2012/13 onwards in England, and from 2014/15 onwards in Wales, was due to an increase in solar PV stations. These peaked in 2014/15 in England and then declined in response to the early closure of the RO.

The chart below shows the total capacity of stations accredited in each year in England and Wales. The spikes in capacity in England were due to: fuelled technologies in the early years of the scheme; fuelled and offshore wind in 2010/11; and offshore and onshore wind and solar PV in 2012/13 to 2014/15.

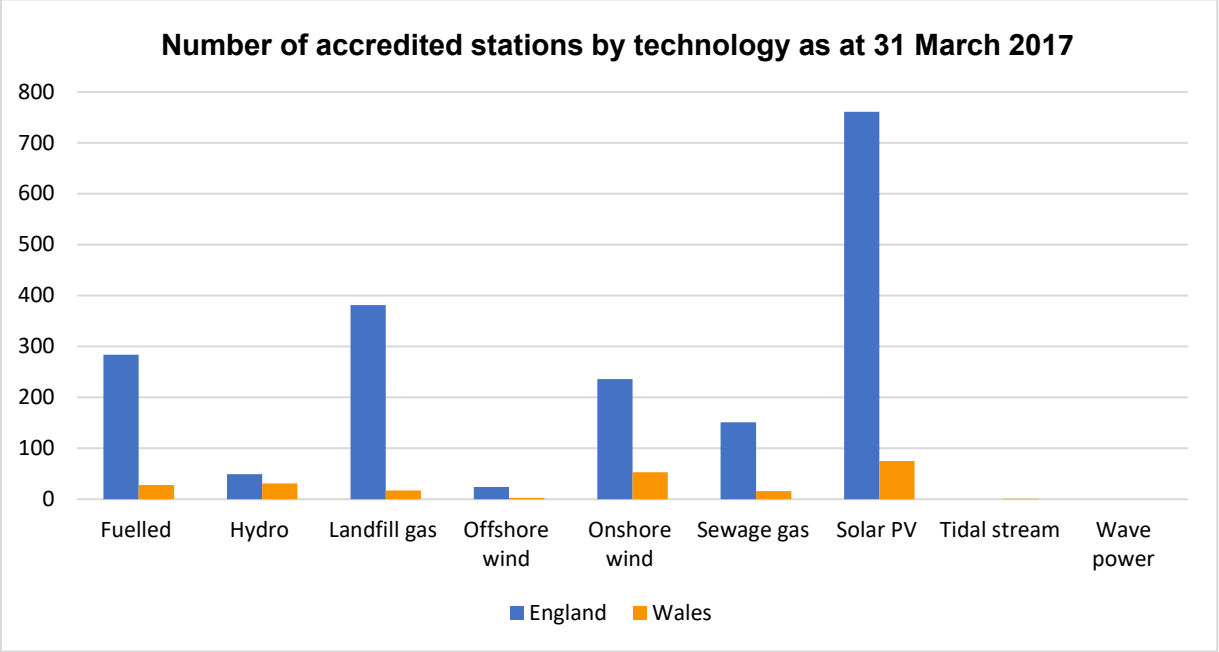


Data as at 31 January 2019 from Ofgem's accredited stations report

61 Ofgem's RO accredited stations report: https://www.renewablesandchp.ofgem.gov.uk/Public/ReportViewer.aspx?ReportPath=/Renewables/Accreditation/AccreditedStationsExternalPublic&ReportVisibility=1&ReportCategory=1

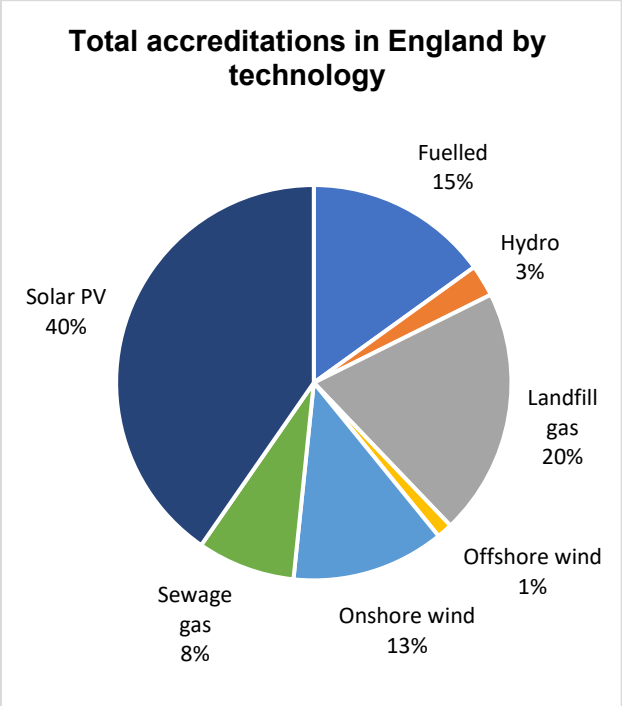
Total number of accredited stations and capacity by technology

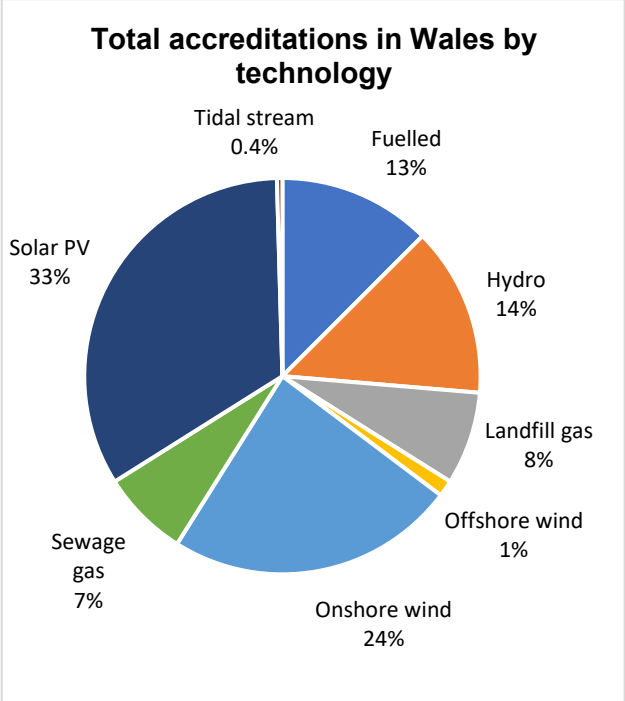
Over the life of the RO since 2002, solar PV accounts for the greatest number of total accreditations, as shown in the chart below.



Data as at 31 January 2019 from Ofgem's accredited stations report

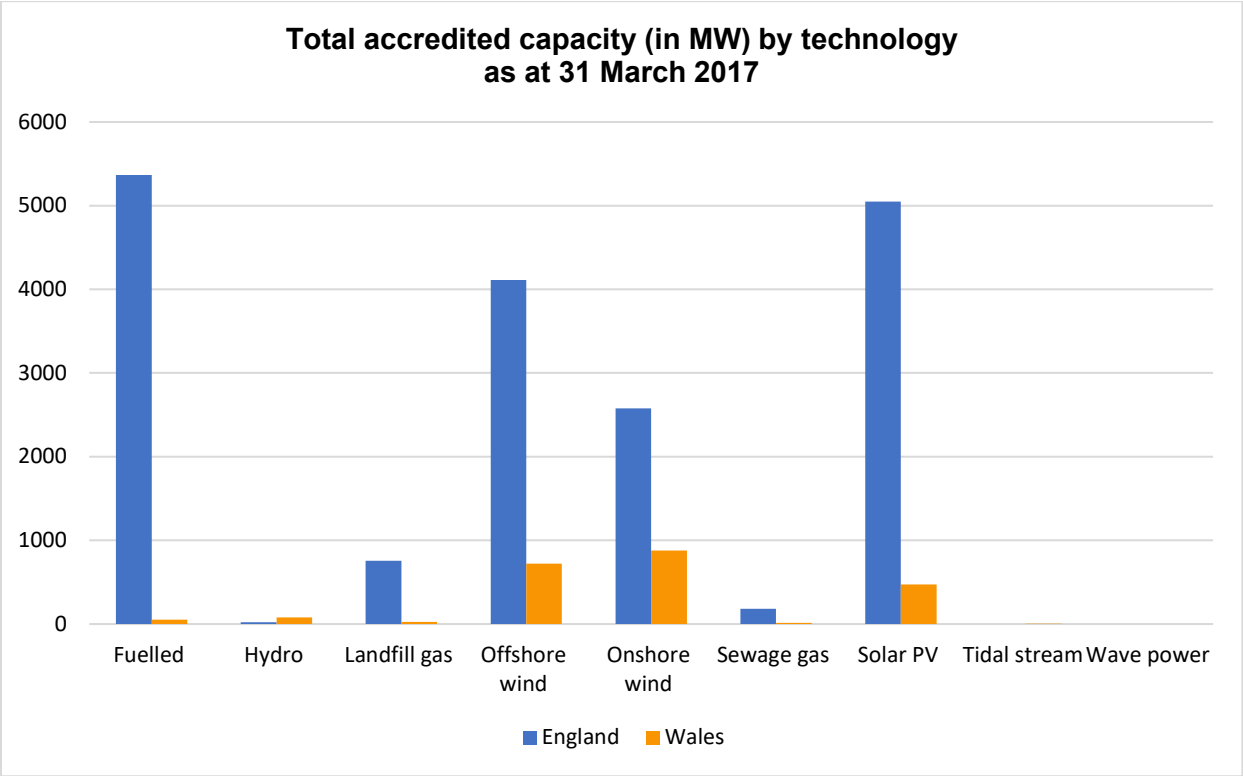
In percentage terms, the technology breakdown for accredited stations in England and Wales, over the life of the RO is shown in the pie charts below.





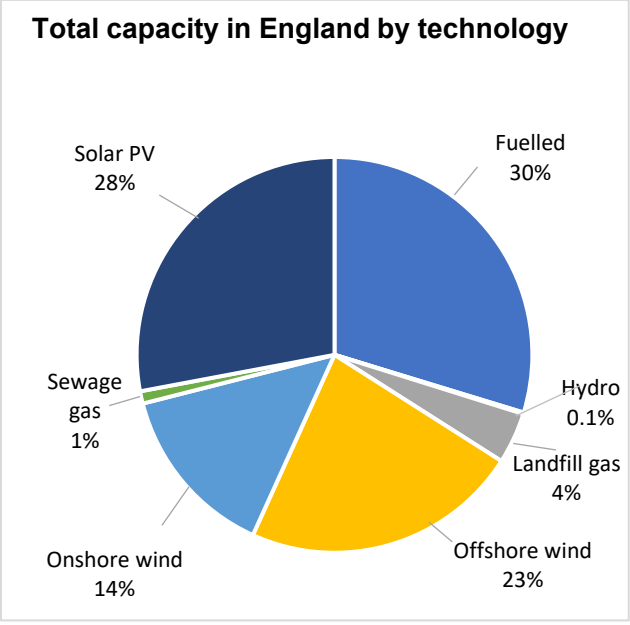
Data as at 31 January 2019 from Ofgem's accredited stations report

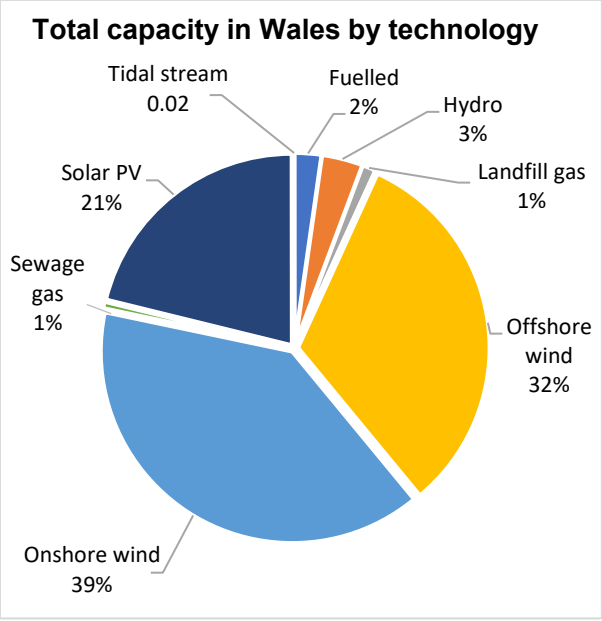
Total capacity is mainly spread across the fuelled technologies, solar PV, offshore and onshore wind, as shown in the chart below.



Data as at 31 January 2019 from Ofgem's accredited stations report

In percentage terms, the technology breakdown for accredited capacity in England and Wales over the life of the RO is shown in the pie charts below.



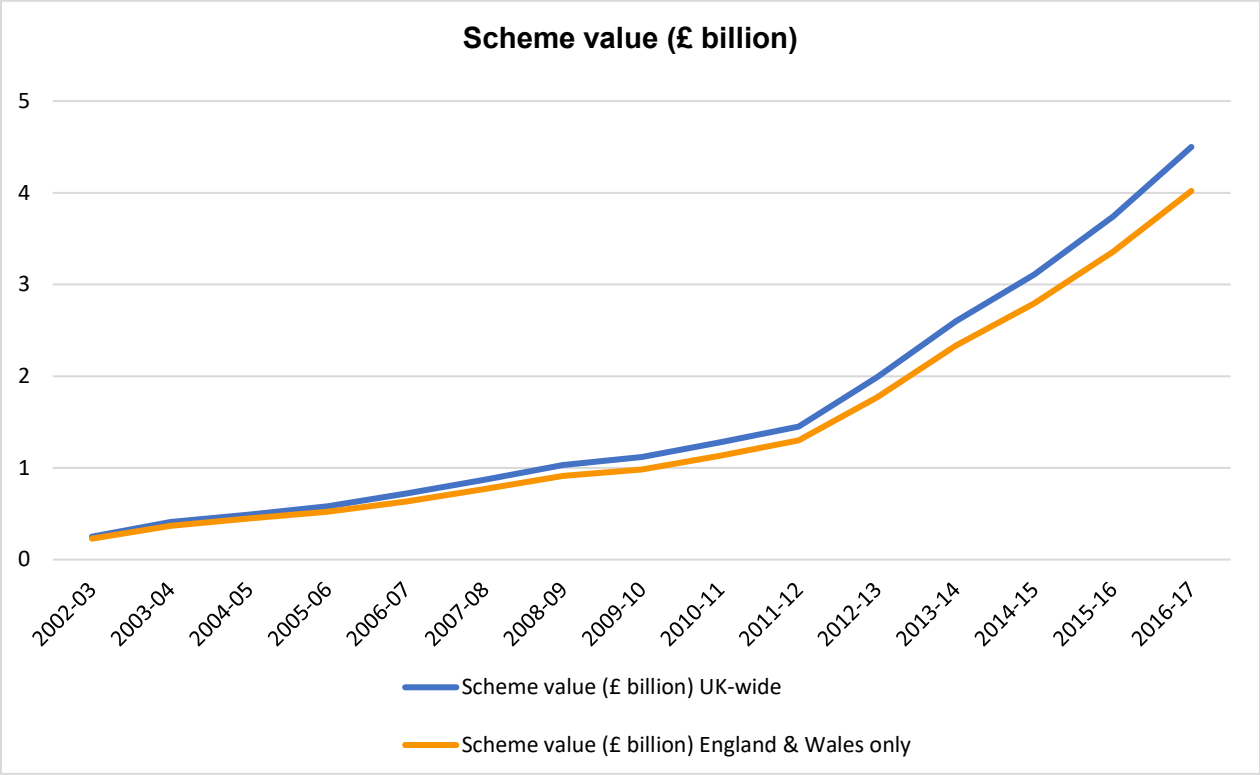


Data as at 31 January 2019 from Ofgem's accredited stations report

Overall value of the RO

The total value of the scheme each year is the notional value of a ROC that year, multiplied by the number of ROCs presented for compliance by suppliers. The price of a ROC is not fixed and is a matter for negotiation between the generator and supplier/trader. However, the notional value of a ROC is considered to be the buy-out price, plus the value of the recycled

buy-out fund payments. The graph below shows the notional value each year of the UK-wide scheme and the England and Wales RO.



Data from Ofgem's Public reports and data: RO for the UK-wide scheme and from the individual annual reports for the England and Wales [62]

Use of the grace periods

The grace periods were designed to protect developers who:

- Had taken investment decisions on the basis of support levels that the developer would then be unable to access, due to a delay in commissioning caused by certain factors which they could not have foreseen and which were beyond their control; or
- Had already made a significant financial commitment prior to the closure announcements and would be at risk of failing to accredit in the shortened time then available.

The grace periods were tailored to the specific technologies. For example, the solar PV grace periods recognised the speed at which that technology deployed. The specified eligibility criteria were aimed at preventing projects in an early stage of development from having time to accredit, so protecting the RO from a significant increase in accredited capacity. The evidence requirements were aimed at allowing Ofgem to assess the evidence quickly and objectively, with minimal subjective judgement or evaluation, and to minimise the risk of gaming.

Based on the accreditation date in Ofgem's accredited stations report as at 31 January 2019, the table below shows the technology breakdown of the stations that used a grace period. It

[62] Ofgem's Public reports and data: RO: https://www.ofgem.gov.uk/environmental-programmes/ro/contacts-publications-and-data/public-reports-and-data-ro

also gives the estimated lifetime costs to the RO of supporting those stations. The figures exclude pending applications for accreditation being assessed by Ofgem.

Technology	Stations in England and Wales that accredited under a grace period:		
	Number of stations	Capacity (TIC)	Yearly cost of support
Fuelled	9	188 MW	£61m
Offshore wind	4	1,368 MW	£433m
Onshore wind	38	829 MW	£81m
Solar PV – over 5MW	37	729 MW	£38m
Solar PV – up to 5MW	165	722 MW	£35m

Total installed capacity (TIC) data from Ofgem's certificates report[63].

Yearly costs are given for 2020/20 as a representative year and are from BEIS's internal predictions, in 2011/12 prices.

The table below compares actual deployment (as at 31 January 2019) against predicted deployment in the impact assessments published with the Government responses to the consultations on closing the RO early to large-scale solar PV[64] and small-scale solar PV[65], and with the Energy Act 2016 on the early closure of the RO to onshore wind[66].

Technology	Predicted capacity if RO did not close early (GW)*	Predicted capacity under early closure proposals (GW)*	Actual accredited capacity as at 31 Jan 2019 (GW)Δ
Onshore wind	12.5	12.3	12.3
Solar PV – over 5MW	7.2	4.2	4.8
Solar PV – up to 5MW+	3.2	1.6	1.5

* *Predictions are the central scenario from the impact assessments to the respective Government responses.*

63 Ofgem's certificate report: https://www.renewablesandchp.ofgem.gov.uk/Public/ReportViewer.aspx?ReportPath=/DatawarehouseReports/CertificatesExternalPublicDataWarehouse&ReportVisibility=1&ReportCategory=2

64 Impact assessment for Government response on changes to financial support to solar PV. Part A: Controlling spending on large-scale solar PV within the Renewables Obligation: https://www.gov.uk/government/consultations/consultation-on-changes-to-financial-support-for-solar-pv

65 Impact assessment for Government response on changes to financial support for solar PV projects at 5MW and below under the Renewables Obligation: https://www.gov.uk/government/consultations/changes-to-financial-support-for-solar-pv

66 Impact assessment for onshore wind: closure of Renewables Obligation on 31st March 2016: https://services.parliament.uk/bills/2015-16/energy/documents.html.

∆ *Actual capacity figures are total installed capacity taken from Ofgem's certificate report. To allow comparison with the impact assessments, the actual outturn figures for onshore wind and small-scale solar PV are UK-wide. Those for large-scale solar PV are GB only.*

\+ *The IA for small-scale solar PV looked at new deployment only in 2015/16 and 2016/17. The figures do not include capacity that had accredited by 31 March 2015.*

No capacity figures were given in the impact assessment published for the Energy Act 2013 regarding closing the RO to all technologies as at 31 March 2017[67]. In addition, no capacity figures were given in the analytical annex to the consultation or Government response on the provision of grace periods from the original 31 March 2017 closure date[68]. It is therefore not possible to assess whether those grace periods had the desired effect.

As the figures exclude pending applications for accreditation, it is not yet possible to determine whether or not the grace periods have been successful in limiting onshore wind and small-scale solar PV to the predicted levels. Large-scale solar PV has already slightly exceeded the predicted level of deployment. However, all three technologies have actual capacities below that predicted had the early closures not been implemented. So, in that respect, the measures have been successful.

Issues raised about the grace periods

The majority of respondents to the 2013 and 2014 consultations on the RO to CfD transition arrangements were broadly content with the proposals for the grid/radar and Investment Contracts grace periods. The majority also supported in principle the enabling financial decisions and dedicated biomass grace periods but proposed a range of changes to the details and the supporting evidence required. As a result, Government decided to: push back the deadline for notifying intent to use the grace period by three months; lengthen the grace period for biomass CHP stations from 12 to 18 months to match that for the biomass cap grace period; and not to pursue the option to limit access to the grace periods on the basis of size. Minor changes were also made to the required supporting evidence.

The majority of respondents to the 2014 consultation on closing the RO early to solar PV above 5MW were opposed to: the closure; basing eligibility on the stage projects had reached by 13 May 2014 (the day the consultation was published); and the proposed evidence to demonstrate eligibility for the grace period. In the light of the comments, Government made adjustments to the evidence requirements and proposed a new grid delay grace period - but the other aspects were left unchanged.

A separate consultation was launched later in 2014 on the proposed grid delay grace period. The majority of respondents supported the need for it and the eligibility criteria, but said the proposed length was too short. Government subsequently increased the grace period to 12 months.

The majority of respondents to the 2015 consultation were opposed to the early closure to solar PV up to 5MW but agreed that if the proposals were to go ahead, the grace periods and

[67] Impact assessment for Renewables Obligation Transition: https://services.parliament.uk/bills/2012-13/energy/documents.html

[68] The analytical annex to the consultation on the Renewables Obligation transition and grace periods is at the back of the consultation and Government response documents: https://www.gov.uk/government/consultations/transition-from-the-renewables-obligation-to-contracts-for-difference

eligibility criteria should be consistent with those provided for solar PV above 5MW. The consultation proposals were implemented with only one change – the eligibility requirements were amended to clarify that a "valid" planning application was required.

A number of developers who were unable to comply with the eligibility requirements subsequently asked for the requirements to be relaxed (particularly with regard to the requirement for valid planning permission under the small-scale solar PV grace period) or for the length of the grace periods to be extended. Government recognised the risk of lost investment for unsuccessful projects but considered that the policy struck the right balance between the public interests involved - including protecting consumer bills and ensuring the right mix of energy - and the interests of the renewables sector in allowing developers who had made a significant commitment prior to the closure announcements to come forward. Relaxing the criteria would have risked significantly adding more costs to consumer bills by allowing greater deployment and would not have provided consistent treatment across the industry. This was because some projects had ceased development in the expectation that the closure requirements and end dates were fixed.

Whilst the grace periods added an administrative burden on both the scheme administrator, Ofgem, and generators, Government considered this proportionate to the intent to allow developers who had made a significant commitment prior to the closure announcements to still come forward.

Assessment of compliance and enforcement

Each year, Ofgem carries out a programme of audits of generating stations to verify that they have submitted correct information when applying for accreditation and when claiming ROCs. In 2016/17, 37 generators in England or Wales over 50kW were audited. The majority were rated as good or satisfactory. Details are in Ofgem's "Renewables Obligation Annual Report 2016-17"[69].

Ofgem also has a Counter Fraud team which provides fraud prevention, detection and investigation support to the RO. During 2016-17, the team received 16 concerns of suspected fraud on the RO involving 32 sites.

Certificate purchase scheme

The Energy Act 2013 set out the basic framework for a Certificate Purchase Scheme. The 2013 Consultation70 on the transition from the Renewables Obligation to CfD set out the then Government's policy intentions for a Certificate Purchase Scheme (subsequently called a Fixed Price Certificate scheme). Subject to responses to the consultation the intention was that it would:

- Put an obligation on the purchasing body to purchase certificates at a fixed price. This would replace the obligation on suppliers to purchase ROCs or to pay into the buy-out fund;
- Come into force from 1 April 2027 and run until the RO's end date of 31 March 2037;

[69] Ofgem's Renewables Obligation Annual Report 2016-17: https://www.ofgem.gov.uk/publications-and-updates/renewables-obligation-ro-annual-report-2016-17

[70] Consultation on the transition from the Renewables Obligation to Contracts for Difference: https://www.gov.uk/government/consultations/transition-from-the-renewables-obligation-to-contracts-for-difference

- Leave unchanged the level or duration of support received by stations in relation to capacity within the RO, or the frequency with which certificates are issued;
- Fix the price for a certificate at the 2027 RO buy-out price, plus 10%. This would be inflation-linked, with a legal obligation on a purchasing body to purchase certificates at that fixed price.

The consultation said that Government intended to publish a further consultation in spring 2014 on the necessary secondary legislation and associated arrangements for the fixed price certificate scheme. However, this did not occur because substantial work was required to design the detail of the scheme and to stress test the way it would operate in practice. Staff resources needed to focus on more pressing priorities at the time, including the design and implementation of the grace periods and closing the RO early to large-scale solar PV. Work on the fixed price certificate scheme was further delayed by priorities to: amend the sustainability and reporting provisions for biomass; make changes to grandfathering policy for biomass co-firing and conversion projects; implement the exemption for Energy Intensive Industries from the indirect costs of the RO; and transpose the Indirect Land Use Change Directive.

The government intends to issue a call for evidence on the introduction of a certificate purchase scheme in due course.

4. What were the original assumptions?

The assumption was that closing the RO with effect from 31 March 2017 and moving to CfDs would give greater certainty and stability of revenues for generators by reducing exposure to variations in wholesale prices, as well as protecting consumers from paying for support when electricity prices were high. As a result, the development of low carbon generation would be cheaper for both investors and consumers. The transition arrangements aimed to give clarity to investors to allow investment to continue without interruption.

The impact assessment on the early closure of the RO to large-scale and small-scale solar assumed that uncertainty existed around the level, speed and cost of future solar PV deployment. For small-scale solar there were also uncertainties over whether deployment would accelerate and come forward early in order to accredit in time or transfer to the Feed-in Tariffs scheme. It was expected that projects that would have qualified for the grace period would actually have deployed in 2015/16, given the usual speed of solar deployment at that size.

The impact assessment on the early closure of the RO to onshore wind assumed that predicted deployment was sensitive to attrition rates and the speed at which projects could gain planning permission and complete construction.

The certificate purchase scheme was intended to reduce the risk of volatility in the value of a ROC certificate in the final years of the RO. The assumption was that the obligation on electricity suppliers to submit ROCs would be replaced in 2027 by an obligation on an administrator to purchase certificates at a fixed price.

5. Were there any unintended consequences?

The outturn deployment figures suggest that some developers speeded up their projects so that they completed in a shorter period than usual in order to accredit by the closure deadline. Although unintended, it was anticipated that this would occur. Some installations commissioned off-grid in order to meet the deadline and connected to the grid at a later date.

The grace periods added an administrative burden on both the scheme administrator, Ofgem, and generators. They also increased the risk of legal challenge to Ofgem over their assessment of whether the evidence provided by generators complied with the rules.

6. Has the evidence identified any opportunities for reducing the burden on businesses?

No opportunities have been identified. Only those applying for a grace period had a different process to follow compared to those applying before the RO closed. The grace periods were aimed at those projects where a significant financial commitment had already been made before the closure was announced. The requirements to demonstrate eligibility for the grace periods were designed to be as light touch as possible, whilst requiring sufficiently robust and independent evidence to demonstrate that significant commitments had been made. Any relaxation of the requirements would have allowed less advanced projects (who had not, at that time, made a significant financial commitment) to accredit and would have increased the overall cost of the RO.

7. For EU measures, how does the UK's implementation compare with that in other EU member states in terms of costs to business?

N/A

Recommendation

For the policy to be kept.

Emissions Performance Standard

Title: The Emissions Performance Standard	Post-Implementation Review
PIR No: BEIS012(PIR)-22-RE	**Date**: 18/09/2019
Original IA/RPC No: DECC0181	**Type of regulation**: Domestic
Lead department or agency: BEIS	**Type of review**: Statutory
Other departments or agencies: Environment Agency	**Date measure came into force**: 18/02/2014
	Recommendation: Keep
Contact for enquiries: Simon Dawes – Simon.Dawes@beis.gov.uk	**RPC Opinion**: N/A

1. What were the policy objectives of the measure?

The policy objective of Emissions Performance Standard (EPS) is to act as a regulatory backstop to ensure that new fossil fuel-fired electricity generation contributes to electricity security of supply in a manner consistent with the UK's decarbonisation objectives. In outline, the EPS places a limit on the carbon dioxide emissions produced by new fossil-fuel generation plants.

2. What evidence has informed the PIR?

The review was carried out by BEIS officials. A call for evidence exercise was used to ask questions on the performance of the EPS in achieving its objective, whether its objective is still appropriate and whether any issues have arisen in its operation. A total of twenty-seven responses were received. We also reviewed plant built since implementation and obtained feedback from the Environment Agency.

3. To what extent have the policy objectives been achieved?

The overwhelming majority of stakeholders indicated support for the EPS measure. Based on their responses, we consider that the EPS has, to date, been successful as a regulatory backstop, reinforcing existing planning policy. Given no new fossil fuel plant in scope of the measure has been built and started generating there has been no need to implement the monitoring regime.

4. What were the original assumptions?

In the original impact assessment[71] it was stated that the EPS is not expected to result in an impact on investment, operational decision making or security of supply. It was expected to provide further clarity on the regulatory environment for fossil fuel power stations.

In the impact assessment for the monitoring arrangements[72], it was assumed that a total of 31 new fossil fuel plants would be built between 2014 and 2030 and be subject to an initial information exchange (to establish the plant's emissions limit) and to on-going monitoring a total cost of £7,500 per plant. Assumed costs to the Regulator included £45,000 to make its central I.T. system fit for purpose, £3,500 per plant per annum for ongoing monitoring and £500 per annum for the Regulator to update their website.

5. Were there any unintended consequences?

No unintended consequences were identified through the review.

6. Has the evidence identified any opportunities for reducing the burden on business?

Given no plant in scope of the EPS has been built or started generating, costs have not been faced by businesses. There have not been any opportunities identified to reduce regulatory burden of the EPS, and therefore we do not intend to make any changes to the monitoring compliance and reporting regime.

7. For EU measures, how does the UK's implementation compare with that in other EU member states in terms of costs to business?

N/A

[71] https://www.parliament.uk/documents/impact-assessments/IA13-12H.pdf
[72] https://www.gov.uk/government/consultations/implementing-the-emissions-performance-standard

1. What were the policy objectives of the measure?

The policy objective of Emissions Performance Standard (EPS) is to act as a regulatory backstop to ensure that new fossil fuel-fired electricity generation contributes to electricity security of supply in a manner consistent with the UK's decarbonisation objectives.

In outline, the EPS places a limit on the carbon dioxide emissions produced by new fossil-fuel generation plants[73]. The EPS complements the National Planning policy[74], which covers fossil fuel generating infrastructure over 50MWe and requires new coal fired power stations to be equipped with CCS.

The EPS was introduced by the Energy Act 2013 which imposes the emissions limit duty on operators of new fossil-fuel plant. It provides for the circumstances in which the EPS may be suspended or modified and provides powers for an appropriate national authority to make arrangements for establishing a monitoring and enforcement regime.

The EPS was then implemented via the Emissions Performance Standard Regulations 2015, the Emissions Performance Standard (Enforcement) (Wales) Regulations 2015, and the Emissions Performance Standard Monitoring and Enforcement Regulations (Northern Ireland) 2016(the Regulations).

The key provisions as set out in Chapter 8 of The Energy Act 2013;

- establish the EPS as an annual limit, equivalent to 450g of CO2 per kilowatt hour of electricity for a plant operating at baseload[75]. The limit is around half the level expected of new coal plant when operating unabated, which is nearly 800g/kWh. It is, however, above the level of modern combined cycle gas-fired power plant, which operate at below 400g/kWh. Further changes in regulations apply the emissions limit duty to additional cases.

- provide that carbon capture and storage projects will be exempted from the emissions limit duty for a period of 3 years commencing from the date the complete CCS system is ready for use. The exemption is available until the end of 2027.

- gives the appropriate authority power to suspend or modify the EPS where there's an electricity shortfall, or a significant risk of an electricity shortfall occurring. This seeks to ensure that the EPS will not become a contributory factor in any risk to security of electricity supply.

- provide powers for an appropriate national authority to make arrangements for establishing a monitoring and enforcement regime (which were subsequently set out in the three pieces of secondary legislation mentioned above). Such a regime is to sufficiently deter an operator of a fossil fuel plant from breaching its obligation under the EPS.

[73] New plants mean those built after receiving consent on or after 18 February 2014. The EPS also applies to plants that received consent before 18 February 2014, when they replace or add a main boiler on or after 18 February 2014.

[74] http://www.decc.gov.uk/assets/decc/11/meeting-energy-demand/consents-planning/nps2011/1939-nps-for-fossil-fuel-en2.pdf

[75] 'Baseload' is assumed as a plant operating at full output for 85% of the operating hours available in a year.

2. What evidence has informed the PIR?

The estimated net cost to business of the EPS was -£0.5m[76] and over the past five years the regulation has not yet been applied to plant, and monitoring compliance and enforcement has not yet been exercised. Therefore, a proportionate approach has been taken to this review, which was carried out by BEIS officials. A call for evidence exercise was used.

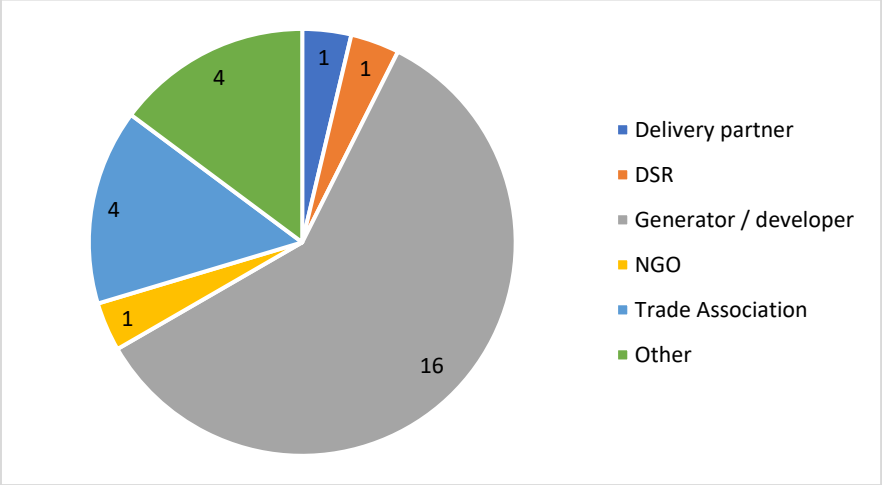
In the call for evidence, BEIS asked the below three questions and sought respondents to provide evidence to support their views[77].

- To what extent has the EPS been achieving its objective?
- Is this current objective of the EPS still appropriate? Could it be achieved in a way that imposes less regulation?
- Have any issues arisen in the operation of the EPS which should be considered?

The call for evidence was published on the beis.gov.uk site and was open to the public for 8 weeks from 8 August 2018 to 1 October 2018.

A total of twenty-seven responses to the EPS questions were submitted by a wide variety of organisations (See Figure 1), including generators, developers, NGOs, trade associations and others.

Figure 1: Responses to the call for evidence by type of organisation



Responses were reviewed to extract the key themes and a summary of call for evidence responses was published[78].

[76] The estimated net cost to business of -£0.5m was published in the EPS impact assessment available at: https://www.gov.uk/government/consultations/implementing-the-emissions-performance-standard and https://www.parliament.uk/documents/impact-assessments/IA12-033J.pdf

[77] The call for evidence was issued as part of a document covering the Capacity Market and Emissions Performance Standard and is available at: https://www.gov.uk/government/consultations/capacity-market-and-emissions-performance-standard-review-call-for-evidence

[78] The summary of call for evidence responses is available at https://www.gov.uk/government/consultations/capacity-market-and-emissions-performance-standard-review-call-for-evidence

We also reviewed plants built since implementation and obtained feedback from the Environment Agency.

3. To what extent have the policy objectives been achieved?

The objective of the EPS, as outlined in the impact assessment[79], is to act as a regulatory backstop to ensure that new fossil fuel-fired electricity generation contributes to electricity security of supply in a manner consistent with the UK's decarbonisation objectives.

Given the typical timelines for the construction of new commercial-scale fossil fuel generation plants, at the time of implementation of the EPS, it was expected that it would be at least 4-5 years before the first plant subject to the EPS would become operational.

Since implementation of the EPS no new or substantially refurbished plant in scope of the measure has been built or started generating electricity. The emissions limit duty has therefore not been applied to any plant, and monitoring compliance with and the enforcement of the emissions limit has therefore not been exercised by the regulators. Plants in scope of the measure are very unlikely to be built and need to comply in the future, but the regulation will be maintained to ensure stability.

25 of the 27 responses indicated support for the EPS measure, with the other two respondents not providing a view. Many acknowledged that since the introduction of the EPS, and other measures including Carbon Capture and Storage requirements under national planning policy, no new coal plant has come forward.

The EPS is a backstop which complements other decarbonisation policies, including the Total Carbon Price and carbon capture readiness requirements. It is therefore difficult to determine the EPS impact on its own. Many respondents acknowledged the importance of these complementary measures and agreed that it is difficult to assess the effectiveness of the EPS as a standalone measure.

13 respondents explicitly stated that, to date, the EPS has been successful in achieving its over-arching objective. One stakeholder, however, raised that the EPS is only partly achieving its objective, stating that "with its current design, the EPS only prevents one type of new fossil-fuelled electricity generation - large baseload coal power stations not equipped with CCS." They raised that other fossil-fuelled generation (gas and diesel plants) have been built or contracted since the EPS came into force. Concerns were expressed around the recent increases in running hours from smaller other non-coal fossil fuel plant, e.g. peaking plant[80] and that in its current form the EPS is unable to regulate this rising source of emissions.

Based on the responses received, we consider that the EPS has, to date, been successful as a regulatory backstop, reinforcing existing planning policy.

4. Is the current objective appropriate?

16 of the 17 respondents who answered the question on the EPS objective indicated the current objective is broadly appropriate. Two respondents caveated their support by

[79] https://www.parliament.uk/documents/impact-assessments/IA13-12H.pdf
[80] Peaking plant refers to plant that typically generates during periods of high demand.

commenting that it is not clear the measure is still needed and it is unlikely that large new unabated fossil fuel plant would have come forward even if the EPS had not been in place. But there was also an acknowledgement of the need for regulatory stability.

One respondent stated that while the objective of the EPS is still appropriate, its design is no longer fit for the modern electricity system. Concern was raised regarding the growth of smaller decentralised generation, and with the running hours of smaller plant increasing and having an impact on emissions.

We consider that the EPS objective, which is broad in its nature (i.e. ensuring consistency of fossil fuel generation "with the UK's decarbonisation objectives") remains appropriate at this time.

5. Has the evidence identified any opportunities for reducing the burden on business?

The regulatory burden faced by impacted businesses is by way of monitoring compliance with the emissions limit.

The original impact assessment[81] estimated that each plant built that was in scope of the EPS would be subject to an initial information exchange (to establish the plant's emissions limit) and to on-going monitoring. The total cost of this, as estimated in the impact assessment for the monitoring arrangements[82], was estimated at £7,500 per plant, which is expected to be a very small portion of plant's operating costs. The EPS reporting regime, broadly speaking, uses the same process currently used for the UK Emissions Trading System (UK-ETS) in order to minimise creation of additional reporting burdens. Given no plant in scope of the EPS has been built or started generating, monitoring costs have not been faced by businesses.

We do not expect new plant in-scope of the EPS to be built. But to ensure stability, our view is that legislation should remain in place. There have not been any opportunities raised or identified to reduce regulatory burden of the EPS.

Issues and areas of improvement

Issues and suggestions for improvement were raised by a small number of stakeholders through the call for evidence exercise. This included:

- calls to have a tighter emissions limit for fossil fuel plant (for example by applying the future instantaneous emissions limit for coal to all new fossil fuel plant and reducing capacity threshold to 1MWth) in the future to encourage the latest technology and high efficiency;
- using the EPS measure (alongside other policies) to help achieve the Government's future carbon budgets; suggesting in the longer term that it could be used to phase out existing gas plant, focusing on less efficient gas plant first; and
- for an EPS to be implemented as part of the General Eligibility Criteria for the Capacity Market.

[81] https://www.parliament.uk/documents/impact-assessments/IA13-12H.pdf
[82] https://www.gov.uk/government/consultations/implementing-the-emissions-performance-standard

Whilst not within scope of the EPS, some respondents referenced other issues impacting the achievement of the UK's decarbonisation objectives. This included:

- clarity on how and when the Government would bring forward legislation to end existing unabated coal power generation;
- importance of a long-term carbon price signal to drive decarbonisation in the electricity sector. Some respondents called for a robust carbon price and more clarity on GB's carbon pricing regime; and
- concerns around the smaller decentralised generation that is exempt from the EU ETS and Carbon Capture Readiness.

The Environment Agency also raised that, as we legislate on ending unabated coal generation, we should consider the regulation of emissions from other more unconventional fuels that could be switched to and co-fired with coal to generate electricity, such as secondary recovered fuel.

Recommendation

The Government is committed to maintaining the EPS as a regulatory back-stop. We are also committed to ending all unabated coal power generation from 2024, as set out in our consultation held in 2021[83].

[83] https://www.gov.uk/government/consultations/early-phase-out-of-unabated-coal-generation-in-great-britain

Strategy and Policy Statement

Title: Government Strategy and Policy Statement (SPS) for the gas and electricity markets	Post-Implementation Review
PIR No: BEIS012(PIR)-22-RE	**Date**: 12/03/2019
Original IA/RPC No: DECC0060	**Type of regulation**: Domestic
Lead department or agency: BEIS	**Type of review**: Statutory
Other departments or agencies: N/A	**Date measure came into force**: 18/12/2013
	Recommendation: Keep
Contacts for enquiries: Steven May – Steven.May@beis.gov.uk – and Heather Lambert – Heather.Lambert@beis.gov.uk	**RPC Opinion**: N/A

1. What were the policy objectives of the measure?

The policy objective was to give a Secretary of State the power to designate a Strategy and Policy Statement (SPS) in which they may set out Government's strategic priorities for energy policy to ensure coherence between government strategy and the actions of the independent GB energy market regulator, Ofgem. This was intended to enhance regulatory transparency and certainty to support more cost-effective investment in the UK energy sector.

2. What evidence has informed the PIR?

This Post-Implementation Review (PIR) has been conducted by BEIS officials in early 2019 and draws upon evidence from policy officials working in the Retail Energy Markets policy team.

This is a low evidence PIR, as to date, an SPS has not been designated by a Secretary of State or put for approval before Parliament. An SPS is expected to be designated later in 2022.

3. To what extent have the policy objectives been achieved?

Since an SPS has not yet been used it is not possible to state whether its policy objectives have been achieved. However, the strong relationship between BEIS and Ofgem ensures the two organisations maintain an aligned understanding of policy objectives and outcomes.

Ministers made clear in the Energy White Paper that they intend to designate an SPS for Ofgem.

4. What were the original assumptions?

The original assumption when making this policy was that the SPS would produce a coherent set of legally binding and deliverable outcomes. It was expected that Ofgem would work toward the outcomes defined in the SPS to avoid legal action. It was anticipated that revisions to the SPS on a frequent basis could risk undermining the policy's aim of stability.

5. Were there any unintended consequences?

No. An SPS has not yet been designated by a Secretary of State or put for approval before the Houses of Parliament.

6. Has the evidence identified any opportunities for reducing the burden on business?

No. A lack of SPS does not place any direct financial cost on businesses.

Recommendation:

We recommend that we keep the SPS policy, as an option for this and future governments to implement.

7. For EU measures, how does the UK's implementation compare with that in other EU member states in terms of costs to business?

N/A

1. What were the policy objectives?

The Energy Act 2013 provides powers for a Secretary of State to designate a Strategy and Policy Statement (SPS) in which they may set out the Government's strategic priorities and other main considerations of their energy policy. The SPS would also set out the policy outcomes to be achieved as a result of the implementation of that policy, and the roles and responsibilities of those who are involved in its implementation. Once drafted the SPS must be laid, debated and approved by both Houses of Parliament. Once the SPS is approved, the Energy Act 2013 requires Ofgem, the GB energy regulator, to have regard to the priorities set out in the SPS when carrying out its regulatory functions.

The policy objective was to ensure coherence between the government's strategic policy framework and the actions of the independent regulator, Ofgem. The policy was aimed at creating a transparent and enduring process through which the UK government can specify the policy outcomes, to which it expects the regulator to contribute and be held to account.

It was intended that achieving these policy objectives would enhance regulatory transparency and certainty in order to support more cost-effective investment in the UK energy sector.

2. Evidence

This is a low evidence PIR, as to date, an SPS has not been designated by a Secretary of State or put for approval before Parliament.

This is due, in part, to a change of government in 2015, which saw the end of the coalition government that had brought forward the SPS policy.

This PIR has been conducted by BEIS officials in early 2019 and draws upon evidence from policy officials working in the retail energy markets policy team.

3. To what extent have the policy objectives been achieved?

Since an SPS has not been used it is not possible to state whether its policy objectives have been achieved. However, BEIS and Ofgem maintain strong lines of communication, with conversations held at senior and ministerial levels on a regular and ongoing basis. This practice ensures the two organisations maintain an aligned understanding of policy objectives and outcomes, in addition to a shared understanding of risks, for both joint and independent work programmes. While Ofgem has regard to BEIS policy and strategy announcements, it is right that the regulator makes independent decisions when carrying out its legislative duties and functions. An example of this is the retail energy Price Cap where Government policy is to temporarily cap the rate charged under specified tariffs, and Ofgem is responsible for the design and operation of the Price Cap.

Officials consider that the SPS is a useful, albeit discretionary, tool for a Secretary of State to be able to legally align the actions of the regulator with policy objectives and strategy of the Government. As such, the SPS power should not be removed from statute. To do so would be to deny existing and future governments the opportunity to formally set out their policy objectives as a legal requirement upon the regulator.

4. What were the original assumptions?

The original assumption when making this policy was that the SPS would produce a coherent set of legally binding and deliverable outcomes. It was expected that Ofgem would work toward the outcomes defined in the SPS to avoid legal action. It was anticipated that revisions to the SPS on a frequent basis could risk undermining the policy's aim of stability.

5. Were there any unintended consequences?

To date, an SPS has not been designated by a Secretary of State or put for approval before the Houses of Parliament. The department and the regulator continue to maintain lines of communication to ensure an aligned understanding of policy objectives and outcomes, in addition to a shared understanding of risk.

6. Has the evidence identified any opportunities for reducing the burden on business?

No. An SPS does not place any direct financial cost on businesses.

7. For EU measures, how does the UK's implementation compare with that in other EU member states in terms of costs to business?

N/A

Recommendation:

We recommend that we keep the SPS policy, as an option for future governments to implement.

Consumer Redress Orders

Title: Ofgem Consumer Redress	Post-Implementation Review
PIR No: BEIS012(PIR)-22-RE	**Date**: 12/03/2019
Original IA/RPC No: DECC0074	**Type of regulation**: Domestic
Lead department or agency: BEIS	**Type of review**: Statutory
Other departments or agencies: N/A	**Date measure came into force**: 18/12/2013
	Recommendation: Keep
Contact for enquiries: Dave Newton – Dave.Newton@beis.gov.uk	**RPC Opinion**: N/A

1. What were the policy objectives of the measure?

The policy provides Ofgem with the power to compel any regulated entities, including energy supply companies, to issue redress directly to consumers affected by breaches of their licence conditions. The aim was to help ensure that consumer interests are better protected by the enforcement system through redress to customers affected by breaches. Previously penalties were only possible as fines, with proceeds placed with the HM Treasury Consolidated Fund.

2. What evidence has informed the PIR?

This is a low evidence review of the Consumer Redress Order (CRO). The justification is that Ofgem has not yet directly used the power. The review has been carried out by BEIS officials in the Retail Energy Markets Team in early 2019. Evidence was gathered from Ofgem officials, Ofgem published data,[84] consumer interest groups, an examination of the policy development documents, and review of indirect policy impacts of increasing voluntary consumer redress.

3. To what extent have the policy objectives been achieved?

The CRO has not yet been used by Ofgem. However, BEIS officials consider that policy objectives are being achieved as the CRO incentivises businesses to cooperate during enforcement procedures, leading to the increased rate of voluntary redress payments and also driving long-term cultural change in the energy industry. The Ofgem legal team believe that the regulator will have cause to exercise the redress order power eventually in a contested case.

[84] https://www.ofgem.gov.uk/investigations/investigations-and-enforcement-data

4. What were the original assumptions?

The Energy Act 2013 Impact Assessment (IA) estimated that the CRO would have no impact on the costs to compliant energy businesses.

It was expected that monies would be transferred away from the HMT Consolidated Fund in favour of consumers that have suffered losses. However, the IA did not provide a monetised benefit as redress sums would directly depend on Ofgem's calculations.

5. Were there any unintended consequences?

There have been no unintended consequences, because a CRO has yet to be issued by the regulator. Voluntary redress payments increased following the introduction of the measure, however this was an expected and desired impact of the policy.

Recommendation

We recommend the power remains in place as it remains an effective preventative measure.

6. Has the evidence identified any opportunities for reducing the burden on business?

There is no burden for compliant businesses as the costs fall solely upon non-compliant businesses.

If a CRO were to be made, legislation stipulates there is an upper limit (10% of company turnover) on the financial burden redress might pose a non-compliant company.

7. For EU measures, how does the UK's implementation compare with that in other EU member states in terms of costs to business?

N/A

1. What were the policy objectives?

The Energy Act 2013 introduced the Consumer Redress Order (CRO), which provides Ofgem, the GB energy market regulator, with the power to compel any regulated entities, including energy supply companies, to issue redress directly to consumers affected by licence condition breaches.

The overarching objective was to help ensure that consumer interests are better protected by the enforcement system through the use of pound for pound redress payments to domestic and business consumers that have suffered losses as a result of a breach of regulatory requirements by gas and electricity businesses. Previously penalties were only possible in the form of fines with the proceeds flowing directly to HM Treasury.

The policy was intended to improve equity by allowing individuals who suffered losses to be able to receive redress directly, whereas previously, penalties for licence breaches were only possible in the form of fines with the proceeds placed with the HM Treasury (HMT)

Consolidated Fund, for use in general public expenditure. The policy was also aimed at protecting consumer interests by increasing compliance by energy businesses.

Gas and electricity businesses must comply with licence conditions (unless they are exempt) and other regulatory requirements. Breaches can result in consumer losses. In the event of a breach before this power was introduced, Ofgem had the power to fine a business up to 10% of its annual turnover. However, Ofgem did not have powers to compel businesses to pay redress to consumers or other businesses in compensation for losses. This meant that whether redress was paid to affected consumers often depended upon individual action (e.g. through the legal system). Ofgem would seek to negotiate voluntary redress in appropriate cases, but energy suppliers sometimes resisted this option. The policy was developed so that Ofgem's enforcement regime could deliver an enforcement threat that is fair, in that parties are directly compensated.

Other regulators such as Ofcom, the UK communication sector regulator, and the Financial Conduct Authority (FCA), the UK financial services regulator, already had powers that allow them to require redress to be paid to consumers directly affected.

2. Evidence

This is a low evidence review of the CRO.

The justification for a low evidence review is that Ofgem has not yet directly used the power. The review has been carried out by Department for Business, Energy & Industrial Strategy (BEIS) officials in the Retail Energy Team in early 2019. Evidence has been gathered from Ofgem using the regulator's published data,[85] from discussions with Ofgem officials and consumer interest groups, and an examination of the policy development documents.

As Ofgem has not yet made use of the CRO, it was not possible to evaluate the policy's direct monetary impact on consumers and other stakeholders. While mandatory consumer redress has not been used, instances of voluntary consumer redress have increased significantly since the policy was introduced. One aim of the policy was to encourage energy companies to enter into redress negotiations more willingly. The review therefore looks at the indirect impact of the policy on increasing consumer redress issued on a voluntary basis. The review uses data published by Ofgem regarding enforcement and redress action before and since the policy was introduced. In addition to Ofgem data, BEIS has consulted Ofgem officials to gather views on the efficacy of the consumer redress order provision and gathered views from Citizens' Advice, the consumer interest group, in order to understand the extent to which the policy was serving consumers.

3. To what extent have the policy objectives been achieved?

The CRO set out in the Energy Act 2013 has not yet been used by Ofgem. However, BEIS officials consider that the measure's policy objectives are being achieved. Stakeholder feedback provides evidence of behavioural change with regards to self-reporting breaches of licence conditions alongside a sustained rise in voluntary redress payments following the CRO's introduction.

[85] https://www.ofgem.gov.uk/investigations/investigations-and-enforcement-data

Ofgem officials suggest that the presence of the CRO in legislation led to the increased rate of voluntary redress payments in the short-term and, as a consequence, is also driving long-term cultural change in the energy industry. The regulator cited feedback it has received indicating that large energy companies are making internal behavioural changes due to redress powers. The regulator was unable to provide detailed examples.

Ofgem data shows that voluntary redress payments grew year-on-year from 2010 to 2013, rising from £200,000 to £22 million. Following the introduction of the CRO in 2013, voluntary redress payments continued to rise, reaching £34.8 million and £66.9 million in 2014 and 2015, respectively. Since 2016 voluntary redress payments have fallen year-on-year from £51.9 million to £4 million in 2018. Over the same period penalty fines have declined, from £15 million in 2010 to £2.4 million in 2018. This suggests that energy companies have remained willing to negotiate voluntary redress payments following the introduction of the CRO, whilst overall the scale of licence breaches has been declining.

Stakeholders have also provided evidence of behavioural change as a result of the measure, with companies more likely to self-report breaches of regulations. Both Ofgem and Citizens' Advice attribute self-reporting of breaches to the CRO. Citizens' Advice highlight that self-reporting has occurred on numerous occasions since the measure was introduced and point to the 2018 case, where the energy supplier, SSE self-reported breaches relating to mistakes for Prepayment Meter customers due to an IT problem, as a representative example. [86] Ofgem's voluntary redress process also includes provisions for reducing the redress sum where companies settle early. This incentivises businesses to cooperate during investigations and enforcement procedures.

Why the power has not been used?

Our interview with an Ofgem representative indicated that the regulator has not used the measure simply because they have not felt it necessary to do so. Consumer redress has been achieved through alternative methods such as direct engagement with energy companies. The regulator is of the opinion that it would have been difficult to achieve voluntary redress for consumers had the CRO not been available to them as a last resort. As such the regulation remains a useful and preventative measure.

The Ofgem legal team also believe that the regulator will have cause to exercise the redress order power eventually in a contested case.

4. What were the original assumptions?

The Energy Act 2013 Impact Assessment (IA) estimated that the CRO would have no impact on the costs to compliant energy businesses.

It was expected that monies would be transferred away from the HMT Consolidated Fund in favour of consumers that have suffered losses. This is because fines against non-compliant persons are allocated to the HMT Consolidated Fund and it was expected that this would be replaced, in part, by redress payments.

The IA assumed that the redress power would benefit consumers by leading to an increase in redress payments. However, the IA did not provide a monetised benefit as redress sums would

[86] https://www.ofgem.gov.uk/publications-and-updates/sse-pay-1-million-after-issuing-inaccurate-and-misleading-annual-statements-pre-payment-meter-customers-between-201415

directly depend on Ofgem's calculations. It was also suggested that society may benefit from increased social welfare (a reduction in deadweight loss), if the policy helped to drive a reduction in non-compliant practices and hence a small (effective) reduction in energy prices.

Overall it was assumed that the policy would lead to an increase in redress payments and a reduced level of fines because there was evidence that Ofgem had been unable to apply redress payments instead of fines in cases where the regulator had judged that redress payments would be most appropriate.

5. Were there any unintended consequences?

We have found no evidence of unintended consequences. The key indirect effect of the measure has been to increase the number of voluntary redress payments, which was an expected and desired impact of the policy.

6. Has the evidence identified any opportunities for reducing the burden on business?

The CRO may only be used when regulated entities, including energy supply companies, breach their licence conditions. In the event of a breach, it is for the business in question to pay the redress. To this extent, there is no burden for compliant businesses as the costs fall solely upon non-compliant businesses.

Additionally, if a CRO were to be made, the legislation stipulates that redress sums cannot exceed 10 per cent of the regulated company's turnover. There is therefore an upper limit on the financial burden a consumer redress order might pose for a non-compliant company.

An Ofgem consultation on enforcement and redress in 2014 identified a concern that voluntary redress (to be offered in place of the last resort of a CRO) in addition to a penalty fine could represent a doubled fine on an energy company. The consultation concluded that the sum of voluntary redress would be taken into account when deciding the penalty fine against an energy company.

7. For EU measures, how does the UK's implementation compare with that in other EU member states in terms of costs to business?

N/A

Recommendation

We recommend the power remains in place as it remains an effective preventative measure. Ofgem lawyers have indicated that they envision that the regulator will use the power when appropriate i.e. a case is contested by an energy company.

Fees in respect of decommissioning

Title: Review of fees in respect of decommissioning - Energy Act 2013	Post-Implementation Review
PIR No: BEIS012(PIR)-22-RE	**Date**: 22/11/2018
Original IA/RPC No: DECC0069	**Type of regulation**: Domestic
Lead department or agency: BEIS	**Type of review**: Statutory
Other departments or agencies: N/A	**Date measure came into force**: 18/02/2014
	Recommendation: Keep
Contacts for enquiries: Daniel Kapadia – Daniel.Kapadia@beis.gov.uk – and Alex Jones – Alexander.Jones@beis.gov.uk	**RPC Opinion**: N/A

1. What were the policy objectives of the measure?

The policy is designed to ensure that the prospective operator of any new nuclear power plant pays for the costs incurred by the Secretary of State in relation to the consideration of the owner's proposed Funded Decommissioning Programme (FDP) and any proposed "section 46 agreement", in particular the costs of obtaining advice in relation to them. It also aims to ensure that the Secretary of State is able to charge a fee for costs incurred in considering agreements for the disposal of hazardous material.

The changes were introduced by the insertion of Section 45A of the Energy Act 2008, as well as amendments to sections 46, 49 and 66 of the Energy Act 2008, by section 149 of the Energy Act 2013. They were intended to build upon the overarching policy objective from the Energy Act 2008 whereby prudent provision is secured in relation to the full decommissioning costs of the project.

2. What evidence has informed the PIR?

This PIR has been informed primarily by the review of the FDP for Hinkley Point C (which has been approved) and Wylfa Newydd (where work was suspended during the FDP-development phase).

For Hinkley Point C, the prospective operators paid the fee under section 45A(1) of the Energy Act 2008 (as inserted by section 149 of the Energy Act 2013) in respect of costs incurred by the Secretary of State in obtaining advice in relation to the consideration of the proposed FDP, including costs associated with the work of the Nuclear Liabilities Financing Assurance Board (NLFAB) – which advises the Secretary of State on the prudency of an operator's FDP proposal in making provision for funding the costs of decommissioning and

waste management. This was paid in accordance with the Nuclear Decommissioning and Waste Handling (Finance and Fees) Regulations 2013 (as amended).

For Wylfa Newydd, it was intended that costs would have been borne by the operator through the payment of fees under section 45A(1) of the Energy Act 2008 (in accordance with above regulations). However, the project was suspended prior to substantive work being undertaken.

3. To what extent have the policy objectives been achieved?

For Hinkley Point C the policy objectives have been fully achieved in that the Operator incurred fees associated with advice provided to the Secretary of State regarding the funded decommissioning programme, itself a component in bringing forward the UK's new nuclear policy.

The review therefore recommends that this policy is to be kept.

4. What were the original assumptions?

The original assumptions are predicated on the objective that prudent provision is made for the full costs of decommissioning nuclear installations and the safe and secure management and disposal of waste.

The Energy Act 2013 is therefore based on the assumption that fees incurred by the Secretary of State in obtaining advice in relation to the consideration of proposed FDPs (and related agreements) are an associated cost of decommissioning.

5. Were there any unintended consequences?

N/A

6. Has the evidence identified any opportunities for reducing the burden on business?

- Broadly the measure is proportionate in relation to the policy objectives.
- Spending is controlled by the contracts between Government, the prospective Operator, and Government's partner organisations (e.g. the Office for Nuclear Regulation).
- Where generic advice which is applicable across projects has been commissioned, delivered and paid for, it may be beneficial for this to be made public where appropriate, taking into consideration commercial sensitivities. This may decrease the burden on future operators as they may, for example, avoid duplicative costs and learn lessons from previous projects.

7. For EU measures, how does the UK's implementation compare with that in other EU member states in terms of costs to business?

N/A

1. What were the policy objectives?

The policy is designed to ensure that the prospective operator of any new nuclear power plant pays for the costs incurred by the Secretary of State in relation to the consideration of the owner's proposed Funded Decommissioning Programme (FDP), including the costs of obtaining advice in relation to it.

The changes were introduced by the insertion of Section 45A of the Energy Act 2008, as well as amendments to sections 46, 49 and 66 of the Energy Act 2008, by section 149 of the Energy Act 2013. They were intended to build upon the overarching policy objective from the Energy Act 2008 whereby prudent provision is secured in relation to the full decommissioning costs of the project.

Section 45A of the Energy Act 2008 places the requirement on the operator to pay the Secretary of State a fee in respect of costs incurred in relation to consideration of the operator's FDP, and in particular the costs of obtaining advice. This PIR is focused specifically on those costs incurred by the Secretary of State in obtaining advice relevant to a funded decommissioning programme.

2. Evidence

This is a low evidence review as only one new nuclear project has been through the process of the Secretary of State obtaining advice on a proposed FDP.

This PIR has been informed primarily by the review of the FDP for Hinkley Point C (which has been completed) and Wylfa Newydd (where work was suspended during the FDP-development phase).

For Hinkley Point C, the prospective operators paid the fee under section 45A(1) of the Energy Act 2008 (as inserted by section 149 of the Energy Act 2013) in respect of costs incurred by the Secretary of State in obtaining advice in relation to the consideration of the proposed FDP, including costs associated with the work of the Nuclear Liabilities Financing Assurance Board (NLFAB) – which advises the Secretary of State on the prudency of an operator's FDP proposal in making provision for funding the costs of decommissioning and waste management. This was paid in accordance with the Nuclear Decommissioning and Waste Handling (Finance and Fees) Regulations 2013 (as amended).

For Wylfa Newydd it was intended that costs would have been borne by the operator through the payment of fees under section 45A(1) of the Energy Act 2008 (in accordance with above regulations). However, the project was suspended prior to substantive work being undertaken.

Overview of advice

For Hinkley Point C, advice was primarily provided by the following (though this list may not be exhaustive):

- The Environment Agency & Office for Nuclear Regulation: statutory consultation
- Nuclear Decommissioning Authority: audit of decommissioning costs

- Nuclear Liabilities Financing Assurance Board: advice on the prudency of a funded decommissioning plan's funding proposals
- Slaughter and May LLP: advice on the structuring of the Funding Arrangements Plan and associated documents
- KPMG: advice on the Funding Arrangements Plan and associated modelling

For the Wylfa project, at the point of project suspension, advice was being provided by:

- Natural Resource Wales & Office for Nuclear Regulation: statutory consultation
- Nuclear Decommissioning Authority: audit of decommissioning costs

This assessment was carried out by BEIS officials who reviewed the available evidence, including a review of payment documentation stored on the Hinkley Point C SharePoint and interaction with the operator, and for the suspended project at Wylfa, discussion with statutory bodies.

This coincides with BEIS guidance on FDP-associated cost:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/48304/4695-fdp-cost-recovery-sch-new-nuclear-ops.pdf

3. To what extent have the policy objectives been achieved?

For Hinkley the policy objectives have been fully achieved in that the Operator paid fees in respect of costs incurred by the Secretary of State in obtaining advice regarding the funded decommissioning programme, itself a component in bringing forward the UK's new nuclear policy.

The review therefore recommends that this policy is to be kept.

4. What were the original assumptions?

The original assumptions are predicated on the objective that prudent provision is made for the full costs of decommissioning nuclear installations and the safe and secure management and disposal of waste.

The Energy Act 2013 is therefore based on the assumption that fees incurred by the Secretary of State in obtaining advice in relation to the consideration of proposed FDPs (and related agreements) are an associated cost of decommissioning.

5. Were there any unintended consequences?

N/A

6. Has the evidence identified any opportunities for reducing the burden on business?

Broadly the measure is proportionate in relation to the policy objectives.

Spending is controlled by the contracts between Government, the prospective Operator, and Government's partner organisations (e.g. the Office for Nuclear Regulation).

Where generic advice which is applicable across projects has been commissioned and delivered, it may be beneficial for this to be made public where appropriate, taking into consideration commercial sensitivities. This may decrease the burden on future operators, avoiding duplication costs.

7. For EU measures, how does the UK's implementation compare with that in other EU member states in terms of costs to business?

N/A

Recommendation

To keep the policy.

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