Subsidy Advice Unit Report on Contracts for Difference (AR7/2025)

Referred by the Department for Energy Security and Net Zero

16 October 2025

Subsidy Advice Unit

Part of the Competition and Markets Authority

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1. The Referral

1.1 On 5 September 2025, the Department for Energy Security and Net Zero (DESNZ) requested a report from the Subsidy Advice Unit (the SAU)[1] in relation to the Contracts for Difference for renewables (CfD) scheme, as at Allocation Round 7 (AR7) (the Scheme) under section 52 of the Subsidy Control Act 2022 (the Act).[2]

1.2 This report evaluates DESNZ's assessment of compliance (the Assessment) of the Scheme with the requirements of Chapters 1 and 2 of Part 2 of the Act.[3] It is based on the information and evidence included in the Assessment.

1.3 This report is provided as non-binding advice to DESNZ. It does not consider whether the Scheme should be implemented, or directly assess whether it complies with the subsidy control requirements.

Summary

1.4 The Assessment uses the four-step structure described in the Statutory Guidance for the United Kingdom Subsidy Control Regime (the Statutory Guidance) and as reflected in the SAU's Guidance on the operation of the subsidy control functions of the Subsidy Advice Unit (the SAU Guidance).

1.5 The SAU published a report on 22 February 2023 evaluating the Department for Business, Energy and Industrial Strategy's assessment of compliance, as at AR5 of the CfD scheme (AR5 Report),[4] and on 21 February 2024 evaluating DESNZ's assessment of compliance, as at AR6 (AR6 Report).

1.6 DESNZ has made some modifications to the CfD scheme in AR7. DESNZ submitted that at least some of these changes do not fall within the categories of permitted modifications. The SAU has therefore undertaken its evaluation of the Assessment as relating to a new scheme.[5] DESNZ has completed its Assessment on the basis of its previous assessments for AR6 and AR5, and has explained how the changes in AR7 impact its assessment against each subsidy control principle.

[1] The SAU is part of the Competition and Markets Authority
[2] Referral of the proposed Contracts for Difference Allocation Round 7 scheme by the Department for Energy Security and Net Zero - GOV.UK
[3] Chapter 1 of Part 2 of the Act requires a public authority to consider the subsidy control principles and energy and environment principles before deciding to give a subsidy. The public authority must not award the subsidy unless it is of the view that it is consistent with those principles. Chapter 2 of Part 2 of the Act prohibits the giving of certain kinds of subsidies and, in relation to certain other categories of subsidy creates a number of requirements with which public authorities must comply.
[4] On 7 February 2023, responsibility for the CfD scheme was transferred to DESNZ.
[5] Under Section 81 (1) of the Act, the modification of a scheme is to be treated for the purpose of the Act as the making of a new scheme for the purposes of the application of the subsidy control requirements (Unless the modification is a permitted modification within the meaning of Section 81 (3) of the Act).

1.7 In our view, DESNZ has considered the compliance of the Scheme with the subsidy control and energy and environment principles. In particular, the Assessment:

(a) consolidates its assessment of the Scheme into a single document, including changes for AR7 and a response to the AR5 Report, improving the clarity of the Assessment;

(b) articulates the policy objectives clearly (Principle A);

(c) explains the change in economic behaviour that the Scheme is expected to bring about (Principle C); and

(d) in relation to minimising distortions (Principle B), identifies various aspects of the Scheme which are relevant to limiting the subsidy to the amount necessary, and limiting the scope for over-compensation.

1.8 However, we have identified the following areas for improvements. The Assessment should:

(a) better use and reference evidence to support some statements, including information that was provided with the AR6 Assessment, such as analysis and forecasts of the trajectory of low carbon electricity with and without the Scheme (relevant for Principles B and C) and evidence of the effectiveness of the previous allocation round auctions in delivering competitive outcomes (Principle B);

(b) provide a fuller discussion of the consideration of alternative policy options, including a contemporary analysis or an explanation as to why the earlier analysis is still relevant (Principle E);

(c) provide more information on the absolute and relative size of the Scheme and subsidies under it, for instance how they compare to the size of the impacted market(s) and to the total estimated level of investment needed to reach the policy objective (Principle B);

(d) identify impacted product and geographic markets, with a more complete evaluation of market characteristics such as market size, market participants and market concentration. It should include a more detailed consideration of effects of the subsidies given under the Scheme on competition or investment, such as impacts on market structure and market concentration, and other low-carbon generators (Principle F); and

(e) building on point (d), provide a more in-depth assessment of the overall scale of the potential negative impact on competition and investment, as well as the potential impact on international trade and investment (Principle G).

1.9 We discuss these areas below, along with other issues, for consideration by DESNZ in finalising its assessment.

The referred scheme

1.10 The CfD scheme has existed since 2014 and aims to encourage low carbon electricity generation. CfDs are long-term (15 or 20 year) contracts between a low carbon electricity generator and the CfD counterparty - the Low Carbon Contracts Company (LCCC). The Scheme is the latest round of the CfD scheme, the seventh allocation round (AR7).[6]

1.11 Under the Scheme, the generator sells its electricity at a variable market price. When the reference price (a proxy of the wholesale electricity price) is below the strike price agreed in the CfD contract, the generator receives a top-up payment from LCCC for the difference (funded by a levy on electricity suppliers).[7] When the reference price is above the strike price, the generator must pay back the difference to LCCC.

1.12 CfD contracts are typically awarded through a competitive allocation round,[8] where companies submit bids in relation to new generation capacity, and the lowest bids are accepted until the overall budget for the allocation round is reached.

1.13 The Scheme is open to application from any eligible renewable electricity generating station being or to be built in in Great Britain. Eligible electricity generating technologies include advanced conversion technologies, anaerobic digestion, dedicated biomass with combined heat and power, energy from waste with combined heat and power, floating offshore wind (FLOW), geothermal, hydro, landfill gas, offshore wind, onshore wind, remote island wind, sewage gas, solar photovoltaic, tidal stream, and wave. These technologies must meet certain size and type requirements to be eligible for the Scheme.

1.14 In each allocation round, DESNZ sets an administrative strike price for each eligible technology, which is the maximum strike price that a project can receive for generating electricity. DESNZ sets these administrative strike prices based on cost information for the technology. For AR7, auction parameters, including the administrative strike prices, were published in July 2025,[9] alongside the pot structure[10] and delivery years.[11] The (actual) strike price for each technology is set

[6] The assessment applies to both of the parallel allocation rounds, Allocation Round 7 and Allocation Round 7a.
[7] However, no top-up is paid while wholesale prices are negative.
[8] There have been six completed allocation rounds (AR1 to AR6) since inception.
[9] Contracts for Difference (CfD): Allocation Round 7 - GOV.UK
[10] The pot structure is the separation of difference eligible technologies into different groups for the competitive allocation. Technologies compete in 'Pot' groupings, each pot has its own auction and clearing price.
[11] The delivery years, for each pot, are the years when a project in that pot can start receiving payments under its CfD contract.

at the level of the final accepted bid in the competitive auction, and must be less than or equal to the administrative strike price for that technology.

1.15 A budget notice specifying the overall budget available for each delivery year applicable to the allocation round, and the administrative strike prices for AR7, will be published ahead of the sealed bid window that will open later in 2025. As an indication, the estimated total subsidy amount for AR6 was £20 billion (rounded up to the nearest £5 billion, September 2024 prices), though the estimated total subsidy amount for AR7 may be significantly lower or higher than these figures.[12]

1.16 A number of changes have been made to the existing Scheme for AR7, following a consultation.

(a) Relaxing eligibility requirements to allow fixed-bottom offshore wind projects to apply for a CfD while awaiting full planning consent. The purpose of this change is to award CfDs at an earlier stage in the development cycle compared to the current model, therefore increasing auction liquidity.

(b) Using new regulatory powers to change the auction information the Secretary of State uses to inform the final budget (partial bid stack visibility). DESNZ intends this change to apply to fixed bottom offshore wind in this allocation round. This change seeks to derisk auction outcomes for this technology.

(c) Increasing the length of new CfD contracts from 15 to 20 years for fixed-bottom offshore wind, FLOW, remote island wind, onshore wind and solar technologies. This change helps rebalance costs between the short term (where major growth in investment is needed) and long term (where the benefits of that investment will continue to be experienced).

(d) Implementing contract and rule changes to allow repowered onshore wind projects to access CfD support.

(e) Implementing contract changes to extend phasing to FLOW. This aims to better support the deployment of larger projects that take longer to deploy.

(f) Increasing the length of the target commissioning window[13] for solar from 3 to 12 months. This aims to support the development of solar at scale through the CfD scheme.

(g) Implementing a temporary restriction on CfD capacity surrendered from previous allocation rounds being entered into AR7.

[12] DESNZ explained that these estimates are highly uncertain as actual payments will depend on market wholesale prices at the time and how much electricity each project generates.
[13] The Target Commissioning Window is the contractual period in a CfD during which the generator can begin fully operating its project while maintaining the full value of its 15-year payment term.

(h) Implementing a change in the pot structure for AR7, with FLOW moving to its own new pot, reflecting the change to introduce an additional allocation round 'AR7a' alongside AR7.[14]

(i) Applying locational clearing prices to offshore wind projects.

1.17 The Assessment sets out that some of the changes were consulted upon.[15] DESNZ provided a range of internal decision-making documents and analysis to support its analysis regarding the rationale for the changes at AR7.

1.18 The Assessment explains that the Scheme is a Subsidy Scheme of Particular Interest. This is because, while the total amount that will be awarded over the applicable period of time is hard to quantify due to the variable nature of payments under the Scheme, a significant portion of subsidies awarded in AR7 are likely to exceed £25 million over the lifetime of the subsidy.

[14] Under AR7, pot 1 (AR7a) will include energy from waste with combined heat and power, hydro, landfill gas, onshore wind, remote island wind, sewage gas and solar photovoltaic. Pot 2 (AR7a) will include advanced conversion technologies, anaerobic digestion, dedicated biomass with combined heat and power, geothermal, tidal stream and wave. Pot 3 (AR7) will include offshore wind and pot 4 (AR7) will include FLOW.
[15] Further reforms to the Contracts for Difference scheme for Allocation Round 7 - GOV.UK

2. The SAU's Evaluation

2.1 This section sets out our evaluation of the Assessment, following the four-step structure used by DESNZ.

Step 1: Identifying the policy objective, ensuring it addresses a market failure or equity concern, and determining whether a subsidy is the right tool to use

2.2 Under Step 1, public authorities should consider compliance of a subsidy with:

(a) Principle A: Subsidies should pursue a specific policy objective in order to remedy an identified market failure or address an equity rationale (such as local or regional disadvantage, social difficulties or distributional concerns); and

(b) Principle E: Subsidies should be an appropriate policy instrument for achieving their specific policy objective and that objective cannot be achieved through other, less distortive, means.[16]

Policy objectives

2.3 The Assessment explains that the objective of the Scheme is to encourage low-carbon electricity generation, whilst having regard to carbon targets and budgets (under the Climate Change Act 2008), ensuring security of supply to consumers of electricity, and the likely cost to consumers of electricity.

2.4 The Assessment sets out that the changes which are being made to the Scheme for AR7 (see paragraph 1.16) are intended to support the policy objective.

2.5 The Assessment explains that the Government has set out its latest ambitions on the deployment of renewables in its Clean Power 2030 Action Plan.[17] The plan sets out the existing installed and contracted capacity for offshore wind, onshore wind and solar, alongside gaps to the DESNZ 'Clean Power Capacity Range' for each technology. It also sets out an objective for offshore wind for the next three allocation rounds, AR7, AR8 and AR9, in order to reach the required capacity to fulfil the UK governments Clean Power 2030 objectives.

2.6 In our view, the Assessment clearly describes and evidences the specific policy objective of the Scheme.

[16] See Statutory Guidance, paragraphs 3.33–3.59 and the SAU Guidance, paragraphs 4.7–4.11 for further detail.
[17] Clean Power 2030 Action Plan - GOV.UK

Market failure

2.7 Market failures arise where market forces alone do not produce an efficient outcome. When this arises, businesses may make investments that are financially rational for themselves, but not socially desirable.[18]

2.8 The Assessment sets out five market failures relevant to the Scheme:

(a) Carbon emission externalities of fossil fuels: by itself, the market would not lower the production of greenhouse gases linked to fossil fuel combustion.

(b) Positive externalities leading to under provision of security of supply: electricity generators cannot monetise or internalise the wider social benefits provided by security of supply, leading to lower than socially optimal levels of security of supply delivered.

(c) Positive externalities leading to under provision of diversity of supply: individual producers will likely not internalise wider benefits of avoiding over-reliance on certain technologies, leading to an under provision of diversity of energy supply. Diversity of electricity supply sources is desirable from a resilience point of view to avoid over-reliance on a particular technology. Greater diversity generally enhances the robustness of an electricity system to fossil fuel supply shocks, and hence yields macroeconomic and security of supply benefits.

(d) Positive externalities leading to insufficient incentives to achieve the learning benefits of deploying first of a kind and immature technologies: such projects cannot internalise the wider learning and innovation effects associated with their deployment, leading to below socially optimal deployment levels.

(e) Financial market failures which restrict funds available to energy infrastructure projects: there is a market failure due to capacity constraints and a resulting funding gap as there is uncertainty and asymmetric information as regards risk between capital providers and low carbon projects.

2.9 The Assessment explains how the design of the Scheme links to each of the market failures that it seeks to address. For instance, it sets out that offering a CfD to new and emerging renewable technologies could open pathways for such technologies to be provided by the market in future.

2.10 It states that in order to address the security of supply market failure, addressing diversity of supply by the market is key, as generators have too low an incentive to provide security of supply from the perspective of the public interest. It explains

[18] Statutory Guidance, paragraphs 3.36–3.51.

that the Scheme increases security of supply by encouraging the deployment of a variety of domestic based renewables.

2.11 In our view, the Assessment appropriately addresses the market failure arguments. Some of the market failure justifications for intervention, particularly the carbon emission externalities of fossil fuel, are well established. The positive externalities in relation to security of supply, diversity of supply and developing immature technologies also correspond clearly to the descriptions of categories of market failure set out in the Statutory Guidance.[19]

2.12 As drafted, the Assessment does not explicitly define security of supply. The Assessment appears to frame security of supply as ensuring sufficient capacity exists in the electricity network, in turn safeguarding against outages and providing reliability. However, this is not explicitly stated in the Assessment. To address this, the Assessment could set out more clearly what aspects of security of supply the Scheme targets. The Assessment could also provide greater clarity by more clearly linking the diversity of supply market failure to the policy objective.

2.13 In relation to the financial market failure (paragraph 2.8(e)), the Assessment could also more clearly explain the capacity constraints and resulting funding gap for low carbon projects it describes, and more clearly link these to the definition of a market failure in the Statutory Guidance.

Appropriateness

2.14 Public authorities must determine whether a subsidy is the most appropriate instrument for achieving the policy objective. As part of this, they should consider other ways of addressing the market failure or equity issue.[20]

2.15 The Assessment describes why the Scheme was considered the most appropriate and least distortive instrument among several policy options. It discusses options from the 2010 Electricity Market Reform impact assessment,[21] and why they were discounted, namely (i) an emissions performance standard (restricting high carbon generation), (ii) carbon price support, and (iii) fixed payments.

2.16 The 2022 Review of Electricity Market Arrangements consultation (2022 REMA consultation) considered a supplier obligation model, in which electricity suppliers would be required to procure low-carbon electricity, and would be subject to a carbon intensity cap. The Assessment states that the supplier obligation model was discounted following responses to the consultation, but no further explanation

[19] Statutory Guidance, paragraphs 3.36–3.51.
[20] Statutory Guidance, paragraphs 3.57–3.59.
[21] Electricity market reform - GOV.UK (www.gov.uk).

is given as to why. In addition, the Assessment explains that, as part of the REMA programme, national pricing will be reformed.

2.17 The Assessment sets out that alternative options to the format of the Scheme were considered internally ahead of AR7, and discounted as they would not have expedited the delivery of Clean Power 2030.

2.18 In our view, the Assessment demonstrates that DESNZ has considered other ways of achieving its policy objective and explains why a subsidy scheme was the most appropriate option. However, as set out in the AR5 and AR6 Reports, we note that the alternatives considered in 2010 at the start of the CfD scheme are presented in broad terms. The Assessment should provide a fuller discussion of the consideration of these alternatives, including a contemporary analysis or an explanation as to why the earlier analysis is still relevant.

Step 2: Ensuring that the subsidy is designed to create the right incentives for the beneficiary and bring about a change

2.19 Under Step 2, public authorities should consider compliance of a subsidy with:

(a) Principle C: Subsidies should be designed to bring about a change of economic behaviour of the beneficiary. That change should be something that would not happen without the subsidy and be conducive to achieving its specific policy objective; and

(b) Principle D: Subsidies should not normally compensate for the costs the beneficiary would have funded in the absence of any subsidy.[22]

Counterfactual

2.20 In assessing the counterfactual, public authorities should consider what would likely happen in the future – over both the long and short term – if no subsidy were awarded (the 'do nothing' scenario).[23]

2.21 The Assessment sets out a counterfactual scenario where in the absence of the Scheme, renewable energy projects would not be deployed at the required scale and pace to support achievement of the Government's net zero emissions target by the year 2050. It explains that without subsidy, the majority of projects are unlikely to be financially viable. This is due to renewable energy projects having higher upfront capital costs than fossil fuel plants, and because wholesale market prices, set by short-term operating costs, may not be sufficient to pay back the upfront capital costs. The Assessment also states that without the Scheme, low

[22] See Statutory Guidance, paragraphs 3.60–3.74 and the SAU Guidance, paragraphs 4.12–4.14 for further detail.
[23] Statutory Guidance, paragraphs 3.63–3.65.

carbon generators would face the risk of volatile prices and so higher financing costs, which discourage investment.

2.22 The Assessment notes that some respondents to the 2021 call for evidence[24] believed that some form of government intervention was required, as almost all respondents felt that there was not a viable route to market for renewable energy projects based primarily on future wholesale market prices. It also refers to modelling done as part of the 2022 REMA consultation, that reiterated the conclusion that the high up-front costs of renewables, combined with expected price volatility, meant that intervention was required to support the scale and pace of deployment needed to decarbonise the power sector. It submits that this is supported by the results of DESNZ's in-house dynamic dispatch model (a fully integrated power market model covering the Great Britain power market over the medium to long term)[25] which suggested the risk factors undermining investment decisions would persist without subsidy.

2.23 In our view, the Assessment identifies good qualitative evidence that, without the Scheme, the financial viability for renewable energy generators is limited. However, as noted in the AR5 and AR6 Reports, the Assessment could set out in more detail what would happen in the absence of the Scheme. We note that DESNZ told us that it is not possible to provide this information based on current modelling approaches and resources, and that it is difficult to envisage and model a scenario without support for renewables. Nonetheless, there is additional information that would improve the Assessment such as the trajectory of low carbon electricity with and without the Scheme (as provided with the AR6 Assessment, see paragraph 2.40(a)). There is also some useful information in DESNZ's Clean Power 2030 Action Plan that sets out targets for each type of renewable energy.

Changes in economic behaviour of the beneficiary and additionality

2.24 Subsidies must bring about something that would not have occurred without the subsidy.[26] They should not be used to finance a project or activity that the beneficiary would have undertaken in a similar form, manner, and timeframe without the subsidy ('additionality').[27] For schemes, this means that public authorities should, where possible and reasonable, ensure the scheme's design can identify in advance and exclude those beneficiaries for which it can be reasonably determined would likely proceed without subsidy.[28]

[24] Enabling a High Renewable, Net Zero Electricity System: Call for Evidence - government response (publishing.service.gov.uk)
[25] See DECC report (publishing.service.gov.uk)
[26] Statutory Guidance, paragraph 3.67.
[27] Statutory Guidance, paragraphs 3.66–3.70.
[28] Statutory Guidance, paragraphs 3.71–3.73.

2.25 The Assessment explains how the Scheme brings about a change in economic behaviour by providing an incentive to invest in building low-carbon generation through price stability, and driving beneficiaries to deploy projects that would probably otherwise be unviable in the near term.

2.26 The Assessment includes qualitative evidence in support of this view, including interviews of market participants for the 2018-21 evaluation of the CfD scheme, which set out that the Scheme has encouraged private finance.[29] Further, the 2022 REMA Consultation document states that 'the CfD scheme has helped to dramatically reduce costs by providing investors with stability'.[30]

2.27 It sets out several further modifications in AR7 that seek to change the economic behaviour of beneficiaries, including increasing the CfD contract term from 15 to 20 years for certain technologies (see paragraph 1.16(c)), which is intended to improve investor confidence. DESNZ explained that there is more evidence that a longer CfD contract could reduce strike prices in the longer run for these specific technologies, compared to other technologies.

2.28 The Assessment further explains that amending the CfD eligibility requirements to allow mature unconsented fixed bottom offshore wind projects to apply for CfDs while waiting for full planning consent (see paragraph 1.16(a)), is intended to strengthen competitive tension by enabling a greater number of independent bidders to participate in AR7. The Assessment states this amendment would encourage auction bids to reflect minimum viable prices, accelerate project delivery timelines and the increased competition has the potential to lower subsidy costs.

2.29 The Assessment identifies several design features of the Scheme aimed at ensuring that the subsidy brings about additional benefits from beneficiaries and does not compensate for costs that may have been borne anyway:

(a) CfD payments are not made where a project has commenced generation prior to an application for support.

(b) Contract terms which prevent delay to start dates, intended to ensure that generators enter into their CfD contract in a timely manner after generation commences and do not avoid difference payments when wholesale prices are high (ie do not avoid payments back to the LCCC).

(c) The Scheme does not allow generators to cumulate a CfD subsidy with any other subsidies granted in respect of the same eligible project costs.

[29] BEIS, Evaluation of the Contracts for Difference scheme phase 3 see page 30 of final report
[30] Review of Electricity Market Arrangements, page 24

2.30 In our view, the Assessment sets out how design features of the Scheme help ensure that the Scheme is not subsidising costs that beneficiaries may have otherwise borne. While the Assessment does not present a fully modelled counterfactual and does not seek to quantify any development of renewables capacity that would proceed absent support, the Assessment explains and provides qualitative evidence on how a subsidy would change beneficiaries' economic behaviour and that the Scheme brings about changes that would not have occurred absent the Scheme.

Step 3: Considering the distortive impacts that the subsidy may have and keeping them as low as possible

2.31 Under Step 3, public authorities should consider compliance of a subsidy with:

(a) Principle B: Subsidies should be proportionate to their specific policy objective and limited to what is necessary to achieve it; and

(b) Principle F: Subsidies should be designed to achieve their specific policy objective while minimising any negative effects on competition or investment within the United Kingdom.[31]

Proportionality

2.32 The Assessment states that the Scheme is a 'market-based instrument' which is carefully designed to ensure that subsidy is proportionate. It states that the CfD premium is designed to minimise payments to just what is needed to fulfil the policy objective and minimise impacts on competition between generators, as it preserves generators' exposure to market forces by incentivising them to compete in the wholesale electricity market.

2.33 Subsidy payments are only made when reference prices are below the strike price, and generators must pay back when reference prices rise above the strike price. Payments are not made when wholesale prices are negative. The Assessment states that this is a key protection against overcompensation. It states that the capping of strike prices for each technology (administrative strike prices) helps to maintain value for money.

2.34 The Assessment explains that subsidy awards are made through a transparent and non-discriminatory competitive process which helps maintain value for money. This involves auctions between projects within four different pots for different technologies, and typically the lowest bids being accepted until the maximum

[31] See Statutory Guidance paragraphs 3.75–3.112 and the SAU Guidance, paragraphs 4.15–4.19 for further detail.

budget is reached. The Assessment also explains multiple design elements which prevent cumulation of subsidy for the same projects.

2.35 The Assessment submits that an evaluation of the CfD scheme during 2018-2021 found that, compared to the Renewables Obligation scheme, the CfD scheme is meeting its aim of supporting increased supply of renewable energy, whilst delivering value for money for consumers. The evaluation estimated consumer cost reductions due to CfD auctions in the first three allocation rounds of around £3 billion compared to supporting the same projects under the Renewables Obligation Scheme.[32]

2.36 The Assessment states that the total subsidy amount under AR7 is unknown and is dependent on the overall budget. DESNZ stated that the budget and auction parameters will be set closer to the auction date to ensure the latest project pipeline information is used to help achieve the objectives while driving competition and value for money. Although the AR7 budget is unknown, the Assessment provides the AR6's estimated subsidy as a guide (see paragraph 1.15).[33] In addition, approval from HM Treasury is required for the CfD budget and parameters for each allocation round due to their impact on energy bills.

2.37 The SAU's AR5 and AR6 reports stated DESNZ would benefit from providing a more thorough analysis of alternative subsidy options. In response to this feedback, the Assessment includes some more contemporary evidence in AR7 and supplemented its discussion on internal consideration and discounting of alternatives to CfD.

2.38 The Assessment also outlines changes for AR7 which have implications for costs to consumers and how they are proportionate to the Scheme's policy objectives, and limited to what is necessary:

(a) The Secretary of State will have partial bid stack visibility consisting of anonymised offshore wind bids which would not be successful under the published budget. This may result in additional awards whilst maintaining competitive tension, to avoid under-procuring offshore wind capacity.

(b) CfD contracts for certain technologies will be extended from 15 to 20 years. The Assessment states that increasing the CfD contract term will smooth and balance costs more evenly across generations. An impact assessment

[32] BEIS, Evaluation of the Contracts for Difference scheme, Phase 2 Executive Summary, page 3.
[33] The AR5 Assessment included background on the monetary and capacity budgets for every allocation round to date, as well as the estimated budgetary impact of successful contracts (over the valuation period) for each allocation round.

referenced in the Assessments suggests the net cost implications of this are uncertain.[34]

(c) The target commissioning window for solar projects will be extended to 12 months. The Assessment describes the current risk that late project delivery can erode the period of the contract in which generators receive CfD payments, which in turn can lead to increase strike prices and thus poorer value for money.

(d) A restriction will be placed on surrendered CfD capacity bidding for AR7. The Assessment explains that the measure is designed to avoid overcompensation and increase deployment of new renewables.

(e) There will be different strike prices for offshore wind in Scotland and the rest of Great Britain, to ensure cheaper projects (reflecting an expectation that these may be based on differences in transmission network charges) are not over-compensated.

2.39 In our view, the Assessment identifies various aspects of the Scheme which are relevant to limiting the value of subsidy amounts under the Scheme to the minimum necessary and limiting the scope for overcompensation. In particular, it explains how the Scheme is designed to avoid the accumulation of subsides for the same project and how the payment mechanism avoids overcompensation.

2.40 However, the Assessment should provide more supporting evidence to demonstrate proportionality. For example, the Assessment could include the following additions which were submitted in its AR6 Assessment:

(a) An analysis and forecasts of the trajectory of low carbon electricity with and without the subsidy.[35] This data shows the changing proportion of the UK electricity generation mix provided by renewables over time and illustrating the contribution of CfD to achieving investment in low carbon technology.[36]

(b) Evidence of the effectiveness of the previous allocation round auctions in delivering competitive outcomes.[37] With its AR6 Assessment, DENSZ provided evidence demonstrating competitive auction outcomes of past CfD allocation rounds, suggesting that auction design and parameters chosen generally drive value for money.

[34] The Assessment suggested that the proposal could reduce subsidy costs to consumers by £500m-£800m per year for 16 years but that there is uncertainty around changes to net and long-term subsidy costs due to uncertainty in wholesale market prices. The Assessment presents 2 scenarios: one with a higher net subsidy cost of £1,300-£1900m and another with a net decrease of £900-1300m.
[35] The AR6 assessment included statistics on the changing proportion of the UK electricity generation mix provided by renewables over time, as well as generation from CfD projects awarded in AR1 and AR2 from 2016 to 2022.
[36] AR6 Report, paragraph 3.49.
[37] AR6 Report, paragraph 3.46.

(c) The methodology and supporting evidence used to set the administrative strike prices for each technology. The SAU's AR6 report states this information shows that 'the change is designed to enable greatest participation whilst seeking to retain sufficient levels of competitive tension.'[38]

2.41 Additionally, the Assessment should provide more information on the absolute and relative size of the Scheme and subsidies under it,[39] as set out in the Statutory Guidance.[40] While the value of the subsidies to be provided under the Scheme is not known, previous allocation round value estimates could be illustrative of size, as included in AR6 Assessment, [41] or an estimated range of the Scheme value could be used. These could then be compared against:

(a) an appropriate measure reflective of the impacted market(s) size; and/or

(b) an estimate of the total investment needed to reach the policy objective.[42]

Design of subsidy to minimise negative effects on competition and investment

2.42 The Assessment identifies a number of characteristics of the Scheme's design relevant to minimising the scale of potential negative effects on competition or investment (Principle F), including the following:

(a) The CfD is a market-based instrument which preserves generators' exposure to market forces by incentivising them to compete in the wholesale electricity market.[43]

(b) The Scheme is open to application for any eligible renewable generating station (subject to certain size thresholds).

(c) Payments are a variable premium (including clawback where appropriate) rather than a fixed payment.

(d) The Scheme has built-in performance criteria ('pre-start milestones') to monitor delivery progress.

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[38] AR6 Report, paragraph 3.47 and 1.13.
[39] AR5 Report similarly states that the AR5 assessment contains limited discussion of the size of the scheme and constituent subsidies (paragraph 3.63). We note that DESNZ responded to the SAU's suggestion in the AR5 Report that the assessment could have been improved by including 'edge case' examples, for instance where the subsidy granted under the CfD scheme would be a large proportion of total project costs. The AR6 and AR7 assessments state that it does not hold detailed project costing information which would have allowed it to perform such an analysis.
[40] The Statutory Guidance sets out that public authorities should consider the size of a subsidy in absolute terms as well as relative to the size of the recipient, the costs on the beneficiary, or the value of the market(s) of the affected products or services (Statutory Guidance, 3.91).
[41] The AR6 assessment submission provided informative tables including the final budget agreed for AR5 and estimated budget spend for AR5, as calculated by National Grid.
[42] For example, DESNZ could refer to the Clean Power 2030 Action Plan, that sets out annual investment needs.
[43] We note this relates to generators' incentives to sell electricity on the market on the best possible terms (so that with the CfD payment they reach or exceed the strike price). It also exposes the generator to risk were the generator to experience unplanned outages. Generators are not exposed to full market price signals, due to the variable CfD payments stabilising prices received, until market prices become negative.

2.43 The Assessment also outlines how changes to AR7 are proportionate to the Scheme's policy objectives while minimizing any negative effects on competition and investment:

(a) Eligibility requirements will be relaxed for fixed-bottom offshore wind projects allowing more projects to be eligible to bid.

(b) Repowering onshore wind projects are permitted to bid.[44] The Assessment states that this is to increase competition in the allocation process, and that it would make investment into onshore wind more attractive.

(c) FLOW projects will be moved from pot 2 into their own pot, theoretically reducing competition within pot 2 but that in practice the significant price differences between the relevant technologies would mean that auction parameters would be needed in any event to support the more expensive technologies.

(d) The phasing of FLOW projects will be extended to increase the commercial viability of projects and encourage deployment of FLOW projects. The Assessment states that a longer period for deployment reduces construction risks and therefore financing costs.

2.44 In our view, the Assessment appropriately covers the subsidy characteristics identified in the Statutory Guidance as being potentially relevant to the likelihood of distortive impacts on competition or investment.[45] It explains how various of these elements help to minimise distortions and consumer costs arising from the Scheme. However, while the Assessment notes that Scottish generators will receive a different strike price relative to generators in the rest of Great Britain for offshore wind (see paragraph 2.38(e)), it could explain this aspect of the Scheme's design in further detail.

Assessment of effects on competition or investment

2.45 The Assessment recognises that the CfD scheme, in accordance with its policy objective, provides an advantage for renewable generators that receive it that is not available to other forms of power. Similarly, the Assessment states that the intended shift from fossil fuels to renewable electricity sources in the energy generation mix will impact other electricity generators in the market.

2.46 The Assessment also notes that the auction pot structure can be used to encourage the development of emerging technologies with potential for significant cost reduction and a significant future role. The Assessment further submits that,

[44] Eligibility is restricted to projects which would not have repowered in the absence of the subsidy. The Assessment states that this gives protection to consumers and enables greater value for money.
[45] See Statutory Guidance paragraphs 3.75–3.112.

whilst CfD auctions are designed to allow all eligible renewable technologies to effectively compete, support or protection of some emerging technologies may affect short-term competition between different renewable technologies. However, the Assessment states that this will be subject to the overall balance it aims to achieve between the different objectives of the Scheme.

2.47 The Assessment highlights the possibility that future increased renewable capacity may lead to more volatile wholesale prices and risk of price cannibalisation,[46] which may impact investment incentives. It also identifies that guaranteed support for generators over the term of their contracts could risk incentivising generation when the system does not require it, forcing wholesale prices down.[47]

2.48 The Assessment notes that the REMA consultation is considering some of these impacts of the CfD scheme. The Assessment also outlines that, to the extent that the CfD scheme is now the main support mechanism for renewable electricity generation, and future wholesale price volatility is connected to greater deployment of renewables that respond to the same changes in weather, CfD generation may increase the risk of such market dynamics.

2.49 The Assessment also discusses how various reforms made for AR7 may impact competition and investment, where it discusses that:

(a) increasing the contract length in AR7 for one technology may offer a competitive advantage over other technologies in the same pot;

(b) there are potential implications of the changes to pot structure but these are very unlikely to have any negative effects on competition or investment;

(c) a benefit of changing the FLOW phasing may be increased investment in the nascent FLOW sector; and

(d) allowing repowering onshore wind projects in AR7 could lead to the displacement of financing and investment into the onshore wind sector but this would not unfairly advantage onshore wind due to the lack of viable projects seeking to repower from other technologies.

2.50 The Assessment outlines that renewable electricity generators generally compete on the wholesale energy market with generators of electricity from other low-carbon sources and fossil fuels.[48] The Assessment states that the CfD scheme is

[46] Price cannibalisation is described in the Assessment as the scenario where high levels of correlated renewables generation can result in over-supply, depressing the market price.
[47] Note that CfD payments are not made when electricity prices are negative.
[48] In its AR5 and AR6 reports, the SAU stated that the assessments would be improved with some additional information on market characteristics, consideration of effects on competition or investment. In this Assessment, DESNZ explained it cannot provide some of this information.

kept under review and will continue to be subject to review as part of the ongoing REMA consultation.

2.51 In our view, the Assessment provides some analysis of market characteristics and of potential impacts on competition in Great Britain. For example, there is recognition of the relevant product market and that the transition from fossil fuels to renewable fuels in the electricity generation mix has an impact on other generators active in the market. We also note the acknowledgement of competition impacts between different renewable technologies due to design.

2.52 However, notwithstanding the explanation about lack of new evidence, we consider that the Assessment should provide a more systematic evaluation of market characteristics, and effects on competition and investment.

2.53 Specifically, it should identify impacted product and geographic markets(s),[49] with a more complete evaluation of market characteristics such as market size, market participants and market concentration. The Assessment should include a more detailed consideration of effects of the subsidies given under the Scheme on competition and investment, such as impacts on market structure and market concentration, and other low-carbon generators.[50] For example, such an analysis could include:

(a) whether the companies which tend to win are the same companies each year, a consideration of the number of bidders for each pot, and how the number of distinct enterprises which bid changes over time; and

(b) the degree to which the Subsidy payments enable these companies to establish or exercise any market power in the impacted market(s). This consideration is relevant to assess the risk that the Scheme is establishing limited number of generators and to monitor current and prospective levels of competitive tension over time.

Step 4: Carrying out the balancing exercise

2.54 Under step 4 (principle G), public authorities should establish that the benefits of the subsidy (in relation to the specific policy objective) outweigh its negative effects, in particular negative effects on competition or investment within the United Kingdom and on international trade or investment.[51]

[49] Statutory Guidance paragraph 3.77, and Annex 3 paragraph 17.30.
[50] In the SAU's AR5 and AR6 reports we stated that providing 'edge case' examples would improve the evaluation of the impact of the Scheme on competition. We noted DESNZ's constraints in providing this information. In our AR6 Report we stated that DESNZ could have alternatively considered looking at the largest potential beneficiary in terms of supported generating capacity and estimated its potential impacts on competitors and market structure. This information was not provided in AR7.
[51] See Statutory Guidance, paragraphs 3.113–3.121 and the SAU Guidance, paragraphs 4.20–4.22 for further detail.

2.55 The Assessment sets out the benefits of the Scheme in supporting the building and operation of renewable electricity generation as follows:

(a) CfDs provide greater long-term predictability of revenue to developers by reducing the exposure to volatile wholesale prices, thereby reducing the cost of capital and thus the level of support required.

(b) CfDs contribute towards renewable energy targets. It was estimated in the evaluation of Phase 1 of the CfD scheme that by 2025 the auctioned CfD generation in AR1 and AR2 will account for 6% of all electricity generation in Great Britain.

(c) Reduced financing costs. The Assessment refers to the results of the 2014 impact assessment estimating the net present value of benefits resulting from reduced financing costs. This included savings in generation costs, capital costs, system costs, and unserved energy and interconnector energy. The 2018-21 evaluation of the Scheme supports this, and indicates this results in an overall cost reduction from consumers. For the first three allocation rounds, costs saved by consumers were estimated at approximately £3 billion as compared to projects under the Renewables Obligation.

2.56 The Assessment notes the following potential negative effects:

(a) Potential unintended consequences, such as crowding out private investment. It concludes that the potential adverse consequences are likely to be minor, for example in relation to CfD contracts isolating generators from market price signals and incentivising generation when the system does not require it. Mitigations have also been integrated where possible into the Scheme's design.

(b) Potential distortions on competition because the Scheme provides an advantage for renewable generators that is not available to other forms of power. Aspects of the Scheme's design are intended to reduce adverse consequences.

(c) A distributional impact arising from the funding of the Scheme through a levy on consumer electricity bills based on consumption. As a result, poorer households will spend a larger proportion of their disposable income on the subsidy. However, the Assessment notes that renewables deployment overall decreases the wholesale electricity price.

(d) Institutional costs consisting of National Grid delivering its functions and those associated with setting up the counterparty body. There are also administrative costs associated with the running of the Scheme.

2.57 In terms of changes in AR7, the Assessment states that there is the potential for:

(a) lower costs for consumers, delivered by increasing the CfD contract term to 20 years for certain projects (see paragraph 1.16(c)), thereby balancing costs more evenly over a longer period of time and reducing risk levels. The Assessment states that this will exert a downward pressure on strike prices and decrease energy costs by approximately £1-2/MWh. However, DESNZ acknowledges that there are risks associated with the extended term such as long-term subsidy cost increases (post-2045) due to the uncertainty of future wholesale prices, and increasing potential competitive distortions (see paragraphs 2.38(b) and 2.49(a));

(b) greenhouse gas emissions savings, estimated at between £400 million and £700 million over the lifetime of individual repowered onshore windfarms based on an estimated pipeline of 500MW to 1000MW of repowered onshore wind entering AR7, if the budget is increased (as set out in the impact assessment published in August 2024);[52] and

(c) reduced construction risks and therefore financing costs for FLOW projects (see paragraph 2.49(c)).

2.58 The Assessment explains that as the location of a project within Great Britain is not considered during the allocation process, DESNZ believes that it is unlikely that geographical impacts will occur, but notes that separate clearing prices are applied to offshore wind projects in Scotland as opposed to England and Wales (see paragraph 2.38(e)).

2.59 It goes on to explain that as comparable support schemes exist in other countries, there is unlikely to be an effect on international trade and investment. However, the Assessment anticipates that reforms in AR7, including extended contract lengths for certain projects (see paragraph 1.16(c)), will provide more certainty and increase investor confidence, consequently raising levels of international investment.

2.60 The Assessment outlines the updated design features of the scheme for AR7 and how this will allow for more effective and efficient processes during allocation.

2.61 In terms of balancing the positive and negative effects, the Assessment mainly refers to calculations made in impact assessments made at the start of the CfD scheme.

2.62 On balance, the Assessment concludes that the benefits of the Scheme outweigh the negative effects. The Assessment refers back to the Scheme's contribution to decarbonisation targets, and reduced consumer cost through the encouragement of the deployment of low-carbon electricity generation. It considers that this

[52] See Proposed amendments to Contracts for Difference for Allocation Round 7 and future rounds - GOV.UK

outweighs any negative effects of the scheme. It further explains that design features of the scheme will mitigate some negative impacts on consumers.

2.63 In our view, the Assessment should provide a more in-depth assessment of the overall scale of the potential negative impact on competition and investment, as well as the potential impact on international trade and investment. We note that issues identified in paragraphs 2.52 to 2.53 may also impact the identification of negative effects, and thus the balancing exercise.

2.64 In addition, while the Assessment briefly sets out the positive effects of the scheme in relation to the policy objective of encouraging low carbon electricity generation, and other benefits in terms of reduced cost of financing, it could provide additional data to support its analysis. For example, it could include data, that was provided with the AR6 assessment, from the LCCC on the avoided cost of emissions from the first two allocation rounds.

2.65 The Assessment could also provide an assessment of the overall scale of the anticipated effects on the achievement of other policy objectives, such as security of supply. DESNZ has provided evidence from 2020 of the expected capacity as a result of the first three allocation rounds, and the Assessment could engage with this evidence to do so. It could also update evidence to consider more recent allocation rounds.

Energy and Environment Principles

2.66 This section sets out our evaluation of the Assessment against the energy and environment principles.[53]

2.67 DESNZ has conducted an assessment of the Scheme against Principles A, B, C and E. We have not identified any other principle that should have been addressed as part of the assessment.

Principle A: Aim of subsidies in relation to energy and environment

2.68 Subsidies in relation to energy or the environment should be aimed at (1) delivering a secure, affordable and sustainable energy system and a well-functioning and competitive energy market, or (2) increasing the level of environmental protection compared to the level that would be achieved in the absence of the subsidy. If a subsidy is in relation to both energy and environment, it should meet both limbs.[54]

[53] See Schedule 2 to the Act, and Statutory Guidance, Chapter 4.
[54] Statutory Guidance, paragraphs 4.19–4.28.

2.69 The Assessment sets out that the objectives of delivering a secure, affordable and sustainable energy system (per the energy limb of Principle A) are aligned to the core objectives of the CfD scheme, as set out in legislation (the Energy Act 2013). The Assessment briefly sets out how the CfD auction mechanism aims to achieve the objectives of ensuring value for money for consumers through use of a competitive bidding process and capped payments.

2.70 The Assessment explains that the environmental limb of Principle A (increasing the level of environmental protection compared to the level that would be achieved in the absence of the subsidy) is relevant in that encouraging low carbon electricity generation (and so reducing greenhouse gas emissions) is a principal objective, and sets out how the Scheme addresses this.

2.71 The Assessment states that the core elements of the CfD remain unchanged for AR7. It also sets out that in detail how the changes which are being made to the CfD scheme for AR7 are aimed at and incentivise the energy and environmental objectives in Principle A.

2.72 In our view, the Assessment explains by reference to the wording of Principle A of the Energy and Environment Principles how the Scheme complies with that principle. The Assessment could consider in more detail how the Scheme is aimed at the security of the energy system (see paragraph 2.12).

Principle B: Beneficiary's liabilities as a polluter

2.73 Subsidies in relation to energy or the environment should not relieve the beneficiary from liabilities arising from its responsibilities as a polluter under the law of England and Wales, Scotland, or Northern Ireland.[55]

2.74 The Assessment confirms that no such relief is available through the Scheme. It explained that the Scheme supports UK efforts to reduce greenhouse gas emissions from electricity generation and that it does not relieve beneficiaries of any liability arising from their responsibilities in law as polluters. Rather, the Scheme incentivises reduction of emissions. DESNZ added that CfD contracts include requirements on generators to comply with all applicable law. The Assessment stated that none of the AR7 changes affect this general assessment.

2.75 In our view, the Assessment clearly sets out why Principle B is met.

[55] Statutory Guidance, paragraphs 4.29–4.34.

Principle C: Subsidies for electricity generation adequacy, renewable energy, or cogeneration

2.76 Subsidies or schemes for electricity generation adequacy, renewable energy, or cogeneration should not undermine the UK's ability to ensure that wholesale electricity and natural gas prices reflect actual supply and demand, and that the wholesale electricity and natural gas market rules will, in general terms, be transparent, encourage free price formation, and operate in an efficient and secure manner.[56] They should also not unnecessarily affect the efficient use of electricity interconnectors between the UK and the European Union. Finally, they should be determined by means of a transparent, non-discriminatory and effective competitive process, or, alternatively, an explanation should be provided for why a non-competitive process was used.[57]

2.77 On the requirements related to Article 304 of the TCA, the Assessment sets out that the Scheme supports integration of electricity from renewable energy sources and that beneficiaries are subject to balancing responsibilities in the wholesale market. It explains that no payment is made when electricity wholesale prices are negative, which incentivises beneficiaries to adapt to the needs of the wider electricity system.

2.78 On the requirements related to Article 311 of the TCA, the Assessment sets out that no aspect of the Scheme could be seen to unnecessarily affect the efficient use of electricity interconnectors. Finally, it reiterates that the subsidies are awarded through a transparent, non-discriminatory and effective bidding process.

2.79 The Assessment states that the core approach will remain unchanged for AR7. The Assessment sets out in detail how the changes which are being made to the Scheme for AR7 ensure a transparent, non-discriminatory and effective competitive process.

2.80 In our view, the Assessment provides a reasonable explanation as to how the Scheme meets Principle C. Since the Scheme is to be assessed as a whole, the Assessment could combine comments on how the AR7 changes ensure a transparent, non-discriminatory and effective competitive process into a more general statement of how the Scheme ensures such a process.

[56] Article 304 of the Trade and Cooperation Agreement between the United Kingdom of Great Britain and Northern Ireland, of the one part, and the European Union and the European Atomic Energy Community, of the other part (TCA)
[57] Statutory Guidance, paragraphs 4.36–4.44.

Principle E: Subsidies for renewable energy or cogeneration

2.81 Subsidies for renewable energy or cogeneration should not affect beneficiaries' obligations or opportunities to participate in electricity markets.[58]

2.82 The Assessment confirms that CfD beneficiaries are strongly incentivised by the terms of CfD contracts to participate in the electricity market to receive the best market revenues they can achieve, as CfD payments are the difference payment between their stipulated strike price and the reference price.

2.83 In our view, the Assessment provides a reasonable explanation as to how the Scheme meets Principle E.

Other Requirements of the Act

2.84 DESNZ confirmed that no other requirements or prohibitions set out in Chapter 2 of Part 2 of the Act apply to the Scheme.

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[58] Statutory Guidance, paragraphs 4.48–4.51.