Contracts for Difference Explainer

Routes to Market Series

- **Part 1—Contracts for Differences explainer**
- **Part 2—Contracts for Differences Allocation Round 4 update**

ITPEnergised (ITPE) has undertaken a review of Contracts for Differences (CfD) in this paper – part one; and the upcoming Allocation Round 4 (AR4) consultation and proposed changes, which will be in part two, to follow.

This 2-part series is targeted at funds, utilities, developers, policy makers and network companies who would like to:

- **Understand the CfD mechanism at a high level;**
- **Understand some of the historic pricing achieved; and**
- **Understand what CfD AR 4 may hold.**

Introduction

In the context of net zero by 2050, and a green Covid recovery, CfD AR4 is good news. The AR4 capacity aims to support up to double the capacity achieved in AR3 which was just over 5GW. Onshore renewables are back in the mix for the first time since 2014 and offshore wind has its own pot 3.

So, what are the proposed changes that have now been confirmed by Government[1] after its 2020 consultation?

Register of community benefits

There will be a new register of renewable projects for onshore wind in England and their associated community benefits with respondents largely in favour of these proposals. This includes some community benefits that are non -financial in nature including: jobs, skills and training schemes; to shared ownership and local equity; through to other benefits that come with installed infrastructure, such as faster broadband or the installation of electric vehicle charging points

A separate pot for offshore wind

The Government consulted on whether to keep the existing two pot structure or establish a new and separate pot for offshore wind. The majority of responses supported a separate pot for offshore wind and that it could no longer be considered a less-established technology owing to price reductions in previous rounds.

[1] Contracts for Difference for Low Carbon Electricity Generation Government response to consultation on proposed amendments to the scheme, DBEIS, November 2020, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/937634/cfd-proposed-amendments-scheme-2020-ar4-government-response.pdf

Contracts for Difference

The pot architecture is now:

- Pot 1: Established technologies - onshore wind (>5MW), solar PV (>5MW), energy from waste with CHP, Hydro (>5MW and <50MW), landfill and sewage gas.
- Pot 2: Less-established technologies - floating offshore wind, advanced conversion technologies, anaerobic digestion (>5MW), dedicated biomass with CHP, geothermal, remote island onshore wind, wave and tidal stream.
- Pot 3: Offshore wind.

Auction parameters for AR4, including budget allocations, and the use of capacity caps, will not be set until nearer the opening of the round.

A separate definition for offshore floating wind

As part of Government's announced ambitions in October 2020 to deliver 40GW of offshore wind by 2030 is an ambition to deliver 1GW of floating offshore wind.

Floating wind will be a distinct technology within CfD with its own administrative strike price (ASP) in pot 2, less established technologies. All wind turbine generators (WTGs) will need to be floating in water depths of at least 45m (down from 60m) as this incentivises fixed bottom offshore wind developers to use shallower depths for more affordable projects.

Delivery year extension

The Government will extend the CfD window from 31 March 2030 to 31 March 2035 meeting with overwhelming support, highlighting increasing investor confidence and critical to meeting national net zero objectives. Beyond the ambition to hold rounds every two years, no further decisions have been taken on the potential timing of future rounds. Many responses called for greater long-term visibility and clarity on auction parameters and framework asking for a published schedule for when future allocation rounds are likely to take place, citing the benefits this could offer in securing a sizeable pipeline of renewable projects as well as financing for projects. However, this appears unlikely at this time.

Supply chain plans

The Government will enhance Supply Chain Plans submitted by generating stations over 300MW under CfD applications to include criteria to help align these to its ambitions and wider goals of making the UK a world leader in green energy by creating jobs, encouraging innovation and boosting exports.

Coal to biomass conversions

The Government will exclude coal to biomass conversions from future CfD auctions; a Biomass Strategy will be published in 2022.

Offshore wind decommissioning

The Government has decided not to link CfD to future decommissioning of offshore wind projects to minimise tax-payers having to fund decommissioning in the future. The Offshore Renewable Energy Installations (OREI) decommissioning team will consider whether to take forward any changes and they may propose a link with the CfD scheme for Allocation Round 5.

Contracts for Difference

Administrative strike price calculations

The Government has decided to retain existing calculations for ensuring value for money. One change, however, in a bid to "improve value for money and better align with wider ambitions on decarbonisation, innovation and investment, [the Government] will have the discretion to target different sections of estimated supply curves depending on technology in allocation rounds. This would be a change compared to recent allocation rounds where ASPs were set by targeting the same proportion of the estimated supply curve across technologies."

Technical changes to future allocation rounds

In order to drive simpler auctions and provide better value for money for consumers, CfD bidders would still "bid into individual years within the delivery window as normal, but when a bid breached the monetary budget, instead of a single delivery year closing, the whole auction would close. At that point, a single clearing price would apply across the delivery window (subject to ASPs), in contrast to previous allocation rounds where different clearing prices could be set in each delivery year."

The Government also indicates that "it is possible that administrative strike prices will be set at a single price per technology across delivery years (the Government will set out ASPs in the budget notice). The Government expects that the proposal would lower maximum strike prices and overall budget impact."

The Government also intends to "implement the proposal to amend the CfD Allocation Regulations to provide the flexibility to decide, on a round by round basis, if it should apply a hard constraint (as in previous allocation rounds) or soft constraint for each capacity cap, maximum or minimum, subject to certain conditions being met."

Energy storage

There will be no changes with respect to energy storage and the upcoming AR4, but Government will continue to work with stakeholders on identified barriers to the colocation of storage to CfD generating units that respondents have identified for potential changes to future allocation rounds.

The Government supports storage to deliver flexibility reducing network management costs and allowing the integration of renewables. Respondents indicated lithium ion storage as the most likely in the short term alongside solar PV and onshore wind projects. Longer duration storage may help mitigate price cannibalisation issues. Green hydrogen production from electrolysis is cited for its potential for longer duration seasonal energy storage and a means to decarbonise heat and industry.

Respondents indicate existing projects are exploring how to retrofit battery energy storage "and many planning applications for solar or onshore wind now include the option for battery storage to be installed. Some responses noted that the CfD contract prevents developers from making significant changes to the sites post operation, including retrofitting, or expanding existing, storage assets. It was argued that sharing grid connections or offering complimentary services could reduce costs to consumers and including suitable provisions in the CfD contract could encourage investment in storage by providing assurance that the CfD unit would continue to be eligible for CfD payments provided the generator continues to comply fully complying with its obligations."

Please refer to ITPEnergised thought leadership series on hybrid renewables **here**.

Contracts for Difference

No top-up payments when there is negative pricing

There will be no top-up payments when the day ahead intermittent Market Reference Price is negative. This is designed to put pressure to reduce negative pricing and encourage developers to find alternative uses for excess power such as contracting with storage or other uses away from grid.

Conclusions

- We expect competition in AR4 to be fierce for onshore renewables given the pent-up development pipelines for onshore wind and solar PV in the UK;
- The Government's statement that Pot 1 technologies will secure CfDs "*at strike prices below the average expected wholesale price for electricity, and so over the course of a contract may pay back as much, or more, than they receive in CfD top-up payments (based on current market forecasts)*" shows that CfD is moving away from a subsidy mechanism to a revenue stabilising mechanism;
- BEIS has slashed its prediction for the cost of offshore wind estimating wind farms in 2025 will have a levelized cost of energy GBP57MW/h. As costs continue to fall and the UK strives for 40GW by 2030, the bidding for AR4 will be extremely competitive;
- Moving Offshore Wind to Pot 3 gives breathing space and opportunities for less developed technologies particularly in offshore renewables. We expect to see competition from a handful of tidal projects in AR4, and competition in later allocation rounds for floating wind to help meet the Government's target of 1GW of floating wind by 2030.; and
- For colocation of storage there is no change for AR4 but Government understands the necessity of flexibility in the system and to enable integration of renewables at a larger scale which may mean changes in future ARs.

We await with anticipation for CfD AR4 but welcome the increased commitment to support up to double the capacity achieved in AR3, a longer delivery schedule to 2035 from 2030; and that low carbon onshore renewables are now back in the mix.