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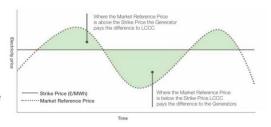


- Developers bid for Contracts for Difference in auction or Allocation Rounds (AR) to receive a guaranteed price for every MWh they generate from their wind farm for 15 years. A price indicator for the auction is set by an Administrative Strike Price (ASP)
- Successful bidders enter into a contract with the Low Carbon Contracts Company (LCCC), a Government company
- Developers are paid a flat (indexed) rate for the electricity they produce: the Strike Price (a price for electricity reflecting the cost of investing in a particular low carbon technology)
- Reference Price (a measure of the average market price for electricity in the GB market).
- If the Reference Price is higher than the Strike Price then the developers pay the LCCC the difference back if lower the LCCC pay a top-up to reach the Strike Price. They can only ever recover the Strike Price agreed under the contract.

What is a CfD?

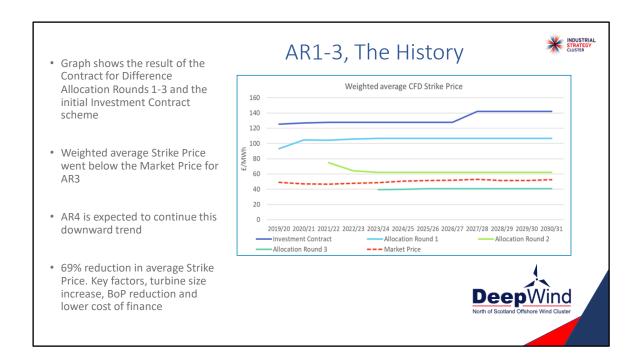


UK Government's main mechanism to support low carbon electricity generation

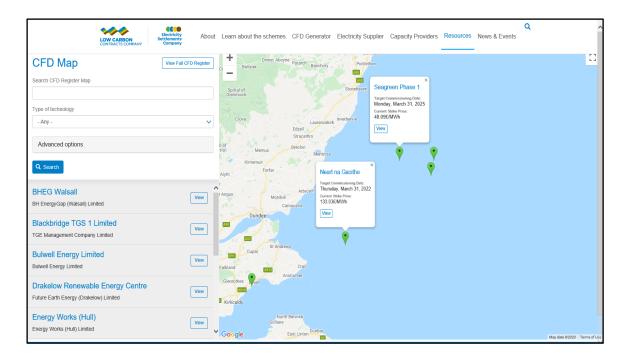




If the Strike Price bid by the developer is lower than the average Reference Price then this will lead to lower electricity prices for everyone in the UK but only at some point in the future were enough new projects are built out to counteract the previous higher CfD bids. The bids are based on 2012 values and are then adjusted for inflation by a Consumer Prices Index (CPI) rate to reflect current values e.g. 1.1313 for AR3



The lower cost of finance consideration will continue to drive developers to underpin risk in their projects with CfD guaranteed prices even though they will be mostly paying back monies under the latest and subsequent rounds. They can now opt to add some additional merchant risk above the 1,500MW CfD cap.



Seagreen CfD bid was £41.61/MWh (2012 pricing) and difference is CPI uplift. £84.94 lower than NNG.

CfD Consultation



Proposed amendments to the Contract for Difference mechanism that DeepWind is minded to support

- Pot 1 Onshore wind and solar projects >5MW
- Pot 2 Floating offshore wind, island wind, wave and tidal
- Pot 3 Fixed Bottom Offshore Wind (FBOW) with only fixed projects in the pot bidding against each other
- Floating Offshore Wind to get its own Administrative Strike Price (ASP)
- CfD Phased Cap of 1500MW to remain in place but allow developers to propose larger projects with an additional part-merchant basis e.g. 2GW project with 1,500MW covered by CfD and 500MW on a merchant contract basis.

The Government considered raising the Phased project cap to 2,500MW but felt that it would lead to fewer projects winning contracts before an auction cap is breached. Such projects could apply for a CfD for the whole capacity without Phasing or splitting it into separate CFD applications – 9 applications at Dogger Bank for 3.6GW



Floating Wind Definition?

A floating offshore wind CfD Unit means a CfD Unit which generates electricity by the use of wind and which —

- (a) is situated (or is to be situated) in offshore waters exceeding 60 meters depth, and
- (b) is a floating structure.

It may be electrically connected to an offshore substation irrespective of whether floating or not.

To qualify for support as a floating offshore wind CfD unit, all the turbines which form part of the eligible generating station would need to meet the definition of a floating offshore wind CfD Unit.

We need to ensure that all floating wind technologies are covered in this definition such as TLP and there is a question about water depth – should it be less than 60m

AR4 Proposed changes Supply Chain impact? 1) Reintroduction of Pot 1 for New opportunities in onshore wind in Scotland as we onshore wind and solar, energy have 60% of the UK's onshore wind pipeline. 4GW from waste with CHP, hydro awaiting construction and 3.8GW in planning - civils, (>5MW and less than 50MW), construction, towers, O&M, transport and ports. landfill gas and sewage gas Downside might be it eats into the capacity available for offshore wind projects - offshore wind CfD project capacity cap needs to be increased + encourage more merchant elements in project. Keep pace with economies of scale 2) Pot 2 has floating offshore wind, Increases the chances for successful floating wind island wind, geothermal, tidal, and island wind projects coming forward as it wave and other advanced removes the need to compete directly with bottom technologies fixed offshore wind – supply chain requires earlier projects of scale in floating wind to come forward from AR4 and later rounds (AR5/AR6 in 2023/25 for ScotWind) in order to invest for cost reduction. More flexibility required in meeting criteria for CfDs i.e. on planning, grid requirements, deploy and monitor options. Oil and gas market failure will not be assisted by floating wind projects in 7 years time

Economies of scale – larger turbines leading to lower over all BoP opportunities – fewer substructures, towers, cables, etc leading to smaller contract values all round making it harder to achieve RoI. If no increase in the size of individual projects this trend will continue.

Contracts for Difference Allocation Round 3 Results - Published by BEIS on 20 September 2019, Revised on 11 October 2019

(A) Information on the successful applicants - strike prices are in 2012 prices.

Project Name	Developer	Technology Type	Capacity (MW)	Strike Price (£/MWh)	Delivery Year	Homes Powered	Region
Bulwell Energy Limited	Bulwell Energy Limited	Advanced Conversion Technologies	27.50	39.650	2023/24	50,980	England
Small Heath Bio Power Limited	Small Heath Bio Power Limited	Advanced Conversion Technologies	6.10	41.611	2024/25	11,310	England
Costa Head Wind Farm	Costa Head Wind Farm Limited	Remote Island Wind	16.32	39.650	2023/24	15,750	Scotland
Druim Leathann Windfarm Limited	Druim Leathann Windfarm Limited	Remote Island Wind	49.50	41.611	2024/25	47,760	Scotland
Hesta Head Wind Farm	Hesta Head Wind Farm Limited	Remote Island Wind	20.40	39.650	2023/24	19,680	Scotland
Muaitheabhal Wind Farm	Uisenis Power Limited	Remote Island Wind	189.00	39.650	2023/24	182,340	Scotland
Doggerbank Creyke Beck A P1	DoggerbankOffshoreWindFarm Project1ProjcoLimited	Offshore Wind	1200.00	39.650	2023/241	1,505,330	England
Doggerbank Creyke Beck B P1	DoggerbankOffshoreWindFarm Project2ProjcoLimited	Offshore Wind	1200.00	41.611	2024/251	1,505,330	England
Doggerbank Teeside A P1	DoggerbankOffshoreWindFarm Project3ProjcoLimited	Offshore Wind	1200.00	41.611	2024/251	1,505,330	England
Forthwind	Forthwind Limited	Offshore Wind	12.00	39.650	2023/24	15,050	Scotland
Seagreen Phase 1	Seagreen Wind Energy Limited	Offshore Wind	454.00	41.611	2024/251	569,520	Scotland
Sofia Offshore Wind Farm Phase 1	Sofia Offshore Wind Farm Limited	Offshore Wind	1400.00	39.650	2023/241	1,756,220	England

¹ This project will be built in three phases, the delivery year listed is for phase 1

Remote island wind and Advanced Conversion Technologies from AR3 totalled 259MW. Floating offshore wind will dominate Pot 2 in the same way that bottom fixed offshore wind has been the dominant technology in the CfD process. 84% so far.

AR4 Proposed changes	Supply Chain impact?	INDUSTRI
3) Introduce Pot 3 for fixed offshore wind	Bottom fixed offshore wind moved into a separate pot where they will then only compete with each other rather than against other technologies. Will enable floating wind projects. Need to increase CfD cap in this Pot – 2,000MW? Plus merchant topups to enable larger single projects. AR cap should not be monetary value based but on capacity to maximise size of projects and number of projects.	
4) New Administrative Strike Price for Floating Offshore Wind	This represents a major market driver for floating offshore wind in the UK and along with the creation of Pot 3 would ensure that we become the leading market for floating wind. Needs to be set at the right value initially to send a strong market signal. Supply chain must have a clearly visible incentive to invest in competitiveness and capacity measures to enable cost reduction. This may have to be high, initially, in comparison to fixed wind e.g. £175/MWh	Deep Wind



AR4 Proposed changes Supply Chain support actions?

5) Floating wind 'additional measures' question

Are there additional measures to support for pre-commercial deployment and cost reduction which would be more effective than the CfD, or which could enhance the effectiveness of the measures under the CfD?

Measures to enable the opportunity for pilot arrays in AR4 to accelerate adoption of floating wind ahead of ScotWind commercial projects?

Early access to ScotWind sites? Separate fast track pilot sites. MS Deploy and Monitor scheme?

CfD Private Wire option that avoids the need for grid connection agreements but PPAs instead e.g. large scale Hydrogen generation instead.
Impact on TNUoS charges?

Energy Transition projects for Oil and Gas offshore platforms and fields (with aggregation) eligible for Private Wire CfD arrangements





- 6) The government welcomes views on strengthening the powers to fail SCPs on the basis that the Applicant has not demonstrated compliance with a past SCP.
- 7) The government welcomes views on whether requiring an updated SCP at a later stage after a CfD is awarded, for example at FID or after MDD, when major contracts would have been awarded would deliver more focused and deliverable commitments.
- 8) The government welcomes views on the current compliance process for SCPs for failure to implement an approved SCP. Is it sufficient and if not, what other potential compliance options could be considered, for example by linking non-compliance to CfD payments?

Supply Chain Plans



I have not attempted to answer these questions as they go to the heart of the supply chain dilemma, can we achieve the required cost reduction and reach 60% content by 2030. The developers historic contention is that you cannot do both and only by utilising a global supply chain can the cost reduction be achieved. The role of DeepWind and the other clusters is to lay the groundwork to challenge that perception and to prove it wrong, with the support of those same developers. We all want the same outcome and that is what the Sector Deal is all about. Our intention is to make a DeepWind submission to the CfD Consultation and to poll the membership on these questions to try and obtain a consensus across our 300 members. I suspect this will be difficult but it will be a worthwhile exercise to gauge the mood of the supply chain.

Summary



Proposed changes to Pot 2 and a new Administrative Strike Price great news for floating offshore wind...... but might need additional measures beyond CfD actions to accelerate the delivery of early pilot array projects. Many of the floating wind supply chain are from the oil and gas sector and require near term opportunities.

Return of onshore wind to Pot 1 and island wind given 'room' in Pot 2 will bring supply chain opportunities for many DeepWind companies just not for many of the offshore players.

Willingness for Government to look again at local content through the Supply Chain Plans is a potential boost for the Scottish supply chain ahead of ScotWind round and Round 4 RoUK. More effect way to incentivise developers and Tier 1s required – tried the stick, time for the carrot?..... or a bigger stick?



