

Insight Paper

WACC-A-MOLE – Implications of the rising cost of capital for the fifth round of the Contracts for Difference scheme

March 2023



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Executive summary

In the aftermath of the global financial crisis of 2008, capital was relatively cheap and accessible, but a paradigm shift is underway, driven by macroeconomic and geopolitical developments and the related energy crisis. Soaring inflation and interest rates, combined with supply chain issues and labour shortages, have pushed up the costs of both debt and equity and driven up the weighted average cost of capital (WACC) for renewable projects (e.g., onshore wind, solar PV) by around 4% compared to early 2021, with this increase unlikely to reverse in the immediate future.

Historically, the strike price for projects under the Contracts for Difference (CfD) subsidy scheme has decreased with each allocation round. These have been driven by increased learning rates and investor confidence due to the stability of the auction design. However, with the increase in the WACC for renewable projects and the accompanying increase in the levelised cost of energy (LCOE), the fifth allocation round (AR5), for which the application window opens in late March 2023, could see the first increase in strike prices. Offsetting the upward pressures on strike prices, there is increased competition from the large pipeline of renewable projects set to come online. Competition could further be influenced by the final design of AR5, in particular what the budgets will be for the different pots, and whether there will be any minimums or maximums used that could limit how the different technologies within a pot compete against each other.

Ahead of AR5, a key area of concern for many developers and investors looking to bid projects into the CfD is the value of the administrative strike price (ASP), the maximum strike price projects can achieve. The ASPs have seen a substantial decrease between AR1 and AR5, with almost all technologies having the same or lower ASP in AR5 compared to AR4, despite the rising WACC pushing up costs. Most parties have highlighted that these ASPs are set too low to allow projects to succeed under the CfD, but the set methodology for calculating ASPs leaves the Government without real room for manoeuvre. Until the final parameters for AR5 are announced and the bidding opens, it is unclear exactly what the full impact of the combination of low ASPs and high WACC will be on projects being able to, or willing to, bid into the CfD.

Alongside the concerns for AR5, the rising WACC has also impacted on the success of projects from previous CFD allocation rounds, which bid in at prices that may no longer be financially viable. Another area of uncertainty, for both projects from previous allocation rounds and AR5, will be whether projects are still able to benefit from the 'merchant nose' and therefore potentially able to competitively underbid on strike price. The 'merchant nose' is still possible before the project delivery year but the Low Carbon Contracts Company (LCCC) will have more powers to enforce a projects CfD start date within the delivery year if possible.

In the context of rising financing costs for renewable generation, which are not reflected by the AR5 ASPs, combined with high wholesale energy prices, merchant routes to market are looking more attractive to investors and developers. However, the impact of the Electricity Generator Levy, a de facto windfall tax, as well as the

uncertainties over future wholesale prices, add additional challenges to merchant routes to market.

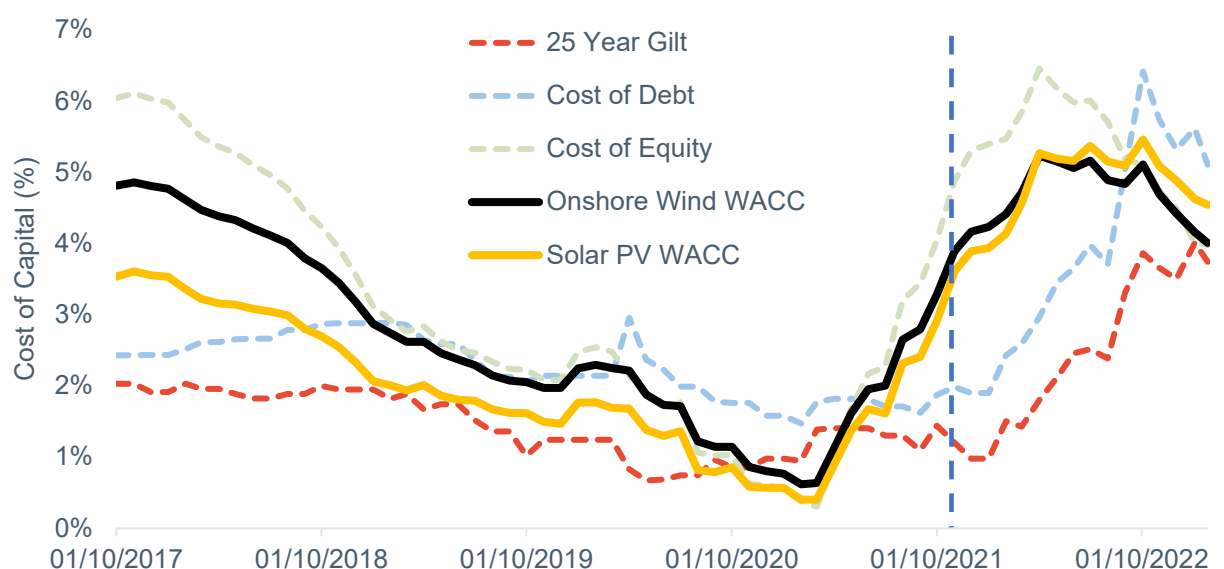
Impacts on Contracts for Difference scheme

Rising central bank rates to battle inflation have generally increased the cost of capital across financing markets, including in energy infrastructure. Increasing weighted average costs of capital (WACC) dampen asset valuations on operational projects, with some marginal impacts on results that we have seen on energy listed yieldcos. The bigger effect though is to place pressure on the amount of debt new projects can raise and thus decrease equity returns on investment in such projects, particularly where forecast future revenues for these projects are stable.

For example, the fact that long-term interest rate swap rates (entered into by projects when they raise senior debt project finance) have nearly tripled in value since last year means that the percentage of project costs that debt can support from future project cashflows (otherwise known as “gearing” or “leverage”) has reduced. This means equity investors are needing to find more of their own money to get projects financed and built.

Meanwhile, whilst inflation has increased revenues, including Contracts for Difference (CfD) revenues, it has also increased capital expenditure and operating expenditure costs, and any net impact on forecast cashflows does not currently offset the negative impact of rising WACC on the project funding structure (Figure 1). This effect is likely to continue until interest rates fall, or unless strike prices increase.

Figure 1: WACC for onshore wind and solar PV projects between 2017 and 2023, with a dashed vertical line marking the application window for Allocation Round 4 of the CfD scheme

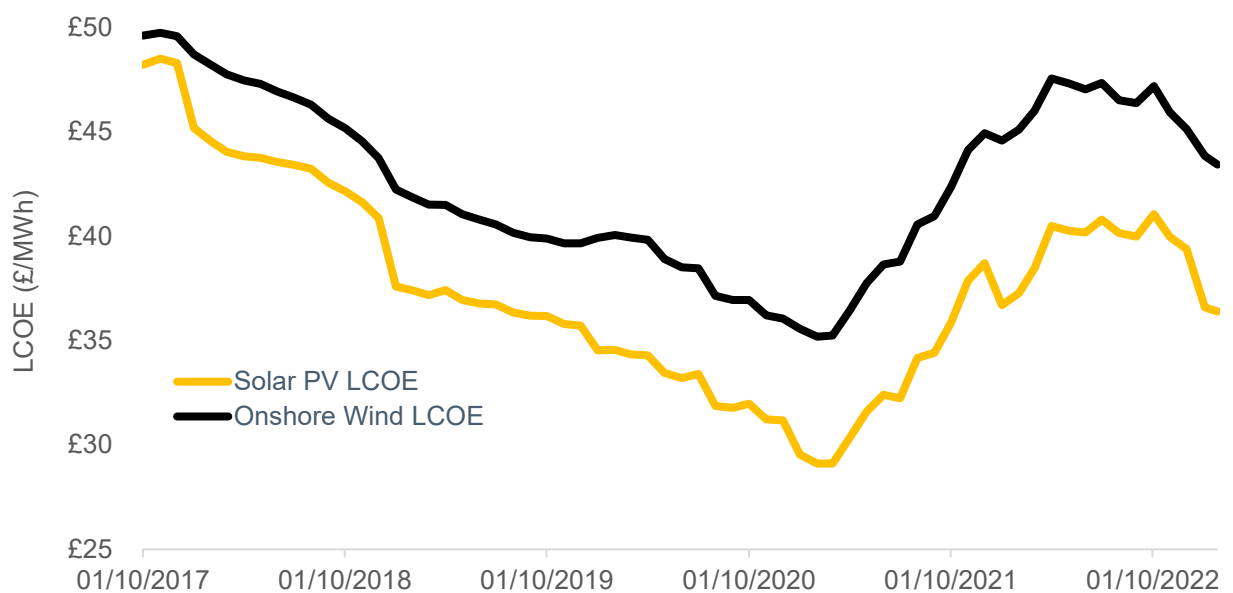


Source: Cornwall Insight

This will certainly make it harder for investors to close deals that allow them to meet the same equity Internal Rate of Return (IRR) hurdle rates that they are used to in the period prior to 2022, or that they were anticipating at the moment they submitted their CfD bids.

Since the first allocation round opened in October 2014, the CfD scheme has helped to significantly lower the levelized cost of energy (LCOE) for many renewable generation types (Figure 2). For instance, during allocation round 4 (AR4) in 2021, offshore wind achieved a strike price nearly 70% lower than in AR1 in 2015 (Figure 3). Similarly, onshore wind achieved a strike price 45% lower in AR4 than in AR1 (Figure 3).

Figure 2: Change in LCOE for onshore wind and solar PV, 2017-2023



Source: Cornwall Insight

Figure 3: Strike prices (£/MWh) and delivery years for different technologies from AR1 to AR4

	AR1	AR2	AR3	AR4
Offshore wind	119.89, 2017-18 114.39, 2018-19	74.75, 2021-22 57.50, 2022-23	39.65, 2023-24 41.61, 2024-25	37.35, 2026-27
Onshore wind	79.23, 2016-17 79.99, 2017-18 82.50, 2018-19	-	-	42.47, 2024-25
Solar PV	50.00, 2015-16 79.23, 2016-17	-	-	45.99, 2023-24 45.99, 2024-25

Source: [GOV.UK](https://gov.uk)

Strike prices and the LCOE for renewables have decreased between allocation rounds as a result of a series of factors, including the benign financial environment and fall in the WACC (Figure 1). Increased interest and development of renewable technologies

over the past decade have resulted in an increase in learning rates – the rate at which a technology’s price drops relative to its sales – helping to lower LCOE and strike prices. Additionally, global economic supply chains and the investor confidence provided by the stability of CfD auction design have both helped lower strike prices between AR1 and AR4.

However, with the AR5 application window due to open in late March 2023, it seems likely that prices may not continue to fall as they have in the past. The rising WACC for renewable projects, compounded by the inflationary pressures imposed by rises in material costs and supply chain issues, mean that there is the potential for prices to rise for the first time since the CfD’s opening, as discussed in our January 2023 blog [*"Are prices going to rise in Contracts for Difference Allocation Round 5?"*](#)¹. Figure 2 shows how the LCOE for both onshore wind and solar PV projects has risen sharply since early 2021 and, despite a decrease in the second half of 2022, remains around £8/MWh higher than the early 2021 values. Alongside the increased WACC, the recent consultation on changes to the AR5 terms and conditions² could also push up strike prices. A key amendment could be the potential reduction of the ‘merchant nose’ depending on the sites’ commissioning process. The ‘merchant nose’ refers to where generators were delaying their CfD start date in order to benefit from high wholesale prices. This will remain possible before the delivery year but the Low Carbon Contracts Company (LCCC) will have more power to enforce a project CfD start date within the delivery year if possible.

Figure 4: Administrative strike prices (£/MWh) and delivery years for different technologies from AR1 to AR5

	AR1	AR2	AR3	AR4	AR5
Offshore wind	155, 2014-15				
	155, 2015-16				44, 2025-26
	150, 2016-17	105, 2021-22	56, 2023-24	46, 2025-26	44, 2026-27
	140, 2017-18	100, 2022-23	53, 2024-25	46, 2026-27	44, 2027-28
	140, 2018-19				
Onshore wind	95, 2014-15				
	95, 2015-16				53, 2025-26
	95, 2016-17	-	-	53, 2023-24	53, 2026-27
	90, 2017-18			53, 2024-25	53, 2027-28
	90, 2018-19				
Solar PV	120, 2014-15				
	120, 2015-16				47, 2025-26
	115, 2016-17	-	-	47, 2023-24	47, 2026-27
	110, 2017-18			47, 2024-25	47, 2027-28
	110, 2018-19				

Source: [GOV.UK](#)

Somewhat offsetting the upward pressures on CfD strike prices for AR5 are the competitive pressures from a large number of renewable projects looking to come

¹ [Cornwall Insight - "Are prices going to rise in Contracts for Difference Allocation Round 5?"](#)

² [GOV.UK](#)

online. Our December 2022 [*Renewables Pipeline Tracker*](#)³ indicates that there is a renewables pipeline (scoping through to under construction) of over 215GW, which could drive down prices through competition. Additionally, the movement of offshore wind into the same pot as solar PV and onshore wind for AR5 could also facilitate greater competition and reduce submitted prices, although until full details of the AR5 parameters are confirmed the competitive tensions cannot be fully predicted.

With all the upwards pressure on strike prices going into AR5, a concern for investors and developers looking to get involved is the value the administrative strike prices (ASPs) are set at. The ASPs represent the maximum strike price that projects can achieve for each technology and have shown a substantial decline between AR1 and AR5, particularly for offshore wind (Figure 4). For almost all technologies the ASPs for AR5 are equal to or lower than for AR4, despite the rising WACC and LCOE. It is therefore likely that these prices will be insufficient for projects to be successful under the CfD. Low AR5 ASPs could therefore act to stifle competition and deter investors and developers from bidding.

The rising WACC and LCOE also have consequences for projects from previous allocation rounds, which bid in under strike prices that may no longer provide sufficient revenue to account for the higher financing and capital costs. This is a particular risk for the projects that were accepted as part of AR4, with many developers indicating that the strike price will not be sufficient to cover the additional capital costs and the Electricity Generator Levy, a 45% tax on generators, further reducing the potential to recoup costs through the 'merchant nose'. This has become an even starker reality in recent weeks as major project developers awarded contracts under AR4 have urged the Government to include targeted support for renewable generators in the upcoming Spring Budget on 15 March. As such, there have been calls for an increase in the current investment allowance regime for renewable generators to help reduce upfront costs and increase investment attractiveness. This would also help to re-establish a level playing field with the oil and gas sector who, in November 2022's Autumn Statement, retained an [*investment allowance rate*](#) of 80% for expenditure on upstream decarbonisation.

Even if AR5 strike prices do remain suppressed, the increasing cost of capital could act as a barrier to the large-scale investment needed in the UK to attain net zero. This is further exacerbated by increasing competition between the US and the EU to attract international capital to finance the net zero transition.

The competition between the US and EU to attract investment in renewables, and what the UK can do to keep pace, will be discussed in upcoming papers and research initiatives by Cornwall Insight.

Cornwall Insight can provide a number of services in relation to AR5, including an overview of the eligibility requirements, breakdown of key contract structures, key bidding considerations as well as forecasts of eligible assets and possible clearing prices. Contact a.asher@cornwall-insight.com for more information.

³ [*Cornwall Insight - Renewables Pipeline Tracker*](#)



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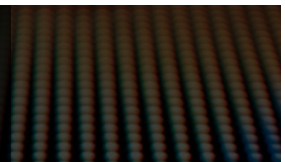
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