

All You Need to Know: The Risk and Reward of Increasing Renewable Energy Capacity in the UK



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With the UK's most recent renewable energy auctions delivering almost 11GW of new capacity at record low prices, Joe Dutton assesses the results and potential risk factors to consider for the renewables sector.

A landmark round of renewable energy auctions this month in the Contract for Difference (CfD) scheme has significantly increased how much renewables capacity will be built in the UK with record-low prices for future renewables production.

The CfD scheme incentivises the development of projects by providing a contract from government that gives a guaranteed price for every MWh of electricity generated for 15 years. The CfD aims to provide certainty to developers and stimulate investment in green energy by reducing exposure to price volatility while also driving cost reductions.

The results will be welcomed by policymakers and the renewable energy industry – plus the majority of the public in favour of renewables – but barriers still remain. Further stimulus for already in-demand technologies will provide significant opportunities for the renewables industry, but it may also mean there are new risks and challenges to overcome.

What are the key takeaways from this announcement?

The fourth round of the biannual CfD scheme was the largest to date, with 11GW of capacity across 93 projects. This is significantly higher than the 6GW in the 2019 auction and 2GW in the scheme's inaugural year in 2015. These new projects will be delivered between 2024 and 2027.

This year's CfD auction delivered three times more projects than the previous rounds combined, as well as record high generation capacity. An exciting step forward this year was the inclusion of the floating offshore wind for the first time, in the Celtic Sea, as well as the welcome return of onshore wind and solar for the first time since 2015, plus the continued inclusion of offshore wind, remote island wind, and energy from waste.

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The average price across all technologies of £48/MWh was the joint lowest, with 2019, while record low prices were secured for offshore wind (£44/MWh), onshore wind (£50/MWh), and solar (£55/MWh). This year was also the first time that the price for offshore wind was lower than onshore wind.

Crucially for the UK's energy transition, these newbuild onshore and offshore wind projects will produce electricity cheaper than gas-fired power stations.

How does the agreement process work?

Under the CfD scheme, generators receive revenue from selling electricity into the wholesale market – but when the average market price for the electricity they generate falls below the pre-agreed 'strike price' set out in the contract, payments are made to them by the government to make up the difference. When prices rise above it, they pay back the difference to the government – and therefore the taxpayer.

Once the strike price has been set, developers with planning permission for a site participate in a reverse auction. If their bid is successful, they have to meet key milestones in the first few years of the contract term, including showing commitment to the project in the first 12 months, and commissioning 80% of the capacity within the target commissioning window.

Record high energy prices this year means successful projects in previous CfD rounds have been paying significant amounts of money back to the government, which has reduced the net costs of the scheme to consumers. This year's projects are also expected to pay back to the government once operational. This drives the financial as well as ethical viability for the transition away from fossil fuels to renewables.

While the CfD auctions have been carried out every two years since the first round in 2015, from 2023 they will be held annually to increase the number of new projects being developed.

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Why is the cost of renewable energy coming down?

The cost of renewable generation has reached a record low for a combination of reasons. Advances in the manufacture, operation, and installation of renewables means larger amounts of electricity can be produced, more cheaply, from the same sized area than in past years. The significant growth in the size of wind turbines in particular has led to a drop in generation costs, while the ability to install offshore windfarms in deeper water further offshore means a higher wind resource and more output. This trend is likely to continue with floating offshore wind.

The competitive nature of the CfD scheme also helps to drive competition among developers, while simultaneously providing long-term security for their investment with the 15-year government-backed contract. This has attracted investment and a growing number of developers into the UK renewable sector, which also helps drive innovation and lower costs.

What does this mean from an insurance perspective?

Increasing climate ambition, steeper emissions reductions targets, and wider electrification have made renewables one of the fastest growing industries, with renewables capacity connected to the UK grid growing by 500% between 2009 and 2021.

The reduction in generation costs for renewables is likely to increase demand, especially from larger commercial and industrial consumers. This will drive further development of renewables. But with this rapid growth comes risk that needs to be properly understood and accounted for.

Nor is the renewables sector immune to the global issues associated with supply chain disruption and inflation that are facing all industries. Rising costs for raw materials and components, shortages of skilled labour, and delays in manufacturing all threaten renewables expansion. Wind turbine manufacturers in particular are struggling as supply chain pressure and 'race to the bottom' on price is squeezing their profitability.

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With a potential surge in demand in the UK, the government and the wider renewables sector will need to understand whether manufacturing needs to be increased locally to meet this demand or whether steps can be taken to strengthen the reliability of global supply chains.

The significant downward pressure on price facing manufacturers means there is a risk that financial savings will be sought elsewhere, including on installation, operations, and maintenance. It is therefore crucial that robust risk management practices are maintained to ensure the safety and longevity of projects and to ensure insurance terms and conditions are met.

What is the long-term significance of this announcement?

The UK has some way to go to reach its climate goals, but this year's CfD results are a significant step in the right direction because they demonstrate how the large amounts of renewable electricity needed to electrify and decarbonise the economy can be produced cheaper than ever before.

During the early years of renewable deployment in the UK there were concerns from some about the ability to reduce costs and scale-up capacity. These auction results are significant in showing those doubts were unfounded, and that renewables are the key to decarbonisation and delivering UK energy and climate targets, such as:

- 50GW of installed offshore wind capacity by 2030, including 5GW of floating wind
- 70GW of solar by 2035 (both ground and rooftop)
- A net zero electricity grid by 2035
- Net zero greenhouse gas emissions across the whole economy by 2050

Where can I find out more information?

BEIS press release: <https://www.gov.uk/government/news/biggest-renewables-auction-accelerates-move-away-from-fossil-fuels>

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Full results and data:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1088875/contracts-for-difference-allocation-round-4-results.pdf

The response of renewable UK: <https://www.renewableuk.com/news/610619/Biggest-ever-auction-secures-record-amount-of-low-cost-renewable-energy-capacity-.htm>

UK power system decarbonisation: <https://www.gov.uk/government/news/plans-unveiled-to-decarbonise-uk-power-system-by-2035>

Article published by AXIS on how renewable energy insurance is responding to an inflationary environment (Feb 2022): [Supply Chain - AXIS \(axiscapital.com\)](#)

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