

Fereidoon Sioshansi

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The offshore wind potential is too big to be written off

Despite its enormous potential some concerns have recently emerged over the soaring cost of building new offshore wind energy projects. As widely reported in the press, some developers are having second thoughts on proceeding with contracts already signed because rising costs have rendered some projects unprofitable. At the same time, some governments are trying to shield themselves from high-cost offshore wind projects by placing maximum prices they are willing to pay for future offshore wind auctions. The latest UK renewable energy auction, for example, reportedly forced some developers to stay on the sideline.

As reported in the *Financial Times*, the UK Government set a maximum price of £44/MWh (\$55/MWh) for its latest tender for renewable energy generation contracts, for which developers were required to submit sealed bids in the first half of August 2023.

Massive offshore wind platforms need equally massive cranes



At that price, most offshore wind developers will sit out of the bidding. The developers are urging the government to lift that price if they want projects to proceed. This is happening as at least one previous auction winner has cancelled their project because it would no longer be able to build it at that price. This has led to speculation about the near-term prospects of the entire sector.

According to *The Guardian*, only a few offshore projects submitted bids in the latest round. This is a major concern for the UK which like so many other countries are struggling to wean itself off fossil fuels in electricity generation. For the UK, offshore wind is the preferred alternative, which explains the target of 50GW by 2030. That would require building 36GW of new offshore wind in the next 7 years.

The problem of escalating costs, of course, is not limited to the UK but also felt elsewhere in Europe and in the US where the biggest offshore wind developer, Ørsted, is considering withdrawing from projects. The shared sentiment, acknowledged by the Global Wind Energy Council, is that until the current problems are resolved, offshore wind will remain rather expensive.

Likewise, Bloomberg's latest assessment confirms that the rising costs, supply chain issues, permitting and grid connection obstacles have combined to result in higher costs and low returns for developers and

manufacturers. BloombergNEF estimates that the levelised cost of electricity (LCOE) of a typical US offshore wind project has increased to \$114 per MWh in 2023, nearly 50% up from 2021 levels even after considering the prevailing subsidies. According to the BNEF:

- “Developers want to renegotiate their previously agreed offtake deals which are no longer profitable while some are trying to cancel their contracts altogether.”

Among those mentioned are Iberdrola, who is apparently trying to walk out of plans for an offshore wind farm in Massachusetts because it is no longer profitable. Iberdrola’s US subsidiary, Avangrid, has reportedly decided to cancel the project and pay a penalty rather than proceed with what will be a money losing project. According to Bloomberg, other developers are similarly considering to either renegotiate or cancel their own offtake agreements because they would be unprofitable given the rising costs.

As always happens, everyone is engaged in so-called Monday-morning quarterbacking, with opinions on what went wrong, why and how to fix it. The emerging consensus is that several developers had signed off-take agreements for ambitious offshore wind projects assuming that the historical trend of falling costs would not only continue but perhaps accelerate with economies of scale, bigger turbines, and ever larger schemes.

Those assumptions did not materialise, resulting in costs increasing, rather than decreasing – at least for now. This has forced many with the awkward choice to either pursue projects which have become unprofitable or pay a penalty and walk away from existing contracts. Neither option is particularly attractive.

Manufacturing the giant blades and massive platforms and transporting them to sites in remote offshore locations is not a trivial task. The scale of the components and the logistics of assembling them require specialised skill and highly specialised barges and cranes, which are in short supply (visuals on prior 2 pages). Then there are the issues of connecting the wind farms to the grid and maintaining the turbines in hard-to-reach locations, further adding to the costs.

The key question is how long it would take for a recovery and resumption of rapid growth for the offshore wind segment. On this, most observers believe that the industry will eventually recover for at least two reasons:

- First, the expectation is that many of the underlying problems will get sorted out by turbine manufacturers, developers, and installers; and
- Second, global decarbonisation of the electricity sector will require massive additional investments in renewable generation – which means that solar, onshore, and offshore wind plus much more will be needed.

It is not a question of one or the other but rather everything, lots of it, and all at once. The offshore wind potential is too big to be written off.

Massive blades for massive turbines require specialized equipment

