India aims high with 37GW offshore plan

Annual seabed lease auctions for wind developers to unlock nation's vast potential, writes **Cristina Brooks**

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India has published offshore wind plans which will see it offer around 37GW of capacity in seven annual phases before 2030.

The nation's vast ocean floor has been divvied up between three models, under which it has varied surveying requirements and funding levels to achieve both "fast-track" and "holistic" development.

Some 36GW of the 37GW offshore site leases will use unfunded models, with developers expected to look to PPAs for their revenues.

The first auction is set for December 1, offering 4GW off Tamil Nadu. It will be followed in fiscal 2024-2025 by one for 3GW, again off Tamil Nadu. Both will have one stage but two bidding "envelopes", namely technical and financial criteria for the 35-year leases.

India expects winners of the first Tamil Nadu rounds to take two years to carry out surveys and settle on offtake deals – which can be captive, on power exchanges or via PPA. They will then enter into concession agreements and take three years to build projects.

Some supports are up in the air. India "may" procure power for distribution operators based on a tariff and it could provide power export infrastructure. It could also offer renewable energy credits or carbon credits.

Other funding is more certain, including plans for 1GW of capacity to be allocated under a funded model via two small auctions for government-surveyed seabed off Tamil Nadu (0.5GW), starting in fiscal 2025, as well as off Gujarat (0.5GW), starting in 2024.

The small auctions, having state off-takers and using Viability Gap Funding – India's version of CfDs – were seen as "quite attractive to developers", Norton Rose Fulbright counsel in Singapore Aditya Rebbapragada told reNEWS.

A long-term strategy was also unveiled as India issued a call for proposals to study a broader area of seabed.

For these larger auctions, developers will themselves identify offshore sites to study within India's EEZ, including off Tamil Nadu and Gujarat.

Non-exclusive survey rights will be allocated on a "first come, first served" basis. Developers will then carry out studies for three years before submitting bids for development rights in an auction process expected to take place in 2026.

The government is considering a number of options for this bidding, it is understood.

The Danish Energy Agency had a hand in planning the auctions through its bilateral joint Centre of Excellence. Deputy director general Martin Hansen congratulated collaborators on a "comprehensive policy framework that will enable investments in offshore wind off Tamil Nadu and Gujarat".

There are currently no commercial offshore wind farms operating in India. It aims for 30GW by 2030 but the trade ministry says the sector is "yet to gain momentum". Its estimated offshore wind potential is 140GW. ■

Developers wary of scheme's hurdles

High costs relative to local electricity tariffs and poor supply chains may challenge offshore wind bidders in India, observers have warned.

"Competitive tariffs" are expected when logistic networks grow but until then bidders face the "complexities of developing offshore wind" in emerging markets with a limited scope, India's trade ministry said.

Cost hurdles, for example the need to develop local ports, loom for developers, Norton Rose Fulbright's Rebbapragada said. Only some 1GW of capacity auctioned will get funding support.

"Government funding through the Viability Gap Funding Programme may help address this to some extent but this would not be available for all offshore wind projects," Rebbapragada said.

INCENTIVISE: **Rebbapragada**

Photo: Norton Rose Fulbright

"Incentivising captive consumption through corporate PPAs as a means of achieving emissions reduction targets is one workaround."

A study by the Danish Energy Agency found the basic LCoE for offshore wind in Tamil Nadu in 2020 was US$120/MWh (10,300 INR/kWh). The agency said the LCoE should drop to $42/MWh to be considered competitive in the Indian power system.

It found uncertainties related to the offshore wind market, supply chain and project development in India contribute to an LCoE level above what can be expected in Europe.

Other expected challenges in India include transmission capacity, evacuation scope and energy storage for offshore wind. ■