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Can the 2025 union budget be a catalyst for offshore wind?



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Synopsis

The Indian government aims to auction 37 GW of offshore wind capacity by 2030, necessitating substantial financial support. The Union Budget 2025 should address the INR 85,000 crore annual cost gap and implement strategic public investments, complemented by state and international funding to bolster the sector.

By Sunil Mani and Anasuya Gagopadhyay, ET CONTRIBUTORS



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The Indian government has made commendable strides in promoting renewable energy (RE), including setting an ambitious target to auction 37 GW of <u>offshore wind</u> capacity by 2030. Offshore wind—a stable and reliable RE source—holds immense promise for diversifying India's energy mix. However, allocate additional funding and address key challenges to unlock the sector's potential in India.

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A significant gap in public support for offshore wind

In June 2024, the government announced its first-ever Viability Gap Funding (VGF) scheme for offshore wind; INR 6,850 crore to support the installation of 1 GW of offshore wind—500 MW each off the coasts of Gujarat and Tamil Nadu.

While this announcement marked a significant milestone, <u>a recent study</u>, Budgeting for Net Zero, published by the International Institute for Sustainable Development (<u>IISD</u>) and the Center for Study of Science, Technology, and Policy (CSTEP), showed that this level of support falls significantly short of what's needed to kick-start the industry. For the initial 1 GW, *an additional* ~INR 9,000 crore would be required to bring costs at par with the round the clock (RTC) electricity benchmark price of INR 5.5 per kWh, compared to the current offshore wind cost of INR 10-15, per kWh. As part of the above VGF announcement for 500 MW of offshore wind capacity in Gujarat, in September 2024 the state government proposed power purchase agreements at an even lower tariff of INR 4.5 per kWh. Such a low benchmark makes offshore wind projects less economically viable for developers, further widens the existing cost gap, potentially discouraging private sector participation, and delaying the development of India's nascent offshore wind market.

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Additionally, the 4 GW offshore wind tender off Tamil Nadu's coast, invited in February 2024, has seen little progress. This delay can be attributed to the absence of VGF support and the lack of guaranteed purchase of power from offshore wind developments, which leave developers grappling with high financial risks.

Bridging the Cost Gap for 2030 goal

The IISD and CSTEP report estimates that achieving the 2030 offshore wind auctioning goal requires bridging a cost gap of ~INR 85,000 crore annually over the next six years. The cost gap identifies how much the cost of offshore wind needs to drop to reach cost parity with RTC electricity price and meet the government's offshore wind goal. The government may need not to fund the entire cost gap, as strategic public investments can unlock significant private sector contributions.

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Given the scale of the cost gap, the government should also reassess its ambitious 2030 auctioning goal (of 37GW) to allow time for the costs of offshore wind technology to decline. This recalibration does not imply halting investments, as early deployment will remain essential to drive domestic cost reductions, foster supply chain development, and build investor confidence. The upcoming Union Budget therefore provides a critical opportunity for the government to layout a long-term roadmap that commits public financial support to meet the goals of offshore wind. Furthermore, the government must also explore complementary funding mechanisms, including contributions from state governments and international climate finance.

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What's more, public sector undertakings can also play a significant role by reallocating investments from fossil fuels to offshore wind. In September 2023, two of India's largest PSUs—Oil and Natural Gas Corporation (ONGC) and National Thermal Power Corporation (NTPC) Green Energy Limited (NGEL)—entered into a joint venture agreement to develop renewable energy projects, with a focus on offshore wind. ONGC, India's largest oil and gas exploration and production company, has extensive expertise in handling offshore operations, while NTPC is the country's largest power utility with deep expertise in power generation. The government could leverage these synergies and invest in their capacity to support offshore wind development in India.

Affordable financing mechanisms like concessional loans from multilateral development banks and loan guarantees can lower the overall costs of

Additionally, non-financial interventions, such as renewable purchase obligations and infrastructure support (for construction of ports, transmission lines, and manufacturing hubs) can further enhance the sector's attractiveness and support the offshore wind supply chain, respectively. Lastly, collaborative funding models that share costs between public and private investors can enhance efficiency while reducing the burden on the government.

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The Economic Case for Offshore Wind

Offshore wind energy offers significant advantages beyond diversification of energy sources. With capacity utilization factors as high as 50% off the Tamil Nadu coast—more than double that of solar energy—offshore wind can provide reliable and consistent energy supply. This stability is particularly important as India seeks to address energy demand fluctuations, while reducing fossil fuel dependence.

Furthermore, IISD and CSTEP study highlights that investing in offshore wind can generate INR 15.8 lakh crore in GDP, create 8.2 lakh jobs, and boost public revenue by INR 4.7 lakh crore by 2050, while significantly reducing GHG emissions and air pollution. These benefits justify the initial investment ADVERTISEMENT

India's RE journey has been marked by ambition and achievement. The upcoming Union Budget is a pivotal opportunity for the Government of India to solidify this commitment by extending this legacy to offshore wind and ensure that fiscal policies reflect the scale of the country's aspirations. The stakes are high, but so are the rewards. With bold and timely action, the government can position offshore wind as a cornerstone of India's energy transition and a key contributor to its net-zero vision.



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(Sunil Mani is Policy Advisor, Energy Programme, IISD and Anasuya Gagopadhyay, Senior Associate, CSTEP)