

# Offshore Wind Policy Drivers in Europe & China



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## Excerpts from Offshore Wind Policy and Market Assessment Report

The four year long FOWIND (Facilitating Offshore Wind in India) project has now been running for just over a year. During this time the project partners (DNV GL, GPCL, CSTEP and WISE) have worked to deliver necessary preliminary work to determine the potential for offshore wind development in the states of Gujarat and Tamil Nadu, in cooperation with MNRE and NIWE.

A key research output - the Offshore Wind Policy and Market Assessment Outlook - was launched on 17 February in New Delhi. A joint report from DNV GL and GWEC on behalf of the FOWIND Consortium, this report is a crucial link to facilitating the development of a roadmap for offshore wind power in India.

The report seeks to review the experiences to date in six major offshore wind markets including Belgium, China, Denmark, Netherlands, Germany and the UK; as well as to put the sector in the larger context of the industry as a whole. We try to tease out the lessons that may be useful for Indian policymakers as they piece together the policy, regulatory and financing frameworks which will allow for the development of a sustainable, commercially successful industry; which of course must be adapted to both the unique opportunities and challenges of the Indian financial and energy environments.

India already has a strong track record in onshore wind, but the rate of capacity addition has fallen in the past couple of years due to policy instability as well as state-specific issues linked to land acquisition for projects, etc. As a result offshore wind may now have a role to play. Offshore wind holds the potential for alleviating the land acquisition challenge. Although the costs are greater, offshore wind has some inherent advantages such as a large wind resource, higher wind speeds than onshore wind and more clarity over land tenure. Offshore wind can also play a role in meeting the demand from load centres closer to the coastline – for example, Greater Mumbai, Chennai and Surat, as well as other big cities such as Vishakhapatnam and Vadodara, subject to technical and economic feasibility.

This report has reviewed progress in the sector to date and focused on the regulatory and policy frameworks in seven leading markets. It has drawn out the following key recommendations for India:

### 1. **Set a clear offshore wind target and roadmap to convey the vision to industry**

Experience shows that a clear, time-bound, quantitative target for offshore wind development, and a roadmap of how to achieve it, is an effective tool to focus minds on the offshore wind opportunity.

### 2. **Clearly articulate and affirm energy policy objectives to maintain industry confidence**

A clear understanding of wider policy objectives helps to provide industry with confidence that the drivers for offshore wind will persist even if the exact milestones do not always go to plan.

### 3. **Ensure managed progression from demonstration to commercial projects**

Demonstration sites are crucial for identifying regulatory issues, testing the local supply chain, understanding specific environmental concerns, helping transfer knowledge and testing new technology. However, for the industry to make the necessary investment in infrastructure, a clear plan for a well-managed progression to commercial scale projects is also required.

### 4. **Provide strong initial public investment and utilise Public-Private partnerships where possible**

Public investment is needed not just to reduce project risk and to provide soft loans but also to ensure that the preliminary assessments and necessary supporting infrastructure is developed. The high cost of offshore wind means that a mix of public and private finance is likely to be required.

### 5. **Ensure sufficient volume, delivered in a smooth pipeline, and design risk-informed support mechanisms to drive cost reduction**

Confidence in sufficient market volume helps industry to maximise local 'learning by doing' and benefit from economies of scale – thus pushing down costs. Yet it is important to ensure a smooth pipeline, as rapid increases or decreases in deployment are challenging for the supply chain to manage. A further aid to cost reduction can be designing 'risk-informed' financial support mechanisms, which are structured such as to minimise upfront developer risk, and therefore minimise the cost of financing.

## 6. Careful consideration of the costs and benefits of promoting a local supply chain

Job creation is a key driver for offshore wind, yet needs careful consideration. It could be beneficial for India to promote investment in this sector with a view towards creating a robust supply chain as part of the country's industrial development strategy. However, the decision to develop a supply chain must be based on whether the potential market is big enough to warrant a local supply chain that is commercially viable, and whether local companies would be able to win export opportunities in the wider global market.

### Summary of Offshore Wind Policy Drivers in Europe and China

	United Kingdom	Germany	Denmark	Belgium	Netherlands	China
Installed capacity	3743 MW	520 MW	1270 MW	495 MW	247 MW	429 MW
Target	8-13 GW by 2020	6.5 GW by 2020	2.8 GW by 2020	1.8 GW by 2020	4.45 GW by 2023	10 GW by 2020
Key policy drivers	Energy security: ●●● Decarbonisation: ●●● Industrial benefits: ●●	Energy Security: ●●● Decarbonisation: ●● Industrial benefit: ●●●	Energy Security: ●● Decarbonisation: ●●● Industrial benefit: ●●●	Energy Security: ●● Decarbonisation: ●●● Industrial benefit: ●●	Energy Security: ● Decarbonisation: ●●● Industrial benefit: ●●●	Energy Security: ●●● Decarbonisation: ●● Industrial benefit: ●●
Land / seabed tenure & development rights	The Crown Estate owns seabed and leases sites. Consent provided through 'one stop shop' in England and Wales  Separate onshore and offshore consents required in Scotland	Developer led approach to identification of sites, within overall Marine Plan.  Marine regulator BSH has leading role, supplying most permits	All permissions are granted by the DEA. The Danish consenting process for offshore wind can be considered a one-stop-shop approach	Seabed split into seven lease areas. Four permits issued by different authorities	Lease areas and one stop consenting shop provided by Ministry of Infrastructure and Environment	Sites identified by NEA. Developers then follow 'Interim Measures for the Administration of Development and Construction of Offshore Wind Power'
Grid connection	Developers fund and construct transmission infrastructure but then required to sell to third party	TSO is required to fund all offshore wind grid connection works to an offshore connection point	Connection developed and financed by grid operator Energinet	Grid connection borne by developer, except for € 25million contribution from TSO	Historically funded by developers but currently under debate	Connection developed and financed by grid operator
Financial support mechanism	Green support certificate to date moving to a form of feed-in tariff called Contract for Difference	15 year feed-in tariff with potential for accelerated 12 year feed-in tariff at higher rate	Feed-in tariff set through competitive auction of individual sites	Green certificate	Sliding premium feed-in tariff, auctioned through competitive tenders	Feed-in tariff for offshore projects based on distance from shore. Demonstration projects get a more generous FIT comparatively

Full report available on "[www.fowind.in](http://www.fowind.in)"

Courtesy: Global Wind Energy Council (GWEC)