

A large offshore wind turbine stands prominently in the background against a cloudy sky. In the foreground, a yellow and red service vessel is moving across the water, leaving a white wake. The vessel has a cabin with windows and a mast with various equipment. The water is a deep blue-grey color.

Strong Energy Demand in India Fuels Offshore Wind Plans

2018



Executive summary

With a very strong growth in energy demand for the second most populous country in the world, India's dependency on coal fired power plants has caused widespread pollution but also a strong lobby in favour of coal due to the number of people employed and size of the investments made. The Government of India has an ambitious renewable energy policy scheme and diffusion targets of 5 gigawatts (GW) of offshore wind have been announced by 2022, increasing to 30GW by 2030. The states of Gujarat and Tamil Nadu are the locations where the initial offshore wind efforts are directed by the Government of India. Through an expression of interest exercise for the initial 1GW of offshore wind in India, local as well as international players have registered their interest in developing the nascent Indian offshore wind market. Whereas international constituencies have voiced concerns pertaining to the capabilities and legislation covering the grid, a relatively strong onshore wind supply chain for wind turbines exists and is made up of domestic as well as international wind turbine and component manufacturers. However, the offshore wind supply chain is yet to be developed and no prior experience is available especially when it comes to the balance of plant components like cables, foundations, and offshore substations.



Private image by Thomas Poulsen

This *Strong Energy Demand in India Fuels Offshore Wind Plans Report* (the Report) is part of a series of reports on the global emerging offshore wind markets. The reports have been crafted by the Panticon team during the months of April through December, 2018 to mark the new name of the management consulting company. Panticon is particularly strong in the Offshore Wind and Logistics sectors within the three core disciplines of Strategic Management Advisory, Mergers & Acquisitions, and Market Research & Analysis.

The Report has been created using an extensive library of data sources (see Reference section). The main data sources used as the basis for the Report were made up of 500+ pages and mainly consisted of various publications by government related organisations, academic journal articles, offshore wind industry articles, and press releases by firms across the offshore wind market supply side as well as demand side.

The Report contains forward-looking statements, which by their very nature, address matters that are, to different degrees, uncertain as they pertain to the future. These, or any other uncertainties, may cause the actual future results to be materially different than those expressed in the forward-looking statements as contained within this Report. At Panticon, we do not undertake to update our forward-looking statements, nor do we assume any liability for actions or dispositions made by firms, organisations, and/or individuals based on information contained in this Report.

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Strong Energy Demand in India Fuels Offshore Wind Plans



Image: Satellite map from Google Maps/cropped

India is yet to install a wind turbine offshore. The huge country has 7,600 kilometres (km) of coastline and good wind conditions where offshore wind turbines can come into play.

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List of abbreviations

CECI	Clean Energy Cooperation with India
CSTEP	Centre for Study of Science, Technology and Policy
EOI	Expression of interest
EU	European Union
FOWIND	Facilitating Offshore Wind in India
FOWPI	First Offshore Windfarm Project of India
GW	Giga-watt
GWEC	Global Wind Energy Council
EIB	European Investment Bank
IEA	International Energy Agency
INR	Indian Rupees
IWTCS	Indian Wind Turbine Certification Scheme
Km	Kilometre
LCoE	Levelized cost of energy
LiDARs	Light detection and ranging instruments
MNRE	Ministry of New and Renewable Energy
MW	Megawatt
MWh	Megawatt-hour
NAPCC	National Action Plan on Climate Change
NIOT	National Institute of Ocean Technology
NIWE	National Institute of Wind Energy
OWF	Offshore wind farm

1. Introduction

India is the second most populous country in the world. For the years 2015 through 2017, annual gross domestic product growth averaged 7.3 per cent (%) and is forecasted to average 7.4% from 2018 through 2020 (**World Bank**, June 2018). This translates into urbanisation and high demand for energy. Up to 2030, the **International Energy Agency (IEA)** forecasts India to be the number one contributor to global growth in energy demand. Coal accounts for 75% of India's power generation. However, coal also happens to be the major cause of deteriorating air quality in India. The Government of India supports renewable energy development. It announced the National Action Plan on Climate Change (NAPCC) in 2008. Prior to the Paris Agreement in 2015, India already had a renewable energy target in place of 175GW by 2022, including up to 60GW of wind. India ranked the seventh largest solar energy market in the world in 2016. It became the world's fourth largest onshore wind energy market in 2016 and had 32.8GW of onshore wind installed by the end of 2017 according to **Global Wind Energy Council (GWEC)**. As offshore wind costs have been dropping in Europe, the case for offshore wind in India is increasingly becoming solid. India has attracted the interest of global offshore wind players, particularly from Europe.



Private image by Thomas Poulsen

1.1. Factors favouring offshore wind development

The key factors favouring offshore wind development in India are highlighted below:

Political will in favour of renewable energy development: The Prime Minister of India, Narendra Modi, strongly supports renewable energy development and his government has implemented several regulatory incentives to encourage growth in the sector.

Employment creation: Offshore wind development contributes to the Government's Make in India policy and offers job creation opportunities to India's youth population.

Growing power demand: With a growing energy demand, India is working to achieve energy security and reach targets set out in its NAPCC of 2008.

Deteriorating air quality: India needs to combat its rapidly deteriorating air quality which is driven by coal consumption.

Offshore wind resources: India has 7,600 km of coastline and good wind resources, particularly on the 3,200 km western coastline, with favourable water depths.

Encouraged by falling offshore wind costs in Europe: Recent auctions in European waters have made offshore wind energy a realistic power generation alternative in India.

Limited land for onshore wind power and solar power development: There has been growing pressure on land-use as more solar and onshore wind energy plants have been installed.

Proximity to demand centres: India's offshore wind resources are located close to the major coastal demand centres. Meanwhile, coal resources are located in the eastern part of the country, notably Jharkhand state, requiring extra investment in transmission infrastructure.

1.2. Factors hindering offshore wind development

The major factor hindering renewable energy development in India, including offshore wind, is arguably the country's dependence on coal power generation. This and other factors hindering offshore wind development in India are outlined below:

Coal dependence: In 2017, India ranked second largest consumer of coal in the world, contributing to the first increase in global coal consumption since 2012. But India's coal dependence goes beyond power generation. Economically, private and state-related banks financed the latest coal power plants and have a lot to lose by giving ground to other power generation technologies. In addition, the coal industry is a key customer of India's railway industry, i.e. by transporting coal from the resource rich eastern India. Politically, India is home to the world's largest coal mining company, the state-owned **Coal India**, which also happens to be a major employer as well as infrastructure investor in rural India.

Project financing: India faces challenges in attracting international financing. Locally, it is unlike the European countries, that had the political will to financially support offshore wind development, and China, whose state-owned enterprises have driven the offshore wind

development.

Inadequate infrastructure: India has limited infrastructure in terms of ports, airports and railways, as well as a transmission and distribution system that needs upgrading. The risk that unaddressed grid constraints will lead to curtailment and negatively impact on levelized cost of energy (LCoE) is prevalent among potential developers.

Cost competitive onshore wind and solar power: Onshore wind and solar power dominate India's renewable energy space. The switch from feed-in tariffs in 2016 to Government and state-led auctions have driven prices further down. In the fourth quarter 2017 auctions, onshore wind achieved prices as low as 2,475 INR/MWh compared with the 7,362 INR/MWh LCoE for offshore wind estimated by the **Facilitating Offshore Wind in India (FOWIND)** Consortium in March 2018 (see section "2. Policy-related developments to embrace offshore wind" below).

Developing offshore policy: Despite the progress made since December 2013, India's offshore wind policy still has many gaps, particularly the grid-related policy framework.

Renewables' intermittency: A strong political argument used by the pro-coal lobby. For example, that non-hydro renewables account for 20% of India's installed capacity power mix but only contribute 8% of what is used for generation.

No offshore wind track record: India's lack of an offshore wind track record means that it lacks the expertise and knowledge required for a quick take-off of the market.

Soil conditions: The sites identified in the Gujarat and Tamil Nadu states are characterised by extensive layers of weak clay and loose sands.

2. Policy-related developments to embrace offshore wind

India is yet to install a wind turbine offshore. Since 2013, the Government of India, in collaboration with international partners, particularly from the **European Union (EU)**, has made encouraging progress to embrace offshore wind. Key developments are outlined below in chronological order.

- **December 2013:** a consortium led by the GWEC launched the FOWIND project in India. Consortium members include local power developer **Gujarat Power Corporation Limited**, classification body **DNV GL**, the **World Institute of Sustainable Energy** and Indian think-tank the **Centre for Study of Science, Technology and Policy (CSTEP)**.
- **January 2014:** India's **Ministry of New and Renewable Energy (MNRE)** announced plans to set up an agency to explore the potential for offshore wind in the country. At the same time, the MNRE was working towards the introduction of a national offshore wind energy policy in India.
- **September 2014:** following a feasibility study of Indian offshore wind potential, the MNRE selected Gujarat state and Tamil Nadu state as ideal for India's first offshore wind farms (OWFs).
- **October 2014:** The Government signed a memorandum of understanding to develop India's first OWF - a 100 megawatt (MW) demonstration project - in the Gujarat state led by the MNRE and including Gujarat Power Corporation Limited.
- **January 2015:** The **European Commission** released early information about the project "**Clean Energy Cooperation with India (CECI)**" designed to benefit India. The aim of the CECI project was to enhance India's capacity to deploy low carbon energy production and improve energy efficiency. It also included preparation of a pilot offshore wind project.
- **January 2015:** The GWEC spearheaded a four-year project, supported by Euro 4 million from the EU's Indo-European Cooperation on Renewable Energy programme, to develop a roadmap for offshore wind power development in India with initial focus on Gujarat state and Tamil Nadu state.
- **February 2015:** The **Tamil Nadu Energy Development Agency** confirmed that Tamil Nadu state was planning to install a 200MW OWF by 2023.
- **February 2015:** The FOWIND Consortium launched a report, "*Offshore Wind Policy and Market Assessment Outlook*", which set out recommendations for the development of the offshore wind industry in India.
- **March 2015:** CSTEP, under the FOWIND Consortium, launched a tender for the supply of light detection and ranging instruments (LiDARs) for sites off the coast of Gujarat state and Tamil Nadu state.
- **June 2015:** The FOWIND Consortium released pre-feasibility reports identifying key offshore areas for detailed offshore wind resource assessment in Gujarat state and Tamil Nadu state.
- **September 2015:** The Government of India approved a new policy, the **National Offshore Wind Energy Policy-2015**, with the goal of replicating India's onshore wind success story. It authorised the **National Institute of Wind Energy (NIWE)** to allocate offshore wind development zones, or "blocks", and steer research and development activities, working under the direction of the MNRE. In October 2015, the MNRE publicised the National Offshore Wind Energy Policy.
- **December 2015:** Danish engineering consultancy **COWI** won a contract to design India's first

OWF, **First Offshore Wind Project of India (FOWPI)**, 25 km off the coast of Gujarat state. The contract scope encompassed: Consultancy and engineering competencies in planning and design, including electrical design, conceptual design of the foundation based on geotechnical studies and metocean analysis, as well as wind farm layout; assisting authorities determine the size of subsidies, electricity costs, connection to the power grid, etc. The 200MW FOWPI is part of the January 2015 CECI programme and is funded by the EU with completion initially planned for 2019. Geophysical surveys commenced at the site in October 2017. The technical documentation package of the tender call is expected to be ready before the end of 2018. In December 2017, COWI began to help to carry out geophysical surveys for the 200MW FOWPI demonstrator.

- **June 2016:** The FOWIND Consortium launched a report, *“Supply Chain, Port Infrastructure and Logistics Study”*, for offshore wind development in the states of Gujarat and Tamil Nadu.
- **September 2017:** India’s **National Institute of Ocean Technology (NIOT)** identified two feasible sites off Rameshwaram and Kanyakumari, in the Tamil Nadu state. It followed an analysis of nearly 3,100 km of Indian coastline across four of India’s southernmost states and relied on wind resource data from numerical wind atlas map models developed by the **Technical University of Denmark** and offshore wind potential maps produced by the **Indian National Centre for Ocean Information Services**.
- **October 2017:** The FOWIND Consortium, in collaboration with the state utilities **Gujarat Energy Transmission Corporation Limited** and **Tamil Nadu Generation and Distribution Corporation Limited**, launched a report, *“Grid Integration Study for Offshore Wind Farm Development in Gujarat and Tamil Nadu”*. The report assessed grid integration issues for offshore wind in the states of Gujarat and Tamil Nadu and focused on early offshore wind projects and the possibility for easy grid access without any significant need for upgrades.
- **November 2017:** The FOWIND Consortium, on behalf of NIWE, commissioned India’s first offshore LiDAR off the coast of Gujarat state, in the Gulf of Khambhat, to measure the offshore wind resource. The NIWE has plans to commission a LiDAR off the coast of Tamil Nadu, in the Gulf of Mannar.
- **December 2017:** The MNRE announced plans to auction five GW offshore wind power in 2018. The MNRE did not provide details about how that process would work in practice. Shortly afterwards, in the same month, the FOWIND Consortium published a report, *“From Zero To Five GW: Offshore Wind Outlook for Gujarat and Tamil Nadu (2018-2032)”*. The report suggested a timeline of 500MW by 2022, 2-2.5GW by 2027, and 5GW between 2028 and 2032.
- **March 2018:** The FOWIND Consortium published another report, *“The Feasibility Study for Offshore Wind Farm Development in Gujarat And Tamil Nadu”*. The report provided a concept design for demonstration projects of 150 to 504MW in the most promising offshore wind development areas in the two states. It assumed a 500MW OWF employing 6MW or 10MW turbines at wind speeds of 8 - 8.3 metres per second. For Tamil Nadu state, with estimated capacity factor at 37.1%-38.1%, it yielded LCoE levels of between 7,362 Indian Rupees (INR) per megawatt-hour (MWh) and 9,087 INR/MWh while Gujarat state, with estimated capacity factor at 32%, gave a LCoE levels of between 9,578 INR/MWh and 11,682 INR/MWh.
- **March 2018:** NIWE announced it was already working on a “one-stop shop” for the project permitting aimed at reducing the interaction of developers with numerous Government

authorities. NIWE also announced plans to initiate additional offshore geotechnical and wind measurement campaigns at identified project development sites in order to reduce risk for developers.

- **April 2018:** NIWE published an expression of interest (EOI) call for a 1GW wind farm off Gujarat state at the site where the FOWIND Consortium commissioned the LiDAR in November 2017. (See Table 1).

Table 1: NIWE Expression of Interest - selected requirements

	April 2018 EOI	May 2018 EOI (Revised April 2018 EOI)
Project size:	1000MW	1000MW
Area:	400 square kilometres	400 square kilometres +
Water depth:	15-20 metres	
Location:	23-40km off Pipavav port, Gulf of Khambhat	or anywhere within India's EEZ
Onshore grid connection responsible:	Developer	Developer
Support mechanism:	25-year PPA from start of operation	25-year PPA from start of operation
Requirements to non-local companies		
Minimum installed offshore wind track record:	500MW	250MW
Requirements to local companies		
Minimum installed onshore wind track record in India:	500MW	250MW
Ties with global offshore wind turbine manufacturers or developers with min. offshore wind track record of:	500MW	250MW
Financial requirements		
Minimum company annual turnover in the previous three fiscal years:	INR 5 billion	INR 5 billion
EOI submission deadline:	25 May 2018	8 Jun 2018

Source: Panticon analysis (September 2018), based on multiple sources

- **May 2018:** NIWE extended the EOI submission deadline from 25 May 2018 to 8 June 2018. At the same time, NIWE relaxed the rules governing potential bidders, as shown in Table 1. The EOI attracted 35 companies and consortia including the top players in the offshore wind industry. From Europe, developers **Ørsted** (Denmark), **Copenhagen Infrastructure Partners** (Denmark), **E.ON** (Germany), **Engie** (France) and **Innogy** (Germany), **Equinor** (Norway) and **Shell** (Holland/UK), **wpd** (Germany), **PNE Wind**, **Mainstream Renewable** and **Parkwind**. Other international developers are Canada's **Northland Power**, Australia's **Macquarie** as well as US **Terraform Global**. Local participants include **ReNew Power**, wind turbine manufacturer **Suzlon** in partnership with Belgian contractor **DEME**, **Mytrah Energy** and **Inox Wind**. The global offshore wind turbine manufacturers – **Siemens Gamesa**, **MHI Vestas**, **GE** and **Senvion** – teamed up with the other EOI participants.
- **June 2018:** The MNRE announced India's offshore wind targets by 2022 and 2030 as 5GW and 30GW, respectively.
- **July 2018:** The MNRE met with the 35 companies and consortia who had expressed interest in developing the 1GW project. The final selection of the developer of the first offshore wind farm will be taken up through competitive bidding between shortlisted parties. An auction is expected in April 2019.
- **November 2018:** The MNRE and the NIWE announced they had prepared a draft certification scheme, the Indian Wind Turbine Certification Scheme (IWTCS). IWTCS incorporates turbine

guidelines from concept to lifetime and various best practices from established offshore wind markets in Europe.

- **November 2018:** The **European Investment Bank (EIB)** held its first offshore wind financing conference in India. The EIB's move is expected to inject offshore wind project financing certainty in India.
- **December 2018:** The NIWE issued a tender for the supply, delivery, testing, training, installation, and commissioning of four offshore LiDARS – two for deployment in Tamil Nadu and the other two in Gujarat.

3. Offshore wind farm developers and owners

With no offshore wind track record and the outcome of the April 2018 EOI pending, India's OWF developer/owner landscape is still shaping up. Related developments, for local players, in this regard are outlined below in chronological order.

- **January 2011:** A project company was established in Gujarat state to, among other things, explore the possibility of combining the offshore wind resource in the Gulf of Kutch with the tidal current flow to assess the feasibility of a “mega marine power project”.
- **August 2012:** India's state-owned **Oil & Natural Gas Corporation** announced plans to build and operate a 10MW pilot offshore plant in the country's western offshore area and subsequently decide if a large-scale development is viable.
- **October 2014:** Indian wind turbine manufacturer Suzlon revealed plans to build a 300MW OWF in Gujarat state. By September 2015, Suzlon was carrying out a feasibility study off Gujarat state at a site in the Kutch region with potential for more than 1GW. Suzlon has already completed a technical feasibility study on the site. In December 2017, Suzlon and partner groups, under guidance from the NIOT and with approvals obtained through the NIWE, installed a LiDAR-based wind measurement station at the site

4. Local offshore wind farm supply chain

The Indian offshore wind supply chain is still taking shape. Across all OWF lifecycle phases, the stakes are high for European players. Because of the existing local onshore supply chain, transition of wind turbine supply and wind turbine components to offshore will not be as challenging as setting up a local balance of plant industry. Developments for selected sub-phases of the OWF lifecycle are outlined below.

4.1 Project management

India is expected to rely on European players for project management.

In January 2016, it was revealed that the UK Foreign and Commonwealth Office is funding a project under which a consortium of three British consultancies will support the Government of India in setting up its offshore wind industry. **IT Power Consulting**, **CmY Consultants** and **SeaChange Offshore** will deliver a 10-month long project that is focusing on the delivery of a concession competition process for new OWF projects and a financial model to better estimate the costs of future Indian OWFs. The companies will help MNRE better understand project costs and the requirements of project developers. In addition, the companies will spend time engaging with the local industry to obtain feedback on the competition process to determine the level of interest in offshore wind projects in India.

4.2 Turbine manufactures

Indian wind turbine maker Suzlon's January 2015 deal to sell its' then wholly owned offshore wind turbine subsidiary Senvion (headquartered in Germany) to Centerbridge Partners of the US included a clause granting Suzlon a licence for technology in the Indian offshore market. In May 2017, Suzlon indicated that its' S128 3MW turbine could be used for the first projects in Indian waters.

In October 2015, Chinese construction equipment and wind turbine manufacturer Sany Group announced plans to invest USD 3 billion from 2016 to 2020 in India's renewable energy sector including technologies for offshore wind power generation.

The global offshore wind turbine manufacturers – Siemens Gamesa, MHI Vestas, GE and Senvion – teamed up with various participants in the April 2018 EOI. All these turbine manufacturers are active in the Indian onshore space. Meanwhile, in December 2018, Siemens Gamesa, inaugurated a new centre in Karnataka, India to support global engineering and technology requirements pertaining to software and design engineering for onshore as well as offshore wind turbines.

4.3 Turbine components

India hosts some top global wind turbine component manufacturers serving both the local and export markets. Examples include Denmark's turbine blade maker **LM Power** (owned by US-based GE since April 2017). In April 2016, **LM Wind Power** inaugurated a new blade manufacturing plant in Vadodara, India, its' second in the country. Another example is Belgian wind turbine gearbox manufacturer **ZF Wind Power**. ZF has a manufacturing base in Tamil Nadu state from where it serves both the local and global wind markets. At end of 2017, its cumulative track record in the Indian market alone stood at 4GW.

4.4 Ports

A June 2016 FOWIND consortium report identified several ports with potential to serve projects in the states of Gujarat and Tamil Nadu. These ports include Hazira and Pipavav in Gujarat as well as Tuticorin in Tamil Nadu

5. Conclusion

India is on track to meet its 60GW onshore wind target by 2022 but not the 5GW offshore wind target. Gathering of detailed offshore data is still at a premature stage making it difficult for the industry to make firm commitments. The outcome of the April 2018 EOI will provide a good indicator of where the market goes from here. India's inaugural offshore wind auction is expected in April 2019 with capacity of 500MW or more. Up to 1 GW offshore wind can commence construction by 2022. Progress towards 5GW depends on when India will upgrade its grid and port infrastructure and no major shifts in the political landscape in the spring 2019 general elections. Although the pieces are yet to fully fall into place, India's growing power demand means that international offshore wind players should be getting ready for a take-off of the market by 2025. The number and calibre of companies and consortia who participated in the April 2018 EOI testifies to the significant potential of India's offshore wind market.



Private image by Thomas Poulsen

References

1. DNV-GL, 20 August 2018: Webinar - Growing the Offshore Wind Sector in India
2. Global Wind Energy Council, Indian Wind Energy – A Brief Outlook; http://www.gwec.net/wp-content/uploads/vip/GWEC_IWEO_2016_LR.pdf
3. Offshorewind.biz
4. Recharge News
5. The Economist, 2 August 2018: The black hole of coal - India shows how hard it is to move beyond fossil fuels; <https://www.economist.com/briefing/2018/08/02/india-shows-how-hard-it-is-to-move-beyond-fossil-fuels>
6. Government of India: Various reports
7. International Energy Agency: Various reports
8. Facilitating Offshore Wind in India (FOWIND) Consortium: Various reports
9. Gujarat Energy Transmission Corporation Limited and Tamil Nadu Generation and Distribution Corporation Limited report, October, 2017: “Grid Integration Study for Offshore Wind Farm Development in Gujarat and Tamil Nadu”
10. Poulsen, T. and Lema, R.: Is the supply chain ready for the green transformation? The case of offshore wind logistics, Renewable and Sustainable Energy Reviews, Volume 73, June 2017, Pages 758-771; <https://doi.org/10.1016/j.rser.2017.01.181>
11. Times of India, 14 December 2017: India to auction 5GW offshore wind projects in 2018; <https://timesofindia.indiatimes.com/business/india-business/india-to-auction-5gw-offshore-wind-projects-in-2018/articleshowprint/62067590.cms>
12. Poulsen, T. and Hasager, C.B.: The (R)evolution of China: Offshore Wind Diffusion, Energies 2017, 10 (12), 2153; <https://doi.org/10.3390/en10122153>
13. Windpower Monthly, 25 October 2017: Policy gaps hinder Indian offshore, report claims; <https://www.windpoweroffshore.com/article/1448273/policy-gaps-hinder-indian-offshore-report-claims>
14. World Bank, June 2018: Economic Prospects; <https://openknowledge.worldbank.org/handle/10986/29801Global>

Who we are

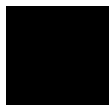
At Panticon, we are particularly strong in the Offshore Wind and Logistics sectors within our three core disciplines of **Strategic Management Advisory**, **Mergers & Acquisitions**, and **Market Research & Analysis**. We are mainly focusing on the business side to improve our clients' performance, create value in the long-term, and to create sustainable competitive advantages.

How we create value

- Tailor-made strategies
- Support M&A endeavours
- Share knowledge
- Analyse markets
- Advise our clients in every aspect of our three core disciplines



Strategic Management Advisory



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