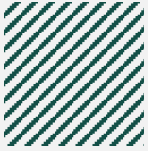


Quarterly Market Observatory



Wind Turbine Market in India & South East Asia Outlook Update – Q3 2020

August 2020



The Eighty – 20 of Industry: What Matters?

Leading Edge - India

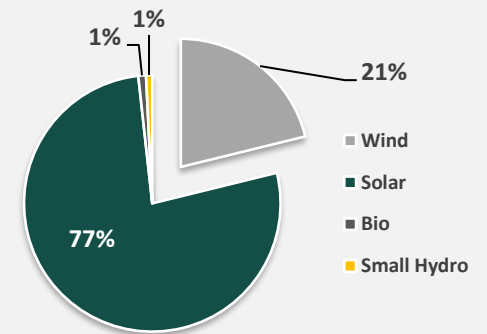
As India pushing for greater industrial self-sufficiency, Government plans to withdraw customs duty concessions in phased manner for wind-turbine components to encourage the use of local equipment

Wind installations levels in India have significantly declined in first half of year 2020 due to outbreak of Covid-19 crisis back in China. Consequently, the outbreak has effected the supply chains that further inflicted the wind energy segment in India. India installed only 136 MW of wind capacity in Q2 2020 which is well below the anticipated addition. Statistically, wind installation in Q2 2020 decline 82% compared to 743 MW in the same period last year, and a 28% fall from 187 MW in the previous quarter (Q1 2020). Moreover, The government is likely to withdraw customs duty concessions for wind-turbine components to encourage the use of local equipment and reduce imports from China and other countries as India is pushing towards greater industrial self-sufficiency. Although, 80-85% of wind-turbine manufacturing takes place in India unlike the solar energy sector, where about 90% of the modules come from China. However, some vital parts for setting up wind power projects are imported, mostly from China. Consequently, The import duty imposed on components varies widely and the removal of concessions will affect manufacturers to different degrees.

Share of Wind capacity in total renewable generation in Q2 2020 (%)

136 MW

Only 136 Mw of Wind capacity added in Q1 2020 **reduced by 82%** as compared to addition in Q2 2019.



Source: eninrac consulting, CEA & Channel checks



Major vital parts imported from China

Unlike the solar energy sector, **80-85%** of wind-turbine manufacturing takes place in India. However, some vital parts such as gear box, yaw components, blades for rotor, sub-parts of such blades are imported, mostly from China.



The **removal of concessions** will affect wind turbine manufacturers in India. Consequently, With input costs going up, wind tariffs may also be affected.



Round Up Monitor – South East Asia

Revenues from existing wind projects have proven largely resilient to COVID-19 impacts; however, projects in the pipeline have experienced slowdowns due to supply chain disruption

Recent policy changes and stepped-up efforts from policymakers have lifted growth rates for non-hydro renewables in the region. Thailand, an early mover on renewables in the region, saw nearly 5 GW of cumulative wind and solar installations by the end of 2019. However, The COVID-19 pandemic has impacted clean energy in the region which was already behind the renewable capacity addition target. Revenues from existing wind projects have proven largely resilient to COVID-19 impacts; however, projects in the pipeline have experienced slowdowns due to supply chain disruption, regulatory delays, and workforce issues. Many of these projects will be delayed but will come online and are expected to rebound in 2021. Moreover, energy project developers that were completing their projects during this pandemic may have incurred additional costs and delays that could affect their anticipated returns or project milestones.

The COVID-19 pandemic has impacted clean energy in South East Asia
Region



Renewable energy project revenues have proven to be the most resilient generation source due to **first in the merit order of dispatch**



Projects in pipeline have experienced slowdowns due to supply chain disruption, regulatory delays, workforce issues & are **expected to rebound in 2021**

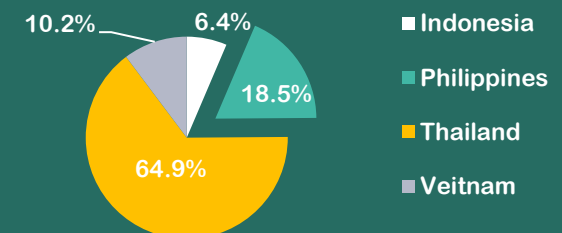


Wind energy project developers that were completing their projects during this pandemic have incurred **additional costs and delays** that could affect project milestones

Total Installed Capacity of
Wind Power (GW) in South
East Asia as on Dec 2019

2.31

Share of SEA Countries in % as on 2019



Source: NREL, eninrac consulting, Channel Checks

Numbers to Focus Upon – Q2 2020



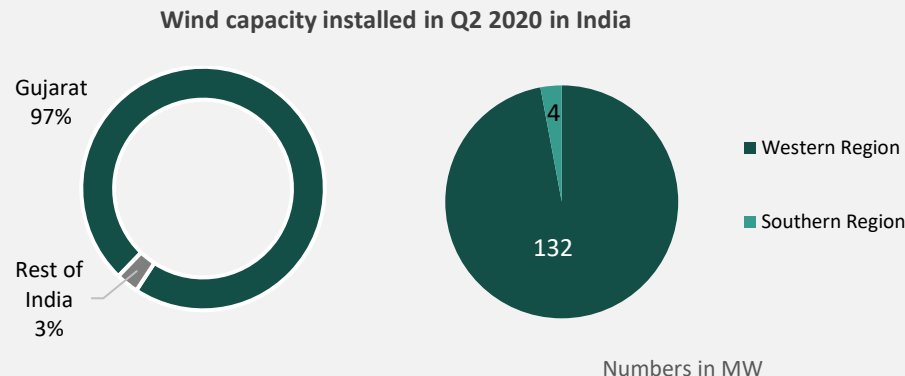
Wind Power Installations in Second Quarter of CY 2020 Shrink by 82% YoY

India installed 136 MW of wind power projects in the second quarter (Q2 2020) of the calendar year. This was a whopping 82% decline in installations compared to 743 MW in the same period last year, and a 28% fall from 187 MW in the previous quarter (Q1 2020).



Gujarat added 97% of the total wind installation in Q2 2020 in India

Of the 136 MW of wind power capacity added during the quarter, Gujarat installed 132 MW, while Karnataka installed about 4 MW. These were the only two states that added wind capacity in the country during this period.



Source: MNRE, eninrac consulting

Key Features Expected



Siemens Gamesa leads the way in India with the launch of its next generation wind turbine

The company continues to shape the market with this new generation wind turbine in the 3MW segment, which is specifically designed for the Indian winds. The new SG 3.4-145 can operate at up to 3.6 MW with flexible rating strategy and delivers 48% more Annual Energy Production (AEP).

Deployment Trends - Projects

01 Another Deadline Extension for SECI's 5 GW Tender

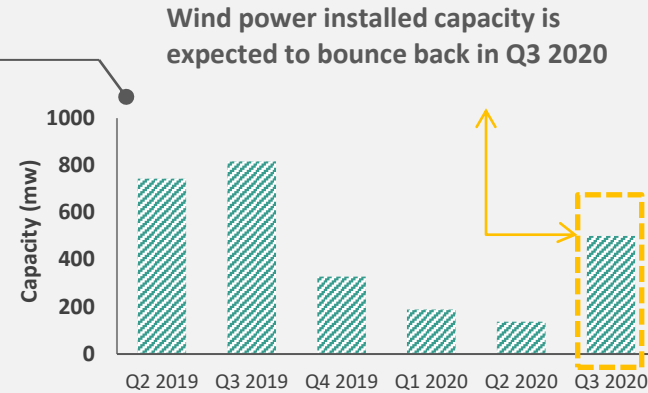
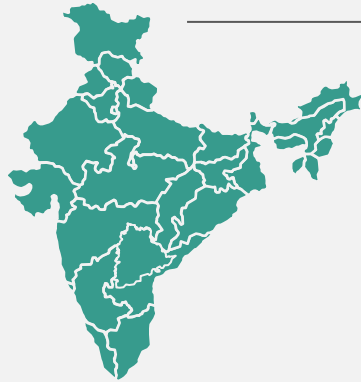
The Solar Energy Corporation of India (SECI) has extended the bid submission deadline for its tender to procure 5 GW of renewable power on a round-the-clock (RTC) basis complemented with thermal power projects.

02 Sembcorp completes 800MW of SECI wind power projects

Sembcorp Energy India Limited (SEIL), announced the completion of its 800MW wind power projects awarded by the Solar Energy Corporation of India (SECI).

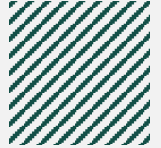
03 Contracts awarded to support projects in Vietnam's emerging offshore wind sector

AFRY has been awarded an owner's engineering services assignment for Tra Vinh Offshore Wind Farm, a 48 MW wind farm project located in Tra Vinh Province, Vietnam. AFRY will provide a full scope of owner's engineering services for the implementation phase



Source: CEA, eninrac consulting

Quarterly Update – Q3 CY 2020



- The capacity additions rate at the beginning of 2020 was looking optimistic with the industry gearing up to add more capacities in FY 2020/21 but with COVID19 impacting the entire world. Although, the recovery to business as usual is expected in Q3 2020.



Key Investments – Q3 2020

- Renewable energy developer Greenko and analytics and engineering firm ONYX Insight announced they have signed an agreement to modernise 500 wind turbines.
- Global wind turbine major Siemens Gamesa Renewable Energy will start making the 3.4 MW wind turbine at its Indian plant in Tamil Nadu. The new machine will be the highest capacity wind turbine in India will be manufactured at its Indian plant in Tamil Nadu



Key Trends – Wind Turbine Market in India Q3 2020

- India's Ministry of New and Renewable Energy has issued guidelines for round-the-clock supply of electricity by bundling solar and thermal power. Under the new guidelines, power project developers can sign power purchase agreements with the discoms for 24x7 supply containing at least 51% renewable power
- India's wind installation for 2020 likely to fall drastically. It is expected wind energy capacity India will add in 2020 to 1.95GW from an earlier forecast of 2.56GW due to the nation wide lockdown amidst the Covid-19 crisis



Key Signpost – Wind Turbine Market Q3 2020

- India is looking at plans to end duty concessions for turbine component imports in a bid to further ease reliance on China. The Indian government could start a phased withdrawal of the concessions from 2021 and has started talks with wind OEMs over the implications of the move. The import duty imposed on components varies widely and the removal of concessions will affect manufacturers to different degrees. Moreover, With input costs going up, tariffs may also be affected. The intent is to increase the current domestic manufacturing to 95%.



Contents & Coverage – Q3 2020

01 This Quarter

The section shall showcase the major highlights for wind turbine segment in India and South East Asia including investments, project developments, policy & regulatory interface, M&A etc.

04 Numbers to Learn

All wind power capacity additions with a split on ownership wise, & state wise break up shall be included. Moreover, the numbers for deals secured by wind turbine manufacturers in India as well as South East Asian countries

07 Deployment Trends

The pace of deployment of projects at wind turbine manufacturers levels covering issues like investments, tenders and capacity additions shall form part of this section

02 Key Features

Key features shall cover the major strengths and development map that the industry has shown over the quarter

05 The Eighty - 20 of Industry – What Matters?

In this section the major factors which are acting as the growth catalysts / barriers in the Wind turbine segment are highlighted inclusive of policies, regulations etc.

08 Technology & Price Trends

This section shall cover all the latest technology implementation and trends, price benchmarks of wind turbines in India and South Asia

Wind Turbine Market in India & South East Asia Outlook Update – Q3 2020

03 Leading Edge

The current affairs leading business impacts on Wind turbine market with insightful data analytics & our exclusive “Knowledge Grid” feeds covered in the section. Our analyst's viewpoints with sharp edged objectives shall be central to the section

06 Key Signposts

The business factors which shall govern the course of coming quarters of business and the industry response to the changes shall be the focus area of this segment

09 Industry Activities & Corporate Strategies

All the industry order track & merger's and acquisition activities shall be tracked. Fresh investments in wind turbine sector as per players profiles shall also be tracked in this section



Must Buy For

- Power Transmission Utilities
- Power Distribution Utilities (DISCOMs)
- Original Equipment Manufacturers
- Power Traders
- Banks/Financial Institutions/Project Financing Agencies
- EPC Service Providers
- Consultants
- Research Firms/Research Institutions
- Regulatory Bodies
- Government Agencies



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Sales: Write to sales@eninrac.com for more information

Please call at +91 120 – 4147 000 for any other queries

Wind Turbine Market in India & South East Asia Outlook Update – Q3 2020



Companies Mentioned

- General Electric
- Vestas India
- Suzlon
- Inox Wind
- Wind World
- Indowind Energy Limited
- Siemens Gamesa
- Envision Energy
- Acciona Nordex
- ReNew Power
- Regen Powertech Pvt. Ltd.
- Enercon India Pvt. Ltd.
- Orient Green Power Ltd.
- Enel Green Power India Pvt Ltd
- Senvion India Pvt Ltd
- Continuum Wind Energy India Pvt Ltd
- Hero Future Energies Pvt Ltd
- Indian Wind Turbine Manufacturers Association



The life of a man consists not in seeing visions and in dreaming dreams, but in active charity and in willing service

- Henry Wadsworth Longfellow

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