Denmark: A Global Hub for Wind Energy Companies

A Look Into the Danish Wind Energy Ecosystem





MINISTRY OF FOREIGN AFFAIRS OF DENMARK Invest in Denmark



Denmark has established itself as a leading global destination for the wind energy sector, demonstrating how industry organisations can collaborate effectively across the value chain. From research and development (R&D) to testing, manufacturing, installation, operation, and energy production, Denmark integrates wind power into its energy grid seamlessly. This ecosystem fosters innovation, employment, and valuable know-how, benefitting the entire wind industry.



Skilled Talent Availability

Denmark's wind energy industry employs approximately 32,000 people. The country boasts a wealth of experienced engineers, drawing from over 40 years of experience in wind power and more than 25 years in offshore wind development.

Testing Facilities

Denmark is home to world-class testing centers for wind systems, turbines, components and related technologies, including:

- Large Wind Turbine Testing (up to 330 meters tip height): Conducted at Test Centre Østerild by DTU Wind Energy
- Large Wind Turbine Testing (up to 200 meters tip height): Conducted at Test Centre Høvsøre by DTU Wind Energy
- Nacelle Testing (up to 25 MW): Managed by the LORC Nacelle Testing Center
- Blade Testing (up to 120 meters): Available at the Blade Test Centre (BLAEST)
- Aerodynamics & Noise Testing: Conducted at DTU Wind
- Material Testing: Also facilitated at DTU Wind
- Lightning Testing: Polytech
- Drive Train Testing: Conducted by DTU
- Welding Technology: Managed by LORC and FORCE Technology at the Lindoe Welding Technology facility
- Foundation and Large Component Testing: Integral to Denmark's advanced capabilities in wind energy R&D



Denmark has top-notch infrastructure for the transportation and testing of large wind turbines and blades. Image credit Vestas Wind Systems

Academia and R&D

Danish researchers are recognised among the top five globally in terms of wind energy research publications, which are some of the most frequently cited. Most Danish universities like DTU Wind, Aarhus University, Aalborg University, University of Southern Denmark offer specialised curricula to cultivate a steady flow of new talent into the wind industry. Danish research institutions such as FORCE Technologies, Danish Technological Institute, Delta, and DHI offer project consultancies for wind companies to develop and enhance their technologies.

Opportunities for India's Wind Industry

As India's wind sector continues to expand to meet both domestic and global energy demands, collaboration with international partners will be vital for Indian OEMs and Indian suppliers to global OEMs.

Partnering with global companies will enable Indian firms to:

- Align with global standards.
- Work on larger designs of turbines

for both onshore and offshore.

- Access the latest wind technologies.
- Bring advanced technologies back to India.

The pandemic-induced disruption of global supply chains has also affected the wind energy sector. As a result, many European OEMs are seeking to bring their suppliers closer, including some from India. Denmark, with its proximity to OEMs, cutting-edge R&D facilities, and testing centers, offers an ideal location for Indian companies to forge these critical partnerships.



Denmark's Appeal to Global Wind Suppliers

suppliers and component For manufacturers, Denmark provides unparalleled opportunities, including proximity to OEMs, access to top-tier R&D facilities, test centers, and a wellestablished supply chain ecosystem. These elements, combined with a highly skilled workforce, offer significant advantages for companies engaged in production, R&D, testing, and verification of turbines and wind systems. The industry associations (Green Power Denmark) and Danish Energy export



Denmark integrates wind power into its energy grid seamlessly. Image credit Vestas Wind Systems

agency are an ecosystem of companies which organises various knowledge sharing and networking events for the benefit of its members. Thus fostering active collaborations and

Suzion's Expansion in Denmark

In 2016, Suzlon, an Indian wind energy leader, opened its Blade Science Centre in Vejle, Denmark. Starting with just 10 employees, the center expanded to 15 members at its peak. Focusing on developing next-generation wind turbines, Suzion's research into airfoils and rotor systems at this facility has helped reduce the Levelized Cost of Energy (LCoE) and improve the Plant Load Factor (PLF) for its clients. In addition to its blade research, Suzion has another center in Aarhus that manages operations, maintenance, and SCADA (Supervisory Control and Data Acquisition) development work.



About Invest In Denmark

Invest in Denmark (IDK) is Denmark's National Investment Promotion Organization, anchored within the Trade Council (TC), under the Ministry of Foreign Affairs of Denmark (MFA).

At IDK, we attract and retain foreign investments in Denmark, by providing customised one-stop service to foreign companies that are looking to set up or expand their business in Denmark.

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