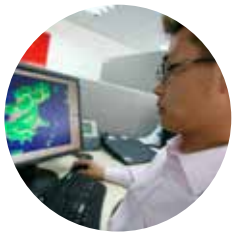
This is Vestas
- from wind to customer

Wind. It means the world to us.™ This is true today, was true 30 years ago, and will be true in 30 years. Wind is Vestas' business and passion.

Vestas' commitment to continuous improvement in technology, service, and operational excellence will ensure that Vestas is the undisputed global wind leader. Something Vestas can achieve if it continues to put all its efforts into delivering best-in-class wind energy solutions. That is Vestas' vision, and this is Vestas' value proposition:

Developing and building wind turbines and service solutions are only part of Vestas' business. Today, Vestas is involved in projects whose scope of work ranges from "simple" supply and commissioning projects to turnkey projects involving the supply, installation, and commissioning of wind turbines, as well as access roads, foundations, cabling, electrical substations, communication systems, and more. Hence, Vestas' value chain stretches from project and planning to procurement and manufacture to construction and installation to operation and maintenance. It is a complex process that depends on a highly skilled and dedicated workforce.



Project planning and design

Starting up to several years before wind power plant construction, Vestas engages with its customer to find the most optimal wind sites, designing the most optimal layout, and securing grid compliance.

Efforts like these make it easier to get the wind power project financed and meet regulations, while providing the conditions for maximising return on investment over the wind power project's lifetime.

- **Big data.** By monitoring more than 29,000 wind turbines 24/7 across the world and having the wind power industry's largest wind data library, Vestas has an unparalleled insight into global wind and weather conditions.
- **SiteHunt®** is an advanced analytical tool that examines a broad spectrum of wind and weather data to evaluate potential sites and establish which of them can provide the optimum conditions for the wind power project.
- **SiteDesign®** optimises the layout of the wind power plant by finding the most effective balance between the estimated ratio of annual revenue to operating costs through a sophisticated analysis of lifetime energy costs for each wind turbine.
- **Electrical PreDesign.** By identifying the varying, complex, and specific grid code requirements across the globe and simulating extreme operating conditions, Electrical PreDesign provides an ideal way to optimise the design of electrical components for the wind turbines, creating a grid compliant, predictable, and reliable wind power plant.

Procurement and manufacture

Working closely with its customer in the project and planning phase gives Vestas a competitive advantage in the procurement phase. With a broad range of product offerings, Vestas offers industry leading, high quality wind turbines covering all wind speeds and wind classes, thereby securing an optimal fit to the wind power project's needs and requirements. In general, Vestas follows a make to order principle.

- **Product offering.** Armed with multiple variants based on the 2 MW and 3 MW platforms, the customer can choose the wind turbines best suited to the specific site.
- **Options.** In addition, Vestas' technology leadership continuously ensures that options like the Large Diameter Steel Tower and Vestas De-Icing are available for site specific conditions.
- **Outsourcing.** Depending on the type of component and in consideration of market specific local content requirements, Vestas outsources various parts of the wind turbines.
- **R&D.** Vestas has a strong focus on continuously developing and optimising the performance of the wind turbines, thereby meeting customer needs and remaining the technology leader in the wind power industry.

Construction and installation

During the construction phase, the wind power plant is built and connected to the grid. Depending on the customer risk profile, Vestas can provide everything from simply supplying the individual wind turbines to an all-inclusive package, including supply, installation, and calibration of the wind power plant as well as civil and electrical works.

- **Supply-only** includes simply supplying the wind turbines and can include supervising, commissioning, and transporting tasks.
- **Supply-and-install.** In addition to supply-only, supply-and-install further includes installation tasks such as cranes and manpower.
- **EPC/turnkey.** In addition to supply-and-install, EPC/turnkey projects also include balance of plant tasks such as roads, foundations, cabling, and substation.

Operation and maintenance

Once constructed and installed, the operation and maintenance phase begins, which is the longest phase, lasting up to 20 years or more. Wind turbines need to be continually serviced to perform consistently at their best. With its substantial knowledge of optimising wind power plants, Vestas offers a wide range of innovative service solutions ranging from pay-as-you-go to full-scope energy-based availability guarantees as well as completely customised solutions, which can help increase the production and profitability of the wind power plant – thereby reducing risks, increasing business case certainty, and ultimately lowering cost of energy.

- **Active Output Management** (AOM) 1000-5000 refers to Vestas' standard service packages that ensure the highest possible output at all times.
- **Customised solutions.** Tied specifically to the customers' needs, Vestas also tailor-makes service solutions to optimise the business case.
- **Spare parts.** Often included in various service packages, Vestas also provides spare parts and repairs via its global supply chain and local presence.