

# “Huge opportunity in wind-solar hybrids”

## Views of Suzlon Group's Tulsii Tanti

Wind turbine maker Suzlon Energy has taken several transformational steps in line with its strategic vision, paving the way for its future growth. In an interview with *Renewable Watch*, Tulsii Tanti, chairman and managing director, Suzlon Group, talks about the overall business scenario, and the company's expansion plans and initiatives...

### What are your views on the renewable energy sector in India and its outlook?

Renewable energy has become pivotal to the movement against the risks of climate change. India's commitment at COP21 to reduce 33-35 per cent of carbon emissions by 2030 and increase renewables to 40 per cent of the energy mix by 2030 is set to truly expand the country's renewable energy portfolio. The government's target of 175 GW by 2022, including 60 GW of wind energy, is closer to becoming a reality, propelled by technology and a conducive policy environment for renewables, facilitated by both the central and state governments. As a result, we witnessed annual installations of 3,415 MW in 2015-16, higher than ever before, and 48 per cent higher than the previous year. The industry is expected to grow at a rate of 30 per cent annually, and may even surpass this, on the back of positive policies.

### What are the emerging trends in wind turbine technologies?

- Aerodynamics is the key to maximising output from wind turbines and there is an ongoing advancement in aerodynamics and material technology.
- Improvements in computational fluid dynamics analysis and the resulting optimisation of rotor configuration and pitch control directly translate into an overall increase in production.
- Our new blade design will utilise carbon fibre in key areas of the blade to reduce its weight. It allows us to design even more aggressive airfoils that generate more lift and less drag in the outboard



portions of the blade.

- Suzlon's hybrid tower uses a lattice base and tubular tower, which uses a unique transition piece to join the upper and lower sections of the tower. These towers make it easier to scale new heights, require less material and hence cost less.
- Wind farm management will grow to further enhance control of the park.

### How has the company's experience been in the solar power segment? Going forward, what will be its focus areas in the segment?

With 20 years of experience in the wind energy sector, we have established a multitude of relationships with stakeholders, enabling us to become one of the most vertically integrated wind energy companies in the country. We are applying these core values and experiences to solar energy.

Our vision is aligned with the goal of 175 GW of renewable energy by 2022 as envisioned by the government, and Suzlon has successfully entered and made its mark in the solar energy segment. We are currently working on the implementation of 515 MW of solar energy projects and are one of the few players to provide complete turnkey and engineering, procurement and construction solutions. We are also working on wind-solar hybrid solutions, as there is a huge opportunity in this area.

### What will be the likely impact of the solar-wind hybrid and repowering policies on the wind power segment?

Over 3,000 MW of ageing turbines are located in high wind sites and can be repowered with upgraded technology to maximise the potential of the site for higher energy yield. The 0.25 per cent rebate from the Indian Renewable Energy Development Agency (IREDA), in addition to the interest rate rebates available to the new wind projects being financed by IREDA, will further encourage investors to consider repowering.

There is an immense opportunity for repowering, especially in Maharashtra, Gujarat and Tamil Nadu, since they were amongst the early adopters of wind energy. We are glad that the Ministry of New and Renewable Energy (MNRE) has directed the state nodal agencies to extend support, especially for infrastructure augmentation of pooling stations, wherever required and for land acquisition. However, creating a facilitative framework for repowering is only the first step. With the initial

implementation experience, we are confident that other challenges will be addressed in subsequent revisions of the policy. Suzlon is the custodian of wind assets of almost 30 per cent (850 MW) of the 3,000 MW repowering potential identified by the MNRE. Suzlon also has the infrastructure, high-wind sites and the latest technology for higher capacity turbines – such as the award-winning S111 120 metre hybrid towers – to repower the older fleet of turbines.

There is a huge opportunity in wind and solar hybrid solutions, given the complementary cycles of generation and the scope for better utilisation of the grid. Wind-solar hybrids have multiple benefits to offer, as costs such as land and evacuation infrastructure do not have to be duplicated. Most importantly, Suzlon has an edge due to its existing development pipeline, and infrastructure and nationwide O&M strength.

### **What is the potential of offshore wind in India? Are there any developments pertaining to Suzlon's offshore wind energy project in Gujarat?**

With a coastline of 7,600 km, India has an enormous offshore wind energy potential. Offshore wind energy implementation requires a number of approvals from various departments. One of the key advantages of offshore wind energy is that large-size projects of 1,000 MW and above can be built, with the capacity utilisation factor ranging from 45 per cent to 50 per cent. This also enables better utilisation of transmission infrastructure and better despatch ability, with insignificant impact on land requirements. We foresee an offshore wind energy revolution in the country, given India's long coastline.

Suzlon has access to the most mature offshore wind energy technology and we are currently conducting a techno-commercial feasibility study in Gujarat. The state has a 1,600 km coastline and we have already identified more than 1,000 MW of offshore wind potential off the Kutch coast. The first pilot project will be for 600 MW and is likely to come up in Gujarat in a span of three to five years.

### **What are the key issues and challenges faced by the company?**

To achieve the government's target of 175 GW, the following challenges at the industry level should be addressed.

- Grid availability at the state level needs to be adequate, for which the government needs to make investments and introduce reforms.
- It is important that long-term feed-in tariffs are in place as that would bring regulatory certainty and a steady flow of investments from both domestic and international markets for setting up wind energy projects.
- It is important to have a uniform, long-term national policy and regulatory framework for both investments and implementation.
- Financial institutions/Banks should finance renewable energy projects with a longer amortisation schedule (viz., 20 years) and a debt-equity ratio of 80:20, in line with international practices.
- A push is required for strengthening the small and medium-sized enterprise sector by encouraging them to invest in renewable projects for captive use through initiatives such as interest rebates of 5 per cent on the investment made.
- The goods and services tax for renewable energy projects should be set at zero as this will lead to a reduction in the cost of energy and make renewables affordable for utilities and consumers.

### **What are the company's key priorities in the short and medium terms?**

We aim to install 20 GW of capacity in the next six years. This is more than our installations till date, but this achievement is well within reach. We have established a multi-pronged strategy that covers research and development (R&D), manufacturing and design as we endeavour to meet our goals. Our focus areas include R&D to harness technology and reduce the cost of energy, increase PLFs and make low-wind sites viable, ramp up volumes, expand our presence in focused markets, realise business efficiencies, introduce new-generation products, enable digitisation to enhance services, and

further optimise the capital structure. We are also working on setting up utility-scale, GW-size renewable projects. With our foray into solar energy, we have already expanded our portfolio and presence. We are confident that, with our plans and strategies, we are well on the way to achieving our vision of becoming one of the best renewable energy companies of the world.

### **What are the key policy and regulatory issues that the government needs to address in the short term?**

With almost 28.5 GW, India attained fourth position in the global installed wind power capacity. We now have to achieve about 31.5 GW by 2022, that is, about 5,000 MW annually, and I am confident the wind segment can deliver the 60 GW target.

The government should consider the following policy recommendations...

- For long-term policy predictability, accelerated depreciation and generation-based incentives should continue till 2022.
- Banks and financial institutions should earmark at least 20 per cent finance for renewable energy projects and provide finance for longer periods of 20-25 years.
- SMEs should be supported by a 5 per cent interest rebate for using renewable energy for captive needs.
- Availability of the grid and land infrastructure should improve at the state level.
- GST for renewable energy projects should be set at zero rate, since electricity is not subsumed under the proposed GST framework.
- The government should facilitate innovative financing and consider incentives to promote local manufacturing.
- The export-import practices of China and the US, which give lines of credit of \$1 billion and \$2 billion respectively for exports by local companies, should be implemented. In India, the EXIM offering is limited to \$200 million per year. The Reserve Bank of India should remove the 10 per cent limit imposed on one company or infuse \$5 billion fresh equity to EXIM. ■