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'The sector truly propels 'Make in India'

Tulsi Tanti, Chairman and Managing Director, Suzlon Group, says Indian wind sector is capable of achieving 60 GW target by 2022



The sector truly propels 'MAKE IN INDIA'

Indian wind sector is capable of achieving 60 GW target by 2022, says ***Tulsi Tanti***, Chairman and Managing Director, Suzlon Group, in an interaction with ***Anurima Mondal***.



Q India ranked 4th position in global wind power installed capacity index and Suzlon was one of the major companies that helped the country to cross the milestone. Tell us something about your contribution in India's wind energy market.

With ~28.5 GW wind energy installations, India attained 4th position in global wind power installed capacity, of which 10 GW has been contributed by Suzlon in the Indian market.

Suzlon wind installations are capable of powering over 5 million households per annum and offsets ~21.5 million tonnes of Carbon Dioxide (CO₂) emission annually. This installation also accounts for ~22% of India's renewable energy sector and 35% in India's cumulative wind energy installations. Wind technology has witnessed a change over the past two decades. Efforts are now focused on

improving the energy yield and bringing down the cost of energy. The technological innovations led by Suzlon have been implemented in many areas viz. the size and weight of rotor blades, to increasing the height and type of towers (75 meter lattice towers, tubular towers to S97 120 meter hybrid towers). Furthermore, majority of the turbines in India installed up to the year 2000 are below 500 KW capacity. Today, we have machines of up to 2.1 MW capacity and above.

We are exporting wind product and technology to more than 30 countries in the world and have made India a global manufacturing and technology hub for wind energy. Wind sector is truly 'Make in India'. We are a fully vertically integrated manufacturing company which provides end-to-end solutions and have 14 manufacturing facilities across the country.

Suzlon pioneered the 'concept to commissioning' model in the wind energy industry, offering complete end-to-end solutions to harness wind for energy generation. In the next 5 years, we plan to build almost 15 GW energy assets in India.

Suzlon has recently achieved 10,000 MW wind capacity in India. How did you manage to achieve this significant milestone?

Two decades ago, Suzlon Group embarked on a journey in the clean energy space from Gujarat. With cumulative wind energy installations of over 16,000 MW worldwide, Suzlon operates



across 19 countries and has over 1800 customers across the globe.

This landmark achievement is a testament of our customer's confidence in Suzlon's technologically advanced products and project execution and service capabilities. Our focus has always been on upgrading our technology and hence we have advanced our technology to harness wind energy at even Class II wind sites.

We have established a multi-pronged strategy that covers continuous R&D and innovation in design, manufacturing and O&M services.

Over the years, Suzlon has been leveraging technology to consistently increase the plant load factor (PLF). The S97 120 m (2.1 MW) turbine with hybrid tower has achieved 35% PLF. With the help of a prototype of the S111 120 m hybrid tower turbine installed at Bhuj, Gujarat is expected to deliver 40% PLF.

We are present across all nine high wind potential states of India i.e. Gujarat, Maharashtra, Andhra Pradesh, Telangana, Tamil Nadu, Rajasthan, Madhya Pradesh, Karnataka and Kerala and have invested in setting up 14 manufacturing units in strategic locations to cater to high wind potential sites.

Could you tell us about your core strengths that make you different from other players?

We are the market leader in India and have a global spread extending across Asia, Australia, Europe, Africa and North and South America with installations of 16.07 GW across 19 countries of which over 10 GW is in India.

We are industry leaders particularly in aerodynamic technology which is one of our biggest USP. We have our R & D centres in Germany, Netherlands, Denmark and India. Last year, we established a Blade Science Centre in Vejle, Denmark, which will work on the development of aerodynamics, pitch control systems, smart controls and new structures

Our R&D efforts are focused on the following:

- o Lowering the LCoE by 20% in the next five years with new turbines
- o More efficient turbines to make previously unviable sites viable
- o Continue to increase our plant load factor and to stabilize the grid in India
- o We envision gigawatt size projects supported by increasing digitization and best in class service



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Our R&D efforts have resulted in path-breaking new products such as the S97 120 and S111 meter hybrid towers. The towers in addition to getting our latest rotor designs into winds with higher energy also require one third less concrete for their foundations and are easier to transport to the site

- o The S97-120 m is giving 35% PLF in India, which is the highest PLF turbine in the country
- o The S111-120 m is forecasted to provide a 40% to 45 % PLF

With its foray into the solar segment, Suzlon is one of the few players to provide turnkey solutions for solar projects.

Suzlon has recently bagged 105 megawatt (MW) order from Axis Energy Group in Andhra Pradesh. Which other states are you focusing on?

Suzlon is a market leader in India with a global footprint across Asia, Australia, Europe, Africa, North and South America. Over the past two decades, Suzlon has built and consolidated its presence in 19 countries.

Post the Axis Energy Group order win, we secured a repeat order of 226.8 MW from a leading Independent Power Producer for a project in Andhra Pradesh. Additionally, we

received 50 MW order from leading power utility in the state of Gujarat.

What initiatives have you taken to reduce Levelised Cost of Energy (LCoE)?

We have invested close to USD 250 million in the last 5 years towards R&D and continue to do so with an aim to reduce the cost of energy further by 25 % in the next 5 years.

Aligned with the government agenda, we are striving for sustainable and affordable energy for all by focusing our R&D efforts on developing high yield products that effectively bring down the LCoE and improve customers' Return on Investment (ROI). This has resulted in path-breaking products:

- o The S97-120m (2.1 MW) turbine with hybrid tower which enables viability of low wind sites and has 35% PLF
- o The S111 (2.1 MW) turbine prototype has been successfully tested in India and USA. In India, it is amongst the few in its class to have the largest rotor diameter spanning 111.8 m. S111 is one of the highest yielding IEC Class III wind turbine.
- o The S111 120m hybrid tower prototype turbine commissioned in Gujarat in March 2016 targets a PLF of 40%.

India has a target of installing 4600 MW of wind power capacity in 2017-2018. Tell us two things that you would like to address for achieving the target?

To continue the momentum in the renewable energy, the government should consider the following policy recommendations

- o Long-term policy predictability: Accelerated Depreciation (AD) and Generation Based Incentive (GBI) should continue till 2022
- o Banks and financial Institutions should earmark at least 20% finance for Renewable Energy projects and provide finance for longer period of 20-25 years.
- o SMEs should be supported by 5% interest rebate for using renewable energy for captive requirement.
- o Improve availability of grid and land infrastructure at State level
- o GST for RE projects at zero rate, since electricity is not subsumed under the proposed GST framework
- o Provide manufacturing with support to facilitate innovative financing, increase capabilities, facilitate job creation and meet the 'Make in India' initiative. Wind manufacturing capacities are created in

India, while Solar is imported from China. Incentives for local manufacturing and job creation in the sector should be considered

- o Implement the EXIM practices of China and USA that gives a line of credit of \$1 billion and \$2 billion respectively, in case of exports by local companies. In India, EXIM offering is limited to \$200 million per year. RBI should remove the 10% limit imposed to one company or infuse \$5 billion fresh equity to EXIM

Do you think India has a business-friendly environment? What are the major challenges you face as a wind power producing company?

The government's thrust on renewable energy has helped the business environment. Alignment of State and Central Government has increased, which has impacted the execution of renewable energy projects.

There are various policy actions such as approval on the repowering policy, the draft wind-solar hybrid and revised RPO trajectory. Further, policy impetus included, 1 GW under Inter-state transmission scheme (ISTS) across various states and investments

in Green Energy Corridor project. During the Union Budget 2016, the coal cess was doubled to Rs. 400/tonne, thereby, creating the resources to achieve the 175 GW target. The government's commitment to improve grid infrastructure also reflected in the proposed additional depreciation for the plant and machinery acquired, installed for transmission activity.

What are your future plans?

Aligned with the 'Make in India' initiative and the green commitments of the Indian Government, we aim to install 15 GW in the next six years.


Our focus areas include R&D to harness technology and reduce Cost of Energy (LCOE), increase Plant Load Factor (PLF) and make low wind sites viable, ramp up volumes, expand our presence in focused markets, realize business efficiencies, introduce new generation products, enable digitalisation to enhance services and further optimize 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.

A Wind-Solar hybrid is another concept that is gaining momentum in the industry and Suzlon is focusing on it. This option optimizes land usage, grid infrastructure and offers energy reliability through complementary forms of energy generation.

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 your expectations from Indian renewable market?

The renewable energy landscape both in India and globally, is undergoing significant transformation. With over 28 GW wind energy, India today is the fourth largest in terms of wind installed capacity. We see the demand for clean, sustainable and affordable power continuing especially in emerging markets. India's commitment at COP21, to reduce 30% to 35% carbon emission and increase renewables to 40% of the energy mix by 2030 will continue to give impetus to incremental demand for renewable energy. 

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