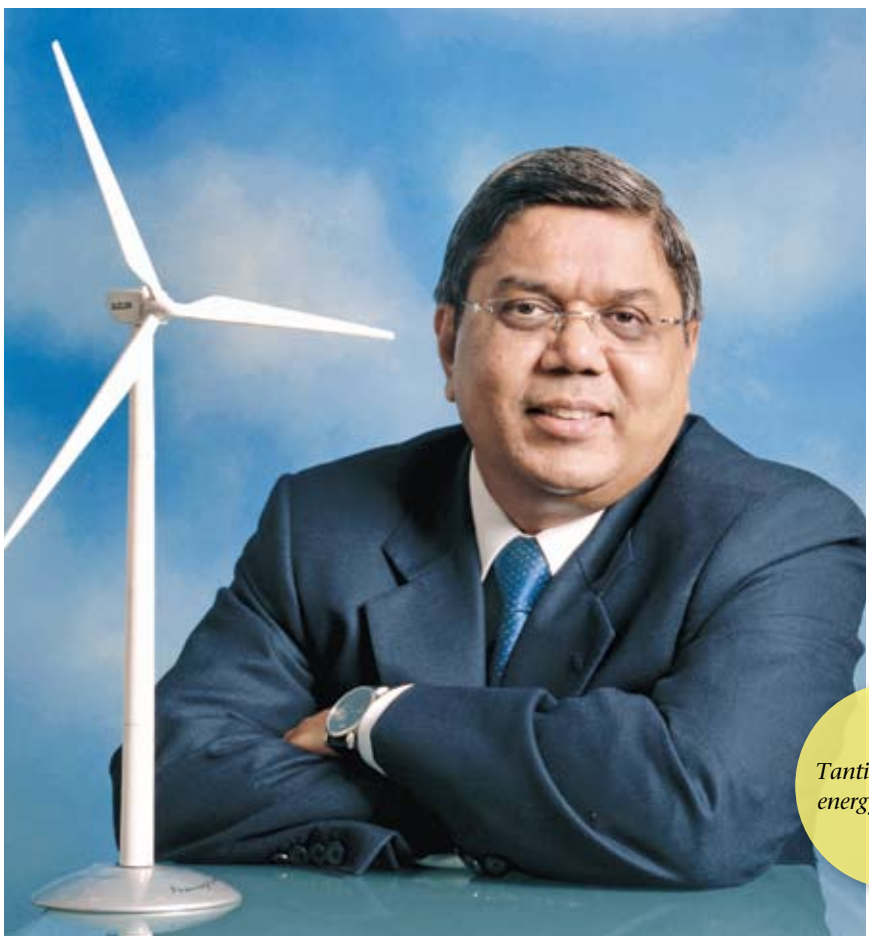
Riding the tailwinds



PHOTOS: PALSHRANJAN BHAUMICK

Tanti: renewable energy profitable

Wind turbine maker Suzlon diversifies into solar energy to straddle the renewables spectrum

Pune-based Suzlon Group, the eighth largest wind turbine maker (onshore and offshore) in the world, has returned to profitability after years in the red with a spirited foray into solar power and a robust strategy for high growth. In just one year, it has reduced its total debt by 47 per cent from ₹10,947 crore (March 2015) to ₹5,164 crore (March 2016).

In the last fortnight, Suzlon came out with its corporate score card for the second quarter for 2016-17 showing consolidated year-on-year (y-o-y) revenue to be up 57 per cent at ₹2,746 crore – this, on the back of sales of 353 MW. While the operating profit (EBIDTA) of ₹586 crore (pre-forex) has registered a five-fold jump on a y-o-y basis, the net profit is ₹238 crore as against loss of ₹202 crore. Boasting of a healthy order book pegged at 1,136 MW and valued at ₹7,165 crore, the group CEO, J.P. Chalasani, says: "We have achieved sustainable turnaround and profitable growth. Our performance is further boosted by rapid technological advancements and a conducive policy environment. Recent policy impetus such as revised RPO trajectory, approval on repowering policy and 1 GW under the inter-state transmission scheme (ISTS) will further bolster incremental demand for renewable energy in India. We are confident of maintaining this momentum and building on our strengths."

"Strong volume growth, controlled costs and resultant operating leverage enabled strong financial performance in this quarter," explains chief financial officer (CFO) Kirti Vagadia. "We remain focussed on tapping business efficiencies and sustainability of profitable growth, and continue to monitor our long-term debt which has helped keep our finance cost in control." Suzlon's consolidated net term debt (excluding FCCB) currently stands at ₹6,646 crore, further reduced by ₹230 crore quarter-on-quarter (q-o-q). "Our efforts to reduce debt are validated by our upgraded credit ratings, which has been recently revised by CARE to investment grade BBB from the earlier BBB-", adds Vagadia. "The upgraded rating is evidence of our improved liquidity profile, working capital cycle, significant volume ramp-up and increase in order intake, our back-ended debt maturity profile, healthy order book, significant reduction in our debt and interest cost, and our efforts are also supported by positive business outlook and policy environment conducive to renewable energy in India."

Now, with new wind turbine models hoisted on some of the tallest towers in the industry that eke out viability from unfeasible wind sites, ensure better yields and increase the capacity utilisation factor (CUF), Suzlon is seeking to expand its market share this year (2016-17) to 40 per cent – by 1,760 MW (1.76 GW, one megawatt being 1,000 gigawatts) of a projected 4,400 MW (4.4 GW) of wind capacities to be established across the country.

Suzlon had a 26 per cent market share in 2015-16, with 900 MW of a record 3,415 MW wind installations in the country. The previous highest

had been 3,196 MW in 2010-11. A third of Suzlon's 900 MW capacities – 288 MW – was contributed by just two of its new models - S97-120 2.1 MW and S111-90 2.1 MW – signifying rotor diameters of 97 and 111 metres respectively, installed on masts 120 and 90 metres tall and both of 2.1 MW rating.

Globally, the company has created 15,473 MW of wind capacities, 10,477 MW of that in Asia, including 9,517 MW in India, 929 MW in China and 31 MW in Sri Lanka, 2,716 MW in North America, 869 MW in South America, 764 MW in Australia, 508 MW in Europe and 139 MW in Africa.

Suzlon's order book grew over threefold within the past one year, from 375 MW to 1,251 MW, with Profit After Tax (PAT) recording ₹483 crore in 2015-16 after serial losses suffered in previous years (*see Table*). Similarly, the company registered an operating profit of ₹565 crore in 2015-16 following sustained operating losses of ₹2,037 crore in 2012-13, ₹918 crore in 2013-14 and ₹493 crore in 2014-15.

Only Gamesa Renewable Pvt. Ltd, the India subsidiary of Spain's Gamesa Corp. Tecnológica SA, with 1,004 MW, added more wind capacity in India than Suzlon in 2015-16. Other significant players were Noida-based Inox Wind Ltd, with 790 MW, Chennai's ReGen Powertech Pvt. Ltd, with 314 MW, Mumbai-based Wind World (India) Ltd (formerly Enercon (India) Ltd), with 189 MW, and Bengaluru-based GE India Industrial Pvt. Ltd, of the US's General Electric, with 127 MW.

As of 31 March 2016, India's installed capacities in renewable energy totalled 42,849 MW, including 26,867 MW of wind power, 6,763 MW of solar power, 4,946 MW of biopower and 4,273 MW of small hydro power. Of the overall energy installations in the country of 302,088 MW – 185,173 MW of it coal generated – renewable energy had a share of 14.2 per cent, with 9 per cent being the share of wind energy alone and solar power having a share of 2.2 per cent.

"Globally, renewable energy is witnessing a paradigm shift from being considered alternate to mainstream [fossil fuel based] sources of energy," says Tulsi Ranchhodbhai Tanti, Chairman and Managing Director of Suzlon Group. "Investments in both wind and solar have garnered traction owing to the improving cost competiveness enabled through technology advancements and the need to transition from fossil fuel dominated energy."

Minimising carbon footprint

Tanti is also heartened by India's recent ratification of the Paris climate change agreement at the United Nations. Accounting for 4.5 per cent of global greenhouse gas emissions, India, as the other signatories, has committed to generate at least 40 per cent of its electricity from non-fossil sources by 2030. This target includes the 175 GW of renewable energy capacity set by the government for 2021-22, 60 GW of it wind energy and 100 GW of solar that includes 40 GW rooftop (or off-grid) solar and 60 GW, grid-connected. Prime Minister Narendra Modi has made renewable energy a priority in addressing the nation's chronic power shortages and also in fulfilling an election promise of "Power to all by 2022".

India ratified the Paris accord on 2 October to coincide with the 147th birth anniversary of Mahatma Gandhi, who had espoused a minimum carbon footprint. The agreement enters into force on 4 November. To achieve the renewable energy targets by 2022, the Ministry of New and Renewable Energy (MNRE) has invited public and private companies and proprietorship firms to invest – in the five-year period 2015-2019 – in this sector that has been accorded priority lending status by the Reserve Bank of India.

"Companies like ours now have immense opportunity to generate sustainable, affordable and reliable energy for all," Tanti affirms. Preparing itself for these opportunities, Suzlon has set for itself the Mission "to deliver utility scale, best-in-class, end-to-end integrated renewable energy solutions to our customers", with the Vision "to be the best renewable energy company in the world, work towards social, economic and sustainable development, to create better life for future generations". In its charter VISION 2022, Suzlon looks to add as much as 20 to 22 GW of renewable capacity between 2016 and 2022.

In his June 2016 company analysis of Suzlon, HDFC Securities' Pawan Parakh notes that its robust order book of 1,243 MW, largely executable in 2016-17, and further order wins expected during the year make his volume estimate of 1,500 MW achievable. "The wind industry is benefiting from the high government thrust on renewables and from improving technology that is leading to attractive internal rates of return (IRRs) despite fall in tariffs," he mentions. "In this backdrop, we are confident of growth in wind installations over the next two to three years."

Globally, clean energy investments – largely from emerging markets - have increased from $272 billion in 2013 to $316 billion in 2014 and to $329 billion in 2015. This in 2015 helped add 64 GW of wind capacities and 57 GW of solar, together constituting about half of the overall power capacities added that year. Wind and solar are being increasingly preferred owing to their improving cost competitiveness, modular, scalable and low gestation period, lack of fuel price uncertainty, and low carbon footprint.

Rajkot-born 58-year-old Tanti founded Suzlon Energy Ltd in 1995 after suffering 10 years of power shortage, power cuts and spiralling costs in running his family textile business. A year earlier, he had ordered two compact wind turbines from Danish manufacturer Vestas Wind Systems A/S, essentially taking his factory off the power grid. He soon realised the extended application of wind energy and its economic and environmental advantages over traditional energy sources that he felt were worsening the plight of businesses.

Tanti's opting for wind energy as his full-fledged business, which he took to Pune, in Maharashtra, rather than basing it in Gujarat where his textile enterprise had been, came at a time when renewables were not considered a viable source of energy. He and his three brothers, Girish, Vinod

and Jitendra, all engineers like him, were the first subscribers to the memorandum for the company, establishing it at a time the domestic market was dominated by only a few international players.

Tanti's strategy was to manufacture turbines of comparable technological sophistication, but at a lower cost. To gain the required know-how, his company entered into a technical collaboration agreement in 1995 with Germany's Südwind GmbH to source the latest technology for producing wind turbine generators (WTGs) in India. Südwind was bankrupted in a couple of years, leading Tanti to branch out on his own by taking over its R&D arm and hiring some of its engineers. The R&D laboratory in the northern German city of Rostock became the training ground for young Indian technicians who then returned to his company in India with their newly-honed skills.

Suzlon's other German R&D unit, for turbine development, integration and innovation, and drive train technology, is in Hamburg. Its other European R&D ventures are the Global Wind and Site Knowledge Centres that have created the Supervisory Control and Data Acquisition (SCADA) systems for all Suzlon wind farms and wind turbines, in Aarhus and Vejle, in Denmark, and the Blade Development and Rotor Technical Field Support unit in Hengelo, in the Netherlands. Its Indian R&D facilities – for testing blades and for technical field support – are based in Vadodara, Pune and Chennai.

Tanti points out that India is also the technology and manufacturing hub for Suzlon, the company having developed an almost completely vertically integrated supply chain with 14 manufacturing facilities, and a vast vendor base. The company, with nearly 8,000 employees of diverse nationalities, manages its international sales business out of Aarhus.

To gain expertise in rotor blade design, Suzlon acquired AE-Rotor Techniek BV in 2000, forged a licensing deal with Aerpac BV a year later and tied up that same year with Enron Wind Rotor Production BV, all of the Netherlands. It made a quantum leap in technical competences in 2006 by acquiring the entire shareholding of Belgian turbine gearbox manufacturer Hansen Transmissions International NV for over $650 million, a move that was seen to be in line with the company's vision and growth strategy.

On the wings of energy production

A market leader

Most of Suzlon's 14 Indian facilities came up between 2003 and 2008, the nacelle, hub and rotor blade manufacturing units being set up in Puducherry, Daman and in Padubidri, Karnataka, the rotor blade manufacturing units in Dhule, Maharashtra, and in Bhuj, apart from a generator unit in Chakan, Maharashtra. A facility to erect tubular towers was established in Gandhidham, another for making transformers, plugs, moulds, electro-motive tools and special purpose machines came up in Vadodara and a unit manufacturing generators and control systems, in Coimbatore. It besides set up a blade, generator, control panel and nacelle unit in Tianjin, China, in 2006.

Suzlon subsidiary SE Forge also operates a casting unit in Coimbatore and a forging unit in Vadodara, both set up in 2006. After opening two new plants for rotor blades this year in Jaisalmer and Anantapur (Andhra Pradesh), the third such facility planned for 2016 was inaugurated on 20 October by Madhya Pradesh Chief Minister Shivraj Singh Chouhan in Badnawar, in Dhar district. The 19-acre state-of-the-art unit, with an annual capacity to produce 400 MW of rotor blades for the latest S111 2.1 MW turbines, has been brought into operation in less than a year.

Within years of its establishment, Suzlon was benefited by a law, passed in 1999, by the government of Maharashtra, the state where it was headquartered, which allowed companies to claim the costs of installing wind turbines as a tax deduction. Its sales consequently quadrupled to $131 million by 2002. Taking on its foreign rivals, Suzlon soon carved a place for itself to become a market leader, shaping the Indian wind energy market as part of its growth story. Today, it makes and installs wind turbines, including offshore turbines, manufactures blades, generators, panels and towers, and delivers turnkey projects through its project management and installation consultancy, and operations and maintenance services.

However, mounting debt, declining turbine sales globally and a default on a convertible bond redemption made the last seven years extremely challenging for Suzlon, its Chief Financial Officer (CFO), Kirti Vagadia, recalling that the company had been managing less business and more liabilities. Factors that have brought Suzlon back to profitability have been the rising demand for renewables, falling input costs (of raw materials such as copper and steel), and debt reduction.

It has managed to halve its outstanding debt - excluding the foreign currency convertible bonds (FCCBs) - to ₹7,010 crore at the end of the June quarter. "About $247 million worth of the outstanding FCCBs has been converted into equity, the remaining $328 million due only in 2019," says Vagadia. "With repayment structured over five years at about ₹1,800 crore yearly, cash profits from business will be invested in funding growth, with prepayment possible as per availability and growth."

Suzlon Company Secretary Hemal Kanuga wrote to the BSE and NSE on 5 August that the company has been in corporate debt restructuring (CDR) since 1 October 2012 and having reduced its debt substantially through several initiatives for liability management as well as through transformational measures, it desires to exit CDR by 31 March 2017. He mentions that Suzlon has had discussions with its lenders in this regard at a joint lenders' meeting.

Vagadia says these strategic initiatives have achieved a turnaround that has been on solid footing, in that the management has been most ethical and transparent in its dealings with all stakeholders and has not sought to shortchange any of them. "We have brought business efficiency to almost all our activity, ramped up volumes, and focused on execution and risk management, and on reducing the levellised cost of electricity (LCoE)," he mentions.

Suzlon had borrowed heavily from banks to gain full control of Germany's REpower Systems AG, a technology leader and manufacturer of the largest offshore wind turbines. The company, later renamed Senvion, was acquired through a series of tranches totalling $1.4 billion between 2007 and 2011. Tanti, who in June 2007 was elected chairman of its board, had wrested the company following a five-month takeover battle with the state-owned French nuclear behemoth, Areva.

Suzlon was also compelled to restructure $1.8 billion of debt after defaulting on a $200 million convertible bond redemption in 2012. Its liquidity was consequently sapped and

In full control

the additional burden of the global slowdown in turbine sales led it to sell Senvion in April 2015 to New York's Centerbridge Partners for a cash consideration of 1 billion and a potential earn-out of up to 50 million.

Technology transfer

The company has proposed to utilise around ₹5,000 crore of these proceeds of nearly ₹7,000 crore then equivalent towards debt repayment, and the balance to fund operations. It provided for the ₹2,000 crore loss in the sale of Senvion in the quarter ended 31 December 2014. This divestment of control of Senvion enabled Suzlon to release its Foreign Currency Translation Reserve (FCTR) that was getting accumulated in reserve and surplus. Senvion had licensed Suzlon for offshore technologies for India, while Suzlon granted Senvion the S111-2.1 MW licence for the US market. Despite the sell-off, Suzlon managed to extend its technology transfer agreement with Senvion on offshore wind turbines. This was further helped by the National Offshore Wind Energy Policy introduced in September 2015 and which has led Suzlon to assess the feasibility for a maiden pilot project of 600 MW off the Gujarat coast. Suzlon was additionally benefited around that time by divesting 23 per cent of its equity, worth ₹1,800 crore, to Dilip Shanghvi & Associates, the Sun Pharmaceuticals managing director's personal investment arm. As on 30 June, Suzlon's 21 promoters and promoter group held 21 per cent of the shares, as much as 95.75 per cent of which was pledged.

In 2011, Suzlon, then saddled with a net debt of over ₹10,000 crore, sold its remnant shareholding in Hansen Transmissions for ₹840 crore to German auto ancillaries firm, ZF Friedrichshafen AG. Over the years, Suzlon had been progressively divesting its equity in Hansen that it had fully acquired in 2006. Tanti had termed the sale of its final holding of 26 per cent to ZF Friedrichshafen as being in line with its strategy to optimise and strengthen its balance sheet. The deal injected much needed liquidity into Suzlon's balance sheet.

"Working capital is key to our business, and we have struggled over the last five years to provide adequate working capital facility to the business," explains Vagadia. "Our working capital is primarily non-fund based - letter of credit (LC) and bank guarantees - that we provide our suppliers and customers." As Suzlon embarks on higher growth, it has greater need for LCs and bank guarantees and has hence tied up with lenders and equity shareholders for additional working capital. "So, from ₹5,000 crore that was available as working capital before our restructuring, we now have almost ₹11,000 crore, which is more than sufficient to grow our business," he maintains.

In a landmark move in January, Suzlon forayed into the solar segment of renewable energy – one of few wind companies to take the step – by winning the tender of the Telangana State Southern Power Distribution Co. Ltd for the generation of 210 MW of PV (photovoltaic) solar power across six sites in the state. Suzlon will oversee the projects from concept to commissioning, within this financial year, and these will be one of 100 MW, at Veltoor, another of 50 MW, and four others of 15 MW each. "These projects of 210 MW will reinforce our commitment to execute tangible capacities in solar energy every year, while expanding our footprint," says Rohit Modi, Suzlon's CEO for International

Operation and New Business.

Suzlon is pursuing the 100 MW solar project at Veltoor through SE Solar, a joint venture forged in June with CLP (China Light & Power) India, one of the largest foreign investors in the Indian power sector with a total committed investment of over ₹14,500 crore and combined power generation of over 3,000 MW. The venture also marked CLP India's entry into solar energy, the company acquiring a 49 per cent stake in the SPV, with the option to gain the balance 51 per cent in future. Expected to be commissioned by May 2017, the project will be funded 80 per cent by debt and 20 per cent by equity.

PALASHRANJAN BHAUMICK

Looking to the future with gusto

Solar journey

"Solar and wind are complementary, hence we will leverage our project execution capabilities and end-to-end solutions to deliver solar projects," notes Tanti. "With a skilled workforce, excellent operations, extensive infrastructure and maintenance service network, and 20 years of experience in building the wind business, I am confident that our maiden solar journey will be a success." He sees this diversification into solar enhancing Suzlon's renewable energy portfolio and boosting its strong presence in the sector. "By integrating renewable energy solutions through combining wind and solar projects at single locations, we aim to contribute to the nation's sustainable growth by offering clean energy with innovative technologies and unique business models," he adds.

A year ago, Suzlon commissioned its next generation WTG, the S111-90 m 2.1 MW, of 111 m diameter rotor of 2.1 MW rating, atop a 120 m tower and designed for low wind sites. Over 300 MW of these turbines have been sold and 30 MW installed. It can generate 20 per cent higher energy compared to the S97-120 m 2.1 MW model, of which the company has sold over 800 MW and installed 330 MW since its launch in November 2014. Both these WTGs now constitute 75 per cent of Suzlon's orders. The S97-120 moreover generates 10 per cent more electricity than the previous S97-90 at the same site conditions.

Suzlon's chief technology officer (CTO) Duncan Koerbel describes the evolutionary S97-120 as the world's tallest and first of its kind combination all-steel lattice base and tubular wind turbine hybrid tower. He explains that the broad base of the lattice component helps support higher load and also reduces steel requirement, while the tall mast harnesses the enhanced wind resource available at higher altitudes for maximising energy yields in low wind regimes. The S97-120 has attained an impressive Plant Load Factor (PLF) of 35 per cent, when most turbines of 90-metre height operate at an average 15 to 20 per cent PLF. The model also increases energy output by 12 to 15 per cent over other turbines of the same capacity but on a 90 m mast.

In line with this vision, Suzlon is at work on its next generation S128 2.6 MW and S128 3.0 MW models, with ratings of 2.6 and 3.0 MW and both having rotor diameters of 128 m. Their tower heights will vary from 120 to 140 m and while the former is for low wind sites and for being marketed domestically by 2018, the latter is built for medium wind and for the international market, also by 2018. The S128 will offer 10 per cent lower LCoE than that of the S111.

The S111-120 m 2.1 MW turbine in Jamanwada, in the arid Bhuj region of Gujarat, is a prototype that completed tests and verification in September for being commercially available within the current financial year. "It is expected to generate about 20 per cent higher output than the S97-120 and to cross 40 per cent PLF levels that are closer to thermal-based sources," notes Chalasani. "Its relatively high per MW cost of installation is far offset by the reduced cost of energy generated." While the S111-90 turbine perches on an all-steel 90 m tubular tower, the S111-120, like the S97-120, rests on a 120 m hybrid lattice base and tubular tower. Each of the models has a rotor diameter of 111.8 m and swept area exceeding 9,500 sq m, and is available in variants of 50 Hz and 60 Hz, making it compatible for varied climatic conditions.

"Depending on the turbine technology, a full scope cost of installation today varies from ₹6 crore to ₹7 crore per MW," remarks Tanti. "Besides, the LCoE for wind is between ₹3.5 and ₹4.5, depending on the technology, site, etc."

He indicates that Suzlon's foray into solar technology was guided by the need for both wind and solar energies in the Indian context, with wind more practical in early morning and late evening, and solar prevailing from around 9 in the morning to about 5 in the evening when wind is relatively low.

"For Suzlon, the new growth path will be in its domination of the wind-solar hybrid spectrum," he maintains. "And this, in turn, will bring stability to the national grid."

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