

CASE STUDY: SUZLON

Introduction

Suzlon Energy Limited, an Indian company that specializes in the development, manufacturing, marketing, and operations of wind turbines, was incorporated in 1995. The company is currently ranked as the fifth leading wind turbine maker in the world, with a global market share of 7.7% in 2006 and 2,725 MW installed globally as of January 2008. A giant in the Asian market, Suzlon maintains a presence in 15 countries across five continents and employs over 13,000 people.

Though its corporate headquarters are based in Pune, India, the company has been developing its business from Amsterdam to leverage location and operational advantages. In a few years, the company may look to list on leading international stock exchanges.

In May 2007, Suzlon acquired the German company REpower, which has strengthened Suzlon's prospects of increasing its share in the promising European market. Previously, in May 2006, Suzlon acquired Hansen Transmissions, a gear-box manufacturer. Hansen raised \$590 million from listing on the London Stock Exchange.

Theme

In a period of thirteen years, Suzlon has transformed from a small company of twenty people to a major multinational business that has propelled India into wind superpower status. Suzlon's success illustrates the desperate need for reliable clean energy in a country that has been characterized until recently by its coal-based power production and its inefficient distribution system. Wind energy production in India has flourished thanks to supportive tax incentives and soaring energy demand, though the lack of a comprehensive national renewable energy policy and strong competition from China present obstacles to further growth.

Internal Factors

Suzlon was founded by Mr. Tulsi R. Tanti, who also acts as Director and Chairman of the Board. In addition, Mr. Tanti has been Chairman of the Supervisory Board at REPower Systems since June 21, 2007 and acts as President of the Gujarat Chapter of Indian Wind Turbine Manufacturers Association. He was awarded the "World Wind Energy Award 2003" for his achievements in the dissemination of wind energy in India. Mr. Tanti was also awarded the "Champions of Composites Technologies" award by Composite Centre International for his contribution in application of composite materials and development of composite technology.

In FY2006-2007, Suzlon achieved total sales of 7,986 crore or around \$2 billion. 48% of these sales came from overseas. Of the 1,456 MW supplied by Suzlon in FY2006-2007, 502 MW were supplied to customers outside India. Sales of wind turbine generators for FY 2006-07 stood at Rs 6,130 crore (app. \$1.5 billion), compared to Rs 3,841 crore (app

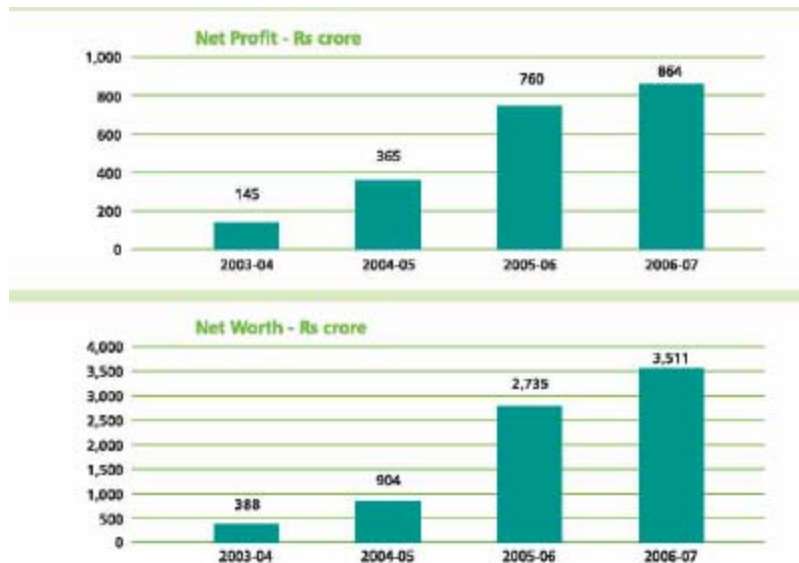
\$.96 billion) for FY 2005-06, registering a growth rate of 60%. Aside from the domestic market, the majority of Suzlon's sales go to the US, China and Europe.

WTGs revenue by geography.

Geography	FY 2006-07		FY 2005-06	
	Amount (Rs in crore)	MW	Amount (Rs in crore)	MW
India	4,121	954.60	3,530	882.55
USA	1,591	374.35	311	81.15
China	300	100.00	-	-
Europe	46	10.50	-	-
Rest of World	72	16.80	-	-
Total	6,130	1,456.25	3,841.00	963.70

Source: Suzlon's 2006-7 Annual Report

Reflecting its strong sales, Suzlon's net profits and net worth have grown significantly in recent years.



Source: Suzlon's 2006-7 Annual Report
 Note: A crore is approximately \$250,000.

Suzlon's success reflects a number of competitive strengths, which include:

- A strong management team
- A global production platform and access to an integrated manufacturing base
- Delivering enhanced value chain in wind energy markets
- In house technology and design capabilities
- Acting as a market leader in India (52.3% of total installed capacity in CY 2006) and significant presence in other high growth markets

Suzlon has also benefited from a favorable tax scheme in India, designed to promote renewable energy investment and development. Currently, the income-tax laws allow 80 percent of the cost of the windmill to be set off against taxable income. Furthermore, if

the owner can show itself as a power sector operator, it can gain more benefits under Section 80 (i)(a), under which income from power generation can get a tax holiday for 10 years.

Risks and Concerns:

Despite its strong performance and the benefits offered by the government, Suzlon faces a number of internal risks that include the following:

- Supply bottlenecks have occurred due to demand outpacing supply.
- Widespread global operations could impact operational efficiency, especially if quality sites are depleted or scarce.
- Large scale acquisitions like that of Hansen Transmissions in May 2006 and Suzlon's bid to acquire Repower Systems AG, exposes the Company to financial risk in form of additional leverage. The acquisition also poses challenges in form of integration and management of business operations and systems, in retention of select personnel, and in coordination of sales and marketing efforts.

External Factors

The wind energy industry has been booming in India over the last few years. According to the World Market Update 2006, in CY 2006, India had the third largest annual capacity addition in the world, with 1,840 MW in new capacity. The cumulative installed MW capacity for wind power in India is projected to grow from 6,228 MW in CY 2006 to 18,028 MW in CY 2011, which reflects a compound annual growth rate of approximately 25%.

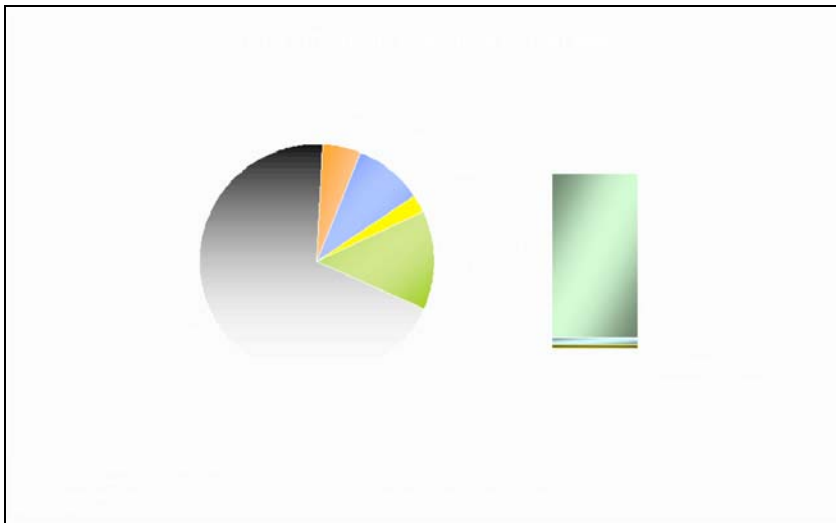
There are many factors that have placed India among the ranks of wind superpowers. India has extended coastlines that are ideal for harnessing wind power. The country has also successfully managed to install wind turbines without destroying its natural beauty: Jaisalmer's in Rajasthan, which houses both an ancient fort and several turbines, is an example of harmonious coexistence. Perhaps most importantly, the cost of wind energy is highly competitive in India, due to its strength in developing new technology while maintaining low labor costs.

In order to support the growth of the domestic wind industry, the Indian government's Ministry of New and Renewable Energy (MNRE) has encouraged state governments to implement national policy guidelines for wind development. In addition, new initiatives are being undertaken by the MNRE to reassess India's wind power potential, which is currently estimated to be 45,000 megawatts, or one-third of total energy consumption.

At the policy level, support from government officials is growing for the Model Renewable Energy Law of 2005. Developed by the World Institute for Sustainable Energy (WISE) in conjunction with the Renewable Energy & International Law (REIL) project, the Model Renewable Energy Law of 2005 includes the following provisions: 1) a national renewable energy target to obtain 10% of all electricity generated by new

sources from renewables by 2012, and 20% by 2020, 2) differential tariffs for renewable energy, 3) preferential treatment for grid connection of renewable energy, and 4) renewable obligations and certificates.

Despite movement towards a national policy on renewables, however, India still lacks a national renewable energy law that establishes cohesive goals and provides economic incentives for Indian wind energy projects. Moreover, the availability of cheap coal renders it the overwhelming primary source of energy generation, and international experts remain skeptical that wind will displace coal in India in any significant way. Only 7% of India's installed electricity supply was comprised of wind in 2007, and the percentage of total generation looks even worse.



Instead of being replaced by other sources, coal consumption is expected to expand rapidly alongside wind in the years to come. This trend does not bode well for India's environment. With its reliance on dirty fuels, India will become the world's third largest carbon emitter by 2015, according to the International Energy Agency,

In this context, Suzlon faces a number of external risks and concerns that threaten its profitability, including:

- Decreases or eliminations of government subsidies relating to wind energy in key markets
- Competitors with longer industry experience who may be able to react faster to trends and changes in customer demand. Emergence of other sources of energy that are comparable to wind energy in form of reduced cost and generation efficiency may also pose risk to wind industry in general and Suzlon in particular.
- Risks inherent in doing business in rural areas in developing countries due to lawlessness. For example, the development of Suzlon's wind farm in Khori, India was thwarted when at least 63 new turbines, worth \$1.3 million apiece and each capable of lighting several thousand homes when the wind blows, could not be

put into service because thieves had stolen their copper power cables and aluminum service ladders for sale as scrap.

Perhaps the greatest external risk that Suzlon faces is competition from China, both in terms of securing sales in China and keeping up with rival Chinese producers. Mr. Tanti himself acknowledges, "Being an Asian leader, we cannot afford to ignore China." Mr. Tanti is correct to be concerned: the Earth Policy Institute estimates that China will likely overtake India in total installed wind power capacity in late 2008 or early 2009

Currently, Chinese wind energy producers enjoy a price advantage on important equipment within the lucrative Chinese market. With their ability to copy technologies from companies such as Suzlon, Chinese manufacturers are able to invest less in research and development and concentrate on sales. Still, Mr. Tanti believes that rapid innovation and design changes will allow Suzlon to stay ahead of copycats. "It's a time-consuming process," he said, estimating that it would take two to three years for rivals to clone Suzlon turbines because they use unique or proprietary parts." Consequently, Suzlon has decided to build some of its latest designs in China for the market there, despite the risk.

Conclusion

Suzlon's success is particularly striking in light of India's dysfunctional power distribution system, where electricity boards charge industrial users more than twice as much per kilowatt-hour as in the United States. Moreover, the country remains vulnerable to blackouts on a daily basis, especially in northern India. Compounding the problem, the electricity boards are slow to collect payments and therefore lack the funds to properly invest in infrastructure. Thus, they rely excessively on costly diesel generators to prevent interruptions in service.

Wind energy presents an opportunity for India to break with this unreliable means of power production and distribution. As fossil fuel prices rise, wind turbines become increasingly attractive investments. Roughly 70 percent of the demand for wind turbines in India comes from industrial users seeking alternatives to relying on the grid, Mr. Tanti explains. The rest of the purchases are made by a small group of wealthy families in India, for whom the tax breaks for wind turbines are attractive.

The auditing group KPMG estimates that wind power costs around 3.5 rupees a kilowatt-hour, compared with 2.5-3 rupees for imported coal. "Wind energy is almost price competitive in many places," T.L. Sankar, senior energy adviser at the Administrative Staff College of India, told a renewable energy conference. Mr. Tanti estimates that wind will remain competitive as long as the price of crude oil remains above \$40 a barrel. To remain competitive at prices below \$40 a barrel, wind energy may require subsidies or carbon taxes on oil and other fossil fuels. Given current trends in energy prices, however, the prospects for wind look promising.

In order to increase its sales domestically and abroad, Suzlon will have to increase its cost efficiency to compete effectively with Chinese producers. Reduced costs can be

achieved by increasing economies of scale from larger projects and developing higher capacity wind turbines. Furthermore, India will need to pass a comprehensive national renewable energy law that will provide incentives such as reduced tariffs and production tax credits to increase wind energy production. Though India's current set of tax incentives has certainly helped to bolster its wind energy industry thus far, more progress needs to be made to increase domestic consumption and sales of wind energy.

Sources

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