Porters five forces: non-conventional energy

ASSIGN BUSTER

The Suzlon story being in 1995 with just 20 people; and in a little over a decade has become an epic. A company of over 13000 people, operations across the America, Asia, Australia and Europe, fully integrated manufacturing unit on three continents, sophisticated R&D capabilities and market leadership in Asia, ranked 5th in terms of global market share. The seeds of the idea that became Suzlon were sown by Mr. Tanti venture into the textile industry just as began in its booming years. Faced with soaring power costs, and with infrequent availabilities of power hitting his business hard Mr. Tanti looked to wind energy as an alter native. His first brush with wind energy was as a customer, having secured two small- capacity wind turbine generators to power his textile business. The company registered revenues of INR 12 Crore in the first year, and has since achieved consistent growth, registering revenue of USD 1, 405 in FY2008- just a decade after inception. The company went public with a highly successful IPO in September 2005. The issue was oversubscribed over 46 times, and led Suzlon to rank amongst the Top- 25 Indian corporations in terms of market-capital. Today Suzlon is being ranked the 5 leading wind power equipment the manufacturer with a global market share of 7. 7%. The company seized market leadership in India over 2, 000 MW of wind turbine capacity in country. The company adopted innovation at the very core of its thinking and ethos.

Suzlon combined this with another visionary step full backward integration of the supply chain. Suzlon by this approach has developed comprehensive manufacturing capabilities for all critical components in our wind turbines bringing into play economies of scale, quality control, and assurance of

supplies in an increasingly supply restricted market. Taking this focus forward, Suzlon acquired Hansen Transmission of Belgium in 2006. The acquisition if the world second leading gearbox marker gives Suzlon manufacturing. Suzlon R&D strategy brings emphasizes the need to lower the cost per- kilowatt- hour, in order to create ever more competitive technology and products. This step has success in the rapid global expansion of Suzlon business with orders from Australia, Brazil, China, Italy, Portugal, Turkey and the U. S. A We have set forth to fulfill the vision of company as global as the wind. Starting as unknown player in a nascent industry in India, Suzlon grew to become the leading player on India wind power stage, and from there has grown to rank among the Top- 5 wind turbine manufacturers in the world.

Mission of Suzlon

Moved to towards the state where being a socially and environmentally responsible citizen is integrated within all our day to day to day business processes. Establish a truly Indian company producing Windmills with Technology suitable for India and to manufacture and market in our own brand name.

Mission

Minimum 20% Net Margin

Minimum 50% Asian market share

Minimum 60% Indian market share

Minimum 25% Global market share

Minimum 40% Growth

Vision of Suzlon

Suzlon is today a major force in the global wind industry, from human beginnings in 1995, to ranking 5 worldwide, with 7. 7% of the global market share in just over a the decade. Already among the top five, Suzlon vision is to be a technology leader, to be among top 3 wind energy companies in the world by leveraging technological leadership and commercial acumen to exceed customer expectation and most respectable brand which grows fast & is the most profitable company employing the best team in the sector.

Vision Statement:-

To be the technology leader in the wind energy industry.

To be among the top 3 wind energy companies in the world.

To be the most respected brand and preferred company for all stakeholders

To be the best team and best workplace.

To be the fast growing and most profitable company in the sector.

COMPANY PROFILE

SUZLON ENERGY LIMITED- OVERVIEW

Suzlon Energy Limited traces its roots back to 1995, when the company took its first step on renewable energy stage with its incorporation. Suzlon began journey to the forefront of the wild energy industry with a small but significant project to supply wind turbine generators for a 3. 34 MW wind farm project in Gujarat, India. In little over a decade, Suzlon has grown to

rank as the world 5 leading and India the and Asia leading manufacturer of wild turbine, with over 2000 MW of wind turbine capacity supplied in India and across the world of USD 675 million, CFS FY 2006, with current order book exceeding USD 1. 7 billion. Technology- Suzlon today develops and manufactures technologically advanced, high-performance and cost- efficient wild turbine, to meet the diverse need customers all around the world. In India, Suzlon offers customer end-to-end wind energy solutions, including wind resource mapping site identification, site development and installation, and finally operation & maintenance services. This allows Suzlon to offer Indian customer economies of scale, and eliminates the need for customer involvement in the complex process of wind far m development.

Wind farms-

Suzlon has developed and impletion several large-scale wind farms throughout India the integrated solution approach. The principal advantage of this approach is the economy of scale: the larger the wind farm and more the number of WTGs- the lower the infrastructure cost per-wind turbine. Similarly, larger project have lower operation and maintenance costs per kWh due to the efficiency obtained in managing a larger wind far m. Among Suzlon many large project are:

The Kutch Wind Farm, Gujarat:

Asia largest wind farm developed and operated by Suzlon, it has more than 750MW of wind power Capacity, already installed, furthers capacity addition is in progress. This wind farm comprises of Suzlon time tested wind turbines of 600kW, 1250kW, and 1500kWCapacity.

The Dhule Wind Far m, Maharashtra:

The Dhule wind farm is Asia second largest wind farm with an installed capacity in excess of 675 MW. This wind farm comprises of Suzlon time tested wind turbines of 600kW, 1250kW and 1500kW capacity.

New Products-

Suzlon aims to drive global market share growth through expanding its product line with models customized to meet customer need as well as specific wild regimes, as seen in the new S52 600 kW and S82 1. 5 MW wind turbine models. In addition to this, Suzlon aims to improve the cost efficiency of generating power from wind through technology enhancements, and optimizing locations and sitting, to the end result of maximizing power generation while driving down the cost of power generated from the wind.

Technology integration-

Suzlon as an developer of WT Gs has developed design, development and manufacturing capability for all major components, development and manufacture of rotor blades, turbine, and tubular towers, control equipment and Nacelles covers. The company has implemented a far reaching backward-integration strategy that has brought the manufacture of all critical components in-house. Today the company, in association with subsidiaries, manufactures rotor blades, tower, nacelle covers, generators, gearboxes and all other critical components in its value chain.

The QA department at Suzlon not only takes measures about the quality control i. e. the product is good or bad, accepted or rejected, but it gives assurance to the customer for the quality electricity production backed by

revenue generation. Regular audits are also conducted by QA inspectors at various sites for the scrutiny of tools, equipments and processes.

Suzlon backward integration strategy is driven from the point of view of increasing in-house manufacturing and allied capabilities leading to lowered WT G costs, greater quality assurance, and a secure Supply Chain. While Suzlon looks to vertically integrate, the company is also pursuing a distributed manufacturing strategy with dedicated manufacturing facilities set up at key locations across the world to supply and service international high growth markets. Today, Suzlon has facilities in Belgium, China, India, and the United States manufacturing everything from components that go into turbine, to complete wind turbine generators, and supply markets around the world. Suzlon integrated wind turbine manufacturing facility in Tianjin, China; and rotor blade manufacturing facility in the Pipestone, United States are geared to support these high growth regions with dedicated delivery capability, enabling a flexible to the local markets, and lowered logistics costs.

Suzlon today develops and manufactures technologically advanced, high-performance and cost- efficient wind turbines. These services are developed to specifically meet the diverse need of customers all around the world. Suzlon offers customers end to end wind energy solution, including

wind resource mapping, site development and installation, and finally operations & maintenance services in India. This allows Suzlon to offer Indian customers economies of scale, and eliminates the need for customer innovation in the complex process of wind far m Development.

Suzlon order book position is a reflection of its strong market position and consistency in delivering to their customers. The order book stands at around USD 4, 335 million. Suzlon domestic order book position is for a capacity of 441 MW and international orders For 3, 726 MW. Suzlon primary customer s in India include companies that have manufacturing facilities with high power consumption. These companies have high profitability and seek investment opportunities with stable returns. In India, Suzlon casters to leading corporate houses like the MSPL Limited, Bajaj Auto Limited, Tata Group and Reliance, to name a few. Suzlon has driven a focused effort to make wind turbine more reliable, consistently delivering availability rates to customers, beating global standard higher than 95% on an average. Suzlon has set new standards with record breaking contracts that have been signed with top wind companies around the world. Majority of the orders have been signed with top wind energy companies in the state. Suzlon Wind Energy Corporation has signed agreements with Edison Mission Group (EMG) of Irvine, California and after repeat orders EMG holds more than 630 MW of Suzlon wind turbine capacity in the United States. Similarly Suzlon relationship with John Deere Wind Energy (JIDW) started with its investment in several Minnesota wind power projects, but quickly expanded to Texas and recently Missouri. Suzlon has successfully entered the Chinese Market, which is one of the world fastest growing economies, with five important contracts with a total of 233. 75 MW, of which 12 MW ar e installation and 221 MW are planned installations in 2007. A contract with Australian Gas & Light marked Suzlon entrance into the Australian Market. Another key high-growth wind energy market Suzlon has entered into is Brazil though a contract signed with SIIF Energies do Brazil Ltd. The project is poised to

double Brazil current installed capacity of 200 MW. Suzlon has adopted an innovative approach to its value chain, enabling the company to deliver customized solution to a variety of needs across the world. Suzlon has developed a fully integrated value chain with control over all critical components- gearbox and generator technology, to tower, rotor blades and in the end complete wind turbine.

India, the world 5th largest market of wind energy is Suzlon largest Asian market and a critical hub for manufacturing. The Suzlon group head quarters is situated at Pune, in Maharashtra. State-of-the-art research and development centers, manufacturing facilities, wind farm projects, training campuses and a network of offices are spread across India. Suzlon has been the market leader in India with more than 4400MW of installed wind energy projects in 8 states. In India wind energy sector, Suzlon has maintained its No. 1 position with the highest year-on-year market share since 10 consecutive years. In FY 2008-09, Suzlon had a market share of more than 50% in the Indian market. Suzlon has grown its cumulative installed base by 400% in the last 5 years since FY 2004-05.

Key Customers

Suzlon revolutionized the wind energy segment in India with its unique end-to-end solutions. This hassle-free business model has enabled over 1300 customers from a variety of industry sectors and regions within India to invest in the wind energy sector with ease and confidence. Suzlon customers in India include small, medium, large scale businesses, private and public sector companies, power utilities, independent power producers (IPPs) and even high net worth individuals (HNI). Many of these customers do not have

prior exposure or expertise of the power sector. But they clearly saw a big opportunity in the power generation business in a fast-growing, energy-starved market like India. Suzlon supported them with its proven technology, expertise and the comfort of end-to-end solutions to help them harness this opportunity. Following is a list of some key customers who have relied on Suzlon experience and expertise for their wind energy projects.

Porter’s Five forces model

Bargaining Power Of Supplier

Is It difficult or costly for Suzlon to switch to another supplier?

Towers are very costly as it accounts for 26. 3% of the total cost and its partial demand is met by in house production but in that it is going for expansion by year 2009, but upto that time it has depend upon other supplier, the cost of rotor blades account for 22. 2% and for the rotor blades it’s complete demand is met by in house production located in India, China and U. S so for that it does not have to depend on any supplier. Gear box manufacturing costs 12. 9 % and also it is manufacture by only two companies and from that one is acquired by suzlon itself but for the partial demand it has depend on only one supplier so in this case bargaining power of supplier is high. In the case of generators there are many manufactures and also many companies are specialized in it. Moreover it account for only 3. 44% of the total cost and in yr 2009 it is going for expansion so in this case bargaining power of supplier is moderate to low. Thus overall we could say that the switching cost is moderate to low.

Demand Supply Gap:-

According to Tulsi the major challenge face by the wind power industry is not the market but the short supply of the products. Also GE's order book is full for the year 2008, 09 and also half year of 2010. Thus clearly there are certain inputs are in short supply.

Gear box :- Acc. To CEO " with gearbox it's not as easy to increase capacity as it is with other components. You need a lot of equipment, from gear cutting machines to heat treatment facilities that may it is a very capital intensive business. So increasing capacity involve a huge investment compared with, say, blade manufacturer and that take time." Thus there is clear pressure in the Gear box manufacturing facility. But the company has acquired Hanson ltd so partial demand is met by suzlon itself and also it is going for expansion so for only partial demand it has depend on other supplier so there is a less problem of short supply of gear box for suzlon as compare to other producers.

Rotor blades :- A crucial component requiring sophisticated production techniques, global supply is dominated by independent blade maker LM Glasfiber, which has about 27% of the market. All the major turbine manufacturer apart from GE energy and RE power produce most of their own blades. But suzlon is going for capacity expansion by 2009 so for that it does not have to much rely on other supplier. Hence the bargaining power of the supplier could be considered moderate to low.

Generators:- Supplied to the wind industry by a number of large companies such as ABB and Siemens, and dedicated supplier like Gamesa and suzlon .

No signs of a shortage of supply. And also suzlon going for capacity expansion by 2009 so most of the demand is met by itself. Thus the bargaining power of the supplier is low.

Tower:- There are many manufacturers of the towers in India and also across the world as it does not need high precise engineering as in the case of gear box. And in tower also it is going for capacity expansion so for that also it do not have to rely on other suppliers. Thus we can say that the bargaining power of the supplier is Low.

Controllers:- The controllers are made by many industries so it is not the key issue for the company. In this case the bargaining power seems low.

Thus the overall we could see that the bargaining power is moderate to low.

Whether it makes good economic sense for the industry to integrate backward?

The cost of the switching is low to the products it can be proved from the above graph. So the buyers can easily move from one company to another company.

The number of buyer is small & volume is high

In the case of big wind turbine manufactures they do not take order of less than 750kw which is considered to be a big amount by most of the suppliers. Thus the client buying the turbine are important to the wind turbine manufactures. Thus the bargaining power of the buyer is generally high in case of particular customer. Also there is strong demand from the buyer which could be seen from the strong growth rate of the company. Thus we

should take advantage of both and we would obtain average of it i. e moderate.

Buyer demand is weak or seller are scrambling to secure the market:

The cumulative growth rate of the industry is around 25%. Thus it could be considered it is an high growth rate industry. Thus the buyer’s demand is high. In case of seller it is found that the challengers and it’s few challengers are only increasing their market share where as small or mid size companies are scrambling to secure the market. Thus in this condition the buyer’s bargaining power could be considered moderate.

Buyer are well informed regarding the prices, costs and products

The customer are well informed regarding the products of suzlon; they can directly go to the company’s website and get the required information of the product. In case of prices they are not shown at the website at the same time while contacting to the company person also they give round about prices of the wind turbine. In case of total costs of wind turbine it largely dependent on the land acquisition cost, set up cost, logistics cost etc and hence it is very hard to get exact cost. In this case the buyer’s bargaining power could be considered moderate.

Buyer cannot easily go for backward integration

There is a low threat in integrating backward for the company which have not been up till now in this particular industry because of following factors

High Entry barriers: only to set up a gear- box manufacturing plant it takes more than 100 million dollars. To set up a rotor blades plant of 350 sets it take an investment of 35 crores.

So like this all the other parts like tower, generator, panel etc also required huge investment.

So there is not easy for any buyer to go backward.

Unavailability of skilled labor: The skilled labor in this industry is not adequately available as per the Vestas CEO. Thus in this case it seems that the buyer’s bargaining power because of skilled labours and high entry barriers is low.

Thus overall the bargaining power of buyer could be considered to be between low to moderate

Threat of new Entrants into the Industry

Brand Preference : There is a clear brand preference in the wind energy industry it could be understood by the market share of the company. The market share of Suzlon is 48%, Enercon is 27. 6% and NEG- Micon it is 11. 9 %. Thus overeall there are 3 companies which shares 87. 51 % of the industry, Even in the remaining 12. 5 % 5. 54% is of Vestas. Thus the clearly the customer have brand preference of this four companies compare to other brand . Thus for new competitors the threat to enter the industry is high.

Exit barriers : Exit barriers in this Industry are very much high because it required a huge investment to start the business and the payback period is

also long about 8 years. So for every player its not easy to exit from this highly capital intensive Industry. So due to that the threat from new entrance is low.

Capital Requirement: The capital requirement in the wind turbine industry is very high. To set up manufacturing facilities of rotor blades set of 350 set is 65 crores. Similarly to set up a gear box unit it requires 100 million dollars. Thus the potential entry of the new company is low.

Access to distribution channels: all the companies are using direct distribution channel, hence it is not possible for a new entrants to access the distribution channel of other company. In this case also the potential entrant is low.

Regulatory Policies

Government Regulation of Energy Markets: clean energy companies are highly dependent on government subsidies and support to bring in revenue, given that oil, coal and nuclear are cheaper, well established energy sources and hold oligopolistic control over the world- wide energy market. Given this dependence on the government, many environment and social movement are focusing on pressuring the government to pave the way for a transition to renewable. Furthermore, many government endorse local renewable as an alternative to foreign fossil fuels, in an attempt to create energy independence. Government support of renewable is taking place on local, national and global scales. In this case the entry of the potential entrants is high.

Tariffs and international trade restrictions: The international trade and tariffs are supportive thus the companies are benefited from it. The government through out the world are giving high incentives to this industry. Thus in this case because of supportive nature to encourage this industry the threat from the new entrants is moderate. Thus overall the threat from new entrants is from low to moderate.

Rivalry in the same industry

Oligopoly market: suzlon is market leader in wind energy having 48% stake followed by enercon having 27. 6% and than NEG-Micon with 11. 9% stake. So if one company change its strategy than it is immediately followed by other companies. So from that we can say that rivalry among competitors is strong.

Differentiation: suzlon has differentiated itself and got the benefit of vertical integration through backward integration in terms of in house production that is done by its own subsidiaries and in the form of services having end to end solution that is from selection of sites to setting a wind farm according to the requirement of the customer. So from this we can say that the rivalry among competitors is moderate to low.

In this case the threat from substitute product is between medium to high. But the operating cost is higher in the substitute product compare to the wind power. Also the procurement of the raw material is an important factor for the company like Bagasse co-generation, Biomass gasifier and wate-to-energy. Where as in case of small hydro power and solar photo voltaic the cost is higher than the wind turbine. Thus the overall we could say that the

wind turbine is a unique product and the substitution from the substitute product is low. Thus overall threat from substitute product is b/w Medium to high.