

India's Suzlon catches wind in China

By Pallavi Aiyar (Feb. 6, 2008)

TIANJIN, China - Forty-meter long, sparkling-white rotor blades lie stacked against each other as far as the eye can see. Icarus himself would have coveted these elegant wings, had he found himself in this 22,500-square-meter site in Tianjin, a port city that serves Beijing, an hour's drive to the northwest.

This substantial facility is in fact the largest manufacturing site run by Indian wind energy major Suzlon, capable of producing wind turbines with an annual capacity of 600 megawatts (MW). The facility, set up with an investment of US\$60 million, came on line in April 2007, making it the first investment by an Indian company in China's rapidly expanding energy sector.

India and China are usually associated as competitors in the energy business, particularly for hydrocarbon resources. Given soaring oil prices coupled with the threat of climate change and pollution, the development of renewable energy resources has emerged as a matter of priority for both countries. Thus, as was repeatedly stressed during Indian Prime Minister Manmohan Singh's recent visit to Beijing, renewable energy holds the potential to be an area of collaboration between two of the world's fastest-growing economies.

Although only a newcomer, Suzlon already accounts for 8% of the lucrative wind energy sector in China, having made and sold turbines of 220 MW capacity in 2007. Nine wind farms across the country are supplied by Suzlon, most in the wind-blown northern province of Inner Mongolia. According to Paulo Soares, chief executive of Suzlon's China branch, the goal for 2008 is to generate turbines with a 600 MW capacity, a target he is confident will be reached. A megawatt, or a million watts, is sufficient power to provide daily electricity for up to 1,000 households.

Use of wind energy has risen steeply in China in recent years. In 2004, the country had a mere 194 MW of new installed capacity. That rose to 488 MW the following year and by 2007 3,031 MW of wind power was installed in the country, second in the world to only the United States. India, which formerly led China in the sector, trailed both countries in terms of new installed capacity last year with less than 2,000 MW.

This change in the fortune of China's wind market is the result of a government push for renewable energy, according to Soares.

The demands of China's double-digit economic growth has helped the mainland overtake Japan to become the world's second-largest energy consumer, after the United States. Coal provides around 70% of China's energy, and with pollution a major drain on the economy, Beijing is keen to reduce the share of the fuel in the country's energy mix.

According to a World Bank report, 16 of the world's 20 most polluted cities are in Beijing. Another of the bank's reports found that the health costs related with outdoor air pollution in urban China in 2003 amounted to between 157 billion yuan (US\$21 billion) and 520 billion yuan - depending on the method of calculation used - or between 1.2% and 3.8% of the country's gross domestic product (GDP).

China's energy production has for many years failed to keep pace with its GDP growth rate. The Ministry of Electric Power has estimated that 15% to 20% of the country's present energy demand cannot be met. Faced with a combination of energy shortages, rocketing oil prices, endemic air pollution and the threat of climate change, Beijing has thus made it a priority to aggressively develop renewable energy technologies.

As a result, in January 2006, a Law on Renewable Resources came into effect aimed at ensuring that by 2020, 10% to 12% of the country's total energy mix will come from renewable resources.

The law obliges grids to purchase the more expensive renewable energy at prices fixed by the government. The extra costs are borne by consumers as a result of slightly higher prices for power. The law also offers financial incentives such as preferential loans and tax breaks to boost renewable projects.

The result for wind energy is growth beyond expectations, with a government target to reach five gigawatts (GW) of installed capacity by 2010 met more than two years in advance - total installed

capacity stands at 5.6 GW. The next target is 30 GW of installed capacity for wind by 2020, a goal Soares says should be comfortably attained.

Soares argues that a key driver for wind energy in China is a regulation that stipulates that the share of non-hydro renewables should reach 1% of total power generation by 2010 and 3% by 2020. Wind at present accounts for only 0.29% of China's power generation but 0.8% of its total installed power capacity.

China to blow ahead

Wind is one of the few sectors in which India is ahead of its Himalayan neighbor, though that is unlikely to last. India's total cumulative installed capacity in wind is around 8 GW compared with China's 5.6 GW. Soares predicts that China will overtake India in terms of total installed capacity within the next two years.

Ultimately China has a much larger potential for wind than India: the country's onshore potential for wind energy is estimated at a 250 GW. China's one-party system can also push through land acquisitions for wind farms much more easily than is possible in India.

For the moment though, India has much to teach China as is evident at Suzlon's Tianjin plant where dozens of Indian engineers scurry around in the sub-zero temperatures giving instructions and training to Chinese colleagues. No domestic Chinese company can at present match the might of Suzlon, the world's fifth-largest producer of wind turbines. Around 50% of China's wind energy market is currently serviced by foreign investors.

How Suzlon fairs in China in the long-term will be an important development, since investments in renewable resources across the border are a viable and mutually beneficial way to boost cross-Himalayan investments more generally.

During Manmohan's China visit, the Chinese side expressed a strong interest in investing in India's hydro-power sector, an area in which China is a clear world leader. Should collaboration in renewables between the two countries really take off, it could lead to warm winds of change thawing even further the once frosty ties between the neighbors.

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