



With its 655 megawatts of capacity, the Kutch wind farm in the north Indian state of Gujarat is one of the largest in the world.

Growth Indian style

Thumbing their noses at the financial crisis, investors breathe new life into the **Indian wind market**; new subsidies are poised to take effect, and industry insiders see an upswing in the offing.

By Andrea Röder

India has broken the 10,000 megawatt (MW) mark. Some 1,800 MW of new wind capacity were added between April 1, 2008 and March 31, 2009 – the Indian fiscal year. But Ramesh Kymal is not satisfied. The Indian Wind Turbine Manufacturers Association (IWTMA) chairman and managing director of Vestas Wind Technology India says that these figures are “way below expectations.” He had estimated a figure well over 2,000 MW.

The reason India’s wind industry fell short of its target was that it began to feel

the effects of the global financial crisis. Newcomer Lanco Infratech canceled construction of an EUR 80 million turbine factory in the south Indian city of Mangalore. The production facility had been slated to open by April 2009 and produce 500 two-MW turbines a year. “The effect of the recession that we are feeling today in India has forced us to return to our plans to venture into the wind and solar energy sector” says Lagadapathi Madhusudan Rao, executive chairman of Lanco Infratech. The company, specialized in building fossil fuel pow-

er plants, airports, and roads, had ambitious plans. Last fall, Lanco wind division head Prasad Kandimilla, said that the company wanted to be a “global player.”

“We are having more and more difficulties in the finance sector, especially when it comes to loans,” says Indian Wind Energy Association (InWEA) general secretary V. Subramanian, describing an all too familiar phenomenon. Somak Gosh, head of corporate finance and development banking at India’s Yes Bank, confirms that it is hard to get low-interest loans for terms longer than



Wind and wool: In Kutch, market leader Suzlon has been putting up wind turbines since 2002, from 600 kilowatts to 2.1 megawatts.

10 years. Because few subsidized loans for renewables are available in India, with the exception of small programs of state energy agency IREDA and World Bank funds, companies are in a difficult situation. For a time, Indian banks offered long-term, low-interest loans. But the current tenor of the industry indicates that such loans have dried up. The new renewables minister Farooq Abdullah offered a glimmer of hope, however, with his announcement that he wanted to ensure renewables projects would have “priority sector” status in the future, giving them funding advantages.

Energy companies at the starting line

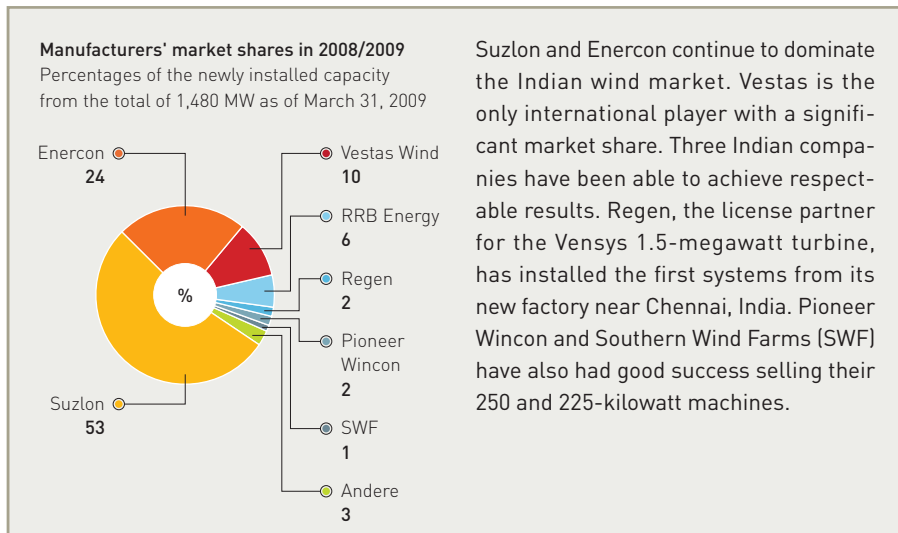
Until now, just a few companies – the turbine manufacturers – have tightly controlled the planning, construction, and financing of wind projects. But now Suzlon, Ves-

tas, Enercon, GE Wind, Gamesa and the rest face competition. Consulting firm Net-scribes predicts that powerful domestic investors in particular will change the business. “A lack of competition has attracted energy giants due to the large scope of growth available in the industry,” says Net-scribes analyst Gaurav Kumar. Not even a quarter of the Indian government estimate of 45,000 MW of wind potential has been tapped – in other words, there is plenty to go around.

The first steps are being made. For instance, Tata Power announced that it would expand its wind capacity from 200 MW to 500 MW by 2011. Another giant, Reliance Energy, is planning a number of small projects totaling some 8.5 MW in the southwest state of Karnataka. NHPC Ltd, the largest hydropower operator in the country, is building a 100 MW wind farm

in the state of Madhya Pradesh. The mainly state-owned concern Gas Authority of India Ltd (GAIL) is looking for suitable sites for its first installation with roughly 20 MW, which will be subdivided into four smaller wind farms.

Other projects include plans by Western Railways to install seven 1.5 MW turbines this year in the coastal Saurashtra region. Railway spokesman S.S. Gutpa says that the company could install up to 100 MW in Saurashtra alone. Western Railways already operates wind farms in India’s leading wind state, Tamil Nadu. Already, more than 4,300 MW of capacity is installed on the southern tip of the continent. Recently, state-owned Neyveli Lignite Corporation (NLC), which operates India’s largest open-pit brown-coal mine, announced a 50 MW project in the southern Indian port city of Tuticorin. The windmills will supply elec- ▶



Suzlon and Enercon continue to dominate the Indian wind market. Vestas is the only international player with a significant market share. Three Indian companies have been able to achieve respectable results. Regen, the license partner for the Vensys 1.5-megawatt turbine, has installed the first systems from its new factory near Chennai, India. Pioneer Wincon and Southern Wind Farms (SWF) have also had good success selling their 250 and 225-kilowatt machines.

the American subsidy model (new energy 1/2008). Until now, however, the program has only applied to a maximum of 49 MW of wind power. This will be significantly raised under the new, modified program. Subramaniam says that the new program will be “introduced soon.” Ramesh Kymal also says that the program should take effect by the end of this year at the latest.

Indeed, talks seem to be in their final round. Following lengthy consultations, the planning commission – directly under the prime minister and responsible for the country’s five-year plans – approved the expanded GBI model for wind projects late last April. The initial terms are clear; subsidies would last for a period of 10 years. However, there has been no final agreement on the rate per kWh exported to the grid. But according to industry insiders, the rate is likely to be between 0.4 and 0.6 rupees (0.6 to 0.8 euro cents). The finance ministry’s budget office estimates a total annual subsidy volume of 30 billion rupees (circa EUR 460 million) – enough to finance some 4,500 MW.

InWEA general secretary Subramanian emphasizes that the previous tax write-off for initial investments would remain in place. The regulation allows wind power producers to write off more investment costs. In the first year, operators can write off 80 percent of their investments – and earnings are tax free for the first ten years.

Investors will have to choose one of the two subsidy programs. The subsidies cannot be combined. Subramanian is convinced that the GBI model, as a further option to the tax model would, “definitely give (the wind industry) a much needed boost.” Crisis or no crisis, nobody in the wind industry doubts the continued growth of the Indian wind power sector.

This is also leading to structural change. Until now, an estimated 80 percent of all wind turbine operators have used the power themselves. Owners are industrial or commercial businesses that use part of the wind power themselves and sell the rest. Soon, more commercial operators will export 100 percent of the power they produce. ◀

tricity to the grid of an open-pit mine currently under construction.

The Oil and Natural Gas Corporation (ONGC) has set its sights much higher. In its first step, the company will invest USD 123 million in a 50 MW project in Gujarat and smaller wind farms in Karnataka. The state-owned oil company wants to install up to 2,000 MW, mostly in the state of Gujarat. Just a few months ago, the coastal state in the northwest of India approved new subsidies for wind and solar power (new energy 2/2009).

Rising land costs

“Such plans are very heartening,” says Subramanian. “These companies would not invest if they did not see good prospects for the sector as a whole and their projects in particular.” He is keen to point out that wind energy is the fastest growing renewable power source in India. But the good news cannot cover up the obstacles to growth that the industry is struggling with.

The Netscribes study says that the greatest problems in the Indian wind market – apart from the financial crisis – are the difficulty of acquiring land for wind farms and poor infrastructure. Prices for good wind farm land have risen considerably, and it is not uncommon for sellers to demand fur-

ther compensation. “Poor roads cause constraints in transportation and installation of large turbines to wind farms located in rural areas,” says study co-author Gaurav Kumar. Furthermore, exporting power to the grid is often impossible due to overloaded and aging grids – especially during monsoons in the high season. “Wind farms are then simply taken off the grid,” Kumar says. Operators are not compensated for the downtime.

The Indian wind lobby hopes to improve the situation by modifying the subsidy system. Subramanian, himself a former undersecretary in the Ministry of New and Renewable Energy, appeals to Prime Minister Manmohan Singh’s government, which was confirmed just a few months ago with a large majority. “The newly elected politicians have to have a more positive attitude toward wind power and not simply use the financial crisis as an excuse for inaction.”

New subsidies on the way

Subramanian says that one of the most urgently needed steps is expansion of the “Generation Based Incentive” (GBI). Last year, the renewables ministry for the first time enacted a feed-in rate for photovoltaic systems and a tax credit for every kilowatt-hour (kWh) of wind power, similar to