



The Future 500 Conference

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Suzlon Energy Limited

Powering a Greener Tomorrow

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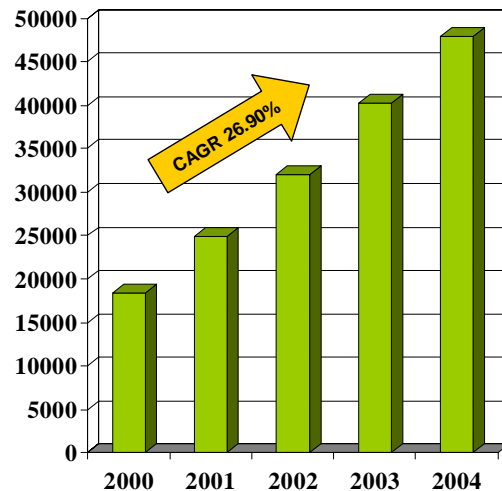
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Energy and Wind: Global Environment Shift Towards Wind as an Energy Source...



- ❑ Global wind energy industry market size of US\$ 11.3 billion as of end 2004⁽²⁾
- ❑ Wind energy share contribution to increase from 0.2% in 2002 to 3% by 2030 ⁽¹⁾
- ❑ More than 60 countries have harnessed wind energy potential
- ❑ Europe, with 34,725 MW, accounted for 72.5% of the cumulative installations
 - Wind energy accounted for 23.4% of the net increase in generating capacity from all fuel sources between 1995 and 2000 ⁽¹⁾
 - Wind contributed about 20% to electricity supply in Denmark, 6% in Germany and 5% in Spain

Accumulated Installed Capacity (Year End)



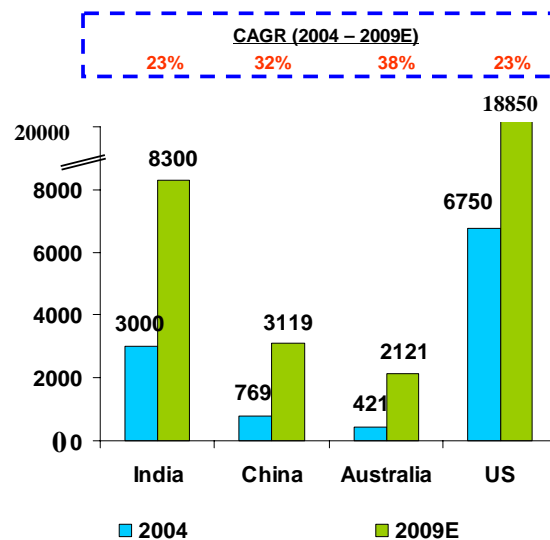
Source
 (1) World Energy Outlook 2004, IEA
 (2) BTM Consult ApS

Global Wind Energy: On a Strong Growth Path



- ❑ Global wind energy sector expected to grow to 117,412 MW between 2004 and 2009E
- ❑ Region-wise capacity growth expected at
 - 38% for Australia
 - 25% for Asia [India & China]
 - 23% for America
 - 17% for Europe
- ❑ India, China, Australia and US are expected to be key growth markets

Key Markets Wind Power Status 2004 vs. 2009E : Cumulative Installed Capacity (MW)



Source : BTM Consult ApS Report 2005

Indian Energy Environment Potential for Growth in Energy Consumption



- ❑ India has been characterized by energy shortages
 - Installed capacity of 115,544 MW, as of March 2005
 - Demand exceeded supply by 7.3% with peak shortage at 11.7%
- ❑ “Power for All by 2012” vision by Indian Government to increase installed capacity to 200,000 MW
 - Electricity Act 2003 stipulates minimum percentage of power generation from renewable energy
 - Government of India expects alternative energy sources such as wind energy to play an important role in bridging electricity deficit
- ❑ Strong growth potential for electricity consumption in India
 - One of the lowest electricity consumption levels globally
 - Per capita electricity consumption of 355 kWh compared to 827 kWh in China, 1,878 kWh in Brazil and 12,331 kWh in the United States ⁽¹⁾

Source
(1) United Nations

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Wind Energy - India in the Global Scenario Placed Favorably



- ❑ Largest market in Asia and 3rd largest market globally in terms of 2004 capacity additions - Added 875 MW
 - Represented 10.7% of total MW added globally
- ❑ 5th largest market globally, in terms of 2004 cumulative installations
 - Represented 6.3% of global installations with 3,000 MW⁽¹⁾ [March 2005 = 3,595MW]⁽²⁾

Country	Cumulative Installed MW at end of 2001	Cumulative Installed MW at end of 2004	CAGR	% of Global Market Share
Germany	8674	16649	24%	34.70%
Spain	3329	8263	35%	17.20%
USA	4245	6750	17%	14.10%
Denmark	2328	3083	10%	6.40%
India	1482	3000	27%	6.30%
Netherlands	430	1081	36%	2.30%
Italy	682	1261	23%	2.60%
Japan	357	991	41%	2.10%
UK	386	889	32%	1.90%
China	406	769	24%	1.60%

Source :
(1) BTM Consult ApS Report 2005
(2) Wind Energy Outlook

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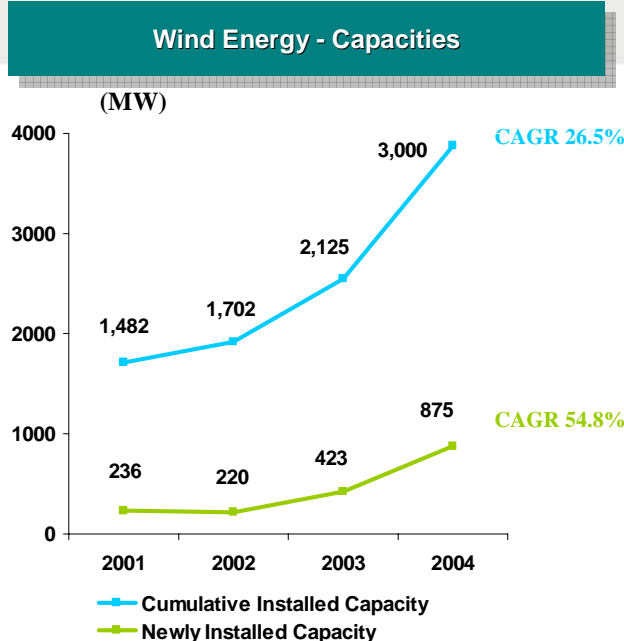
Indian Wind Energy : On the Upswing



- India has witnessed high growth rates in capacity installations since 2001

- Installed capacity at 3,000 MW, up from 1,482 MW in 2001, CAGR of 27%
- Annual installations increased from 236 MW in 2001 to 875 MW in 2004, CAGR of 55%

- Government of India estimates wind power potential at 45,000MW ⁽¹⁾



Source :
1. Ministry for Non-Conventional Energy Sources

Key Growth Drivers for Wind Energy



Cost Competitiveness

- Cost per Kwh of wind generation decreased from US\$ 0.38 in early 80s to present US\$ 0.03-0.06, at excellent wind sites ⁽¹⁾
- Rising Oil & Gas prices makes Wind Energy cost competitive

Environmental Awareness/ Government Initiatives

- Kyoto Protocol Implementation - Carbon-dioxide emission to reduce by 5.2% of 1990s levels, by 2012
- Implementation of Renewable Portfolio Standard requires minimum percentage of power generation from Renewable Energy

Energy Security

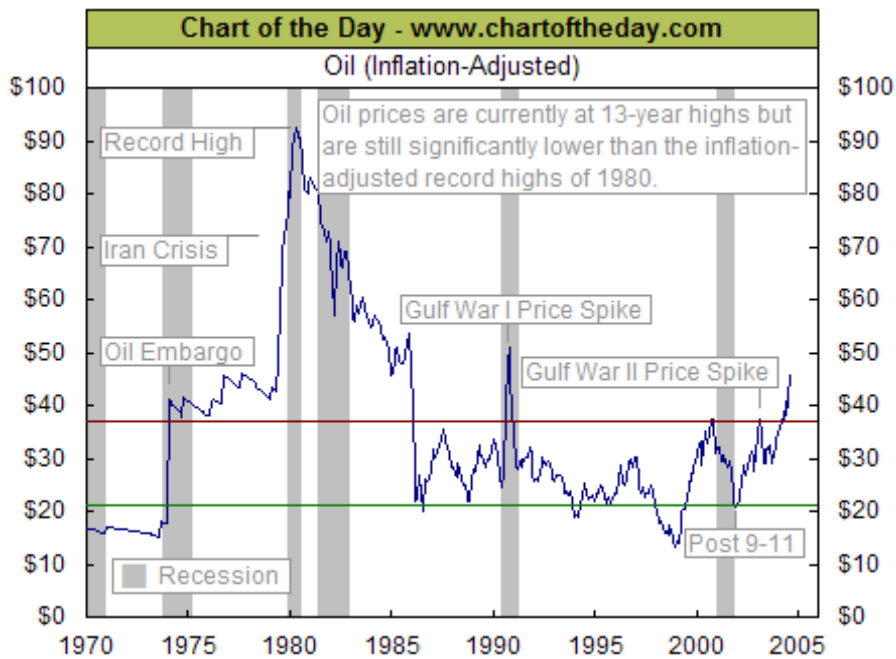
- Price volatility of Oil & Gas have increased focus on Renewable Energy

Increased Electricity Demand

- Global Electricity Consumption expected to double between 2002 & 2030⁽²⁾
 - higher growth in India and China
- Wind Energy's contribution expected to increase from 0.2% in 2002 to 3% in 2030 ⁽³⁾

Source :
(1) American Wind Energy Association
(2) World Energy Outlook 2004, IEA
(3) World Energy Outlook 2004, IEA

Future price of oil?
The answer is blowing in the wind



Energy

- Global Scenario
- India Scenario

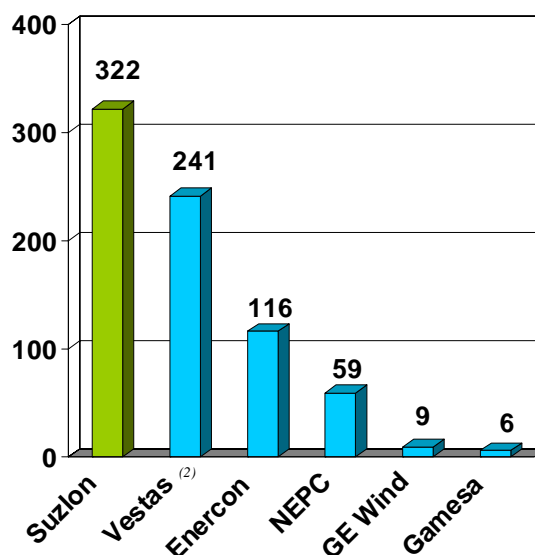
Suzlon - Business Overview

Suzlon: Leaders in Wind Energy Ranked #1 in India



- ❑ Leading manufacturer of Wind Turbine Generators for last 10 years
- ❑ Ranked #1 in India for last 7 consecutive years, in terms of annual installations
- ❑ Ranked # 6 Globally in MW installed in 2004
- ❑ Cumulative sales of 1,126 MW vis-à-vis India's cumulative installations of 3,595 MW as of March 2005 ⁽¹⁾
- ❑ Strong market position in India and focused on growth markets globally

India - Annual Installed Capacity in 2004



Source
(1) Wind Energy Outlook
(2) Includes capacity of NEG Micon

Key Competitive Strengths

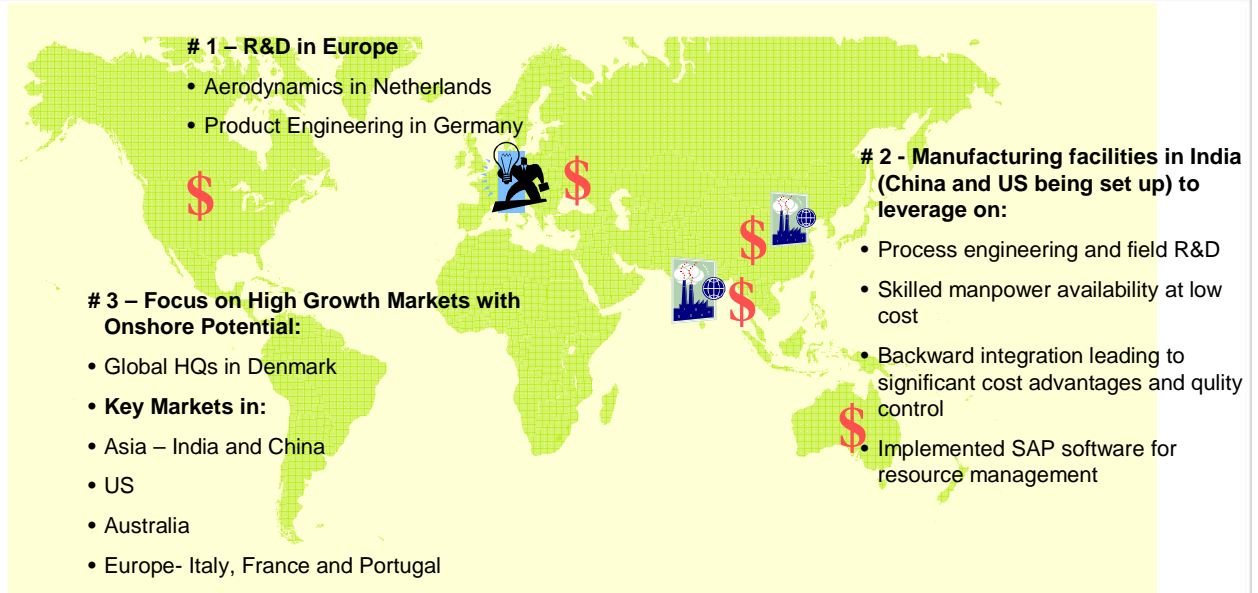


- #1 Leveraging Best of All Worlds - Technology, Manufacturing and Market Opportunities
- #2 Total Wind Energy Solutions Provider, along with Associate Companies
- #3 Backward Integration to Control Supply Chain, Reduce Costs and Quality Control
- #4 Strong Home Market Presence
- #5 Experienced Management Team

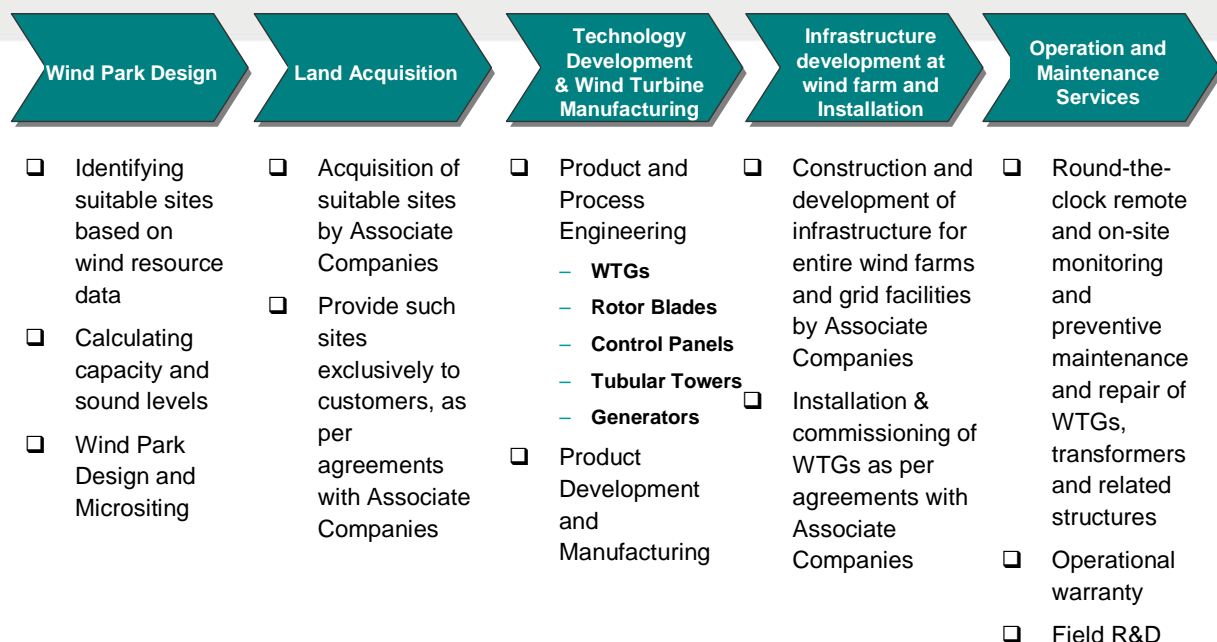
#1 Integrating Best of All Worlds



Leveraging on key locales for Technology, Manufacturing and Market



#2 Integrated Wind Energy Solution Provider, along with Associate Companies *The Indian Context ... customised based on Market*



#3 Backward Integration to Control Supply Chain and Reduce Costs *Quality, Reliability and Service Security*



In-house Manufacturing

- Rotor blades
- Tubular towers
- Generators
- Controllers

Benefits

- Optimised Technology Development
- Low Manufacturing Cost
- Improved Quality Control
- Improved Service Support

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#4 Strong Home Market Presence



Consistently Ranked # 1 for the last 7 years (market share of 42.8% of 2004 installations)

Presence across 7 key Indian Windy States with 27 wind farms

Manufacturing facilities in proximity to key windy sites

Clientele include Indian Companies such as Bajaj Auto, Godrej Industries and Ramco Group

Well positioned to leverage on high growth Indian wind energy market through Integrated Business Model

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#5 Experienced Management Team



- ❑ Over 2,300 employees world-wide
- ❑ International business managed out of Denmark
- ❑ R&D teams in Germany and the Netherlands
- ❑ Engineering office in India
- ❑ Manufacturing management from India
- ❑ Experience in all aspects of wind energy

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Asia's largest Wind Park



250 MW Capacity Wind Park at Satara

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auroville: an emerging universal township



The Future 500 China Conference

Notes and Recommendations