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World Turbines

Industry Study with Forecasts for **2012 & 2017**

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INDUSTRY STRUCTURE

Gains will be driven by rising demand in the large turbine engine segment, supported by increases in aircraft manufacturing, as well as continued strength in a number of power generation markets.

Global market to advance 4.9% yearly through 2012

The world market for turbines and related products (turbine-based engines, generators and generator sets) is projected to increase 4.9 percent annually to $106 billion in 2012. Growth will be driven by rising demand in the large turbine engine segment, supported by increases in aircraft manufacturing, as well as continued strength in a number of power generation markets. Global demand for electric power generation turbine products is projected to advance 4.6 percent annually to $63.2 billion, providing solid opportunities, but decelerating from rapid increases since 1997. Growth will moderate after a decade-long boom in wind turbine demand moved these products from a niche market in a few countries to a major segment of the worldwide turbine and electric power generation industries. A number of factors will promote growth in the power generation segment, including rising electric energy requirements in many developing countries and environmental concerns that will spur the replacement of older coal-fired power plants. Environmental factors will also promote sustained growth in wind generation systems, although not at the torrid pace of the past decade.

World Turbine Product Demand
($83.6 billion, 2007)

China, other developing areas offer best prospects

Growth in the large Chinese market will remain well above the global average, despite a deceleration from the double-digit annual pace of the past decade. The strongest percentage gains are expected in Mexico and the Latin America and Africa/Mideast regions, buoyed by the ongoing expansion of the highly underdeveloped power generation and aerospace sectors found in most countries. Above-average growth is also expected in India and Eastern Europe, where modernization and expansion of power generation and air carrier sectors are stimulating considerable demand for turbines. The large and developed markets in North America and Western Europe will generally not match the pace of these markets. However, given the sheer size of turbine demand in these two regions, the continued growth in both will provide significant opportunities for turbine producers.

Turbine engines, gas turbines remain key segments

The largest product segment, turbine engines, will post above average gains of 5.5 percent annually, benefitting from rising aircraft production. The gas turbine segment (i.e., gas turbines used in power generation applications) will also register above average sales gains, approaching $17 billion in 2012. This represents a strong rebound from the declines of the 2002 to 2007 period, which saw significant retrenchment in the large US gas turbine market after a gas power plant building boom.

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Sample Text, Table & Chart

ASIA/PACIFIC

India: Outlook & Suppliers

The market for turbines and related products in India is expand ... 8 billion in 2012, ahead of average ... orrid 2002 to 2007 pace. growth ... ue to the slow increases in wind tu ... emely high 2007 base. O wind m ... more rapid, with gains in eight pe ... d hydraulic turbines, turb and tur ... es of more than ten percen for gas ... ng gains will be aggressiv the part ... den the availability of elec in the c ... d the budding local air ca try. Fo ... o June 2007, Bharat Heav cals Li ... rs for 8,925 MW of coal- plants a ... f hydroelectric plants. Ai increas ... ational government to de portion ... order to increase efficienc foreign

SAMPLE TEXT

W ... to the staggering gains of to 2007 ... rbines is expected to rise annually ... which is an annual demand of more than nine times 2002 levels in India -- and will keep the country among the top five markets for wind turbines in that year. This is hardly surprising since the country's large land area allows for sustained growth in wind turbine sales through 2012 and beyond. Furthermore, India is expected to remain among the five leaders in total installed wind capacity, with the level expected to increase to nearly 17,000 MW by 2012. In addition, as the Indian market begins to mature, the large installed base of wind turbines will provide some aftermarket and repowering (substituting newer, more efficient turbines on an existing wind turbine tower) opportunities.

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TABLE VI-7

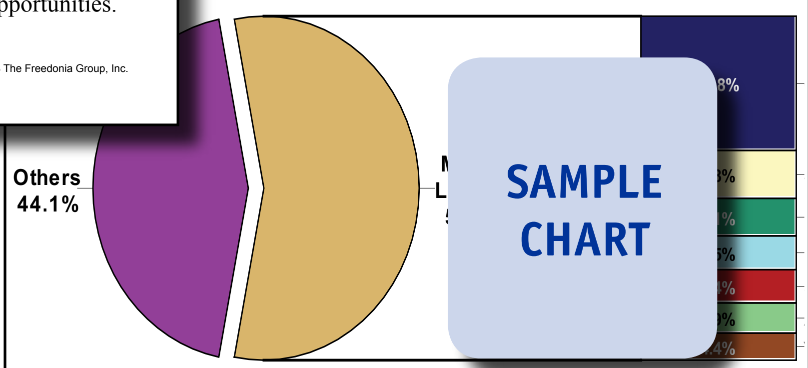
INDIA -- TURBINE PRODUCT SUPPLY & DEMAND
(million dollars)

Item	1997	2002	2007	2012	2017
Population (million persons)	954	1045	1128	1211	1293
$ GDP/capita	1580	1870	2590	3480	4470
GDP (bil 2006$)	[illegible]	[illegible]	[illegible]	[illegible]	5775
% fixed invest	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Gross Fixed Investment (bil 2006$)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
$ turbines/000$ invest	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Turbine Product Demand by Type	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Turbines:	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Wind	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Gas Combustion	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Steam & Hydraulic	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Microturbines	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Turbine Engines	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Turbine Generators & Generator Sets	290	380	590	880	1250
net exports	-80	-20	50	70	100
Turbine Product Shipments	650	1000	2860	3830	5000

SAMPLE TABLE

CHART VIII-1

...BINE PRODUCT MARKET SHARE BY COMPANY, 2007
($83.6 billion)



SAMPLE CHART

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Sample Profile, Table & Forecast

TABLE VI-8

INDIA -- TURBINE PRODUCT DEMAND BY APPLICATION (million dollars)

Item	1997	2002	2007	2012	2017
Electric Power Generation (bil kWh)					
$ pwr gen turbines/000 kWh					
Aerospace Equipment Shpts (bil $)					
$ aircraft engines/000$ aero shpt					
Turbine Prdt Demand by Application					
Electric Power Generation					
Aircraft Engines					
Marine & Other					

SAMPLE TABLE

COMPANY PROFILES

Enercon GmbH
Dreekamp 5
26605 Aurich
Germany
49-49-41-9270
http://www.ene

Annual Sales:
Employment:

Key Products:

SAMPLE PROFILE

Enercon is a privately held manufacturer of wind turbines. In addition, the Company offers a range of services, including site assessment, project management, approval planning and aftermarket service.

Among the wind turbines produced by Enercon are E-33 330-kilowatt (kW), E-44 900-kW, E-48 800-kW, E-53 800-kW, E-70 2,300-kW, E-82 2000-kW, E-112 4,500-kW and E-126 6-megawatt models. Typical applications for the Company's wind turbines include power generation. E-48 wind turbines are made with BOOSTCAP ultracapacitors supplied by Maxwell Technologies Incorporated (US) via an agreement between Enercon and Maxwell Technologies. BOOSTCAP ultracapacitors are designed for use as backup energy storage and power delivery units. In September 2007, Enercon installed two E-126 wind turbines at a site in Emden, Germany.

Production activities for Enercon are conducted at production facilities in Aurich, Emden and Magdeburg, Germany; Sweden; Turkey; India; and Brazil. Combined, these facilities encompass about 450,000 square meters of space. The Company is building a plant in Portugal that is expected to be completed in 2008. Additionally, Enercon

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"Shipments of turbine products from Indian facilities are forecast to increase 6.0 percent annually to $3.8 billion in 2012. This is in line with demand and will lead to a modest increase in the country's trade surplus. Preventing even faster increases will be the expected deceleration in the domestic wind turbine market. In addition, moderating growth in the world wind turbine market, which is beginning to mature in a number of countries, will restrain export opportunities for Indian manufacturers of these products."
--Section VI, pg. 209

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Other Studies

Fuel Cells

US commercial fuel cell demand will expand nearly sixfold through 2012 to $975 million. Electric power generation will remain the largest market and grow 41% annually, bolstered by ongoing interest in less energy pollution and foreign dependency. Portable electronics will be the fastest growing market and benefit direct methanol fuel cells. This study analyzes the US fuel cell industry, with forecasts for 2012 and 2017 by product and market. It also reviews technology, evaluates market share and profiles major players.

#2328 .... 04/2008..................... $4500

World Electric Power Equipment

World electric transmission and distribution equipment demand will rise 4.4% annually through 2011. The industrial and commercial sector will see the strongest gains as cogeneration proliferates and products such as high voltage transformers become more common outside of the utility sector. This study analyzes the $85 billion world electric power equipment industry, with forecasts for 2011 and 2016 by product, market, world region and for 17 countries. It also details market share and profiles major players.

#2261 .... 10/2007..................... $5400

Battery & Fuel Cell Materials

US demand for battery and fuel cell materials will rise 4.4% per year through 2011. Growth will be driven by rising production of high-performance batteries (e.g., lithium, Ni-MH) and a nearly fivefold jump in fuel cell demand. Metals will stay the leading material while polymers and carbon/graphite lead gains. This study analyzes the US battery and fuel cell material industry, with forecasts for 2011 and 2016 by type, function and application. It also details company market share and profiles major players.

#2244 .... 10/2007..................... $4400

World Fuel Cells

Global fuel cell spending (R&D, investment, sales) will grow 15% yearly through 2011. Portable electronics will be the fastest growing commercial use while electric power generation will stay the largest. Proton-exchange membrane fuel cells will remain dominant over other chemistries. This study analyzes the $5.2 billion world fuel cell industry to 2011 and 2016 by product, chemistry, application, world region and for 14 countries. It also reviews technology, evaluates market share and profiles major players.

#2194 .... 05/2007..................... $5500

Diesel Engines

US demand for diesel engines will grow 3.8% annually through 2011. Best opportunities in the dominant motor vehicle market will be found in light-duty trucks, with the much smaller passenger car segment also faring very well. Off-highway diesel engines will experience slowing but still robust demand as new emissions regulations phase in. This study analyzes the $16.6 billion US diesel engine industry to 2011 and 2016 by product, material and market. It also details market share and profiles major firms.

#2171 .... 03/2007..................... $4400

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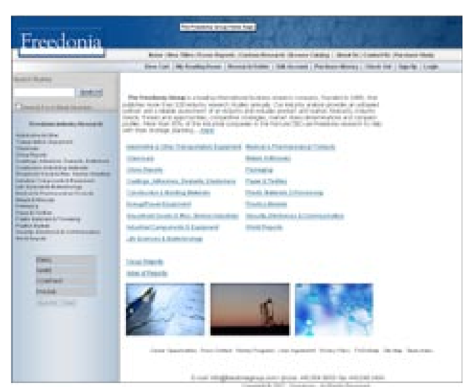

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