

The Wind Forecast – Supply Side

March 2008

The Wind Forecast – Supply Side (new market report available)

Supply chain analysis framework:

- Positioning
- Capacity
- Lead times
- Production footprints
- Market shares
- Contracting
- Consolidation

Player profiles on:

- **WTGs:** Acciona, Ecotécnia, Enercon, Gamesa, GE, Goldwind, Mitsubishi, Nordex, REpower, Siemens, Sinovel, Suzlon, Vestas, AAER, Clipper, Dongfang, Fuhrländer, Multibrid, WinWinD
- **Gearboxes:** Bosch Rexroth, Chongqing, Echesa, Eickhoff, Fellar, GE, Hansen, Ishibashi, JaKe, Moventas, Nanjing, Pujol, RENK, Winergy, Brad Foote, Elecon, Hangzhou
- **Generators:** ABB, Elin, Enercon, Winergy, Hitachi, ingeteam, Leroy Somer, Mitsubishi, WEM, WEIER, Yongji, Shanghai Electric, NSK, WEG, Hyuandai
- **Blades:** Rotec, Baoding, Enercon, Gamesa, JSW, LM, Nordex, Siemens, Suzlon, Tecsis, TPI, Vestas, Umoe, SINOI, Euros, MFG, Multibrid, Knight & Carver

Included components and materials:

- WTGs
- Gearboxes
- Generators
- Blades
- Bearings
- Castings
- Forgings
- Steel
- Carbon fibre
- Fibreglass
- Copper

Updated market outlook 2008-2012

Prices:

Personal copy (EUR 650)
Corporate multi-user (EUR 1,600)

The supply chain is, in general, under pressure to meet the demand. The current bottleneck is concentrated on the ability to produce gearboxes and bearings, which is also due to the lack of castings, forgings and alloys meeting the required level of quality.

A decade ago, the production capacity of blades was the bottleneck determining the overall production capacity of the industry. This is now changing, and successful business planning now includes the ability to manage long-term planning, large investments and the long payback times on critical components such as gearboxes and bearings. This supply planning is further complicated by the need for quality standards, skilled staff and long running-in periods for new suppliers entering the market for critical components. WTG manufacturers are currently setting new standards with regards to quality, creating a demand for highly skilled staff throughout the chain, and for quality inspectors on the shop floors.

The actual lead time on components depends on the demand vs. supply situation. The most critical components are bearings, gearboxes, castings, forgings and alloys, for which component manufacturers and WTG manufacturers will not be able to establish any surplus production over the next three years, but merely satisfy the current level of demand.

The production of blades and generators is keeping pace with demand. This has come about primarily as a result of the WTG manufacturers' insourcing process, combined with the generator suppliers' recent capacity expansions. 10-12% of the world generator market is expected to be required by the WTG manufacturers, while castings are in a more critical situation, with 30-35% of the world market capacity currently used in WTG manufacturing.

Over the past decade, component production has been increasingly insourced, in line with the implementation of vertical integration strategies aimed at securing the supply of critical components. Depending on the business strategy adopted, components such as towers, blades, generators, gearboxes and controls have been insourced as a result of the increase in lead times experienced by the market.

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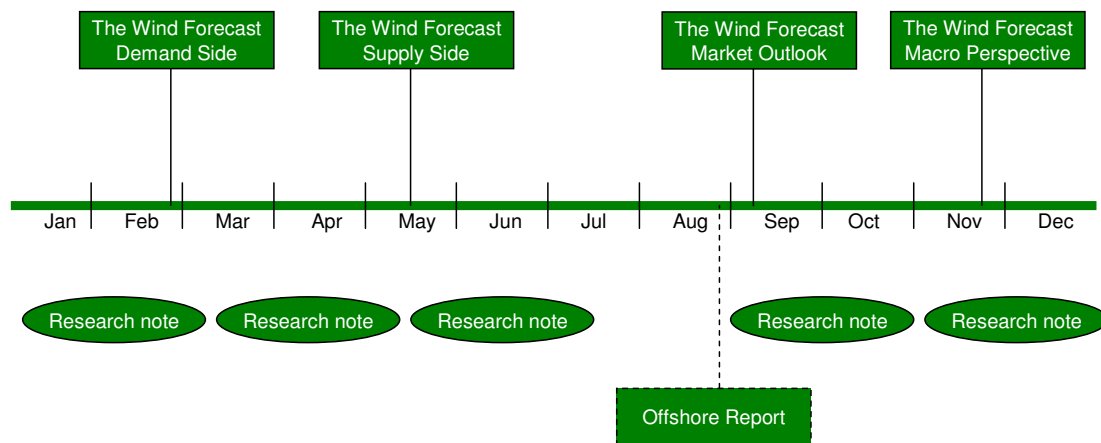
Our research brings you detailed market views, outlooks, competitive analysis, strategies, trends and perspectives through out the entire value chain. Our market reports and research notes typically provide you with detailed market analysis by country, profiles, strategies and expectations of developers, utilities, wind turbine manufacturers and component suppliers as well as trends and perspectives in the industry.

The mission is to provide a balanced data and analysis framework enabling our clients to decide upon strategic investments in order to grow profitable in this fast growing market.

A one-year research subscription package includes:

- Four market reports of “The Wind Forecast”
- Research notes on ad hoc basis
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As a guideline, our research will be available as illustrated in the figure below:



The Wind Forecast – Demand Side

...includes among others year-in-review market data, drivers and barriers for developers and utilities, trends on demand side like new players, strategies and cross-border movements. It also includes strategies, wind farm ownership tables, product portfolios, etc. for the top players on demand side. Furthermore, updated and revised country specific market forecasts are also part of the report.

The Wind Forecast – Supply Side

...includes among others trends on supply side like sourcing, new players, supply chain development and strategies and internationalisation. It also includes strategies, market share data, performance and expectations of wind turbine manufacturers and main component suppliers. Furthermore, updated and revised country specific market forecasts are also part of the report.

The Wind Forecast – Market Outlook

...includes among others detailed market analysis by country including historical development, legal framework and subsidy schemes, products, drivers and barriers, risk profiles, market trends and forecast. It includes detailed five and ten years market forecasts for wind turbine development and installations for more than 20 countries.

The Wind Forecast – Macro Perspective

...includes among others competitive analysis of renewable energy vs. conventional energy including e.g. investments, costs, subsidies, OMS, capacity, drivers and barriers. Furthermore, the report includes a comparison of the different renewable energy sources. Furthermore, updated and revised country specific market forecasts are also part of the report.

Research notes

...include detailed analysis on specific trends in industry like e.g. capacity shortages, strategic changes in competition, major activities among players, etc. Research notes can also include detailed market analysis on new emerging markets.

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