Global network - global mindset
In-depth knowledge of the industry
Independence
Adding value to your renewable energy business

# **Business Study**

By MAKE Consulting October 2010

# **Offshore Wind Power**

# Contents

- Executive Summary
- The Offshore Wind Power Market
  - o Installed Offshore Wind Base
  - Offshore Market outlook 2010– 2015
  - o Country Review
- Cost and Contracting
  - Capital Expenditures
  - Operational Expenditures
  - o Project Feasibility
  - o Contracts
- Offshore Value Chain Trends
  - o Offshore WTGs
  - Foundations
  - o Offshore WTG Supply Chain
  - o Harbors and Ports
  - Installation Vessels
  - o Offshore Grid Connection
- Maintenance & Service
  - $\circ \ \ \text{Logistical Constraints}$
- Appendix
  - o Key Owners and Developers
  - Contractors
  - o Vessel Suppliers
  - o Cable-Laying Vessels
  - $\circ \ \ \text{Cable Suppliers}$
  - $\circ \ \, \text{Transformer Station Suppliers}$
  - WTG Manufactures
  - Foundations Suppliers

(Price: EUR 2,500)

The year 2009 represented yet another record showing for the offshore wind industry, with 620 MW installed, corresponding to an annual growth of 80% compared to 2008. This underlines the attractiveness of the industry and the opportunity for policymakers to achieve utility-scale renewable power production and the fulfillment of renewable energy targets.

The positive offshore development is expected to continue with a CAGR of 43% in the period from 2010 to 2015, led by European markets. The UK and Germany will be the dominating markets, accounting for approximately 50% of new offshore installations within the period. In Asia, the industry is almost exclusively driven by China, which is set to be the next large offshore market. In the Americas, the first offshore project has yet to be installed, and low onshore market saturation and political challenges are hindering the offshore market in gaining momentum.

Siemens and Vestas remain the market leaders, boasting a combined cumulative market share of almost 90%. However, other players are gaining ground, and a range of WTG manufacturers are planning to expand their offshore footprint, thereby increasing competition in the offshore wind segment.

The expected growth in the offshore industry will create increased pressure on the value chain. Foundations and vessels are likely to be in short supply as the industry takes off, and towers and blades may well pose a bottleneck for offshore WTGs in the 5+ MW class. Furthermore, infrastructure development is required to handle the increasing size of WTGs. Despite obstacles, the offshore market is gradually maturing as a result of improved offshore incentives, binding renewable energy targets, supply chain build-up, and increased experience.

This 70-plus page report provides the reader with an overview of offshore wind power and the market dynamics influencing the industry. The report includes analysis of both current and expected market conditions, a global market forecast, and a detailed breakdown of trends in the offshore value chain. A comprehensive appendix offers profiles and a market overview of the leading players within the offshore wind power industry.

THIS BUSINESS STUDY IS PART OF OUR RESEARCH SUBSCRIPTION PACKAGE. THE STUDY CAN ALSO BE PURCHASED AS A SINGLE INSTALLMENT.

See the next pages for further information about our research subscription.

MΛKΕ

Adding value to your renewable energy business

Headquarters Bushøjvænget 129 DK-8270 Højbjerg Denmark

T: +45 7026 6628

USA office

T: +86 22 2318 5066

### **Research Products**

Clients subscribing to our research packages receive a range of market reports, business studies and research notes, up-to-date market forecasts and data, flash notes, and ad hoc analyst presentations.

Our research provides organizations around the world with detailed insight into the market's current technological, regulatory, and competitive situation, putting facts into perspective by analyzing trends and making projections about future developments in the field.

MAKE's research is an essential market intelligence tool for the entire firm:

- Reports and forecasts that give analysts the data they need
- Research to help drive successful program decisions
- C-level briefs to ensure that business leaders have the latest information

Our research is published as illustrated in the figure below:

	Q1	Q2	Q3	Q4
Market Reports	Market Outlook	Supply Side	Demand Side	WTG Trends
Business Studies		U.S. Wind Power	Offshore Wind Power	China Wind Power
Research Notes	Min. Two Research Notes	Min. Two Research Notes	Min. Two Research Notes	Min. Two Research Notes
Flash Notes	Min. Five Flash Notes	Min. Five Flash Notes	Min. Five Flash Notes	Min. Five Flash Notes
Forecasts	Annual/Semiannual/ Quarterly	Quarterly	Semiannual/ Quarterly	Quarterly
Project Pipelines		Project Pipeline	Project Pipeline	Project Pipeline
Policy Event Horizons	Policy Event Horizon		Policy Event Horizon	

N.B. Annual publishing plan is tentative and subject to change.

Market Reports are 40-60 pages of high-quality industry forecasts, trend-spotting, and analysis, giving the reader insight into the demand side, the supply side, wind power development in a range of countries, as well as current WTG trends. Our market reports are published quarterly.

Business Studies are 60-100 pages of detailed, in-depth strategic market studies for key segments of the wind industry. In 2010, the business studies will focus on the U.S., offshore, and China wind power markets.

Research Notes are 10–20 pages of comprehensive analysis concerning specific trends in the industry. They are published eight times a year and cover topics such as capacity shortages, order announcements, emerging markets, policy changes, and strategic shifts in the competitive landscape.



info@make-consulting.com

T: +1 312-441-9590

T: +86 22 2318 5066

Flash Notes are 1–2 pages of instant expert responses to important events. They are published on an ad hoc basis and cover topics such as M&A activities, major contracts, product launches, and policy changes. Flash Notes are published a minimum of 20 times a year.

Market Forecasts and Data are circulated annually, biannually, and quarterly depending on the subscription level and include forecasts of new installations and accumulated capacity on a five-year scale divided by specific regions and on a global basis.

**Project Pipelines** offer an overview of the current project pipelines in selected regions and are published with reference to the business studies.

**Policy Event Horizons** are published biannually and provide updates on upcoming legislative events in key markets, including potential outcomes.

**Analyst Presentations** feature up-to-date insight from MAKE analyst presentations held at conferences and industry events around the world.

	Basic	Extended	Premium
Market Reports	✓	✓	✓
Annual Forecasts	✓	✓	✓
Analyst Presentations	✓	✓	✓
Business Studies		✓	✓
Semiannual Forecasts		✓	✓
Research Notes		✓	✓
Business Studies in PPT Format			✓
Quarterly Forecasts			✓
Flash Notes			✓
Semiannual Policy Horizons			✓
Project Pipelines			✓
Prices (EUR) Corporate/Personal	4,000 / 2,500	9,500 / 6,500	11,500 / 7,500



T: +1 781 791 5045

# How to order...

#### To order our research:

· Fill in this order form and fax it to +45 8610 2736 DK: U.S.: +1 312 441 9591 China: +86 22 2318 5001

 Order online at www.make-consulting.com

• Call us on

+45 7026 6628 DK: U.S. (Boston): +1 781 791 5045 U.S. (Chicago): +1 312 441 9590 +86 22 2318 5066

• Send an e-mail to info@make-consulting.com

# **Order form**

Product	Select product
Premium Subscription – Corporate (EUR 11500 + VAT)	
Premium Subscription – Personal (EUR 7500 + VAT)	
Extended Subscription – Corporate (EUR 9500 + VAT)	
Extended Subscription – Personal (EUR 6500 + VAT)	
Basic Subscription – Corporate (EUR 4000 + VAT)	
Basic Subscription – Personal (EUR 2500 + VAT)	
Single Market Report (EUR 1500 + VAT)	
Business Study (EUR 2500 + VAT)	

- \*A single user subscription package is solely intended for one person.

  \*\*A corporate, multiuser subscription package can be distributed throughout an organization.

# Subscriber details

Name:
Company (write "private" if not applicable):
Address line 1:
Address line 2:
Address line 3:
ZIP/post code:
Country:
Telephone:
E-mail:
VAT/TVA/MWST no. (for EU-based companies only):

