



Wind Energy M&A Report 2010

**Value Drivers and Acquisition Multiples for 2008-2009
European & North American Wind Transactions**

Published by:

Epsilon Research

Tel: +33 1 47 70 30 24

WindReport@epsilon-research.com

www.epsilon-research.com

In Partnership with:



CLIMATE
CAPITAL
NETWORK

Disclaimer: All Rights Reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior permission of the publisher Epsilon Research. Please note that the findings, conclusions and recommendations delivered are based on information gathered in good faith from both primary and secondary sources, believed to be reliable but which we have not independently verified; Epsilon Research make no guarantee, representation or warranty and accept no responsibility or liability as to its accuracy or completeness. The opinions contained within the report are based upon publicly available information at the time of publication.

Target Audience

The Wind Energy M&A Report is targeted at the following players in the wind energy market [the 'Wind Players']:

- A) Investors and financing providers for wind farms: renewable energy funds, utilities, private equity firms, banks and other capital and debt providers;
- B) Owners and developers of wind farms;
- C) Advisors and research analysts: independent and banks M&A advisors, equity research analysts of renewable energy and utilities.

Report Objectives

This report focuses on analyzing transaction multiples, based on public & proprietary databases. Unlike classic market research or general reports on M&A activity in the wind market, it aims to:

- Provide Wind Players with reliable benchmarks for valuing wind farms and portfolios, in tandem with other valuation methodologies (DCF, etc.).
- Segment transaction multiples for wind farms or portfolios according to development stage and analyze valuation drivers (feed-in tariffs, capacity factor, etc...) to quantify their impact on price.
- Analyze real deal and earn-out structures for early stage wind farm portfolios, providing further insight for benchmarking portfolios and structuring potential deals.

Methodology

The Wind Energy M&A Report 2010 is based on the detailed analysis of 50 European & North American wind farms (or developer) transactions announced in 2008 and 2009.

Purchasers of this report can access the 50 reports online via the [EMAT database](#) (Epsilon Multiple Analysis Tool™), which provides detailed and sourced multiple analysis reports (see sample below).

Our methodology is based on market practice:

- Deals are classified according to the stage of development of the wind farm or the portfolio from project to operation: pipeline, in development, in construction or in operation;
- Multiples calculated are based on capacity (MW), production (MWh) and sales (€), depending on development stage: installed, expected or portfolio capacity / production, actual or expected sales.
- Probability-Weighted Multiples, based on the probability of reaching the operational stage, have also been calculated for wind farms in early stages of development.

Key findings

- Coherent multiples were found providing a robust benchmark for wind farm portfolio valuation, at each stage of development and for each key value driver (feed-in tariffs, capacity factor)
- As expected, most of the financial value created is when a project receives all construction permits – our analysis allows to quantify that value for each stage of development and each value driver.
- Capacity multiples are 16% higher in Europe than in North America, reflecting the difference in feed-in tariffs
- The financial crisis had a limited impact on acquisition multiples of wind farms, compared to the 2007 multiples as given in our previous Wind Energy M&A Report 2008.

This report will be updated regularly, based on new announced transactions. We intend to also publish similar reports on other climate change & environment sectors, such as Solar Energy, from 2010 onwards. Please let us know if you want to be kept informed on the planned release of these reports (see our web site).

Table of Contents

1. Report objectives	5
2. Executive Summary	6
3. Context - Overview of the European M&A Wind Sector	7
4. Methodology, Sample and Scope	8
4.1. Sample of M&A deals	8
4.2. Definitions and Terminology	9
4.3. Valuation Multiples Used for Wind Farms	11
4.3.1. Industry Specific Multiples	11
4.3.2. Financial Multiples	11
4.3.3. Gearing Analysis	12
4.4. Information Sources	12
5. Overview of Acquisitions in Sample (50 deals Europe and North America)	13
6. Valuation Drivers and Acquisition Multiples Analysis	14
6.1. Valuation Driver: Development Stage	14
6.1.1. Capacity Multiples for Wind Farms in Operation (Stage IV)	15
6.1.2. Capacity Multiples for Wind Farms in Construction (Phase III)	16
6.1.3. Capacity Multiples for Wind Farms in Development (Phase II)	17
6.1.4. Capacity Multiples for Wind Farms in Early Stages of Development (Phase I and II)	18
6.1.5. Capacity Multiples for Wind Farms in All phases of Development (Phase I to IV)	19
6.1.6. Summary of Capacity Multiples for Each Stage of Development	20
6.2. Valuation Driver: Capacity Factor	21
6.2.1. Production Multiples for Wind Farms in operation (phase IV)	22
6.2.2. Production Multiples for Wind Farms in Construction (Phase III)	23
6.2.3. Production Multiples for Wind Farms in Development (Phase II)	24
6.2.4. Production Multiples for Wind Farms in Project Stage and development (Phase I and II)	24
6.2.5. Production Multiples for Wind Farms in all phases of development (phase I to IV)	25
6.2.6. Summary of Production Multiples by Stage Development (phase I to IV)	26
6.3. Valuation Driver: Electricity Prices	27
6.3.1. Renewable Energy Prices in Europe and North America	28
6.3.2. Estimated Sales Multiples for Wind Farms in Operation (Phase IV)	29
6.3.3. Estimated Sales Multiples for Wind Farms in Construction (phase III)	30
6.3.4. Estimated Sales Multiples for Wind Farms in Development (phase II)	30
6.3.5. Estimated Sales Multiples for Wind Farms in project stage (phase I and II)	31
6.3.6. Summary of Sales Multiples for Wind Farms by Stage of Development	32
6.4. Other Valuation Drivers	33
6.5. Summary Multiples for Wind Farms by Country (All Stage of Development)	34
6.5.1. Summary of Multiples for France (5 deals)	34
6.5.2. Summary of Valuation Multiples for Germany (3 deals)	34
6.5.3. Summary of Valuation Multiples for Ireland (3 deals)	35
6.5.4. Summary of Valuation Multiples for Italy (4 deals)	35
6.5.5. Summary of Valuation Multiples for Romania (2 deals)	36
6.5.6. Summary of Valuation Multiples for Spain (5 deals)	36
6.5.7. Summary of Valuation Multiples for Sweden (3 deals)	37
6.5.8. Summary of Valuation Multiples for United Kingdom (6 deals)	37
6.5.9. Summary of Valuation Multiples for Belgium, Greece, Hungary Poland, Switzerland and turkey (1 deal each)	38
6.5.10. Summary of Valuation Multiples for Canada (4 deals)	39
6.5.11. Summary of Valuation Multiples for United States (9 deals)	39
7. Valuation Risks for Wind Farms	40
8. Examples and Analysis of Deal Structures, PPA Agreements and Earn outs (10 deals)	41
9. Detailed EMAT Deal Reports for Each Transaction	43
9.1. List of Deals Available on EMAT	43
9.2. Overview of an EMAT Report	44
9.3. EMAT access	45
10. About us	46

List of Graphs, Tables and Figures Included in the Report

Figure 1 Number of Transactions Identified and Those Selected for Sample	8
Figure 2 Wind Farm Development Process and Stages	9
Figure 3 Gearing Assumptions by Stage of Development	12
Figure 4 Completion Probability Used by Stage of Development	16
Graph 1 - Summary of Wind Farms Capacity Multiples by Stage, 2008-2009.....	20
Graph 2 & 3 - Capacity Factors for Selected European Countries and North America	21
Graph 3 - Summary of Wind Farms Production Multiples by Stage, 2008-2009	26
Graph 4 - Average Wind Electricity Prices by selected European Country 2007-2009 (euros).....	28
Graph 5 - Average Wind Electricity Prices by selected North American region.....	28
Graph 6 - Summary of Wind Farms Expected Sales Multiples, by Stage, 2008-2009	32
Graph 7 - Investment Costs Breakdown for Wind Farms	
Graph 8 - Breakdown of Operation Costs for Wind Farms.....	33
Table 1 Definitions of terms used in this report:	9
Table 2 Overview of all Transactions in Sample (Deal value, Capacity and Multiples)	13
Table 3 Summary Statistics for all Transactions in Sample Europe and North America	13
Table 4 Capacity Multiples for Wind Farms in Operation	15
Table 5 Multiples for Wind Farms in Construction	16
Table 6 Capacity P-Weighted Multiples for Wind Farms in Development (Phase II).....	17
Table 7 Capacity P-Weighted Multiples for Wind Farms in project stage (Phase I and II).....	18
Table 8 Capacity P-weighted Enterprise Value Multiples for Wind farms with capacity in Phase I to Phase IV.....	19
Table 9 Production Multiples for Wind Farms with full capacity in operation (phase IV)	22
Table 10 Production Multiples for Wind Farms with Capacity in Construction (Phase III)	23
Table 11 Production Multiples for Wind Farms with Capacity in Development (Phase II)	24
Table 12 Production Multiples for Wind Farms in Project and development Stage (Phase I and II)	24
Table 13 Production Multiples for Wind Farms in all phases of development (phase I to IV).....	25
Table 14 Sales Multiples for Wind Farms in Operation (Phase IV).....	29
Table 15 Sales Multiples for Wind Farms in Construction (Phase III).....	30
Table 16 Sales Multiples for Wind Farms in Development (Phase II)	30
Table 17 Sales Multiples for Wind Farms in Project Stage (Phase I and II).....	31
Table 18 Summary of Valuation Multiples for France (5 Deals).....	34
Table 19 Summary of Valuation Multiples for Germany (3 Deals).....	34
Table 20 Summary of Valuation Multiples for Ireland (3 Deals)	35
Table 21 Summary of Valuation Multiples for Italy (4 Deals).....	35
Table 22 Summary of Valuation Multiples for Romania (2 Deals)	36
Table 23 Summary of Valuation Multiples for Spain (5 Deals).....	36
Table 24 Summary of Valuation Multiples for Sweden (3 Deals).....	37
Table 25 Summary of Valuation Multiples for United Kingdom (6 Deals)	37
Table 26 Summary of Valuation Multiples for Belgium, Greece, Hungary, Poland, Switzerland and turkey (1 deal each).....	38
Table 27 Summary of Valuation Multiples for Canada (4 Deals).....	39
Table 28 Summary of Valuation Multiples for United States (9 Deals).....	39
Table 29 Earn-out as % of total equity value for 10 selected deals	41
Table 30 Summary of Earn-out Milestones for 10 Selected Deals.....	42
Table 31 Value of Earn-out paid (€ M per MW) for 10 Selected Deals by Stage of Development.....	42
Table 32: List of detailed transaction reports that can be accessed via the EMAT online database	43

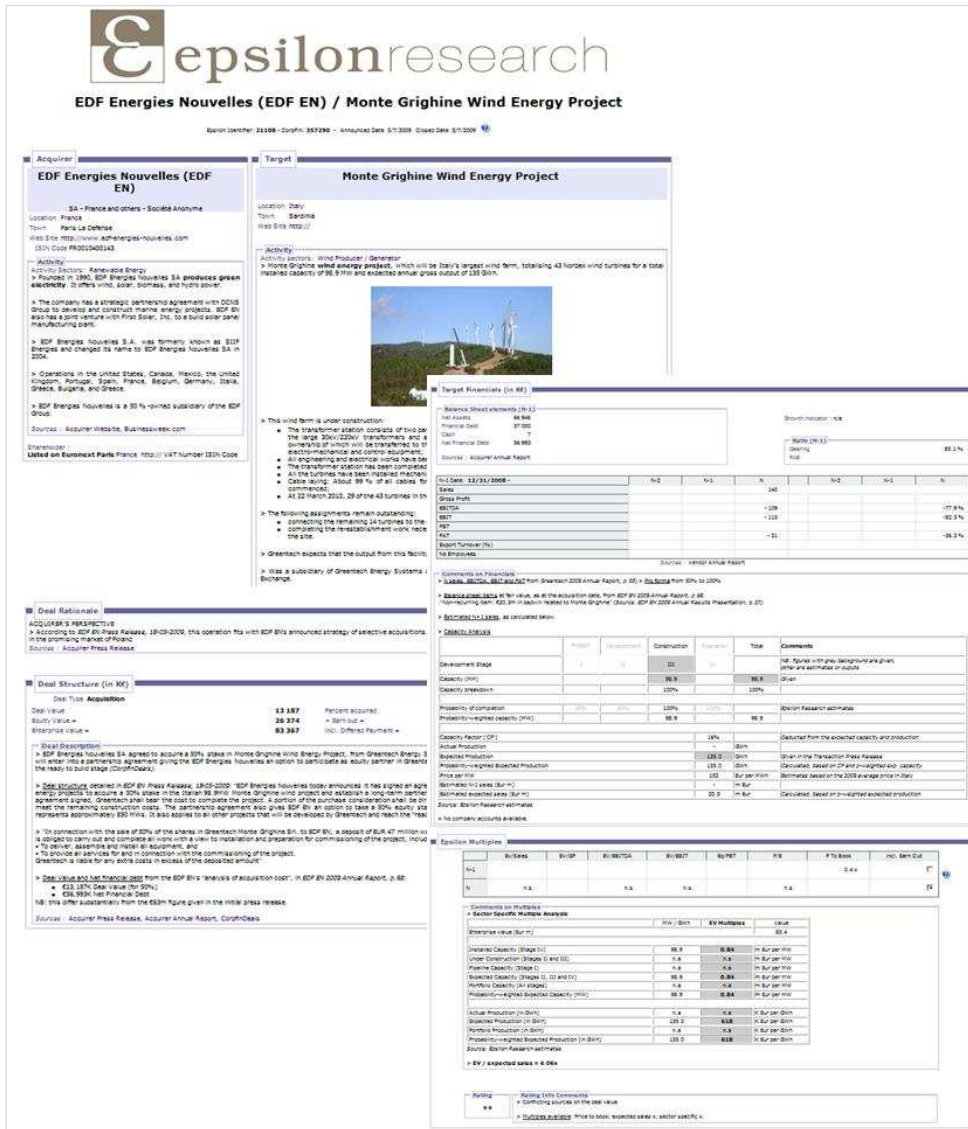
The EMAT database

EMAT (« Epsilon Multiple Analysis Tool™ ») - *The Reference Source for Private Company Acquisition Multiples*

EMAT is a unique database of mostly European deal analysis reports (1 to 500 m€ deal value) that includes the detailed calculation of acquisition multiples, accessible via its proprietary IT platform. Covering most industry sectors, it has quickly become a reference source in Europe for private company acquisition multiples.

- ✓ In depth analysis of small–mid market M&A / Private Equity deals, covering most industry sectors.
- ✓ Reports written by a team of financial analysts, with a focus on: deal rationale and structure, target business and financials (restated), transaction multiples (calculation, comparison and analysis).
- ✓ More than 3,500 reports already published.
- ✓ Service includes on-demand production of reports on deals not yet covered, within 24h.
- ✓ Online access via Epsilon’s proprietary IT platform, subscription based.

Overview of an online EMAT Report



The screenshot displays a detailed financial report for the acquisition of Monte Grigline Wind Energy Project by EDF Energies Nouvelles (EDF EN). The report is structured into several key sections:

- Acquirer:** EDF Energies Nouvelles (EDF EN), SA - France and others - Société Anonyme. Location: France. Website: <http://www.edfenergies-nouvelles.com>.
- Target:** Monte Grigline Wind Energy Project. Location: Italy. Activity: Wind Producer / Generator. The project is a 100 MW wind farm in the Alps, Italy, with a total installed capacity of 99.9 MW.
- Deal Rationale:** According to the Press Release (JRD-03-2009), this operation fits with EDF EN's announced strategy of selective acquisitions in the growing market of Renewables.
- Deal Structure (in M€):** Deal Type: Acquisition. Deal Value: 13,187. Equity Value: 26,374. Enterprise Value: 83,367.
- Deal Value and Financing Costs:** Deal Value: 13,187. Enterprise Value: 83,367. Net Debt: 70,180.
- Deal Value and Financing Costs (continued):** Deal Value: 13,187. Enterprise Value: 83,367. Net Debt: 70,180.

The report also includes a table of financial ratios and a summary of the deal structure, providing a comprehensive overview of the transaction.

To find out more about our Multiple Analysis Tool™ or our DealSearch™ service please contact us arrange for a demo.

ABOUT US

Epsilon Research

Epsilon Research is an independent research and financial analysis bureau specialising in the M&A/private equity markets. It provides research, deal analysis and market intelligence on private company M&A and LBO transactions.

Its key product, EMAT (« Epsilon Multiple Analysis Tool™ »), is a unique database of Private Company Acquisition Multiples, accessible via its proprietary IT platform. It has quickly become a reference source in Europe for private company acquisition multiples. EMAT subscribers (banks, PE funds, M&A boutiques, accounting firms) also benefit from Epsilon's DealSearch service, where analysts write on-demand reports for deals not yet included in the database.

Based on the unique information now available on EMAT, Epsilon has developed a number of market intelligence tools: indices that measures the evolution of private company prices (per sector, country, type of deals, etc.); sector specific market studies and analysis; tailored service for private equity quarterly portfolio valuations. Epsilon has launched with Argos Soditic the Argos Mid-market Index (published every six months) that measures the evolution of European private mid-market company prices: it has quickly become a leading reference for players in private markets.

Epsilon's team is composed of corporate finance professionals and financial analysts, Paris and London based. It has received for its EMAT database the label of Finance Innovation, the Paris-based global financial services cluster.

Research Analysts

- **Gregoire Buisson**, Founder & CEO, Epsilon Research, gregoire.buisson@epsilon-research.com

Grégoire has been active in the M&A sector for more than 15 years. He is the co-founder (2001) and president of Epsilon Corporate Finance Ltd, an independent service provider for corporate finance professionals; the founder (2007) and CEO of Epsilon Research, a Paris-based research and financial analysis bureau specialized in the private equity and private company M&A markets. Prior to founding Epsilon, Grégoire worked as an investment manager with a London-based early stage venture fund, Sitka Partners. He previously worked for the investment banking division of Société Générale in Paris and SG Hambros in London. Advising major European groups as well as private firms, he has accomplished complex corporate finance projects (valuations, restructurings, private and public M&A transactions, LBOs) in many industry and service sectors. Grégoire was a lecturer at Sciences-Po (Master 'Finance & Strategy') for 6 years. He holds an MBA from London Business School (2001) and graduated from Sciences-Po, Paris IX-Dauphine (Masters Degree in Management) and Paris I-Sorbonne (Masters Degree in Philosophy).

- **Nada Saliba**, Epsilon Renewable Energy Research Analyst, nada.saliba@epsilon-research.com

Working with Epsilon Research since its creation in 2007, Nada has analyzed more than a 1,000 deals across all sectors and developed detailed reports on valuation multiples. She covers the renewable energy sector. Prior to Epsilon she worked at the acquisitions department of Lazard and at Credit Financier in Lebanon as an equity and strategy analyst. She holds a PHD in economics (2009) from the Sorbonne University and graduated from the Sorbonne (Masters Degree in European Economics) and the Lebanese University (Masters Degree in Political Science). Nada has published a number of articles in Asian Journals on FDI and indebtedness.

Environment Sector Advisor

- **Alan Ocaña-Meyer**, Non executive director of Epsilon Research

Alan advises Epsilon Research on environmental topics leveraging on more than 7 years of experience in the renewable energy, environmental services and carbon markets gained in his previous positions at Carbon Clear, Climate Capital Network and Itochu Corporation where he has acted as an investor, technical advisor and venture manager. Previous to being involved in the sector Alan was a Manager at Deloitte London and a Deputy Director at the Securities Commission in Mexico.

