



## **Sourcing and Deploying Capital in Renewables**

**Mortimer Menzel, Augusta & Co**

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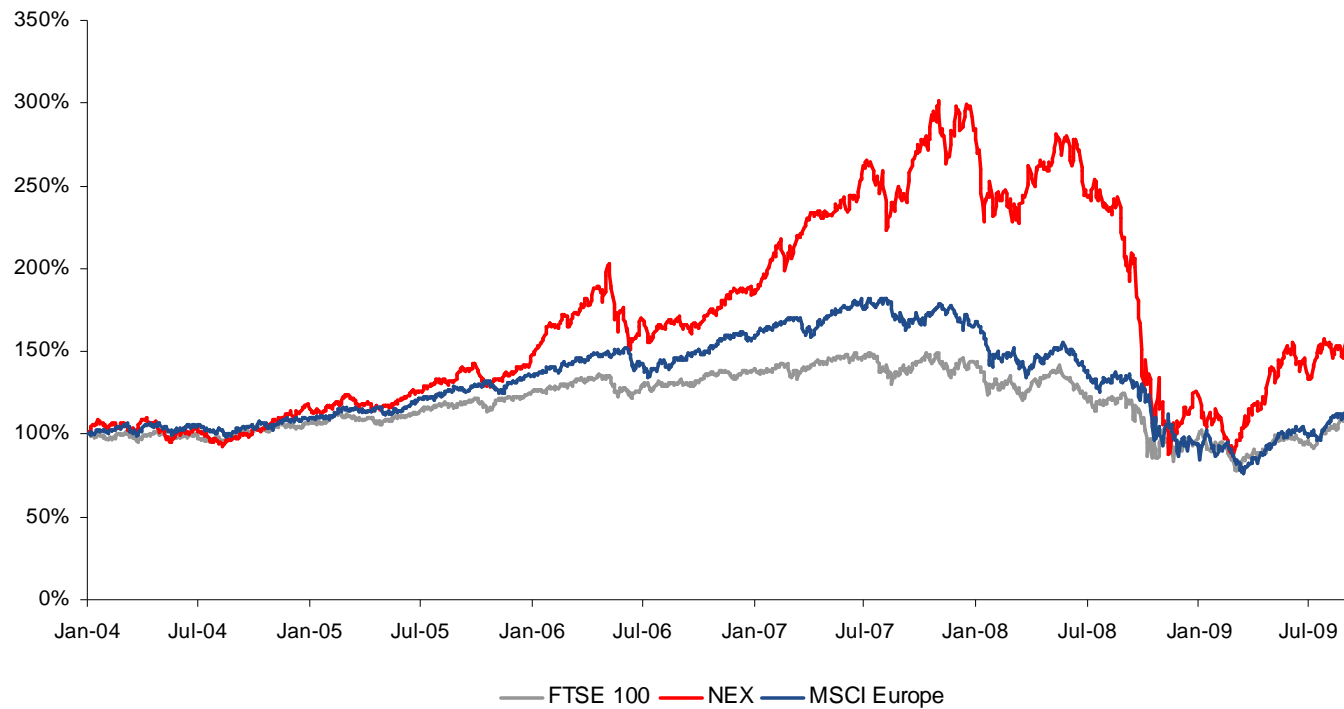
**AUGUSTA & CO**

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## The world looks a little better: NEX currently at summer '06 levels

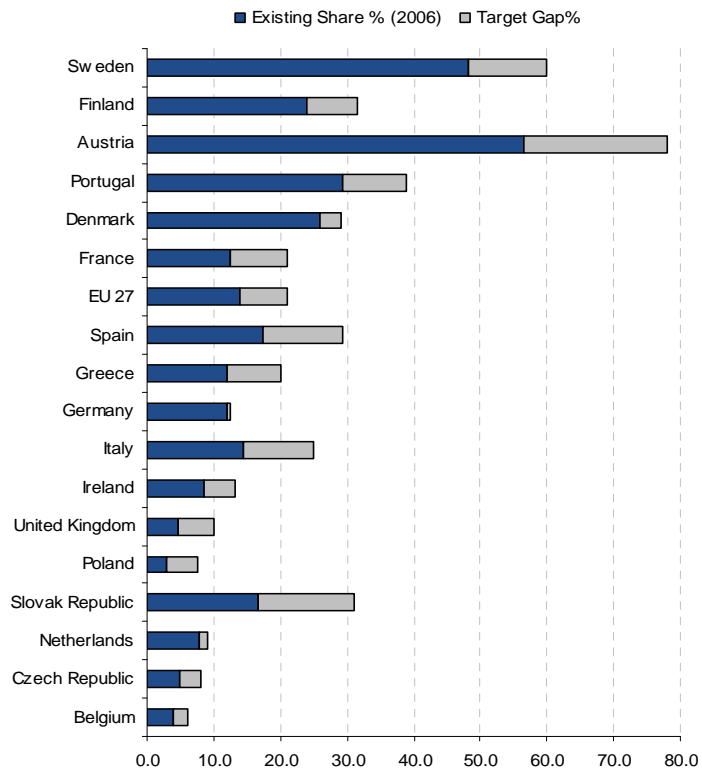
NEX Index Jan 2004 – Sept 2009



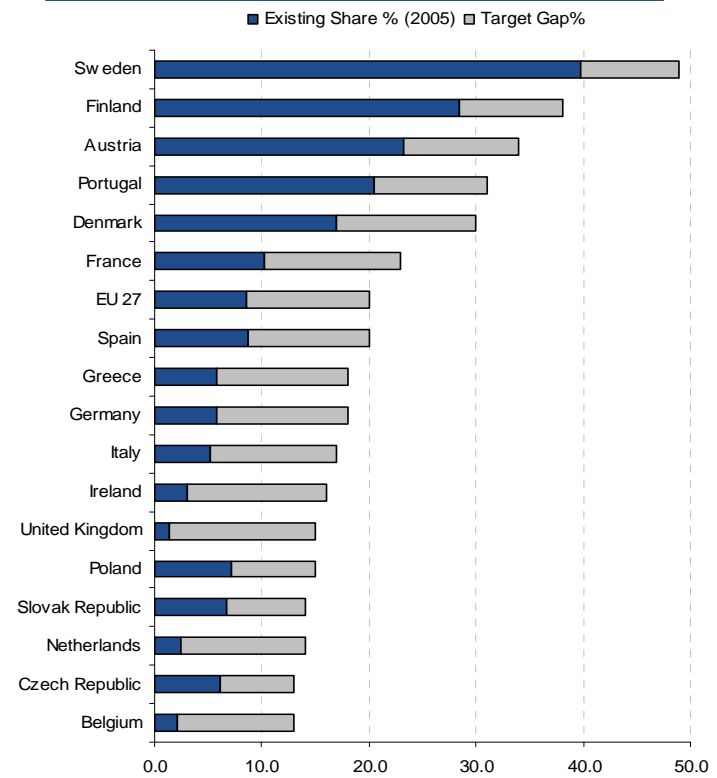
Source: New Energy Finance ("NEF"), STOXX

## Legislation and targets are driving further investment

Share of ELECTRICITY from renewables  
vs. target in 2010\*



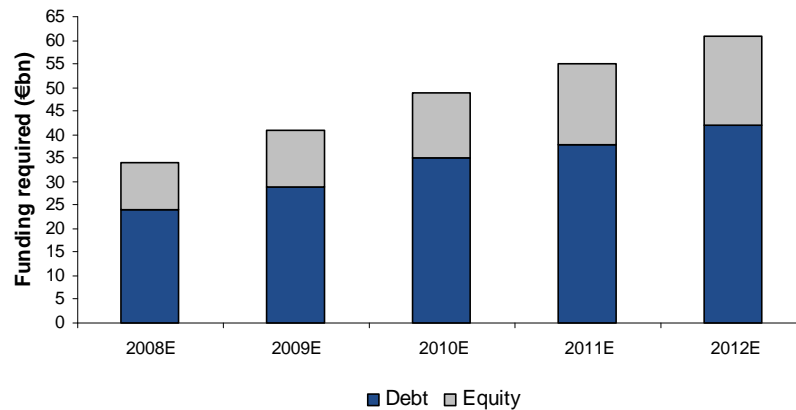
Share of ENERGY from renewables  
vs. target in 2020



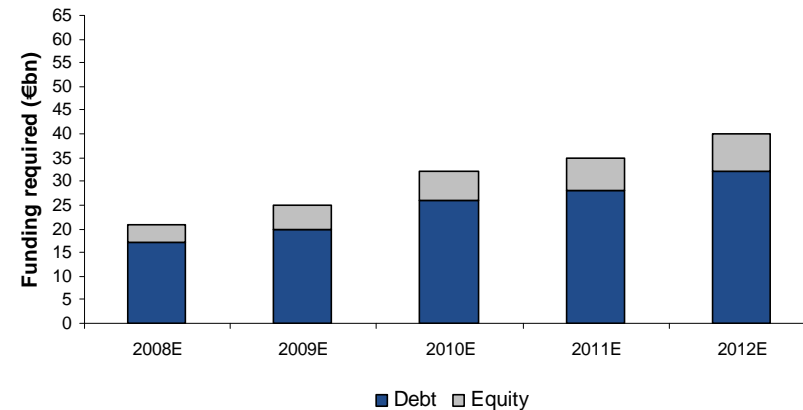
Source: BMU publication „Erneuerbare Energien in Zahlen“. EU Commission data  
Note: \* Does not take into account electricity from nuclear sources

## Most research agrees capital requirement is huge: mainly going to wind and solar

Wind project funding



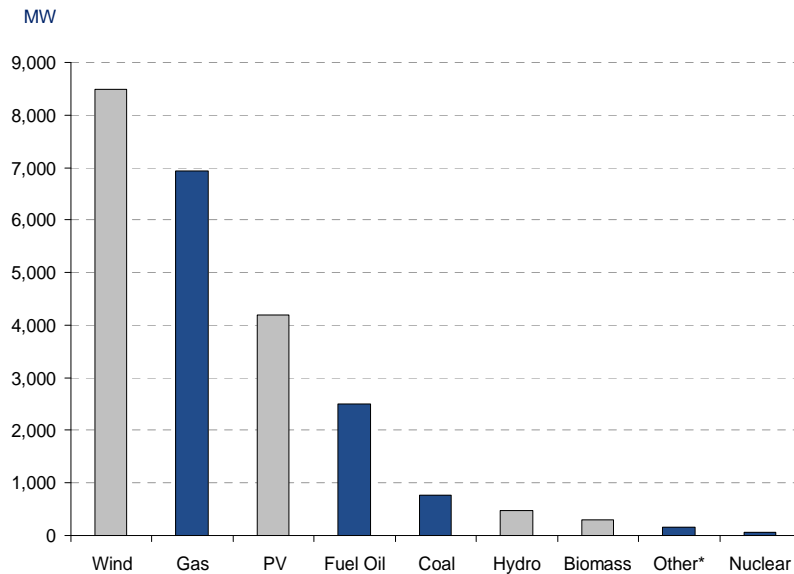
Solar project funding



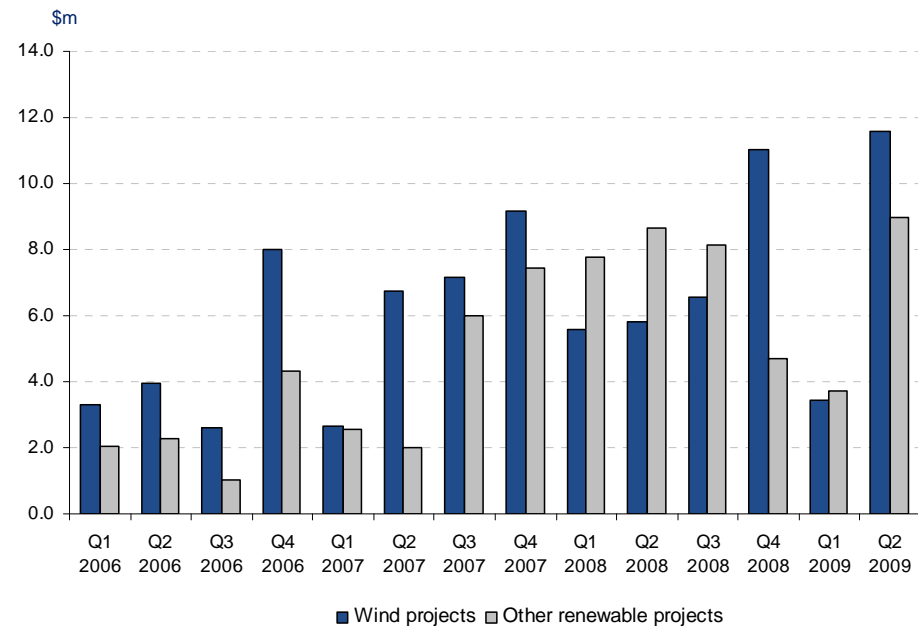
Most analysts estimate that to meet project growth targets in wind and solar installations alone approx. €175-200bn of capital needs to be invested in 2010/11.

## Wind is the fastest growing electricity source in EU

New power capacity installed in EU 2008



Wind vs. other renewables financing in EU\*\*

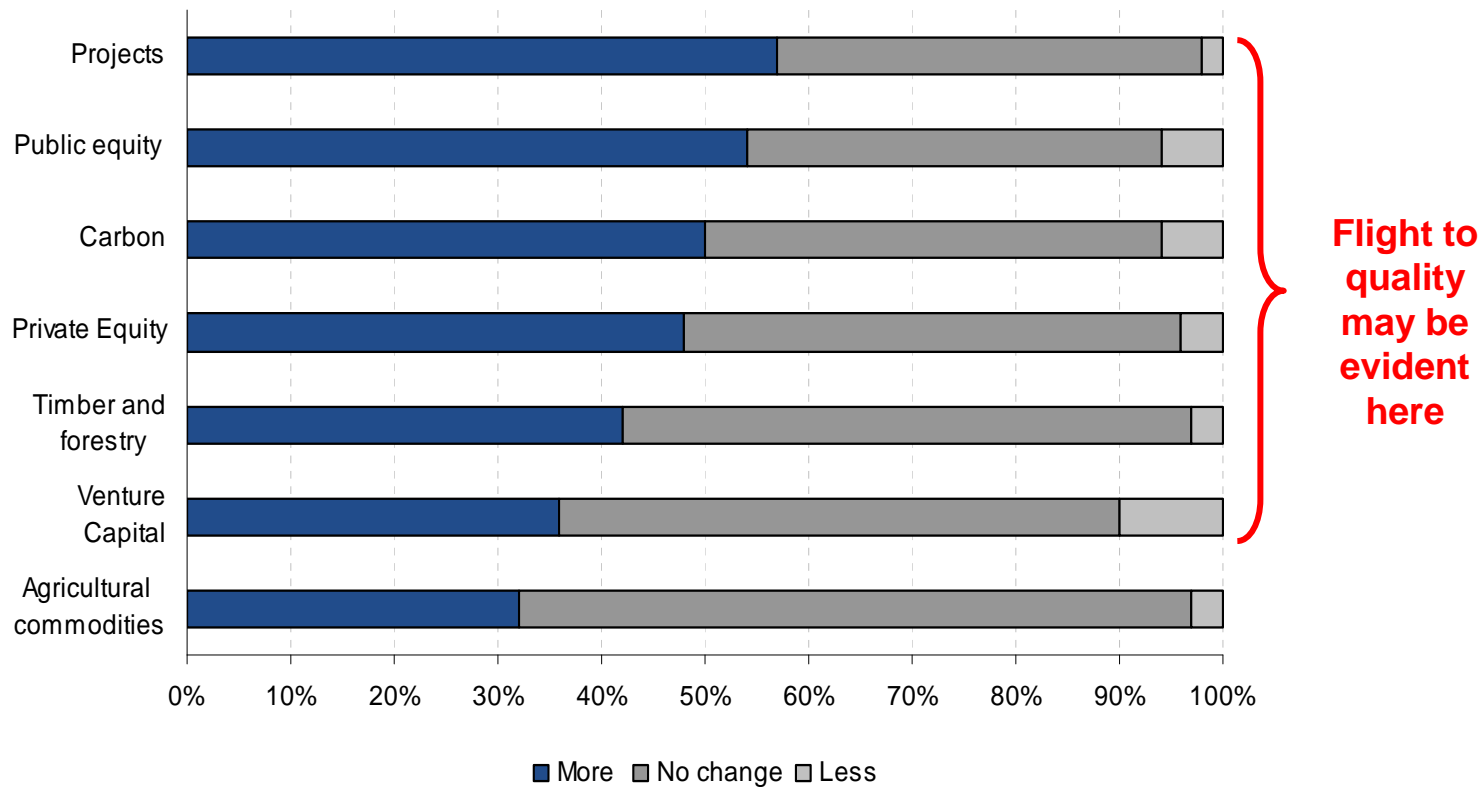


Source: European Wind Energy Association, NEF

\*Geothermal, peat and waste, \*\*Asset Financing includes equity and debt with refinancing of projects

## Institutional investors are increasing their allocations

Expected change to clean energy allocations by 2012



Source: NEF survey of 106 institutions with \$1tr in AUM



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**What is actually happening in Renewables M&A in practice ?**



## The European equity market for wind developers today

- The market is still a buyer's market
- There are significant amounts of equity chasing deals but:
  - Investors can afford to be very selective
  - Bank financing is available only for the best developers and projects
  - This has led to cash strapped developers selling projects under development
    - That means there is a glut of non-financed development projects
    - But few good fully financed or operating projects
  - Several notable insolvencies have also provided excess product on the market
- The investor universe has changed too: Utilities still control the market Europe-wide
  - Many utilities can afford to build development projects without bank debt
  - Many financial investors have moved levered IRR expectations up to min. 14% IRR
  - Prop desks of investment banks have weakened (this was ca. 20% of the equity capacity in '07)
  - Hedge funds are weakened
  - No value given for post-sale refinancing of an operating portfolio
  - No value given for repowering after 20-25 years (although 25 years dcfs the norm)
  - Management teams and entire development businesses much more difficult to sell today

## The European debt market for wind developers today

- Obtaining debt is much more difficult for onshore wind and almost impossible in offshore
- Borrowing costs have increased significantly:
  - Spreads for a European onshore wind currently estimated<sup>1</sup> to be approx. 225 bps over Euribor (from ca. 150 bps in October 2008)
  - Increase tempered by cuts in base rates so overall interest cost is even or down slightly
  - But much more equity required now:
    - Mainly 25-30% in onshore - up from ca. 10-15% in 2007 and early 2008
    - This has a huge impact on project IRRs especially for financial investors
  - Arrangement fees increased dramatically from ca. 0.8% in 2007 to ca. 2.3% in early 2009
  - Tenors are shorter
- Whether an already operating project can be refinanced is questionable now
- Senior Debt for development pipeline also still very difficult today
- There may be signs that the bond market can replace banks for senior debt in special cases

<sup>1</sup>Source: "Debt finance for European wind and solar in early 2009"  
NEF and Augusta estimates



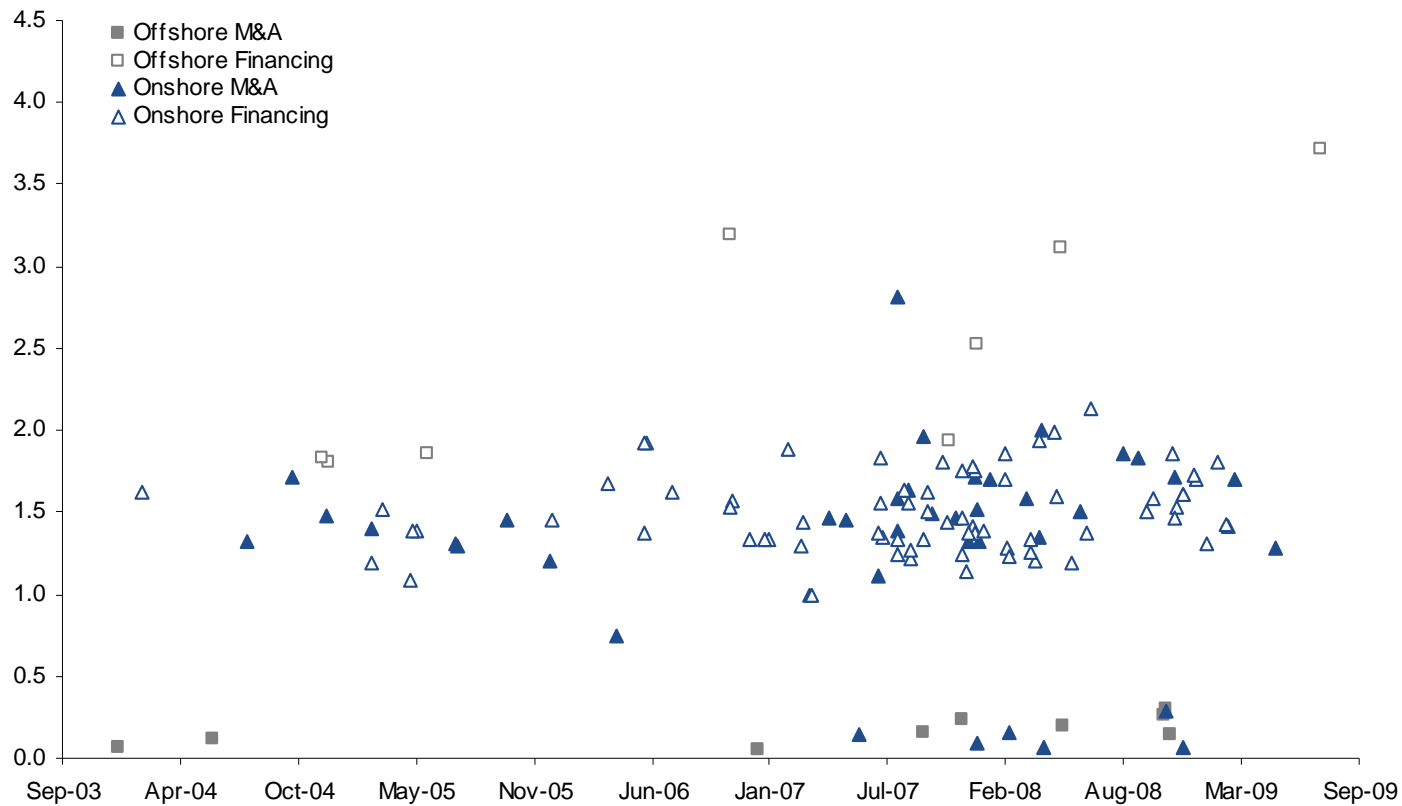
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**How does all this translate into the asset values of wind projects?**



## Since 2003 a defined price for wind assets has emerged

### Windfarm transactions



## IRRs still significantly higher than in '07

	Onshore	Offshore
EPC Cost € '000/MW	~ 1,400	~ 3,000 *
Capacity Utilization	20 - 35%	30 - 45%
Investment Costs €/kWh <sup>1)</sup>	~ 80 - 46 €c	~ 114 - 76 €c
Operating Cost	1.5 - 1.8 €c/kWh	~ 2.2 - 2.8 €c/kWh
Debt Service Cover Ratio @ P90	1.25	1.3 - 1.5
Proj. Fin. Leverage	70 - 75%	55 - 65%
Equity IRR @ P50	9 - 12 %	14 - 18%

\* Site dependent

<sup>1</sup> kWh per annum (Cap. Util. \* 8,760 \* 1000) / EPC Cost (EPC Cost \* 1,000)

## Public equity now looks a little cheaper than private equity

Company	Country	Market Cap. (€m)	EV (€m)	EV / Revenues 2009F	EV / EBITDA 2009F	EV / EBIT 2009F	P/E Ratio <sup>1</sup> 2009F	Cost of Equity <sup>2</sup> in %
<b>Developers</b>								
Renewable Energy Generation	UK	46.2	57.9	4.6 x	25.7 x	n.m.	n.m.	7.2%
PNE Wind	Germany	94.1	130.7	1.2 x	19.9 x	33.4 x	85.3 x	8.1%
Energiekontor	Germany	54.5	161.1	2.9 x	9.7 x	14.9 x	14.2 x	7.8%
Novera Energy	UK	68.2	207.3	3.0 x	10.4 x	n.m.	n.m.	7.0%
ERG Renew	Italy	112.8	356.8	5.8 x	14.3 x	n.m.	n.m.	7.9%
Greentech Energy Systems	Denmark	173.4	305.8	30.3 x	n.m.	n.m.	n.m.	8.3%
Fersa Energias Renovables	Spain	343.0	469.4	18.8 x	27.6 x	52.2 x	245.0 x	8.5%
Theolia	France	184.2	671.9	4.1 x	21.7 x	112.0 x	n.m.	10.3%
Infigen Energy	Australia	693.6	908.5	7.6 x	12.1 x	58.7 x	n.m.	9.8%
EdF Energies Nouvelles	France	2,863.1	4,242.4	4.9 x	16.4 x	25.8 x	40.6 x	8.4%
EDP Renovaveis	Portugal	6,359.1	6,872.1	9.3 x	14.4 x	28.8 x	48.6 x	7.3%
Iberdrola Renovables	Spain	14,235.1	15,160.2	7.3 x	11.3 x	20.4 x	37.4 x	8.5%
<b>Mean</b>				<b>8.3 x</b>	<b>16.7 x</b>	<b>43.3 x</b>	<b>78.5 x</b>	<b>8.3%</b>
<b>Median</b>				<b>5.3 x</b>	<b>14.4 x</b>	<b>31.1 x</b>	<b>44.6 x</b>	<b>8.2%</b>
<b>Turbine Manufacturers</b>								
Clipper Windpower	UK	211.5	70.6	n.m.	n.m.	n.m.	n.m.	7.7%
Nordex	Germany	872.3	784.1	0.6 x	8.9 x	n.m.	n.m.	10.6%
Repower	Germany	1,036.9	1,019.6	0.7 x	11.8 x	18.5 x	23.8 x	9.2%
Suzlon	India	2,069.9	2,489.7	0.7 x	8.7 x	12.1 x	10.1 x	11.1%
Gamesa	Spain	3,999.8	3,978.8	1.3 x	14.7 x	20.6 x	28.8 x	10.2%
Vestas	Denmark	9,420.4	9,450.4	1.3 x	9.7 x	11.8 x	16.6 x	10.2%
<b>Mean</b>				<b>0.9 x</b>	<b>10.8 x</b>	<b>15.8 x</b>	<b>19.8 x</b>	<b>9.8%</b>
<b>Median</b>				<b>0.7 x</b>	<b>9.7 x</b>	<b>15.3 x</b>	<b>20.2 x</b>	<b>10.2%</b>

Source: Thomson, Broker, Oanda, Company info, Augusta research (as of 17 September 2009)

Notes: <sup>1</sup>P/E ratio uses EPS estimates from various brokers notes. <sup>2</sup>Cost of Equity = RFR + (β \* RP) where RFR is 4.5% and Risk Premium is 4.5%. <sup>3</sup>Estimates incl. Proceeds from the sale of SSP Technology

## Augusta & Co credentials

*Augusta has closed approx €4.0bn of placements and advisory mandates since being founded.*

*Here is a selection of noteworthy deals*

<p>2009</p>  <p><b>AREVA</b></p> <p>Sale of blade manufacturer PN Rotor GmbH to Areva</p>	<p>2009</p>  <p>Stadtwerke Bochum GmbH</p> <p>Sale of 20MW Multibrid Wind Farm</p>	<p>2009</p>  <p><b>EnBW</b></p> <p>Sale of 52MW of windfarms in Germany</p>	<p>2008</p>  <p><b>VATTENFALL</b></p> <p>Financial Advisor on sale of UK plc</p>	<p>2008</p>  <p><b>POWEO</b></p> <p>Sale of 36MW of wind farms in France</p>	<p>2008</p>  <p><b>NIBC</b></p> <p>Debt and equity placement for uk composting company</p>
<p>2007</p>  <p><b>evelop</b></p> <p>Equity placement in 400 MW offshore windfarm</p>	<p>2007</p>  <p>€150 million Joint venture between Multibrid &amp; AREVA</p>	<p>2007</p>  <p>Financial advisor on debt and equity placement for 600 MW of Polish and Spanish windfarms</p>	<p>2006</p>  <p>Financial advisor on the equity placement of 48 MW windfarms in France</p>	<p>2006</p>  <p>Strategic advisor on UK offshore renewables strategy</p>	<p>2004</p>  <p>Financial advisor in acquisition of £400m portfolio of UK wind assets</p>