

**Vestas®**

# Confidence through experience

Track record as of 30 June 2012

**Wind.** It means the world to us.™

# Harvesting the full potential of wind



Confidence is built through experience.

During more than 30 years in the wind industry we have installed over 51 GW of wind energy capacity across 71 countries, together with our customers. That's more than 20 per cent of all turbines globally – and over 65 per cent more than our closest competitor\*.

It is a track record that is fundamental to our constant efforts to minimise turbine downtime for our customers. We put our installed base to use every day, improving product performance by monitoring and performing diagnostics on the world's largest fleet of wind turbines.

Every 10 minutes, data from more than 22,000 turbines – or nearly 39,000 MW – is monitored across 140 to 500+ signals, including temperature, pressure and log data. The data, combined with information on service visits, creates a complete picture of turbine health.

This rigorous diagnostic analysis enables us to optimise operational performance throughout the value chain:

- it ensures that our accelerated lifetime simulations on key components are as realistic as possible

- it ensures that the most significant CtQs (critical-to-quality) are thoroughly managed throughout manufacturing
- it optimises turbine performance in micro-siting and site layouts
- it enables us to accurately forecast and model operational expenditures, annual energy production and the overall business case
- through ongoing condition monitoring, it allows us to implement timely predictive maintenance, thereby minimising lost production.

Our 51+ GW of installed capacity is the foundation of our undisputed experience and expertise. Together with our comprehensive performance data, it is the backbone for our customers' business case certainty. It is the essential element that ensures maximum production throughout the lifetime of our customers' wind power plants, and the reason why Vestas has a lost production factor of less than 2 per cent across all platforms\*\*.

\* BTM Navigant "World Market Update 2011".

\*\*Vestas Performance Diagnostic Centre, average percentage calculated across 12,500 Vestas turbines under full scope service.



# Track record by **turbine type\***

| <b>Turbine type</b> | <b>Quantity</b> | <b>Total MW</b> |
|---------------------|-----------------|-----------------|
| Other               | 33,948          | 22,857          |
| V80-1.8 MW*         | 1,016           | 1,829           |
| V80-2.0 MW*         | 3,219           | 6,438           |
| V90-1.8 MW*         | 1,249           | 2,249           |
| V90-2.0 MW*         | 4,363           | 8,696           |
| V90-3.0 MW*         | 2,647           | 7,941           |
| V100-1.8 MW*        | 792             | 1,434           |
| V112-3.0 MW*        | 101             | 303             |
| <b>Total</b>        | <b>47,335</b>   | <b>51,747</b>   |

\* Delivered Vestas wind turbines as of 30 June 2012.

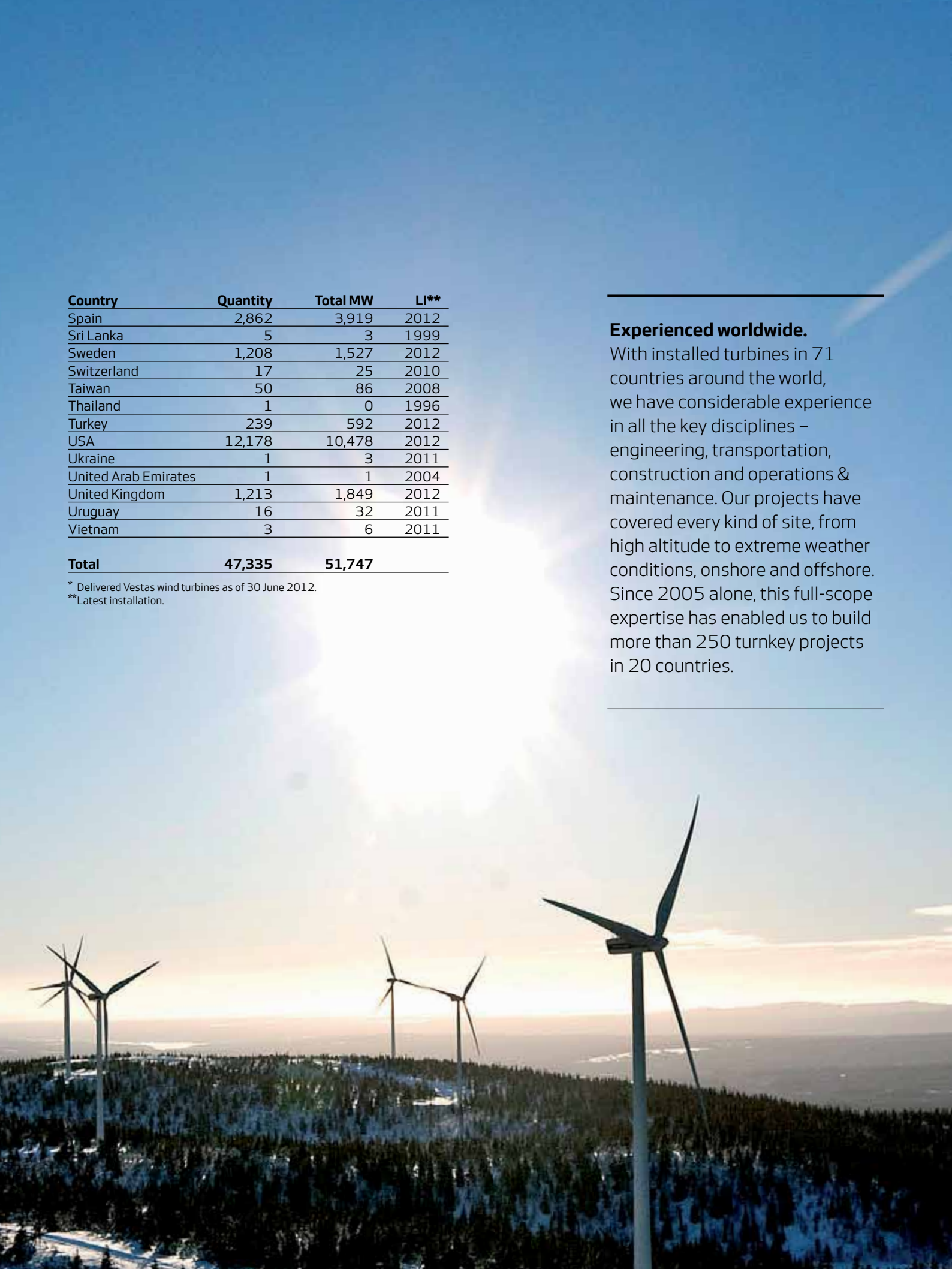


# Track record by **country\***

| Country            | Quantity | Total MW | LI** |
|--------------------|----------|----------|------|
| Argentina          | 62       | 89       | 2012 |
| Aruba              | 10       | 30       | 2009 |
| Australia          | 665      | 1,261    | 2011 |
| Austria            | 247      | 433      | 2011 |
| Azerbaijan         | 2        | 2        | 2009 |
| Belgium            | 130      | 295      | 2011 |
| Brazil             | 162      | 290      | 2012 |
| Bulgaria           | 118      | 307      | 2012 |
| Canada             | 1,217    | 2,032    | 2012 |
| Cape Verde         | 39       | 28       | 2012 |
| Caribbean Islands  | 2        | 0        | 1991 |
| Chile              | 64       | 117      | 2010 |
| China              | 3,070    | 3,635    | 2012 |
| Costa Rica         | 71       | 51       | 2002 |
| Croatia            | 21       | 48       | 2008 |
| Cuba               | 4        | 4        | 2005 |
| Cyprus             | 47       | 93       | 2012 |
| Czech Republic     | 48       | 72       | 2012 |
| Denmark            | 4,993    | 2,721    | 2012 |
| Dominican Republic | 14       | 25       | 2011 |
| Egypt              | 124      | 79       | 2004 |
| Finland            | 44       | 36       | 2012 |
| France             | 728      | 1,392    | 2011 |
| Germany            | 6,175    | 8,057    | 2012 |
| Greece             | 770      | 1,044    | 2011 |
| Hungary            | 49       | 105      | 2010 |
| India              | 4,437    | 2,792    | 2012 |
| Iran               | 37       | 16       | 2004 |
| Israel             | 3        | 0        | 1993 |

| Country              | Quantity | Total MW | LI** |
|----------------------|----------|----------|------|
| Italy                | 2,393    | 2,812    | 2012 |
| Jamaica              | 33       | 39       | 2010 |
| Japan                | 379      | 510      | 2008 |
| Jordan               | 5        | 1        | 1996 |
| Kenya                | 6        | 5        | 2009 |
| Latvia               | 1        | 1        | 2002 |
| Lithuania            | 6        | 18       | 2007 |
| Luxemburg            | 13       | 9        | 1999 |
| Malaysia             | 1        | 0        | 1995 |
| Mauritius            | 1        | 0        | 1986 |
| Mexico               | 72       | 132      | 2012 |
| Morocco              | 84       | 50       | 2000 |
| Netherlands          | 1,308    | 1,562    | 2012 |
| Netherlands Antilles | 10       | 30       | 2012 |
| New Caledonia        | 20       | 5        | 1999 |
| New Zealand          | 231      | 346      | 2011 |
| North Korea          | 2        | 0        | 1986 |
| Norway               | 33       | 34       | 2012 |
| Pakistan             | 28       | 50       | 2012 |
| Peru                 | 1        | 0        | 1995 |
| Philippines          | 20       | 33       | 2008 |
| Poland               | 306      | 621      | 2012 |
| Portugal             | 366      | 666      | 2012 |
| Republic of Ireland  | 563      | 586      | 2011 |
| Romania              | 192      | 488      | 2011 |
| Russia               | 3        | 1        | 1998 |
| Slovakia             | 4        | 3        | 2003 |
| South Africa         | 3        | 4        | 2010 |
| South Korea          | 104      | 166      | 2008 |



The background of the entire page is a photograph of a wind farm. Several wind turbines are visible, silhouetted against a bright, hazy sky at sunset or sunrise. The foreground shows a dark, forested hillside with patches of snow.

| Country              | Quantity      | Total MW      | LI** |
|----------------------|---------------|---------------|------|
| Spain                | 2,862         | 3,919         | 2012 |
| Sri Lanka            | 5             | 3             | 1999 |
| Sweden               | 1,208         | 1,527         | 2012 |
| Switzerland          | 17            | 25            | 2010 |
| Taiwan               | 50            | 86            | 2008 |
| Thailand             | 1             | 0             | 1996 |
| Turkey               | 239           | 592           | 2012 |
| USA                  | 12,178        | 10,478        | 2012 |
| Ukraine              | 1             | 3             | 2011 |
| United Arab Emirates | 1             | 1             | 2004 |
| United Kingdom       | 1,213         | 1,849         | 2012 |
| Uruguay              | 16            | 32            | 2011 |
| Vietnam              | 3             | 6             | 2011 |
| <b>Total</b>         | <b>47,335</b> | <b>51,747</b> |      |

\* Delivered Vestas wind turbines as of 30 June 2012.

\*\* Latest installation.

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### Experienced worldwide.

With installed turbines in 71 countries around the world, we have considerable experience in all the key disciplines – engineering, transportation, construction and operations & maintenance. Our projects have covered every kind of site, from high altitude to extreme weather conditions, onshore and offshore. Since 2005 alone, this full-scope expertise has enabled us to build more than 250 turnkey projects in 20 countries.

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# Offshore track record by **country\***

| Country        | Quantity   | Total MW     |
|----------------|------------|--------------|
| Belgium        | 55         | 165          |
| Denmark        | 102        | 197          |
| Japan          | 2          | 1            |
| Netherlands    | 128        | 247          |
| Portugal       | 1          | 2            |
| Sweden         | 11         | 13           |
| United Kingdom | 282        | 784          |
| <b>Total</b>   | <b>581</b> | <b>1,409</b> |

\* Delivered Vestas wind turbines as of 30 June 2012.





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**Thanet. 100 turbines in 100 days.**

Having pioneered the offshore wind industry since the early 1990s, we have the expertise to harness the raw power of wind, even at sea. Thanet Offshore Wind Farm is only one example. Completed in June 2010 – five weeks ahead of schedule – Vestas Offshore achieved the still-impressive feat of installing all 100 turbines in less than 100 days, not counting idle time due to bad weather or loading/transit.

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