Vestas®

Building on 57 GW of **experience**

Track record as of 30 June 2013

Wind. It means the world to us.™

Proven technology

For us, it is more than a saying – it is something we live by.

We have made wind work for our customers for over 30 years. Together, we have installed 57 GW of wind power capacity in 73 countries. That is more than 20 per cent of all wind turbines installed globally – and over 15 GW more than our closest competitor.

Every day, we leverage our global experience to continuously improve the performance of our customers' wind power plants. We do this through the monitoring and performance diagnostics of the world's largest fleet of wind turbines.

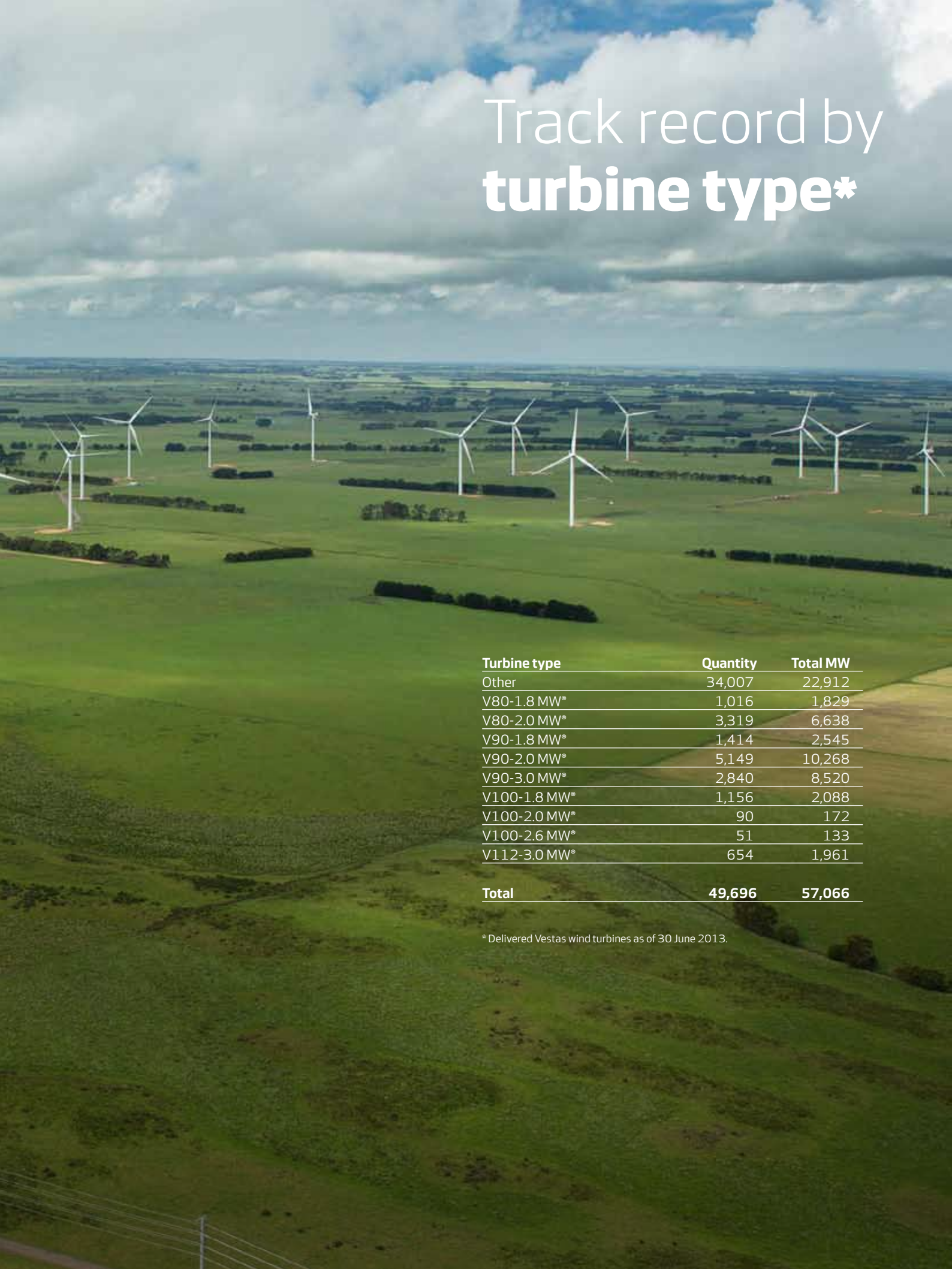
The continuous stream of data from more than 25,000 wind turbines enables us to meticulously plan and carry out service inspections, thereby reducing wind turbine down-time to an absolute minimum. The data is monitored across 140 to 500+ signals including temperature, pressure and log data. Combined with information from service visits, this comprehensive data creates a complete picture of turbine health.

Ongoing monitoring enables us to optimise the performance of our customers' wind power plants by:

- ensuring that our accelerated lifetime simulations on key components are as realistic as possible
- ensuring that the most significant CtQs (critical-to-quality) are thoroughly managed throughout manufacturing
- optimising turbine performance in micro-siting and site layouts
- enabling us to accurately forecast and model operational expenditures, annual energy production and the overall business case
- allowing us to implement predictive maintenance, thereby minimising lost production.

Our 57 GW of installed capacity is the backbone of our unrivalled experience and expertise. When combined with one of the industry's largest testing facilities comprising of 50 test rigs and 150 engineers who are committed to continuously improving the quality of our products even further, we can truly offer our customers proven technology.

We have the data to back the claim: In 2012, the Lost Production Factor – the share of available wind not harvested by Vestas wind turbines – improved to below 2 per cent across the fleet. Meanwhile, the consumption of warranty provisions in relation to revenue was the lowest ever. This is what we mean by proven technology. For our customers, it means business case certainty.



Track record by **turbine type***

Turbine type	Quantity	Total MW
Other	34,007	22,912
V80-1.8 MW®	1,016	1,829
V80-2.0 MW®	3,319	6,638
V90-1.8 MW®	1,414	2,545
V90-2.0 MW®	5,149	10,268
V90-3.0 MW®	2,840	8,520
V100-1.8 MW®	1,156	2,088
V100-2.0 MW®	90	172
V100-2.6 MW®	51	133
V112-3.0 MW®	654	1,961
Total	**49,696**	**57,066**

* Delivered Vestas wind turbines as of 30 June 2013.

Track record by **country***

Country	Quantity	Total MW	LI**
Argentina	62	89	2012
Aruba	10	30	2009
Australia	861	1,849	2013
Austria	254	447	2012
Azerbaijan	2	2	2009
Belgium	138	311	2012
Brazil	203	382	2013
Bulgaria	119	309	2012
Canada	1,419	2,396	2013
Cape Verde	39	28	2012
Caribbean Islands	2	0	1991
Chile	115	214	2013
China	3,279	4,024	2013
Costa Rica	71	51	2002
Croatia	21	48	2008
Cuba	4	4	2005
Cyprus	47	93	2012
Czech Republic	55	86	2013
Denmark	5,035	2,844	2013
Dominican Republic	14	25	2011
Egypt	124	79	2004
Finland	62	90	2013
France	845	1,628	2013
Germany	6,363	8,497	2013
Greece	771	1,045	2013
Hungary	49	105	2010
India	4,460	2,833	2013
Iran	37	16	2004
Israel	3	0	1993

Country	Quantity	Total MW	LI**
Italy	2,566	3,185	2013
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	100	182	2013
Morocco	84	50	2000
Netherlands	1,327	1,605	2013
Netherlands Antilles	10	30	2012
New Caledonia	20	5	1999
New Zealand	231	346	2011
Nicaragua	22	40	2012
North Korea	2	0	1986
Norway	45	70	2012
Pakistan	28	50	2012
Peru	1	0	1995
Philippines	20	33	2008
Poland	462	950	2013
Portugal	374	677	2013
Puerto Rico	13	23	2012
Republic of Ireland	577	614	2013
Romania	266	636	2013
Russia	3	1	1998
Slovakia	4	3	2003

Country	Quantity	Total MW	LI**
South Africa	3	4	2010
South Korea	104	166	2008
Spain	2,918	4,039	2012
Sri Lanka	5	3	1999
Sweden	1,430	2,090	2013
Switzerland	18	28	2013
Taiwan	50	86	2008
Thailand	1	0	1996
Turkey	255	640	2013
USA	12,396	10,991	2013
Ukraine	33	99	2013
United Arab Emirates	1	1	2004
United Kingdom	1,394	2,264	2013
Uruguay	21	41	2013
Vietnam	3	6	2011
Total	**49,696**	**57,066**	

* Delivered Vestas wind turbines as of 30 June 2013.
** Latest installation.

Experienced worldwide.
With installed wind turbines in 73 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.

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
Total	**581**	**1,409**

* Delivered Vestas wind turbines as of 30 June 2013.

On-track with the offshore game-changer
After pioneering the offshore wind industry in the early 1990s, we are currently developing the next generation wind turbine for offshore. With an output of 8 MW, the V164-8.0 MW™ has the potential to become a game-changer within offshore wind power in terms of power generation and low cost of energy.

Development of the V164-8.0 MW™ turbine is progressing as planned. The first blade and a prototype hub have been tested and testing of the drivetrain has commenced.

Installation of the first prototype of the V164-8.0 MW™ has been moved up to the first quarter of 2014. Depending on customer demand and market conditions, serial production of the game-changing offshore wind turbine could begin as early as 2015.

Vestas Wind Systems A/S
Hedeager 44 . 8200 Aarhus N . Denmark
Tel: +45 9730 0000 . Fax: +45 9730 0001
vestas@vestas.com . **vestas.com**

08/2013-EN