The future belongs to clean energy

We are convinced that the long-term future of energy belongs to wind and other clean energy sources. Renewables are becoming increasingly competitive on purely economic grounds, with wind energy for utility scale applications leading the way – now and in the future.

In addition to being confident that wind will come out on top in the clean energy future, we are also convinced that Vestas will come out on top in the competition against other original equipment manufacturers (OEM). Our global reach, technology and service leadership, and scale give us a unique position to compete and win in the marketplace.

At the same time, there is a relentless demand for lowering the cost of energy. With market-based policies like auctions being “the new norm”, it is more important than ever that we sharpen our focus and continually evolve to meet the competitive environment – both from other OEMs that are increasingly consolidating as well as from other power generation sources. We see this as a healthy development as our industry matures, though strategically and organisationally, we need to act on multiple fronts to maintain our market-leading position.

Our corporate strategy is working – but more is needed to stay ahead

Vestas delivered extremely solid performance across all parameters in 2016. Industry-wide, Vestas is at the top of the market share tables; we are active in substantially more countries than any of our competitors; and has more GW under service than anyone else. Vestas is the market leader by revenue and volume, and 2016 was our best year ever.

Nevertheless, the Board of Directors and Executive Management know that our current success is no guarantee for future prosperity. Vestas needs to continually improve if it is to stay on top against other OEMs and other power generation sources.

When the company launched the “Profitable Growth for Vestas” strategy in 2014, we gave ourselves three to five years to accomplish the objectives we spelled out, while simultaneously committing to annual strategy reviews to update where needed. Our “Profitable Growth” strategic ambitions remain just as valid today as when we launched them. However, if we are to remain the global wind leader, we need to continue stepping up our game. In our 2017-2020 strategy update, three key themes will shape our approach: raising the bar, refining initiatives, and accelerating execution.

While the strategic direction for Vestas remains the same, we are updating our vision and mission statements as well as refining our core strategic objectives and accelerating various initiatives to effectively respond to evolving market conditions that include the onshore sector shifting from high growth rates to high but steady volumes and an intensifying competition for market share.

Increasing cash distribution to shareholders

The Board and I are pleased to see that the operational results Vestas has achieved during the year have also manifested themselves into strong financial performance. The Board recommends that a dividend will be paid again in 2017 on the back of the results for 2016. Strong growth in earnings allows us to increase our dividend payments compared to last year. On top of that, we also initiated and completed the company’s second share buy-back programme and hence, cash returns continue to increase, displaying our strong intent to continue to provide shareholder value.

The Board wishes to thank all Vestas employees for contributing to our performance in 2016. We have many more projects lined up for 2017, and I am sure that we will succeed if we continue working together for the good of Vestas, our customers, shareholders, and employees.

Bert Nordberg
Chairman of the Board of Directors

Preparing for the future

“The Board and I are pleased to see that the operational results Vestas has achieved in 2016 have also manifested themselves into strong financial performance. We are convinced that the future of energy belongs to wind and other clean energy sources.”

Bert Nordberg
Chairman of the Board of Directors
The market environment continues to be very supportive for the wind power industry with regulatory policies generally providing a favourable backdrop for industry stability. Combined with the continuously improving economics of wind energy, the future looks bright for increasing wind energy’s share of the energy mix.

Vestas is a financially strong and operationally effective organisation, delivering solid 2016 performance with strong revenue and earnings growth. Once again, we realised strong cash flows, which are increasingly created by the earnings we generate.

With total net investments of EUR 617m, we are also preparing for the future. We need to continuously introduce new and effectively integrate proven technologies into our products and services. In 2016, we invested more in R&D than any of our peers and continued launching product upgrades and other innovations that can lower the cost of energy.

We also achieved important safety milestones in 2016, with three factories reporting no lost time injuries and an overall reduction in total recordable injuries across Vestas’ factories of 30 percent. Any injury is unacceptable as it not only affects our daily business but more importantly our families. Safety must always come first and it is an essential prerequisite for world-class operations.

Vestas achieved record-breaking order intake for the year, and amongst others, announced 31 orders in 31 days, across 12 countries, and five continents in the month of December, demonstrating once again the power of Vestas’ global reach.

When listing some of the highlights, one always risks omitting others. The 1 GW Fosen/Hitra order in Norway and the Wind XI project in the US, which has a potential of up to 2 GW, stand out as high points on the order front in 2016. In the coming years, our ambition is to further develop and expand our market position.

During the year, we grew our multi-brand service capabilities by acquiring the Germany-based independent service provider Availon Holding GmbH. Multi-brand built strong momentum in 2016, reaching approx 8 GW of non-Vestas turbines in the service backlog.

The joint venture MHI Vestas Offshore Wind showed major progress during 2016 by announcing four firm and unconditional orders. Based on these levels of order activity, the joint venture finds itself well positioned as one of the strongest players in the offshore market.

In 2016, Vestas continued to optimise its overall manufacturing and supply chain competitiveness in response to evolving market conditions. Unfortunately, we had to reduce the staffing levels at the blade factory in Lem, Denmark. However, the factory remains a very important part of Vestas’ global manufacturing footprint.

Raising the bar
Vestas is now stronger than ever across the business. Our current success, however, is no guarantee for future prosperity. To beat the competition on all parameters, we will build further on our capabilities to integrate new technologies and ensure the lowest possible cost of energy.

To continue leading the industry, Vestas needs to do more in all parts of the business. Towards 2020, three key themes shape Vestas’ approach:

- **Raising the bar** – Vestas will set even higher, more ambitious targets to push ourselves to stay ahead of competition.
- **Refining initiatives** – Re-scoping or expanding Vestas strategic initiatives to reflect new market realities.
- **Accelerating execution** – Accelerating execution of new and existing initiatives to deliver on higher targets.

Global reach, technology and service leadership, and scale remain the foundation for Vestas’ unique position in the market place and will be our key differentiators to secure a leadership position.

On that note, let me conclude by thanking all employees in Vestas for their hard work and dedicated efforts throughout the year. We reached many milestones and set new records, and I thank all of you for your tremendous dedication and efforts during 2016.

Anders Runevad
Group President & CEO
Vestas has installed almost 82 GW (59,909 wind turbines) in 76 countries around the world and has manufacturing facilities in North and Latin America, Europe, and Asia.

EUR 10.2bn

In 2016, Vestas’ revenue amounted to EUR 10.2bn and EBIT before special items amounted to EUR 1.4bn – an increase of EUR 1.8bn and EUR 0.6bn, respectively, compared to 2015.

The Vestas Group

Dedicated to wind energy
Vestas is a global energy company dedicated to wind energy – improving business case certainty and reducing the cost of energy for its customers.

Vestas works in close partnership with customers to offer the most effective solutions. The core business is development, manufacturing, sale, and service of wind turbines – with competencies that cover every aspect of the value chain from site studies to service.

The strategic direction for Vestas remains the same – as does the ambition to maintain and expand Vestas’ global leadership and create an even more flexible and robust company.

The Vestas track record speaks for itself
With installed wind turbines in 76 countries around the world, Vestas has considerable experience in all key disciplines – engineering, logistics, construction, operations, and service. Vestas’ projects have covered every kind of site, from high altitude to extreme weather conditions.

Every day, Vestas leverages its global experience to continuously improve the performance of its customers’ wind power plants. This is done through the monitoring and performance diagnostics of the world’s largest fleet of wind turbines. The continuous stream of data from more than 32,000 wind turbines enables Vestas to meticulously plan and carry out service inspections, thereby reducing wind turbine downtime to an absolute minimum.

Vestas has installed 59,909 wind turbines on six continents, which generate more than 205 million MWh of electricity per year – enough electricity to e.g. supply almost 120 million Europeans households electricity consumption and globally reduce carbon emissions by more than 110 million tonnes of CO₂.
Vestas’ corporate strategy

Raising the bar towards 2020
After completing a successful turnaround, Vestas launched the Profitable Growth Strategy in 2014, with the objective to deliver profitable growth. Vestas is executing on the strategic objectives and meeting the targets with the result that Vestas is now stronger than ever across the business.

In the coming years, the strategic ambition is to further develop and expand Vestas’ market position. Profitable growth will continue to set the direction. Vestas will continue to work diligently on strengthening its position further by also taking advantage of the opportunities ahead. Vestas wants to grow in a profitable way, as generating profit will allow Vestas to further expand its business and achieve its ambitions.

And at the same time, Vestas needs to prepare for the future to beat the increasing competition on all parameters. To do so, Vestas will build further on its capabilities to integrate new technologies in its product portfolio and at the same time ensure the lowest possible levelised cost of energy. Improving its competitiveness also requires Vestas to adapt its organisation to succeed in rapidly evolving market conditions.

Vision and mission
Vestas’ vision and mission serve as important beacons for uniting all Vestas’ key stakeholders, most importantly its employees, setting a clear purpose and direction for where the company is heading and how the employees can support that journey.

Vision – To be the global leader in sustainable energy solutions, meaning:

- Lowest cost of energy solutions
- Preferred partner
- Leader in revenue
- Best-in-class margins.

Mission – Deliver best-in-class energy solutions to the benefit of Vestas’ customers and the planet.

Vestas corporate strategy update
The wind power industry is maturing and will face new opportunities and challenges towards 2020. The outlook for the industry remains positive while continuously evolving, as is Vestas and its overall strategy.

Strategy update in response to industry outlook
The 2017-2020 strategy update captures an evolving reality for wind power where the onshore sector is shifting from high growth rates to high but steady volumes. To be the global leader in sustainable energy solutions, Vestas need to do more in all parts of the business. Looking ahead to 2020, three key themes shape Vestas’ approach across the Group:

- Raising the bar – Vestas will set even higher, more ambitious targets to push ourselves to stay ahead of competition.
- Refining initiatives – Re-scoping or expanding Vestas strategic initiatives to reflect new market realities.
- Accelerating execution – Accelerating execution of new and existing initiatives to deliver on higher targets.

The 2017-2020 strategy provides Vestas with an attractive financial outlook towards 2020. In addition, Vestas continues to explore opportunities to accelerate growth and develop the company further.

The strategic direction for Vestas remains the same, but Vestas has refined and accelerated its strategic initiatives to effectively respond to a new reality as well as updated its vision and mission statements. The Vestas vision – to be the global leader in sustainable energy solutions – reflects the evolving nature of power markets and our customers who operate in those markets. Vestas plays in the sustainable energy solutions market and wind continues to be at the core DNA of Vestas offerings.

Vestas’ strategy revolves around four core objectives:

- Global leader in the wind power plant solutions market
- Global leader in the service solutions market
- Lowest cost of energy solutions
- Best-in-class global operations.
## Global leader in the wind power plant solutions market

Vestas will continue to focus on profitable growth in mature and emerging markets, partnering more closely with its customers, expanding its key account programme, involving customers in product development, and working closely with them to deliver tailored solutions.

With its strong global footprint, Vestas has a competitive edge, allowing it to grow profitably in both developed and developing markets. Vestas will continue to scale production up and down in accordance with demand in different regions. Building on its long-standing global presence, Vestas will continue to pursue opportunities in markets where wind energy is set to expand.

As part of Vestas’ ambitions to grow profitably, Vestas is participating in project development to a limited extent as some markets require this. By entering into co-development activities under a more structured approach, Vestas expects to be able to engage earlier with certain customers and thereby potentially lock deals earlier than it would otherwise be possible in some cases, whilst simultaneously offering significant value to the customer. The short to medium-term financial effects from such initiatives are expected to be limited in the context of Vestas’ overall financials.

The repowering potential is increasing rapidly and Vestas is well-positioned to capture value in this market segment. The main repowering opportunity towards 2020 is in Germany with additional potential in Denmark, the USA, and India. Beyond 2020, the repowering potential will become global.

Vestas’ mid-term ambition to grow faster than the market remains unchanged for 2017-2020. Vestas’ ambition is to uphold its No. 1 global position in installed wind power capacity.

## Global leader in the service solutions market

Vestas has installed 82 GW on six continents and services more than 71 GW across the globe. Together with Vestas’ industry-leading quality and a Lost Production Factor under 2 percent, Vestas has an unparalleled track record within operation and service of wind turbines.

As the majority of Vestas’ wind turbine contracts are sold with service agreements, typically running for five to 10 years, the stable revenue stream from the service business is set to continue its growth as the installed base of wind turbines increases.

As part of Vestas’ goal to become the leader in the service solutions market, Vestas will grow its multi-brand service solutions. Multi-brand service solutions offer a large opportunity as Vestas turbines cover approx 16 percent of the total installed fleet worldwide. With the acquisitions of UpWind Solutions Inc. and Avalon Holding GmbH, Vestas accelerated its competences within multi-brand service solutions.

Vestas large installed base and unmatched data processing and analytics capabilities within the wind power industry serve as an important enabler for developing and expanding the service business further. Vestas already use data to optimise operation and maintenance, but Vestas data expertise should enable the company to bring new value creating solutions to the market.

As a result of higher than anticipated growth in the service business, Vestas has decided to increase its strategic ambition for the area. The new target is to grow its service business by more than 50 percent organically towards 2020 versus 2016 revenue, while at the same time deliver best-in-class margins.
For more than 35 years, Vestas has been driving down the cost of energy in the wind power industry and been at the heart of the technological progress. Vestas has a clear ambition to sustain this downward trend and lower the cost of energy faster than anyone in the wind power industry by bringing commercially valuable products and services to the market. Vestas’ technology strategy derives its strength from market-driven product development and extensive testing at the wind power industry’s largest test facility, located in Denmark.

Coupled with utilising Vestas’ smart data capabilities across the entire value chain, Vestas’ approach to technology enables it to continuously integrate new and effectively innovate proven technologies to create high-performing products and services in pursuit of its over-riding objective: lowering the levelised cost of energy (LCOE).

During 2016, Vestas introduced new variants and solutions to support its ambition to reduce LCOE faster than market average. By reducing LCOE faster than market average, Vestas aims to provide its customers with the highest returns in the industry. Vestas’ investments in new technology are the highest in the wind power industry.

Vestas will also continue to increase efficiency by leveraging on the scale of its operations.

Finally, working capital management remains an area of high priority for Vestas. Consequently, the focus remains on improving the cash conversion cycle and lowering the working capital tied up while transporting and installing the wind turbine projects.

Vestas’ corporate strategy positioned to support growth in all areas

Vestas has a strong position within its three main business areas, onshore wind turbines, services, and offshore wind. Each area offers a solid base for continued growth and stability.

In the coming years, Vestas expects the onshore wind turbine market to transition from high global growth rates to high but steady volumes, while Vestas expects to see double-digit growth in the worldwide installed base creating important new opportunities to grow the service business. Finally, offshore wind is projected to become a large-scale renewable technology, creating the foundation for a high growth scenario in the offshore market.


* Compound average growth rate.
### Highlights for the Group

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<tr>
<td><strong>HIGHLIGHTS</strong></td>
<td></td>
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<td><strong>INCOME STATEMENT</strong></td>
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<tr>
<td>Revenue</td>
<td>10,237</td>
<td>8,423</td>
<td>6,910</td>
<td>6,084</td>
<td>7,216</td>
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<td>Gross profit</td>
<td>2,126</td>
<td>1,505</td>
<td>1,178</td>
<td>896</td>
<td>796</td>
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<tr>
<td>Profit before financial income and costs, depreciation and amortisation (EBITDA) before special items</td>
<td>1,826</td>
<td>1,212</td>
<td>929</td>
<td>610</td>
<td>473</td>
</tr>
<tr>
<td>Operating profit/(loss) (EBIT) before special items</td>
<td>1,421</td>
<td>860</td>
<td>559</td>
<td>211</td>
<td>4</td>
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<tr>
<td>Profit before financial income and costs, depreciation and amortisation (EBITDA) after special items</td>
<td>1,826</td>
<td>1,258</td>
<td>977</td>
<td>530</td>
<td>299</td>
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<tr>
<td>Operating profit/(loss) (EBIT) after special items</td>
<td>1,421</td>
<td>906</td>
<td>607</td>
<td>102</td>
<td>(697)</td>
</tr>
<tr>
<td>Net financial items</td>
<td>(33)</td>
<td>(15)</td>
<td>(53)</td>
<td>(138)</td>
<td>(14)</td>
</tr>
<tr>
<td>Profit/(loss) before tax</td>
<td>1,287</td>
<td>925</td>
<td>523</td>
<td>(36)</td>
<td>(713)</td>
</tr>
<tr>
<td>Profit/(loss) for the year</td>
<td>965</td>
<td>685</td>
<td>392</td>
<td>(82)</td>
<td>(963)</td>
</tr>
<tr>
<td><strong>BALANCE SHEET</strong></td>
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<tr>
<td>Balance sheet total</td>
<td>9,931</td>
<td>8,587</td>
<td>6,997</td>
<td>5,640</td>
<td>6,972</td>
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<td>Equity</td>
<td>3,190</td>
<td>2,899</td>
<td>2,379</td>
<td>1,524</td>
<td>1,622</td>
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<td>Provisions</td>
<td>622</td>
<td>458</td>
<td>390</td>
<td>388</td>
<td>353</td>
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<tr>
<td>Average interest-bearing position (net)</td>
<td>2,111</td>
<td>1,721</td>
<td>494</td>
<td>(862)</td>
<td>(1,189)</td>
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<tr>
<td>Net working capital</td>
<td>(1,941)</td>
<td>(1,383)</td>
<td>(957)</td>
<td>(596)</td>
<td>233</td>
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<tr>
<td>Investments in property, plant and equipment</td>
<td>304</td>
<td>220</td>
<td>163</td>
<td>73</td>
<td>167</td>
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<td><strong>CASH FLOW STATEMENT</strong></td>
<td></td>
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</tr>
<tr>
<td>Cash flow from operating activities</td>
<td>2,181</td>
<td>1,472</td>
<td>1,126</td>
<td>1,248</td>
<td>(73)</td>
</tr>
<tr>
<td>Cash flow from investing activities</td>
<td>(817)</td>
<td>(425)</td>
<td>(285)</td>
<td>(239)</td>
<td>(286)</td>
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<tr>
<td>Free cash flow</td>
<td>1,364</td>
<td>1,047</td>
<td>841</td>
<td>1,009</td>
<td>(359)</td>
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<tr>
<td>Cash flow from financing activities</td>
<td>(611)</td>
<td>(360)</td>
<td>389</td>
<td>(1,150)</td>
<td>832</td>
</tr>
<tr>
<td>Change in cash and cash equivalents less current portion of bank debt</td>
<td>753</td>
<td>687</td>
<td>1,230</td>
<td>(141)</td>
<td>473</td>
</tr>
<tr>
<td><strong>RATIOS</strong></td>
<td></td>
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<tr>
<td><strong>FINANCIAL RATIOS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross margin (%)</td>
<td>20.8</td>
<td>17.9</td>
<td>17.0</td>
<td>14.7</td>
<td>11.0</td>
</tr>
<tr>
<td>EBITDA margin (%) before special items</td>
<td>17.8</td>
<td>14.4</td>
<td>13.4</td>
<td>100</td>
<td>6.6</td>
</tr>
<tr>
<td>EBIT margin (%) before special items</td>
<td>13.9</td>
<td>10.2</td>
<td>8.1</td>
<td>3.5</td>
<td>0.1</td>
</tr>
<tr>
<td>EBITDA margin (%) after special items</td>
<td>17.8</td>
<td>14.9</td>
<td>14.1</td>
<td>8.7</td>
<td>4.1</td>
</tr>
<tr>
<td>EBIT margin (%) after special items</td>
<td>13.9</td>
<td>10.8</td>
<td>8.8</td>
<td>1.7</td>
<td>(9.7)</td>
</tr>
<tr>
<td>Return on invested capital (ROIC) (%) before special items</td>
<td>265.2</td>
<td>117.2</td>
<td>35.3</td>
<td>7.7</td>
<td>0.2</td>
</tr>
<tr>
<td>Solvency ratio (%)</td>
<td>32.1</td>
<td>33.8</td>
<td>34.0</td>
<td>270</td>
<td>233</td>
</tr>
<tr>
<td>Net interest-bearing debt/EBITDA before special items</td>
<td>(1.8)</td>
<td>(1.9)</td>
<td>(1.5)</td>
<td>(0.1)</td>
<td>1.9</td>
</tr>
<tr>
<td>Return on equity (%)</td>
<td>32.6</td>
<td>26.2</td>
<td>20.1</td>
<td>(5.2)</td>
<td>(45.9)</td>
</tr>
<tr>
<td>Gearing (%)</td>
<td>15.5</td>
<td>17.1</td>
<td>25.5</td>
<td>39.9</td>
<td>108.0</td>
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<tr>
<td><strong>SHARE RATIOS</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Earnings per share (EUR)</td>
<td>4.4</td>
<td>3.1</td>
<td>1.8</td>
<td>(0.4)</td>
<td>(4.8)</td>
</tr>
<tr>
<td>Book value per share (EUR)</td>
<td>14.4</td>
<td>12.9</td>
<td>10.6</td>
<td>7.5</td>
<td>8.0</td>
</tr>
<tr>
<td>Price / book value (EUR)</td>
<td>4.3</td>
<td>5.0</td>
<td>2.9</td>
<td>2.9</td>
<td>0.5</td>
</tr>
<tr>
<td>P / E ratio</td>
<td>14.0</td>
<td>21.2</td>
<td>17.2</td>
<td>neg.</td>
<td>neg.</td>
</tr>
<tr>
<td>Cash flow from operating activities per share (EUR)</td>
<td>9.8</td>
<td>6.6</td>
<td>5.0</td>
<td>6.1</td>
<td>(0.4)</td>
</tr>
<tr>
<td>Dividend per share (EUR)</td>
<td>1.31</td>
<td>0.91</td>
<td>0.52</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Payout ratio (%)</td>
<td>30.0</td>
<td>29.9</td>
<td>29.9</td>
<td>0.0</td>
<td>0.0</td>
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<tr>
<td>Share price 31 December (EUR)</td>
<td>61.7</td>
<td>64.8</td>
<td>30.4</td>
<td>21.5</td>
<td>4.3</td>
</tr>
<tr>
<td>Average number of shares</td>
<td>222,360,341</td>
<td>224,074,513</td>
<td>221,674,711</td>
<td>203,704,103</td>
<td>203,704,103</td>
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<tr>
<td>Number of shares at the end of the year</td>
<td>221,544,727</td>
<td>224,074,513</td>
<td>224,074,513</td>
<td>203,704,103</td>
<td>203,704,103</td>
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</table>

1) The ratios have been calculated in accordance with the guidelines from ‘Den Danske Finansanalytikerforening’ (The Danish Society of Financial Analysts) (Recommendations and Financial ratios 2015), ref note 7.4 to the consolidated financial statements. Vestas annual report 2016.
2) Adjustment for tax based on effective tax rate for the year.
3) Based on proposed dividend.
### OPERATIONAL KEY FIGURES

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<tbody>
<tr>
<td>Order intake (bnEUR)</td>
<td>9.5</td>
<td>8.2</td>
<td>5.8</td>
<td>5.8</td>
<td>3.8</td>
</tr>
<tr>
<td>Order intake (MW)</td>
<td>10,494</td>
<td>8,943</td>
<td>6,544</td>
<td>5,964</td>
<td>3,738</td>
</tr>
<tr>
<td>Order backlog – wind turbines (bnEUR)</td>
<td>8.5</td>
<td>7.9</td>
<td>6.7</td>
<td>6.8</td>
<td>7.1</td>
</tr>
<tr>
<td>Order backlog – service (bnEUR)</td>
<td>10.7</td>
<td>8.9</td>
<td>7.0</td>
<td>6.7</td>
<td>5.3</td>
</tr>
<tr>
<td>Produced and shipped wind turbines (MW)</td>
<td>9,957</td>
<td>7,948</td>
<td>6,125</td>
<td>4,513</td>
<td>6,171</td>
</tr>
<tr>
<td>Produced and shipped wind turbines (number)</td>
<td>4,264</td>
<td>3,330</td>
<td>2,527</td>
<td>2,025</td>
<td>2,765</td>
</tr>
<tr>
<td>Deliveries (MW)</td>
<td>9,654</td>
<td>7,486</td>
<td>6,252</td>
<td>4,862</td>
<td>6,039</td>
</tr>
</tbody>
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### SOCIAL AND ENVIRONMENTAL KEY FIGURES

#### OCCUPATIONAL HEALTH & SAFETY

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<tbody>
<tr>
<td>Total recordable injuries (number)</td>
<td>303</td>
<td>335</td>
<td>384</td>
<td>307</td>
<td>417</td>
</tr>
<tr>
<td>– of which lost time injuries (number)</td>
<td>82</td>
<td>56</td>
<td>53</td>
<td>66</td>
<td>110</td>
</tr>
<tr>
<td>– of which fatal injuries (number)</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
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#### CONSUMPTION OF RESOURCES

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<tbody>
<tr>
<td>Consumption of energy (GWh)</td>
<td>567</td>
<td>516</td>
<td>501</td>
<td>586</td>
<td>630</td>
</tr>
<tr>
<td>– of which renewable energy (GWh)</td>
<td>296</td>
<td>283</td>
<td>278</td>
<td>325</td>
<td>327</td>
</tr>
<tr>
<td>– of which renewable electricity (GWh)</td>
<td>268</td>
<td>257</td>
<td>255</td>
<td>309</td>
<td>310</td>
</tr>
<tr>
<td>Consumption of fresh water (1,000 m³)</td>
<td>428</td>
<td>427</td>
<td>366</td>
<td>512</td>
<td>581</td>
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#### WASTE DISPOSAL

<table>
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<tbody>
<tr>
<td>Volume of waste (1,000 tonnes)</td>
<td>75</td>
<td>67</td>
<td>51</td>
<td>71</td>
<td>87</td>
</tr>
<tr>
<td>– of which collected for recycling (1,000 tonnes)</td>
<td>37</td>
<td>33</td>
<td>27</td>
<td>42</td>
<td>44</td>
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#### EMISSIONS

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<tbody>
<tr>
<td>Emission of direct CO₂ (1,000 tonnes)</td>
<td>58</td>
<td>49</td>
<td>50</td>
<td>56</td>
<td>59</td>
</tr>
<tr>
<td>Emission of indirect CO₂ (1,000 tonnes)</td>
<td>26</td>
<td>25</td>
<td>29</td>
<td>44</td>
<td>59</td>
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#### LOCAL COMMUNITY

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<tr>
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<tr>
<td>Environmental accidents (number)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Breaches of internal inspection conditions (number)</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>1</td>
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#### EMPLOYEES\(^1\)

<table>
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<tbody>
<tr>
<td>Average number of employees</td>
<td>21,625</td>
<td>18,986</td>
<td>16,325</td>
<td>16,598</td>
<td>20,284</td>
</tr>
<tr>
<td>Number of employees at the end of the period</td>
<td>21,824</td>
<td>20,507</td>
<td>17,598</td>
<td>15,192</td>
<td>17,238</td>
</tr>
<tr>
<td>– of which outside Europe, Middle East, and Africa</td>
<td>9,975</td>
<td>9,121</td>
<td>7,441</td>
<td>5,790</td>
<td>6,596</td>
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#### SOCIAL AND ENVIRONMENTAL INDICATORS\(^2\)

#### OCCUPATIONAL HEALTH & SAFETY

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</thead>
<tbody>
<tr>
<td>Incidence of total recordable injuries per one million working hours</td>
<td>6.9</td>
<td>8.7</td>
<td>11.8</td>
<td>9.8</td>
<td>10.7</td>
</tr>
<tr>
<td>Incidence of lost time injuries per one million working hours</td>
<td>1.9</td>
<td>1.5</td>
<td>1.6</td>
<td>2.1</td>
<td>2.8</td>
</tr>
<tr>
<td>Absence due to illness among hourly-paid employees (%)</td>
<td>2.2</td>
<td>1.9</td>
<td>2.3</td>
<td>2.5</td>
<td>2.4</td>
</tr>
<tr>
<td>Absence due to illness among salaried employees (%)</td>
<td>1.2</td>
<td>1.1</td>
<td>1.3</td>
<td>1.2</td>
<td>1.1</td>
</tr>
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</table>

#### PRODUCTS

<table>
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<tr>
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</thead>
<tbody>
<tr>
<td>CO₂ savings over the life time on the MW produced and shipped (million tonnes of CO₂)</td>
<td>281</td>
<td>224</td>
<td>173</td>
<td>125</td>
<td>163</td>
</tr>
</tbody>
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#### UTILISATION OF RESOURCES

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Renewable energy (%)</td>
<td>52</td>
<td>55</td>
<td>56</td>
<td>56</td>
<td>52</td>
</tr>
<tr>
<td>Renewable electricity for own activities (%)</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>89</td>
</tr>
</tbody>
</table>

#### EMPLOYEES

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</thead>
<tbody>
<tr>
<td>Women in Board of Directors (^1) and Executive Management (%)</td>
<td>23</td>
<td>23</td>
<td>23</td>
<td>15</td>
<td>8</td>
</tr>
<tr>
<td>Women at management level (%)(^2)</td>
<td>19</td>
<td>18</td>
<td>18</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>Non-Danes at management level (%)(^2)</td>
<td>60</td>
<td>57</td>
<td>54</td>
<td>53</td>
<td>56</td>
</tr>
</tbody>
</table>

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1) Only Board members elected by the general meeting are included.
2) Employees at management level comprise employees at level IPES 4+ according to Mercer's International Position Evaluation System.
2016 at a glance

For full-year 2016, revenue amounted to EUR 10.2bn, EBIT margin before special items was 13.9 percent, total net investments\(^1\) was EUR 617m, and the free cash flow\(^1\) amounted to EUR 1,564m. The wind turbine order intake increased from 8,943 MW in 2015 to 10,494 MW in 2016 and the value of the service order backlog increased by EUR 1.8bn to EUR 10.7bn.

**Dividend**
The Board of Directors recommends to the General Meeting that a dividend of DKK 9.71 per share be paid for the financial year 2016.

**EUR 401m**
Vestas initiated a share buy-back programme – bought back 6.0m Vestas shares at a value of EUR 401m.

**1,750 MW service contact**
UpWind Solutions signed a multi-site service contract with Berkshire Hathaway Energy, to provide maintenance services of 1,750 MW across 15 sites in the US.

**9,957 MW**
2016 was another busy year for Vestas. The number of MW produced and shipped reached 9,957 (4,264 wind turbines).

**1 GW onshore order**
Vestas signed the largest single project in the history of the company with the 1 GW Fosen/Hitra project in Norway.

**Acquisition of Availon**
Vestas acquired the Germany-based independent service provider Availon Holding GmbH.

**910 MW offshore orders**
MHI Vestas Offshore Wind received firm and unconditional orders for 910 MW.

**-21 percent**
Through the dedicated efforts of its employees and supervised contractors, Vestas reduced the rate of total recordable injuries by 21 percent.

**Record-breaking**
Vestas achieved record-breaking order intake and, amongst others, announced 31 orders in 31 days, across 12 countries and five continents in the month of December.

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\(^1\) Before investments in marketable securities and short-term financial investments.
Fourth quarter 2016
As expected, the fourth quarter of 2016 was characterised by high activity levels in terms of both order intake and deliveries. The level of deliveries was also reflected in revenue, earnings, and free cash flow, which in the fourth quarter of 2016 stood at the highest level during the year. Compared to 2015, revenue increased by 9 percent to EUR 3,313m. Operating profit (EBIT) before special items improved by EUR 100m to EUR 504m, equivalent to an EBIT margin of 15.2 percent – 1.9 percentage points higher than in 2015.

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Revenue (mEUR)</th>
<th>EBIT Margin before special items (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1 2016</td>
<td>1,000</td>
<td></td>
</tr>
<tr>
<td>Q2 2016</td>
<td>2,000</td>
<td>8.5</td>
</tr>
<tr>
<td>Q3 2016</td>
<td>3,000</td>
<td>12.0</td>
</tr>
<tr>
<td>Q4 2016</td>
<td>4,000</td>
<td>16.0</td>
</tr>
</tbody>
</table>

The free cash flow excluding investments in marketable securities and short-term financial investments amounted to EUR 1,375m in the fourth quarter of 2016, primarily impacted by an improvement in net working capital as well as a positive cash effect from operating activities during the quarter.

Full year 2016
Project performance
Compared to 2015, the order intake for the year increased by 17.3 percent to 10,494 MW, corresponding to EUR 9.5bn. All regions contributed to the increase in order intake. The US market showed a strong demand, especially during December 2016, while the steady growth continued across the markets in Europe and Asia Pacific, where amongst others Vestas received its largest order to date during 2016. The order, which is to be delivered in Norway, contributed with 1 GW to the order intake.

At the end of 2016, the wind turbine order backlog amounted to 9,530 MW corresponding to EUR 8.5bn against 8,732 MW and EUR 7.9bn at the end of 2015.

9.7 GW
In 2016, Vestas delivered 9.7 GW (3,913 wind turbines) in 34 countries around the world.

In 2016, final capacity delivered to the customers amounted to 9,654 MW – an increase of 29 percent compared to 2015. The growth was in particular driven by increased deliveries to the US market, where deliveries increased from 2,999 MW in 2015 to 3,940 MW in 2016. Deliveries in the Americas, Europe, Middle East, and Africa (EMEA), and Asia Pacific regions increased by 44 percent, 9 percent, and 83 percent in 2016, respectively.

By the end of 2016, Vestas has installed almost 82 GW in 76 countries.

Service performance
At the end of 2016, Vestas had service agreements with an expected contractual future revenue of EUR 10.7bn – an increase of 20 percent compared to 2015. Service revenue increased by EUR 171m to EUR 1,309m compared to 2015. The increase was driven by a combination of organic growth and acquisitions.
The service EBIT margin before special items amounted to 17.2 percent – a slight decrease compared to 17.7 percent in 2015. The decline was mainly driven by dilutive effects from the two acquisitions made in late 2015 and early 2016.

**Income statement**

Revenue increased by 22 percent to EUR 10.2bn in 2016. Americas accounted for 47 percent, while EMEA and Asia Pacific accounted for 45 and 8 percent, respectively.

The Group reported an operating profit (EBIT) before special items of EUR 1,421m in 2016, an improvement of EUR 561m relative to 2015. The EBIT margin before special items was 13.9 percent in 2016 against 10.2 percent in 2015.

Profit for the year was EUR 965m in 2016 compared to EUR 685m in 2015, mainly driven by the improved operating profit.

**Balance sheet**

Vestas’ total assets increased by EUR 1,344m to EUR 9,931m in 2016. This was primarily driven by an increase in cash and cash equivalents, which in turn was attributable to the strong cash flow during the year.

At 31 December 2016, Vestas’ net working capital amounted to EUR (1,941)m, which is an improvement of EUR 558m from 2015 and corresponds to (19) percent of annual revenue. The net working capital improvement during 2016 was primarily driven by increased prepayments received from customers.

At the end of 2016, Vestas had a net cash position of EUR 3,255m, which is an improvement of EUR 985m compared to the end of 2015. The positive free cash flow was the main driver for Vestas increasing its net cash position. Cash and cash equivalents stood at EUR 3,550m, marketable securities and short term financial investments was EUR 201m and the financial debt of EUR 496m relates to the green corporate bond.

The net debt/EBITDA ratio amounted to (1.8) by the end of 2016 compared to (1.9) by the end of 2015 and the solvency ratio was 32.1 percent at the end of 2016 – a decrease of 1.7 percentage points compared to 2015.

**Cash flow and investments**

In 2016, cash flows from operating activities before changes to net working capital amounted to EUR 1,793m, an increase of EUR 718m compared to 2015. This was driven by the improved operating profit.

Cash flow from operating activities amounted to EUR 2,181m in 2016, compared to EUR 1,472m in 2015. The increase was driven by the improved profit for the year.

Cash flow from investing activities amounted to a net outflow of EUR 817m.

Consequently, free cash flow excluding investment in marketable securities and short term financial investments amounted to EUR 1,564m, which was in line with the upgraded guidance of EUR 1,500m-1,600m from January 2017.
10 years in a row
By putting safety first, Vestas has significantly improved its injuries per one million working hours for 10 years in a row.

In 2016, Vestas' share of renewable energy was 52 percent and share of renewable electricity 100 percent. The target for Vestas' energy consumption is to reach a 60 percent share of renewable energy in 2020 from 55 percent in 2015. The road to the target will be both improvements in energy efficiency and further transition to renewable energy.

MHI Vestas Offshore Wind
During the year, the joint venture MHI Vestas Offshore Wind announced four firm and unconditional orders for projects in UK, Denmark, Belgium, and Scotland – totalling 910 MW.

Furthermore, the joint venture also announced that it had been appointed preferred supplier for two projects, one in Germany and one in the USA totalling 273 MW and with the announcement of Borssele III & IV (2 x 340 MW) in the Netherlands, the company also ended the year by adding yet another preferred supplier agreement to the list. Borssele III & IV can be seen as a milestone project for the offshore industry in cost competitiveness with a reported price of EUR 54.50 per MWh (excluding transmission costs).

Based on these levels of order activity, the joint venture finds itself well positioned as one of the strongest players in the offshore market. MHI Vestas Offshore Wind has been a very active participant in the market, and has generally had a presence in most tenders taking place since its formation.

Outlook 2017
Revenue is expected to range between EUR 9.25bn and 10.25bn including service revenue, which is expected to grow. Vestas expects to achieve an EBIT margin before special items of 12-14 percent with the service EBIT margin remaining stable.

Total investments1) are expected to amount to approx EUR 350m, and the free cash flow1) is expected to be minimum EUR 700m in 2017.

It should be emphasised that Vestas’ accounting policies only allow the recognition of supply-only and supply-and-installation activities as income when the risk has finally passed to the customer, irrespective of whether Vestas has already produced, shipped, and installed the wind turbines. Disruptions in production and challenges in relation to wind turbine installation, for example bad weather, lack of grid connections, and similar matters may thus cause delays that could affect Vestas’ financial results for 2017. Further, movements in exchange rates from current levels may also impact Vestas’ financial results for 2017.

Annual General Meeting 2017
The Annual General Meeting of Vestas Wind Systems A/S will be held on 6 April 2017 at 1 p.m. (CET) at Crown Plaza Copenhagen Towers in Copenhagen, Denmark.

For the financial year 2016 the Board of Directors recommends a dividend of DKK 9.71 (EUR 1.31) per share equivalent to 30.0 percent of the net result for the year after tax.

The convening for the Annual General Meeting will be disclosed on 3 March 2017.

1) Before investments in marketable securities and short-term financial investments, and incl. expected proceeds from sale of office buildings.
Record high activity

Project performance

2016 showed a record strong order intake for our Project business. The order intake during 2016 amounted to 10,494 MW corresponding to EUR 9.5bn. Compared to 2015, the order intake in MW for the year increased by 17 percent.

All regions contributed to the increase in order intake. The US market showed a strong demand especially during December 2016, while the steady growth continued across the markets in Europe, Middle East, and Africa and Asia Pacific.

Final projects delivered to the customers totalled 9,654 MW, which was a 29 percent increase compared to 2015. The growth was in particular driven by increased deliveries to the US market, Americas accounted for 50 percent (2015: 45 percent), EMEA for 41 (2015: 49 percent) percent, and Asia Pacific for 9 percent (2015: 6 percent) of the deliveries in MW.

At the end of the year, the order backlog for the Project business amounted to 9,530 MW equaling EUR 8.5bn. Compared to last year, the order backlog in MW increased by 9 percent. Despite the increase in delivery of wind turbines, the order backlog has developed positively due to the strong order intake.

Service performance

The service activity was at a higher level compared to last year, due to a combination of organic growth and acquisitions. By the end of 2016 Vestas has more than 37,000 wind turbines under service, equivalent to approx 71 GW.

At the end of 2016, we had service agreements with expected contractual revenue of EUR 10.7bn, up 20 percent from 8.9bn in 2015. At the end of the year, the average duration in the service order backlog was approx six years, which was stable compared to last year.

Strong financial performance across the board

The higher activity levels resulted in a revenue increase of 22 percent compared to 2015, while at the same time fixed costs were kept firmly under control leading to a double-digit EBIT margin before special items of 13.9 percent – an increase of 3.7 percentage points – and the highest net profit ever.

The strong financial performance was also reflected in the cash flow generation. Combined with continued well managed operations, as measured by net working capital, free cash flow\(^1\) amounted to more than EUR 1.5bn. And yet again, as in 2015, the free cash flow was primarily generated by operating earnings confirming the good development of the company.

As a result of the strong financial performance, we are also seeing the balance sheet continuing to improve. The average net interest-bearing position was positive of EUR 2,111m in 2016 compared to EUR 1,721m in 2015, which was an improvement of 23 percent, driven by strong cash flow during the year.

All in all, 2016 was a year well executed which is clearly reflected and summarised in the return on invested capital (ROIC) that increased to 265 percent at the end of 2016 – the highest level ever – and hence, the strong shareholder value generating capabilities of the company continues at a very high level.

Capital allocation priorities

The main priority is to invest in Vestas’ corporate strategy and use capital resources for required investments and R&D in order to realise this strategy. As a player in a market where projects, customers, and wind turbine investors become larger, Vestas aims to be a strong financial counterpart.

Available capital resources may also be used for bolt-on acquisitions in order to accelerate or increase profitable growth prospects.

Any decision to distribute cash to shareholders will be taken in appropriate consideration of capital structure targets and availability of excess cash. The dividend policy reflects the general intention of the Board of Directors to recommend a dividend of 25-30 percent of the year’s net result after tax, which will be paid out following the approval by the annual general meeting. In addition, Vestas may from time to time supplement with share buyback programmes to adjust the capital structure.

\(^1\) Before investments in market securities and short term financial investments.
Global trends

In 2016, global onshore installations is expected to decline to 55 GW compared to 59 GW installed in 2015. The deterioration was mainly caused by a slowdown in the Chinese market, where onshore wind power installations declined to 22 GW in 2016 – a decline of 22 percent compared to 2015. Excluding the Chinese market, global onshore installations is expected to increase by 2 GW in 2016.

Public policies that have supported renewable energy’s growth continue to evolve. Currently, investments in wind power are typically supported through financial incentive schemes remunerating the renewable power production. In some regions, support systems are becoming more market-based and moving towards systems providing support in addition to the market price – not in place of it. As long as such market-based systems are structured in a way to create a level playing field for the different energy sources, Vestas does not expect this transition to be a disadvantage to the wind power industry.

We believe the future is bright for wind energy. Globally in 2016, wind energy is expected to have accounted for approx 18 percent of new installed electricity generation capacity, and that share is set to continue growing in the future.

Vestas is determined to continue leading the industry, and to working with partners in government and the private sector to realise wind power’s full potential as an affordable clean energy source and key climate change solution.

Vestas’ market development in 2016

Vestas’ installed capacity increased from 74 GW in 2015 to almost 82 GW in 2016 – an increase of 11 percent.

With deliveries across 34 countries in 2016, our wide geographic diversification remains a key strategic strength, allowing us to balance out the inevitable ups and downs in any given market. Our global presence in 76 countries across six continents underlines our ability to provide wind energy solutions anywhere in the world.

During 2016, we continued our focus on early engagement, thereby offering more attractive cost-effective wind energy solutions to the benefit of both our customers and Vestas. By early engagement with customers, for example on site design, we are able to unlock value and offer a more optimised solution.

Combined with the ongoing efforts to build closer and expand already existing customer relationships and partner with new customers in both mature and new wind power markets, we experienced order intake growth across all regions and signed orders in a total of 33 countries in 2016. Demand for wind turbines from Vestas’ 2 MW and 3 MW platforms remains strong. In 2016, approx two-thirds of the order intake was based on the 3 MW platform, while the remaining one-third related to the 2 MW platform.

Regional market developments

In the USA, an extension of the American Production Tax Credit (PTC) was approved in December 2015, the main element of which was a two-year extension of the 100 percent value followed by a three-year phase-down period. The PTC extension provides the policy certainty necessary for effective business planning and investments. The longer-term certainty, alongside wind energy’s natural competitiveness against other power generation sources, will ensure an expected solid future for wind energy in the USA.

Europe remains a stable core market for Vestas. The German market continues to display its importance as it once again was our largest northern European market in terms of deliveries in 2016. We also entered into the largest single project in the history of the company in 2016 with the 1 GW Fosen/Hitra project in Norway.

In 2016, we continued to grow our presence in emerging markets. Order intake continued in Brazil and China, and Vestas also received orders in e.g. Honduras, Uruguay, Vietnam, Turkey, Morocco, Argentina, and Jordan.

Our ability to maintain a strong market position in countries such as the USA and Germany, our ability to sell large projects (e.g. the 1 GW project in Norway), and the continued focus on order intake in emerging markets clearly supports our strategic ambition to grow in both mature and emerging markets and we are comfortable maintaining our ambition to grow faster than the market.

“2016 order intake reached a new record level driven by improvements in all regions. We are comfortable maintaining our ambition to grow faster than the market and we believe the future is bright for wind energy.”

Juan Araluce
Executive Vice President & CSO
Outlook and market trends for the service business

The service market is growing faster than the market for wind turbines and is becoming more and more important to Vestas as customers shift their focus from capital expenditure to total cost of ownership. The latest market reports indicate that the service market is expected to grow by 9 percent annually over the next 10 years.

Our service business is a key element in the company’s long-term corporate strategy. With data derived from the world’s largest installed fleet and more than 35 years of technical insight, our goal is to release the full potential of our customers’ wind power businesses. That is why a service partnership with Vestas stands apart.

Changes in customer needs are creating new trends in the market. Vestas is observing a customer trend away from availability towards a greater focus on lifetime service costs and output optimisation. Other general trends that can be observed within wind turbine operations and maintenance are the increased demand for unique offerings as opposed to standard products as well as greater importance of data solutions.

Finally, to succeed in the service market, understanding the commercial needs and the strategies of the asset owners are crucial.

Strategic position and ambitions for the future

More customers choose to build in-house service capabilities while more independent service providers are emerging, leading to increased competition. Thus, to maintain our leading position in the service market, we will continue to invest in our service business.

Vestas’ extensive data processing and asset management capabilities enable anticipating and planning service requirements. This means that we have been able to keep a Lost Production Factor consistently under 2 percent. Vestas’ technology and service know-how are mutually reinforcing elements in maximising wind power plant output and lowering the cost of energy.

As part of our goal to become the leader in the service solutions market, we will grow our multi-brand service solutions. Multi-brand service solutions offer a large opportunity as Vestas turbines cover approx 16 percent of the total installed fleet worldwide.

Vestas’ service business is expanding with an installed base of more than 37,000 wind turbines under service by the end of 2016, and with a revenue increase of 171m from EUR 1,138m in 2015 to EUR 1,309m in 2016. Combined with the global footprint of the service organisation and the unmatched ability to analyse data related to wind and weather conditions, the installed base of wind turbines gives Vestas a distinctive advantage which provides ideal conditions for stable growth going forward.

In 2016, the service business grew by 15 percent – excluding impact from acquisitions and foreign exchange rate developments, the organic growth amounted to 8 percent. Vestas’ service order backlog increased by EUR 1.8bn to EUR 10.7bn.

We will continue to expand the catalogue of service offerings and improve existing solutions to increase our customers’ output and lower the cost of energy. Based on current market opportunities and order intake, we have an ambition towards 2020 to grow the service business organically by more than 50 percent.

Acquisitions support fleetwide partner growth

In December 2015, we acquired the independent US service provider UpWind Solutions, Inc., followed by the announcement in early 2016 of the agreement to acquire the Germany-based company Availon Holding GmbH. These acquisitions have strengthened our offerings within servicing of both Vestas and non-Vestas wind turbines and are expected to further accelerate the corporate strategy within the service area. The ambition is to become our customers’ preferred fleetwide lifetime service partner globally.

We are currently servicing more than 71 GW of installed capacity, to which the service backlog consist of approx 8 GW of non-Vestas turbines. We will use our unmatched database and analytics capabilities to further accelerate servicing of third-party wind turbines.
Vestas’ technology strategy

Being the global wind power leader requires a long-term line of sight in technology development. We continuously strive to bring commercially competitive products to the market in a profitable way. Vestas’ technology strategy derives its strength from market-driven product development and extensive testing at Vestas’ test facilities in Denmark – the largest test facilities in the wind power industry – and the UK. This enables Vestas to continuously introduce new and integrate proven technologies to create high-performing products and services in pursuit of the overriding objective: lowering the cost of energy.

By building on the existing 2 MW and 3 MW platforms, we secure an ability to grow profitably and deliver highly competitive and reliable products and services for our customers’ projects in all wind classes. For Vestas, industrialisation means moving from a “one-size-fits-all” approach to custom configurations based on modularised building blocks that enable Vestas to offer customers tailored solutions to meet project-specific requirements.

The modularity increases the flexibility of our product range by combining different modules with standardised interfaces, making it possible to optimally configure the wind turbine as well as the wind power plant for the local wind and grid environment. Vestas’ product range can thus match an increasingly wider variety of wind conditions, even within the same wind class, and in this way optimise wind turbine output and strengthen customers’ business case.

The efforts made as part of the technology strategy have resulted in steady reductions in the levelised cost of energy year-on-year.

Committed to remain the technology leader

We continue to be the technology leader in the wind power industry by translating our global reach and industry knowledge into new investments. Vestas combines its superior technical knowledge and insight in how we maximise components and technical systems to deliver the lowest levelised cost of energy for our customers.

From the design of the first wind turbine on the 3 MW platform years back, comprising just one size and suitable for a single type of site, we have now developed a whole family of wind turbines within the same platform, based on relatively few, interchangeable parts. Rotor diameters now range from 105 to 136 metres and cover all wind classes within the wind segment. Using proven technologies like a full-scale converter, the 3 MW platform meets even the most challenging grid requirements providing excellent energy yield in all wind and weather conditions.

The 2 MW platform continues to be a preferred choice for many of our customers. Vestas’ 2 MW platform is one of the most trusted platforms in the industry providing customers with great business case certainty. With many new orders in the USA for the V110-2.0 MW turbine in 2016, the platform once again confirmed its flagship status in the market.

Investing in new technology

Leveraging on our world-class data collection is key when developing new technologies and solutions to our customers. Vestas’ product development, value chain simulation, and operations & maintenance performance and optimisation, are all founded on high performance data computing. Vestas and its external partners utilise big data in all stages of the innovation and implementation process of new technologies.

Investments have contributed to creating the highly data-driven business Vestas is today with an unmatched ability in the wind power industry to create and utilise smart data to lower the cost of energy. Equally important is to use Vestas knowledge to overcome and eliminate risks associated with new technology.

The multi-rotor spins off new knowledge

Continuing to reduce the levelised cost of energy in the long-term will require new solutions and new ways of thinking. In cooperation with the Technical University of Denmark, we have installed a concept demonstrator to test the technical feasibility to operate and controlling a multi-rotor wind turbine.

The multi-rotor concept demonstrator was installed in April 2016 and entered the second test phase mid-September, during an official launch event at the Risø test site in Denmark.

"Vestas has a clear ambition to lower the cost of energy faster than anyone in the wind power industry by bringing commercially valuable products and services to the market.”

Anders Vedel
 Executive Vice President & CTO
Flexible, asset-light, and low-cost manufacturing footprint

2016 was another busy one for Vestas. The number of MW produced and shipped reached 9,957 MW (4,264 wind turbines), compared to 7,948 MW (3,330 wind turbines) in 2015. A further ramp-up of the production was required in 2016 due to the high activity level.

The increased activity level in 2016 was achieved without adding new factories to our current manufacturing footprint, highlighting the flexibility and strength of the operating model that was introduced during the turnaround years.

The collaboration with our suppliers has generally moved to a new level of maturity, and a supplier account management programme is now being rolled out, similar to the one used for customers.

We are forming close partnerships with large suppliers and involve these in the development of products and processes, as the suppliers often possess many years of knowledge and experience that can be utilised to the benefit of both parties.

During 2016, we took a great step forward with Vestas cost-out programmes in all markets, making our cost set-up even more competitive. Competition remains strong in all markets so further progress on the cost-out journey will have to continue in coming years.

The Lost Production Factor remains at a low level of under 2 percent demonstrating Vestas’ high quality levels and that we have maintained a well-functioning operation throughout the ramp-up.

In 2016, we unfortunately had to reduce the staffing levels at the blades factory in Lem, Denmark by approx 300 employees. The reduction at the Lem factory was necessary due to its high manufacturing costs compared to the market level as well as the need to strengthen Vestas’ overall manufacturing and supply chain competitiveness in response to evolving market conditions. However the factory in Lem remains a very important part of our global manufacturing footprint.

Evolution of manufacturing footprint

To ensure profitability in new markets with high growth potential, we have outlined separate plans for the target markets China, India, and Brazil. Local presence and local sourcing is of great importance in these countries, be it for reasons of proximity to customers, cost-effectiveness, or fulfilling local content requirements in manufacturing.

In 2016, we announced that we will manufacture and intend to sell our largest onshore wind turbine in China, the V136-3.45 MW turbine. Vestas is continuously bringing its latest technologies, products, and service solutions to China and is determined to grow together with its partners in the country while simultaneously leveraging on the continuous supply chain localisation.

We have been present in Brazil since 2000 and announced 371 MW in firm orders in 2016. In addition to the sales office in São Paulo, Vestas inaugurated a hub and nacelle production facility in Aquiraz (Ceará) as well as established successful partnerships for producing blades and generators locally. Vestas is today included in the Brazilian Development Bank’s approved list of suppliers.

Late in 2015, we announced that we would build a blade factory in India, the construction of which is progressing according to plan. This will be the first significant addition to the manufacturing footprint since 2011 and is an example of our ambitions to grow in our strategic focus markets. The new factory will support Vestas’ operations in the Indian market as well as potentially servicing activities in other markets. It is expected to be fully operational by early 2017.

Equally important, during 2016, we started sourcing of blades from third parties in China, Turkey, and Brazil. Integrating external manufacturers into our global manufacturing set-up illustrates the scalability and flexibility of Vestas’ supply chain and our ongoing commitment to providing cost-effective wind power plant solutions for our customers.

In addition to these three specific growth markets, we continue working on establishing supply chains in new markets with growth potential around the world.

“This was another busy year with MW produced and shipped up by 25 percent, while leveraging on our scale made us a cost-effective market player. We remain flexible and agile to adjust to market fluctuations.”

Jean-Marc Lechêne
Executive Vice President & COO
Disclaimer and cautionary statement

This document contains forward-looking statements concerning Vestas' financial condition, results of operations and business. All statements other than statements of historical fact are, or may be deemed to be, forward-looking statements. Forward-looking statements are statements of future expectations that are based on management's current expectations and assumptions and involve known and unknown risks and uncertainties that could cause actual results, performance, or events to differ materially from those expressed or implied in these statements.

Forward-looking statements include, among other things, statements concerning Vestas' potential exposure to market risks and statements expressing management's expectations, beliefs, estimates, forecasts, projections and assumptions. A number of factors that affect Vestas' future operations and could cause Vestas' results to differ materially from those expressed in the forward-looking statements included in this document, include (without limitation): (a) changes in demand for Vestas' products; (b) currency and interest rate fluctuations; (c) loss of market share and industry competition; (d) environmental and physical risks, including adverse weather conditions; (e) legislative, fiscal, and regulatory developments, including changes in tax or accounting policies; (f) economic and financial market conditions in various countries and regions; (g) political risks, including the risks of expropriation and renegotiation of the terms of contracts with governmental entities, and delays or advancements in the approval of projects; (h) ability to enforce patents; (i) product development risks; (j) cost of commodities; (k) customer credit risks; (l) supply of components; and (m) customer-created delays affecting product installation, grid connections and other revenue-recognition factors.

All forward-looking statements contained in this document are expressly qualified by the cautionary statements contained or referenced to in this statement. Undue reliance should not be placed on forward-looking statements. Additional factors that may affect future results are contained in Vestas' annual report for the year ended 31 December 2016 (available at www.vestas.com/investor) and these factors also should be considered. Each forward-looking statement speaks only as of the date of this document. Vestas does not undertake any obligation to publicly update or revise any forward-looking statement as a result of new information or future events other than as required by Danish law. In light of these risks, results could differ materially from those stated, implied or inferred from the forward-looking statements contained in this document.