Press release

Expansion figures for the year 2019 in Germany

Onshore wind energy - overcoming the historical low as quickly as possible by obtaining more permits and land

- Gross onshore wind energy expansion of 1,078 megawatts (MW) or 325 turbines in 2019 at its lowest level since the introduction of the Renewable Energy Act (EEG) in 2000
- Expansion 55 percent lower than in 2018 and 80 percent lower than in 2017
- Government and federal states must overcome the low level of expansion by taking immediate measures to obtain more permits and land
- General distance rules must be avoided, especially for existing regional, area and construction planning and repowering projects
- Renewable energies’ demand for climate-neutral production, sector coupling, hydrogen production increasing - the Federal Government must adapt expansion paths

Berlin, 28 January 2020 - With 1,078 MW and 325 turbines, the gross expansion of onshore wind turbines in 2019 will reach its lowest level since the introduction of the Renewable Energy Act (EEG) in 2000, according to figures calculated by Deutsche WindGuard. The expansion was thus significantly below the forecast of 1,500 MW estimated by the German Wind Energy Association (BWE) and VDMA Power Systems in mid-2019. According to industry estimates, an increase of around 5,000 MW per year will be necessary to reach the 65 percent target by 2030, given the growing demand for gross electricity.

BWE and VDMA Power Systems call on the state and federal governments to refrain from the counterproductive distance regulation. Instead, all parties involved must implement the other 17 points on the task list of the Federal Ministry of Economics for strengthening wind energy: "The effects of the expansion lull on employment and value creation in the wind industry must now be urgently overcome in order to maintain the substance in Germany. The wind industry has already had to react to the declining production for the domestic market with drastic reductions in employment. If the market stagnates at this level, the loss of demand from Germany alone threatens to take away another 25 percent of the workforce. This does not even take into account a shift of production to export markets. Without a domestic market, Germany cannot maintain its technological leadership in the wind industry," explains Matthias Zelinger, Managing Director of VDMA Power Systems.

Hermann Albers, President of the German Wind Energy Association, adds: "In order to fill the tender volumes with projects and to achieve the expansion and climate protection targets, the identified and long known approval obstacles must be removed as quickly as possible and more areas must be declared for wind turbines. This requires an agreement between the Federal Government and the

1 Link Prognos study, October 2019
Länder before the end of spring. New hurdles such as general distance regulations would aggravate the situation and lead to a loss of about 40 percent of the potential wind areas in Germany.

A first positive step is the announced adaptation of the General Administrative Regulation for the Marking of Aircraft Obstacles (AVV) to avoid light immissions and to enable quieter and highly efficient wind turbines. The federal states should now finally adopt the AVV and thus make it legally binding. Another important adjustment screw is VHF rotating radio beacons, whose excessive test areas must be adapted to international standards in order to make currently blocked areas available at short notice.

By the end of 2020, around four gigawatts (GW) of currently installed wind power capacity will be phased out of EEG support. "Repowering should be possible under facilitated conditions on the affected existing areas, also in view of the distance regulations under discussion. As a rule, existing wind turbines are located at the most cost-effective and accepted sites. These areas have been pre-designated with regard to spatial planning, nature and landscape by existing turbines. Especially for existing turbines that are no longer located on wind-suitable sites in the updated regional planning, further measures for continued operation and thus CO2 avoidance should be considered," explains Hermann Albers.

For 2020, the associations expect an increase of 1,400-1,800 MW. However, a reversal of the trend this year or next year will only succeed if the Federal Government consistently and quickly removes the obstacles to approval and avoids new obstacles. According to industry forecasts, around 288 GW could be added onshore in the years 2019-2023 worldwide. In Europe, around 72 GW could be realized during this period, with an average annual addition of 14.4 GW. The prerequisite for this is that the member states implement the requirements of the new EU Renewable Energy Directive. It is also important that the expansion of the grid infrastructure is accelerated. In Germany, a gross increase of 11.2 GW could be achieved by 2023.

However, the demand for renewable energy is growing on a much larger scale and onshore wind is playing a central role here, the industry representatives emphasise. "The commitments of large technology companies to climate-neutral production show that the provision of electricity from renewable sources is increasingly becoming a location factor. The demand for wind power is also driven by additional requirements for electrification and sector coupling. Moreover, the German government's decision to phase out coal-fired power generation reinforces the need to accelerate the expansion of renewable energies. In order to prevent a renewable energy electricity gap, the federal government must revise its consumption assumptions for the year 2030 upwards," says Matthias Zelinger.

**Figures at a glance**

<table>
<thead>
<tr>
<th>Status of onshore wind energy expansion</th>
<th>Capacity in MW</th>
<th>Number of wind turbines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross additions in 2019</td>
<td>1,078</td>
<td>325</td>
</tr>
<tr>
<td>Of which repowering</td>
<td>155</td>
<td>50</td>
</tr>
<tr>
<td>Dismantling</td>
<td>97</td>
<td>82</td>
</tr>
<tr>
<td>Net additions in 2019</td>
<td>981</td>
<td>243</td>
</tr>
<tr>
<td>Accumulated WTG portfolio by 31 Dec 2019</td>
<td>53,912</td>
<td>29,456</td>
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</tbody>
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2 Global Wind Market Outlook, Update Q3 2019, September 2019 (Global Wind Energy Council); Wind Energy in Europe: Outlook to 2023, October 2019 (WindEurope)
About Bundesverband WindEnergie e.V.
BWE, a member of Bundesverband Erneuerbare Energie [German Renewable Energy Federation (BEE)] with more than 20,000 members, represents the entire industry. Members of BWE include the mechanical engineering industry’s suppliers and manufacturers, project developers, specialist jurists, the financial sector, companies from the fields of logistics, construction, service/maintenance and storage technology, electricity traders, network operators, and energy suppliers. As a result, BWE is the primary contact for politics and business, science and the media.

About VDMA Power Systems
VDMA Power Systems is a division of the non-profit German Engineering Federation (VDMA). The association represents the interests of manufacturers of wind turbines and hydroelectric plants, fuel cells, gas/steam turbines and plants and engine systems at home and abroad. VDMA Power Systems serves them all as an information and communication platform for all industry issues, such as energy policy, energy policy, legislation, market analyses, trade fairs, standardisation, and press and public relations.

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