



To the Media

Stuttgart/Berlin, April 15, 2020 (released in Germany on April 1, 2020)

Germany: Major One-Off Events Drive Renewables' Share to All-time High of 52 Percent

ZSW and BDEW publish latest figures

The pressure to expand renewables by breaking the gridlock and securing investments is mounting in face of a challenging economic situation.

Renewables covered around 52 percent of gross power consumed in Germany during the first quarter of 2020. This all-time high was driven by a combination of one-off events. Preliminary calculations by the Centre for Solar Energy and Hydrogen Research Baden-Württemberg (ZSW) and the German Federal Association of Energy and Water Management (BDEW) yielded this figure. February's record winds were followed by an unusually sunny March. Power consumption was also down by one percent from the same period last year. This dip is attributable to the relatively weak economy and a decline in industrial production in the last week of March triggered by the corona crisis. The amount of conventional power fed into the grid decreased markedly as renewable sources were given priority and power plants shut down in late 2019. These factors converged to create the conditions for renewable sources to furnish more than half of the power consumed in the first three months (Q1 2019: 44.4 percent). However, these were special circumstances, so it remains to be seen if the trend will continue throughout 2020 – especially since the first quarter regularly shows a higher renewables' share due to weather conditions.

"The performance of renewables is very encouraging. However, we should always bear in mind that this is only a snapshot and includes many one-off events. The record figures stand in sharp contrast to the dramatic situation in the current expansion of wind and PV systems: If the obstacles and caps are not removed quickly, the 65 percent target by 2030 will hardly be achievable. The difficult economic situation further intensifies the pressure to act: It must be ensured that further investments are made in the expansion of renewables so that they can guarantee the energy supply of tomorrow," says Kerstin Andreae, chairwoman of the BDEW board of management.

"More investments in renewables are going to pay off, particularly in view of the economic slump caused by the corona crisis," adds Prof. Frithjof Staiß, Managing Director of ZSW. "A far larger share of the created value remains in the country if you build wind and solar power plants rather than burn fossil fuels. This has a positive effect on the economy and business enterprises. Besides, investments in renewable

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energy projects are low-risk and a financially rewarding option for investors deterred by the currently volatile stock market.”

A closer look at individual production figures

Germany generated nearly 158 billion kilowatt hours (billion kWh) of gross power in the first quarter of 2020, down almost seven percent from the same period of the previous year (Q1 2019: 169 billion kWh). By comparison, it consumed around 148 billion kWh (Q1 2019: 151 billion kWh).

Solar, wind and other renewable sources collectively produced around 77 billion kWh of electricity (Q1 2019: 67.1 kWh). Onshore wind accounted for nearly 43 billion kWh, biomass for a good 11 billion kWh, from, offshore wind power for 9 billion kWh, solar power for 7 billion kWh, and hydropower for 5 billion kWh. The rest was sourced from biogenic waste and geothermal energy. Conventional energy sources generated around 81 billion kWh. The figure for the same period last year was 101.9 billion kWh. The 1,400 megawatt (MW) Philippsburg 2 nuclear power station was disconnected from the grid and lignite-fired power stations with 760 MW capacity went off line and on standby as safety backup in late 2019. These shutdowns had an impact on the numbers alongside the aforementioned one-off events.

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Two methods of calculating the share of green electricity

The *share of renewables in gross power consumed* amounted to around 52 percent in the first quarter of 2020. A common accounting practice, calculating the share of renewables as a percentage of gross power consumption is in line with European specifications and the German government’s definitions for its goals to increase renewables’ share. Gross power consumption encompasses all electricity used in a country.

Another option is to measure the *share of renewables in gross power generated*. This is the entire amount of electricity generated in Germany, including exported power. The share of renewables in gross power generated came to around 49 percent in the first quarter of 2020.

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The Zentrum für Sonnenenergie- und Wasserstoff-Forschung Baden-Württemberg (Centre for Solar Energy and Hydrogen Research Baden-Württemberg, [ZSW](#)) is one of the leading institutes for applied research in the areas of photovoltaics, renewable fuels, battery technology, fuel cells and energy system analysis. There are currently around 280 scientists, engineers and technicians employed at ZSW’s three locations in Stuttgart, Ulm and Widderstall. In addition, there are 100 research and student assis-



tants. The ZSW is a member of the Innovation Alliance Baden-Württemberg ([innBW](#)), an association of 13 non-university, business-oriented research institutes.

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