



# Press release

Bonn, 4 January 2023

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## Bundesnetzagentur publishes 2022 electricity market data

### Electricity consumption and generation from renewables

Electricity consumption (grid load\*) fell 4% overall in 2022 to 484.2 TWh (2021: 504.5 TWh). Electricity generation (net) rose 0.4% to 506.8 TWh (2021: 505.0 TWh).

The share of consumption taken by electricity generated from renewable sources in 2022 was 48.3% (2021: 42.7%). Wind farms – especially those on land – made the largest contribution. On and offshore turbines together comprised a share of 25.9%. Solar covered 11.4% and biomass 8.2%, with the remaining 2.8% coming from hydropower and other renewables.

At 233.9 TWh in 2022, overall generation from renewable energy sources was about 8.5% higher than the previous year, when it was 215.5 TWh. Onshore wind generation (100.5 TWh) was around 12.4% higher than the previous year (89.4 TWh). Generation from offshore wind turbines was up 2.9% year-on-year to 24.7 TWh from 24.0 TWh. Solar generation rose too, up from 46.6 TWh in 2021 to 55.3 TWh in 2022, an increase of 18.7%.

Generation from conventional sources totalled 272.9 TWh, down 5.7% from 2021.

Electricity produced from natural gas rose 1.7% year-on-year. One reason for the use of gas power plants is their flexibility when higher demand for electricity needs to be met at short notice, for example if generating capacity on the pan-European electricity market is temporarily unavailable. Gas-fired power plants can also be helpful, and in some cases essential, for redispatching and balancing. Legislative changes have enabled coal-fired power plants to be brought back to the electricity market in order to reduce the amount of electricity being produced by gas power stations.

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Overall, generation from lignite was 5.4% higher in 2022 and generation from hard coal 21.4% higher than the previous year.

### Wholesale electricity prices

The average day-ahead wholesale price for electricity in 2022 was €235.45/MWh (2021: €96.85/MWh). The day-ahead wholesale electricity price in Germany was negative in 69 of the 8,760 hours of trading (2021: 139 hours). The trend across the year as a whole was towards higher wholesale electricity prices.

### Cross-border electricity trade

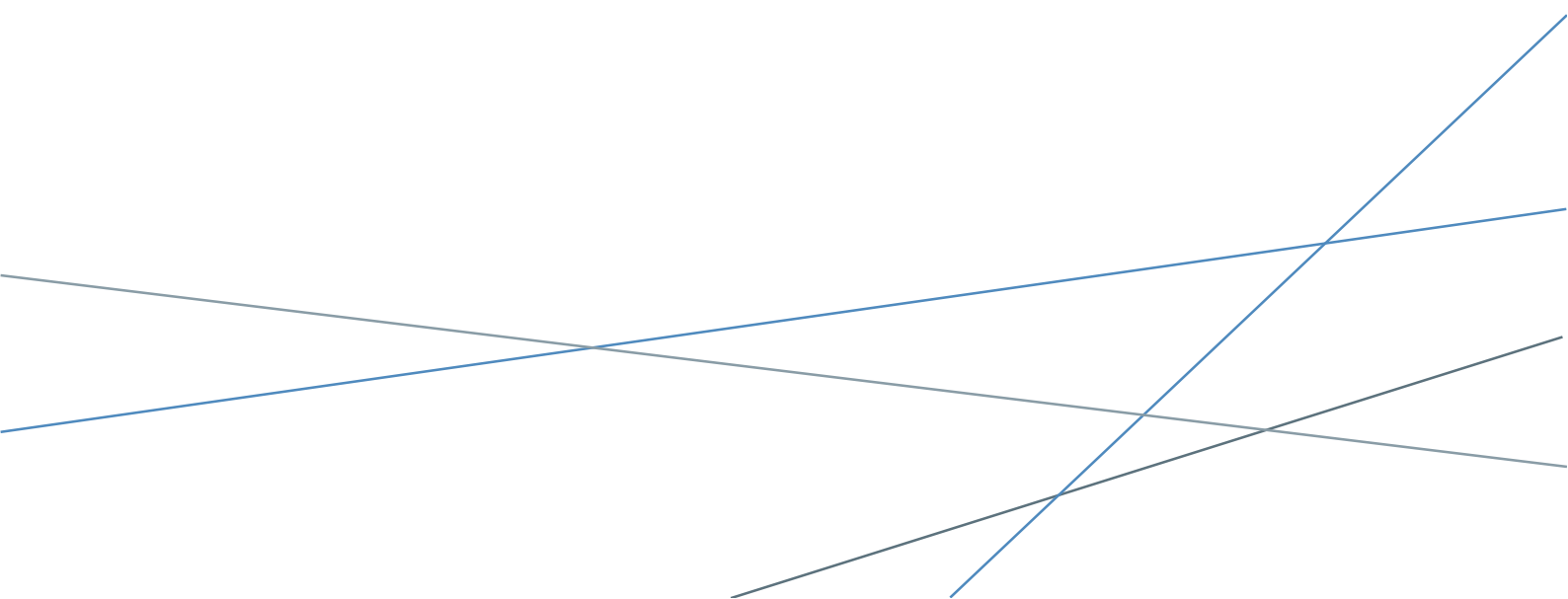
Germany was a net exporter of electricity again in 2022 with a net export of 26.28 TWh, which can be broken down into 62.05 TWh of exported electricity (2021: 56.99 TWh) and 35.77 TWh of imported electricity (2021: 39.60 TWh). Net exports were up 51.1% compared with 2021 (17.39 TWh).

The export surplus\*\* was €2,880mn in 2022, higher than in 2021 (€1,142mn).

More key figures and explanations about the electricity market in 2022 are available on the Bundesnetzagentur's electricity market data platform <https://www.smard.de/page/en/topic-article/207552/209668>.

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Data on the platform are provided by the German TSOs and can be updated on the basis of new findings.





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\* The grid load share of electricity that was generated from renewables is calculated differently from the federal government's target definitions for the expansion of renewable energy (Renewable Energy Sources Act), which are measured by gross electricity consumption. The grid load does not include power stations' own consumption or industrial networks, so the calculation basis applied here – compared with the share of gross electricity consumption – typically results in a higher proportion of generation from renewables. The grid load is calculated by taking the net electricity generation, subtracting transmission capacity exports, adding transmission capacity imports and subtracting the pumping work at pumped storage power stations.

\*\* The export surplus is derived from the sum of the product of the hourly net exports multiplied by the corresponding day-ahead hourly prices.

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The Bundesnetzagentur für Elektrizität, Gas, Telekommunikation, Post und Eisenbahnen is an independent higher federal authority with its main office in Bonn and is under the responsibility of the Federal Ministry for Economic Affairs and Climate Action (BMWK). Some of its areas of activity fall under the substantive supervision of the Federal Ministry for Digital and Transport (BMDV).