

Bosnia and herzegovina electricity generation

Bosnia and Herzegovina (BiH), a country of around 3.5 million people, is currently a net exporter of electricity - the only one in the Western Balkans. More than half of its electricity generation capacity is made up of hydropower, while the remainder is made up of five lignite power plants.

As of the end of 2022 the country had around 2076 MW net installed hydropower capacity larger than 10 MW, 2065 MW of lignite, 182 MW of small hydropower, 135 MW wind power, 102 MW solar and 93 MW of industrial power generation. Generation levels hover around two-thirds coal to one third hydropower, depending on the hydrological conditions.

In March 2018 BiH's first wind farm – the 50.6 MW Mesihovina facility in Herzegovina, financed by Germany's KfW – started operating, followed by the 36 MW Jelovaja plant in 2019. The 48 MW Podveleže wind farm was also completed in 2021 and several more are planned and/or under construction.

The coal power plants are situated in Tuzla (715 MW installed capacity), Kakanj (466 MW) Gacko (300 MW) and Ugljevik (300 MW), and – since September 2016 – Stanari near Dobož (300 MW), all with their own mines nearby. Tuzla 4 and Kakanj 5 should have closed during 2022 due to obligations under the Energy Community Treaty but the Federal government and parliament approved an illegal lifetime extension, leading to a dispute settlement procedure being opened by the Energy Community Secretariat in October 2022.

Other lignite plants such as Tuzla 7, Banovići and Kakanj 8 have not been officially cancelled but are highly unlikely to go ahead. In December 2023, Federal Premier Nermin Nikić publicly confirmed that Tuzla 7 will not be built and the contract with China's Gezhouba is awaiting cancellation.

As well as new coal capacity, Bosnia and Herzegovina plans a large amount of new hydropower, which is proving even more controversial than the coal plants. In the last decade, more than 100 small hydropower plants have been built, causing widespread public resistance in places like Fojnica, Krušica and on the Neretva and Buna.

Feed-in tariffs are now being phased out, thus removing one of the main drivers for their construction. In addition, the Federation of BiH has banned the issuance of new energy permits for small hydropower due to its disproportionate environmental impacts.

BiH's 2020 target for renewable energy was 40 per cent, which it almost met. However, this was mainly due to burning wood for heating as it did not meet its electricity sub-target. Like other countries in the region, Bosnia and Herzegovina over-relied on hydropower plants, while dragging its feet on wind and solar.

Estimates of the country's renewable energy potential vary widely, depending on whether environmental criteria are used and what economic assessment is used. Some estimates of cost-competitive potential for solar PV and wind include:

Bosnia and Herzegovina could do a lot more to use energy efficiently. Electricity prices are kept artificially low and there is therefore limited incentive to make savings. The country is almost four times as energy-intensive as the average in EU countries and has the highest energy intensity in the Western Balkans. The residential sector is responsible for the highest share of total final energy consumption and has high potential for improvements.

In December 2022, the Energy Community Ministerial Council adopted 2030 climate and energy targets. According to these, Bosnia and Herzegovina needs to achieve a 43.6 per cent share of renewables in gross final consumption of energy, and to reduce its greenhouse gas emissions by 41.2 per cent compared to 1990 levels - requiring a steady decrease from current levels. To boost energy efficiency and energy savings, it also needs to cap primary energy consumption at 6.5 Mtoe and final energy consumption at 4.34 Mtoe by 2030.

In mid-2023 Bosnia and Herzegovina published a draft National Energy and Climate Plan. Although lacking a Strategic Environmental Assessment and an analytical background section, it was notable for its commitment not to build any new coal or gas power plants and its plans to introduce carbon pricing.

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