



The power of solar photovoltaic installations in BIH almost doubled in 2022!

Bosnia and Herzegovina (BIH) follows the global trend of strong growth in the installed power of solar photovoltaic power plants. According to the preliminary data, the total power of these power plants at the end of 2022 exceeded 100 MW, as illustrated in Figure 1, with the achieved generation of 110 GWh of electricity.

The key factor that has influenced this trend is an increase in the electricity prices for industrial customers from 1 January 2022 by 20% (in the Federation of Bosnia and Herzegovina). As a reaction to this price increase numerous small and medium-sized companies have decided to invest in solar power plants to cover part of their consumption (so-called self-consumption generation). In accordance with the current legal framework (in the Federation of Bosnia and Herzegovina), self-consumption generation is not an industrial activity and does not require obtaining permits from the relevant institutions. For that reason, there is no exact record of how many new PV installations for self-consumption have been realized.

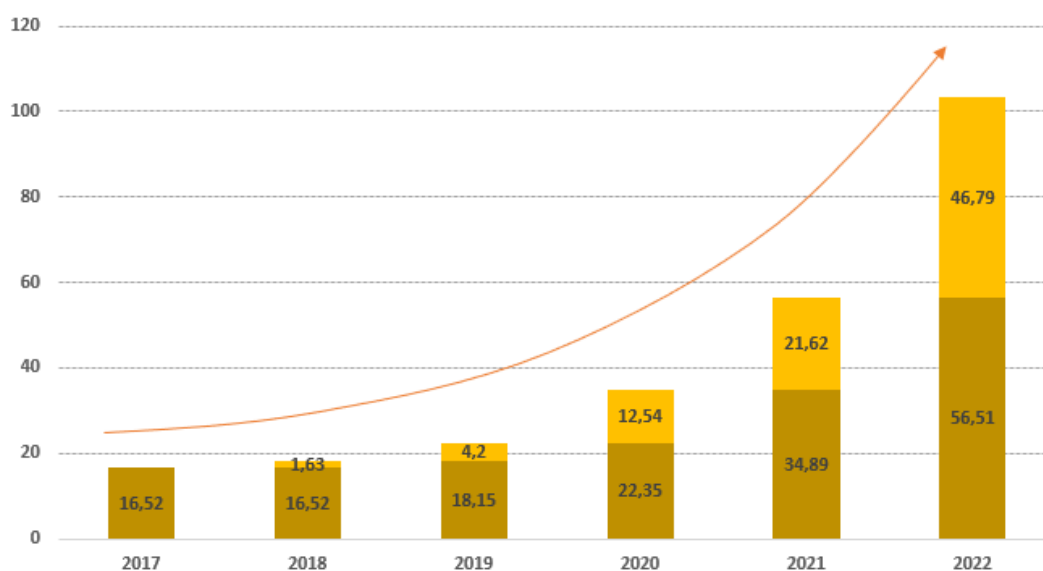


Figure 1. Trend in the solar power plant installations in Bosnia and Herzegovina (MW).

Another significant factor that influenced the mass construction of solar power plants in Bosnia and Herzegovina is the introduction of the Institute of Virtual Power Plants, which came to life in practice in mid-2022.

Thus, Bosnia and Herzegovina became the first country in the Western Balkans where virtual power plants are operational. Virtual power plants allow independent producers to freely sell electricity on the market by entering into bilateral contracts with some registered suppliers/traders. Contracts are mostly concluded for a one-year period with a fixed or variable price that depends on the market trend. The day-ahead trading price on the Hungarian Electricity Exchange (HUPEX) is often taken as the reference price.

Currently, there are 7 virtual power plants in BiH, which have aggregated in their portfolio close to 40 MW of solar power plants and over 100 MW of small hydropower plants. Aggregated energy from virtual power plants is mostly exported to the deficit countries of the Southeast Europe region. A registered supplier/trader can perform the function of a virtual power plant, if among other things, it aggregates a minimum of 1 MW of generation capacity, regardless of the place of their connection.

The high market prices of electricity in the region of Southeast Europe have caused many independent producers to terminate the valid contracts they had under the current incentive scheme for the purchase of produced energy (the so-called feed-in tariff) and selling at higher prices on the regional market, accepting the risk of exposure to market volatility.

In general, having in mind the constantly present deficit of electricity in the region of Southeast Europe, it is realistic to expect that the installation of solar power plants will continue with increased intensity. The factors that could slow down the growth of the integration of variable sources on the distribution and transmission network (wind power plants and solar power plants) are of a technical nature and are related, above all, to the capacity of the network to receive energy from such sources and the necessary expansion of the existing network infrastructure, which would be sufficient to support the existing/expected trend and the investor's requirements. Balancing variable energy sources is very important from the aspect of preserving power system stability and security of supply. Some countries in the region have a significantly higher degree of integration of variable energy sources in relation to the total installed generation capacities (Slovenia reached the amount of over 700 MW in 2022 of solar power plants and Croatia with over 1000 MW of wind power plants) and have been successfully controlling their power systems although they have more modest balance possibilities than BiH.

Having in the mind balance surplus of BiH and the well-developed functional balancing market as well as extremely developed interconnections, it is expected that the balancing of variable energy sources in BiH will not represent an obstacle that will slow down the development of solar and wind power plants in the foreseeable future.