

SNAPSHOT: UKRAINIAN RENEWABLES MARKET

Government objectives

Ukraine's National Renewable Energy Action Plan, adopted in August 2024, sets renewable energy targets of 27% of electricity consumption and 25% of generation (2022: 14.3%), to be achieved by 2030. To achieve this, the plan foresees a total installed capacity of 12.2 GW of solar

energy (5GW of which being produced by consumers), 6.2 GW of wind energy (including 100 MW offshore), 876 MW of biomass and biogas, and 40 MW of geothermal energy. Also required will be 906 MW of flexible generation and storage capacity of 656 MW. The climate law of October 2024 requires that the entire economy be carbon neutral by 2050.

Installed capacity and potential

		Existing (2021)	Estimated capacity potential
Solar		7.6 GW	80 GW (attainable with appropriate policies and investments)
Wind		1.7 GW	30-40 GW
Small hydro		150 MW	200-500 MW
Biomass		245 MW	Limited for large-scale power plants, but promising for small-scale CHPs using biogas from agricultural waste, urban sewers and landfills

By mid-2024, war-related infrastructure damage, set against the ongoing commissioning of new decentralised renewable energy plants, had left the country with approximately 7 GW of generation capacity from renewable energy sources. Ukraine's 9.16 million residential and 77,000 public buildings also offer significant potential for households and public institutions to generate electricity with rooftop solar installations.

Installation, operation and manufacturing dynamics

Between 2018 and 2021, renewable energy sources developed at an unprecedented pace and the number of

companies specialising in the field almost tripled. The market developed very unevenly across the different regions, however, with most companies located in central and southern Ukraine, while the north-east and north-west remained underrepresented. 2021 saw a major emphasis on solar photovoltaic (PV) systems, as 84% of all 1,025 renewable energy suppliers focused on installing and operating such systems. Bioenergy and hydropower businesses were also well represented, whereas wind companies were present in less than half of the regions.

While the capacities for installing renewable energy systems are quite well established, the same cannot be said of the manufacture of equipment. Before the war,

there were four solar PV manufacturers active in Ukraine. One of these pursued the entire production cycle, while the others assembled components. One domestic wind turbine manufacturer operates a factory in western Ukraine. Most solar PV modules are imported from China, or have been donated since February 2022. In 2018, import duties on solar panels were removed and in July 2024 this was temporarily extended to some other equipment, all of which are now also temporarily exempt from VAT.

Today the labour market remains very tight due to military mobilisation and migration (internal and external). This is exacerbated by the demographic situation and the destruction of educational institutions

Regulatory framework of the electricity market

The regulation of the wholesale electricity market was reformed in 2019. The market was liberalised and divided into different segments: bilateral, day-ahead, intraday, balancing, and ancillary services markets. However, most renewable energy producers still sell electricity at feed-in tariffs directly to the Guaranteed Buyer, a state enterprise, for use in the bilateral market, in which two parties enter an agreement for an extended supply period. Retail customers are free to choose their electricity supplier.

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