DIW ECON
Das Consulting-Unternehmen des DIW Berlin

Renewable energy in Ukraine: Market overview

Domestic renewable resources

	Existing (2021)	Estimated capacity potential
Solar	7.6 GW	80 GW (reachable with the right 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 (vulnerability & logistical issues), but promising for small-scale CHPs using biogas from agricultural waste, urban sewers, and landfills

RES in the residential & public sector

	Current demand (2021)	Generation potential	Main RES type
Residential sector	38.7 TWh (30.8% of total electricity consumption)	9.16 million buildings/ 26-37 TWh per year	Rooftop solar PV
Public sector	15 TWh (12% of total electricity consumption)	77,000 public buildings/ 100+ GWh per year	Rooftop solar PV + unused potential for wind / solar parks on municipal land outside settlements

RES companies & PV equipment producers

Following the unprecedented pace of RES development just before the war, the number of **companies specialising in installing and operating RES facilities** almost tripled between 2018 and 2021. There is a strong focus on solar PV, with companies installing and operating solar PV systems accounting for 856 out of 1,025 RES companies (84%) in 2021.

The development of the RES market is very uneven across Ukraine's regions. Most RES companies are located in central and southern Ukraine, while the north-east and north-west are underrepresented. The regions with a lower number of RES companies show less diversity in RES types. Solar PV companies are present in all regions. Bioenergy and hydropower are also well represented across Ukraine, while wind companies are present in only 10 of the 24 regions (according to data).

Most of the solar PV modules installed in Ukraine are **imported** from China. Before the war, four solar PV module **manufacturing companies** were active in Ukraine, of which only one was operating the full production cycle from raw material processing to final module assembly, while the others assembled solar PV modules from mostly imported components. The removal of import duties on solar PV module imports in 2018 reduced the cost of imported modules by 20% in comparison to domestically produced modules, further weakening the competitiveness of Ukrainian producers, who were already challenged by the highly modern and automated production lines in China.