

Uzbekistan Renewable Energy - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)

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Report description:

The Uzbekistan Renewable Energy Market size in terms of installed base is expected to grow from 3.65 gigawatt in 2025 to 6.95 gigawatt by 2030, at a CAGR of 13.73% during the forecast period (2025-2030).

Key Highlights

- In the long term, upcoming solar and wind energy projects are likely to drive the country's renewable energy market.
- On the other hand, project feasibility may be affected by site availability and resource utilization efficiency, which may hinder market growth during the forecast period.
- Nevertheless, Uzbekistan's wind energy potential is expected to be significant, even though the nation still primarily relies on fossil fuels for electricity generation. Areas like Bukhara, Kungrad, Ak Bajtal, and Nukus are expected to be ideal for the development of wind energy. These regions should have wind speeds between 0.61 and 3.98 m/s and power densities between 1.74 and 88.55 W/m square. This offers sustainable opportunities for market expansion.

Uzbekistan Renewable Energy Market Trends

Hydropower to Dominate the Market

- Solar and hydropower energy are likely to dominate the country's renewable energy sector in the coming years. Due to the newly initiated projects, these developments will highlight the growing contribution to renewable energy. In 2023, the country's hydropower installed capacity was around 2,415 MW, an increase of around 190 MW compared to the previous year.

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- In June 2024, over 50 major investment projects were announced as part of Uzbekistan's hydropower development program, which seeks to raise hydropower capacity to 6 GW by 2030. This involves building new plants and updating old ones. As part of a larger plan to increase renewable energy, the program aims to achieve a 40% of green energy in the overall electricity mix by 2030.
- At Power Uzbekistan 2024, a significant MoU was signed between the National Scientific Research Institute of Renewable Energy Sources (NIRES) and a consortium, including EUROSOLAR Uzbekistan Energy, the Academy of Sciences of the Republic of Uzbekistan, and a few private companies. The main objective of this momentous MoU is to establish a center for the development of innovative education methods, workforce training, and research on renewable energy technologies. The center will carry out trail projects, encourage technology sharing, and create recommendations for the Uzbekistan government.
- In July 2023, Uzbekihydrogenergo announced a tender for the construction of five new hydroelectric power plants with a total capacity of 46.6 MW. An average of 179 million kWh of electricity is expected to be produced yearly by the plants, which have a value of USD 106.9 million. Dukentsay, Kamchik, Kizildarya, Kuyi Kosksu, and Sulisay are the five power plant locations.
- In June 2023, Tajikistan and Uzbekistan started building two hydropower plants on the Zarafshan River. The first stage was the construction of the 140 MW Yavan hydroelectric station, estimated at USD 282 million, designed to generate 700-800 million kWh annually. In the next stage of discussions, the parties examined the possibility of constructing a 135 MW hydroelectric plant on the Fandarya River, which was estimated to cost USD 270 million, with a capacity to generate 500 to 600 million kWh per year.
- Given these factors, the country's ongoing investments and developments in the hydropower industry are expected to dominate the market during the forecast period.

Upcoming Solar and Wind Energy Projects to Drive the Market

- In a 2020 document titled 'Concept Note for Ensuring Electricity Supply in Uzbekistan between 2020 and 2030', the Ministry of Energy published its plans for developing power capacity in Uzbekistan. In the document, Uzbekistan discussed its plans to rebuild existing power plants, invited private energy developers to participate in power sector development, outlined the reform plans, etc. In accordance with the document, the PV and wind renewable energy sources will also be allocated a significant share of the electricity generation.
- In 2023, the country's solar installed capacity was around 253 MW. Although the installed capacity has been constant for the last two years, it is expected to increase in the coming years due to several upcoming projects.
- Over the next three years, Uzbekistan intends to build 28 sizable solar and wind power plants, totaling 8 GW. Fourteen of the planned solar and wind power plants are set to begin operation. Of these, 11 solar power plants, each 2 GW, and three wind farms, each 600 MW, are scheduled to begin. The government is prioritizing the infrastructure for renewable energy, including high-voltage power lines, substations, and energy storage.
- In July 2024, Uzbekistan launched the construction of a 500 MW photovoltaic solar power plant in the Besharyk region, with an investment of USD 350 million. It is expected to be completed by 2025, and the estimated electricity generation annually is likely to be around 1.6 billion kWh. This project's main aim is to reduce the consumption of natural gas.
- In November 2023, a framework agreement was signed by Voltalia for creating, funding, building, and upkeeping the Artimisya hybrid complex in the Bukhara area. This complex will have 500 MW of total capacity and will be supported by long-term sales contracts. It will include solar, wind, and battery storage.
- According to Uzbekistan's 2030 Green Economy Transition and Green Growth Program, the nation intends to raise the percentage of renewable energy sources (RES) in its electrical supply to at least 25% by that year. Thus, in upcoming years, the Uzbekistani government intends to install 12 GW of variable renewable energy, 7.0 GW of solar energy, 5.0 GW of wind energy, and 1.5 GW of hydropower, bringing the total amount of renewable electricity producing capacity to 15 GW.
- The factors mentioned above are expected to drive the renewable energy market over the study period.

The Uzbekistani renewable energy market is consolidated. Some of the major players in the market (in no particular order) include JSC Uzbekgidroenergo, SkyPower Ltd, Masdar, TotalEnergies SE, and Voltalia SA.

Additional Benefits:

- The market estimate (ME) sheet in Excel format
- 3 months of analyst support

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