



Kosovo Solar Report

Prepared by J.v.G. Technology GmbH

J.v.G. Technology GmbH is a German engineering company specializing in turnkey solar module production lines and manufacturing consulting, with project experience ranging from 20 MW to 500 MW per production line, including multi-line and gigafactory projects exceeding this scale.

This Solar Report is part of the **PVKnowHow** Knowledge Network.
The data, analysis, and conclusions in this document are based on real research, consulting insights, and international solar market data.

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Gain comprehensive insights into the statistics and metrics surrounding the solar production industry in Kosovo

KEY POINTS

All figures have been converted into USD



Yearly sunshine (sun hours per year)

Average Yearly Sunshine:

- January: 160 hours
- February: 190 hours
- March: 220 hours
- April: 240 hours
- May: 260 hours
- June: 280 hours
- July: 300 hours
- August: 290 hours
- September: 250 hours
- October: 210 hours
- November: 170 hours
- December: 150 hours



kWh per kWp installed

kWh Output per kWp:

- In January: 80 kWh/kWp
- In February: 95 kWh/kWp
- In March: 115 kWh/kWp
- In April: 135 kWh/kWp
- In May: 150 kWh/kWp
- In June: 165 kWh/kWp

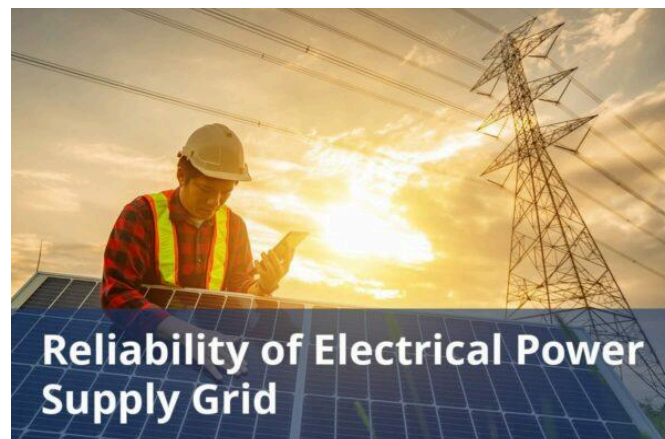
- In July: 180 kWh/kWp
- In August: 170 kWh/kWp
- In September: 125 kWh/kWp
- In October: 100 kWh/kWp
- In November: 85 kWh/kWp
- In December: 75 kWh/kWp



Average cost per kWh from utility company

Average Cost of Electricity:

- Residential: \$0.120/kWh
- Commercial: \$0.150/kWh
- Industrial: \$0.110/kWh



Reliability of electrical power supply grid

System Reliability:

- Expected availability: 98%
- Outage frequency: 1 day per year



DETAILED INFORMATION

All figures have been converted into USD

Total solar panel production capacity (installed)

Total Solar Panels Installed:

- Residential: 150000 units
- Commercial: 20000 units

Total solar panel production capacity (projected)

Projected Solar Panel Installations:

- Next year: 170000 units
- In 5 years: 250000 units

Average costs of various electricity generation sources (coal, natural gas, solar, etc)

Average Costs of Solar Panels:

- 2021: \$2500 per kW

- 2022: \$2300 per kW
- 2023: \$2100 per kW

Percentages of various electricity generation sources (coal, natural gas, solar, etc)

Percentage of Electricity by Source:

- Solar: 20%
- Wind: 15%
- Natural Gas: 50%
- Other: 15%

Average daily availability of electricity from the national grid (measured in hours)

Daily Availability of Solar Energy:

- Average: 4.5 hours per day

Number of residential solar panel installations

Number of Residential Solar Panels:

- Average per home: 15 panels
- Total homes with solar: 10000 homes

Total number of solar farms (installed and projected)

Number of Solar Farms:

- Total: 30 farms
- Installed capacity per farm: 2 MW

Off-grid market demand for solar panels (current and projected)

Off-grid market demand for solar panels in Kosovo is expected to grow significantly in the following years due to several factors:

- **Regulatory Changes:** The government has simplified the process for households to install solar panels, eliminating the need for construction permits and allowing systems up to 7 kW for residential use.
- **Subsidies and Financial Incentives:** Kosovo is offering subsidies of €250 per kW for households installing solar systems, which can cover up to €1,750 per household.
- **Increased Awareness and Need for Energy Independence:** With frequent outages and an unreliable national grid, there is a growing awareness among households about the benefits of off-grid solar solutions. The desire for energy independence and stability is driving demand for solar panels.

On-grid market demand for solar panels (current and projected)

Kosovo's Energy Regulatory Office (ERO) states that as of 2023, there are around 250 "prosumers" in Kosovo who generate their own solar electricity and feed the excess into the grid. ERO receives 10-15 new applications per month from businesses and households for installing solar panels, indicating growing interest in on-grid solar. Prosumers with large solar panel installations include Hotel Gračanica with 141 photovoltaic panels, supermarket chains like Interex, shopping centers like Gorenje, Albi Mall, and Prizren's Abi Çarshia. A planned 100 MW solar farm project by KfW Development Bank will be Kosovo's first large-scale photovoltaic system.

Average monthly income of workers in solar industry (labor cost)

- * As of 2024, the average gross monthly salary in Kosovo is approximately \$540
- * Construction and Infrastructure for roles such as builders and electricians: monthly salaries range from \$430 to \$755
- * Information Technology (which is relevant for solar) offers salaries typically between \$755 to \$1,295 per month for skilled professionals.
- * The estimated salary for a manager is \$1,295 per month.

Population of the country

The current population of Kosovo is 1,771,686.

Average overhead costs of solar panel production (with a brief breakdown)

Estimate for Factory Rent: The prices for development land range approximately 540 – 944 \$/m² according to the current offer. Industrial Electricity Rates: The average wholesale electricity price in Kosovo is approximately \$0.091/kWh. Water Costs: The average cost of industrial water per cubic meter in Kosovo is approximately \$0.82/m³. Salaries and Wages: Workers of industries close to solar industries in Kosovo averagely earn between \$430 and \$1,295 monthly, depending on the position.

A summary of the energy infrastructure

Electricity Generation: Kosovo relies heavily on coal-fired power plants for electricity generation, with over 90% of supply coming from two

aging plants – Kosova A and Kosova B. Total installed capacity in 2021 was 1,236 MW, with peak demand reaching 1,398 MW.

Transmission and Distribution: Kosovo's transmission system is operated by KOSTT, a public company that is a member of ENTSO-E. Transmission losses were 1.6% in 2021. Electricity distribution is handled by KEDS, a private company. Distribution losses were high at 24.6% in 2021.

Imports and Exports: Kosovo relies on electricity imports to meet demand. Net energy imports reached an estimated 12.5% of GDP in 2022.

Energy Policy and Development: Kosovo aims to diversify its energy mix and develop renewable sources to reduce reliance on coal. It has set a target of 32% renewable energy by 2030 in its draft National Energy and Climate Plan (NECP).

Some of the government regulations surrounding solar panel production

Energy Regulatory Office (ERO) is the independent regulatory body responsible for overseeing the energy sector, including the licensing and regulation of solar energy producers and prosumers. The ERO has developed legislation to support the integration of solar energy into the grid, facilitating the process for individuals and businesses to install solar panels. Prosumers are becoming increasingly common in Kosovo. Currently, around 250 prosumers produce approximately 8 MW of solar electricity with new applications for solar panel installations coming each month.

Government initiatives in solar panel production (includes investments and subsidies)

EU Grant Support: Kosovo is utilizing a \$80.89 million grant from the European Union to subsidize solar panel installations for households and small to medium-sized enterprises (SMEs). This initiative is part of a broader \$539 million aid package aimed at addressing energy challenges in the region, particularly in light of the energy crisis.

Subsidy Details: The subsidies for photovoltaic systems are structured as follows:

- Households: \$270 per kW for systems ranging from 3 kW to 7 kW, with a maximum subsidy of \$1,887
- Micro, Small, and Medium Enterprises (MSMEs): \$270 per kW for systems between 3 kW and 9 kW, up to \$2,157 total. For systems of 10 kW and above, the subsidy is reduced to \$215 per kW, with a maximum of \$6,471.
- An additional \$215 is available for businesses that are female-owned or jointly owned by women holding at least 51% of ownership.

Notable solar projects in the country (installed and projected)

Solar4Kosovo Photovoltaic Plant:

- Capacity: Up to 100 MW
- Location: Near Pristina, on former ash dump fields
- Expected Output: Approximately 152 GWh of electricity annually, displacing around 152,000 tonnes of CO₂ per year
- Funding: Supported by a \$34.51 million EU grant and loans from the European Investment Bank (\$35.59 million) and KfW Development Bank (\$31.28 million)

105 MW Solar Project: Kosovo signed agreements for a solar power project with Lindja Solar, selected from the first auction for solar power generation.

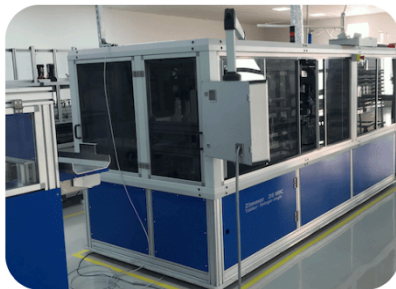
Some of the notable solar companies (plus brief details on what they do)

Yildirim Energy:

- Headquarters: Istanbul, Turkey
- Website: <https://www.yildirimenerji.com.tr/>

Solar Energy Group Europe (SEGE):

- Headquarters: Vienna, Austria
- Website: <https://www.sege.co/>



ABOUT THIS REPORT

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All market data, analysis, and conclusions follow JvG's internal

consulting standards and international PV market research practices.

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For a detailed list of references and additional information, please visit our website with the current report at:

<https://www.pvknowhow.com/solar-report/kosovo/>

About J.v.G. Technology GmbH

J.v.G. Technology GmbH is a European engineering and advisory specialist for solar production lines and manufacturing equipment, supporting investors and operators with market, location and production-focused decision frameworks.

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