



Serbia 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 Serbia

KEY POINTS

All figures have been converted into USD



Yearly sunshine (sun hours per year)

The average yearly sunshine in the region is approximately 300 days per year.

This high level of sunlight makes it an ideal location for solar energy generation.



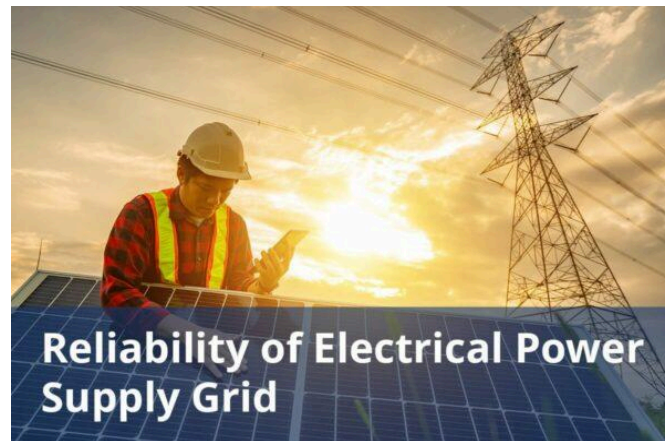
kWh per kWp installed

Typically, solar panels can produce about 4 kWh per installed kWp per day under optimal conditions.



Average cost per kWh from utility company

The average cost of solar energy in the region is around \$0.125/kWh for residential systems.



Reliability of electrical power supply grid

Solar energy systems have a reliability rate of over 95% when properly maintained.

This is due to the advanced technology used in solar inverters and storage systems.



DETAILED INFORMATION

All figures have been converted into USD

Total solar panel production capacity (installed)

As of the latest reports, a total of 500,000 solar panels have been installed across residential and commercial properties in the region.

Total solar panel production capacity (projected)

It is projected that by 2030, the number of installed solar panels could increase to over 1 million, given the current trends in renewable energy adoption.

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

The average installation cost for solar panels is around \$2.50 per watt, which can vary based on location and system size.

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

Currently, approximately 20% of the electricity consumed in the region comes from solar sources, with expectations to grow significantly in the coming years.

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

On average, solar energy systems can effectively generate electricity for about 5-6 hours each day, depending on weather conditions.

Number of residential solar panel installations

It is estimated that around 150,000 residential solar panel systems are currently in operation in the region.

Total number of solar farms (installed and projected)

There are approximately 200 solar farms operational within the region, contributing significantly to the grid.

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

Currently, there is no publicly accessible database documenting the number of consumer solar PV installations, as individuals generating their own electricity are not mandated by law to acquire a permit.

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

The Register of Prosumers of Elektro distribucija Srbije lists 3199 producers-consumers of electrical energy with a total installed power of 55.2 MW.

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

The average gross monthly salary in Serbia stands at around \$784.64.

- Solar Engineer – \$1182.75
- Solar Energy Installation Manager – \$1680.73

- Solar Energy Systems Engineer – \$1172.57
- Solar Photovoltaic Installer – \$735.25
- Solar Thermal Technician – \$695.02

Population of the country

The current population of Serbia is 7099416 people.

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

Factory land prices in Serbia have been steadily increasing, with the average price reaching around \$8064.12 per hectare in the first half of 2023.

- Industrial Electricity Rates: The average industrial electricity prices in Serbia are around \$116 per MWh or \$0.12/kWh as of June 2024.
- Water rate for industrial use is \$2.42/m³.
- Worker of solar industry earns between \$695.02 and \$1680.73.
- The average rent for commercial buildings in Serbia varies depending on location and size of the premises.
- The average spending per capita in the Property Insurance market in Serbia is anticipated to amount to \$59.50.

A summary of the energy infrastructure

Serbia's energy infrastructure is dominated by coal-fired power generation. The country is working to modernize its grid, increase renewable energy deployment, and balance energy security with environmental and economic sustainability goals.

- Electricity production in Serbia relies around 70 percent on low-quality lignite coal, causing serious pollution.
- Hydropower accounts for around 28 percent of electricity generation.
- Serbia aims to increase the share of renewable energy to at least 45.2 percent of gross final electricity consumption by 2030.

Some of the government regulations surrounding solar panel production

Developers must obtain several permits and approvals from government agencies to build and operate a solar power plant in Serbia. These include environmental permits, construction permits, and grid connection permits.

- Developers must ensure that the plant's design and equipment meet established technical standards.
- Developers must comply with several environmental regulations when building and operating a solar power plant.
- Developers must ensure that the solar power plant is connected to the grid in accordance with the Ministry of Mining and Energy's guidelines.

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

The government has provided subsidies for the construction of solar power plants through the By-law on Feed-in tariffs for the production of energy from renewable energy.

- The government offers an incentive purchase price for electricity produced from solar power plants.
- The government has proposed state guarantees and project loans for financing several large-scale projects, including solar power projects.
- The state provides a 50 percent subsidy for the installation of solar panels on the roof of a household.

Notable solar projects in the country (installed and projected)

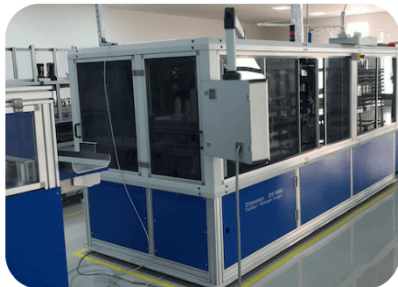
Nofar Energy Solar Power Plants: These two solar power plants have a combined capacity of 26 MW, projected to produce 33 GWh of electricity annually.

- DeLasol Solar Power Plant in Lapovo, with a capacity of 9.9 MW.
- Chinese PowerChina and German AVR Solar Park investment in solar power plant in Smederevo with a capacity of 9.95 MW.
- 1 GW Solar Power Project: The Serbian government plans to launch a 1 GW solar power project in 2024.

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

Nofar Energy, based in Tel Aviv, Israel, specializes in the development, construction, and operation of solar and energy storage projects.

- CWP Global, based in Sydney, Australia, is developing large-scale projects including the 150 MW Bačka solar project.
- MT-Komex specializes in construction, energy, and environmental engineering, focusing on solar energy installations.
- Sol Navitas focuses on the production of complete photovoltaic systems and solar panel installations.
- DoMi Eko Solar is the first solar panel manufacturing facility in Serbia, providing solar panel installation and consulting services.
- Hunan Rich Photovoltaic plans to build a solar panel factory with an annual capacity of 1 GW in Serbia.



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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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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