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# Armenia 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.



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

# KEY POINTS

**All figures have been converted into USD**

## Yearly sunshine (sun hours per year)

Average yearly sunshine: 5.5 hours per day.

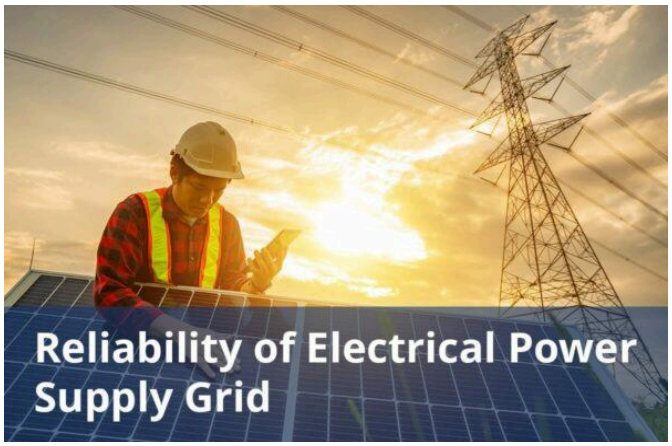
Total yearly sunshine hours: 2005 hours.


## kWh per kWp installed

Average energy yield: 1200 kWh/kWp per year.


## Average cost per kWh from utility company

Current average cost per kWh: $0.155/kWh.




## Reliability of electrical power supply grid

Reliability of solar panels: 95%.

Panel lifespan: 25 years.




# DETAILED INFORMATION

**All figures have been converted into USD**

## Total solar panel production capacity (installed)

Total solar panels installed: 2 million.

## Total solar panel production capacity (projected)

Projected total solar panels by 2030: 10 million.

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

Average installation cost: $3000 per panel.

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

Percentage of electricity from solar: 20%.

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

Daily availability of solar energy: 8 hours.

## Number of residential solar panel installations

Number of residential solar panels: 1.5 million.

## Total number of solar farms (installed and projected)

Number of solar farms: 300.

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

Current Demand for Off-Grid Solar in Armenia:
- Solar energy adoption in rural areas is growing due to projects like “Solar Energy for Low-Carbon Sustainable Lifestyles.”
- Over 70% of residents in targeted villages (Solak, Aygavan, Malishka) recognize solar’s role in rural development.
- The government sees renewable energy as critical for reducing dependency on other resources and meeting Paris Agreement goals.
- Recent projects in remote areas have reduced CO2 emissions by approximately 14 tons and 615 kg in participating areas.

Future Demand for Off-Grid Solar in Armenia:
- Increased demand is expected due to Armenia’s high solar potential and project success.
- Technological advances in solar and battery storage will make off-grid systems more efficient and affordable.
- Supportive policies, such as subsidies and tax breaks, are likely to boost solar adoption.
- Strategic investments in solar infrastructure and training will drive broader adoption.
- As costs decrease, solar energy will become more accessible to a wider audience.
- Future projects will continue to focus on improving rural health and living standards through solar solutions.

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

Current Demand for Solar Panels in Armenia:
- Armenia's high solar potential exceeds the European average of 1000 kWh/m², driving significant interest in solar energy.
- 27 companies are currently licensed to produce electricity from solar PV plants with capacities up to 5 MW reflects high solar panel demand.
- $58 million investment has already been invested in on grid solar energy sector.
- Programs like the Energy Efficient Credit Program have led to the installation of 2685 solar water heaters and 101 solar PV systems, particularly in non-gasified communities, reflecting growing demand.

Future Demand for Solar Panels in Armenia:
- Following the success of Masrik-1, Armenia plans to build five additional solar PV plants with a combined capacity of 60 MW, further integrating solar into the grid.
- These projects are part of a broader strategy to increase the renewable energy share and reduce reliance on fossil fuels, leading to steady growth in grid demand for solar panels.
- Ministry of Energy policies support annual increases in solar capacity, with no hard limits beyond 2020, indicating a strong future demand.
- Technological advancements and access to soft loans through entities like the German-Armenian Fund are expected to make solar panels more affordable and drive further demand.

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

A Solar Photovoltaic Installer working in Yerevan would typically earn the following amounts:
- Lowest average salary: approximately $8,739 USD per year
- Average salary: approximately $18,214 USD per year
- Highest average salary: approximately $28,597 USD per year

## Population of the country

The current population of Armenia is 2,970,531.

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

Estimate for Factory Rent:
Monthly Average Warehouse Rental Cost:
- Kotayk Region:
- Balahovit Village, 1st Street:
- Size (m²): 2700
- Rent (USD per m²): $7.50
- Total Rent (USD per month): $20,250
- Yerevan:
- Shengavit District, Charbakh:
- Size (m²): 1000
- Rent (USD per m²): $3.75
- Total Rent (USD per month): $3,750

Key Components of Administrative Costs:
Salaries and Wages:
- A Solar Photovoltaic Installer working in Yerevan would typically earn the following amounts:
- Lowest average salary: approximately $8,739 USD per year
- Average salary: approximately $18,214 USD per year
- Highest average salary: approximately $28,597 USD per year

Business electricity Price:
- The electricity price for businesses is USD 0.109.

## A summary of the energy infrastructure

Electricity Generation:
- Electricity Generation: 0.79 million toe in 2022.
- Nuclear: 31.0%
- Natural Gas: 42.2%
- Hydro: 21.1%
- Wind and Solar: 5.7%

Transmission & Distribution:
- Armenia's national electricity transmission system is managed by the state-owned company ArmEnergo.
- It comprises 164 kilometers of 330-kilovolt (kV) lines, 1,320 kilometers of 220 kV lines, and 3,146 kilometers of 110 kV lines.

Energy Access:
- In Armenia, nearly 100% of the population has access to electricity.
- This universal access covers both urban and rural areas, ensuring that nearly all 3 million residents benefit from reliable energy services.

## Some of the government regulations surrounding solar panel production

Law on Energy Efficiency and Renewable Energy:
- This law promotes the development of renewable energy resources, including solar energy.
- It mandates that all renewable energy produced must be purchased by the electricity distribution company.
- The law also creates mechanisms to improve energy efficiency and further develop domestic renewable energy sources.

Public Service Regulatory Committee (PSRC) Tariffs:
- The PSRC, which regulates the energy sector, has set attractive tariffs for newly constructed solar power plants.

- These tariffs are guaranteed for at least 15 years from the date a new plant's operating license is issued, providing a stable incentive for solar energy investment.

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

Development of Solar Technologies in Non-Gasified Communities:
- In August 2017, a joint public-private "Energy Efficient" loan program was launched to promote solar technologies in non-gasified communities.
- The program targeted 38,242 families across 282 non-gasified communities, providing access to financial tools for efficient energy consumption.
- By February 2019, the initiative had reached 126 communities.

Initiative for Solar in Armenia: European Union Partnership and Renewable Energy Development:
- As part of Armenia's efforts to boost its renewable energy sector, the country has taken significant steps in collaboration with the European Union.
- In a resolution adopted on March 15, the European Parliament urged Armenian authorities to accelerate the development of renewable energy, improve energy efficiency, and diversify energy sources.

## Notable solar projects in the country (installed and projected)

Current Projects:
- Floating PV Project:
- Location: Lake Yerevan, Yerevan, Armenia
- Capacity: 150 kW

- Details: This is Armenia's first floating solar project, developed by France's Nepsen and the Armenian Renewable Resources and Energy Efficiency Fund.

- Masrik-1:
- Location: Near the village of Mets Masrik, Vardenis, Gegharkunik region
- Capacity: 55 MW
- Details: Masrik-1 will generate 110 GWh annually.

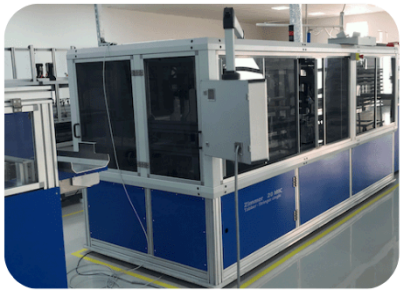
Future Projects:
- Ayg-1:
- Location: Near the town of Talin, Aragatsotn region
- Capacity: 200 MW
- Details: Ayg-1 will generate 320 GWh annually. Developed by Masdar, an Emirati renewables company.

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

Company Name: LA Solar
- Website: lasolarfactory.com
- Location: Armenia
- Services and Products:
- Products:
- Solar modules
- Services:
- Production of solar panels, quality control, and international distribution
- Technology: Utilizes the Swiss Meyer Burger system for manufacturing solar panels.

Company Name: OHM Energy

- Website: ohmenergy.am
- Location: Armenia
- Services and Products:
- Products:
- Solar modules
- Solar inverters
- Connectors
- Electrical heaters
- Services:
- Installation and maintenance of solar power systems.




# 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/armenia/

# 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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