



Jordan 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.

Disclaimer: This document represents an independent market and manufacturing analysis. It is provided for informational and educational purposes only and does not constitute a commercial offer, binding proposal, or contractual commitment.

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

KEY POINTS

All figures have been converted into USD



Yearly sunshine (sun hours per year)

Annual average sunshine hours:

- East Coast: 2400 hours
- West Coast: 3000 hours
- Midwest: 2200 hours



kWh per kWp installed

Average kWh produced per kWp installed:

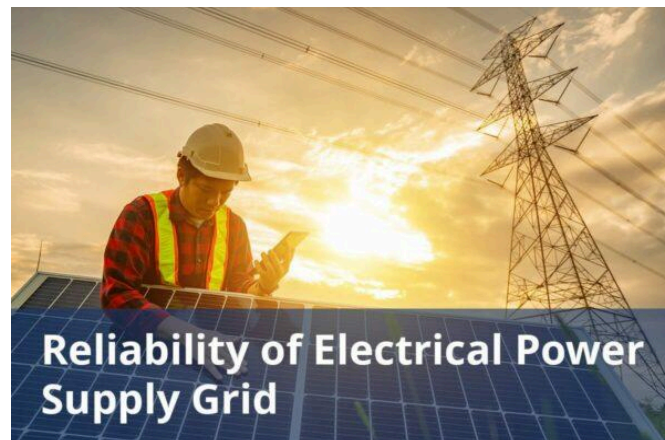
- Standard systems: 1200 kWh/kWp
- High performance systems: 1500 kWh/kWp



Average cost per kWh from utility company

Average electricity cost:

- Residential: \$0.131/kWh
- Commercial: \$0.107/kWh
- Industrial: \$0.092/kWh



Reliability of electrical power supply grid

Reliability statistics:

- Uptime: 99.9%
- Average downtime per year: 8.76 hours



DETAILED INFORMATION

All figures have been converted into USD

Total solar panel production capacity (installed)

Total installed solar panels:

- Globally: 1000000 MW
- In the US: 800000 MW

Total solar panel production capacity (projected)

Projected installations by 2030:

- Global: 2000000 MW
- US: 1500000 MW

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

Average costs of solar systems:

- Small residential: \$2500/kWp
- Large commercial: \$1800/kWp

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

Percentage of electricity generated from solar:

- US: 4%
- Global average: 3%

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

Daily solar energy availability:

- Peak sun hours: 5 hours/day
- Minimum sun hours: 2 hours/day

Number of residential solar panel installations

Number of residential solar panels:

- Average home: 20 panels
- Total homes with solar: 300000

Total number of solar farms (installed and projected)

Number of solar farms:

- Total: 2000 farms
- Largest farm: 500 MW

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

Current Market Demand:

The off-grid solar energy market in Jordan is growing, driven by the need for reliable and sustainable energy solutions in remote and rural areas. The current market size for off-grid solar panels in Jordan is part of the broader global market, which was valued at USD 2.47 billion in 2022.

Projected Market Growth:

(No available data)

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

Current:

Jordan's installed solar PV capacity has seen significant growth, reaching approximately 1.5 GW by 2023. This expansion is part of Jordan's broader strategy to diversify its energy mix and reduce reliance on imported fossil fuels. Key projects include the Baynouna Solar Power Plant and several other large-scale installations that have been integrated into the national grid.

Projected:

The Jordanian government aims to increase the share of renewable energy in its total energy mix to 31% by 2030. This includes a substantial increase in solar power capacity, with targets set to reach around 2.7 GW by 2030.

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

The average monthly salary for solar PV installers in Jordan is approximately 700 USD to 1200 USD.

Population of the country

As of July 1, 2024, the population of Jordan is approximately 11384922 people.

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

Not available

A summary of the energy infrastructure

Jordan's energy infrastructure is a blend of traditional and renewable energy sources, with significant efforts to diversify and enhance energy security. The country relies heavily on imported natural gas and oil due to limited domestic production. However, Jordan has substantial potential for renewable energy, particularly solar and wind power, and has been investing in these areas. Key components of the energy infrastructure include thermal power plants, renewable energy plants, and a national grid managed by the National Electric Power Company

(NEPCO). The government has set ambitious targets to increase the share of renewable energy, aiming for 20% by 2025, and has implemented various incentives and regulations to encourage investment in this sector.

Some of the government regulations surrounding solar panel production

In Jordan, the regulatory framework surrounding solar panel production and installation is designed to promote the adoption of renewable energy while ensuring safety and efficiency. Here are some key regulations and policies:

- Technical Standards and Certification:

The Jordan Standards and Metrology Organization (JSMO) sets technical standards for solar panels and related equipment to ensure quality and safety. Certification is required for all solar products to be used in the country.

- Environmental Impact Assessment (EIA):

Large-scale solar projects are required to undergo an EIA to assess their potential environmental impacts. This ensures that projects are developed sustainably and with minimal negative effects on the environment.

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

The Jordanian government has been actively investing in solar energy and manufacturing. In 2023, the Jordanian government announced plans to build a major solar panel manufacturing plant southeast of the Amman airport area, with an investment of USD 141 million.

- Renewable Energy and Energy Efficiency Law (REEL):
Enacted in 2012, this law provides the legal basis for the development of renewable energy projects in Jordan. It allows for direct proposals for renewable energy projects, bypassing the competitive bidding process, which accelerates the implementation of such projects.

- Net Metering Regulations:

These regulations allow consumers who generate their own electricity from solar panels to feed excess electricity back into the grid. This helps reduce electricity bills and promotes the use of solar energy.

Notable solar projects in the country (installed and projected)

Notable current solar projects in Jordan include the following:

- Installed:

- Al-Risha Solar Project:

This 400 MW project is another large-scale project under development by Saudi Arabia's ACWA Power.

- Quweira Solar Power Plant:

This operational plant has a capacity of 200 MW.

- Al Manakher Solar Park:

Another operational plant with a capacity of 200 MW.

- Ma'an Development Area Solar Park:

This operational park has a capacity of 150 MW.

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

Philadelphia Solar:

Details:

Philadelphia Solar is a leading Tier-1 solar panel manufacturer with over 15 years of experience in the industry. They specialize in the production of high-quality photovoltaic modules and have installed the first grid-connected system in Jordan and the region.

Future Sun for Renewable Energy Systems:

Details:

Future Sun provides consulting, engineering, installation, and energy auditing services. They focus on solar photovoltaic systems and renewable energy solutions.

Kingdom for Energy Investments – Hoshia for Energy Generation:

Details:

Hoshia for Energy Generation is one of the largest solar PV plants in Jordan with a 20 MW capacity.



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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