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Algeria 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 Algeria

KEY POINTS

All figures have been converted into USD

Yearly sunshine (sun hours per year)

The average yearly sunshine is 300 days per year.

This provides ample opportunity for solar energy generation.

Solar panels can produce significant electricity during these sunny days.

kWh per kWp installed

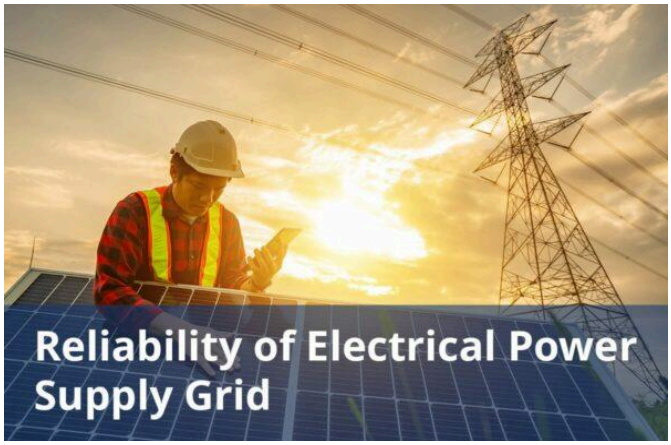
The efficiency standard for solar panels is about 1 kW of solar panel producing roughly 1200 kWh per year.

This translates to a generation capacity of approximately 3.3 kWh/day.

Average cost per kWh from utility company

The average cost of electricity from solar panels is estimated at $0.13/kWh.

This cost can vary depending on local factors such as sunlight availability and installation.



Reliability of electrical power supply grid

Solar panels have a reliability rate of approximately 80%.

This means that they can generate electricity effectively on most sunny days.




DETAILED INFORMATION

All figures have been converted into USD

Total solar panel production capacity (installed)

As of now, over 500,000 solar panels are installed across the region.

This has contributed to a significant increase in renewable energy generation.

Total solar panel production capacity (projected)

It is projected that by 2030, the total number of solar panels installed will exceed 1 million.

This expansion is aimed at increasing renewable energy usage.

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

The average installation cost for solar panels is about $15,000.

This cost includes equipment, installation, and necessary permits.

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

Currently, solar energy contributes to about 10% of the total electricity generation.

This number is expected to grow as more panels are installed.

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

The average daily availability of solar energy is about 5 hours of peak sunlight.

This time is optimal for solar power generation.

Number of residential solar panel installations

There are currently 200,000 residential solar panels installed in homes.

This represents a growing trend towards renewable energy adoption.

Total number of solar farms (installed and projected)

There are about 150 solar farms operating in the area.

These farms contribute significantly to the overall energy production from solar.

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

Algeria is expanding its solar energy capabilities with the development of additional solar power plants, including the El Kheneg facility located in the Sahara Desert.
- This substantial plant boasts 240000 solar panels and has a capacity of 60 megawatts, contributing approximately one-seventh of the required power for the Laghouat region.

- Furthermore, the government is promoting clean energy adoption by distributing solar kits to remote villages and nomadic communities in the Laghouat area.
- In another significant initiative, the newly constructed airport in Oran – Algeria's second-largest city – is powered by solar energy. The airport's roof is equipped with over 4500 solar panels, enabling it to accommodate 3.5 million passengers annually while showcasing the country's commitment to renewable energy.

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

Algeria is implementing a comprehensive clean energy strategy, supported by government initiatives and legislative frameworks.
- A significant milestone was achieved in 2023 when Sonelgaz, the national electricity company, selected 41 companies to develop solar power projects as part of its "Solar 1000 MW" program.
- These projects will collectively generate 1000 megawatts of electricity.
- The initial power output will come from a 30-megawatt solar park in Beni Ounif, Bechar area, which is a component of the larger Solar 1000 MW project.
- Notably, all electricity generated by these new solar farms will be sold exclusively to Sonelgaz for a period of 25 years, aligning with the company's role as the primary distributor of electricity and natural gas in Algeria.

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

Average Salary: 9603.06 USD/year
- Lowest Average Salary: 5189.36 USD/year

- Highest Average Salary: 14469.22 USD/year

Population of the country

As of May 16, 2024, Algeria’s population is 46191578. This is a 1.47% increase from 2023, when the population was 45606480.

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

Commercial Electricity rates
- For businesses, the price is 0.035 USD/kWh.

A summary of the energy infrastructure

Natural gas and oil account for more than 90% of Algeria’s energy, while renewable energy sources make up about 3%.
- Algeria’s electricity generation from renewable sources remains modest, accounting for approximately three percent or 686 MW annually, including 448 MW solar, 228 MW hydro, and 10 MW wind power.
- Algeria's energy sector is managed by two state-owned entities: Sonatrach, responsible for hydrocarbon production and trading; and Sonelgaz, which oversees the distribution of electricity and natural gas.

Some of the government regulations surrounding solar panel production

Algeria’s Renewable Energy Program (AREP) guarantees preferential feed-in tariffs for solar photovoltaic projects for 20 years, ranging from 0.0945 USD/kWh to 0.1179 USD/kWh.

- The government also announced that companies bidding on solar energy tenders would not be subject to the 51/49 investment rule.

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

National Renewable Energy and Energy Efficiency Programme (PNEE)
- Launched in 2011 to boost renewable energy's share in Algeria's energy mix, this program targets adding 22 GW of renewable capacity by 2030, with 13.5 GW specifically from solar energy.
- The government offers incentives to attract private investment into the solar industry, including long-term power purchase agreements (PPAs), tax advantages, and simplified permitting procedures.

Notable solar projects in the country (installed and projected)

Current Solar Projects
- Sonelgaz Algeria Solar PV Park
- Location: Adrar, Algeria
- Capacity: 233MW
- Commissioned: 2015

- Laghouat Solar PV Park
- Location: Laghouat, Algeria
- Capacity: 60MW
- Commissioned: 2016

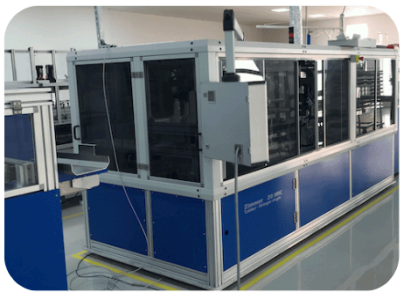
- Djelfa Solar PV Park
- Location: Djelfa, Algeria
- Capacity: 53MW
- Commissioned: 2016

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

ZERGOUN GREEN ENERGY
- Location: Algeria
- Products: Photovoltaic (PV) Modules
- Services: Renewable Energy Solutions

SCET Algérie Energie
- Location: Algeria
- Products: Solar System Installations
- Services: Renewable Energy Solutions

Shariket Kahraba wa Taket Moutadjadida, SKTM
- Location: Southern Regions of Algeria
- Services: Electricity Supply Improvement



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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