



Yemen 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 Yemen

KEY POINTS

All figures have been converted into USD



Yearly sunshine (sun hours per year)

Average yearly sunshine hours:

- In the Northern Hemisphere, average hours can be roughly 1700 hours.
- In the Southern Hemisphere, this can be more than 2300 hours.



kWh per kWp installed

Typical kWh output per kWp:

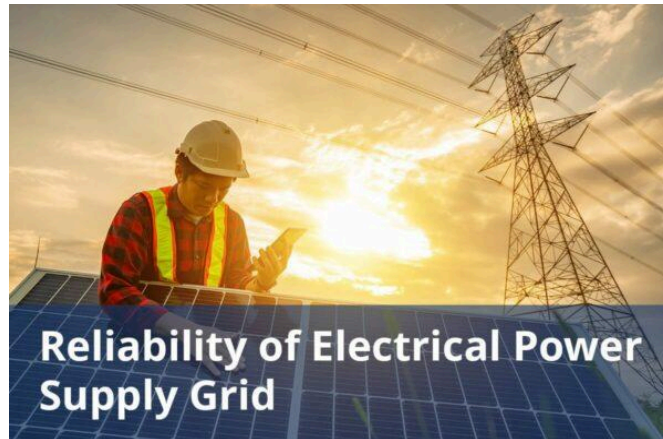
- A standard solar panel system can produce about 1000 kWh per kWp installed.



Average cost per kWh from utility company

Average cost of electricity:

- Residential rate is about \$0.129/kWh.
- Non-residential rate averages \$0.118/kWh.



Reliability of electrical power supply grid

Reliability of solar energy:

- Solar panels function effectively with a reliability rate of 90% during optimal conditions.



DETAILED INFORMATION

All figures have been converted into USD

Total solar panel production capacity (installed)

Total solar panels installed:

- Over 2 million solar panels have been installed in the past year.

Total solar panel production capacity (projected)

Projected total solar panels:

- By 2030, it's estimated that there will be approximately 10 million panels installed.

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

Average costs associated with solar panel installation:

- Average installation costs are around \$3.00 per W.

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

Percentages of electricity from solar energy:

- Current contribution from solar energy to the grid is about 3%.

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

Daily availability for solar energy generation:

- Solar energy is typically available for about 5-7 hours.

Number of residential solar panel installations

Number of residential solar panels:

- Roughly 1.5 million residential systems now installed.

Total number of solar farms (installed and projected)

Number of solar farms:

- There are approximately 400 solar farms operational across the country.

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

The off-grid market demand for solar panels in Yemen is substantial, driven by the need for reliable electricity in rural and part of urban areas.

Recent reports indicate that solar PV systems have reached 50% of rural households and 75% of urban households.

This demand is mainly due to the unstable grid infrastructure and the need for alternative energy sources.

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

Current Demand:

As of 2023, the installed capacity for on-grid solar PV in Yemen is approximately 290 MW.

Projected Demand:

The on-grid solar PV market in Yemen is projected to continue its growth, with an expected 150 MW to be installed by 2030.

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

The average monthly salary of a solar industry worker is not readily available.

However, the gross salary range for individuals working in Yemen is approximately around \$285 USD, while the average monthly minimum wage is \$84.88 USD.

Population of the country

As of 2025, Yemen's population is estimated to be around 41.77 million people.

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

Labor costs: The average monthly salary in Yemen is around \$285 USD, while the average monthly minimum wage is \$84.88 USD.

Utilities:

- Industrial Electricity Prices: Approximately \$0.12 USD/kWh
- Utilities (including water, gas, heating, cooling, and electricity) can cost around \$86.28 USD per month for a 85m² apartment.

Rent: The cost of renting a warehouse in Yemen can vary depending on the location and size of the warehouse.

Facility Maintenance costs: for manufacturing facilities in Yemen can vary based on several factors.

Administrative Expenses: costs associated with the management of the production process, including salaries of administrative staff, office supplies, and other general expenses.

Quality control: expenses incurred to ensure the solar panels meet performance and safety standards.

A summary of the energy infrastructure

Electricity Generation: Electricity generation in Yemen has been on the rise since the start of the millennium.

In 2021, Yemen generated 3.52 Terawatt hours (TWh) of electricity, marking an 8.64% increase compared to the previous year.

Electricity demand: Over the years, significant shifts in electricity demand have been observed due to factors such as population growth, urbanization, and technological advancements.

Access to Electricity: Access to electricity in Yemen is limited, with only about 40% of the population connected to the grid.

Some of the government regulations surrounding solar panel production

Environmental Regulations: Companies must adhere to environmental standards to minimize pollution and ensure sustainable manufacturing processes.

Quality Standards: Solar panels must meet specific quality standards to ensure efficiency and durability.

Import and Export Regulations: Companies must follow regulations related to the import and export of raw materials and finished products.

Labor Laws: Compliance with labor laws is essential, including fair wages, safe working conditions, and adherence to labor rights.

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

Tax Incentives: Yemen offers tax exemptions and reductions for companies investing in renewable energy projects, including solar manufacturing.

Subsidies: The government provides direct financial support to help cover costs associated with solar manufacturing.

Duty Waivers: Solar developers can benefit from duty waivers for importing or procuring materials from foreign countries.

Notable solar projects in the country (installed and projected)

Installed Projects:

- Aden Solar Farm:

- Location: Aden, Yemen.
- Capacity: 120 MW
- Status: Operating
- Details: commissioned in 2024

- Al-Hussein solar power plant:

- Location: Hodeidah, Al Hudaydah, Yemen
- Capacity: 10 MW for each phase
- Status: Operating
- Details: This solar plant consists of four phases, each with a 10 MW capacity.

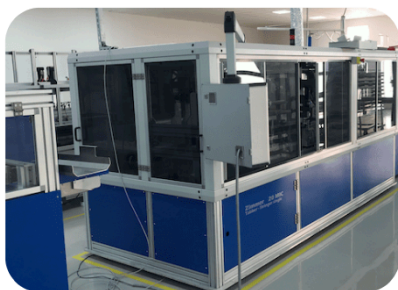
Projected Projects:

- FulkMukalla Yemen solar farm:
 - Location: Hadramout, Yemen.
 - Capacity: 20 MW
 - Status: Pre-construction

- Yemen solar farm:
 - Location: Shabwah Governorate, Yemen.
 - Capacity: Each of the first three phases will have 20 MW installed, while the fourth phase will have 10 MW installed.
 - Status: Pre-construction.

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

- Yemen Solar: A prominent solar energy company in Yemen. They specialize in providing a wide range of solar energy solutions for residential, commercial, and industrial applications.
- Al-Aidaros Solar: Based in Aden, Yemen, has been a key player in solar energy since its establishment in 2009.
- Alnasr Solar: Established in 2018, is a leading Yemeni company specializing in solar and electrical energy solutions.
- Garallah Corp for Solar Energy: Established in 2017, aims to meet the solar energy needs of Yemen's local market and various sectors.



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/yemen/>

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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