



Cabo Verde 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 Cabo Verde

KEY POINTS

All figures have been converted into USD



Yearly sunshine (sun hours per year)

Annual sunshine varies significantly across regions.

Typically, areas like the southwestern United States can receive over 300 sunny days a year, while other regions can average only about 200.

In optimal locations, the amount of solar energy received can exceed 5.5 kWh/m² per day.



kWh per kWp installed

The average conversion efficiency of solar panels is around 15% to 20%.

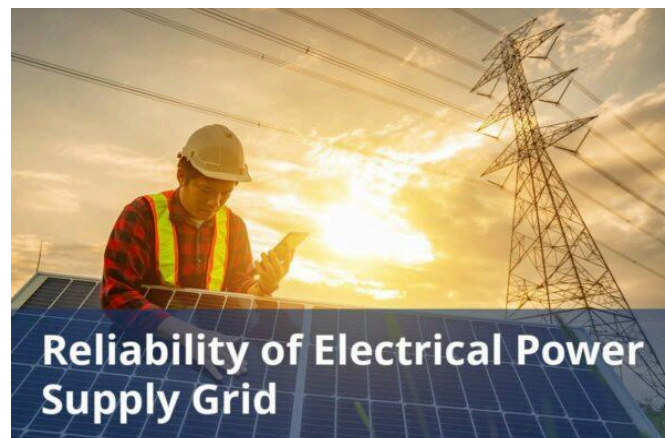
This means that for every 1 kWp of solar panel capacity, you can expect to generate between 1,200 to 1,600 kWh annually depending on location and technology used.



Average cost per kWh from utility company

Residential Electricity Prices:

- For 0-100 kWh: \$0.135/kWh
- For 100-600 kWh: \$0.135/kWh
- For 600-1000 kWh: \$0.1945/kWh
- For consumption above 1000 kWh: \$0.2196/kWh



Reliability of electrical power supply grid

Solar panels have a lifespan of 25 to 30 years and require minimal maintenance.

They go through efficiency tests to ensure they perform well even in diverse weather conditions.



DETAILED INFORMATION

All figures have been converted into USD

Total solar panel production capacity (installed)

As of 2023, over 2 million residential solar systems are installed in the United States.

Total solar panel production capacity (projected)

By 2030, it is projected that the number of solar installations could reach over 10 million, potentially generating unprecedented amounts of clean energy.

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

The average cost of installing solar panels has fallen significantly over the last decade.

Current averages place installation costs between \$2.50 to \$3.50 per watt before incentives.

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

As of 2023, solar energy accounts for about 3% of the total electricity generation in the United States.

This share is expected to increase as more systems come online.

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

Daily solar energy availability is influenced by seasonal variations.

In the summer, more sunlight is available, while the winter months can result in significantly lower solar production.

Number of residential solar panel installations

The average residential solar system size is about 5 kW to 10 kW, which equates to approximately 15 to 30 solar panels depending on the wattage of each panel.

Total number of solar farms (installed and projected)

The United States has over 1,500 operational solar farms, significantly contributing to renewable energy goals.

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

The off-grid market demand for solar panels in Cabo Verde is driven by the need for reliable electricity access in rural and isolated areas.

The government and various organizations are exploring microgeneration options using solar technologies that can provide essential services such as lighting and water pumping.

Here are few examples:

- On São Nicolau, 40 farmers have switched from diesel to solar irrigation, reducing costs and enabling more affordable food supplies to Santiago markets.
- In Brava, local fishermen use solar power for ice production and preserving fish that was previously discarded and improving village lighting

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

In Cabo Verde, the on-grid solar market is expanding significantly.

Government initiatives include new solar parks of 3.4 MW of additional solar capacity planned for Santiago, São Vicente, São Nicolau, and Maio, reflecting Cabo Verde's commitment to enhancing its solar infrastructure and energy reliability across the archipelago.

The microgrid project on Santiago Island integrates solar power to provide stable and sustainable electricity to Pedra Badejo, addressing the energy needs of a previously underserved area.

Monte Trigo Project: This rural photovoltaic micro-grid, operational since 2012, serves 60 homes in Santo Antão and produces an average of 74 kWh daily, supporting various community facilities.

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

The average monthly salary in Cabo Verde ranges \$150 – \$200.

Mechanical and Electrical Engineer: the average monthly salary is approximately \$1960.

Electrical Worker: the average monthly salary is approximately \$685.

Population of the country

The current population of Cabo Verde is 525398.

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

Industrial Electricity Rates

As of 2025, the average electricity price in Cabo Verde is approximately \$0.213/kWh.

Water Costs

The average water tariff in Cabo Verde is approximately \$5.17/m³.

Salaries and Wages

Worker of solar industry in Cabo Verde earns between \$685 and \$1960 monthly, depending on the position.

Rent for Office Space

Private office rents in Praia range from \$222 to \$278 per month.

Insurance

The average insurance spending per capita in Cabo Verde is around \$50+

A summary of the energy infrastructure

Cabo Verde's energy infrastructure is characterized by a heavy reliance on imported fossil fuels, with almost 84% of electricity produced from thermal sources.

The country is making significant efforts to transition towards renewable energy sources, aiming to achieve 50% of its electricity from renewables by 2030 and 100% by 2050.

Cabo Verde lacks significant fossil fuel reserves and relies heavily on imported petroleum products, which account for about 80% of its total energy supply.

Some of the government regulations surrounding solar panel production

Decree-Law 1/2011: This is the foundational legal framework for renewable energy production in Cabo Verde.

National Energy Policy: Adopted in 2008, this policy sets a vision for reducing dependence on imported fossil fuels by promoting renewable energy sources and improving energy efficiency.

Net Billing Regulation (2019): This regulation allows for net billing of solar photovoltaic (PV) systems, enabling owners of solar installations to receive credits for excess electricity generated and fed back into the grid.

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

Utility-Scale Solar Projects: The Cabo Verdean government aims to achieve over 160 MW of new solar projects by 2030.

Subsidies and Financial Incentives: Net Billing Regulation (2019): This regulation allows households and businesses with solar installations to receive credits for excess electricity fed back into the grid, providing a financial incentive for adopting solar technology.

International Funding Support: The government collaborates with international organizations such as the World Bank and Luxembourg Cooperation, which provide grants and funding to support renewable energy initiatives, including solar projects.

Notable solar projects in the country (installed and projected)

Santiago Solar PV Plant:

- Capacity: 5 MW, operational since 2010
- Details: The Santiago Solar PV Plant has a capacity of 5 MW and has been operational since November 2010.

Sal Solar PV Plant:

- Capacity: 2.5 MW, also operational since 2010; An additional 5 MW solar plant is set to be opened in 2024.

São Vicente PV Plant:

- Capacity: 5 MW, expected to begin commercial production in December 2024.

Renewable Energy and Improved Utility Performance Project (REIUP):

- Capacity:
- Fogo Island: 1.3 MW
- Santo Antão Island: 1.2 MW
- São Nicolau Island: 0.4 MW
- Maio Island: 0.4 MW

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

Atlantic Renewable Energy Solutions Lda.

- Headquarters: Praia, Santiago, Cabo Verde
- Website: <https://www.arescv.com/>
- Details: A leading solar energy company in Cabo Verde, specialized in major solar projects including the large-scale Santiago Solar PV Plant.

GTek Lda

- Headquarters: Praia, Santiago, Cabo Verde
- Website: <https://gtek.cv/index.html>
- Details: GTek Lda is known for its contributions to solar infrastructure projects throughout the archipelago.

ProSol

- Headquarters: Matiota, S. Vicente, Cabo Verde
- Website: <https://prosol.cv/>
- Details: ProSol focuses on impactful solar installations, including the notable São Vicente PV Plant.

Repower

- Headquarters: Palmarejo-Praia, Ilha de Santiago, Cabo Verde
- Website: <https://www.repower.cv/>
- Details: Repower is recognized for its advanced solar solutions and large solar farms.



ABOUT THIS REPORT

This Solar Report is part of the PVKnowHow Knowledge Network, developed by J.v.G. Technology GmbH - a German engineering company, specializing in turnkey solar module production lines (ranging from 20 MW to 500 MW per production line, including multi-line and gigafactory projects exceeding this scale).

All market data, analysis, and conclusions follow JvG's internal consulting standards and international PV market research practices.

REFERENCES

All References

1. Weather and climate (n.d.). Average Monthly Sunshine hours in Boa Ventura. Retrieved September 16, 2024, from <<https://weather-and-climate.com/average-monthly-hours-Sunshine,boa-ventura-boa-vista-cv,Cape-Verde>>
2. Weather and climate (n.d.). Average Monthly Sunshine hours in Praia. Retrieved September 16, 2024, from <<https://weather-and-climate.com/average-monthly-hours-Sunshine,praia,Cape-Verde>>
3. International Renewable Energy Agency (2024, July 31). Energy profile – Cabo Verde. Retrieved September 16, 2024, from <<https://www.irena.org/-/media/Files/IRENA/Agency/Statistics/Statistical%5FProfiles/Africa/Cabo-Verde%5FAfrica%5FRE%5FSP.pdf>>
4. Global Petrol Prices (n.d.). Cape Verde electricity prices. Retrieved December 14, 2025, from <<https://www.globalpetrolprices.com/Cape-Verde/electricity%5Fprices/>>
5. Rio Times online (2023, June 1). Blackouts in Cape Verde, in 2022, was 51 hours without electricity. Retrieved September 16, 2024, from <<https://www.riotimesonline.com/brazil-news/lusophone-world/blackouts-in-cape-verde-dropped-53-in-2022-to-51-hours-without-electricity/>>
6. International Renewable Energy Agency (2024). Renewable energy statistics 2024\ . Retrieved September 16, 2024, from <<https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2024/Jul/IRENA%5FRenewable%5FEnergy%5FStatistics%5F2024.pdf>>
7. Macau news agency (2021, October 7). Cabo Verde: State plans renewable electricity production of 250 MW by 2030\ . Retrieved September 16, 2024, from <<https://www.macaubusiness.com/cabo-verde-state-plans-renewable-electricity-production-of-250-mw-by-2030/>>

8. Local carbon power (2022). Electricity in Cape Verde in 2022\.
Retrieved September 16, 2024, from
<<https://lowcarbonpower.org/region/Cape%5FVerde>>
9. Statista (2024, January 31). Share of individuals with a reliable supply of electricity in Cabo Verde in 2019\.
Retrieved September 16, 2024, from
<https://www.statista.com/statistics/1315856/share-of-individuals-with-a-reliable-supply-of-electricity-in-cabo-verde/>
10. Rio Times online (2023, June 1). Blackouts in Cape Verde dropped 53% in 2022 to 51 hours without electricity.
Retrieved September 16, 2024, from
<https://www.riotimesonline.com/brazil-news/lusophone-world/blackouts-in-cape-verde-dropped-53-in-2022-to-51-hours-without-electricity/>
11. ECREE Secretariat (2011). Summary of Cape Verde Renewable Energy Plan.
Retrieved September 16, 2024, from
<<http://www.ecowrex.org/system/files/documents/2011%5Fsummary-of-cape-verde-renewable-energy-plan%5Fecreee.pdf>>
12. Goalfore advisory news (2024, April). Construction begins on Cape Verde solar IPP.
Retrieved September 16, 2024, from
<<https://news.goalfore.com/detail/64043/construction-begins-on-cape-verde-solar-ipp.html>>
13. Discover Cape Verde (2023, March 10). More solar power for Cape Verde.
Retrieved September 16, 2024, from
<<https://www.discover-cape-verde.com/more-solar-power-cape-verde/>>
14. Open Infra map (n.d.). All 54 power plants in Cape Verde.
Retrieved September 16, 2024, from
<<https://openinframap.org/stats/area/Cape%20Verde/plants>>
15. Offgrid installer (n.d.). Off-grid power in Cape Verde.
Retrieved September 16, 2024, from
<<https://offgridinstaller.com/blog/off-grid-in-cape-verde/>>
16. United Nations Industrial Development Organization (n.d.). Bringing solar power to rural areas of Cabo Verde.
Retrieved

September 16, 2024, from

<<https://www.unido.org/news/bringing-solar-power-rural-areas-cabo-verde>>

17. PV Magazine (2023, March 23). Cape Verde kicks off tender for 3.4 MW of solar. Retrieved September 16, 2024, from

<https://www.pv-magazine.com/2023/03/23/cape-verde-kicks-off-tender-for-3-4-mw-of-solar/>

18. The ECOWAS Centre for Renewable Energy and Energy Efficiency (2024, July 18). Prime Minister of Cabo Verde inaugurates clean

energy mini-grid on Fogo Island. Retrieved September 16, 2024, from

<<https://www.ecreee.org/prime-minister-of-cabo-verde-inaugurates-clean-energy-mini-grid-on-fogo-island/>>

19. Circutor (2012, March). Rural photovoltaic micro-grid with individual energy allowance scheme powers a 60 homes village in Santo Antão

(Cabo Verde). Retrieved September 16, 2024, from

<<https://circutor.com/docs/CirMagazine2012-03-EN-Cabo-Verde.pdf>>

20. TimeCamp (n.d.). Average Salary in Cabo Verde (Cape Verde).

Retrieved September 16, 2024, from

<<https://www.timecamp.com/average-salary/cabo-verde-cape-verde/>>

21. Worldsalaries (2024). Average Mechanical and Electrical Engineer Salary in Cape Verde for 2024\.

Retrieved September 16, 2024, from <<https://worldsalaries.com/average-mechanical-and-electrical-engineer-salary-in-cape-verde/>>

22. Worldsalaries (2024). Average Electrical Worker Salary in Cape Verde for 2024\.

Retrieved September 16, 2024, from <<https://worldsalaries.com/average-electrical-worker-salary-in-cape-verde/>>

23. Worldometers (n.d.). Cabo Verde population. Retrieved September 16, 2024, from

<<https://www.worldometers.info/world-population/cabo-verde-population/>>

24. Global Petrol Prices (n.d.). Cape Verde electricity prices. Retrieved September 16, 2024, from

- <<https://www.globalpetrolprices.com/Cape-Verde/electricity%5Fprices/>>
25. Stockholm International Water Institute (SIWI) (2020). Water Tariffing: What's at stake? Retrieved September 16, 2024, from <<https://www.siw.org/wp-content/uploads/2020/03/AEWPP%5F-Water-Tariffing-2020%5FWEBB.pdf>>
26. Coworker (n.d.). Coworking Spaces in Praia. Retrieved September 16, 2024, from <<https://www.coworker.com/cape-verde/prai?view=list>>
27. World Bank Group (2019, February). Revisiting the Efficiency of Public Spending to Reduce Debt and Improve Education and Health Outcomes. Retrieved September 16, 2024, from <https://documents1.worldbank.org/curated/ar/806461552536106467/pdf/Cabo-Verde-Revisiting-the-Efficiency-of-Public-Spending-to-Reduce-Debt-and-Improve-Education-and-Health-Outcomes-Public-Expenditure-Review.pdf>
28. International Trade Administration (2022, July 31). Cabo Verde – Country Commercial Guide. Retrieved September 16, 2024, from <<https://www.trade.gov/country-commercial-guides/cabo-verde-renewable-energy>>
29. Wikipedia (n.d.). Energy in Cape Verde. Retrieved September 16, 2024, from <<https://en.wikipedia.org/wiki/Energy%5Fin%5FCape%5FVerde>>
30. The African Energy Commission (AFREC) (n.d.). Cape Verde. Retrieved September 16, 2024, from <<https://au-afrec.org/cape-verde>>
31. World bank group (2024, March). CREATING MARKETS IN CABO VERDE An Archipelago of Opportunity: Pathways to Foster Sustainable Private Sector–Led Growth. Retrieved September 16, 2024, from <<https://www.ifc.org/content/dam/ifc/doc/2024/cabo-verde-country-private-sector-diagnostic-en.pdf>>
32. Gesto Energy Consulting (2011). Cape Verde Regulatory Framework for Renewable Energy Licensing. Retrieved September 16,

2024, from

<<https://gestoenergy.com/project/cape-verde-regulatory-framework-for-renewable-energy-licensing/>>

33. World bank group (2021, April 27). Project Information Document (PID). Retrieved September 16, 2024, from

<<https://documents1.worldbank.org/curated/en/734021628260766519/pdf/Project-Information-Document-Cabo-Verde-Renewable-Energy-and-Improved-Utility-Performance-Project-P170236.pdf>>

34. ECREE Secretariat (2011). Summary of Cape Verde Renewable Energy Plan. Retrieved September 16, 2024, from

<<http://www.ecowrex.org/system/files/documents/2011%5Fsummary-of-cape-verde-renewable-energy-plan%5Fecreee.pdf>>

35. International Trade Administration (2022, July 31). Cabo Verde – Country Commercial Guide. Retrieved September 16, 2024, from

<<https://www.trade.gov/country-commercial-guides/cabo-verde-renewable-energy>>

36. Gesto Energy Consulting (2011). Cape Verde Regulatory Framework for Renewable Energy Licensing. Retrieved September 16, 2024, from

<<https://gestoenergy.com/project/cape-verde-regulatory-framework-for-renewable-energy-licensing/>>

37. Afrik 21 (2024, April 12). Cabeolica in Cape Verde to invest \$50m in expansion and storage. Retrieved September 16, 2024, from

<<https://www.afrik21.africa/en/wind-power-cabeolica-in-cape-verde-to-invest-50m-in-expansion-and-storage/>>

38. PWC (2024, August 13). Cabo Verde corporate – Tax credits and incentives. Retrieved September 16, 2024, from

<<https://taxsummaries.pwc.com/cabo-verde/corporate/tax-credits-and-incentives>>

39. ECREE Secretariat (2011). Summary of Cape Verde Renewable Energy Plan. Retrieved September 16, 2024, from

<<http://www.ecowrex.org/system/files/documents/2011%5Fsummary-of-cape-verde-renewable-energy-plan%5Fecreee.pdf>>

40. PV Magazine (2023, March 23). Cape Verde kicks off tender for 3.4 MW of solar. Retrieved September 16, 2024, from <<https://www.pv-magazine.com/2023/03/23/cape-verde-kicks-off-tender-for-3-4-mw-of-solar/>>

41. Gesto Energy Consulting (2011). Santiago 5 MW Solar PV development, Cape Verde. Retrieved September 16, 2024, from <<https://gestoenergy.com/project/santiago-5-mw-solar-pv-development-cape-verde/>>

42. ENF solar (n.d.). Solar System Installers in Cape Verde. Retrieved September 16, 2024, from <<https://www.enfsolar.com/ares?directory=installer&utm%5Fsource=ENF&utm%5Fmedium=Cape+Verde&utm%5Fcontent=130984&utm%5Fcampaign=profiles%5Finstaller>>

For a detailed list of references and additional information, please visit our website with the current report at:

<https://www.pvknowhow.com/solar-report/cabo-verde/>

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.

www.jvg-thoma.com

Contact & Further Information

For further discussion or clarification of manufacturing-related aspects, please contact:

J.v.G. Technology GmbH

www.jvg-thoma.com

info@jvg-thoma.com