Aloe Energy

COUNTRY REPORT · NOVEMBER 2026

Cabo Verde: grid and electricity access

West Africa (not a WAPP member)

42k
people live without night-time light, a proxy for no power

38%
of them live within 15 km of a power line

0
km of high-voltage lines, 66 kV and above

121
MW of operating power plants, 10 MW and above

2
power plants and transmission lines planned or under construction

About 42,000 people in Cabo Verde live where satellites see no electric light at night, and 38% of them live within 15 km of a power line. This page brings together what our open atlases show for Cabo Verde: 121 MW of power plants and the projects still to come.

WHAT THIS MEANS

14,000 people without power live 2 to 15 km from a line: close enough to plan for the grid, too far for a quick connection.



Map: Aloe Energy WAPP grid atlas. Lines © OpenStreetMap contributors (ODbL).

THE GRID TODAY

Our map shows no lines of 66 kV and above in Cabo Verde: its grids run at lower voltages, island by island. Installed capacity was about 177 MW (2024). The latest international tracking report puts access to electricity at 98% of people.

NEAR THE GRID, NOT ON IT

About 42,000 people in Cabo Verde, roughly 8% of the population, live where satellites see no electric light at night. Of them, 38% live within 15 km of a mapped or predicted power line: 2,000 within 2 km, 14,000 2 to 15 km away, and 26,000 farther out. The largest group lives more than 15 km from any line, where standalone solar and mini-grids are the realistic first step for years to come.



- Within 2 km of a line: **2,000** (4%)
- 2 to 15 km: **14,000** (34%)
- More than 15 km: **26,000** (62%)

"Without night-time light" is a satellite proxy, not a measured access rate.

Mapped line length

Voltage	km
Total	**0**

PLANTS AND PIPELINE

Five operating power plants of 10 MW and above add up to about 121 MW, 82% of it oil. The largest is Palmarejo (66 MW, oil). Another 2 plants totaling about 20 MW are under construction or planned.

Operating capacity by type



Oil: **99 MW** (82%) Wind: **22 MW** (18%)

EMISSIONS

In 2024, each megawatt-hour used in Cabo Verde came with about 0.53 tonnes of CO2, including imports. The table also gives the combined margin used for carbon projects.

Grid emission factor, 2024 (tCO2/MWh)

Measure	tCO2/MWh
Generated in country	0.528
Electricity used, with imports	0.528
Combined margin (for carbon projects)	0.381

SECOND LIFE

Between 2026 and 2040, about 643 tonnes of solar equipment and stationary batteries are expected to retire in Cabo Verde, most of it solar panels. That is 0.1% of the total for the 49 countries in our second-life atlas.

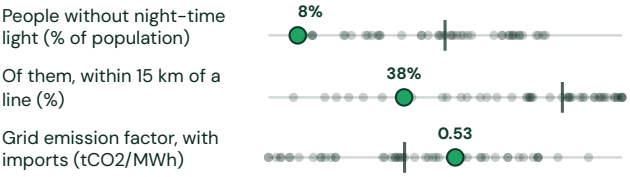
Solar and batteries retiring each year (tonnes)



CLEAN ENERGY CERTIFICATES

I-REC status: not approved yet, so renewable plants here cannot issue I-RECs.

HOW IT COMPARES



Each dot is one country with a page on aloeenergy.org; the line marks the median. Positions only, no ranking.

Sources: Grid lines: OpenStreetMap contributors (ODbL), gap-fill from the World Bank Africa grid (2017); power plants: Global Energy Monitor (September 2026), WRI and public project sources; capacity and access: regulators, utilities and Tracking SDG7 2026; people and distance to the grid: WorldPop 2020 and gridfinder (CC BY 4.0); second life: Aloe second-life model (central case); emission factor: Aloe grid emission factors (Ember).

Aloe Energy

The full page, with the interactive atlas, is at aloeenergy.org/countries/cabo-verde. The maps are free to view; the data behind them is available on request: brandon@aloeenergy.org. Aloe Energy is a not-for-profit initiative working on energy access across Africa, with open grid maps and data from Southern and Eastern to West and Central Africa.

Scan for the live page and map

Cite as: Aloe Energy (2026). Cabo Verde country report, November 2026. aloeenergy.org/countries/cabo-verde.
Free to share under CC BY 4.0.

FULL DATA

More about Cabo Verde

Everything else our research pages show for this country, from published sources. Each section names the page where the method and sources are.

PRICES AND RELIABILITY

LIT BUT OFF THE MAP

Where the lights are and the map is not

Satellites see 79 lit places in Cabo Verde at night. 13 are within 2 km of a mapped line, 17 are 2 to 10 km away and 49 are 10 km or more from any mapped line. Places lit far from the map point to lines the map is missing, mines and plants with their own power, or mini-grids.

The lit places off the map cover about 296 km² and are home to about 81,860 people.

Lit places by distance to a mapped line

Distance	Lit places	Newly lit
Within 2 km of a mapped line	13	
2 to 10 km away	17	12
10 km or more	49	29

See them on the map: the "Lit but off the map" layer of the grid-edge atlas (aloeenergy.org/research/grid-edge).

CLIMATE AND CARBON

Carbon per new connection

The Mission 300 compact for Cabo Verde adds about 2,400 new connections by 2030: 1,500 to the grid, 350 on mini-grids and 560 with solar home systems.

Counted with what household surveys show people use for light now (kerosene is the main light in 5% of homes without power), they avoid about 49 t of CO2 a year and add about 290 t from the power they use, a net addition of 241 t a year.

New connections and CO2, central case

Measure	Value
New connections by 2030	2,433
CO2 avoided (t a year)	49
CO2 added (t a year)	290
Net CO2 avoided (t a year)	-241
Net per 1,000 connections (t a year)	-99.2

The default methodology view and every source: carbon per connection (aloeenergy.org/research/carbon-per-connection).

CIRCULAR AND MOBILITY

SECOND LIFE

Who could use a second-life panel

Places in Cabo Verde that could use a second-life solar panel add up to about 46 MWp (range 21 to 105): 46 MWp to cut generator use in towns, 0 MWp for mini-grids, 0 MWp for household systems and 0.0 MWp for 1 health facilities and 0 schools with no light at night.

Mapped by half-degree cell, with years to 2040: where the panels are needed (aloeenergy.org/research/second-life#where-demand).

E-MOBILITY

Electric transport, per km

On Cabo Verde's grid, an electric motorbike emits about 36 g of CO2 per km from the power it charges with, against 48 g for a petrol one (23% less).

CO2 per km from use (g)

Vehicle	Electric	Petrol or diesel	Difference
Motorbike	36	48	-23%
Bus	683	1,673	-59%
Small car (newer petrol car)	110	125	-12%

Life-cycle figures, a cost calculator and city air: e-mobility (aloeenergy.org/e-mobility#per-km).

Sources: Lit places: NASA Black Marble night lights, compared with our mapped lines (grid-edge atlas). Carbon per connection: compact targets, household lighting surveys (census, MICS, DHS, MTF) and our grid emission factors. Second-life demand: grid-edge screening, compact targets, World Bank Enterprise Surveys and health and school facility lists, in our second-life atlas. Transport per km: our grid emission factors and vehicle energy use; running costs from national pump prices and tariffs.