Aloe Energy

COUNTRY BRIEF · NOVEMBER 2026

Angola: grid and electricity access

Southern African Power Pool

16 M
people live without night-time light, a proxy for no power

73%
of them live within 15 km of a power line

7,023
km of high-voltage lines, 66 kV and above

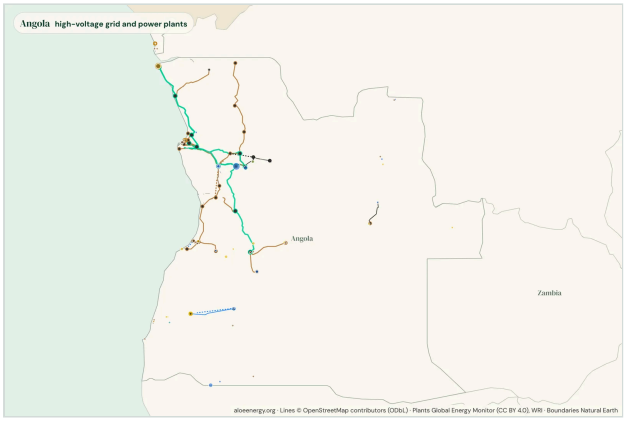
6,329
MW of operating power plants, 10 MW and above

30
power plants and transmission lines planned or under construction

About 16 million people in Angola live where satellites see no electric light at night, and 73% of them live within 15 km of a power line. This page brings together what our open atlases show for Angola: about 7,023 km of high-voltage lines, 6,329 MW of power plants and the projects still to come.

WHAT THIS MEANS

7.7 million 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 SAPP grid atlas. Lines © OpenStreetMap contributors (ODbL).

THE GRID TODAY

Angola's mapped high-voltage network runs to about 7,023 km of lines at 66 kV and above, with 56 substations. The highest voltage on the map is 400 kV, and 82% of the line length runs at 220 kV or more. About 1,264 km come from older World Bank (2017) maps, used where OpenStreetMap has gaps. Installed capacity was about 6,382 MW (Jul 2026), and peak demand about 2,186 MW (Oct 2022).

NEAR THE GRID, NOT ON IT

About 16 million people in Angola, roughly 43% of the population, live where satellites see no electric light at night. Of them, 73% live within 15 km of a mapped or predicted power line: 4.2 million within 2 km, 7.7 million 2 to 15 km away, and 4.4 million farther out. The largest group lives 2 to 15 km out: close enough to plan for the grid, too far for a quick connection. That is where mini-grids built to join the grid later can do the most good.



Within 2 km of a line: **4.2 million** (26%)
2 to 15 km: **7.7 million** (47%)
More than 15 km: **4.4 million** (27%)

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

Mapped line length

Voltage	km
400 kV	2,131
220 kV	2,594
132 kV	169
110 kV	243
66 kV	158
Voltage not recorded	465
Gap-fill from older public maps	1,264
Total	**7,023**

PLANTS AND PIPELINE

There are 46 operating power plants of 10 MW and above, adding up to about 6,329 MW, 64% of it hydro. The largest is Laúca hydroelectric plant (2,070 MW, hydro). Another 25 plants totaling about 7,512 MW are under construction or planned, 2,197 MW of them under construction.

Operating capacity by type



Hydro: **4,069 MW** (64%) Gas: **732 MW** (12%)
Solar: **704 MW** (11%) Oil: **650 MW** (10%)
Other: **174 MW** (3%)

Promised and now expected dates

Project	Type	MW	First promised	Now expected
Caculo Cabaça	Hydro	2,172	2024	2027
Angola-Namibia interconnector (ANNA)	Line	-	2026	2029
Inga-Soyo interconnector	Line	-	2020	2028
Zambia-Angola interconnector	Line	-	2030	2030

EMISSIONS

In 2024, each megawatt-hour used in Angola came with about 0.18 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	0.177
Electricity used, with imports	0.177
Combined margin (for carbon projects)	0.091

SECOND LIFE

Between 2026 and 2040, about 7,300 tonnes of solar equipment and stationary batteries are expected to retire in Angola, most of it solar panels. That is 1.8% of the total for the 18 countries in our second-life atlas.

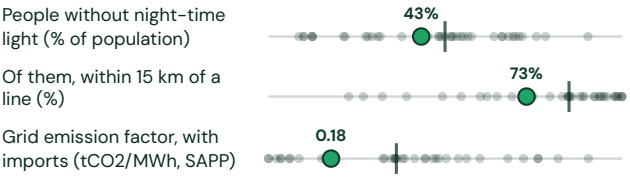
Solar and batteries retiring each year (tonnes)



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 peak demand: national utilities and regulators; 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/angola. 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 at the grid edge in Sub-Saharan Africa.

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