Aloe Energy

REGIONAL REPORT · NOVEMBER 2026

Central African Power Pool (CAPP)

Every country side by side, from public data

10
countries in our data

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

62%
of them live within 15 km of a power line

14,949
MW of operating power plants, 10 MW and above

8
countries with a Mission 300 compact in our data

The Central African Power Pool (CAPP) side by side: power plants and lines, the generation mix, Mission 300 compacts, prices, carbon, access, drought risk, storage and waste for each country, with a pool total. About 227 million people live in the 10 countries in our data; our atlases map about 14,949 MW of operating plants and 20,365 MW more planned or under construction.

Formed in 2003, it brings together ten ECCAS countries. Angola, Burundi and DR Congo are also members of SAPP or EAPP, so they appear in those reports too.

GRID AND GENERATION

GRID AND GENERATION

Power plants, lines and the generation mix

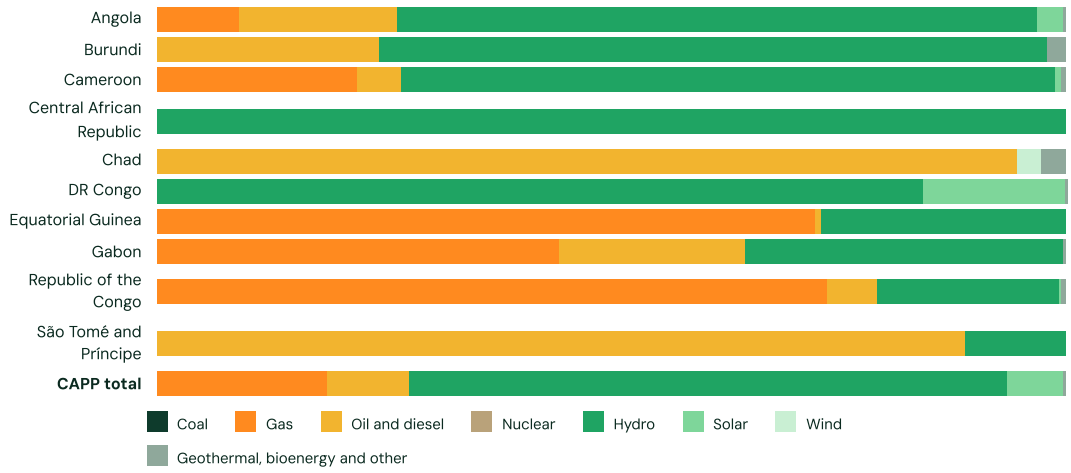
Across the 10 CAPP countries in our data, our atlases map about 14,949 MW of operating power plants of 10 MW and above (hydro 64%, gas 15%, oil and diesel 9%), about 3,135 MW under construction and about 17,230 MW more planned. Hydro is the largest source in 4 of the 10 countries.

The mapped high-voltage network runs to about 24,040 km of lines.

Power plants and lines by country

Country	Operating (MW)	Largest source	Under construction (MW)	Planned (MW)	Lines (km)	Top voltage	Substations
Angola	6,329	Hydro (64%)	2,197	5,315	7,023	400 kV	56
Burundi	224	Hydro (51%)	0	0	480	220 kV	9
Cameroon	2,053	Hydro (68%)	20	5,740	2,692	220 kV	18
Central African Republic	119	Oil and diesel (42%)	50	225	151	110 kV	2
Chad	266	Oil and diesel (57%)	60	520	156	88 kV	8
DR Congo	3,884	Hydro (84%)	398	3,601	9,846	500 kV	142
Equatorial Guinea	338	Gas (64%)	200	0	1,208	220 kV	15
Gabon	868	Gas (60%)	160	862	622	220 kV	13
Republic of the Congo	843	Gas (63%)	50	957	1,856	220 kV	23
São Tomé and Príncipe	26	Oil and diesel (57%)	0	10	8	-	0
CAPP total	**14,949**	**Hydro (64%)**	**3,135**	**17,230**	**24,040**		**286**

Generation mix by country



Electricity generation by source, 2024

Country	Generation (TWh)	Coal	Gas	Oil and diesel	Nuclear	Hydro	Solar	Wind	Geothermal, bioenergy and other
Angola	15.6	–	9%	17%	–	71%	3%	–	–
Burundi	0.5	–	–	24%	–	73%	–	–	2%
Cameroon	7.3	–	22%	5%	–	72%	1%	–	1%
Central African Republic	0.1	–	–	–	–	100%	–	–	–
Chad	0.4	–	–	95%	–	–	–	3%	3%
DR Congo	15.9	–	–	–	–	84%	16%	–	–
Equatorial Guinea	1.5	–	72%	1%	–	27%	–	–	–
Gabon	2.6	–	44%	20%	–	35%	–	–	–
Republic of the Congo	5.5	–	74%	5%	–	20%	–	–	1%
São Tomé and Príncipe	0.1	–	–	89%	–	11%	–	–	–
CAPP total	**49.4**	**–**	**19%**	**9%**	**–**	**66%**	**6%**	**–**	**–**

Capacity and peak demand, latest published

Country	Capacity (MW)	Peak demand (MW)	As of
Angola	6,382	2,186	Oct 2022
Burundi	166	–	2025
Cameroon	2,011	–	2025
Central African Republic	98	–	Sep 2026 (GEM)
Chad	487	–	2025
DR Congo	1,650	2,379	August 2026
Equatorial Guinea	343	–	Sep 2026 (GEM)
Gabon	852	–	Sep 2026 (GEM)
Republic of the Congo	748	–	2025
São Tomé and Príncipe	12	–	Sep 2026 (GEM)

Cross-border line projects we track: 2 completed, 4 under construction, 12 in preparation

Countries	Voltage	Status	Year
Rwanda–Burundi–Tanzania	220 kV	Completed	2024
Republic of the Congo–DR Congo	220 kV	Completed	–
Rwanda–Burundi	220 kV	Under construction	2027 (expected)
Rwanda–DR Congo	220 kV	Under construction	2027 (expected)
Burundi–DR Congo	220 kV	Under construction	2028 (expected)
Cameroon–Chad	225 kV	Under construction	2030 (expected)
Angola–Namibia	400 kV	In preparation	2029 (expected)
DR Congo–Rwanda–Burundi	220 kV	In preparation	2030 (expected)
Uganda–DR Congo	220 kV	In preparation	2030 (expected)
Cameroon–Republic of the Congo	225 kV	In preparation	2032 (expected)
Gabon–Republic of the Congo	400 kV	In preparation	2032 (expected)

Countries	Voltage	Status	Year
Republic of the Congo–Angola	400 kV	In preparation	2032 (expected)
Cameroon–Gabon–Equatorial Guinea	–	In preparation	2033 (expected)
Angola–DR Congo	–	In preparation	–
Angola–Namibia	400 kV	In preparation	–
DR Congo–Angola	–	In preparation	–
Zambia–Angola	–	In preparation	–
Zambia–DR Congo	330 kV	In preparation	–

Capacity is what the country or CAPP reports (available capacity in the SAPP monthly report, installed capacity elsewhere); it is not the same as our mapped plants. GEM marks the plant total from Global Energy Monitor where no national figure is published. The project table lists lines in our project tracker; older interconnectors are on the atlas and the interconnector limits (aloeenergy.org/research/interconnector-limits) page. Every plant and line: the CAPP grid atlas (aloeenergy.org/research/capp-grid).

MISSION 300 COMPACTS

MISSION 300 COMPACTS COMPARED

What the compacts say, side by side

8 of the 10 CAPP countries in our data have published a Mission 300 national energy compact. Together they seek about US$32.9 billion of private investment by 2030. 1 set out how to handle e-waste from solar kits and batteries, and 5 say what happens to mini-grids when the main grid arrives.

No compact in our data: Angola, Equatorial Guinea.

Set the split beside the access section below, which shows where the people without power live by distance to a mapped line: a compact that relies on the grid fits a country where most of them live within 2 km.

Access targets and how they are split

Country	Access now	Target	Grid	Mini-grid	Standalone	What the split measures
Burundi	25.9% in 2025	70% by 2030	60%	13%	27%	Share of new connections
Cameroon	74% in 2025	100% by 2030	–	–	–	Not stated
Central African Republic	16.8% in 2024	50% by 2030	44%	32%	23%	Share of new connections
Chad	11% in None	90% by 2030	50%	20%	20%	Share of people with access
DR Congo	21.5% in 2024	62% by 2030	44%	56%	0%	Share of new connections
Gabon	92.7% in 2023	95% by 2030	–	–	–	Not split
Republic of the Congo	31.7% in None	81% by 2030	–	10%	90%	Share of people with access
São Tomé and Príncipe	84% in 2024	100% by 2030	–	–	–	Not stated

What each compact commits to

Country	Productive use	E-waste	Least-cost or GIS plan	Mini-grid rules when the grid arrives	Cost-reflective tariff	Private investment sought (US$ billion)
Burundi	Mentioned	Yes	Exists	Yes	Committed	1.5
Cameroon	Mentioned	Mentioned	Planned	Yes	Committed	5.9
Central African Republic	Mentioned	No	Exists	Mentioned	Committed	0.5
Chad	Mentioned	No	Planned	Yes	Mentioned	1.3
DR Congo	Mentioned	No	Exists	Yes	Committed	20
Gabon	Mentioned	No	Planned	Yes	Committed	2.0
Republic of the Congo	Mentioned	No	Planned	Not stated	Committed	1.4
São Tomé and Príncipe	Yes	No	Exists	Mentioned	Committed	0.2

Read from each compact document, with page numbers and quotes for every value: Mission 300 compacts compared (aloeenergy.org/research/m300-compacts). "Not stated" means the compact does not say.

PRICES

What power costs across the pool

Household tariffs are the energy charge at the central bank exchange rate; check on the tariffs page what each includes. Our power price data holds 5 deals in CAPP countries, from auctions, signed power purchase agreements and published bids.

Household tariffs and load shedding

Country	Utility	Household (US$/kWh)	Lifeline or first block (US$/kWh)	Load shedding
Angola	ENDE	0.015	0.004	No data
Burundi	REGIDESO	0.046	0.023	Cuts reported
Cameroon	Eneo Cameroon	0.135	0.085	Not confirmed this month
Central African Republic	–	–	–	Cuts reported
Chad	–	–	–	Not confirmed this month
DR Congo	SNEL	0.089	0.039	Cuts reported
Equatorial Guinea	–	–	–	None reported
Gabon	–	–	–	Not confirmed this month
Republic of the Congo	Energie Electrique du Congo (E2C)	0.084	–	Not confirmed this month
São Tomé and Príncipe	–	–	–	Not confirmed this month

Power deals signed or bid in the pool, US$/MWh as signed

Source	Deals	Median	Lowest	Highest
Hydro	3	71	45	72
Diesel and fuel oil	1	321	–	–
Solar PV	1	142	–	–

Every tariff and status with its source: utilities, tariffs and load shedding (aloeenergy.org/research/utilities-and-tariffs). Every deal with its source: power prices and deals (aloeenergy.org/research/power-prices). Load shedding is grouped from the status we last read for each country.

CARBON

Grid carbon and carbon markets

2 of the 10 CAPP countries in our data issue I-REC renewable energy certificates, about 0.0 TWh to date. The grid factor is the average CO2 per MWh of electricity used; a low factor means grid power, electric transport and new grid connections add little CO2.

Grid carbon, certificates and carbon markets

Country	Grid factor (tCO2/MWh)	Year	I-REC certificates	Issued to date (GWh)	Article 6 deals and activities	Net CO2 avoided by new connections (t a year)
Angola	0.177	2024	Not approved	–	0	-18,122
Burundi	0.161	2024	Approved, none issued	–	0	-19,931
Cameroon	0.150	2024	Not approved	–	0	-25,241
Central African Republic	0.000	2023	Not approved	–	0	8,046
Chad	0.721	2024	Issuing	2	0	-318,030
DR Congo	0.061	2024	Issuing	11	0	174,106
Equatorial Guinea	0.371	2024	Not approved	–	0	–
Gabon	0.385	2024	Not approved	–	1	5,008
Republic of the Congo	0.413	2024	Not approved	–	0	-68,976
São Tomé and Príncipe	0.677	2023	Not approved	–	0	-272

Methods: grid emission factors (aloeenergy.org/research/grid-emission-factors), clean energy certificates (aloeenergy.org/research/clean-energy-certificates) and carbon per connection (aloeenergy.org/research/carbon-per-connection) (central case, new connections to 2030 under each compact or national target). A negative value means the new connections add CO2 on net, because the grid power they use emits more than the kerosene and diesel they replace.

ACCESS

Who lives near the grid but not on it

About 146 million people in the CAPP countries in our data live where satellites see no electric light at night, out of about 227 million. 62% of them live within 15 km of a mapped power line, and 28% within 2 km, close enough for a grid connection to be the obvious first step.

Satellites also see 1,065 lit places 2 km or more from any mapped line: missing lines, mines and plants with their own power, or mini-grids.

People without power and how far they live from the grid

Country	People (million)	Without night light (million)	Within 2 km of a line	2 to 15 km	Beyond 15 km	Median distance (km)	Lit places off the map
Angola	38	16	26%	47%	27%	7.2	315
Burundi	14	10	33%	66%	1%	3.5	45
Cameroon	29	15	29%	36%	35%	7.0	219
Central African Republic	5.3	3.5	16%	11%	73%	77.1	46
Chad	20	15	15%	26%	59%	32.7	121
DR Congo	109	83	30%	30%	40%	7.7	160
Equatorial Guinea	1.9	0.4	70%	30%	0%	0.5	27
Gabon	2.5	0.3	52%	31%	17%	1.4	75
Republic of the Congo	6.3	1.4	39%	35%	26%	4.6	54
São Tomé and Príncipe	0.2	0.0	76%	14%	10%	0.5	3
CAPP total	**227**	**146**	**28%**	**34%**	**38%**		**1,065**

Night-time light is a proxy for no power, not a household survey. Map and method: the grid-edge atlas (aloeenergy.org/research/grid-edge).

RISK, STORAGE AND WASTE

Drought, battery sites, waste and second life

A dry year that takes a fifth of hydro output would cost the CAPP countries about 773 MW on average over the year, and a severe drought (two fifths) about 1,550 MW. 15 coal, gas and oil plant sites with about 2,594 MW of grid connection could host batteries as they close. Waste could fuel about 513 MW of power, and about 25,674 t of solar panels, kits and batteries will reach end of life from 2026 to 2040.

Drought risk, storage sites, waste and second life

Country	Hydro in operating plants	Dry year, MW lost	Severe drought, MW lost	Thermal plant sites for batteries (MW)	Power from waste (MW)	Solar and battery waste 2026–2040 (t)	Second-life panel demand (MWp)
Angola	63%	278	556	929	100	6,754	4,012
Burundi	51%	7	14	–	10	1,214	656
Cameroon	68%	119	239	364	147	4,017	1,412
Central African Republic	23%	3	7	50	29	753	388
Chad	–	–	–	67	19	1,407	879
DR Congo	84%	302	605	–	124	10,405	5,416
Equatorial Guinea	36%	10	20	154	4	204	157
Gabon	38%	29	58	496	50	314	117
Republic of the Congo	28%	25	51	534	30	606	999
São Tomé and Príncipe	–	–	–	–	1	–	19
CAPP total		**773**	**1,550**	**2,594**	**513**	**25,674**	**14,056**

Methods: hydro and drought (aloeenergy.org/research/hydro-exposure), power plant to battery site (aloeenergy.org/research/thermal-to-storage), power from waste (aloeenergy.org/research/waste-to-energy) and the second-life atlas (aloeenergy.org/research/second-life). Central cases throughout.

SOURCES AND METHOD

- Plants and lines: our grid atlases (Global Energy Monitor, WRI, OpenStreetMap, World Bank and national sources). Generation mix: Ember. Capacity and peak demand: SAPP monthly report and national regulators and utilities.
- Compacts: the published Mission 300 national energy compacts and World Bank compact progress reports. Distances: our grid-edge atlas.
- Tariffs and load shedding: utility tariff books, regulators and news reports (Utilities and Tariffs data). Deals: auction results, regulators, utilities and trade press (power prices data).
- Grid factors: Ember and national data, in our grid emission factors. Certificates: the I-REC registry (Evident). Article 6: UNEP-CCC Article 6 pipeline.
- Access: WorldPop population, NASA Black Marble night lights, Google Open Buildings and our mapped lines (grid-edge atlas).
- Hydro: our grid atlases and Ember. Thermal sites: Global Energy Monitor (September 2026). Waste: FAOSTAT, Global Energy Monitor and OpenStreetMap. Second life: IRENA, compact targets and our second-life atlas.

Rows run in alphabetical order. These are side-by-side facts, not scores or rankings. A dash means we hold no data for that country. Pool totals count member countries only.

Aloe Energy

Country detail, maps and the data behind every table: aloeenergy.org/regions/capp. Aloe Energy is a nonprofit that publishes open energy maps and data for Africa. Free to share under CC BY 4.0.