Aloe Energy research

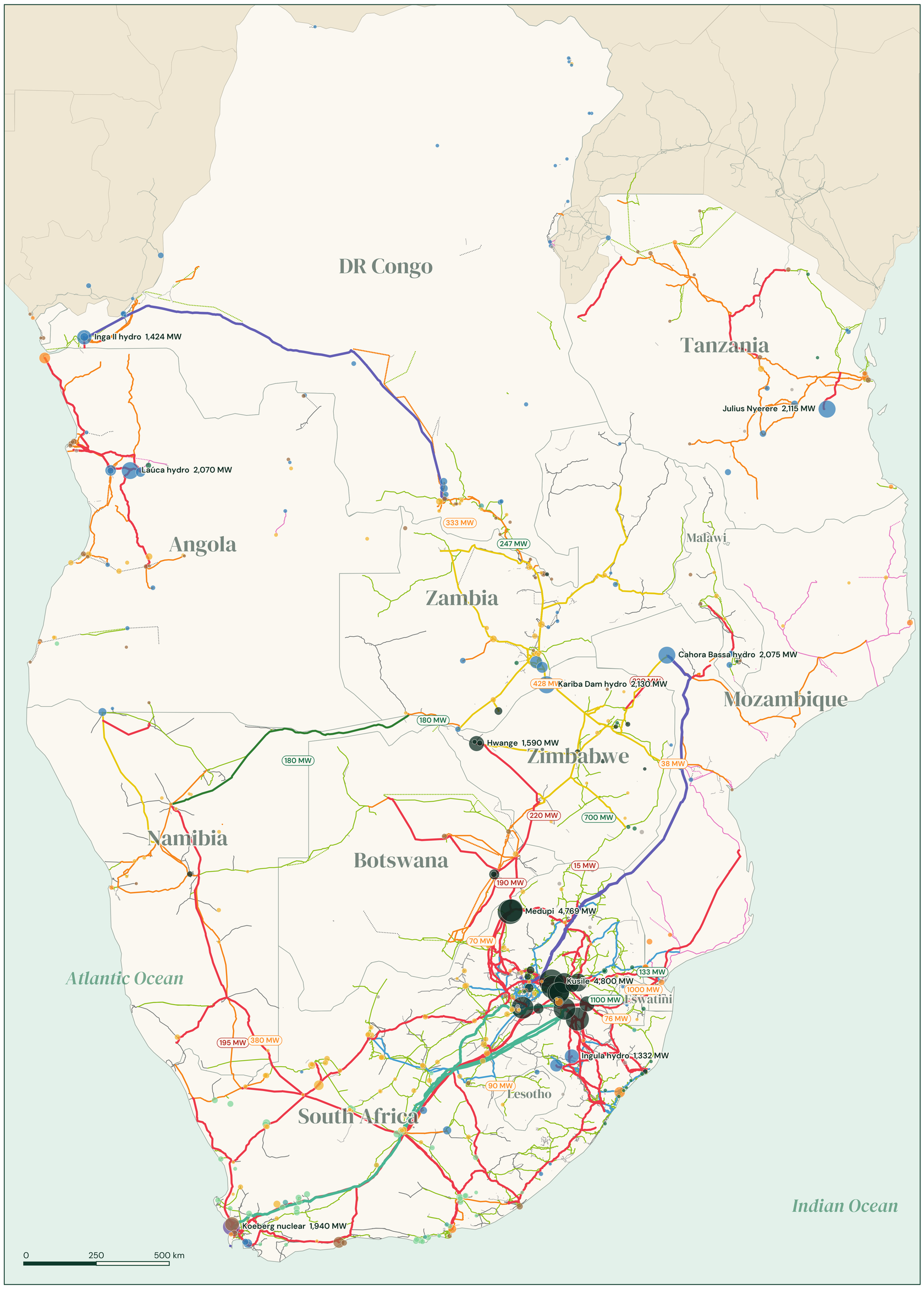
Grows where the grid hasn't.

The Southern African Power Pool today

The high-voltage grid and the power plants running in November 2026

12 member countries · 13,145 transmission line sections · 434 power plants of 10 MW and above (94,869 MW)

Edition 2 · Data as of November 2026



How to read the map

- 765 kV
- 500–533 kV
- 400 kV
- 350 kV
- 330 kV
- 275 kV
- 220 kV
- 132 kV
- 110 kV
- 88 kV
- 66 kV
- Voltage not recorded
- Dotted: line missing from OpenStreetMap, taken from utility or World Bank maps
- 330 MW — Usable cross-border transfer (SAPP), colored by share of the line rating

Power plants, 10 MW and above

- Hydro
- Gas
- Solar
- Biomass
- Storage
- Coal
- Oil
- Wind
- Nuclear
- Other

50 MW · 500 MW · 2,000 MW

The region in numbers

- **95 GW** in 434 operating power plants of 10 MW and above
- **163,501 km** of mapped transmission lines, 66 kV and above
- **5.6 US¢/kWh** average day-ahead price, August 2026
- **191.2 GWh** traded on SAPP competitive markets, August 2026

Supply against peak demand, August 2026

DR Congo	-729 MW
Botswana	-223 MW
Zimbabwe	-188 MW
Namibia	-182 MW
Eswatini	-169 MW
Lesotho	-130 MW
Zambia	+395 MW
Mozambique	+1,101 MW
South Africa	+4,928 MW

Available capacity at peak minus peak demand, before firm imports. DR Congo also shed about 100 MW. Angola, Malawi and Tanzania are not in SAPP's table.

Tightest interconnections

Usable transfer as a share of the line's thermal rating. Most are held back by stability, not wire size.

Beitbridge - Messina	15 MW · 21%
Phokoje - Matimba	190 MW · 29%
Songo - Bindura	220 MW · 31%
Insukamini - Phokoje	220 MW · 31%
Aggeneis - Kokerboom	195 MW · 39%
Mutare - Chicamba	38 MW · 54%
Aries - Kokerboom	380 MW · 60%

Largest power stations

Kusile (ZAF, coal)	4,800 MW
Medupi (ZAF, coal)	4,769 MW
Majuba (ZAF, coal)	4,143 MW
Kendal (ZAF, coal)	4,116 MW
Matimba (ZAF, coal)	3,990 MW
Lethabo (ZAF, coal)	3,708 MW
Tutuka (ZAF, coal)	3,654 MW
Matla (ZAF, coal)	3,600 MW
Duvha (ZAF, coal)	3,000 MW

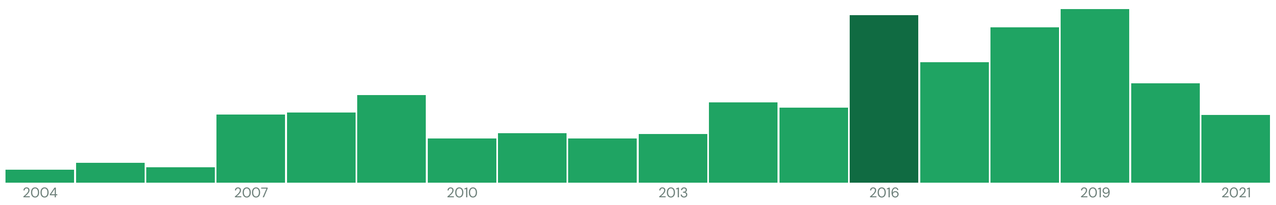
What runs the region today



- Coal 49,331 MW (52%)
- Hydro 20,750 MW (22%)
- Solar 9,224 MW (10%)
- Oil 4,631 MW (5%)
- Wind 4,366 MW (5%)
- Gas 3,214 MW (3%)
- Nuclear 1,960 MW (2%)
- Biomass 743 MW (1%)

Installed capacity of operating plants of 10 MW and above, by type. Global Energy Monitor (September 2026) and our project register.

Capacity added each year



MW commissioned, 2004–2021. Peak: 4,332 MW in 2019. Source: SAPP annual reports 2015 and 2022.

Sources. Transmission lines: contains information from OpenStreetMap, which is made available under the Open Database License (ODbL), extracted 4 November 2026; lines missing from OpenStreetMap from TANESCO (2015), the World Bank Africa electricity grid (2017) and national grid maps, CC BY 4.0. Power plants: Global Energy Monitor Global Integrated Power Tracker (September 2026, CC BY 4.0), a project register built from public sources, WRI Global Power Plant Database v1.3, OpenStreetMap and the World Bank AICD inventory. Statistics, transfer limits, project updates and the draft Generation and Transmission Master Plan 2025-2045: Southern African Power Pool (monthly report August 2026, Annual Report 2022, Pool Plan 2017). Boundaries: Natural Earth.

Line colors follow the Southern African Power Pool's own grid maps: solid for existing lines, broken for proposed ones. Planned routes are indicative, drawn substation to substation. This map is for information only, not for engineering, investment or navigation decisions. Boundaries and names do not imply any view on their status. Free to print and share for non-commercial use with credit to Aloe Energy, unchanged (CC BY-NC-ND 4.0). Download both sheets at aloeenergy.org/research/sapp-grid. Edition 2; the companion sheet shows the region to 2035 and beyond.

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