

CAPP Aims for Regional Electricity Integration, but Regulatory Bottlenecks Persist



Executive summary

- Institutional, legal and regulatory challenges within Central African Power Pool (CAPP) countries are delaying the emergence of a robust regional electricity market.
- Despite geographic proximity, national grids remain disconnected, and generation mixes are dominated by fossil fuels or isolated hydro schemes. So, the priority is to build new interconnection projects to leverage the region's vast hydropower potential.
- A harmonized regional framework will encourage cross-border investment, reduce investor risk, and allow surplus generation – for instance from Angola – to be exported to neighboring markets.
- The lack of a regional regulator has led to wide variations in tariffs, licensing, and technical standards. A study, backed by the AfDB, has proposed the creation of such a body.

- More effective regulation and consequent higher rates of investment in domestic infrastructure would establish a commercial rationale for more cross-border electricity trading.
- Implementation of the Regional Electricity Market Readiness Plan (REMReP), supported by AUDA-NEPAD and the World Bank will enhance transparency, improve bankability, and promote efficient planning.

CAPP lays the foundations

The Central African Power Pool (CAPP) has begun to lay the foundations for regional power trade, leveraging vast hydropower potential and new interconnection projects. But despite its strategic importance, progress has been constrained by institutional, legal and regulatory challenges that are delaying the emergence of a robust regional electricity market.

Established in 2003 under the Economic Community of Central African States (ECCAS), CAPP was designed to advance regional energy security and integration. Central Africa—particularly the Democratic Republic of Congo (DRC), Cameroon, and Gabon—is estimated to hold over 40% of Africa’s hydropower potential, with the Inga site in DRC alone accounting for a significant share. Yet more than two decades on, CAPP remains in a nascent phase, challenged by operational inefficiencies, weak institutions, and limited regulatory harmonization.

Regional challenges

Comparative ERI scores for CAPP countries						
Country	2018	2019	2020	2021	2022	2024
Angola	..	0.405	0.593	0.591	0.608	0.737
Cameroon	0.645	0.692	0.525	0.557	0.606	0.683
Central African Republic	..	..	0.263	0.116	0.292	0.622
Chad	..	..	0.238	0.236	0.147	0.514
Congo Democratic Republic	..	..	0.377	0.418	0.527	0.603
Congo Republic	..	..	0.238	0.105	0.101	0.352

Access to electricity remains a major development challenge in Central Africa. Electrification rates average below 35%, with countries like Chad and the Central African Republic (CAR) lagging even further behind. Despite geographic proximity, national grids remain disconnected, and generation mixes are dominated by fossil fuels or isolated hydro schemes. Ambitious projects such as the up-to 11GW Inga III in DRC and

interconnectors like Cameroon–Chad (CEB-Tchad) and Gabon–Congo have great potential to boost security of supply, connectivity and trade. But political instability, technical delays, and financing gaps continue to stall implementation.

Previous ERI (Electricity Regulatory Index for Africa) reporting has noted that while interconnections are technically feasible, the lack of harmonised market rules and institutional incentives has discouraged commercial uptake.¹ The region's limited progress in achieving electrification targets has prompted broad support for deeper reform and renewed regional cooperation. While bilateral power exchanges exist, a competitive and liquid regional power market remains work in progress.

Regulatory coordination gaps

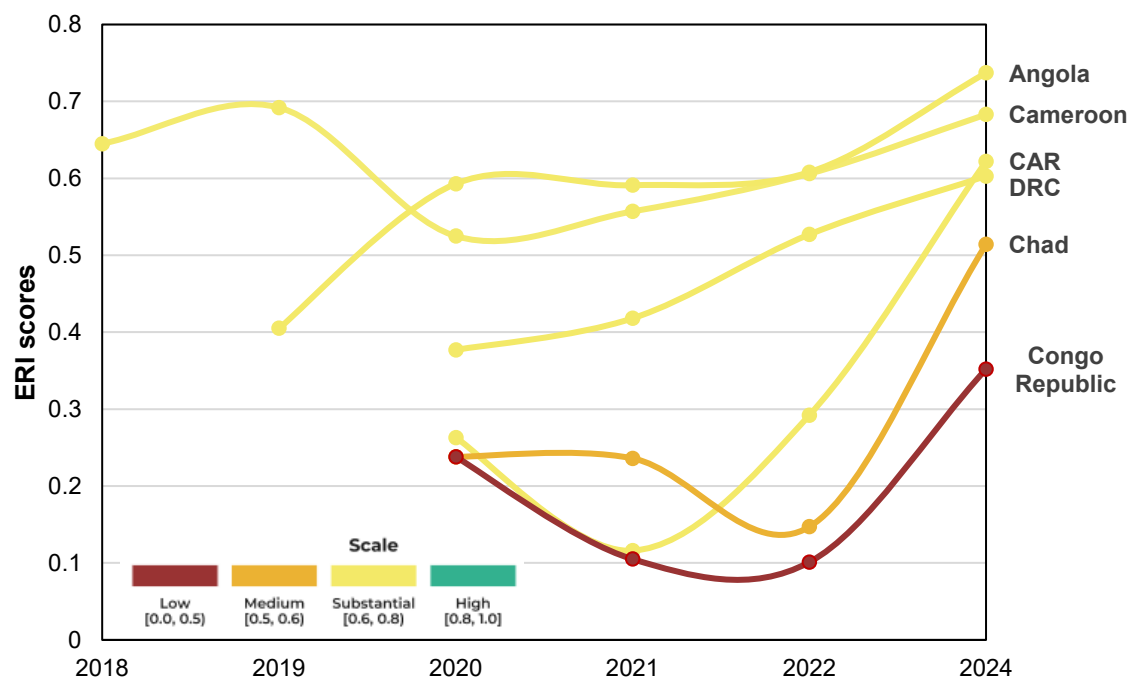
A harmonized regional framework encourages cross-border investment, reduces investor risk, and allows surplus generation to be exported to neighboring markets. But unlike the West African Power Pool (WAPP) and the Southern Africa Power Pool (SAPP), CAPP lacks an operational regional regulator. ECCAS's Energy Division provides only limited coordination and does not set binding rules. This has led to wide variations in tariffs, licensing, and technical standards across CAPP countries (AfDB, 2023). Without an equivalent to the ECOWAS Regional Electricity Regulatory Authority (ERERA), regional projects are typically negotiated bilaterally, as seen in the DRC–Congo–Gabon corridor.

A 2024 ECCAS study backed by the AfDB proposed the creation of a Central African Electricity Regulatory Commission (Commission Régionale de Régulation de l'Electricité en Afrique Centrale, CORREAC), modelled on ERERA, to issue regional guidelines and oversee cross-border agreements. But CORREAC's launch is expected in the first quarter of 2026.

The AfDB's Electricity Regulatory Index for Africa (ERI) shows that regulatory fragmentation creates inefficiencies that limit the potential for regional trade. Out of the 10 members of the pool, six participated in the ERI survey. None achieved scores, placing them in the top category for performance (see the chart below).

¹ [Electricity Regulatory Index for Africa 2020](#)

Figure 1: ERI Scores in CAPP - Gradual improvements from Central African Republic and Chad



However, two members play strategic roles which extend beyond the pool and could eventually play key roles in regional or even continental electricity trade once the necessary domestic and cross-border transmission infrastructure is in place. Angola is also a member of the Southern African Power Pool (SAPP), while Democratic Republic of Congo (DRC) is part of SAPP and the Eastern Africa Power Pool (EAPP).

In the most recent ERI survey, Angola was the best performing country in the region, followed by Cameroon, Central African Republic (CAR), DRC, Chad and Republic of Congo. Of these, CAR and Chad have achieved the biggest improvements in the past two years from a very low level.

The relatively poor level of sector regulation and limited regulatory convergence is a challenge for regional alignment and the benefits that this would bring. Without standardised procedures and strong enforcement mechanisms, boosting cross-border electricity trade seems difficult.

With relatively little physical infrastructure connecting CAPP members, incentives for harmonizing regulations on a regional basis are low. At the same time, more effective

regulation and consequent higher rates of investment in domestic infrastructure would establish a commercial rationale for more cross-border electricity trading.

One key strategic goal is the potential of establishing both physical and commercial infrastructure to allow Angola to export some of its estimated 1.5GW of excess generation capacity – an amount which is only expected to grow. The government plans a second 750MW gas-fired power plant at Soyo, the country’s most north-westerly point and its border with DRC at the mouth of the Congo river.

The start of construction at the Cameroon – Chad Power Interconnection Project (PIRECT) in late 2024 may open this and other opportunities. The \$744 million project has taken four years to prepare. Its target is to allow Chad to import 100MW of electricity from Cameroon – largely from the 420MW Nachtigal hydro plant where the final turbines were commissioned in March 2025. At the same time, it will interconnect Cameroon’s own southern interconnected grid – to which Nachtigal is connected – to its separate northern network. It is expected to be commissioned by 2027.

In February 2025, the Republic of Congo and the European Union announced a feasibility study to build a high voltage interconnector from Pointe-Noire – the location of strategic gas-fired power plants – to Brazzaville and Kinshasa across the border in DRC. This is part of the Boucle de l’Amitié Energétique project. Other sections include a line joining Pointe-Noire with Angola’s Cabinda enclave and DRC’s Inga where there are hopes of constructing a multi-giga-scale hydro scheme.

More robust regulatory frameworks will be critical to ensuring the success of these projects. Integration of regional power generation and markets will not happen if basic issues— such as inter-regulator communication and tariff clarity—are not resolved first.

Integration pathways and reform priorities

To align with the African Continental Free Trade Area (AfCFTA) and the African Union’s Single Electricity Market (AfSEM), CAPP must accelerate reforms. The new Regional Electricity Market Readiness Plan (REMReP), supported by AUDA-NEPAD and the World Bank, outlines a 10-point agenda:

- Establish CORREAC
- Finalize interconnection standards

- Develop model power purchase agreements
- Coordinate investment for hydropower and transmission
- Enact updated energy laws
- Conduct cost-of-service studies
- Enforce service quality standards
- Facilitate renewable energy integration
- Promote off-grid and mini-grid expansion
- Strengthen efficiency frameworks.

Each of these measures would enhance transparency, improve bankability, and promote efficient planning. Cross-border harmonization is particularly essential for new hydropower projects in the pipeline, many of which span shared river basins. A lack of regional oversight and dispute resolution mechanisms could be a hindrance to implementing such projects.

Capacity-building partnerships with advanced regulators like RURA (Rwanda) and IRSEA (Angola) could support peer learning, technical assistance and benchmarking. Regional training programs and twinning initiatives could help weaker regulators build competence and confidence to engage in market-based trade.

Political and financial risks

Access to finance and underinvestment remain key challenges. Many national utilities are insolvent and unable to finance cross-border purchases. The IEA estimates that Africa requires \$25bn per year in new investment by 2030², yet annual energy investment across ECCAS countries is less than \$200m³.

Tariff distortions add further barriers. Heavily subsidized domestic tariffs in DRC and Congo deter exports, while higher-cost producers like Gabon and Cameroon struggle to compete. Without cost-reflective pricing, trade is commercially unviable.

Other challenges include institutional inefficiencies. Many regional organizations, including ECCAS and CAPP, have seen slow progress due to overlapping mandates and

² Financing Clean Energy in Africa, IEA 2023

³ Africa Energy 2025, Cross Border Information

limited funding. As donors shift their focus to results-based financing and regional impact, CAPP will need to demonstrate that its institutional reforms are not only technically sound but politically feasible.

Outlook

Despite these obstacles, CAPP's potential is vast. With some of the world's largest untapped renewables and emerging infrastructure, Central Africa could become a continental energy hub. But for that to happen, regulatory institutions, legal frameworks, and political trust must be strengthened.

Support for the establishment of CORREAC as a regional regulator will help fast-track the completion of key transmission interconnectors. At the same, improved regulatory alignment within the power pool will unlock the benefits of trade across those interconnectors.

The potential exists to match future increases in supply and demand across borders more effectively than can be done within them. For instance, hydropower surplus from DRC and Cameroon could be exported to neighbors within the power pool or even further afield, supporting industry, development, and climate goals.

CAPP and its member states have a policy framework pointing towards more coordinated leadership, a unified regulatory vision, and targeted reforms. This will allow them to accelerate convergence in the coming decade and achieve progress towards the wider goal of the creation of AfSEM and the benefits that it will bring.

Case study – Improved regulation will spur regional ITPs and open power trading opportunities

Governments, investors and international supporters – including the United States – are focused on the challenge and opportunity of connecting Angola's surplus of hydroelectric power generation to mining ventures in the Copperbelt region of the Democratic Republic of Congo (DRC). Some independent transmission projects (ITPs) are already in development. Better regulations will trigger more investment and faster progress.

Hydro-Link – a vehicle supported by US-based developer Symbion Power – has signed memoranda of understanding with the governments of both Angola and DRC to build a

1,150km, 400kV transmission line connecting huge hydro schemes in North Angola such as Laúca and Caculo Cabaça with mines in the Kolwezi area of southern DRC.

The interest of US-based companies in investment opportunities in the region runs in parallel to the efforts of the Trump administration, which in 2025 brokered a peace agreement to end fighting in eastern DRC.

Other private sector backed ITPs to take power from Angola to DRC are advancing. Morocco's Société Maghrébine de Génie Civil (Somagec) has committed equity into a scheme to build both the 400km Soyo-Inga-Cabinda and the 1,240km Laúca- Saurimo-Kolwezi 400kV transmission lines. Its Dubai-headquartered subsidiary Meridia Energy has completed pre-front-end engineering and design and financial studies and filed environmental and social impact assessments with regulators and is progressing towards financial close.