Energy and Environmental Policy Program, University of Delaware, Delaware, US.

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JOINT POLICY BRIEF

Harnessing Regional Energy Governance for Central Africa's Energy Security

Authors:

Tabenyang Etchu, Idowu Kunlere, Callixte Kambanda, Rhoda Mshana, Francine Mbock, Freda Opoku, Michael Awuah, & Kalim Shah

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[1]Energy and Environmental Policy Program, University of Delaware, Delaware, US,
[2]African Development Bank (AfDB), Abidjan, Côte d'Ivoire.
[3]Center for European Integration Studies (ZEI), University of Bonn, Germany.
Corresponding author: pvdz@udel.edu

Abstract

Central Africa is at a critical juncture in its energy governance, which could shape its energy future. The region is navigating between traditional fossil fuel projects like the encouraged Central African Pipeline System (CAPS) by the Central Africa Business Energy Forum (CABEF) and increasing momentum towards renewable energy solutions advocated by initiatives like the establishment of the Centre for Renewable Energy and Energy Efficiency for Central Africa (CEREEAC) which is supported by international organizations such as the World Bank, United Nations Development Organization and the African Development Bank. The region faces pressing challenges, including energy poverty, limited electricity access, and the need for a just and sustainable energy transition. In addition, financial challenges pose a significant obstacle to the energy transition, especially in the provision of affordable and reliable energy, deployment of renewable energy sources, and the roll-out of a large-scale power grid infrastructure network across the region, which requires comprehensive financing approaches involving public, private, and multilateral sources. Thus, this brief highlights the challenges conventional national energy governance systems face, the critical importance of regional cooperation in energy governance, and provides practical recommendations for improved and reliable energy access in Central Africa.

Background and Rationale

Regional energy governance in this context refers to governing energy and energy resources at the supranational level. It seeks to coordinate, regulate, and manage energy policies and resources using governance approaches and mechanisms to advance energy transition efforts across multiple regions, a specific geographical area, or countries at a level above the national government. In this instance, *supranational* typically refers to entities such as regional organizations or alliances, which have authority above that of individual nations. In this instance, the Economic Community of Central African States (ECCAS) is a befitting example. However, national energy governance focuses on policies, regulations, institutions, and mechanisms through which a sovereign state manages its energy sector. It encompasses all activities related to the exploration, production, distribution, and consumption of energy resources within a country's borders. It plays a crucial role in shaping the energy area of a country, influencing its economic development, environmental sustainability, and geopolitical relations. Effective governance requires coordination among government agencies, industry stakeholders, civil society organizations, and international partners to achieve national energy objectives while addressing diverse interests and priorities.[1] To address the complexities of energy resource management, particularly in the power sector,

[1] Thijs Van de Graaf and Fariborz Zelli, 'Actors, Institutions and Frames in Global Energy Politics', in *The Palgrave Handbook of the International Political Economy of Energy*, ed. by Thijs Van de Graaf and others (Palgrave Macmillan UK, 2016), pp. 47–71, doi:10.1057/978-1-137-55631-8_2; Thijs Van de Graaf and Jeff

for combatting energy poverty, this brief explores the need for robust regional energy governance in Central Africa, emphasizing the role of regional institutions in harmonizing national policies, fostering cross-border cooperation, and implementing approaches to ensure equitable access to energy across the region.

Key facts

- Central Africa[2] has a combined population of 176,138,265 million as of 2023, per UN population data.
- According to the Africa Energy Portal, in 2021, regional GDP per Capita was USD 1033.066, and the share of the populace without access to electricity was 105.114 million people, with 75.138 million people in rural areas and 29.976 million people in urban centers across the region.
- About 59.7% of the population is energy-poor (without electricity access).
- The 2022 ERI[3] average score for the region[4] is 0.344. Placing the region in the red band of low regulatory development overall.
- The region's 2022 Regulatory Governance Index (RGI) average score is 0.594. This places the region in the orange band of medium level of development of the regulatory framework. This proves that regional energy governance has the potential to offer an excellent mechanism to deal with pressing energy challenges.

Keywords: Regional Energy Governance, Central African region, Energy Access, Energy Transition

Introduction

The Central African region (Figure 1) faces a pressing energy challenge. Despite abundant resources – from fossil fuels to untapped renewables – the region struggles with low energy access, hindering economic development (Table 1). This challenge is compounded by a rapidly growing population (Figure 2, Table 2), increasing energy demand, and the urgent need for climate-friendly energy solutions.

Individual nation-states have been managing their respective energy resources through various governance approaches. However, these approaches have been linked, among other things, to the widespread energy deficiency across the region. Individual nation-states have been managing their respective energy resources

Colgan, 'Global Energy Governance: A Review and Research Agenda', *Palgrave Communications*, 2.1 (2016), pp. 1–12, doi:10.1057/palcomms.2015.47.

[2] Central Africa, a subregion of the African continent, comprises 7 sovereign states: Cameroon, Central African Republic, Chad, Congo, Democratic Republic of Congo, Equatorial Guinea, and Gabon. These countries are not just geographical entities but also actively shaping their energy landscapes through various policies and initiatives. It is worth noting that Central Africa is a subregion of the African continent comprising various countries according to different definitions. As defined by the United Nations, Middle Africa includes Angola, Burundi, Cameroon, Central African Republic, Chad, Democratic Republic of the Congo, Republic of Congo, Equatorial Guinea, Gabon, Rwanda, and São Tomé and Príncipe. Eleven countries are members of the Economic Community of Central African States (ECCAS), while six are also part of the Economic and Monetary Community of Central Africa (CEMAC), sharing the Central African CFA franc. These regional organizations play a crucial role in coordinating and implementing energy policies and initiatives, thereby significantly impacting the energy landscape of Central Africa.

[3] ERI stands for Electricity Regulatory Index. It is a composite index that measures the level of development of electricity sector regulatory frameworks in African countries and the capacity of regulatory authorities to effectively carry out their relevant functions and duties. ERI is the flagship index developed by the African Development Bank since 2018.

[4] Equatorial Guinea was not part of the ERI survey sample as the country has not yet established an independent regulatory authority to date.

through a mix of governance approaches, mostly through national energy governance. However, this brief is not about the ineffectiveness or poor governance of countries in the region, but the challenges these national governance entities face in sourcing for funding and attracting investments, poor energy infrastructure, lack of expertise, resource sharing and complementarity. These challenges faced by the national governance regimes have been linked, among other things, to the widespread energy deficiency across the region. Solving most of the complex energy challenges and issues, including access to electricity for all without increasing our carbon footprints, solutions that go beyond what national governments can do should be explored. Thus, instead of the current status quo, we contend that a regionalized approach to energy governance presents a more effective and promising step in resolving some of the region's complex and debilitating energy policy issues. To buttress the point we make above, it is important to unpack some key elements of effective energy sector governance at the national level. Table 1 identifies some elements of good power sector governance and how energy governance in many countries in the region fail to meet these standards, leading to energy poverty.

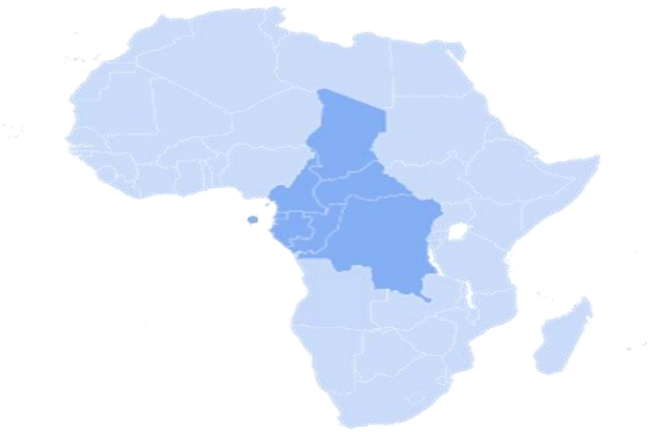
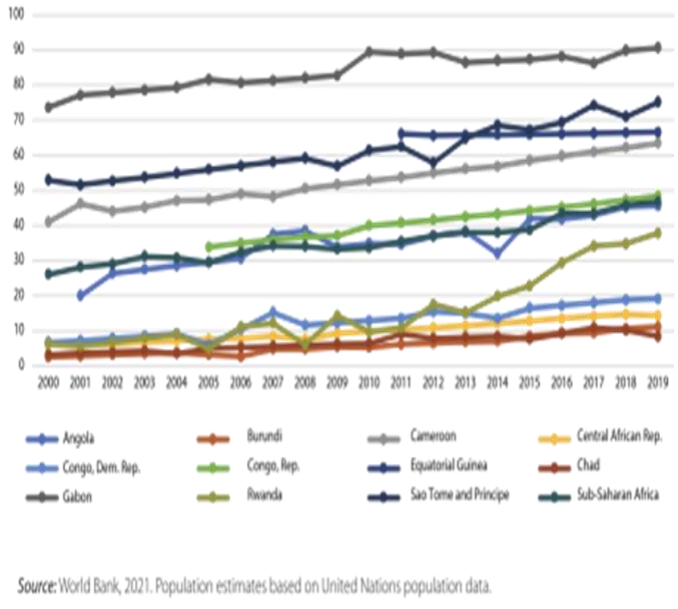


Figure 1: Map of Africa Showing the Central African Region



Source: World Bank, 2021. Population estimates based on United Nations population data.

Figure 2: Evolution of electricity access in Central Africa (Percentage)

Table 1: Energy Access in Central Africa

Countries Energy Access Indicators (2021)					
Countries	**Access to electricity-National (%)**	**Rural (%)**	**Urban (%)**	**Population of people with access to electricity (millions of people)**	**Access to clean cooking-National (%)**
Angola	48.2238541	21.3226929	61.2000008	16.3452301	50
Burundi	10.2338276	1.62983668	62.8334274	1.25932002	0.2
Cameroon	65.4467087	24.8150673	94.6907959	17.4178371	22.8
Central African Republic	15.6802769	1.56525028	34.6614456	0.787597	0.9
Chad	11.2685585	1.301935434	43.21174622	1.88925004	8.0
Congo DRC	20.76818657	0.999868453	43.75589371	19.17651939	4.3
Congo	49.65720367	12.39394188	66.96563721	2.897044897	35.6
Equatorial Guinea	66.7869949	1.35474634	90.3046494	0.96998078	24.1
Gabon	91.80640411	26.79707718	98.69192505	2.014680386	89.7
Rwanda	48.70043564	38.19631577	97.98828888	6.515616894	5.4
Sao Tome and Principe	78.45111084	73.71914673	80.02230072	0.174724743	3.7

Regional energy governance is characterized by collaboration and coordination among member countries. Energy resources are pooled and shared, and joint institutions (soft and hard) are established to resolve collective energy and climate problems. This approach offers several advantages over purely national or global approaches. It unlocks the region's vast energy potential and ensures sustainable energy security, defined by availability, affordability, reliability, and sustainability.

While global energy financing based on the top twenty recipients of Energy finance data for the 2012-2021 period in Africa indicates that the Central African Region has not been a top priority (Figure 3), a gradual shift could be underway, driven by its vast renewable potential (including hydroelectric, wind, and solar) and its critical role in the energy transition. Central Africa houses the second-largest rainforest (crucial for carbon sequestration) and produces over 60% of the world's cobalt and lithium (essential for electric vehicles). This growing importance has increased activity to promote deploying new energy technologies to close the energy access gap.

Table 2: Ideal Energy Governance — And the Reality in Many Central African Countries[5]

Aspect of Energy Governance	The Ideal Is …	Too Often, the Reality Is …
Legal mandate	The executive should disengage from commercial public utility service regulation and establish an independent regulatory authority to control and monitor the sector.	The appropriate legal mandate is given to the regulatory authority thus empowered to carry out its mandate.
Clarity of roles and objectives	The missions and roles of the different actors such as the State, the regulatory authority, the electricity utilities, and other operators in the sector, must be clearly defined in the law so that there is no ambiguity and overlapping of roles.	The roles and responsibilities of the key stakeholders are appropriately spelled out in the regulatory framework for most of the countries.
Independence	A regulator should exert its missions and powers independently at arms-length from the executive power: the regulator should have an adequate independence (i) from the government and stakeholders, (ii) in decision -making (ii) in its finance.	Most of the regulatory systems do not foster an appropriate independence of the regulatory authority. Almost all the countries are subject to little independence and regulatory capture.
Accountability	To avoid any misunderstandings or conflicts, the electricity sector law should hold the regulator accountable for its activities, and its report should be presented to Parliament for scrutiny.	The regulatory framework does not provide for the regulator being held accountable for the decisions taken and activities carried out, as a consequence of little independence and other factors.
Transparency of decisions	The publication of regulatory documents and decisions must be mandatory/compulsory under law, to enable them to be accessible to the public.	Trends in this area are balanced: half of the countries are making visible efforts to transparently regulate their energy systems whereas in others, significant efforts need to be made in terms of major decisions related to procurement, planning, etc.
Predictability	The regulator is responsible for tariffs in the electricity sector. A well-documented comprehensive tariff methodology which sets the framework for calculating, adjusting, and publishing tariffs, based on formulas set out in the tariff methodologies or contracts of the electricity utilities is a basic	Not only does the regulatory framework not always play a decisive role in the tariff process, but the tariff methodology and related mechanisms are not always well documented. Tariffs are not systematically revised as per the tariff calendar. This is mainly explained by the vertically

[5] Source: 2022 Electricity Regulatory Index (ERI), African Development Bank

	requirement. A concession operator, utility or consumers should be informed of the planned tariffs to be expected in a well-determined horizon.	integrated partial unbundling model with historic concession holders in most of the region's energy systems.
Participation	Before making major decisions that may impact the sector, the regulator must consult all relevant stakeholders to gather their different opinions. This avoids misunderstandings and a one-sided vision in the sector.	The regulatory frameworks do not allow countries to systematically consult and include the most relevant stakeholders in the energy system's decision-making process, and the level of development is low.
Access to information	The regulator authority has the obligation to facilitate access to information for stakeholders, by setting up information dissemination channels, namely: the website, the regulatory journal, press releases for dissemination in the media, etc.	It is often challenging to find reliable and up-to-date key information about energy systems (technical and regulatory). Even when a website exists, it is not regularly updated in most countries.

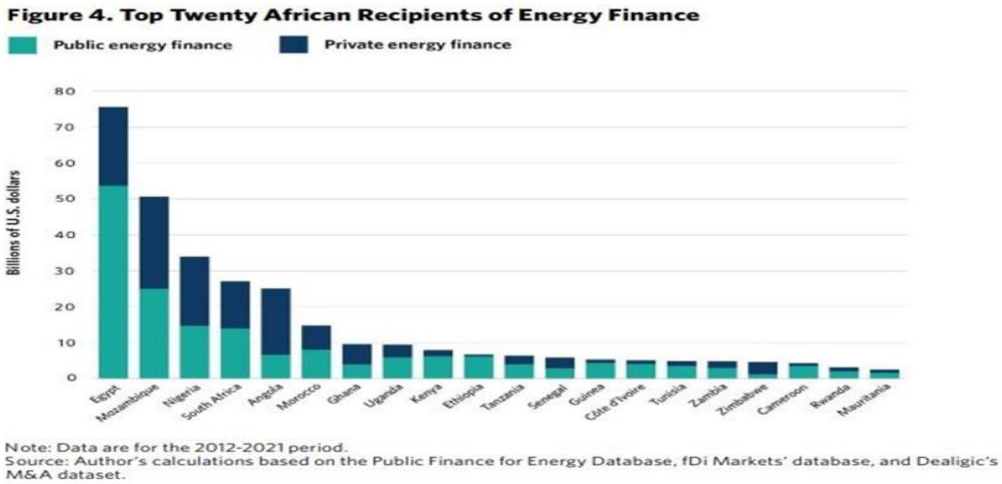


Figure 3: Top Twenty African Recipients of Energy Finance

Although national and global institutions remain vital, this policy brief emphasizes the growing importance of regional governance regimes in tackling Central Africa's energy challenges. The region's overlapping and interconnected energy challenges necessitate a nuanced and contextualized regional approach, which offers a unique and promising policy governance framework. This collaborative framework can strengthen the energy governance architecture and unlock latent opportunities across member states.

The Economic Community of Central African States (ECCAS), in collaboration with stakeholders like the AU, World Bank Group, EU, AfDB, CEMAC, and others, has been at the center of promoting regional economic integration and energy regionalism in Central Africa. In the Central Africa region, perhaps the most important developments have taken place in the context of ECCAS through the Central African Power Pool (CAPP), Centre for Renewable Energy and Energy Efficiency for Central Africa (CEREEAC) and the

earmarked ECCAS Regional Electricity Regulatory Authority Africa (CORREAC). Additionally, the Douala Consensus[6] reaffirms industrialization and structural transformation as the bedrock for realizing the goal of economic diversification to unlock the full potential of the African Continental Free Trade Area (AfCFTA) and ensure sustainable growth in Central Africa. As a result, Central African countries have seen the need to review their growth strategies to ensure that they realize the aspirations set out in the African Union's Agenda 2063: The Africa We Want and attain the Sustainable Development Goals of the 2030 Agenda for Sustainable Development of which achieving SDG 7 forms the basis of this brief through regional energy governance.

The Limits and Consequences of National Energy Governance in Central Africa

Conventionally, national governments have held significant control over energy governance in Central Africa, viewing it as a pillar of national security and a tool for political influence. Each country has developed energy policies shaped by individual resource endowments and institutional structures to ensure national energy security.

While calls for deregulation, liberalization, and private sector involvement are growing, national governments still retain significant control over the energy sector. National policies and regulations heavily influence investment flows and ultimately shape regional institutions' decisions, reflecting member states' priorities and interests.[7] National frameworks undeniably serve as the foundation of regional energy governance, necessitating collaboration between national and regional levels. To exemplify this, based on the Electricity Regulatory Index for Africa (ERI) 2022 report by the AfDB's energy portal, the seven countries that constitute the Central African region show variability in policy, regulatory, legal, and institutional performance (Figures 4 and 5). Two countries (Burundi and Gabon) display low regulatory governance (Figure 5), and the best-performing country (Cameroon) only displays substantial regulatory governance. On the other hand, only one country (Rwanda) reflects a high level of regulatory governance. With no known established independent regulatory authority, performance data for Equatorial Guinea[8] were not featured in the report. These poor national performances are translated at the regional level into the weaknesses of regional instances such as the CAPP and the long-awaited CORREAC, which had yet to be formally established at the time of this brief's publication.

[6] Intergovernmental Committee of Experts (ICE) for Central Africa, 'Douala Consensus: Thirty Third Session of the Intergovernmental Committee of Experts for Central Africa Under the Theme: "Made in Central Africa: From a Vicious Circle to a Virtuous Circle"', 2017; UNECA, 'Economic Diversification a Must, as Central Africa Faces Double-Jeopardy with Coronavirus', *Africa Renewal*, 2020 <https://www.un.org/africarenewal/news/coronavirus/economic-diversification-must-central-africa-faces-double-jeopardy-coronavirus> [accessed 18 March 2024].

[7] Jack N. Barkenbus, 'Federal Energy Policy Paradigms and State Energy Roles', *Public Administration Review*, 42.5 (1982), 410–18 <https://doi.org/10.2307/975643>; R. Leal-Arcas and A. Filis, 'The Fragmented Governance of the Global Energy Economy: A Legal-Institutional Analysis', *The Journal of World Energy Law & Business*, 6.4 (2013), 348–405 <https://doi.org/10.1093/jwelb/jwt011>.

[8] African Development Bank Group, *Electricity Regulatory Index for Africa (ERI) 2022* (African Development Bank Group, 6 February 2023), pp. 1–87 <https://africa-energy-portal.org/sites/default/files/2023-02/ERI%202022_AFDB%20EN.pdf>.

Figure 4: 2022 ERI scores for ECCAS countries

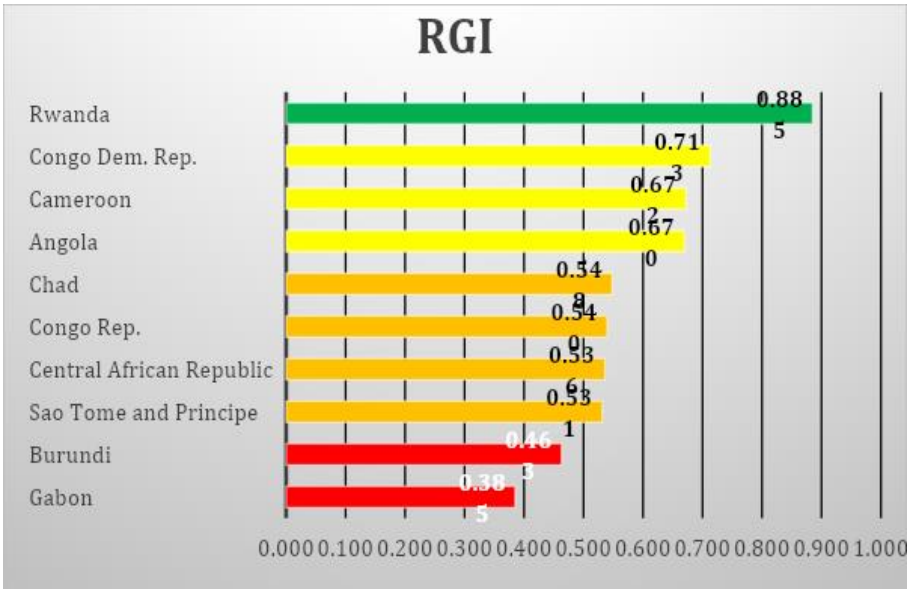


Figure 5: 2022 RGI Scores for ECCAS countries

Because of their inherent energy poverty, countries in the region tend to, understandably, focus primarily on developing their respective national energy systems. Consequently, access to electricity across the region is among the lowest.

This national-centric approach thus reveals the limitations in addressing the region's pressing energy challenges. National energy policies prioritize national interests, hindering regional collaboration and resource sharing. Varying national regulations in the context of regional policies create incoherence, uncertainty, and complexity for investors, hindering regional energy integration. Individual countries often lack the financial and technical resources to effectively develop and manage large-scale energy projects. Hence, a regional approach to energy procurement and development could foster collaboration, expand

market share, and strengthen member states' bargaining power, ultimately positioning the region for greater success.[9]

Despite these limitations, national energy policies remain crucial for regional governance. However, the current structure struggles to address the region's widespread lack of energy access. Regional problems often require regional solutions. Moving forward, a more coordinated regional approach is necessary to overcome the limitations of individual nation-states and achieve sustainable energy security for all in Central Africa.

Opportunities and Benefits of Regional Energy Governance in Central Africa

Regional institutions in Central Africa would serve as crucial bridges between national and global governance. They facilitate collaboration and coordination among member states, allowing them to tackle challenges that transcend individual capabilities. Regional governance allows strategically leveraging regional economic agreements and natural resources to unlock Central Africa's abundant energy potential. This collaborative approach fosters regional development and promotes sustainable energy security for the entire region. Successful examples like the European Union (EU) and the Economic Community of West African States (ECOWAS) demonstrate the potential of regional energy cooperation in achieving strategic vision, integration, long-term planning, and attracting investments for regional energy trade.[10]

Regional collaboration could facilitate joint infrastructure development, including expanding generation sources and power grid interconnections and potentially building regional hydrocarbon pipelines to address this growing energy demand. Regional energy governance should promote equitable access to energy for all member states, including rural and underserved communities. Additionally, it has a huge capability to prioritize environmentally sustainable solutions that contribute to climate change mitigation and adaptation efforts at the regional level.[11] CAPP's interconnection projects, which include the power transmission interconnection between the Democratic Republic of the Congo and Angola and between Cameroon and Chad, demonstrate ongoing efforts in this area.

Like the Congo River basin, Central African countries share unique geographical features that necessitate the development of viable transboundary cooperation. A unified regional energy sector through regional governance fosters collective management of these shared resources and challenges, leading to greater effectiveness. This unified voice would strengthen Central Africa's position in international energy negotiations, potentially securing good deals and fostering regional economic development through collective bargaining power.

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[9] 'CAPS, New Gas Megaproject, Aims to Power Central Africa, but at What Cost, Critics Ask', *Mongabay Environmental News*, 2023 <https://news.mongabay.com/2023/04/caps-new-gas-megaproject-aims-to-power-central-africa-but-at-what-cost-critics-ask/> [accessed 20 March 2024].

[10] Michael Awuah, *Energy Regionalism in ECOWAS and the EU: A Comparative and Polycentric Governance Study*, 2021 <https://doi.org/10.5771/9783748922940>.

[11] Victoria R. Nalule, *Energy Poverty and Access Challenges in Sub-Saharan Africa: The Role of Regionalism* (Springer, 2018); Kathleen J. Hancock, 'Introduction to the Special Issue on Energy Regionalism', *Review of Policy Research*, 41.2 (2024), 282–89 <https://doi.org/10.1111/ropr.12599>; Swedish International Development Cooperation Agency, *Regional Energy Cooperation in Africa and Possible Entry Points for the New Regional Results Strategy* (Swedish International Development Cooperation Agency, November 2014) <https://sadc-energy.sardc.net/attachments/article/223/FINAL%20REGIONAL%20REPORT%20142611%20reduced%20size.pdf>.

Central Africa already has key institutions like the Central African Power Pool (CAPP) and the Centre for Renewable Energy and Energy Efficiency (CEREEAC) actively promoting regional energy governance. CAPP focuses on developing a regional electricity market, while CEREEAC supports the region's clean energy transition by providing technical assistance and promoting renewable energy resources. These existing structures can be a bedrock for a more integrated regional energy governance approach. Additionally, the ongoing construction projects of regional transmission lines and other region-wide energy-related projects emphasize the importance of a harmonized regional energy governance framework. With additional financial and technical support, these regional bodies offer significant advantages. Their smaller size and shared interests enable faster and more streamlined decision-making than national or global initiatives. This facilitates the acceleration of energy access and the advancement of regional energy governance.[12]

Risks and Challenges of Regional Energy Governance

Central Africa faces a critical dilemma: its rapidly growing population (Table 2) and national economies demand increasing energy resources, yet the region boasts the lowest energy access rates. This begs the question: Can the current national approach to energy governance adapt and expand while ensuring reliable and accessible energy for all?

While regional energy governance offers undeniable benefits, it presents significant challenges. A primary concern is the potential loss of national sovereignty over energy resources and decision-making. This could lead to dependence on regional authorities and raise concerns about equitable distribution of benefits among member states. Furthermore, unequal regional power dynamics could lead to unfair decision-making processes. Establishing trust and ensuring fair representation for all is crucial for fostering long-term cooperation. Additionally, cultural and economic disparities can hinder harmonizing regulations and infrastructure development. Finally, the fact that some countries in the region already belong to other regional economic and technical (energy) hubs can affect the governance dynamics in ECCAS.

Implementation complexities, bureaucracy, unforeseen challenges, and a lack of commitment from member states can lead to project underperformance or failure. Negotiations surrounding resource sharing, infrastructure costs, and economic benefits can be intricate and time-consuming. Building and maintaining effective regional governance structures requires significant investments in human resources, technical expertise, and robust institutions. Navigating diverse political and economic processes further complicates achieving consensus and smooth implementation of regional energy policies. Addressing these potential downsides is crucial for securing buy-in and fostering successful regional energy cooperation.

Implications of Regional Energy Governance

This section explores the potential implications of implementing regional energy governance in Central Africa, focusing on five key areas: polycentrism, politics, social and economic development, innovation, and bi-regional partnerships.

Polycentric Nature of Regional Energy

It is a multi-level governance structure with diverse actors that can better adapt to local contexts and needs, fostering innovative solutions. Instead of relying on a single central authority, which might create a

[12] Ouedraogo.

"chokehold" or bottleneck, regional governance fosters a polycentric approach based on subsidiarity. This means decision-making and implementation happen at various levels, including regional institutions, national governments, sub-national structures, local authorities, and civil society organizations.

This bottom-up, as opposed to the top-down approach, offers several advantages. For example, local communities and actors can contribute their unique perspectives and knowledge, leading to more context-specific and effective solutions. Regional institutions can tailor strategies to the region's specific social and economic realities, ensuring greater effectiveness. The risk of a single point of failure hindering progress is minimized by distributing decision-making and resource allocation across multiple levels. Therefore, if one level faces challenges, others can address the issue.

Furthermore, the polycentric approach promotes resilience by addressing socio-energy problems like rural electrification and energy poverty at multiple levels. If one level of government, industry, or civil society fails to address an issue, other levels can fill the vacuum to find solutions. For example, in instances where a national government struggles to extend electricity infrastructure to remote rural areas due to budget constraints or logistical difficulties, local governments, regional organizations, and non-governmental organizations (NGOs) can mobilize resources and expertise to keep such issues on the front burner or mobilize support to fill this gap. Entities within the regional governance framework could deploy small-scale renewable energy projects or micro-grids tailored to the specific needs of rural communities. Similarly, the private sector could collaborate with local cooperatives to bring innovative energy solutions to off-grid areas where the national grid is stretched thin. This multi-layered and collaborative approach ensures a more robust and adaptable system capable of addressing energy needs even when certain segments fall short. The polycentric approach builds a more resilient and inclusive energy sector by distributing responsibilities and fostering cooperation across various levels.

Political Implications of Regional Energy Governance

Regional energy governance requires strong political commitment from Central African leaders. This collaboration across borders to manage energy resources, such as joint electricity generation, demands significant political will, especially considering the region's historical reliance on individual states for energy governance.

For example, a delay in establishing a regional electricity regulatory market could demonstrate the challenges of achieving collective management of power trading and the regulation of tariffs, which could affect competitiveness in the electricity market. However, despite these challenges, deeper regional cooperation and integration offer an opportunity to strengthen regional collective action in the energy sector. This collaboration can lead to more effective solutions for addressing the energy challenges faced by individual countries in the region.

Social Implications of Regional Energy Governance

The success of any regional policy hinges on its consideration of the social well-being of the individuals and communities it impacts. In the context of regional energy governance, the potential social implications can be transformational, leading to significant improvements in the lives of Central Africans.

For example, reliable and affordable access to energy can dramatically improve living standards. It can increase local employment by creating jobs in conventional and renewable energy projects, grid expansion, and maintenance. It could also lead to improved health outcomes as access to electricity enables refrigeration for medicines and vaccines, powers healthcare facilities, and improves indoor air quality through clean cooking solutions. Lastly, it could also lead to expanded consumer choice: Reliable electricity

provides opportunities for individuals and businesses to utilize various appliances and technologies, enhancing quality of life and economic activity.

Second, a well-designed regional energy policy can support broader social transformation by empowering communities and bridging the urban-rural divide. For example, local ownership and participation in energy projects fosters a sense of agency and promotes sustainable development. Therefore, expanding access to electricity in rural areas can narrow the gap between urban and rural communities, creating a more equitable society.

Economic and Financing Implications of Regional Energy Governance

Regional energy governance can expedite the development of integrated regional energy markets, particularly for power and gas. This will be achieved by constructing large-scale infrastructure projects, such as pipelines, power grids, and hydropower dams across the region. The ongoing development of 15 Regional Interconnection Projects (RIPs) and 15 Cross-Border Electricity Projects (CBEPs) in Central Africa is a testament to the potential economic benefits.

The rapidly growing population of Central Africa will lead to a surging demand for energy from both industry and households. Regional cooperation can significantly transform regional and national economies by enabling abundant and affordable energy. This will lead to meaningful economic and industrial growth across the region.

Innovation and Technological Implications of Regional Energy Governance

Like other parts of the continent, Central Africa is witnessing a transformative shift in its energy landscape driven by advancements in renewable energy technologies. The increased affordability and availability of solar power, coupled with establishing the Central African Economic and Monetary Community (CEMAC) and the growing adoption of renewable energy policies, foster this growth.

This technological evolution in the roll-out of renewable energies presents a significant opportunity for local workforce development. The region can achieve several key benefits by investing in local communities' manufacturing, training, and upskilling in the various aspects of renewable energy, including production, operation, maintenance, and repair. For example, new energy-related jobs and services will stimulate economic growth and diversification. Second, local communities will gain ownership and contribute to the sustainability of the energy transition. Third, a skilled workforce will ensure the efficient operation and maintenance of renewable energy infrastructure.

However, realizing these benefits requires proactive measures from regional institutions, national governments, and local communities. These include equipping individuals with the necessary skills to participate in the renewable energy sector through well-designed training programs. Furthermore, this could foster partnerships with international organizations and private companies possessing expertise in renewable energy technologies to facilitate knowledge transfer and capacity building and support the local manufacturing and assembly of renewable energy components to create jobs and stimulate economic growth.

Implications for Bi-Regional Partnerships on Regional Energy Policy

Central Africa stands out as one of the least integrated regions on the continent. It faces widespread energy poverty and limited access to affordable and modern energy sources. This situation can be partially attributed to the absence of a harmonized and regionally regulated energy sector.

In stark contrast, other African regional institutions, such as ECOWAS, have demonstrated the benefits of regional collaboration in attracting geopolitical partnerships, investments, technologies, and technical expertise. Implementing a regional energy policy and governance framework in Central Africa presents a similar opportunity to attract significant investments in infrastructure development, renewable energy projects, and grid modernization and facilitate the transfer of knowledge and expertise from partners with advanced energy sectors. It could also unlock the region's vast energy potential through coordinated resource exploration and development and promote cross-border energy trade to ensure energy security and economic growth.

Mitigation Strategies for Effective Regional Energy Governance

Despite these potential drawbacks, regional energy governance remains a critical path forward for Central Africa. Addressing the region's energy challenges requires collective action and surpassing individual national limitations. Fostering open communication, establishing transparent decision-making mechanisms, and prioritizing capacity building within regional institutions can mitigate the risks of dominance and mistrust.

Additionally, acknowledging cultural diversities while seeking common ground through collaborative planning and inclusive participation can pave the way for successful regional energy cooperation. Ultimately, the collective benefits of an integrated energy market – enhanced energy security, economic growth, and opportunities for clean energy development – outweigh the potential drawbacks, making regional energy governance a compelling strategy for Central Africa's future.

Finding the right balance between traditional infrastructure expansion and exploring innovative solutions is crucial. While regional collaboration can facilitate large-scale infrastructure projects, it should also explore the potential of decentralized solutions like small-scale solar farms and battery storage systems for remote areas. This can ensure energy access in off-grid communities while complementing the central grid expansion.

Next Steps on the Policy Front

To harness regional energy governance to improve Central Africa’s energy access and security, the adoption of the following policy steps would be beneficial:

1. Strengthening Regional Cooperation and Coordination in the Energy and Climate Sector
    - Encourage deeper collaboration and pooling of resources between Central African countries and support from African institutions and international partners to accelerate the energy transition in the region.
    - Develop regional policies and initiatives to harmonize regulations, standards, and investment frameworks for large-scale energy infrastructure projects such as the regional power grid network.
    - Enhance and strengthen regional institutions like CAPP, CEREEAC, ECCAS, CEMAC; finalize the setting-up of the regional regulator CORREAC, and others to facilitate knowledge-sharing, technology transfer, and joint project development.

2. Mobilize Financing and Investment
    - Engage in public-private partnerships to attract investment in energy infrastructure.
    - Work with African and international financial institutions to de-risk investments and mobilize private capital for bankable energy projects.

- Implement initiatives to address financial constraints and build local capacity for energy development at the local, national, and regional levels.

3. Enhance Policy and Regulatory Frameworks
   - Design and enforce sound national and regional policies, such as feed-in tariffs, tax incentives, and renewable energy targets, to incentivize renewable energy deployments.
   - Implement the legal frameworks and minimum standards for developing conventional and renewable energy projects. The AfDB-ECCAS support project for developing the Institutional and Regulatory Framework for Electricity in Central Africa (PADCRE) will help expand access to reliable and affordable energy in the region.
   - Ensure policy coherence across different sectors (energy, trade, industry, etc.) to support the energy transition.

4. Develop Human Capital and Local Content
   - Invest in skill-building programs to train engineers, technicians, and scientists for the entire energy industry.
   - Promote the development of local manufacturing and service capabilities to support the energy value chain.
   - Ensure that the benefits of the energy transition are equitably distributed, and that vulnerable and remote populations are not left behind.

5. Leverage the Region's Renewable Energy Potential
   - Conduct comprehensive assessments of the region's renewable energy resources, such as wind, solar, hydropower, and geothermal.
   - Develop strategies to harness these resources for energy abundance, industrial development, economic diversification, and job creation.
   - Integrate renewable energy into the region's energy mix to improve energy access, enhance energy security, and reduce reliance on fossil fuels in the long term.

Implementing these policy actions, Central African countries can work together to harness the power of regional energy governance and unlock the full potential of available energy resources, abating energy poverty and driving sustainable development and economic growth in the region.

Conclusion

This policy brief takes a broader view, focusing on creating an enabling environment for innovation, reducing barriers to competition, and developing institutions to solve energy challenges and secure energy abundance. Effective regional energy governance matters for various reasons, impacting people, environmentalists, climate activists, the energy industry, and trading partners. As the region's population grows and living standards improve, the demand for modern, affordable, and reliable energy increases, as does the need for reliable energy supply for industrial development. Regional organizations like CAPP and CEREEAC are well-suited to advance this agenda of energy regionalism, which can be secured through financial and logistical resources, competent human capital, and political will.

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