

Transforming Energy Crises in the Gulf of Guinea: A Positive Innovative Disruption.

Mekobe Ajebe, Doctoral Student,
Weatherhead School of Management, CWRU
Mobile: 16145920317
mekobe.ajebe@case.edu

Overview.

Introduction:

The Gulf of Guinea is a sub-region located in the Central - West African Coast lines, adjacent to the Atlantic territorial waters.



Sources: Gulf of Guinea Commission, 2021.

It is a rich, vast and heavily under-exploited sub region. Sources reveals it holds about 35% of the world's total petroleum reserves and blessed with many minerals and other natural resources; as well as a very rich rain forest accounting for about 20% of the world's total rainforest and much of the oxygen-generating sources of the entire globe (Abubakar, 2016).

Despite the region's abundant energy resources, it still has the lowest electrification rates in the world with close to 90 million people lacking access to electricity (Avila et al., 2017).

Gulf of Guinea Commission (GGC): Member Countries.	Indicators		
	Electricity Generated (GWh) 2018.	Electricity Final Consumption (GWh) 2018.	National Population access to electricity (% of Population) 2018.
Cameroon	8907.1	6990.8	62.7
Nigeria	36277	30800	60
São Tomé and Príncipe	96.5	17.7	71.0
Angola	10899.1	5965.4	43.3
Democratic Republic of Congo	10582	8700	9
Gabon	3309.6	2249.2	93.0
Republic of Congo	1913.6	1609.9	68.5
Equatorial Guinea	472.4	572.0	67.0

Sources: IRENA Database, IRENA database, AFREC Database, Tracking SDG7/WBG, IEA database

With a strong reliance on fossil fuel power, aging and inefficient systems; it sets the nations in the Gulf back of meeting United Nations -Sustainable Development Goal 7 (UN-SDG 7), retarding industry progress and diminishes the economic growth by 2 to 4 percent every year (Hott, 2019).

Research Problem:

The geographical diversity of the states in the Gulf of Guinea is a basic challenge to finding a common regional agenda. There is a variety of different administrative, bureaucratic and linguistic traditions resulting in the co-existence of a Francophone, an Anglophone and Spanish systems with partly overlapping and/or competing mandates (Sako, 2006). The Gulf of Guinea Commission just like other overlapping sub regional blocs have many of the key functions of planning, budgeting, monitoring transparency and accountability which are

weakly developed and never mutually reinforcing. This causes national inflated policy agendas with limited mechanisms to encourage sub-regional implementation in these states.

National priorities in energy generation are part of the explanation for overlapping interest in the Gulf of Guinea.

Gulf of Guinea Commission (GGC): Member Countries.	Power Pool	Major Electricity Operator	Sub - Regional Bloc
Cameroon	CAPP	AES-SONEL	ECCAS
Nigeria	WAPP	PHCN	ECOWAS
São Tomé and Príncipe	CAPP	EMAE	ECCAS
Angola	CAPP and SAPP		ECCAS and SADC
Democratic Republic of Congo	CAPP, SAPP and EAPP	SNEL	COMESA, ECCAS, SADC
Gabon	CAPP	SEEG	ECCAS
Republic of Congo	CAPP	SNE	ECCAS
Equatorial Guinea	CAPP	SEGESA	ECCAS

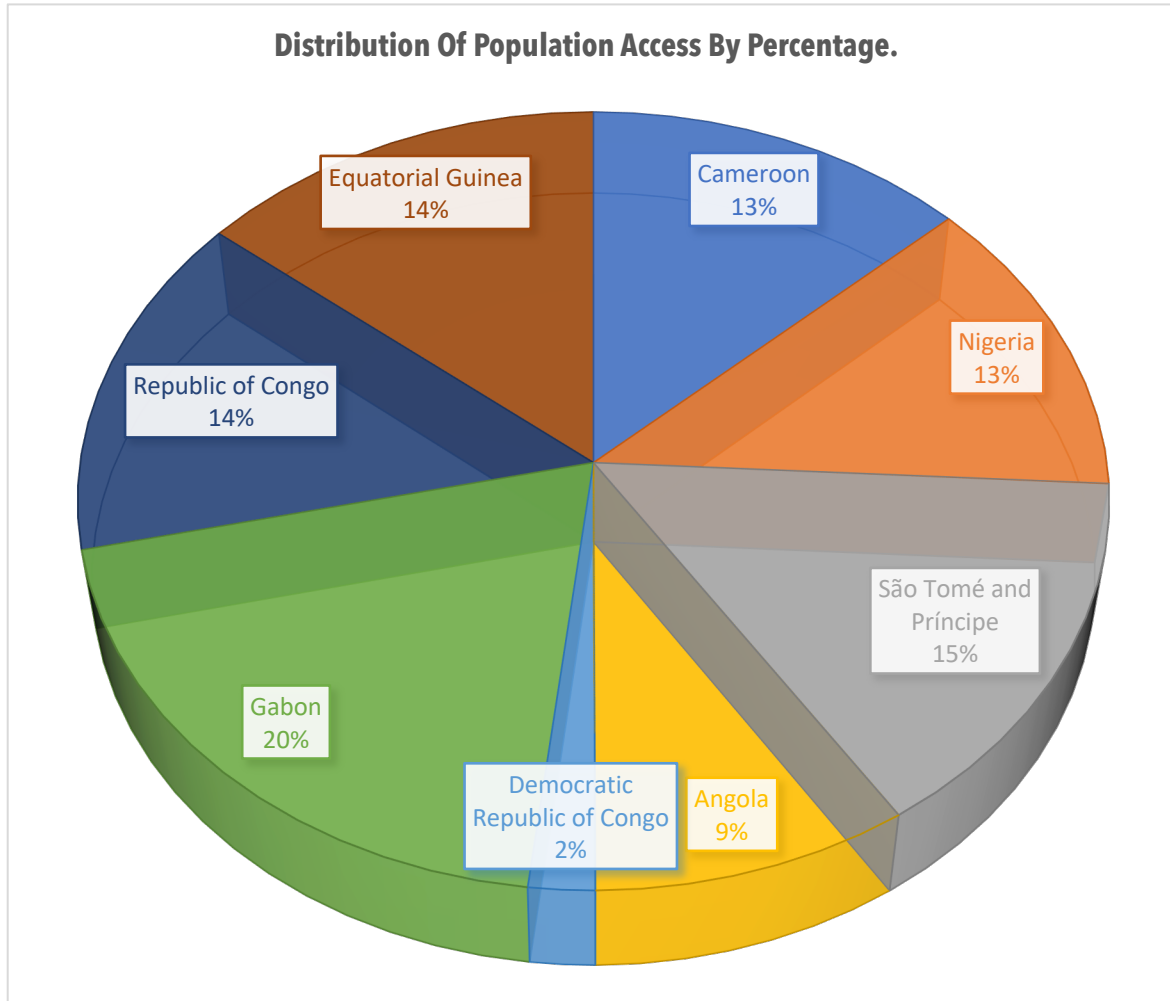
As far as regions are concerned, there are primarily five power pools in Africa acting as specialized agencies of their respective RECs (Regional Economic Communities) (RECs). Out of the five pools, eight of the Gulf states represents four power pools (i) the Central Africa Power Pool (CAPP) for the Economic Commission for Central Africa States (ECCAS), (ii) the Eastern Africa Power Pool (EAPP) for the Common Market for Eastern and Southern Africa States (COMESA), (iii) the Southern Africa Power Pool (SAPP) for Southern African Development Community (SADC), and (v) the West Africa Power Pool (WAPP) for Economic Community of West African States (ECOWAS). There is a high multiplicity of schemes and overlapping memberships and mandates in different regional blocs amongst the Gulf of Guinea countries. These has become so pervasive that there is no country in the Gulf of Guinea that does not belong to at least one grouping.

Research Question:

What role can the national governments within the Gulf of Guinea States play to form an ecosystem that is innovative?

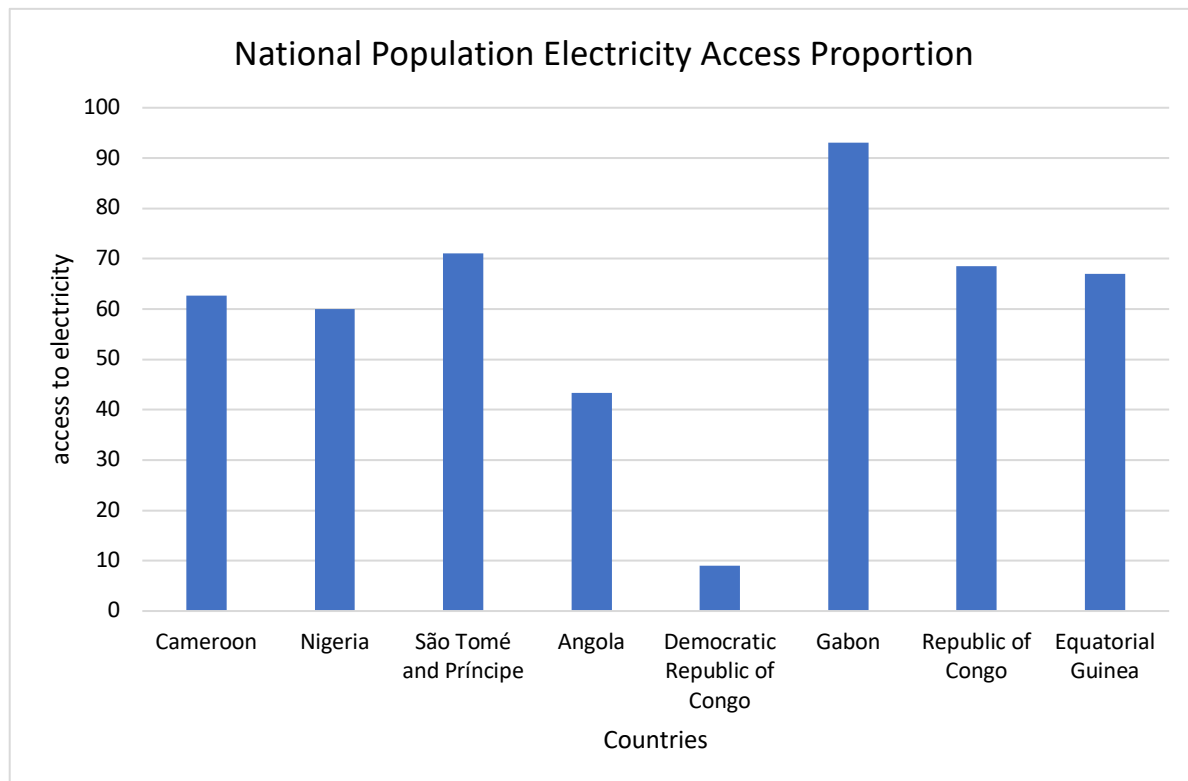
Method.

In this study, the choice of method was motivated by my desire to introduce the innovative ecosystem of Orchestra model with its co-competition aspect as a win-win for all stakeholders in the Gulf of Guinea. Using both qualitative and quantitative methods, this research will reveal the current status of energy generation, consumption and access in the Gulf of Guinea and also presents a huge reservoir for energy investors.



Sources: IRENA Database, IRENA database, AFREC Database, Tracking SDG7/WBG, IEA database

The quantitative data statically reveals the asymmetry on electricity accessibility in the different Gulf of Guinea countries. Data collection on countries' energy sector is done through literature review, research papers and countries' energy reports.



Sources: IRENA Database, IRENA database, AFREC Database, Tracking SDG7/WBG, IEA database

Design:

Qualitative method clearly shows a multiple case study design, using case study observation in 13 communities from 8 countries revealing locals' willingness to overcome electricity challenges and explore ways energy consumption and markets can be improved through collaboration and co-opetition, thus attracting a win-win for all stakeholders. This real-world observational process in communities that share the same characteristics, was conducted between 2010 - 2020 and my unparalleled access and network to these areas build-up some rapport over time.

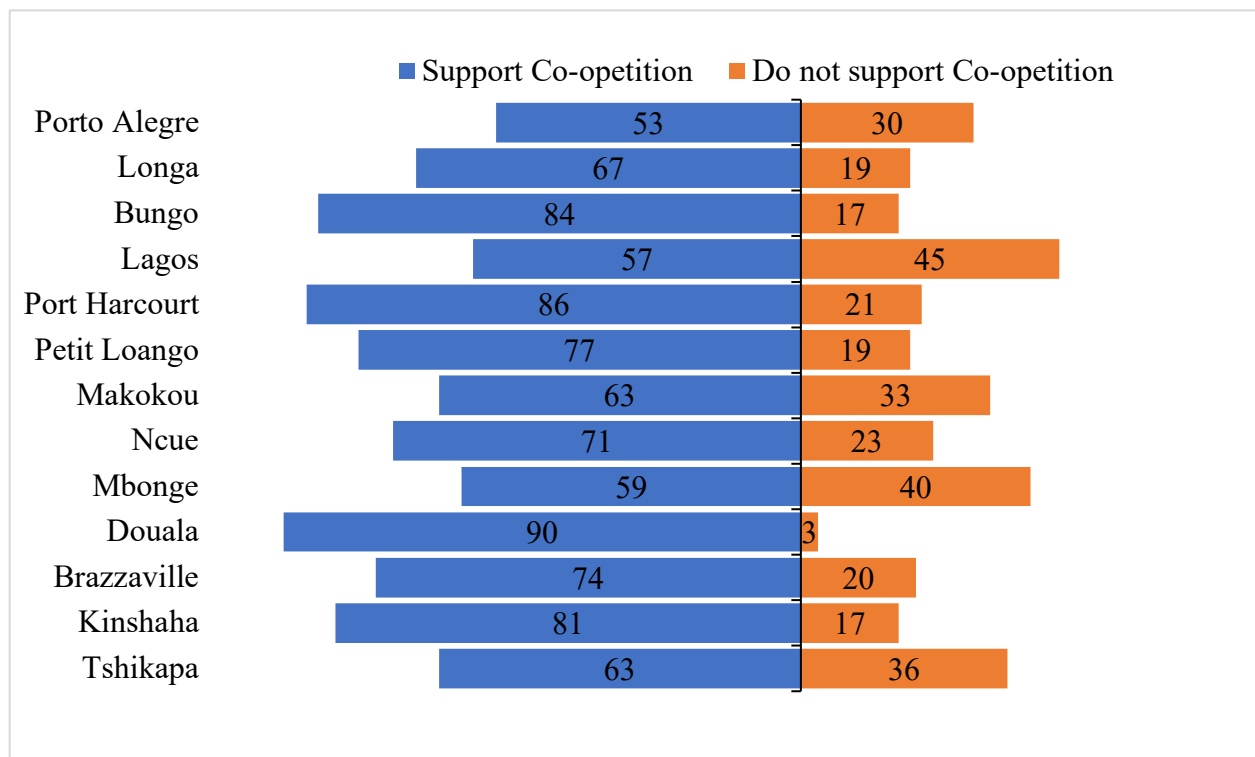
Countries and Communities	Support Co-opetition	Do not support Co-opetition
Democratic Republic of Congo		
- Tshikapa	63	36
- Kinshasa	81	17
Congo		
- Brazzaville	74	20
Cameroon		
- Douala	90	3
- Mbonge	59	40
Equatorial Guinea		
- Ncue	71	23
Gabon		
- Makokou	63	33
- Petit Loango	77	19
Nigeria		
- Port Harcourt	86	21
- Lagos	57	45
Angola		

- Bungo	84	17
- Longa	67	19
São Tomé and Príncipe		
- Porto Alegre	53	30
MEDIAN	71	21

Results.

In the communities surveyed, people generally agree that it is important to take co-opetition' into account when dealing with energy issues, even if it means making compromises.

A median of 71% as oppose to 21% agree that these communities/countries should take other countries' interests into account.



Therefore, these countries increasingly realize that collaboration is an important means by which to better compete globally. The competitive collaboration helps these nations to enhance their internal skills and technologies while guarding against transferring competitive advantages to ambitious players outside the sub-market (Hamel et al., 1989).

So, in essence, we need competition among energy companies in the Gulf of Guinea, but cooperation among the different governments.

Conclusion.

Process:

Orchestrated by the Gulf of Guinea Commission acting as the main body will provide a market opportunity grounded on a clear innovation architecture/platform that will attract a group of energy companies working together. In the ecosystem, the commission can be the dominating firm while the other firms, national and private which are invited into the ecosystem may either provide new services as a part of an integrated solution or operate on the main energy's primary product/technology by adding value as a complementary offering.

Benefits:

There is a coexistence of market commonality and resource asymmetry between Gulf of Guinea Countries. Market commonality contributes more to competition whereas resource asymmetry contributes more to cooperation. That is, there is a balance between harmony amongst the nations and rivalry amongst the energy companies. Das & Teng (2000), defines competition as the pursuit of one's own interests at the expense of others, and cooperation as the pursuit of mutual interests and common benefits.

Cooperative arrangements amongst Gulf of Guinea countries with competitors enable energy companies to internalize a partnering rival's skills. These skills are embodied in specific outputs of the cooperative relationship. Once internalized, however, they can be applied in different markets within these countries. Cooperation amongst nations may be not only a means for gaining access to each other's local companies' skills but also a mechanism for actually acquiring their skills (Hamel, 1991).

Competitive collaboration amongst these countries also reduces the costs, risks, and uncertainties associated with innovation or new product development during global expansion. In some cases, it is too costly for a single energy company to develop or penetrate new markets alone.

Coopetition will propel the need to solidify Gulf of Guinea energy players' collective power in dealing with outside stakeholders and in strengthening market position for members countries within a coopetition group.

This is especially true when these energy players dominate the global market. Competition without cooperation between Gulf of Guinea countries will dilute the pressure of anti-trust regulations and anti-monopoly demands.

Competition will promote product innovation, technological advancement and national adaptation, which are beneficial to nations (Porter, 1985). Cooperation, on the other hand, fortifies local companies' collective bargaining power with host country government authorities. Despite increasing interdependence between governments and private companies, some clashes of interest inevitably remain because the economic and social goals governments seek do not always complement private energy companies' interests. By uniting, energy players in the Gulf, it will achieve a stronger position to bargain for inputs (e.g., production factors, infrastructure access), processes (e.g., lobbying government decision-makers and thus influencing regulatory policies), and outcomes (e.g., industry access, market penetration, and financial returns). If successful, these bargaining returns will benefit all participating energy companies.

Competition is further strengthened by the need for strategic flexibility. Energy companies in the Gulf of Guinea that follow competition may possess increased strategic flexibility due to the wider variety of strategic options than those available through pure competition or cooperation in isolation. Given the diversity of energy resources and geographical territories for many companies, competition helps participating companies realize a multitude of competitive and collaborative options in various countries. In contrast, either competition or cooperation in isolation offers much more limited strategic options (Luo, 2007). Under pure competition, a global player seeks to become a dominant market power by imposing entry barriers against followers, lobbying host governments not to ratify investment projects to other players, wielding market power to curb competitive rivalry, or colluding with a few local or foreign incumbents by restraining outputs, raising prices, and controlling supplies (Luo, 2007).

Safeguards for Investors / Investments in Gulf of Guinea.

Partial Risk Guarantees

Partial risk guarantees that cover commercial lenders against default on a loan, normally for private sector projects, when such default is the result of a government's failure to meet its obligations.

risks relating to government performance including:

i) contractual payment obligations; (ii) obstruction of an arbitration process; (iii) expropriation and nationalization; (iv) foreign currency availability and convertibility; (v) nonpayment of a termination amount or an arbitration award following a covered default; or (vi) failure to issue licenses, approvals, and consents in a timely manner.

All Gulf of Guinea countries are IBRD and IDA countries and PRGs can be provided in both IBRD and IDA States. The IBRD and its concessional lending arm, the International Development Association (IDA), are collectively known as the World Bank as they share the same leadership and staff.

The Bank provides enclave guarantees which are structured for export oriented foreign exchange generating commercial projects in IDA-only countries.

The Bank supports the establishment of several Guarantee Facilities in member countries that involve wholesaling partial risk guarantees in order to reach smaller projects.

Types of Guarantee Coverage Offered:

The bank provides transfer restriction coverage that protects against losses arising from an investor's inability to convert local currency (capital, interest, principal, profits, royalties, or other monetary benefits) into foreign exchange for transfer outside the host country. The coverage also insures against excessive delays in acquiring foreign exchange caused by the host government's actions or failure to act. Currency devaluation is not covered.

Expropriation coverage offers protection against loss of the insured investment as a result of acts by the host government that may reduce or eliminate ownership of control over, or rights to the insured investment. This policy also covers partial losses, as well as "creeping expropriation," a series of acts that over time have an expropriator effect. Bona fide, non-discriminatory measures taken by the host government in the exercise of its legitimate regulatory authority are not considered expropriatory.

War and civil disturbance coverage protect against loss due to the destruction, disappearance, or physical damage to tangible assets caused by politically motivated acts of war or civil disturbance, including revolution, insurrection, and coups d'état.

Terrorism and sabotage are also covered. War and civil disturbance coverage also extend to events that result in the total inability of the project enterprise to conduct operations essential to its overall financial viability.

Breach of contract coverage protects against losses arising from the host government's breach or repudiation of a contractual agreement with the investor. In the event of such an alleged breach or repudiation, the investor would first need to invoke the dispute resolution mechanism (e.g., arbitration) set out in the underlying contract and obtain an award for damages. The investor may file for a claim if, after a specified period of time, payment is not received.

IBRD Disaster Risk Financing

The International Bank for Reconstruction and Development (IBRD) offers member countries three types of disaster risk financing products that provide varying levels of protection, depending on the type, frequency and severity of the event. They are:

- (i) weather hedges which are financial contracts designed to provide compensation for financial losses to an entity affected by weather volatility.
- (ii) contingent financing which provides countries that have a disaster risk management framework in place, immediate access to financing following a natural disaster and the declaration of a state of emergency; and
- (iii) catastrophe bonds which transfer the risk of a natural disaster to investors by allowing the issuer to not repay the bond principal if a major natural disaster occurs.

The fund's management is supervised by the TCX Supervisory Board, which is responsible for oversight and governance of the Fund's policies and strategy.

There is also the Global Index Insurance Facility (GIIF) which is a dedicated World Bank Group's program that facilitates access to finance for smallholder farmers, micro-entrepreneurs, and microfinance institutions through the provisions of catastrophic risk transfer solutions and index-based insurance in developing countries such as those in the Gulf of Guinea.

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