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Energy Poverty: A Comparative Analysis of the EU and ECOWAS Post-Pandemic Response to the Energy Price Hike. The Case Study of France and Nigeria

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ABSTRACT

The Covid 19 crises and energy crises following Russia's invasion of Ukraine has caused a huge surge in energy price crises. These crises have also impacted the cost of electricity tariffs for consumers in the EU and ECOWAS region. While Covid and Russia's invasion of Ukraine significantly impacted EU countries, this was not the same for ECOWAS countries which was impacted majorly by the Covid crises. This thesis explores the impact of these crises in the different regions and its impact on energy poverty for vulnerable consumers in the regions. The aim of this thesis is to analyse whether energy poverty is a justification for government intervention in a liberal market. A positive answer to this would mean that an unfettered free functioning of the market does not always lead to optimal outcomes for society, the issues of multidimensional energy poverty being a primary example. A negative answer on the other hand would mean that even when the markets fail, the State is required to respect market rules and not intervene. The result of non-State intervention is that vulnerable consumers are left to bear the brunt of such market failures from electricity price volatilities and insecurity of supply.

Keywords*: Energy poverty, energy access, affordability, social contract, energy justice, multi-level governance, social justice, energy equity.*

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This thesis is dedicated to my husband and daughter, Bernard Damisa and Onize Damisa who have been my inspiration and source of strength throughout this journey.

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To the energy class of 2024-2025, our joules is all we need to power the transition of the future.

Table of Contents

List of Acronyms

AFDB	African Development Bank
EA	Electricity Act
ECOWAS	Economic Community of West African States
ECREEE	The ECOWAS Centre for Renewable Energy and Energy Efficiency
EDF	Électricité de France
ERERA	ECOWAS Regional Electricity Regulatory Authority
EREP	ECOWAS Renewable Energy Policy
EU	European Union
EU SILC	EU Statistics on Income and Living Conditions
Disco	Distribution Company
GDP	Gross Domestic Product
IEA	International Energy Agency
IMF	International Monetary Fund
MWh	Megawatt-hour
MYTO	Multi-Year Tariff Order
NERC	Nigerian Electricity Regulatory Commission
NESI	Nigeria Electricity Supply Industry
NREP	National Renewable Energy Policy
NREEEP	Nigeria National Renewable Energy and Energy Efficiency Policy
PPP	Purchasing Power Parity
SBT	Service Based Tariff
SGEI	Services of General Economic Interest
TCEJ	Triumvirate Conception of Energy Justice
TFEU	Treaty on the Functioning of the European Union
TWh	Terawatt-hour
WAPP	West African Power Pool

List of Tables

List of Figures

INTRODUCTION

"Only when the most vulnerable people are permanently lifted out of their desperate circumstances can we honestly say that we live in a society of which we can be proud." – Katalin Csiba[1]

The Covid-19 pandemic and energy price crises following Russia's invasion of Ukraine have underscored the challenges related to energy access and affordability in both the EU[2] and ECOWAS regions.[3] These crises have also impacted the cost of electricity tariffs for consumers in the EU and ECOWAS. While Covid and Russia's invasion of Ukraine significantly impacted EU countries, this was not the same for ECOWAS countries which were impacted majorly by the Covid crises. Access to essential energy services—such as heating, cooling, lighting, clean cooking, and electricity for communication and appliances—is increasingly recognized as critical for human development.[4] Reliable, affordable, and high-quality energy access significantly impacts living standards, health, well-being, and social inclusion.[5] The Covid-19 pandemic, with extensive lockdowns and quarantine periods in the EU, increased energy needs inside households, while many were faced with unemployment or lower incomes, placing a double burden on household budgets. The end of 2021 added a third layer in the form of sharp increases in prices for fuels used for heating and electricity production.[6] In Africa the COVID-19 situation and its impacts varied across countries; hence, interventions were not the same for all of them. These impacts range from declining exports of energy resources to disruptions in the construction of new energy projects. On the demand side, confinement measures have resulted in an increase in residential electricity demand. According to the IEA, the imposition of lockdowns has resulted in a cut in disposable incomes. This situation has raised questions as to whether households will be able to pay for their electricity bills.[7]

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[1] Katalin Csiba, 2016, "Energy Poverty Handbook", p. 17 https://www.socialeurope.eu/wp-content/uploads/2017/01/energypovertyhandbook-online.pdf

[2] Alain Beltran, 2018, "Introduction: Energy in history, the history of energy", in Journal of Energy History/Revue d'Histoire de l'Énergie [Online], n°1, published 04 December 2018, URL: https://energyhistory.eu/en/node/84

[3] Muyiwa Adigun, 2024, "Legal remedies for energy injustices in the ECOWAS sub-region: the role of the ECOWAS Court", *Journal of Energy & Natural Resources Law*, 42:3, 363-380. https://doi.org/10.1080/02646811.2024.2345010

[4] Marlies Hesselman, 2020, "Energy Poverty and Household Access to Energy Services in International, Regional and National Law", in Martha Roggenkamp et al, Encyclopaedia of Energy law and the Environment (Cheltenham: Edward Elgar 2020, forthcoming), vis SSRN.com

[5] George Jiglau et al., 2023, "Energy and the social contract: From "energy consumers" to "people with a right to energy" in Sustainable Development, 1-16, https://doi.org/10.1002/sd.2727

[6] Jiglau et al., 2023

[7] IEA, 2020, "Africa and Covid-19: Economic recovery and electricity access go hand in hand", https://www.iea.org/commentaries/africa-and-covid-19-economic-recovery-and-electricity-access-go-hand-in-hand

One of the most fundamental problems facing modern law is how to attempt to reconcile the values of markets, rights, and social solidarity and how to deal with the tensions between them.[8] A fundamental issue is that these values are inadequately defined, it being recognized that the idea of public service value is "inherently vague and highly politicised". This dilemma can be seen in the framing of the SGEI by the EU under Article 106 of the TFEU and the strict requirement to prove market failure prior to the State intervening and the wording of the Article 4.1. of the EREP which requires intervention only when they can bring added value to national actions which I discuss in more detail in Chapter 2.

A key characteristic of a liberal market is the requirement for governments to not intervene when prices go up.[9] However, a lack of government intervention means the markets determine the price of electricity tariffs which must reflect costs to ensure the financial sustainability of utilities and reliable electricity services, which often remain unaffordable for low-income households. If poorer households pay less than the cost-reflective tariff, they require subsidies either from other electricity consumers (who would then face higher prices) or through external financial support, such as government grants.[10] Cost-reflective tariffs are increasingly advocated due to rising electricity generation costs and the pressing need to expand and maintain energy infrastructure. Insufficient funding jeopardizes supply reliability and network integrity, disproportionately affecting low-income households. While higher tariffs support critical investments, they also risk exacerbating energy poverty without carefully targeted subsidies. Failure to mobilize adequate revenues through tariffs or taxation undermines broader development goals, including poverty eradication. [11]

Research Question

In the post-pandemic era, does energy poverty justify government intervention in electricity tariffs in a liberal market?

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[8] Tony Prosser, 2006, "The Limits of Competition Law: Markets and Public Services", The Cambridge Law Journal, Vol. 65, No. 1

[9] Meeus, L., Conti, I., de Almeida, L., Glachant, J.-M., Hancher, L., Münchmeyer, M., Piebalgs, A., & Pototschnig, A., 2023, "Energy policy ideas for the next European Commission: From targets to investments" (Policy Brief Issue 2023/12). European University Institute. https://doi.org/10.2870/870204

[10] A study into approaches to minimise the impact of electricity price increases on the poor, 2010, https://www.thedtic.gov.za/wp-content/uploads/NEDLAC_final_report.pdf

[11] NEDLAC report 2010

Research Justification

The research question bothers on complex issues such as whether the market or the State should provide for public service value. Will the market provide electricity for those who are unable to pay? Can markets maximise economic growth whilst maintaining a commitment towards and concern for the well-being of fellow citizens?[12] This question has remained a topical issue of debate amongst economics who have warned against governments tampering with electricity tariffs. Ignacio Pérez-Arriaga in his White Paper on power sector reform, prepared for the Spanish Government in 2005 stated that *''Tariffs are computed, not decreed''*. The role of governments is to establish a sound regulatory framework, so the activities necessary to supply electricity are efficiently performed, but not to interfere in the process of computation of the resulting tariffs.[13]

The research question is addressed through a comparative case study analysis using the theoretical framework outlined in Chapter 1. The aim of the research is to determine if government intervention is required in a liberalised market, and if yes, to what extent and under what circumstances. My hypothesis is, if electricity tariffs are left entirely to market forces, affordability for low-income consumers becomes unattainable without State intervention. My argument is that the market, on its own, is insufficient. For a truly liberalized market to function equitably, the State must prioritize equity-based frameworks to ensure a just and equitable energy access for its citizens. With fragile energy infrastructure and a high level of energy poverty, governments must pay particular attention to the implications of the pandemic and energy price crisis for the energy sector, especially for advancing energy access and the clean energy transition. Government decisions in the energy sector significantly influence poverty reduction, but they may be influenced by political priorities. What interventions and for whom they are targeted could also raise issues of social justice, fairness, and inclusion in the energy sector.[14] How the supranational and national bodies responded to the issue of energy price crisis and the sufficiency or otherwise of the intervention will be discussed in Chapters 2 and 3.

[12] Prosser, 2006

[13] Reneses, J., Rodríguez, M.P., Pérez-Arriaga, I.J., 2013, "Electricity Tariffs". In: Pérez-Arriaga, I. (eds) Regulation of the Power Sector. Power Systems. Springer, London. https://doi.org/10.1007/978-1-4471-5034-3_8

[14] Mark McCarthy Akrofi and Sarpong Hammond Antwi, 2020, "COVID-19 energy sector responses in Africa: A review of preliminary government interventions", *Energy Research & Social Science*, Volume 68, 101681 https://doi.org/10.1016/j.erss.2020.101681

Case Study – Rationale for Choosing France and Nigeria

The rationale for choosing France and Nigeria is due to the economic position they occupy in their respective supranational bodies. France being a major force in the EU (at a time when addressing energy poverty has been identified as a key European Union (EU) policy priority)[15] makes it suitable in analysing how it was able to react to this growing challenge and what interventions it took to address this growing concern. This also applies to Nigeria who, although being the biggest player in the ECOWAS, with a GDP larger than the combined GDP of other Member States put together, still struggles with energy poverty (infrastructure, access and affordability).[16] Both France and Nigeria operate a liberalised electricity market. This study adopts a north-south comparative perspective to evaluate the extent to which supranational recommendations have been implemented at the national level, assessing the adequacy of legal responses to energy poverty and the protection of vulnerable populations in liberalized energy markets.

Theoretical Framework

To assess the effectiveness of the supranational bodies and national States' response to the energy crisis, I develop the SEM Paradoxes framework. The SEM stands for: Social Contract, Energy Justice and Multi-Level Governance (MLG). The paradoxes of the SEM are commodities vs. public good, State vs. markets and supranational vs. national. To reach the conclusion of why the supranational and national responded the way they did, the SEM helps in analysing the competing tensions of the paradoxes and in determining the justification or otherwise of government intervention in a liberal market.

Methodology

This study adopts a multi-method approach combining documentary analysis, secondary data review, and comparative statistical techniques. The documentary analysis involves examining academic and grey literature, policy documents, and survey instruments to contextualize the research. Secondary data is drawn from sources such as EU Statistics on Income and Living Conditions (EU-SILC), EU Commission Data, ECOWAS Regional Electricity Regulatory

[15]Thomson H, Snell C and Liddell C., 2016, "Fuel poverty in the European Union: a concept in need of definition?", People Place Policy; 10: 5–24.
[16] Tijjani C. B., Ozden K., 2021, "Cost Benefit Analysis of Nigeria's Continued Role in ECOWAS", Journal of Management, Economics, and Industrial Organization, 5(2), 10-23. http://doi.org/10.31039/jomeino.2021.5.2.2

Authority (ERERA) data, International Energy Agency (IEA), the WB/IMF, African Development Bank (AfDB), and national statistical data, offering insights into energy consumption and affordability.

Structure

This thesis examines the post-pandemic electricity price surge from 2019 to 2023 in both the EU and ECOWAS regions, focusing on case studies in France and Nigeria. The first part is the literature review on the SEM Paradoxes framework, which I use in analysing the responses of the supranational and national. Chapters 2 and 3 consist of a qualitative multi-case study approach of the supranational and national States' responses to the electricity price crises using the SEM Paradoxes. Given the distinct factors influencing electricity price increases in the EU and ECOWAS, this thesis not only draws comparisons but also highlights differences to provide a comprehensive analysis within their respective contexts. Chapter 4 concludes the analysis with a discussion of my findings and recommendations.

Limitation

The author realises that other factors (electricity tariff pricing models, supply chain disruptions, energy weaponization as in the case of Russia, inflation and economic recession) may call for government intervention in a liberal market setting. Due to the word limit constraint, this thesis will focus on the price hike in electricity tariffs in times of crisis and its implications for accessibility, affordability, energy justice issues of equity and inclusion in the energy sector. Further research on the above listed indicators will be needed in determining whether government intervention in a liberal market is justified or not.

CHAPTER 1 – THEORETICAL FRAMEWORK

To guide the literature review and inform the development of an appropriate theoretical framework, this chapter explores how electricity is conceptualized through three interrelated paradoxes: (i) commodity versus public good, (ii) state versus market, and (iii) supranational versus national governance. These paradoxes offer a lens through which to understand how electricity tariffs are set and how such structures influence the persistence of energy poverty. In response, this study engages with three complementary frameworks: the social contract, energy justice theory, and the multi-level governance framework.

1.1.The Social Contract – Commodity vs. Public Good

The classical theories of the social contract were developed in a specific context during the enlightenment by political, legal, and philosophical thinkers (Rousseau, Locke, Hobbes) to explain the emergence of the State and its mechanisms and concepts (sovereignty, general will, general interest, democracy).[17] The social contract is what individuals agree to form a society together. This contract is neither constitution nor law but is revealed through texts and the practice of texts. It justified the power relations between rulers and the ruled. It explains the renunciation of total individual freedom in favor of order, collective security, and, paradoxically, freedom. For Heffron, it is a 'just' agreement between stakeholders in the energy sector and society where citizens' rights and well-being are protected in today's modern economy at local, national and international levels.[18] The agreement is indispensable to society and the durability of governments and the State.[19] According to Jiglau et al., the social contract refers to an implicit agreement between individuals and governing institutions, where individuals consent to cede certain freedoms or comply with rules in exchange for protection of fundamental rights and provision of essential services by the state.[20]

Beltran distinguishes between energy as a scientific concept and energy as a social construct. In its scientific sense, energy is quantifiable and expressed in units such as joules or watts.

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[17] T. Hobbes, Leviathan or The Matter, Form and Power of a Commonwealth, Ecclesiastical and Civil, 1651; J. Locke, Two Treatises of Government, 1690; J.-J. Rousseau, Du contrat social, 1762 cited in Heffron, R. J., & De Fontenelle, L., 2023, "Implementing energy justice through a new social contract", Journal of Energy & Natural Resources Law, 41(2), 141–155. https://doi.org/10.1080/02646811.2023.2186626

[18] Heffron & De Fontenelle, 2023

[19] De Fontenelle, L., 2024, "Energy Justice and the Social Contract Theory". In: Heffron, R.J., de Fontenelle, L. (eds) The Power of Energy Justice & the Social Contract. Just Transitions. Palgrave Macmillan, Cham. https://doi.org/10.1007/978-3-031-46282-5_2

[20] Jiglau et al., 2023

However, in a more social and political setting, energy takes on a broader, more complex meaning, symbolizing necessity, abundance, and scarcity.[21] Scholars like Karl Marx links closely the source of energy to the social organization (in fact, for him, a type of exploitation): "By acquiring new productive forces, men change their mode of production, and by changing their mode of production, the way they earn their living, they change all their social relationships. The quern produces a society with a suzerain: the steam mill, a society with industrial capitalism."[22] According to Franjić, energy is not merely a physical commodity but a fundamental enabler of societal functions, deeply embedded in economic, social, and technological systems. According to Louis de Fontenelle, energy is a fundamental good for life in society. It underpins all human activities. Like water, medicine, and food, energy is vital. As a vital good, societies seek to rationalize and organize their production, transport, and access to promote their best allocation and avoid shortages.[23] Energy comes in various forms such as heat, light, motion, electrical, chemical or gravitational. Scientists define energy as the ability to do work. Modern civilization is possible because people have learned how to change energy from one form to another and then use it to do work.[24]

Understanding energy services as distinct from energy consumption is critical for improving policy design. Franjić distinguishes between "energy," "energy services," and "electricity." While "energy" refers to raw resources such as coal, oil, and gas, "energy services" encapsulate the benefits derived from energy use, including heating, lighting, transportation, and industrial processing. Electricity is presented as a secondary energy carrier, a medium through which primary energy is converted to deliver services to end-users.[25] Fell defines energy as a raw material or carrier (such as gas or electricity). Electricity is not considered an energy service by itself; rather, it is the carrier that must be transformed into useful work or functions while energy services are those functions performed using energy such as heating, lighting, or transportation that satisfies human needs or end services.[26] It is important to note that the

[21] Alain Beltran, 2018
[22] Marx Karl**,** *Misère de la philosophie. Réponse à la "Philosophie de la misère" de M. Proudhon* (Paris: A. Franck, 1847).
[23] De Fontenelle, L. (2024).
[24] Energy can be used for a variety of things, such as walking and bicycling, moving cars along roads and boats through water, cooking and refrigerating food, lighting our homes and offices, manufacturing products, and even sending astronauts into space https://www.eia.gov/energyexplained/what-is energy/#:~:text=Energy%20is%20the%20ability%20to,use%20it%20to%20do%20work accessed 16 April 2025
[25] Siniša Franjić, 2020, "Energy, Energetics and Energy Policy", Journal of Humanities, Arts and Social Science, 4(2), 187-193. http://dx.doi.org/10.26855/jhass.2020.07.012
[26] Michael James Fell, 2017, "Energy services: A conceptual review", Energy Research & Social Science,

transformation of electricity into useful work for consumers requires capital investments in energy infrastructure. These investments need to be recouped in order to maintain energy infrastructure and electricity supply. The cost of generating electricity has increased due to the need to expand generation capacity. The cost of distributing electricity needs to increase to provide adequately for maintenance and rehabilitation of the network. Failure to generate the revenues (tariffs and taxes) to meet the required efficient expenses to sustain the industry will have a devastating impact on the economy[27]and on the ability of the State to guarantee minimum energy services as required under the social contract. On the other hand, prioritising profitability means electricity prices will be left to market forces and may be unaffordable for low-income households leading to energy poverty.

Energy poverty can refer to two types of social inequalities, depending on the geographical context.[28] In the global north, the concept of energy poverty was first proposed by Lewis,[29] who emphasized that inadequate energy use can negatively affect quality of life, even in developed countries.[30] Boardman further quantified this concept, defining energy-poor households as those that spend more than 10% of their income on fuel or energy services.[31] Bouzarovski and Petrova define energy poverty as the inability of a household to attain a socially and materially necessitated level of domestic energy services."[32] Thomson et al.[33] employ an energy vulnerability framework to analyze energy poverty, drawing on the work of Bouzarovski and Petrova.[34] According to Thomson et al., energy poverty occurs when a household lacks adequate access to essential energy services, such as heating, cooling, lighting, and appliance use.[35] In the global south, energy poverty highlights critical issues related to the lack of access to essential energy forms, such as electricity and non-solid fuels, both in terms

Volume 27, https://doi.org/10.1016/j.erss.2017.02.010.

[27] NEDLAC report, 2010

[28] Thomson H, Bouzarovski S, Snell C., 2017, "Rethinking the measurement of energy poverty in Europe: A critical analysis of indicators and data". *Indoor and Built Environment*; 26(7):879-901. doi:10.1177/1420326X17699260

[29] Lewis P. 1982, "Fuel Poverty Can Be Stopped". National Right to Fuel Campaign; Bradford, UK: [Google Scholar]

[30] Dimaviya Eugène Compaore, Asmo Guira, Boukaré Maiga, 2024, "Assessing energy poverty and its determinants in the West African Economic and Monetary Union countries: a multidimensional analysis", Oxford Open Energy, Volume 3, https://doi.org/10.1093/ooenergy/oiae019

[31] Boardman B. 1991, "Fuel poverty is different", *Policy Stud* 1991; 12:30–41. https://doi.org/10.1080/01442879108423600

[32] Bouzarovski, S., & Petrova, S., 2015, "A global perspective on domestic energy deprivation: Overcoming the energy poverty-fuel binary", Energy Research and Social Science, 10, 31–40. https://doi.org/10.1016/j.erss.2015.06.007

[33] Thomson et al., 2017

[34] Bouzarovski and Petrova, 2015

[35] Thomson et al., 2017

of availability and affordability.[36] It encompasses several factors, including households' inability to access energy services like electricity, reliance on outdated technologies, and the use of hazardous or inefficient fuels for cooking, heating, and lighting (e.g., burning firewood and other traditional biomass). Access to energy carriers and infrastructure is a key factor in determining energy security. Households in remote, underserved, or informal settlements may face limited access to affordable and reliable energy sources, such as electricity grids or clean cooking fuels. Infrastructure deficits can force reliance on expensive or inefficient energy sources. Availability on the other hand, refers to the economic burden of energy costs relative to household income. High energy prices, inadequate social assistance schemes, and market volatility contribute to affordability challenges, disproportionately affecting low-income households. In some cases, energy costs may consume such a large share of income that households must ration energy use, leading to substandard living conditions.[37]

The social contract in the context of energy services is a prerequisite for the legal organization of access, availability, and stability of energy resources, energy quality, and the type of energy used. [38] In the context of this thesis, analysing the paradoxes between energy as a commodity or a public good through the lens of the social contract is key to understanding the roles of the different actors in setting electricity prices and the extent to which they can intervene in ensuring electricity prices remain affordable and accessible to all consumers in a just and equitable way.

1.2.Energy Justice Theory and the Social Contract – State vs. the Markets

The early phase of energy justice literature primarily centred on household-level issues, especially cooking and related forms of energy poverty. Between 2011 and 2017, these topics evolved into broader discussions encompassing poverty, fuel poverty, and rural electrification, alongside emerging interests in energy consumption and food security. From 2018 to 2020, these diverse themes became more structured, consolidating into distinct categories such as electricity access, renewable energy, fuel poverty, and energy policy. It was only in the most recent period (2021–2023) that justice gained prominence as a standalone theme, growing from

[36] Filho, W. L., Gatto, A., Sharifi, A., Sálvia, A. L., Guevara, Z., Awoniyi, S, & Silva, I. D, 2024, "Energy poverty in African countries: an assessment of trends and policies", Energy Research &Amp; Social Science, 117, 103664. https://doi.org/10.1016/j.erss.2024.103664
[37] Thomson et al., 2017
[38] De Fontenelle, L. (2024). Energy Justice and the Social Contract Theory. In: Heffron, R.J., de Fontenelle, L. (eds) The Power of Energy Justice & the Social Contract. Just Transitions. Palgrave Macmillan, Cham. https://doi.org/10.1007/978-3-031-46282-5_2

earlier work on renewables and policy. Throughout all phases, fuel poverty consistently remained the most dominant and interconnected topic.[39]

Ferrall-Wolf et al., build on foundational definitions from key scholars in the field to frame their understanding of energy justice. Central to their approach is the triumvirate conception of energy justice (TCEJ) proposed by McCauley et al.,[40] which identifies distributive, procedural, and recognition justice as its three core principles. Distributive justice focuses on how the benefits and burdens associated with energy systems are shared across society. Procedural justice emphasizes the fair and inclusive participation of all stakeholders in decision-making processes, underscoring principles of transparency, impartiality, and access to information. Recognition justice, as developed by Jenkins et al.,[41] highlights the importance of acknowledging and fairly representing marginalized groups, ensuring equal political and social standing for all individuals. Wood and Roelich argue that while widely cited and applied, TCEJ faces internal contradictions due to its top-down policy implementation approach. Originally inspired by grassroots environmental justice movements, its reliance on institutional policy making undermines its goal of inclusivity and equity. This tension raises concerns about its effectiveness in addressing localized energy injustices, particularly in marginalized communities.[42]

Beyond this core framework, Ferrall-Wolf et al., also references the broader set of principles advocated by Sovacool and colleagues (2015, 2016, 2017).[43] Their expanded model incorporates elements such as human rights, availability, affordability, due process, good governance, transparency, accountability, sustainability, inter/intragenerational equity and responsibility which have come to be known as cosmopolitan justice. Sovacool et al.,

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[39] Isa Ferrall-Wolf, Annelise Gill-Wiehl, and Daniel M. Kammen, 2023, "A Bibliometric Review of Energy Justice Literature", published in Frontiers in Sustainable Energy Policy. https://doi.org/10.3389/fsuep.2023.1175736

[40] McCauley, D. A., Heffron, R. J., Stephan, H., and Jenkins, K., 2013, "Advancing energy justice: the triumvirate of tenets", Int. Energ. Law Rev. 32, 107–110. Available online at: http://hdl.handle.net/10023/6078

[41] Jenkins, K., McCauley, D., Heffron, R., Stephan, H., and Rehner, R., 2016, "Energy justice: a conceptual review", Energ. Res. Soc. Sci. 11, 174–82. https://doi.org/10.1016/j.erss.2015.10.004

[42] Wood, Nathan & Roelich, Katy, 2020, "Substantiating Energy Justice: Creating a Space to Understand Energy Dilemmas", Sustainability. https://12.1917.10.3390/su12051917

[43] Sovacool, B. K., Burke, M., Baker, L., Kotikalapudi, C. K., and Wlokas, H., 2017, "New frontiers and conceptual frameworks for energy justice". Energ. Policy 105, 677–691 https://doi.org/10.1016/j.enpol.2017.03.005 ; Sovacool, B. K., Heffron, R. J., McCauley, D., and Goldthau, A., 2016, "Energy decisions reframed as justice and ethical concerns". Nat. Energ. 1, 1–6. https://doi.org/10.1038/nenergy.2016.24 ; Sovacool, B. K., and Dworkin,M. H., 2015, "Energy justice: conceptual insights and practical applications". Appl. Energ. 142, 435–444. https://doi.org/10.1016/j.apenergy.2015.01.002

positioned the approach as a useful analytical and decision-making tool for framing and responding to energy dilemmas.

Table 1: definition of cosmopolitan justice terms

Principle	Definitions
Human Rights	The principle that access to energy is essential for enjoying fundamental human rights, such as health, education, and dignity.
Availability	Ensuring that sufficient energy resources are accessible to meet basic needs and services for all.
Affordability	Guaranteeing that energy services are economically accessible without imposing financial hardship.
Due process	Upholding legal fairness, consistency, and the right to be heard in energy-related decision-making.
Good Governance	Promoting transparency, accountability, and participatory governance in the management of energy systems.
Transparency	Making information about energy systems, policies, and impacts openly available and understandable to all stakeholders.
Accountability	Holding institutions and actors responsible for energy injustices and ensuring mechanisms for redress.
Sustainability	Ensuring that energy systems support long-term environmental health and resource preservation.
Intragenerational Equity	Ensuring fairness in energy access and impacts among current populations, especially across socio-economic and regional divides.
Intergenerational Equity	Considering the rights and needs of future generations in today's energy decisions and practices.
Responsibility	Acknowledging the moral and ethical duties of individuals, governments, and corporations in promoting just energy systems.

All human societies are going through a period of crisis: a climate crisis, an environmental crisis, an energy crisis, a social crisis, the combination of which indicates a broken social contract on energy. The crisis immediately limits freedom in the sense of experience since energy is essential for carrying out many human activities—heating, feeding, lighting, transport, notably—and is, therefore, a problem of trust. The problem stems from a physical

limit, i.e., the scarcity and depletion of the resources needed to produce energy in sufficient, stable, and affordable quantities, and from environmental pressures, particularly global warming. This leads to a problem of individual trust in the ability of public authorities to manage the situation, while at the same time, a collective awareness of the need for change is emerging. Sustainable Development Goal No. 7 (SDG 7) of the United Nations seeks to ensure access to affordable, reliable, sustainable and modern energy.[44] Affordable energy means to secure reliable and sustainable energy at the best cost possible. However, this cannot be achieved without taking into consideration energy justice which means a fair distribution of both energy services' benefits and burdens.[45] Inevitably, affordability is obtained when there is fair distribution of the energy benefits and burdens. The contrary is true when only a portion of the population will obtain benefits while the others will be the ones exposed to energy burdens.[46]

Within liberal regimes, energy systems are based on a social contract based primarily on energy security, i.e., guaranteed availability of the resource and physical, social, and economic access to stable energy at a reasonable price, enabling them to satisfy their needs and carry out their activities.[47] Historically, utilities were vertically integrated i.e. state owned and regulated. Liberalization is the process of removing government control and regulations to create markets for competitive entities. In the EU, liberalisation dates back to the founding Treaty of Rome in 1957.[48] In the ECOWAS region, market reforms commenced in the early 2000s under the supervision of the World Bank and IMF.[49] The arguments in favour of a liberalised market are that generation and retail electricity markets offer key advantages over vertical integration. First, they manage business risk more efficiently and second, price plays a crucial role in ensuring supply security unlike the vertically integrated model, which ensures supply at a high cost. Markets allow price-driven insurance options, enabling flexibility for consumers. Third, full retail competition reduces political interference by effectively 'privatising' the final

[44] https://www.un.org/sustainabledevelopment/energy/ accessed 3 May 2025
[45] Sovacool et al., 2017
[46] Gonzalo Irrazabal Pérez Fourcade, 2024, "Energy Justice as a Key to Achieve Affordable Energy". In: Heffron, R.J., de Fontenelle, L. (eds) The Power of Energy Justice & the Social Contract. Just Transitions. Palgrave Macmillan, Cham. https://doi.org/10.1007/978-3-031-46282-5_2
[47] De Fontenelle, 2024
[48] Meeus, Leonardo & Reif, Valerie, 2020, "Why did we start with electricity markets in Europe?" https://10.4337/9781789905472.00013.
[49] Charly Gatete, 2023, "Competitiveness and sustainability of electricity markets in the ECOWAS region: evolution of reforms, regulations challenge and markets integration" http://icer-regulators.net/wp-content/uploads/2023/11/Competitiveness-and-sustainability-of-electricity-markets-in-the-ECOWAS-region_Dr-Charly-GATETE.pdf

electricity price. In contrast, regulated prices attract more political and regulatory involvement. Fourth, competition fosters innovation such as joint electricity-gas marketing, online switching, direct debit payments, and new forms of vertical integration.[50] Demsetz notes that while natural monopoly might still exist, it could be restrained by franchising or competition for the field in utility sectors, such as electricity.[51] For Pollitt, while liberalisation has involved some reduction in regulation in wholesale and retail electricity, it is not necessarily the case that liberalisation and regulation are substitutes. Wholesale and retail competition may require more regulation (in terms of cost and complexity) to ensure their success. A State-owned vertically integrated national monopoly may require minimal regulation but is not consistent with a liberalised market.[52] Chao et al., note that electricity prices would be much more volatile in the absence of regulation and that this would be politically unacceptable.[53]

LaBelle[54] underscores the cosmopolitan dimensions of energy justice as a universal, normative guide for energy governance. Enshrining the social contract within the ambit of energy justice refers to the goal of achieving equity in both the social and economic participation in the energy system, while also remediating social, economic, and health burdens on those historically harmed by the energy system.[55] The State's obligation in the context of a social contract is to guarantee a minimum quantity of energy necessary for a dignified life and basic functioning. The State is expected to ensure the protection of human dignity and the equitable redistribution of essential goods and services through policies, public investments or legal provisions. This context reveals the problem of the social contract, what it is, what makes it fragile, and what it could be in the future.[56]

This thesis adopts the cosmopolitan framework to analyze complex, cross-cutting energy challenges from a north–south comparative perspective. By grounding the analysis in cosmopolitan justice, the study emphasizes the integration of the TCEJ principles in assessing

[50] Pollitt, M. G., 2007, "Liberalisation and regulation in electricity systems: How can we get the balance right?" Cambridge Working Papers in Economics No. 0737. University of Cambridge. https://www.repository.cam.ac.uk/handle/1810/194122
[51] Demsetz, H., 1968, 'Why Regulate Utilities?', Journal of Law and Economics, Vol.11, pp.55-65.
[52] Pollitt, M.G., 2004, 'Electricity Reform in Chile: Lessons for Developing Countries', Journal of Network Industries, Vol.5, No.3-4, pp.221-262.
[53] Chao, H-P., Oren, S. and Wilson, R., 2008, 'Re-evaluation of vertical integration and unbundling', in F.P.Sioshansi (ed.).
[54] LaBelle, M.C., 2017, 'In pursuit of energy justice' Energy Policy **2017**, 107, 615–620. https://doi.org/10.1016/j.enpol.2017.03.054
[55] Baker, S., DeVar, S., and Prakash, S., 2019, 'The energy justice workbook. Initiative for Energy Justice', available online at: https://iejusa.org/wp-content/uploads/2019/12/The-Energy-Justice-Workbook-2019-web.pdf
[56] De Fontenelle, 2024

whether injustices occur in the access to or realization of energy services by vulnerable consumers and possible pathways for remediation by responsible actors.

1.3.MLG and the Social Contract – Supranational vs. National

This section explores academic literature on the multi-level governance framework which will be used in analysing the dilemma between the supranational bodies and the national States in undertaking intervention measures to mitigate the impact of electricity price hike on vulnerable consumers in Chapters 2 and 3.

Governance entails achieving consensus, obtaining permission, or ensuring compliance to implement policies, projects, or strategies in arenas with diverse interests, distinguishing it from a top-down, government approach. Initially, "governance" typically denoted the complicated and uncertain conditions that constitute governing. [57] However, governance encompasses the multifaceted processes of formulating, implementing, and legitimizing public policies.[58] It involves cooperation between public and private institutions to guide and manage society, organizations, and networks.[59]

MLG, introduced by Gary Marks in 1993[60], seeks to decentralize and liberalize governance and authority. Hooghe and Marks[61] initially defined MLG as an ongoing negotiation system among governments at various geographical levels, including supranational, national, regional, and local tiers, shaped by institutional developments and decision-making reallocation. In recent years, MLG has gained importance in reshaping energy governance.[62] According to Stilwell and Troy,[63] MLG refers to challenges that arise when coordinating policies and plans across multiple levels of government and with other sectoral policies. MLG is the system of

[57] A.S. Hermanson, 2018, "Energy security in a multi-level governance perspective", Mar. Policy 98, 301–308, https://doi.org/10.1016/j.marpol.2018.09.025.
[58] B. Sun, M. Baker, 2021, "Multilevel governance framework for low-carbon development in urban China: a case study of Hongqiao Business District, Shanghai, Cities" 119, 103405, https://doi.org/10.1016/j.cities.2021.103405.
[59] J. Kunchornrat, A. Phdungsilp, 2012, "Multi-level governance of low-carbon energy systems in Thailand", Energies (Basel) 5 (3) 531–544, https://doi.org/10.3390/en5030531.
[60] A. Smith, 2007, "Emerging in between: the multi-level governance of renewable energy in the English regions", Energy Policy 35 (12) 6266–6280, https://doi.org/10.1016/j.enpol.2007.07.023.
[61] L. Hooghe, G. Marks, 2003, "Unraveling the central state, but how? Types of multi-level governance", Am. Polit. Sci. Rev. 97 (2) 233–243, https://doi.org/10.1017/S0003055403000649.
[62] V. Dobravec, N. Matak, C. Sakulin, G. Krajaˇci´c, 2021, "Multilevel governance energy planning and policy: a view on local energy initiatives", Energy Sustain. Soc. 11 (1) 1–17, https://doi.org/10.1186/s13705-020-00277-y.
[63] F. Stilwell, P. Troy, 2000, "Multilevel governance and urban development in Australia", Urban Stud. 37 (5–6) 909–930, https://doi.org/10.1080/00420980050011154.

making decisions where authority is shared across different levels, from local to global, rather than just one single authority.[64] Challenges may include issues of authority, resources, and institutional constraints where tiers of government (top or bottom) must interact with various (State/non-State) actors to address public policy concerns. Initially, scholars applied MLG to European and global politics to describe federalist organizations with power dispersed among levels and institutions.[65] These systems coordinate policies across various government levels through consensus-building, compromise, competitive pressure, or hierarchical control. Originally it was used to analyse and describe the governance structure of the EU structural policy, emphasising the parallel processes of decentralisation and Europeanisation but has developed into a more general concept that has been applied in different contexts. For instance, it has been used as an approach to understand the dynamic interrelationship within and between different levels of governance and government. [66]

The concept of MLG serves as a mechanism to coordinate government efforts for more efficient policy implementation. However, an alternative perspective on MLG proposes viewing it as a policy-dimensional framework, which is adaptable to local contexts and beneficial to countries.[67]

Key Characteristics of Multi-Level Governance

- Interdependence → Different levels are not fully independent and may be interconnected through different systems of influence, like funding or reporting.
- Shared Authority → Power to make decisions is not limited to a single governing body but shared in the system through specific mechanisms.
- Negotiation → The different bodies often need to consult and agree on issues that are connected to their power.
- Flexibility → A successful system needs to be adaptable to various needs, changing and evolving according to situation.

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[64] https://energy.sustainability-directory.com/term/multi-level-governance/ accessed 2 June 2025

[65] P. Cairney, 2019, "Understanding public policy: Theories and issues (2nd ed.) Chapter 8 Multi-level Governance and Multi-centric Policymaking," in *Cairney, P., Understanding public policy: Theories and issues*, 2nd ed., University Press., 2019, ch. 8, pp. 1–4

[66] Stephenson, P., 2013, "Twenty years of multi-level governance: 'Where does it come from? What is it? Where is it going?" *Journal of European Public Policy* 2013:20(6): 6):817–837. https://doi.org/10.1080/13501763. 2013.781818

[67] Kim Kaze, Nazmiye Balta-Ozkan, Elisabeth Shrimpton, 2025, "Connecting power to people: Integrating community renewable energy and multi-level governance towards low-carbon energy transition in Nigeria", Energy Research & Social Science, Volume 121, https://doi.org/10.1016/j.erss.2025.103938.

A central theme of MLG acknowledges that environmental and energy-related issues extend beyond the borders of a single nation-State, they require cooperation across several interconnected bodies. It involves intricate negotiations, the exchange of data, and the harmonization of policies at different scales, that all influences the outcome. It also accounts for political, social and economic contexts, as those all contribute to the shaping of these interactions. Therefore, the term involves more of the "governance" framework of decision making itself, rather than a political system structure. In this way, a more flexible, transparent, and inclusive system allows to create better approach that provides more viable solutions that are specifically designed for long term system growth. It challenges the traditional concept of centralized authority and the nation-State as the sole relevant actor in policy making, as the issues are global and diverse.[68] The task of creating policies driven by democratic principles is, therefore, to take into account the principles of energy justice and inclusive participation to ensure that diverse preferences are recognized.[69] The MLG framework as applied in this thesis underscores the possibility that the different levels and actors between regional and national may conflict with each other specifically based on their conceptualisation of energy either as a commodity or a public good. It emerges as a critical instrument for analysing this dilemma and proferring recommendations on how the supranational and national States can work together to ensure markets work in the interest of all citizens in order to deliver on the social contract.

The literature review shows that electricity policy involves several tensions between seeing electricity as a commodity or a public good, between State control and market forces, and between national and supranational decision-making. These tensions help to explain how tariffs are set and why energy poverty remains a challenge. Based on the foregoing, this thesis uses three main frameworks: the social contract theory, to explore tensions between supranational and national conceptions of electricity as a commodity or public good; energy justice theory, using the cosmopolitan justice lens to assess the balance between market profitability and equitable access for low-income consumers; and the multi-level governance framework, to analyse how interactions across governance levels influence energy policy development and tariff regulation.

[68] https://energy.sustainability-directory.com/term/multi-level-governance/ accessed 2 June 2025
[69] Björklund, M., von Malmborg, F. & Nordensvärd, J., 2023, "Lessons learnt from 20 + years of research on multilevel governance of energy-efficient and zero-carbon buildings in the European Union". *Energy Efficiency* **16**, 98 https://doi.org/10.1007/s12053-023-10178-6

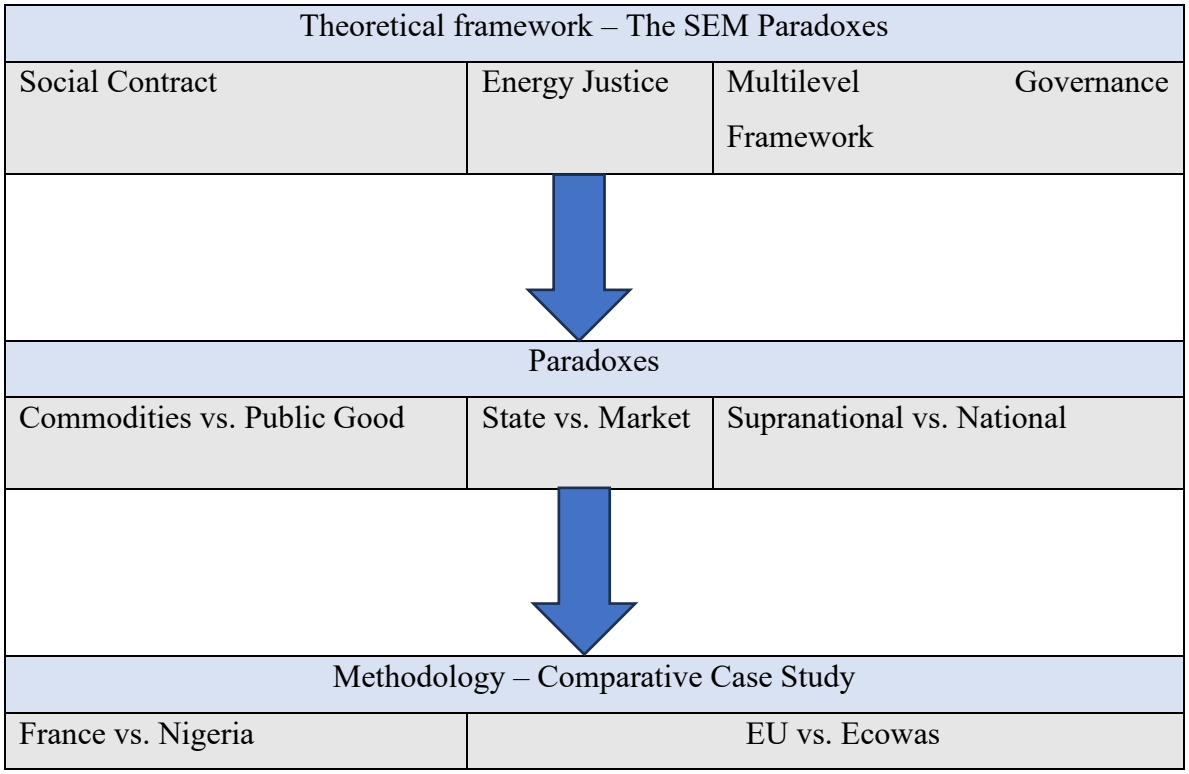

Figure 1: Theoretical Framework Matrix *Source: developed by author*

The SEM Paradoxes framework will guide the analysis in the next chapters to assess whether government action on electricity pricing is justified to address energy poverty.

CHAPTER 2 – ANALYSIS OF THE ROLE OF THE SUPRANATIONAL BODIES IN COMBATING ENERGY POVERTY USING THE SEM PARADOXES.

This Chapter explores the tension between the supranational bodies - the EU and ECOWAS - using the SEM Paradoxes identified in Chapter 1. It analyses how the supranational bodies' view electricity with the aim of determining which of the paradoxes informed the interventions, if any, and the sufficiency or otherwise of the interventions.

2.1.General Overview – Market Liberalisation

Market provision reflects the right of the individual to make choices and to bear responsibility for those choices. Competition law applies to ensure that markets remain efficient and open to welfare-enhancing innovation and change. The liberalization and deregulation agenda accept that public services benefit from provision through competitive markets and so are accompanied by the creation of regulators charged with restraining monopoly until the market becomes competitive. Whilst public services can be provided by the market, liberalisation involves a potential tension between the values of competitive markets and those of public service because competitive markets require that prices should be aligned to costs. Whilst the consumer citizen is treated with dignity and respect, this ceases when payment for consumption ceases. The services could become so uneconomic without supporting cross-subsidy that they could no longer be provided, and that would undermine the concept of universal service. The market respects the consumer as long as they are willing and able to pay; however, as citizens are equal and because consumer citizenship is revealed as an equivalent of a constitutional citizenship there are certain values in the form of social and economic rights that will "trump" competition law and the market.[70] This tension becomes evident in light of the SEM Paradoxes as to how the supranational bodies' view electricity either as a commodity or a public good. In view of the SEM Paradoxes, can the State and market work together to protect public service values in a market driven system? Are there certain conditions that must exist, or should it be as a matter of public policy?

2.2.THE EU

Electricity sectors in Europe developed as vertically integrated geographic monopolies either State or privately owned and regulated as natural monopolies. Each utility handled generation, transmission, distribution, and retail supply. Reforms aimed to create new structures that

[70] Prosser, 2006

deliver long-term benefits, including prices reflecting true economic costs and service quality matching consumer needs.[71] In Europe, reforms followed two tracks. First, EU Electricity Market Directives required Member States to take steps toward liberalizing national markets by key dates. Second, the European Commission worked to improve cross-border trade and transmission links. Both aimed to apply Single Market principles to energy, allowing EU-wide competition and lowering cross-border transport costs. Three Internal Energy Market Packages—in 1996, 2003, and 2009—focused on unbundling and gradually opening national markets. A key goal was lower, more aligned prices across the EU through wholesale and retail competition.[72]

2.2.1. The Social Contract – Commodities vs. Public Good

Article 106(2) of the Treaty on the Functioning of the European Union[73] lays the basis of State intervention in economic activities by an undertaking. Article 106(2) TFEU provides that:

'Undertakings entrusted with the operation of services of general economic interest or having the character of a revenue-producing monopoly shall be subject to the rules contained in the Treaties, in particular to the rules on competition, in so far as the application of such rules does not obstruct the performance, in law or in fact, of the particular tasks assigned to them'.

In its Communication on Services of General Economic Interest in Europe, the Commission observed that:

'Services of general economic interest are different from ordinary services in that public authorities consider that they need to be provided even where the market may not have sufficient incentives to do so. This is not to deny that in many cases the market will be the best mechanism for providing such services [...]. However, if the public authorities consider that certain services are in the general interest and market forces may not result in a satisfactory

[71] Patrícia Pereira da Silva, Pedro A. Cerqueira, 2017, "Assessing the determinants of household electricity prices in the EU: a system-GMM panel data approach", Renewable and Sustainable Energy Reviews, Volume 73, Pages 1131-1137, ISSN 1364-0321, https://doi.org/10.1016/j.rser.2017.02.016.
[72] Pereira et al. 2017
[73] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:12016ME/TXT accessed 19 May 2025

provision, they can lay down a number of specific service provisions to meet these needs in the form of service of general interest obligations'.[74]

According to case law,[75] the concept of an undertaking encompasses any entity engaged in an economic activity, irrespective of its legal status and the way in which it is financed. Economic activity usually consists in the provision of goods and services for remuneration. Remuneration is essentially consideration for the provision of goods or services. Two broad categories of activity are usually regarded as non-economic. First, activities regarded as non-economic are those that fall within the scope of the exercise of public power.[76] Second, activities based on the principle of solidarity, which are deemed to pursue an objective of general interest, are regarded as non-economic activities.[77]

In its subsequent Communication on the application of the State aid rules to compensation for SGEIs, the Commission considered *'[. . .] that it would not be appropriate to attach specific public service obligations to an activity which is already provided or can be provided satisfactorily and under conditions, such as price, objective quality characteristics, continuity and access to the service, consistent with the public interest, as defined by the State, by undertakings operating under normal market conditions'*.[78] In essence, the Commission is of the view that we should not fix what is not broken. If the market is functioning well and delivering a service in line with public interest standards, there's no justification for state intervention or special subsidies.

A similar view is expressed in its Quality Framework for Services of General Interest in Europe (COM(2011) 900): *SGEIs are economic activities which deliver outcomes in the overall public*

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[74] Commission Communication on Services of general interest in Europe (OJ 2001, C 17, p. 4), para. 14. ELI: http://data.europa.eu/eli/C/2024/5046/oj accessed 29 April 2025

[75] Judgment of 27 June 2017, Congregación de Escuelas Pías Provincia Betania, C-74/16, EU:C:2017:496, paragraph 47. Cited in Collins and Navarro, 2021

[76] The Court of Justice has held that the construction and the commercial exploitation of port and airport infrastructures are economic activity, while traffic management, ensuring safety, and pollution surveillance engage the exercise of public powers and therefore do not constitute economic activity - Judgments of 17 February 1993, Poucet and Pistre, C-159/91 and C-160/91, EU:C:1993:63, paragraphs 18–19, and of 12 December 2006, SELEX Sistemi Integrati v Commission, T-155/04, EU:T:2006:387, paragraph 91. Cited in Collins and Navarro, 2021

[77] State supervised social security schemes that demand compulsory affiliation and which disperse universal benefits against risks of sickness, old age, death and invalidity, regardless of the number of contributions made or the financial status and the state of health of the insured at the time of affiliation, are considered to be non-economic - Dôvera zdravotná poist'ov˘na v Commission, T-216/15, not published, EU:T:2018:64, paragraphs 52–53. Cited in Collins and Navarro, 2021

[78] Commission Communication on Services of general interest in Europe (OJ 2001, C 17, p. 4), para. 14.

good that would not be supplied (or would be supplied under different conditions in terms of objective quality, safety, affordability, equal treatment or universal access) by the market without public intervention.[79] What this means is that the role of SGEIs is to fill the gaps left by market failures where private providers would not or cannot serve all citizens equitably or affordably. Thus, the Commission discourages unnecessary State intervention in functioning markets and seeks to balance economic efficiency (let the market work where it can) with social equity (intervene when vulnerable groups or remote regions are left out).

Article 106(2) purports to shield services of general economic interest ('SGEIs') from the full application of EU law, notably its competition rules, where their application obstructs the performance of the particular tasks assigned to SGEIs. Article 14 TFEU recognises the place of SGEIs such as electricity needs to be provided in line with a high level of quality, safety and affordability, equal treatment and the promotion of universal access and of user rights. Access to such services constitutes a "shared value" and is recognised as a human rights objective in Article 36 of the binding EU Charter of Fundamental Rights.[80] Thus, Member States may provide for commission and fund SGEIs provided that they comply with the EU Treaties.

According to Collins and Navarro,[81] Article 106(2) TFEU requires that, in order to commission an SGEI, Member States must demonstrate that market forces have failed to meet a demand that, in their opinion, should be met as a matter of public interest, i.e. the existence of a market failure. The authors take the view that market failure includes situations in which markets do not deliver goods or services at desirable levels not only from an efficiency perspective (market failure narrowly defined) but also from an equity or social perspective (market failure broadly defined).

The legitimacy of SGEIs rests on the simultaneous existence of an economic activity and a market failure. Absent these conditions, public intervention risks being perceived as distortionary and protectionist rather than equitable and necessary. This framework aligns with the overarching principles of the internal market and the EU's competition law architecture.

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[79] See the Communication of 20 December 2011 from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, establishing A Quality Framework for Services of General Interest in Europe, COM(2011) 900 final, p. 3; Review of Member States' reports on the implementation of the European Commission Decision on the provision of State aid to the provision of services of general economic interest, 2017 https://dmsearch.eesc.europa.eu/search/opinion

[80] Hesselman, 2020

[81] Anthony M Collins, Martín Martínez Navarro, 2021, "Economic Activity, Market Failure and Services of General Economic Interest: It Takes Two to Tango", *Journal of European Competition Law & Practice*, Volume 12, Issue 5, May, Pages 380–386, https://doi.org/10.1093/jeclap/lpaa098

Electricity, water, and healthcare are often treated as commodities under market liberalization. But SGEIs treat them as rights or commons, thereby legitimizing price regulation, subsidies, and public ownership in certain cases. Thus, if applying competition rules (e.g., requiring cost-reflective tariffs) would obstruct the ability of a utility to guarantee affordable electricity, the rules may be relaxed or exempted under Article 106(2). Energy services can thus be regulated to ensure equity and affordability, addressing energy poverty, even if this comes at the expense of full market profitability.[82]

2.2.2. Energy Justice Framework – State vs. Markets

The energy poverty concept appeared as early as the 2009 third energy package and was mentioned explicitly in the first Electricity Directive (2009/72/EC, repealed) and the Gas Directive (2009/73/EC), which called on the Member States to 'develop national action plans or other appropriate frameworks to tackle energy poverty', define 'vulnerable customers', and protect them.[83] The Social Climate Fund Regulation and the revised Energy Efficiency Directive define energy poverty as a household's lack of access to essential energy services, such as heating, hot water, cooling, lighting and energy to power appliances. The European Pillar of Social Rights and the United Nations Sustainable Development Goals include energy among the basic services that have the right of access to everyone. The European Green Deal points to a fair and inclusive energy transition process. The European Pillar of Social Rights states that energy is the basic service with the greatest differences in access to the EU.[84] Among the key primary indicators for identifying the energy poverty problem are the inability to maintain a suitable temperature in the home, housing inadequacy, and poverty and social exclusion.[85]

Since 2020, European and global energy markets have been going through a severe crisis. This was the result of multiple factors, starting with a COVID- induced recession followed in 2021 by strong post-COVID global economic recovery, unfavourable weather conditions for renewable generators, and outages at France's nuclear power fleet. Gas and electricity prices reached record levels in 2022 and hit all-time highs following the Russian invasion of Ukraine

[82] Collins and Navarro, 2021
[83] Agnieszka Widuto, 2023, “Briefing, Members” Research Service European Parliamentary Research Service PE 733.583, https://www.europarl.europa.eu/RegData/etudes/BRIE/2022/733583/EPRS_BRI(2022)733583_EN.pdf
[84] https://employment-social-affairs.ec.europa.eu/policies-and-activities/european-pillar-social-rights-building-fairer-and-more-inclusive-european-union_en accessed 29 April 2025
[85] Widuto, 2023

with electricity prices rising to levels much higher than in recent decades. In Europe, gas-fired power stations are often the marginal technology setting the wholesale electricity prices. From 2015 to 2019, European wholesale electricity prices fluctuated between 40 and 60 EUR/MWh. Spot prices were relatively stable until the end of 2018, then decreased in 2019 due to weak demand, lower fuel costs, and increased renewable generation.[86]

The ability to keep a home adequately warm depends on several factors, including the general condition of the building, geographical location and the cost of energy. While 10.6% of people in the EU couldn't afford to keep their home adequately warm in 2023, up from 9.3% in 2022 (and 6.9% in 2021), 8.8% of people in the EU lived in households spending 40% or more of their disposable income on housing in 2023[87]. In nineteen EU countries, the share of people who couldn't afford to keep their home adequately warm increased between 2022 and 2023.[88]

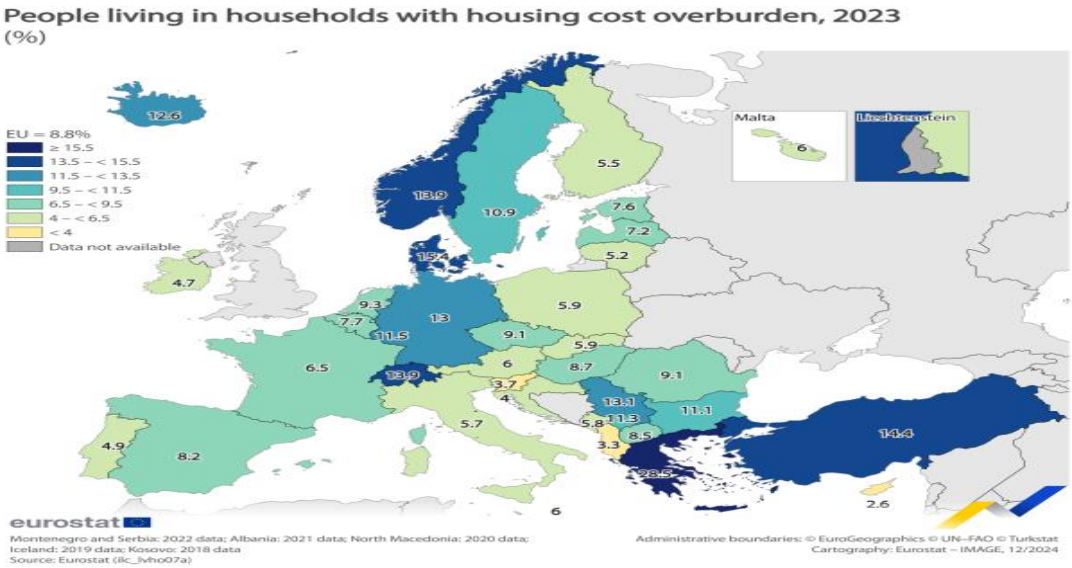

Figure 2: Map of people living in households with housing cost overburden, 2023

Against the backdrop of high energy prices, in October 2021, the Commission mandated Member States to provide further protection for vulnerable customers and energy poor households. Article 27 requires Member States to nationally define the concept of 'vulnerable customers' which may relate to the notion of energy poverty and involve prohibition of

[86] REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS Report on energy prices and costs in Europe COM/2024/136 final **https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:52024DC0136**

[87] Key figures on living conditions in Europe, 2024 edition https://ec.europa.eu/eurostat/web/products-key-figures/w/ks-01-24-001 accessed 2 May 2025

[88] Thomson et al., 2017

disconnection in critical times. [89] It is well known, and considered problematic, that definitions of vulnerable customers differ widely amongst EU Member States. How France complied with this directive would be explored in more detail in Chapter 3.

The Commission also adopted a communication with a toolbox designed to mitigate the impact on consumers and businesses. The proposed immediate measures included emergency income support for energy-poor users, temporary deferrals for bill payments, safeguards to avoid disconnections from the energy grid, reduced taxation rates, and aid for companies and industries.[90] While social policy options fall mainly in the Member States' responsibility, the EU can propose measures linked to its energy policy, which is a shared competence between the Member States and the EU. [91]

The SGEI framework challenges the primacy of market logic by allowing targeted public interventions. There's a constant tension between competition law (efficiency) and public interest obligations (equity). Article 106(2) embodies the idea that essential services are a public obligation, not just market commodities. It enshrines the State's duty to intervene when the market cannot ensure basic welfare, thus operationalizing the social contract between governments and citizens in a just and equitable way.

2.2.3. MLG - Supranational vs. National

The principle of subsidiarity is a foundational concept in EU law that guides the division of competences between the EU and its Member States, particularly in areas where both share legislative powers. It is especially relevant in the context of Services of General Economic Interest (SGEIs) and public service provision, including energy, healthcare, and transport.[92] Article 5(3) TFEU states that:

"In areas which do not fall within its exclusive competence, the Union shall act only if and in so far as the objectives of the proposed action cannot be sufficiently achieved by the Member States... but can rather, by reason of the scale or effects of the proposed action, be better achieved at Union level."[93]

[89] Marlies Hesselman, 2024
[90] Widuto, 2023
[91] Dimaviya et al., 2024
[92] Proposal for a COUNCIL REGULATION on an emergency intervention to address high energy prices Brussels, 14.9.2022 COM(2022) 473 final 2022/0289 (NLE)
[93] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:12016ME/TXT accessed 29 April 2025

Thus, the subsidiarity principle preserves Member States' rights to design and deliver public services while justifying limited EU intervention to uphold internal market rules and competition. Member States appear to enjoy a wide discretion in defining the territorial scope of an SGEI. This has at least one important consequence. By defining the territorial scope of an SGEI beyond the geographical area of the market failure, Member States can reduce or avoid any necessity to compensate the SGEI provider for services provided in non-profitable locations, thus passing the burden of financing the SGEI onto the users of the service. Since Member States have wide discretion to provide, commission and fund SGEIs, in the exercise of the powers conferred upon it by Article 106(2) TFEU, the Commission can successfully challenge the exercise of that discretion in cases of manifest error only. However, Member States' power to define SGEIs may not be exercised arbitrarily to relieve a particular sector from the application of EU competition rules. Member States must identify a legitimate public interest, typically of non-economic nature (for instance, the promotion of social or territorial cohesion), which market forces have failed to meet or have met inadequately.[94]

While EU competition rules seek to ensure that undertakings neither hinder nor prevent effective competition to the detriment of consumer welfare, its State aid rules aim at ensuring that State intervention contributes to the achievement of legitimate public policy objectives, thus creating positive societal effects greater than the negative effects upon competition. Electricity tariffs are a pertinent application of the SGEI framework. When electricity is deemed an economic activity and evidence of market failure exists—such as insufficient coverage, high cost, or lack of access, Member States may lawfully intervene through regulated tariffs under the SGEI exception. Such interventions must still meet proportionality and necessity requirements under EU law. The social contract is reflected in the expectation that States guarantee essential services as part of their legitimacy. Cosmopolitan justice resonates with the EU's insistence on universal access, non-discrimination, and social cohesion, all of which are central to defining and implementing SGEIs. These frameworks underscore that market mechanisms alone are insufficient to meet collective needs, and public intervention is both legitimate and necessary where equity and inclusion are at stake.

2.3.THE ECOWAS

The Economic Community of West African States (ECOWAS) was created in 1975 by a treaty known as the Treaty of Lagos and revised in 1993 (the Revised Treaty). The aim of the Treaty

[94] Collins and Navarro, 2021

was to achieve "collective self-sufficiency" for its Member States by creating a single large trading bloc through an economic and trading union. The treaty was couched in the context of a gradual progression from a free trade area via a customs union to a common market.[95]

Article 28 of the Revised Treaty is concerned with the energy sector and seeks to establish a common energy policy to find a collective solution to the energy development problems in Member countries. The main objective for the ECOWAS energy integration program is to develop interconnection and power exchange between power systems of Member States under the West African Power Pool (WAPP) Project. Through the West African Gas Pipeline (WAGP) project, it also seeks to utilize gas flared in Nigeria to feed power stations in neighbouring countries. Other objectives are to promote and protect private investments in energy projects, to harmonize legislations and standards of operation in the power sector and finally to create an open and competitive regional electricity market.[96]

2.3.1. The Social Contract - Commodities versus Public Good

Thermal power is the predominant source of generation. With the exception of Guinea, Liberia, Mali, and Sierra Leone, where hydro accounts for more than 50% of production, higher proportions of electricity produced in most countries in the region comes from thermal sources.

Table 2: Electricity tariff models[97]

Methodology	Countries using it	Definition
Cost Plus (Rate of Return)	Benin, Côte d'Ivoire, Gambia, Guinea, Guinea-Bissau, Liberia, Mali, Sierra Leone	Calculates revenue as OPEX + Depreciation + (WACC × RAB) + Taxes − Other Revenue. Ensures cost recovery plus fair return on investment.

[95] Sohn, Rike & Yeboah, Benjamin, 2014, "Understanding Regional Integration in West Africa – A Multi-Thematic and Comparative Analysis" https://www.researchgate.net/publication/264288749_Understanding_Regional_Integration_in_West_Africa_-_A_Multi-Thematic_and_Comparative_Analysis

[96] Diaw, I. M., 2004, "West Africa's Energy Sector and Developments / Regulatory Issues concerning the West African Power Pool" [PDF]. In: Global Regulatory Network (GRN), *2nd Global Regulatory Network Conference*. Bamako, Mali 26-27 July 2004. [online] Available at: http://www.globalregulatorynetwork.org/Resources/2ndGRN/Images/Session%20I%20-%20Diaw.pdf

[97] Comparative Analysis of Electricity Tariff in ECOWAS Member Countries, 2019, Africa Energy Portal, https://africa-energy-portal.org/reports/comparative-analysis-electricity-tariffs-ecowas-member-countries

Price Cap	Cabo Verde, Niger, Senegal	Sets a cap on price per kWh using a formula based on inflation and productivity
Revenue Cap	Burkina Faso, Togo	Caps total allowable revenue rather than price, with adjustment for volume drivers
Hybrid	Ghana, Nigeria	Combines features of cost plus and incentive-based regulation. Often includes service quality and performance targets (losses, collections).

According to the report by the AFDB-ERERA, based on GDP data across the ECOWAS region, there appears to be a strong relationship between income levels and electricity access, with the highest access rates seen in the countries with the higher GDP per capita. There is also a close relationship between electricity access and population density. Cost based approaches to set prices are predominant. However, the countries that appear to outperform their peers on this indicator are also those with higher income per capita, indicating that income is a predominant explanatory factor.[98]

Table 3 below presents GDP per capita (PPP international dollars) and access to electricity (% of population with service) in each country. Both variables vary significantly between countries. GDP per capita at PPP ranges between USD 1,217 (Niger) and USD 6,913 (Cabo Verde), with access varying between 13.0% (Niger) and 92.9% (Cabo Verde). [99]

[98] Comparative Analysis of Electricity Tariff in ECOWAS Member Countries, 2019
[99] Comparative Analysis of Electricity Tariff in ECOWAS Member Countries, 2019

Table 3: GDP per capita and access to electricity – 2017/2018.

	GDP per capita (current PPP int.USD)	Access to electricity (% of population)
Benin	2286.99	43.1%
Burkina Faso	1866.62	25.5%
Cabo Verde	6912.64	92.9%
Côte d'Ivoire	3902.41	65.6%
The Gambia	2642.2	56.2%
Ghana	6099.3	79.0%
Guinea	2188.51	35.4%
Guinea-Bissau	1864.94	26.0%
Liberia	1404.53	21.5%
Mali*	2383.96	44.0%
Niger*	1216.76	13.0%
Nigeria	5941.27	54.4%
Senegal	3459.4	61.7%
Sierra Leone	1561.09	23.4%
Togo	1670.69	48.0%

*As of 2018

Source: IMF, WBG and local sources

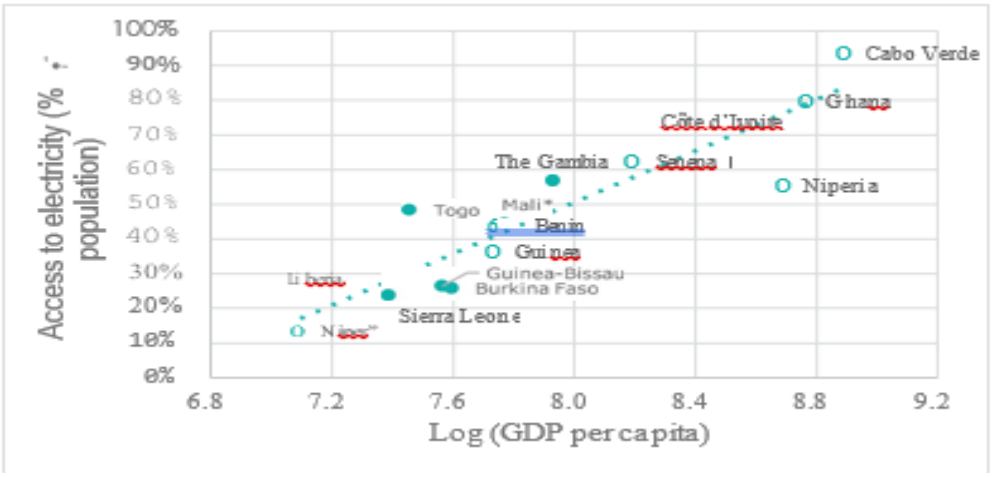

Figure 3: relationship between income level and electrification. Source: AFDB-ERERA

Figure 3 shows a positive relationship between income level and electrification. The explanatory power of the model measured by the Rz coefficient is approximately 84%. In other words, 84% of the evolution of access is explained by income level in this relatively small sample. Another anticipated facilitating factor for electrification is the population density, where the higher the population density, the greater the potential economies of scale in the development of network infrastructure and ease by which the utility can connect new customers. The following graph illustrates this relationship.[100]

[100] Comparative Analysis of Electricity Tariff in ECOWAS Member Countries, 2019

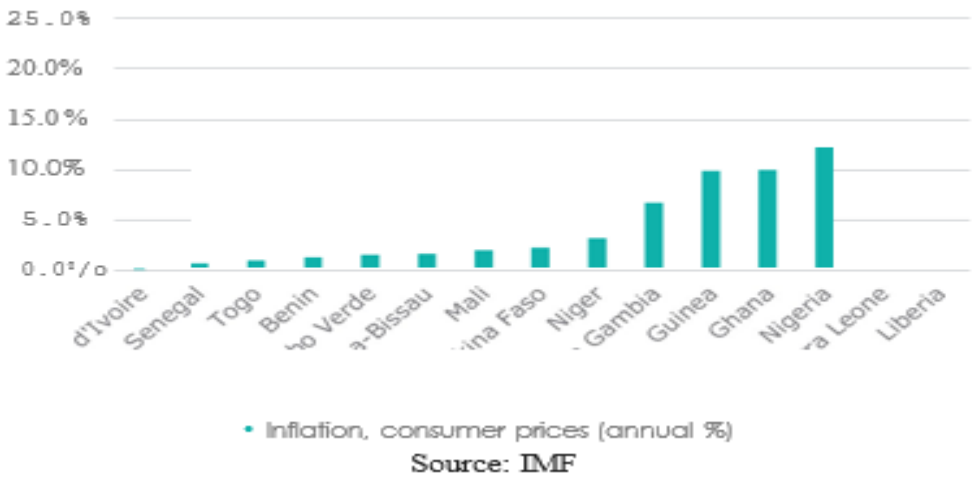

Figure 4: inflation, consumer prices.

Figure 4 shows that inflation is an important indicator for comparative purposes since the higher the inflation the greater the risk of tariffs and costs becoming misaligned, and the greater importance for tariff adjustment processes to be in place. In 2018 the annual percent change in prices (inflation) ranged between 0.3% in Cote d'Ivoire and 23.4% in Liberia. There are two other countries with double digit inflation rates in 2018: Nigeria (12.1%) and Sierra Leone (16.9%). The data suggests that regulatory protection against inflation is most critical for The Gambia, Guinea, Ghana, Nigeria, Sierra Leone and Liberia.[101]

In 2013, the ECOWAS Renewable Energy Policy (EREP)[102] was adopted to address energy poverty, improve security, and promote sustainable development in West Africa. It seeks to support Member States through the ECOWAS Centre for Renewable Energy and Energy Efficiency (ECREE) in developing national policies, building capacity, and attracting private investment. The policy does not give a single-sentence definition but describes energy poverty as a multifaceted challenge:

"There are significant energy pricing and income inequalities between urban and rural areas and among different social groups, a phenomenon common to many developing countries. The urban and rural poor in West Africa spend proportionately more of their income for poor quality energy services than the better-off for better quality services. Whereas urban areas tend to use energy higher up the energy ladder (e.g. electricity, charcoal, kerosene etc.), rural areas

[101] Comparative Analysis of Electricity Tariff in ECOWAS Member Countries, 2019
[102] ECOWAS Renewable Energy Policy, 2013 https://www.ecreee.org/renewable-energy/, p. 25

continue to rely on traditional biomass for meeting their energy requirements for cooking and lighting."[103]

This above excerpt is a diagnostic statement of systemic injustice, revealing how energy inequality is both a market failure and a governance failure. From the standpoint of the social contract, it calls on the State to reassert its developmental role. From the standpoint of justice, it invites a paradigm shift in which energy is no longer seen as a commodity for sale, but a foundational right and common good, essential to human development and dignity. The persistent high level of energy poverty in the ECOWAS region shows that the objectives of the EREP have not been realized. According to analysts, despite attempts at reforming the region's power sector, the private sector has been reluctant to mobilize much needed investment due to the non-profitability of power generation and distribution. There is the sense that return on investment will not be commensurate given that tariff structures across most of the region are not commercially viable. There is also the risk that consumers will steal electricity outright. In other words, the classic free-rider problem, where the market is unable to derive payment to meet even the basic level of costs of production creates barriers to private investment.[104]

2.3.2. Energy Justice Framework - States vs. Markets

Section 4.6 of the EREP promotes market-based incentives (e.g., feed-in tariffs, tax exemptions, concessional loans) while recognizing the need for subsidies and public funding to expand access in poor and rural areas. It emphasizes that full cost-reflective pricing without safeguards can exacerbate energy poverty:

"Securing the financial profitability of the sector through a legal and regulatory framework making RE an attractive business… while ensuring affordable access to the poor. Subsidies shall meet incremental costs for producing agreed quantities of renewable electricity… to avoid the free riders' profits."[105]

Existing power generation costs are high, partly because of the dependence on diesel and heavy fuel whose prices have been rising and much of it has to be imported, for most of the smaller oil importing countries in the region. Consequently, tariffs are either high or highly subsidised,

[103] EREP, 2013
[104] Sohn & Yeboah, 2014.
[105] EREP, 2013, P. 48

considerably straining national budgets. The State utilities are often plagued by weak management capacity resulting in less efficient operations and uncertain financial viability. As these utilities continue to be under-capitalized, their capacity to access financial markets for upkeep and expansion projects remains severely constrained. Yet, in most cases, these will be the central actors in the reversal of these challenges.[106]

According to Article 4.6 of the EREP, enhancing the financial viability of national utilities is a cross-cutting issue for ECOWAS Member States and a prerequisite to make renewable energy power production an attractive business for private investors/entrepreneurs. The financial health and reliability of a national energy sector is a major condition to create confidence for potential private investors.[107] This means the sector that has a reasonable debt with regard to its turnover requires tariffs that ensure a proper level of auto-financing after reimbursement of the debt. In addition, the EREP requires that specific measures such as providing subsidies to alleviate up-front costs for technology moving towards a fully competitive production shall meet incremental costs for producing agreed quantities of renewable electricity through approved sources.[108]

Although energy is viewed as a market commodity, the EREP seeks to balance cost recovery with subsidies and public support. The move to introduce result-based subsidies is a welcome initiative of the EREP. A study by Yang et al., found that government subsidies have a positive threshold effect on renewable energy investments. Specifically, when energy consumption intensity and bank credit exceed certain thresholds, subsidies significantly enhance investment in renewable energy.[109] By focusing on cost-effective, well-designed subsidy programs, ECOWAS Member States can enhance energy access, stimulate private sector participation, and achieve their renewable energy targets.

In ECOWAS States, the social contract traditionally entails the State guaranteeing essential services like electricity, often through subsidies, regardless of cost recovery. Article 4.6 reimagines the social contract by moving away from universal subsidies (which often benefit

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[106] EREP, 2013

[107] Michael Amoah Awuah, Re-Imagining the ECOWAS Energy System in a Post-Pandemic World, 2021, https://ssrn.com/abstract=4919232 or http://dx.doi.org/10.2139/ssrn.4919232

[108] Xiaolei Yang, Lingyun He, Yufei Xia, Yufeng Chen, 2019, "Effect of government subsidies on renewable energy investments: The threshold effect", Energy Policy, Volume 132, Pages 156-166, https://doi.org/10.1016/j.enpol.2019.05.039.

[109] Richard G. Newell, William A. Pizer, Daniel Raimi, 2019, "U.S. federal government subsidies for clean energy: Design choices and implications", Energy Economics, Volume 80, Pages 831-841, ISSN 0140-9883, https://doi.org/10.1016/j.eneco.2019.02.018.

wealthier urban users) to targeted, results-based subsidies, promoting fiscal justice and better use of public funds. It introduces the idea that for energy access to be sustainable and inclusive, the system must be financially self-reinforcing, with tariffs and subsidies structured to support long-term equity, not short-term populism. It also affirms the State's duty to create a functional enabling environment not necessarily to be the direct provider, but to ensure accessible, affordable, and reliable electricity through public-private collaboration.

2.3.3. MLG - Supranational versus national

According to Article 4.1., under its subsidiarity principle, "the EREP will intervene in regional actions only when they can bring added value to national actions. The roles of national and regional institutions in the EREP process will be defined precisely." Section 4.4.1 mandates Promotes women's involvement in the renewable energy sector, capacity-building for vulnerable groups, and integration of gender-sensitive energy planning that each Member State is expected to develop or revisit a National Renewable Energy Policy (NREP) and an associated five-year action plan, with ECREEE providing support tools, guidelines, and capacity development.

The policy does not provide a direct or detailed definition of what constitutes "added value." However, we can infer the meaning of "added value" from the policy's broader objectives and implementation framework such as Article 4.6 which states that regional bodies like ECREEE are tasked with developing model laws and regulatory templates, coordinating standardization and certification schemes and supporting national capacity building and investment promotion. These activities are not obligatory at the national level unless they bring "added value", i.e., benefits beyond what a country could achieve alone. However, not clearly defining the term "added value" may delay or prevent regional action in urgent contexts (e.g. energy poverty crises). National governments could resist or reject regional guidance by claiming it lacks added value, even when intervention could be beneficial.

In the context of electricity and energy markets, a competitive market structure refers to an environment where multiple private actors can freely enter, compete, and invest in energy generation, distribution, or service provision, often under transparent rules and minimal distortions.[110] Article 4.6 is a pivotal clause in the EREP that bridges economic rationality with social justice. By advocating for viable utilities, transitional subsidies, and predictable

[110] Sohn & Yeboah, 2014

investment conditions, it supports the emergence of a competitive, pro-poor energy market without dismantling the State's role as a guarantor of energy access. However, its impact on energy poverty depends on how well this principle is operationalized across diverse national contexts. The policy has both enabling and constraining implications for reducing energy poverty across the ECOWAS region. By intervening only where it adds value, EREP allows regional institutions like ECREEE to focus resources on low-capacity or underserved countries, especially where energy poverty is most acute. This can accelerate rural electrification and off-grid solutions in lagging areas. The downside is that "added value" conditions may slow down urgent interventions in high-poverty zones if bureaucratic evaluations are required to prove regional relevance.

The following Chapter discusses how the national States view electricity and its impact on their implementation of the recommendations by the supranational bodies.

CHAPTER 3 – ANALYSIS OF THE ROLE OF THE NATIONAL STATES IN COMBATING ENERGY POVERTY USING THE SEM PARADOXES.

This Chapter uses the SEM Paradoxes in analysing the tension between the national States - France and Nigeria. It analyses how the national States' view electricity with the aim of determining which of the paradoxes informed the interventions, if any, and the sufficiency or otherwise of the interventions.

3.1.CASE STUDY - FRANCE

The year 2022 saw a major energy crisis emerge, on a scale not seen since the oil shocks of the 1970s. France and Europe in fact faced three independent but simultaneous crises which compounded one another:

- Soaring gas prices, amid concerns about Europe's security of supply in the wake of Russia's invasion of Ukraine. Prices first surged in late 2021, as the economy was recovering from the COVID-19 crisis. They were then pushed even higher by the war in Ukraine and the resulting reduction of Russian gas supplies to Europe, at a time when the entire European continent was worried about security of supply;[111]
- A crisis of French nuclear power generation after the discovery of a generic fault affecting the fleet's most recent reactors, following the discovery of a stress corrosion phenomenon, which led to the shutdown of numerous units for testing and repair starting late in 2021. This pushed yearly nuclear power output down to its lowest level on record since 1988, some 30% below the yearly average of the past 20 years;[112] and
- A lengthy drought that drove hydropower output in France down to its lowest level since 1976 and had a similar impact across much of Europe.[113]

3.1.1. The Social Contract – Commodities vs. Public Good

In France, the current fuel poverty policy was created in 2010 during the French environment roundtables called, "Grenelle de l'environnement", under the "Grenelle 2" law n° 2010-788.' The law defines a person suffering from fuel poverty as, "anyone who encounters, in their

[111] France (2022) Electricity Review Full Report, Réseau de Transport d'Electricité (RTE) https://assets.rte-france.com/analyse-et donnees/202308/Bilan%20%C3%A9lectrique%202022%20rapport%20GB_version_finale%20(2).pdf
[112] France (2022) RTE Report
[113] France (2022) RTE Report

home, particular difficulties in obtaining the energy required to meet their basic energy needs due to insufficient resources or housing conditions".[114] France does not use a precise legal label such as "vulnerable consumer" (as the EU recommends), but rather embeds vulnerability within the fuel poverty framework, primarily tied to socioeconomic status (e.g., income, unemployment, age) and housing conditions (e.g., type, size, age, and energy performance) etc. French household expenditure on energy is comprised majorly of the cost of household gas and electricity; the latter produced predominantly by nuclear power. The historical stability of electricity prices has benefitted all households across the income distribution. Recently, however, expenditure on energy has risen significantly.[115]

In 2020, an average French household in the bottom 20% of the income distribution spent 5.5% of living expenditure on household energy, with very little change over the past 25 years. Based on Eurostat data, it is estimated that such a household now spends about 7.3% of total living expenditure on energy. This is about a third more than in 2020, equal to roughly €300 more per year, and despite the government's price caps on electricity and gas. Whilst poorer households spend less on energy (and everything else) than richer households, they spend a larger proportion of their incomes on energy bills as can be seen in Figure 5.[116]

[114] Bérangère Legendre, Olivia Ricci, 2015, "Measuring Fuel Poverty in France: Which households are the most fuel vulnerable?", Energy Economics, Volume 49, Pages 620-628, ISSN 0140-9883, https://doi.org/10.1016/j.eneco.2015.01.022.
[115] Legendre et al, 2015
[116] Carl Heinemann, Iakov Frizis, Istvan Heilmann, 2022, "Fossil Fuel Prices and Inflation in France", Final Report, Cambridge Econometrics Cambridge, UK https://www.camecon.com/wp-content/uploads/2022/11/France-report_FINAL3.1_PDF.pdf

Sources: Eurostat: lc lci r2 a, prc hicp manr, hbs str t223, ilc di01

Figure 5: Household incomes by quintile and household expenditure on energy as a share of total household expenditure[117]

In autumn of 2021, the French government introduced a number of measures to tackle the rising cost of energy for households and businesses in response to the increases in fossil fuel prices, most notably price caps on retail gas and electricity prices[118]. A tariff shield on electricity and gas was announced, effectively blocking the levels of regulated tariffs (and for those indexed on the regulated tariffs for gas).

Consumers in France have different electricity contract options:[119]

1. Regulated Tariff (tarif réglementé): Set by public authorities, available from EDF and local distribution companies.
2. Fixed-Rate Contracts (tarif fixe): Prices remain unchanged for the contract duration.
3. Indexed Tariffs (tarif indexé): Prices fluctuate based on regulated tariff variations.
4. Market-Based Pricing (prix du marché): Prices adjust according to wholesale electricity rates.

[117] Heinemann et al., 2022
[118] Bruegel (2022). National policies to shield consumers from rising energy prices. Website. [Online] https://www.bruegel.org/dataset/national-policies-shield-consumers-rising-energy-prices
[119] Prasanth Kumar, 2025, "Electricity Prices in France to decrease by 15% from 1st February 2025", Article No. 297, https://prasanthragupathy.com/2025/02/electricity-tariffs-in-france-to-decrease-by-15-from-1st-february-2025/

For a consumer with a regulated tariff, a standard electricity bill comprises the following:

- 38% of the cost is related to the supply.
- 36% to various taxes.
- 26% to transport, the TURPE (Tariff of Use of Public Electricity Networks).
- The bill also includes a monthly subscription charge (Abonnement) and consumption charges (Consommation) of 20%.[120]

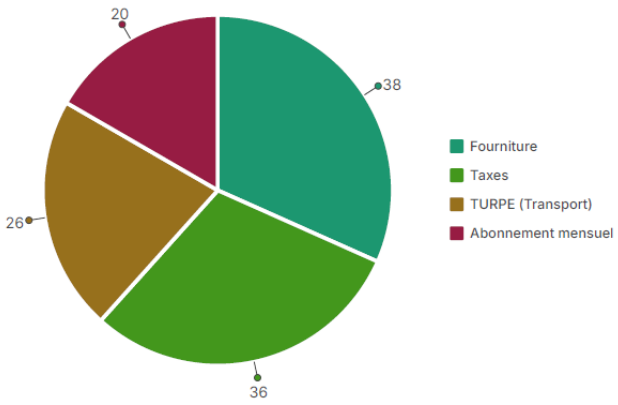

Figure 6: composition of France's electricity bill[121]

The government also reduced the main tax on electricity (TICFE, passing from €22.5 per MWh to €0.5-€1 per MWh); an increase in the volume of the "regulated access to historic nuclear electricity"[122] from 100 to 120 TWh to help alternative suppliers access cheaper generation. A subsidy scheme for gas and electricity providers was introduced to compensate for the difference between gross market prices and retail tariffs; and a legal obligation for the incumbent suppliers of the regulated tariffs (Engie for natural gas, EDF for electricity) to block the tariffs at their current levels.[123]

These direct price measures have also been flanked by two direct subsidies to households: firstly, an additional "energy cheque" of €100 for the 600,000 low-income households that already benefited from the energy cheque scheme; secondly, a €100 "inflation premium" paid to 38 million citizens (those under the median income level). The measures targeted at energy consumption in buildings have been complemented by a state-subsidised reduction of road fuel

[120] https://www.french-property.com/guides/france/utilities/electricity/bill accessed 9 June 2025
[121] Image generated by Gamma ai on 9 June 2025
[122] ARENH scheme (accès régulé à l'électricité nucléaire historique) was created in 2010 to foster market liberalisation by enabling alternative suppliers to propose competitive retail offers. Without such access to the largely amortised and low-cost nuclear generation, no actor could possibly compete with the market power of the state-owned company EDF.
[123] Rüdinger, Andreas, 2023, "Exiting the Energy Crisis: Lessons Learned from the Energy Price Cap Policy in France", Intereconomics. https://58.5-9.10.2478/ie-2023-0003.

prices of 10 to 30 cents per litre between April and December 2022. The French government also published an energy demand reduction plan in July 2022, called 'Plan sobriété énergétique', with the aim of reducing energy consumption by 10% over the next two years.[124]

In the context of the social contract, the State protected citizens through subsidies and price caps, reinforcing its role in safeguarding energy as a basic need rather than a commodity. While the market treated energy as a volatile commodity; the government framed it as a public good, especially via price freezes and EDF control. The actions of the French State to step in reinforced the State's responsibility for protecting its citizens from market volatility, aligning with energy justice principles such as distributional equity and recognitional justice.

3.1.2. Energy Justice Framework – State vs. Markets

Key wholesale electricity prices in the EU are based on a marginal price model, established by EU legislation. In the electricity market, the power sources with the cheapest operating cost are used first, and power plants that are more expensive to operate are added until total electricity demand in the market is satisfied. This is known as merit order. The last, i.e. the marginal, and therefore most expensive plant activated to satisfy demand sets the price for the whole market. This means that the market clearing price is equal to the marginal price of power production. As a result, wholesale prices can vary significantly during the day, as demand varies at different times of the day and night.[125]

[124] Ministère de la Transition écologique et de la Cohésion des territoires & Ministère de la Transition énergétique, (Ministère de la Transition Ecologique) 2022b. Sobriété énergétique : un plan pour réduire notre consommation d'énergie. Website. [Online] Available at : https://www.ecologie.gouv.fr/sobriete-energetique-plan-reduire-notre-consommation-denergie

[125] Heinemann et al., 2022

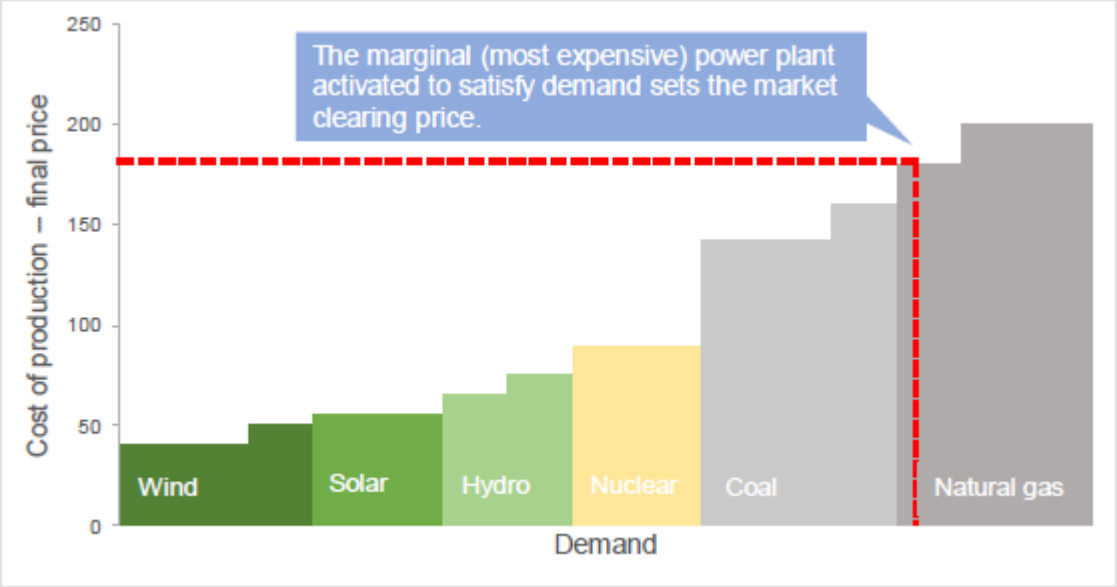

Figure 7: Electricity Price Setting in EU Member States[126]

Until 2021, France had lower household electricity prices than its European peers. The large French nuclear fleet coupled with an energy market dominated by a State-controlled and former monopoly firm, Électricité de France (EDF), has contributed to French households facing lower energy bills compared to their peers. This is related to the fact that France relies on subsidies and direct price controls to ensure affordable electricity (as well as affordable household gas). In European electricity markets, electricity producers typically sell electricity to energy suppliers that then provide electricity to household and business consumers. In France, the main difference to other market-based systems is that the State-owned producer, EDF, sells a large part of its production at a discount.[127] Since 2019, however, prices have come closer to those in neighbouring countries, as shown in Figure 8.[128]

[126] Heinemann et al., 2022
[127] Ouest France, 2022. Pouvoir d'achat : l'Assemblée nationale a adopté le projet de loi « d'urgence ». [Online] Available at: https://www.ouest-france.fr/economie/pouvoir-d-achat/pouvoir-d-achat-huile-de-friture-et-prix-de-l-electricite-seance-a-rallonge-a-l-assemblee-d36ccd8d-a22b-4db0-a320-f214faa12879
[128] France (2022) RTE Report

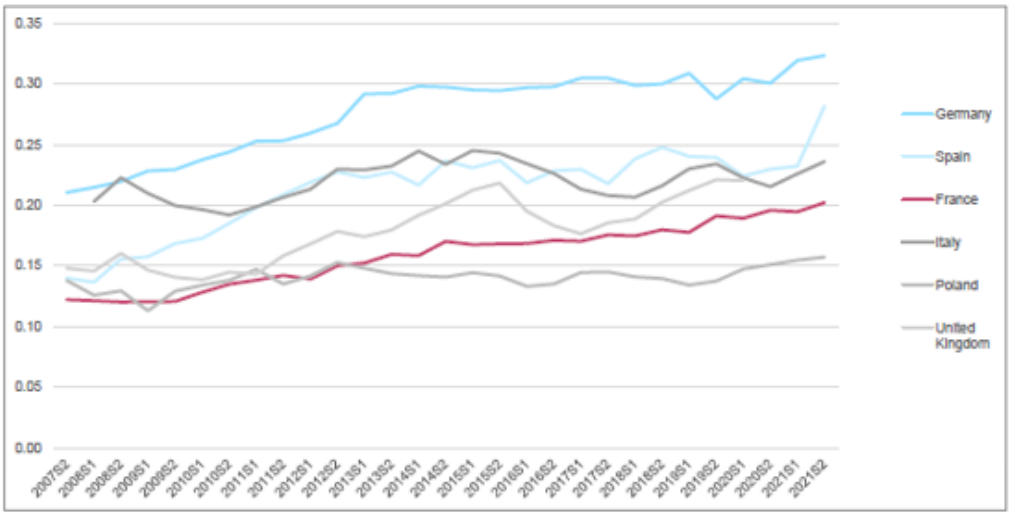

Figure 8: Retail electricity prices in France and EU MS Source: Eurostat, NRG PC 204

In 2021, France's energy bill reached €115 billion in 2022, about €70 billion higher than in 2019 due to higher fossil fuel prices as well as greater use of liquefied natural gas, imports of which surged after Russia invaded Ukraine.[129] Electricity imports added around €7 billion to France's energy bill in 2022, whereas exports had generated a profit of close to €3 billion in 2021 (and €2 billion on average between 2014 and 2019).[130]

In early 2022, a subsidy scheme was deployed to help the private sector and local authorities pay their significantly higher energy bills. Initially based on very complex criteria, this scheme later applied to all companies experiencing an energy bill increase of at least 50%, with energy costs representing at least 3% of gross revenues, and aims at covering approximately 25%-35% of the total bill increase.[131] The obligation of EDF to sell more nuclear electricity to competing suppliers at an adjusted price of €46.2 per MWh, versus €42 per MWh coupled with the complete nationalisation of EDF for around in response to mounting debt in the company, and increased investment in the maintenance of the existing nuclear fleet (€50bn) also helped cushion the inflationary effect on the retail market.[132] In 2023, an additional price shock absorber was introduced for small and medium enterprises by local authorities aimed at limiting the recent increase of tariff levels by approximately 25%.[133]

[129] https://lekiosque.finances.gouv.fr/fichiers/Etudes/Thematiques/3T2022.pdf
[130] Rüdinger, 2023
[131] Rüdinger, 2023
[132] Heinemann et al., 2022
[133] Heinemann et al., 2022

The energy crisis was a stress test for market-led energy governance in France. In the context of energy justice, it exposed fundamental flaws in assuming markets alone can deliver resilience, equity, and decarbonization. The State's decisive action to re-assert its control and re-stabilise the system through tariff shields, nationalisation of EDF, price control mechanisms demonstrates that in times of structural crisis, markets require the state not just as a regulator but as a direct actor and guarantor of energy justice.

3.1.3. MLG – Supranational vs. National

In 2022, for the first time since 1980, France was a net importer of electricity, with a yearly net import balance of 16.5 TWh, or just under 4% of total domestic consumption. The net import balance particularly deepened during the summer, a period during which France usually exports much more than it imports: the months of July, August and September alone accounted for 60% of the net import balance, i.e. 10 TWh.[134] This was the direct result of nuclear fleet availability falling to a historic low, combined with the drop in hydropower output (due to the drought that hit Europe in the spring and the summer) during the period. Spot prices moved in line with the economic fundamentals of the market, reflecting changes in fossil fuel prices and the availability of low-carbon generation capacity. New records were set during the summer (the average spot price during the week of the 22nd of August was 612 €/MWh), when nuclear and hydropower output were at their lowest.[135]

Against this backdrop, the power system proved resilient: France did not experience any supply disruptions. This outcome is attributable to a structural decline in power demand in France and neighbouring countries, and to the fact that gas and electricity exchanges continued to function in accordance with European market rules. In particular, short-term markets gave the right economic signals during periods of tight supply. This was notably the case during the summer, when hydropower and nuclear output dropped sharply, and market prices rose to reflect those economic fundamentals.[136]

Despite the above benefits, the increasing policy fragmentation among Member States remains of crucial importance. Fearing that the Union might be unable or too slow to react collectively, Member States tend to revert to national approaches to face the energy crisis. In some cases, the European Union itself has become the scapegoat, as highlighted by the growing criticism

[134] France (2022) RTE Report
[135] France (2022) RTE Report
[136] France (2022) RTE Report

targeting the alleged weaknesses of the European electricity market, sometimes referred to as the main culprit of the surge in electricity prices. This tendency has become particularly vivid in France recently, with various members of the government and Members of Parliament asking for a massive overhaul of the EU electricity market to "decouple" gas and electricity prices, sometimes even referring to a "Frexit" of the integrated energy market.[137] This overly simplistic approach neglects the fact that France has long been one of the main beneficiaries of the integrated electricity market, considering that it has been the greatest net exporter of electricity for years (with up to 60 TWh some years), while also heavily relying on imports during cold winters, because of its high share of electric heating.[138]

3.2.CASE STUDY – NIGERIA

The most prominent of the energy law in Nigeria is the Electricity Act (EA) of 2023 which repealed the Power Sector Reform Act of 2005 (EPSR Act 2005). The EA establishes a thorough institutional framework for the Nigerian power sector, encompassing facets such as electricity generation, transmission, distribution, supply, trading, system operations, electricity-related offences, and the enforcement of consumer rights and obligations.[139] Nigeria is one of only two ECOWAS countries (alongside Ghana) that have fully unbundled their electricity sectors into separate generation (Genco), transmission (Transco), and distribution (Disco) entities. Nigeria has 12 licensed Discos, a dedicated transmission company (TCN), and several IPPs. This level of unbundling positions Nigeria as a reform leader, essential for enabling competitive markets and regional trade. Nigeria's Electricity Supply Industry (NESI) regulator, the Nigerian Electricity Regulatory Commission (NERC), has the highest regulatory involvement among all ECOWAS countries alongside Ghana and Liberia. NERC is fully responsible for key tasks such as setting tariff levels and structures, overseeing service quality, reviewing sector investment plans, and validating contracts and market behaviour.[140]

The COVID 19 pandemic impacted the NESI in several ways. Firstly, the Government's response by imposing a total lock down of economic activities in the public and private sectors, forced over 200 million residents to remain at home, thereby changing the dynamics of electricity supply from industrial and commercial to purely residential loads. Thus, electricity

[137] Rüdinger, 2023
[138] Rüdinger, 2023
[139] Akrofi and Antwi, 2020
[140] Comparative Analysis of Electricity Tariff in ECOWAS Member Countries, 2019

uses in homes spiked during the day, while electricity uses in factories and businesses remained flat.[141] Utility revenues and market remittances as well as compliance monitoring was also affected as distribution operators attributed non-performance to COVID-19 restrictions. Nigeria's COVID-19 response included a $500,000 relief fund from the Nigerian off-grid energy investing company known as "All-On," which was established by Shell.[142]

3.2.1. Social Contract – Commodities vs. Public Good

In 2021, Nigeria was among the top three countries with the highest number of people lacking electricity access. The figures stood at 86 million for Nigeria, 76 million for the Democratic Republic of Congo, and 55 million for Ethiopia. Challenges persist in Nigeria's electricity generation and supply, with frequent power outages, system instability, and fluctuations in the national grid.[143]

Nigeria practices incentive-based Regulation with the Multi-Year Tariff Order (MYTO) pricing mechanism which allows for minor reviews bi-annually and major reviews after 5 years. According to NERC, minor reviews are to be carried out after every six months to cater for changes in the variables on which the tariff is predicated upon to achieve a cost reflective tariff for the growth and sustainability of NESI.[144] This led to the decision to undertake a major review in 2020, in line with the MYTO model. When COVID 19 spread to pandemic proportions in the first quarter of 2020, the issue of tariff review became unsaleable to Nigerians who joined the world in observing lockdown restrictions, thereby bringing all economic activities to a halt. The restriction in movement meant that consumers were locked in their homes 24/7 with poor electricity supply. The poor supply led to online protests amongst consumers who demanded for improvement in supply hours and increase in electricity tariff must be preceded by metering and improved service.[145]

NERC responded to this urgent supply challenge by directing utility companies to not disconnect customers for non-payment of electricity bills during the lockdown and suspension of the initial tariff increase scheduled for April 1, 2020. This intervention was albeit temporary as it was later followed by the approval of tariff increases for six DisCos, with the option to

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[141] Charles Akoso and Adamu Ibrahim, 2020, "Regulatory Response to the COVID-19 Pandemic in Nigeria", https://erranet.org/wp-content/uploads/2020/11/Charles-A.-Akoso-Adamu-H.-Ibrahim-Regulatory-Response-to-the-COVID-19-Pandemic-in-Nigeria.pdf

[142] Akrofi and Antwi, 2020

[143] Tracking SDG: The energy progress report 2023 https://www.irena.org/Publications/2023/Jun/Tracking-SDG7-2023

[144] Akoso and Ibrahim, 2020

[145] NERC (2015). *MYTO 2015 Tariff Schedule for Electricity Distribution Companies in Nigeria* *https://nerc.gov.ng/index.php/home/myto*

adjust the tariffs every six months based on specific indices.[146] The directive to undertake bi-annual tariff increments to achieve cost reflectiveness despite the high number of vulnerable consumers shows that electricity is being treated as a commodity in the NESI by the regulator.

3.2.2. Energy Justice – State vs. Markets

Nigeria uses a hybrid tariff methodology under its MYTO, which blends cost-plus (rate of return) and incentive-based regulation (price/revenue caps) and classifies its residential consumers into five tariff bands under the MYTO framework (Band A–E)[147], with Band E typically including the lowest-income and lowest-consumption consumers.

Nigeria also employs a targeted subsidy mechanism known as the "social tariff", which applies to residential electricity consumers who use less than 50 kWh/month. This category is considered vulnerable and qualifies for significantly lower tariffs. The social tariff is intended to reduce energy poverty and support affordability for low-income users.[148]

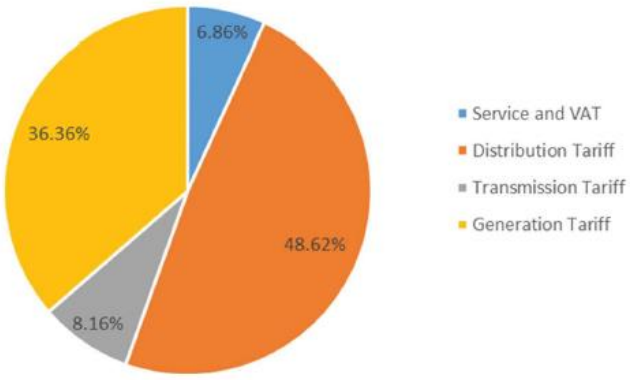

Figure 9: Electricity bill components in Nigeria[149]

While there isn't a legal term directly defining energy poverty, key components of provisions against energy poverty under the Electricity Act of Nigeria include: access and affordability; renewable energy integration; energy efficiency measures; social inclusion; infrastructure development; financial support mechanisms; community engagement; and regulatory compliance.[150] According to a PWC report, Over 55% of household income is spent on food and beverages. Only about 2% of household income is spent on energy (African average is

[146] https://www.thecable.ng/nerc-approves-electricity-tariff-hike-for-six-discos/ accessed 13 June 2025
[147] NERC MYTO Tariff Schedule, 2015
[148] Akoso and Ibrahim, 2020
[149] Babatunde, O., Buraimoh, E., Tinuoye, O., Ayegbusi, C., Davidson, I., & Ighravwe, D. E., 2022, "Electricity sector assessment in Nigeria: the post-liberation era". *Cogent Engineering*, *10*(1). https://doi.org/10.1080/23311916.2022.2157536
[150] Babatunde et al., 2022

5%).[151] Nigeria's collection rate was only 66%, the lowest in ECOWAS, indicating major financial leakage. Total distribution losses were 15.7%, combining technical and non-technical losses.[152]

Table 4: collection rate statistics in ECOWAS MS Source: Data Collection by AFDB-EREA Authors[153]

	Collection rate (%)
Cabo Verde	No data available
Nigeria	66.0%
Guinea	70.0%
Guinea-Bissau	81.0%
Liberia	82.0%
Ghana	86.8%
Sierra Leone	88.0%
Senegal	88.9%
Benin	91.2%
Burkina Faso	91.2%
The Gambia	94.0%
Togo	94.4%
Côte d'ivoire	96.1%
Mali	98.0%
Niger	98.0%

The utility firms (DisCos) maintain that it is impossible to improve service without a tariff that is sufficient to cover their costs and reasonable profit margin, while consumers who are 35% metered on the other side argue that an increase in the electricity tariff must be preceded by metering and improved service. Following a request for rate review filed at NERC by the DisCos, the regulator of NESI on September 1, 2020, announced a new tariff regime called, Service Reflective Tariff (STF)[154] with upward review in rates for some consumer groups in certain service clusters (bands)[155]. This review was consistent with the government's policy on gradual transition to cost reflective tariff, aimed at eliminating the need for further subsidy in the power sector. Despite the call by Nigerians for free power as palliative to cushion the impact of COVID 19 on Nigerian families, the NERC sustained its efforts towards the realization of a cost-reflective tariff for NESI. A proposed date of July 1, 2020, was publicized for the kick off of the new tariff. However, the Government again intervened and moved the implementation

[151] https://www.pwc.com/ng/en/assets/pdf/covid-19-power-sector.pdf accessed 13 June 2025
[152] Comparative Analysis of Electricity Tariff in ECOWAS Member Countries, 2019 accessed
[153] Comparative Analysis of Electricity Tariff in ECOWAS Member Countries, 2019
[154] The SBT aims to align electricity tariffs with the quality of service delivered by Discos
[155] https://nerc.gov.ng/faq/electricitytariffs/#:~:text=Service%2DBased%20Tariff%20(SBT),improvement%20in%20quality%20of%20supply.

date citing timing as inappropriate due to the impact of COVID 19 lock down on homes as major reasons.[156] The challenge of restructuring operations to meet customer demand in the midst of a rampaging pandemic made it expedient for the government of Nigeria to cave in to industry demand for an upward review of electricity tariff in September 2020. This tariff review was christened Service Based Tariff, implying that the DisCos were incentivized to earn as they improve service in a cluster. The extraordinary tariff review was approved for NESI at such a difficult time of COVID-19 after NERC and stakeholders extracted a commitment from DisCos to improvement in service hours and quality of service.[157]

From the above analysis we see the reinforced tension between the regulator and State as to how to treat electricity either as a commodity or a public good. While State intervention aimed to secure some relief for vulnerable consumers, the regulator leaned more towards protecting the viability of the utilities and treated electricity more as a commodity than a public good.

3.3.3. MLG – Supranational vs. National

Nigeria's National Renewable Energy and Energy Efficiency Policy (NREEEP**)**, adopted in 2015, draws heavily from section 4.4.2 of the EREP which requires Member States to develop national renewable energy policies. It reflects several of its core objectives, including increased renewable energy penetration in the energy mix (especially solar), off-grid electrification strategies to improve rural access, private sector involvement in generation and distribution and promotion of energy efficiency and conservation technologies. However, the NREEEP deviates from the EREP in terms of targets. While the EREP sets a target of 22% of the rural population to be served by off-grid RE by 2020, 25% by 2030, the NREEEP aims to increase solar energy's contribution to the total energy supply mix to 3% by 2020 and 6% by 2030. This figure has been reviewed upward by successive policies such as the Nigeria Renewable Energy Master Plan (REMP)[158] and the vision 30:30:30.[159]

[156] Akoso and Ibrahim, 2020
[157] Akoso and Ibrahim, 2020
[158] The REMP sets a of 13% in 2015, 23% by 2025 and 36% by 2030 of renewable electricity of total electricity generation cited in https://nep.rea.gov.ng/ accessed 11 June 2025
[159] The renewable energy targets promoted by the Nigerian Government's vision 30:30:30, includes the installation of 30 Gigawatt by 2030 with a share of 30 percent renewables. GIZ (2015), The Nigerian Energy Sector, an Overview with a Special Emphasis on Renewable Energy, Energy Efficiency and Rural Electrification. Nigerian Energy Support Programme (NESP) in https://energyforgrowth.org/wp-content/uploads/2019/11/How-big-is-Nigerias-power-demand-2.pdf

About eight months after NREEEP came into force, on December 8, 2015, the Feed-in-Tariff policies of NERC for renewable energy sourced electricity in Nigeria came into force. The Feed-in Tariffs are subject to review every three years only for new projects.[160] The new system stipulates a purchase obligation on the off-taker (like the Discos) as follows; as a matter of priority, the Nigeria Bulk Electricity Trading (NBET)[161] or its successor shall purchase 50% of the system-established renewable electricity capacity while the off-takers shall take up the remaining 50% of the capacity. Inability to cope with the obligation is to be met with a financial penalty.[162] The establishment of the FiT complied with section 4.6 of the EREP which promotes the need for market-based incentives. The FiT policies ensure the promotion and viability of solar PV based grid expansion in Nigeria. The push to balance cost recovery with subsidies and public support by the government also shows convergence with ECOWAS views on electricity and seeks to strike a balance between electricity as a commodity and as a public good.

[160] Chigbogu G. Ozoegwu, Patrick U. Akpan, 2021, "A review and appraisal of Nigeria's solar energy policy objectives and strategies against the backdrop of the renewable energy policy of the Economic Community of West African States", Renewable and Sustainable Energy Reviews, Volume 143, 110887, ISSN 1364-0321, https://doi.org/10.1016/j.rser.2021.110887.

[161] NBET is responsible for buying electricity from generation companies and selling it to the DisCos. NBET was established in 2010 to help improve the efficiency of the electricity market and to ensure that all consumers have access to electricity

[162] Nigerian Electricity Regulatory Commission. Regulations on feed-in tariff for renewable energy sourced electricity in Nigeria. 2015. Nigeria, https://www.lse.ac.uk/GranthamInstitute/wp-content/uploads/laws/2027.pdf accessed 11 June 2025

DISCUSSION AND CONCLUSION

The divergence in the definition of energy poverty by the EU and France highlights a crucial dynamic enshrined in Article 194 (2) of the TFEU[163] which gives Member States the freedom to determine the conditions for exploiting its energy resources. This could by extension be extended to France's choice of defining and dealing with the issues of energy poverty.

Table 5: comparison, energy poverty definition and indicators between EU and France.

Indicators	**France**	**EU**
Definition	Fuel poverty is when someone has "particular difficulties in obtaining the energy needed to meet their basic needs due to the inadequacy of their resources or housing conditions."	No single binding EU definition: EU recommends identifying vulnerable consumers using indicators like income, housing quality, and energy costs
Key focus	Emphasizes basic needs, housing quality, and income constraints	Focus on energy affordability, housing conditions, and access for vulnerable groups
Legal binding status	Legally binding in French law (since 2010)	EU recommendations are non-binding but included in the Energy Efficiency Directive (Art. 3, 7 & Annexes)
Targeted groups	Low-income households, SMEs, Utilities	Vulnerable consumers, the elderly, rural poor, disabled, and children

France's interventions in retail markets highlights the SEM Paradoxes tension: the conflict between market-based governance models, such as the EU's marginal pricing mechanism, and national sovereignty in welfare protection. The EU's insistence on the presence of a market

[163] Energy Policy: General Principles (2023) https://www.europarl.europa.eu/factsheets/en/sheet/68/energy-policy-general-principles accessed 9 June 2025

failure which must be proved by Member States prior to an intervention shows that the competition between commodity and the public good is very much present. The reservation of the right of the Commission under Article 106(2) to challenge a Member States' intervention where it deems that a market failure has not been sufficiently established also shows that for the EU, the markets come first before the SGEI.

While EU rules dictate that electricity markets be governed by cost-reflective, competitive models, France disrupted this norm by implementing price caps and forced sales of nuclear power at below-market rates. These deviations underscore a national commitment to social solidarity over strict market efficiency. Frances's interventions through price caps and direct subsidy interventions shows that the public good comes first before the markets. However, France's push to exit the EU's integrated electricity market may be a little shortsighted. France, being a net beneficiary of energy imports during its nuclear fleet outages should be the champion for a more integrated market. Moreover, in larger markets electricity prices become much less volatile. This is to be welcomed in hourly markets, but is even more valuable in longer-term markets, where it reduces risk for investors. Another major benefit of integration would be the reduction in demand for backup capacities, which are needed to ensure secure electricity supply during periods with low availability of variable renewable electricity generation. [164]

In the context of the SEM Paradoxes, the treatment of electricity by the EU and France during the crisis showed that while the supranational body and the national State views electricity as a public good, France's laws favoured more the public good which requires the State to act not just as a regulator but a decision maker in times of crisis to ensure the equitable protection of vulnerable consumers.

The north-south comparison shows that having a strict market outlook towards electricity is not sustainable. The impact is that vulnerable consumers bear the brunt of a cost-reflective market-led electricity pricing system. While France introduced more subsidies, Nigeria's sustained withdrawal of subsidies, particularly at the crucial point of the pandemic, shows that electricity is viewed more as a commodity than a public good. The absence of a definition of energy poverty by both the Supranational body and national State despite the high level of

[164] Georg Zachmann, Carlos Batlle, Francois Beaude, Christoph, Maurer, Monika Morawiecka and Fabien Roques, 2024, "Unity in power, power in unity: why the EU needs more integrated electricity markets", Policy Brief, https://www.bruegel.org/policy-brief/unity-power-power-unity-why-eu-needs-more-integrated-electricity-markets

energy poverty also lends credence to this. Nigeria does not have a codified definition of energy poverty or vulnerable consumers. This may be linked to the fact that the energy access rate in Nigeria is still very poor and a strong indicator of the existence of energy poverty. Out of the 733 million people without access to electricity in the world, about 91.94million live in Nigeria. In other words, 1 out of 8 persons without electricity live in Nigeria.[165]

Article 4.1 merely grants the ECOWAS a supervisory role of its Member States. Most of its intervening powers were not expressly stated in the policy but had to be inferred from joint reading of other provisions. Thus, ECOWAS lacks the authority to intervene in energy matters of its Member States in the same way the EU can under established circumstances.

The persistent failure to provide reliable, affordable energy by the Supranational body and national State reveals a crack in this contract that energy poverty is not just a technical or economic issue, it represents a failure of public accountability and a violation of citizens' rights to dignity, opportunity, and development. Nigeria's power sector reforms have long favoured a market-oriented model, characterized by privatization, cost-reflective tariffs, and performance-based regulation. Nigeria's move towards the SBT to ensure financial viability of the Disco reveals the social contract tension. The COVID-19 pandemic forced the State to reassert control and treat electricity as a public good revealing contradictions in the country's regulatory trajectory. This move has been largely ineffective as the Discos still struggle to be profitable despite the series of tariff reviews.[166]

The introduction of results-based subsidies by Article 4.6 of the EREP shows a more balanced approach towards the Supranational view of energy as a commodity but also as a public good. It also shows the tensions between the treatment by the national State. Nigeria's social tariff mechanism on the other hand reflects a well-intentioned but only partially effective effort to provide affordable electricity access to vulnerable populations. While the design is clear, implementation bottlenecks, including poor metering, high losses, and weak revenue collection, dilute its impact.

The conflict between economic liberalization and social protection, shows a key tension in ECOWAS and Nigeria's energy trajectory. While market-based mechanisms are critical for long-term sustainability, their success hinges on public legitimacy, transparent communication,

[165] https://proshare.co/articles/energy-poverty-in-nigeria-prevalence-human-development-and-public-policy-options?category=Power&classification=Read&menu=Economy&utm_source=chatgpt.com
[166] Akoso and Ibrahim, 2020

and meaningful service improvement conditions that are still developing at both the Supranational and national level. If the ECOWAS intends to truly recognize energy as a common good, it must amend its policy to remove ambiguities and spell out circumstances that constitute "added value". Comprehensive reform of subsidy targeting, improved customer data, and fiscal support may also be required to make the social tariff more equitable and financially viable.

Table 6: SEM Analysis

SEM Indicators	EU	France	ECOWAS	Nigeria
Energy Poverty definition	+	+	-	-
Vulnerable consumers	+	-	-	-
Social contract	+	++	+	+
Energy justice	+	++	+	+
Multi-level governance	++	++	+	+

LEGENDS

++	**Very satisfactorily meets the indicators**
+	**Satisfactorily meets the indicators**
–	**Does not satisfy the indicators**
––	**Absent**

The analysis in chapters two and three shows that energy has remained largely treated as a commodity, by the analysed actors – the EU, ECOWAS and Nigeria – with the exception of France. The reactive actions of the EU, ECOWAS and Nigeria in the crisis highlights the trade-offs in the SEM Paradoxes between ensuring profitability and affordability of electricity tariffs for vulnerable consumers and maintaining the tenets of a liberalised market at the Supranational and national level. The dominant framing of electricity as a commodity shows a failure of the social contract requiring short-lived interventions.

A failure of the social contract means that citizens lose trust in the governments to protect their constitutionally guaranteed right to basic essential services. To regain the trust, it is pertinent for both the Supranational bodies and national States to review the way electricity is being treated. The failure of energy as a commodity logic suggests the need to reframe energy as a public good, something that must be universally provided and protected from pure market logic. The access and affordability issues from both north-south comparison shows that the market alone is not sufficient to guarantee the social contract and energy justice principles. If the state recognizes energy as a public good, it must intervene through subsidies, regulation, and direct investment to ensure equitable access, even where markets retreat.

To honour the Social Contract, the following recommendations should be considered by the supranational bodies and national States:

For the EU, honouring the social contract will involve:

- **Applying a proportionality test to SGEI justifications**: The Commission must ensure that both EU State aid assessment and national SGEI legislations contain provisions that ensure SGEIs are proportionate in scope and intensity to the public service objectives they intend to achieve. The scope of SGEIs should not be defined so broadly as to include commercial services unrelated to the public interest need (e.g., bundling profitable express courier services with unprofitable public mail delivery to justify aid) or contain hidden cross-subsidies that unnecessarily burden users or distort competition.[167]
- **Promoting renewable energy technologies:** the Commission must continue to promote widespread adoption of low-carbon and renewable technologies energy efficiency measures and increased electrification rates in heating and in transport among Member States to avoid fossil fuels-induced crises in the future.[168]
- **Building trust between partners and institutions to monitor and enforce common internal market rules:** subsidising electricity for domestic industrial consumers (to outcompete firms located in other member states) can escalate into detrimental subsidy races or border closures, with limited (or even detrimental) consequences for the global competitiveness of EU industry. Convincing Member States of the need to participate

[167] Collins and Navarro, 2021
[168] Zachmann et al., 2024

in the market integration will require sufficient redistributive tools, (such as joint funds to counter distributional issues while net social welfare increases) and creating enhanced roles for either joint EU or regional institutions.[169]

For France, honouring the social contract will involve:

- **Phasing out fossil fuel subsidies**: the lure of short-term, "quick fix" measures will only result in the loss of long-term solutions.[170] The electricity market design based on marginal pricing means natural gas prices often affect wholesale electricity prices. This means that rising fossil fuel prices also push up electricity prices, especially during demand peaks.[171] Fossil fuel subsidies should be redirected to financing renewable energy sources that can guarantee energy security in and out of crisis.
- **Ramping up renewable energy generation:** France must harness the potential of renewable energy to alleviate cost pressures through lower consumer prices in transport, heating and electricity can be hard to identify due to market structures and policy provisions. Ramping up the share of renewables in electricity production should eventually affect wholesale prices, if total electricity demand can more often be satisfied with renewable sources alone. Likewise, expanding the use of renewables in household heating and transport reduces consumer exposure to fossil fuel price volatility in international markets.[172]
- **Transforming the energy voucher into an electricity voucher:** to better support France's climate objectives and encourage the use of clean energies, the current energy voucher could be converted into a clean energy voucher aimed at promoting consumer uptake of renewable energy. Additionally, the distribution of the voucher could be conditioned to the proportion of the energy bill relative to household income to better reflect the actual energy needs of recipients.[173]

For the ECOWAS, honouring the social contract will involve:

[169] Zachmann et al., 2024
[170] Rüdinger, 2023
[171] Heinemann et al., 2022
[172] Heinemann et al., 2022
[173] Patrick Lenain, 2024, "Economic Policies For Affordable, Secure And Clean Energy Insights From France", Council on Economic Policies (CEP) Policy Brief, https://www.cepweb.org/wp-content/uploads/2024/05/Lenain-2024.-Economic-Policies-for-Affordable-Secure-and-Clean-Energy-France.pdf

- **Promoting off-grid and renewable energy technologies directly in fiscal and regulatory measures, especially in underserved regions:** Given the changing and positive trends in terms of technologies, markets and regulatory frameworks, renewable energy power generation has the potential to be a full-fledged component of power production for ECOWAS Member States.[174] ECOWAS must continue to provide investments opportunities to promote the wide scale implementation of renewable energy technologies in its Member States in line with the EREP.
- **Doing more than inviting private capital; the ECOWAS must reassert its developmental role in the actualisation of the WAPP:** The extension of access to transmission networks across the region will provide a more integrated energy system for the region. Investing in inclusive energy systems, and ensuring that access is based on need, not purchasing power is key to achieving the social contract.[175] The ECOWAS must also take a more active role in aligning the national policies of its Member States with the EREP, focusing on affordability, sustainability, and equity.
- **Promoting research and development in renewable energy technology**: the focus should be on building domestic capacity and skills in policy, conversion, efficient utilization and storage of solar energy.[176] This will ensure adequate capacity and skill in implementing EREP and national policies and achieving all the stated objectives, both in the short-term and the long-term.

For Nigeria, honouring the social contract will involve:

- **Undertaking grid rehabilitation:** the current transmission grid cannot handle the generation capacity required to achieve total electrification of the country.[177] An overhaul of the current transmission grid and building of a smarter grid is key to solving the country's electrification access gap. The government must also implement policies for integrating and interlinking renewable energy technologies, particularly, solar mini grids with the national grid to be able to guarantee basic electricity access for its citizens.

[174] Awuah, 2021
[175] Sohn & Yeboah, 2014
[176] Comparative Analysis of Electricity Tariff in ECOWAS Member Countries, 2019
[177] Olubayo Babatunde, Elutunji Buraimoh, Oluwatobi Tinuoye, Clement Ayebgusi, Innocent Davidson & Desmond Eseoghene Ighravwe, 2023, "Electricity Sector Assessment in Nigeria: the Post-Liberalisation Era", Cogent Engineering, 10:1, 2157536, https://doi.org/10.1080/23311916.2022.2157536

- **Ensuring cost-reflective tariff reforms are accompanied by social safety nets to avoid exacerbating energy poverty**: Only 35% of the grid connected customers were metered as of 2020.[178] The government must ensure that smart meters are deployed to all consumers in the NESI to avoid exorbitant electricity billing which is a characteristic of estimated billing in Nigeria. The use of social tariffs is a well-established practice to protect lower income customers. However, such measures create a need for cross-subsidies. Evaluating the extent of these cross subsidies requires detailed modelling of the cost burden of different customer groups. However, ensuring that any cost shortfall is made up from other customers (or directly from Government), with the burden being spread appropriately across other customers is a critical factor in tariff sustainability.[179]
- **Promoting decentralised renewable energy generation to boost electricity access in the country**: in line with the EREP, the national government should develop a robust long-term plan for incentivising renewable energy technology and increasing electricity access. Monies saved from the removal of fossil fuel subsidies should be channelled to renewable energy technologies to alleviate the upfront cost for low-income households and businesses.

[178] Akoso and Ibrahim, 2020
[179] Comparative Analysis of Electricity Tariff in ECOWAS Member Countries, 2019

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ANNEXURES

ANNEXURE 1 – FRANCE ELECTRICITY DISTRIBUTION STRUCTURE

The French power market is highly concentrated. Electricity generation, still largely dominated by Électricité de France (EDF) the vertically integrated French incumbent utility, is still controlled by the French state. The French transmission system operator, Réseau de Transport de l'Electricité (RTE), and the distribution network operator, Electricité Réseau Distribution de France (ERDF), are 100% owned by EDF. ERDF manages about 95% of the electricity distribution network. In France electricity suppliers and distributors are regulated by the Commission de Régulation de l'Énergie (CRE) that ensures adherence to market regulations.[180]

Active electricity suppliers in France, as of 31 December 2012 –Source CRE (2014).

According to the Directorate for Legal and Administrative Information (Prime Minister) as of February 1, 2025, regulated electricity tariffs in France have been reduced by 15%, following a proposal issued by the Commission de Régulation de l'Énergie (CRE) in January 2025. The new regulated price is set at €239 per MWh (including taxes), down from €281 per MWh in February 2024.[181] This reduction occurs in spite of the formal termination of the electricity

[180] Crosbie, Tracey & Short, Michael & Dawood, Muneeb & Ala-Juusela, Mia & Dorcome, Regis & Huovila, Aapo & Brassier, Pascale. (2015). Generalised business models. DOI: 10.13140/RG.2.1.1900.2960
[181] Prasanth Kumar, 2025

tariff shield, which was confirmed by decree on December 28, 2024.[182] Specifically, the average regulated electricity sales tariff (Tarif Réglementé de Vente d'Électricité, or TRVE) has decreased by 15% for consumers subscribed to contracts indexed to the TRVE, most notably the "Tarif Bleu" contract offered by EDF.[183]

Despite the headline tariff reduction, two key cost components are increasing from 1 February 2025, which could partially offset consumer gains:

- Excise Duty (formerly TICFE): Rises from €21/MWh to €33.70/MWh, returning to pre-2022 levels, increasing the final electricity bill for all consumers.
- TURPE (network usage charge): Undergoes an exceptional increase of 7.7%, instead of the typical 1% rise in August. This will raise the cost of accessing the public electricity grid.[184]

Together, these increases mean that total electricity bills may not fall as sharply as the 15% TRVE decrease might suggest particularly for households on market contracts or with high consumption levels. For consumers on the TRVE-indexed contracts (Tariff Bleu) and market-based contracts (TRVE indexed), the reduction will trigger lower prices. However, consumers with non-indexed market offers may face price increases where wholesale electricity and taxes rise. The TRVE reduction signals regulatory responsiveness to falling wholesale electricity prices, even in the absence of State-backed tariff shields. However, the rise in structural charges (taxes and network costs) highlights the complexity of electricity pricing, where relief in one area can be offset by increases in others. Vulnerable or low-income households may still struggle with affordability, especially if they are not on regulated contracts or if energy usage is high.

[182] https://www.service-public.fr/particuliers/actualites/A18001?lang=en#:~:text=The%20Commission%20de%20R%C3%A9gulation%20de,when%20it%20is%20usually%20increased). Accessed 13 June 2025
[183] ibid
[184] ibid

ANNEXURE 2 – SGEI POLICY ANALYSIS

SGEI POLICY TIMELINE[185]

Timeline	Policy development	Key highlights
2003	Altmark Judgment (C-280/00)	Established four cumulative criteria for SGEI compensation not to be considered State aid.
2005	First SGEI Package	Included a Decision, Framework, and amended Transparency Directive to provide clarity post-Altmark.
2010-2011	Consultation & Review	Public consultation showed legal uncertainty and scattered application; need for simplification identified.
Dec., 2011	Adoption of Revised Package	Consisted of a Communication (concepts), revised Decision (rules), draft de minimis Regulation, and revised Framework.
Jan., 2012	Implementation of New Package	Clarifies compatibility conditions, reinforces transparency, and encourages efficiency in compensation.
2017	Planned Review	Member States must report every 2 years for policy reassessment by January 2017.

2011 SGEI PACKAGE INSTRUMENT

Instrument	Purpose	Description
Communication (2012)	Clarify State aid concepts	Differentiates economic vs. non-economic activities, sets criteria for SGEI definition, public procurement alignment.

[185] Nicola Pesaresi, Adinda Sinnaeve, Valérie Guigue-Koeppen, Joachim Wiemann, Madalina Radulescu, 2012, "The New State Aid Rules for Services of General Economic Interest (SGEI)" https://competition-policy.ec.europa.eu/system/files/2021-04/SGEI_competition_policy_newsletter_2012_1_en.pdf

Revised Decision	Simplified compatibility check	Applies to aid in the sum of €15 million or less for hospitals and social services; entrustment of 10 years or less; reasonable profit capped.
Draft de minimis Regulation	Exclude low-impact aid	Compensation of €500,000 or less over 3 years not considered State aid.
Revised Framework	Detailed compatibility for large aid	Requires transparency, non-discrimination, efficiency incentives, net avoided cost methodology.

KEY POLICY PROVISIONS

Key Terms	Description
Definition of SGEI	SGEI is defined as economic services of particular importance not sufficiently provided by the market; defined by the State. Includes services like transport, energy, postal services, health, elderly care, etc.
Legal Basis	Article 106(2) TFEU allows SGEI to receive aid if necessary and not contrary to EU interests
Objective of SGEI	Ensure public access to essential services, promote social inclusion, and address market failures.
Subsidiarity & Member State Powers	Member States decide how to organize, fund, and regulate SGEIs, including setting electricity tariffs, providing subsidies, or limiting market access.
EU Oversight	The EU intervenes only to ensure that national measures do not distort competition, affect trade disproportionately, or violate other Treaty principles.
Social Contract Consideration	SGEIs are often essential for fulfilling the social contract by ensuring equity, accessibility, and solidarity.

ANNEXURE 3 – NIGERIA'S ELECTRICITY DISTRIBUTION STRUCTURE

There are 12 DisCos in Nigeria. Electricity bills are paid to distribution companies.[186]

Table 1: Discos in Nigeria

DisCo	Status	% Age Load Allocation
AEDC	Privatized	11.5%
BEDC	Privatized	9%
EKO DisCo	Privatized	11%
EEDC	Privatized	9%
IBEDC	Privatized	13%
IKEDC	Privatized	15%
JEDC	Privatized	5.5%
Kaduna EDC	Privatized	8%
KEDC	Privatized	8%
PHEDC	Privatized	11.5%
YEDC	Privatized	11.5%
APLE Electricity Distribution Plc	Private DisCo	

Table 2: AEDC customer classification.

Service Bands	New Tariff Class	Description
Lifeline	R1	Life-Line customers with energy consumption of not more than 50kWh/month
A (Minimum of 20hrs/day)	A – Non-MD	Customers with single or three-phase connections located within Band–A Service Level Feeders
	A – MD 1	Customers with LV Maximum Demand connection located within Band–A Service Level Feeders
	A – MD 2	Customers with MV/HV Maximum Demand (11/33kV) connection located within Band – A Service Level Feeders
	A – Special	Customers under special supply agreement
B (Minimum of 16hrs/day)	B – Non-MD	Customers with single or three-phase connections located within Band–B Service Level Feeders
	B – MD 1	Customers with LV Maximum Demand connection located within Band–B Service Level Feeders
	B – MD 2	Customers with MV/HV Maximum Demand (11/33kV) connection located within Band – B Service Level Feeders
C (Minimum of 12hrs/day)	C – Non-MD	Customers with single or three-phase connections located within Band–C Service Level Feeders
	C – MD 1	Customers with LV Maximum Demand connection located within Band–C Service Level Feeders
	C – MD 2	Customers with MV/HV Maximum Demand (11/33kV) connection located within Band – C Service Level Feeders
D (Minimum of 8hrs/day)	D – Non-MD	Customers with single or three-phase connections located within Band–D Service Level Feeders
	D – MD 1	Customers with LV Maximum Demand connection located within Band–D Service Level Feeders
	D – MD 2	Customers with MV/HV Maximum Demand (11/33kV) connection located within Band – D Service Level Feeders
E (Minimum of 4hrs/day)	E – Non-MD	Customers with single or three-phase connections located within Band–E Service Level Feeders
	E – MD 1	Customers with LV Maximum Demand connection located within Band–E Service Level Feeders
	E – MD 2	Customers with MV/HV Maximum Demand (11/33kV) connection located within Band–E Service Level Feeders

[186] https://nerc.gov.ng/index.php/home/nesi/403-generation#; NERC Market Competition Report 2022 https://nerc.gov.ng/index.php/component/remository/func-startdown/1105/?Itemid=591 accessed 9 June 2025

Table 3: Approved allowed tariff for (₦/KWh) for AEDC

Tariff Class	May 2024	May – Jun 2024	Jul 2024 – May 2025
Life-line	4.00	4.00	4.00
A – Non-MD	225.00	206.80	209.50
A – MD1	225.00	206.80	209.50
A – MD2	225.00	206.80	209.50
A – MD2 Special	225.00	206.80	209.50
B – Non-MD	63.35	63.35	63.35
B – MD1	76.15	76.15	76.15
B – MD2	76.15	76.15	76.15
C – Non-MD	51.79	51.79	51.79
C – MD1	63.44	63.44	63.44
C – MD2	63.44	63.44	63.44
D – Non-MD	33.95	33.95	33.95
D – MD1	55.82	55.82	55.82
D - MD2	55.82	55.82	55.82
E – Non-MD	33.95	33.95	33.95
E – MD1	55.82	55.82	55.82
E – MD2	55.82	55.82	55.82

While the approved tariffs for bands B-E have remained frozen by NERC since December 2022, the tariffs for band A customers have undergone significant price increments. The revenue gap in the tariff for band B-E is being funded by the government as subsidies.[187] NERC requires service delivery commitments from the Discos under the SBT which seek to align end-user tariffs in proportion to service level enjoyed by the customer clusters, measured in average hours of supply per day over one month.[188] However, the poor service delivery and frequent power outages[189] has necessitated the NERC to mandate discos to downgrade some customers in the band A feeder who have been deemed to not be supplied with the required level of supply (20 hours of average supply but not more than 18 hours of average supply) and appropriate compensation made to affected customers.[190] While this is a welcome development by the NERC, future tariff measures should take into consideration its impacts on vulnerable consumers prior to the orders being implemented. The impact of cost-reflective tariff without the provision of social safety nets is that low-income households may not be able to afford it and may trigger a rebound effect where customers resort to the use of polluting fossil fuels.

[187] May 2025 Supplementary Order to the Multi-Year Tariff Order – 2024 for AEDC https://nerc.gov.ng/wp-content/uploads/2025/05/AEDC_May_2025_045.pdf accessed 13 June 2025
[188] May 2025 Supplementary Order
[189] https://businessday.ng/energy/article/power-outage-persists-as-nigeria-masks-grid-collapse/ accessed 13 June 2025
[190] May 2025 Supplementary Order

ANNEXURE 4 – ECOWAS RENEWABLE ENERGY POLICY[191]

Key Terms	Description
Policy Statement	The EREP is a regional strategic framework adopted in 2013 by the ECOWAS Authority to promote renewable energy across its member states to ensure energy security, sustainability, and access.
Policy Objective	To increase the share of renewable energy in the regional energy mix to at least 10% of total electricity generation by 2020, and 19% by 2030 (excluding large hydro).
Targets & Timelines	10% RE (excluding large hydro) in electricity mix by 2020; 19% by 2030; 48% (including large hydro) by 2030.
Implementation Timeframe	The policy is structured around two major milestones: Short-term (2013–2020) and Long-term (2021–2030). Evaluation and adaptive measures are planned periodically every 5 years.
Subsidiarity Principle & Member Powers	Member states retain the sovereignty to implement the policy through national action plans tailored to their context, while ECOWAS intervenes regionally where added value exists.
Institutional Responsibility (MLG)	ECREEE (ECOWAS Centre for Renewable Energy and Energy Efficiency) is tasked with implementation support, coordination, capacity building, and monitoring & evaluation. National agencies develop and execute localized plans.
Financial Mechanisms	Funding mechanisms include public investment, donor contributions, PPPs, and the ECOWAS Renewable Energy Facility (EREF), aimed at de-risking renewable energy investments.
Monitoring & Evaluation (M&E)	ECREEE manages data and reporting frameworks in collaboration with national agencies.

[191] EREP, 2013

Legal Framework	Though not legally binding, the policy provides a harmonized guideline that influences national energy laws, tariff regulations, and technical standards across the region.
Gender and Social Inclusion	Promotes women's involvement in the renewable energy sector, capacity-building for vulnerable groups, and integration of gender-sensitive energy planning.
Social Contract Consideration	The policy recognizes access to energy as a basic social right and aims to reduce energy poverty, support gender equity, and enhance livelihood in rural areas by encouraging decentralized renewable energy solutions.