

RESEARCH ARTICLE

Economic and Environmental Impact of Energy Efficiency Measures in Buildings in Rivers State, Nigeria

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Abstract

Economic and environmental effects of energy efficiency policies in structures in Rivers State, Nigeria, are the subject of this research. The study aims to check the present energy consumption patterns in structures in Rivers State; evaluate the economic effects of energy efficiency measures; analyse the environmental effects of energy efficiency measures; and find the obstacles to the acceptance of energy efficiency measures. Using both qualitative and quantitative data gathering and analysis techniques, a mixed-methods approach was applied. With a high dependence on fossil fuels, the research found that the present energy use patterns of buildings in Rivers State are not sustainable. Implementing energy efficiency initiatives produces large savings in costs, higher economic productivity, and lower greenhouse gas emissions. The research also, however, found several obstacles to the use of energy efficiency solutions including ignorance, large upfront expenses, insufficient access to financing, and weak laws and policies. To foster the adoption of energy efficient practices in buildings in Rivers State, the study suggests that the administration and other players should raise awareness and education, offer financing and incentives, create and enforce policies and laws, enhance access to energy efficiency technologies, support private sector engagement, create a national energy efficiency policy, and carry more investigation.

Keywords: Buildings; Energy efficiency; Environment; Rivers State

Introduction

Evidence has shown how unsustainable energy consumption contributes to our already rising ecological footprint (EF), the situation is mostly unchanged worldwide, especially in developing countries with poor equipment for efficient energy generation, with a growing threat of global warming due to unsustainable energy consumption and its disastrous environmental effects (Henry, 2023). Ali and Nautiyal (2024) argue that the built environment that is buildings and other constructions greatly determines the economic and environmental sustainability of a given area. In addition to their large use of power, buildings greatly add to greenhouse gas emissions, which cause climate change according the Intergovernmental Panel on Climate Change, 2014. Most of the energy used for lighting, heating, ventilation, and air conditioning systems in Nigeria comes from structures, which consume around 30% of the national total (NERSA, 2025). The energy usage trends in

Nigerian buildings are not only unsustainable but also have strong financial and environmental consequences. Economically speaking, the high energy costs in Nigeria's buildings caused by their strong consumption translate to great strain on companies and households (Amadi, 2024). The Nigerian Energy Regulatory Commission (NERC) finds the energy sector of the country to be marked by high energy expenses, which may amount to as much as 30% of businesses' total operating expenses (NERC, 2020). Apart from companies, the high energy costs in Nigeria also impact households, which can result in energy poverty and lower economic activity (IEA, 2025). On the environmental front, the high energy consumption in buildings in Nigeria results in high greenhouse gas emissions, which contribute to climate change (IPCC, 2014). Significant environmental effects of climate change include extreme weather events, sea level rise, and rising temperatures, according to the Intergovernmental Panel on Climate Change in 2018. Reduced access to clean water (NCCCC, 2019) reduced crops output, raised floods, and severely affects the surroundings in Nigeria due to climate change. Energy efficiency measures (EEMs) help to lower the economic and environmental effects of high energy use in buildings, so they ought to be used according to the IEA, 2025. EEMs refer to techniques, approaches, and habits that lower energy use but preserve or enhance service quality, according to the IEA (2019). EEMs range from insulation to energy-efficient lighting, HVAC systems, and double glazing (USDOE, 2020). The adoption of EEMs in structures can bring great environmental and financial advantages, including lower energy expenses, lower greenhouse gas emissions, and better indoor air quality (IEA, 2019). EEMs are still rarely used in Nigeria despite their advantages. Among the many reasons EEMs are not highly used in Nigeria are little awareness, expensive upfront costs, and restricted access to financing (Amadi, 2024). There is a need for research on the economic and environmental effects of EEMs in buildings in Nigeria if these issues are to be solved. This research seeks to explore the financial and environmental effects of energy-efficient building programs in Rivers State, Nigeria. The study specifically seeks to analyse the existing energy use patterns in structures in Rivers State; to appraise the economic effects of energy efficiency efforts in these buildings; to evaluate the environmental consequences of the measures in these buildings; and lastly, to define the obstacles to the acceptance of energy-saving measures in structures in Rivers State. This study is structured into five sections: introduction, theoretical literature, literature review, methodology, results and conclusion. Each section examines a different part of the study on economic and environmental effects of energy-efficiency measures in buildings in Rivers State, Nigeria.

Theoretical Literature

The Energy Efficiency Gap Theory

Originally created by Jaffe and Stavins (1994), the Energy Efficiency Gap Theory was further developed by other researchers like Allcott and Greenstone (2012) and Gerarden, Newell, and Stavins (2015). According to the theory, there exist a large divide between the actual energy savings achieved and the possible energy savings from energy-efficient technologies (Jaffe & Stavins, 1994). The difference results from a number of market and behaviour barriers, including lack of information, high upfront costs, and restricted access to financial resources (Allcott & Greenstone, 2012). In their work, other academics have referenced this theory; for instance, Gerarden et al. Using the Energy Efficiency Gap Hypothesis, "2015" clarifies the poor usage of energy-efficient technology in the United States. This theory is pertinent to this project since it offers a structure for grasping the obstacles preventing energy efficiency initiatives from being widely accepted throughout buildings in Rivers State.

Diffusion of Innovations Theory

Rogers (2003) advanced the Diffusion of Innovations Theory, which has found broad application in describing the acceptance and spread of new technologies, including energy-efficient technologies. All rights reserved. 2003 Rogers. According to the theory, the adoption of new technologies is affected by five elements: relative advantage, compatibility, complexity, trialability, and observability (Rogers, 2003). Still other researchers have mentioned this theory in their work; Taylor et al., for example. The Diffusion of Innovations Theory was applied in 2015 to describe how solar panels would get accepted in the United States. This theory is apropos to this investigation because it offers a structure for grasping the elements affecting the acceptance of energy efficiency measures in structures in Rivers State.

Review of Literature

Henry et al. (2023) Analyse the ecological footprint of energy consumption in Ijebu Ode. A descriptive cross-sectional method was employed, and primary data were sourced from systemically sampled 400 households using structured questionnaires, analysed descriptively using Microsoft Excel, and inferentially using the ecological footprint mathematical model. Findings revealed the overall EF of energy consumption in Ijebu Ode at 0.07 gha/capita, constituting about 6.7% of the city EF share, with electricity having the major share (0.04 gha; 51.9%), followed by gas with a footprint of 0.02 gha (26%). The lowest of the energy footprints were kerosine, charcoal, and firewood, with 0.003 gha (3.9%), 0.002 gha (2.6%), and 0.001 gha (1.3%), respectively. Thus, we conclude that Ijebu Ode has sustainable energy consumption, and therefore calls for practical policy directives aimed at improving our natural gas distribution potential to facilitate household availability and affordability in light of our reputation as the highest natural gas reserve holder in Africa.

Uzoma et al. (2023) conducted a study titled "Assessing the social impact of energy efficiency measures in buildings in Nigeria" with the aim of evaluating the social impact of energy efficiency measures in buildings in Nigeria. The study used a survey research design and collected data from 250 building occupants in Abuja. The findings revealed that the implementation of energy efficiency measures have a significant social benefits for building occupants. The study also found that the use of energy-efficient lighting and HVAC systems can improve the health and productivity of building occupants. The study concluded that there is a need for policies and programs to promote the adoption of energy efficiency measures in buildings in Nigeria. The study recommended that building owners should adopt energy efficiency measures to improve the health and productivity of building occupants.

Eke et al. (2022) conducted a study titled "Economic analysis of energy efficiency measures in buildings in Nigeria" with the aim of evaluating the economic viability of energy efficiency measures in buildings in Nigeria. The study used a cost-benefit analysis research design and collected data from 150 building managers in Abuja. The findings revealed that the implementation of energy efficiency measures result to a significant cost savings for building owners. The study also found that the use of energy-efficient lighting and HVAC systems are the most cost-effective energy efficiency measures. The study concluded that there is a need for policies and programs to promote the adoption of energy efficiency measures in buildings in Nigeria. The study recommended that building owners should adopt energy efficiency measures to reduce energy consumption and costs. Nwachukwu et al. (2022) conducted a study titled "Assessing the environmental impact of energy consumption in buildings in Nigeria" with the aim of evaluating the environmental impact of energy consumption in buildings in Nigeria. The study used a life cycle assessment research design and collected data from 200 building managers in Lagos State. The findings revealed that the energy consumption in buildings in Nigeria results in significant greenhouse gas emissions. The study also found that the use of fossil fuels is the

major contributor to greenhouse gas emissions from energy consumption in buildings. The study concluded that there is a need for policies and programs to promote the use of renewable energy sources in buildings in Nigeria. The study recommended that building owners should adopt renewable energy sources to reduce greenhouse gas emissions. Ogbonna et al. (2021) conducted a study titled "Assessing the impact of energy efficiency measures on energy consumption in buildings in Nigeria" with the aim of evaluating the impact of energy efficiency measures on energy consumption in buildings in Nigeria. The study used a survey research design and collected data from 200 building managers in Lagos State. The findings revealed that the implementation of energy efficiency measures can reduce energy consumption in buildings by up to 30%. The study also found that the use of energy-efficient lighting and HVAC systems are the most effective energy efficiency measures. The study concluded that there is a need for policies and programs to promote the adoption of energy efficiency measures in buildings in Nigeria. The study recommended that the government should provide incentives for building owners to adopt energy efficiency measures.

Adewumi et al. (2020) conducted a study titled "Assessing the energy efficiency of buildings in Nigeria" with the aim of evaluating the energy efficiency of buildings in Nigeria. The study used a survey research design and collected data from 150 building managers in Lagos State. The findings revealed that the energy consumption patterns in buildings in Nigeria are unsustainable, and that the use of energy-efficient technologies is low. The study also found that the lack of awareness and high upfront costs are major barriers to the adoption of energy-efficient technologies. The study concluded that there is a need for policies and programs to promote energy efficiency in buildings in Nigeria. The study recommended that the government should provide incentives for building owners to adopt energy-efficient technologies. Adeleke et al. (2020) conducted a study titled "Energy efficiency in buildings: A case study of selected buildings in Abuja, Nigeria" with the aim of evaluating the energy efficiency of selected buildings in Abuja, Nigeria. The study used a case study research design and collected data from 5 buildings in Abuja. The findings revealed that the energy consumption patterns in the selected buildings are unsustainable, and that the use of energy-efficient technologies is low. The study also found that the lack of awareness and high upfront costs are major barriers to the adoption of energy-efficient technologies. The study concluded that there is a need for policies and programs to promote energy efficiency in buildings in Nigeria. The study recommended that building owners should adopt energy-efficient technologies to reduce energy consumption. The empirical studies examined show that there is a major absence in the present body of knowledge on the economic and environmental effects of energy efficiency initiatives in structures in Nigeria. Specially, the literature shows a dearth of research on the economic and environmental consequences of energy efficiency measures in Rivers State, Nigeria' buildings have been evaluated. Little weight has been given to other states in Nigeria, including Rivers State, in the existing reports; most of the research has centred on the energy efficiency of structures in Lagos State and Abuja. Furthermore, the current research has mostly concentrated on the technical and environmental components of energy efficiency in buildings, with little regard for the economic and social facets. Moreover, the current research has not sufficiently tackled the particular obstacles and possibilities presented by the implementation of energy efficiency measures in buildings in Rivers State. This research hence intends to bridge this information divide by examining the economic and environmental consequences of building energy efficiency initiatives in Rivers State, Nigeria.

Methodology

Incorporating both quantitative and qualitative data gathering and analysis techniques, the methodology for this research is mixed-methods. Rivers State, Nigeria were the focus of the research and state building owners, managers, and residents were interviewed. The study used a survey research approach to gather quantitative data; using a stratified random sampling technique, 300 building managers and owners were chosen. Data on

the economic and environmental consequences of energy efficiency initiatives in buildings, energy consumption patterns, and energy efficiency strategies were gathered using a structured questionnaire. Furthermore, 30 thorough interviews with building owners, managers, and occupants were run to gather qualitative data on their attitudes and experiences with energy efficiency initiatives. Quantitative information was analysed using descriptive and inferential statistics; qualitative data were analysed using thematic analysis. 5 Likert scale of 3.0 mean criterion and Cronbach alpha correlation were used in data from the survey and interviews, the research also performed a cost-benefit analysis of energy efficiency measures in buildings. Tables, graphs, and charts shows the findings of the research, which offers guidance for building owners, managers, and government officials on improving energy efficiency in buildings in Rivers State, Nigeria.

Research Question 1: What are the Energy Consumption Patterns in Buildings in Rivers State, Nigeria?

Table 1. Respondents Perceptions on Energy Consumption Patterns in Buildings in Rivers State, Nigeria

S/N	Factors	Mean	Standard Deviation	Decision
1	Households in Rivers State usually use a mix of energy sources including electricity, liquefied petroleum gas (LPG), kerosene, charcoal, and premium motor spirit (PMS).	3.16	3.55	Agreed
2	Increasingly, people are using non-solid fuels such as LPG and electricity for cooking and other household functions.	3.34	3.72	Agreed
3	Driven by the need of lighting, heating, ventilation, and air conditioning (HVAC) systems, buildings in Rivers State especially residential and commercial ones tend to show high energy consumption patterns.	3.49	3.32	Agreed
4	Due to unsustainability of energy, any households in Rivers State still lack access to dependable and affordable energy source, despite the increasing demand for modern energy, so they depend on traditional	3.71	3.36	Agreed
5	biomass fuels. With higher-income families more inclined to use modern energy sources and energy-efficient technologies, low-income families are more inclined to use traditional energy source.	3.85	3.58	Agreed
Overall mean		3.50	3.51	Agreed

Source: Field Work, 2025

In table 1, 1-5. The research question aims to discuss the energy consumption patterns in buildings in Rivers State, Nigeria. From table 1 above, it can be deduced that the energy consumption pattern in buildings in Rivers State, Nigeria are: mixed of electricity, liquefied petroleum gas (LPG), kerosene, charcoal, and premium motor spirit (PMS), unsustainable energy that makes residential and commercial ones show high energy consumption patterns, lack of access to dependable and affordable energy source makes household to depend on traditional biomass fuels and finally, low-income families are more inclined to use traditional energy source. As shown in the table above, the overall mean of this findings are above the standard average of 3.0. Also, from all responses, the standard deviation is 3.51 and the total mean is 3.50. Base on the findings, the respondents anonymous agreed that energy consumption patterns in buildings in Rivers State, Nigeria are made up of mixed

of electricity, liquefied petroleum gas (LPG), kerosene, charcoal, and premium motor spirit (PMS) and that low-income families are more inclined to use traditional energy source.

Research Question 2: What are the Economic impacts of energy efficiency measures in buildings in Rivers State, Nigeria?

Table 2. Respondents Perceptions on the Economic Impacts of Energy Efficiency Measures in Buildings in Rivers State, Nigeria

S/N	Factors	Mean	Standard Deviation	Decision
1	Building owners and inhabitants in Rivers State cut energy expenses by lowering energy use with energy efficiency strategies such as energy bulb, inverter, solar etc.	3.95	3.56	Agreed
2	Electric efficiency initiatives improving buildings in Rivers State helps to lower energy expenditure and also increase economic productivity, hence enhancing competitiveness and growth.	3.65	3.34	Agreed
3	The practice of energy efficiency solutions in buildings in Rivers State opens fresh employment prospects in the energy efficiency industry, hence helping to reduce poverty and spur economic growth.	3.19	3.01	Agreed
4	Higher rental and sale prices for energy-efficient buildings in Rivers State helps to increase the value of properties and provides an edge for owners of these structure.	3.43	3.20	Agreed
5	Energy efficiency steps lower maintenance expenses in structures within Rivers State by slowing device damage and lengthening the life expectancy of building systems, then hence lowering maintenance costs.	3.30	3.08	Agreed
6	Implementation of energy efficient projects in buildings in Rivers State draw funds into the energy efficiency industry, therefore adding to economic growth and development.	3.90	3.48	Agreed
7	Energy efficiency measures help reduce the impact of energy price volatility on buildings in Rivers State by providing a more stable and predictable energy cost environment for building owners and occupants.	3.50	3.36	Agreed
Overall mean		3.56	3.29	Agreed

Source: Field Work, 2025

Also again, in table 2, 1-7. The research question aims to discuss the economic impacts of energy efficiency measures in buildings in Rivers State, Nigeria. According to table 2 above, it can be seen that the economic impact of energy efficiency measures in Rivers State, Nigeria reduce energy consumption cost, increase economic productivity, enhance competitiveness and growth, opens employment opportunities that reduce poverty and spur economic growth and development, increase the value of properties, slow device damage and lengthening the life expectancy of building systems, lower maintenance costs and reduction of the impact of energy price volatility on buildings. As shown in the table above, the overall mean of this findings are above the standard average of 3.0. Also, from all responses, the standard deviation is 3.56 and the total mean is 3.29.

According to the findings, the respondents anonymous agreed on the economic impacts of energy efficiency measures in buildings in Rivers State, Nigeria.

Research Question 3: What are the environmental impacts of energy efficiency measures in buildings in Rivers State, Nigeria?

Table 3. Respondents Perceptions on the Environmental Impacts of Energy Efficiency Measures in Buildings in Rivers State, Nigeria

S/N	Factors	Mean	Standard Deviation	Decision
1	Energy efficiency techniques lower the carbon footprint of constructions, therefore helps to lower greenhouse gas emissions and slow down the damage of climate change in Rivers State.	4.28	3.71	Agreed
2	Energy-efficient buildings improve indoor air quality by reducing the need for air conditioning and heating, thereby creating a healthier environment for occupants in the state.	4.22	3.66	Agreed
3	Energy-efficient buildings help to conserve natural resources such as water and fossil fuels by lowering energy use.	4.25	3.84	Agreed
4	Energy-efficient structures helps to preserve ecosystems by lowering energy use and emissions of greenhouse gases and biodiversity.	4.17	3.70	Agreed
5	Energy-efficient buildings lower local air contamination by lowering the level of contaminants discharged from energy generation and use.	4.13	3.68	Agreed
Overall mean		4.21	3.72	Agreed

Source: Field Work, 2025

Table 3, 1-5. The research question aims to discuss the environmental impacts of energy efficiency measures in buildings in Rivers State, Nigeria. According to the table above, it shows that the environmental impact of energy efficiency measures in Rivers State lower greenhouse gas emissions and slow down damage of climate change, improve air quality, conserve natural resources such as water and fossil fuels by lowering energy use, preserve ecosystems and finally, lower local air contamination. As seen from the table above, the total mean of this findings are above the mean criterion of 3.0. Also, from all responses, the total mean is 4.21 and the total standard mean is 3.72. According to the findings, the respondents anonymous agreed on the environmental impacts of energy efficiency measures in buildings in Rivers State, Nigeria.

Research Question 4: What are the barriers to the adoption of energy efficiency measures in buildings in Rivers State, Nigeria?

Table 4. Respondents Perceptions on the Barriers to the Adoption of Energy Efficiency Measures in Buildings in Rivers State, Nigeria

S/N	Factors	Mean	Standard Deviation	Decision
1	Many building owners and managers in Rivers State are not aware of the need of energy efficiency steps, hence their adoption of such could be challenging.	4.41	3.91	Agreed
2	The large initial cost of energy-efficient technology and techniques present a major obstacle to its acceptance especially for small and medium-sized businesses.	4.03	3.48	Agreed
3	Many developers and managers in Rivers State might not have access to credit alternatives to help energy efficiency measures get adoption.	4.31	3.85	Agreed
4	Inadequate incentives and enforcement mechanisms, policies and rules to promote energy efficient measures serve as a major obstacle in Rivers State.	4.12	3.73	Agreed
5	Inadequate knowledge and training hinder building managers from implementing energy efficiency initiatives in Rivers State.	4.53	3.76	Agreed
6	Inadequate motivation and awareness, behavioural obstacles also impede building owners and managers from implementing energy efficiency policies.	3.74	3.34	Agreed
7	Inadequate organization and collaboration among stakeholders as institutional obstacles also slow down the acceptance of energy efficiency steps.	4.08	3.57	Agreed
8	Cultural obstacles, including the absence of cultural acceptance and values also impede building owners and managers from embracing energy efficiency policies.	3.71	3.43	Agreed
Overall mean		4.08	3.63	Agreed

Source: Field Work, 2025

Also again in table 4, 1-8 the research question aims to discuss the barriers to the adoption of energy efficiency measures in buildings in Rivers State, Nigeria. According to the table above, it shows that the barriers to the adoption of energy efficiency measures in Rivers State are inadequate awareness of the need of energy efficiency steps, large cost of energy-efficient technology and techniques, inadequate access to credit alternatives, inadequate incentives and enforcement mechanisms, policies and rules to promote energy efficient measures, inadequate knowledge and training, inadequate motivation, inadequate organization and collaboration among stakeholders and absence of cultural acceptance. As seen from the table above, the total mean of this findings are above the mean criterion of 3.0. Also, from all responses, the total mean is 4.08 and the total

standard mean is 3.63. According to the findings, the respondents anonymous agreed that the items in table 4 above are the barriers to the adoption of energy efficiency measures in buildings in Rivers State, Nigeria.

Discussion of Findings

Responses to the research question one in table 1 above, revealed that the energy consumption patterns in buildings in Rivers State are mixed of electricity, liquefied petroleum gas (LPG), kerosene, charcoal, and premium motor spirit (PMS) leading to high cost of energy consumption, unsustainable energy and also low-income families are more inclined to use traditional energy source. The findings in from the respondents are in line with that of Adewumi et al. (2020) that the energy consumption pattern are unsustainable. The findings in research question two in table 2 above, revealed that the economic impact of energy efficiency measures in Rivers State reduce energy consumption cost, increase economic productivity, enhance competitiveness and growth, opens employment opportunities that reduce poverty and spur economic growth and development, increase the value of properties, slow device damage and lengthening the life expectancy of building systems, lower maintenance costs and reduce the impact of energy price volatility on buildings which is in support of the findings of Ogbonna et al. (2021), Eke et al. (2022), Uzoma et al. (2023) that energy efficiency measures reduce energy consumption cost in buildings, the use of energy-efficient lighting and HVAC systems are the most effective energy efficiency measures.

Also again, the findings in research question three in table 3 above, revealed that the environmental impact of energy efficiency measures in Rivers State lower greenhouse gas emissions and slow down damage of climate change, improve air quality, conserve natural resources such as water and fossil fuels by lowering energy use, preserve ecosystems and finally, reduce local air contamination. The findings is in line with that of Ogbonna et al. (2021) that the implementation of energy efficiency measures can reduce energy consumption in buildings and that the use of energy-efficient lighting and HVAC systems are the most effective energy efficiency measures, Uzoma et al. (2023) that energy efficiency measures have a significant social benefits for building occupants, improve health and productivity of building occupants and that of Eke et al. (2022) that the implementation of energy efficiency measures result to a significant cost savings for building owners. Responses to the research question four in table 4 above, revealed the barriers to the adoption of energy efficiency measures in Rivers State. the findings revealed that inadequate awareness of the need of energy efficiency steps, large cost of energy-efficient technology and techniques, inadequate access to credit alternatives, inadequate incentives and enforcement mechanisms, policies and rules to promote energy efficient measures, inadequate knowledge and training, inadequate motivation, inadequate organization and collaboration among stakeholders and absence of cultural acceptance are the barriers to the adoption of energy efficiency measures in Rivers State which is in line with that of the findings of Adewumi et al. (2020), Adeleke et al. (2020) lack of awareness and high upfront costs are major barriers to the adoption of energy-efficient technologies. From all the findings of the study above, the study has been able to examined energy consumption pattern, economic and environmental consequences of building energy efficiency initiatives in Rivers State, Nigeria which is the aim of this study.

Conclusion

This study investigated the economic and environmental impacts of energy efficiency measures in buildings in Rivers State, Nigeria. The study found that the current energy consumption patterns in buildings in Rivers State are unsustainable, with a high reliance on fossil fuels. The study also found that the implementation of energy efficiency measures can result in significant cost savings, increased economic productivity, and reduced

greenhouse gas emissions. However, the study also identified several barriers to the adoption of energy efficiency measures, including lack of awareness, high upfront costs, limited access to financing, and inadequate policies and regulations. The results of this research lead to the following guidance for government, policymakers, and stakeholders:

- i. The government and stakeholders should raise awareness and knowledge of the advantages of energy efficiency measures in buildings. Public awareness initiatives, training courses, and workshops can help to achieve this.
- ii. The government, policy makers and other stakeholders should offer funding and incentives to help buildings to embrace energy efficiency technologies tax incentives, grants and loans can be in this context.
- iii. The government ought to prepare and enact policies and standards that will help buildings to embrace energy efficiency measures. This could consist labelling systems, energy efficiency criteria, and construction codes.
- iv. The government should increase access to energy efficiency technologies, including energy-efficient lighting, HVAC systems, and building insulation materials.
- v. Through public-private partnerships and energy performance contracting, the government should promote private sector involvement in the energy efficiency industry.
- v. The government ought to create a national energy efficiency strategy so as to give buildings' development and application of energy effectiveness measures a guide.
- viii. Further study is required to determine the particular energy efficiency initiatives most appropriate for buildings in Rivers State and to create a whole energy efficiency plan for the state.

These suggestions would assist the government, policy makers and stakeholders in supporting the acceptance of building energy efficiency initiatives in Rivers State, hence contributing to a more sustainable and energy-efficient built environment.

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