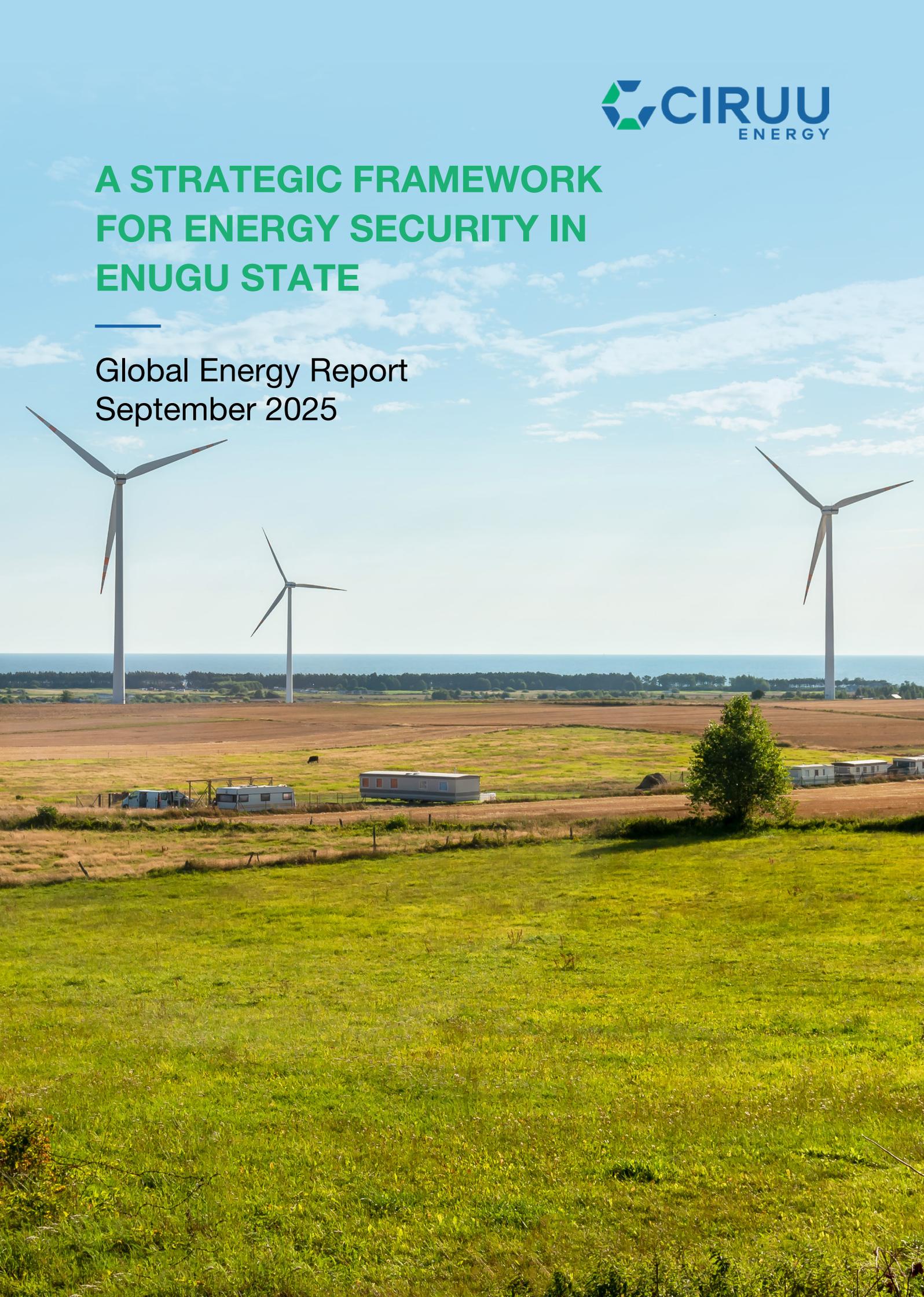


# A STRATEGIC FRAMEWORK FOR ENERGY SECURITY IN ENUGU STATE

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Global Energy Report  
September 2025



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# Acronyms

- **AfDB** African Development Bank
- **AFREXIM** African Export-Import Bank
- **CAF** Capital Adequacy Framework
- **COP** Conference of Parties
- **CRDC** Climate-resilient debt clause
- **DFI** Development finance institutions
- **DRM** Domestic revenue mobilisation
- **DSA** Debt Sustainability Analysis
- **DSF** Debt Sustainability Framework
- **DSSI** Debt Service Suspension Initiative
- **EEDC** Enugu Electricity Distribution Company
- **EMDC** Emerging and developing country
- **ETP** Energy Transition Plan
- **EPC** Energy Performance Certificate
- **EREA** Enugu Renewable Energy Authority
- **F2C2** Finance Facility against Climate Change
- **FX** Foreign exchange
- **GDP** Gross Domestic Product
- **GNI** Gross National Income
- **IDA** International Development Association
- **IEA** International Energy Agency
- **IFI** International financial institution
- **IHLEG** Independent High-Level Expert Group on Climate Finance
- **IMF** International Monetary Fund
- **IRENA** International Renewable Energy Agency
- **IPPs** Independent Power Producers
- **JETIP** Just Energy Transition Investment Plan
- **KPIs** Key performance indicators
- **LDC** Least developed country
- **LIC** Low-income country
- **LPG** Liquefied Petroleum Gas
- **MDB** Multinational development bank
- **MIC** Middle-income country
- **MIGA** Multilateral Investment Guarantee Agency
- **NAP** National Adaptation Plan
- **NBSAB** National Biodiversity Strategy and Action Plan
- **NDC** Nationally Determined Contribution
- **ODA** Official Development Assistance
- **OPEC** Organisation of Petroleum Exporting Countries
- **PMU** Project Management Unit
- **PPP** Public-Private Partnerships
- **RIPU** Renewable Investment Promotion Unit
- **SDG** Sustainable Development Goal
- **SLB** Sustainability-linked bond
- **SLF** Sustainability-linked financing
- **SLL** Sustainability-linked loan
- **UNCTAD** UN Trade and Development
- **UNDP** United Nations Development Programme
- **WEC** World Energy Council (WEC),

# Foreword

As the world undergoes a historic transition toward cleaner, more resilient, and inclusive energy systems, regional governments play an increasingly pivotal role in driving the global green economy. Enugu State, in Nigeria's southeast, stands at a decisive juncture in its developmental trajectory. With abundant renewable resources, a strategic geographic location, and an enterprising population, Enugu can become a regional model for sub-national green growth and energy transformation in Africa. This report—commissioned as part of an energy security and sustainable energy development framework—serves as a cornerstone for Enugu State's vision to align its economic ambitions with climate imperatives, energy equity, and

technological innovation. It is both a strategic blueprint and a bold declaration of intent: to unlock the environmental, economic, and geopolitical dividends of a renewable-powered future. Drawing from international best practices and tailored to the unique dynamics of Enugu's socio-economic and environmental landscape, the report integrates insights from the International Energy Agency (IEA), World Energy Council (WEC), the Organisation of Petroleum Exporting Countries (OPEC), African Union Agenda 2063, Nigeria's Energy Transition Plan (ETP), and the UN Sustainable Development Goals (SDGs). This plan is designed to support state policy and investor alignment, and to anchor Enugu's role in West Africa's emerging green economy.



# Executive Summary

Enugu State's energy landscape has historically been challenged by energy poverty, frequent grid unreliability hindering economic activities, and a significant dependence on imported, fossil-based energy sources. This dependence has resulted in economic vulnerability, environmental concerns, and limited access to reliable power for residents and businesses. However, Enugu State possesses considerable untapped renewable energy resources, presenting a unique opportunity to transform its energy sector and drive sustainable economic growth. The state is endowed with abundant solar irradiance, significant biomass potential from agricultural residues and dedicated energy crops, exploitable hydro resources through small-scale hydropower plants, and emerging possibilities in green hydrogen production. Driven by the need for decarbonisation and access to affordable energy, and with Africa increasingly taking centre stage in the global energy transition, Enugu State can strategically leverage its renewable energy resources to become a leader in green growth.

By implementing a decisive and well-structured green growth strategy, Enugu can not only address its domestic energy challenges but also generate significant national and international benefits. This includes attracting foreign investment in renewable energy projects, creating green jobs in the manufacturing, installation, and maintenance of renewable energy systems, reducing greenhouse gas emissions, and contributing to Nigeria's nationally determined contributions (NDCs) under the Paris Agreement. A successful green growth strategy in Enugu can serve as a model for other states in Nigeria and across Africa, demonstrating the viability of transitioning to a clean energy economy. The strategy will focus on key areas such as policy and regulatory frameworks, investment promotion, infrastructure development, skills training, and community engagement to ensure a just and equitable energy transition. **This report guides investment initiatives focused on:**

- Energy security and resilience
- Renewable energy deployment
- Green industrialisation
- Energy access and inclusivity
- International market integration
- Climate mitigation and adaptation

## Key Findings

- **Energy Potential:** Enugu can deploy over 2,500 MW of renewable capacity (solar, small hydro, biomass) by 2040.
- **Development Impact:** Universal energy access can drive a 12–18% GDP uplift by 2040 through agri-industrial hubs, digital economy zones, and green manufacturing.
- **Job Creation:** A green transition could generate over 100,000 direct and indirect jobs across solar, bio-energy, and energy services.
- **Climate Value:** Enugu’s energy transition could offset over 18 million tonnes of CO<sub>2</sub> by 2040—supporting Nigeria’s NDC and the Paris Agreement.
- **Investment Viability:** Public-private partnerships (PPPs), green bonds, and climate finance mechanisms are viable enablers for bankable project pipelines.

## Strategic Pillars



### Energy Security through Diversification:

Deploy hybrid mini-grids, solar farms, and distributed generation to reduce grid dependence.



### Renewable Energy for Economic Development:

Power industrial zones, agro-processing centres, and health/education facilities with clean energy.



### Green Financing and Institutional Reform:

Establish a dedicated Enugu Renewable Energy Authority (EREA) and Green Finance Task Force.



### International Collaboration:

Align with AfDB, IRENA, and international donors to scale up impact and attract concessional financing.



This strategic report provides an adjustable roadmap for transforming Enugu State into a sustainable energy leader in eastern Nigeria. Building on global best practices and tailored insights into Nigeria’s macro-energy context, this strategy leverages energy access, affordability, security, and decarbonisation to attract investments, boost productivity, and empower communities. Enugu State, endowed with coal, solar, and biomass potential, must pivot towards decentralised renewable systems and institutional reform to meet its development goals. Enugu State stands at a pivotal juncture to redefine its energy future. This report delivers a comprehensive, systems-level strategy for achieving energy security, transitioning to renewables, and integrating sustainable energy development across key economic sectors — housing, agriculture, transport, and aviation. Grounded in global best practices and frameworks (UN SDGs, IEA, IRENA, World Bank), this roadmap positions Enugu as a regional clean energy hub, capable of driving industrialisation, attracting foreign direct investment (FDI), and delivering inclusive growth.

# Introduction

Enugu State, historically renowned as a coal powerhouse in Nigeria, is proactively repositioning itself to embrace a cleaner, decentralised, and technology-enabled energy future. This transformation is driven by a confluence of factors, including environmental concerns, economic opportunities, and technological advancements. Geographically situated within West Africa's green corridor and embedded within Nigeria's fastest-growing regional economies, Enugu State holds strategic significance in the nation's broader energy transformation and climate leadership ambitions. Its location provides access to potential renewable energy resources and positions it as a key player in regional energy trade. Despite its potential, energy access in Enugu State remains a significant challenge, particularly in rural areas where access rates linger below 60%. This disparity hinders economic empowerment and social progress. Furthermore, the instability of the national grid electricity supply and the escalating

costs of diesel fuel, a common alternative, continue to impede economic growth, discourage investment, and limit opportunities for residents and businesses. These challenges necessitate innovative solutions to bridge the energy gap and stimulate sustainable development. Concurrently, the global imperative to phase out carbon-intensive energy sources and achieve net-zero emissions is accelerating. This global movement creates both pressure and opportunities for Enugu State. The state is compelled to reduce its reliance on fossil fuels while simultaneously being presented with the chance to attract investment in renewable energy technologies, develop a green economy, and showcase its commitment to environmental stewardship. This transition requires strategic planning, policy support, and collaborative partnerships to unlock the state's full potential in the evolving energy landscape. This report provides a comprehensive, actionable roadmap for:



Achieving energy security through renewable infrastructure and innovation



Advancing sustainable development and inclusive green growth



Positioning Enugu as a regional clean energy investment hub

It is designed for implementation by state ministries, private investors, international partners, development finance institutions, and civil society actors.



The strategy aligns with



Nigeria's Energy Transition Plan (ETP 2060)

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Africa Renewable Energy Initiative (AREI)

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United Nations SDGs



ECOWAS Renewable Energy Policy

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Just Transition principles from COP28

01

## The Sustainable Energy Initiative: Driving a Sustainable Tomorrow.

### State Level

At the state level, renewable energy infrastructure diversifies the energy mix and builds resilience against grid failures, fuel price volatility, and extreme weather events.



- At the community level, renewable energy projects such as solar farms, wind parks, and bio-energy initiatives create jobs in construction, operation, and maintenance—often in areas where economic revitalisation is most needed
- These ventures reduce local air and water pollution, improving public health outcomes and lowering healthcare costs.
- They also increase energy access in underserved or off-grid communities, fostering inclusive development and reducing inequalities, in alignment with **UN Sustainable Development Goals (SDGs) 3 (Good Health and Well-being), 7 (Affordable and Clean Energy), 8 (Decent Work and Economic Growth), and 10 (Reduced Inequalities).**
- States that lead in clean energy adoption often attract investment from innovative tech companies and green manufacturers, spurring industrial growth and workforce development.
- Renewable energy enhances state energy security by reducing dependence on imported fuels or single-source power generation.
- Governors who champion renewable initiatives can align with national and global climate goals while strengthening their state's energy independence and environmental stewardship, reinforcing **SDG 9 (Industry, Innovation, and Infrastructure) and SDG 13 (Climate Action).**



## National Level



Nationally, His Excellency the Governor's proactive stance on renewables contributes to the country's commitments under international climate agreements, such as the **Paris Agreement**.

- Renewable energy projects can significantly cut greenhouse gas emissions, pushing the nation closer to net zero targets and reinforcing national energy security.
- As the nation transitions from fossil-based systems to sustainable energy, HE the Governor has a pivotal role in piloting scalable models that can be replicated nationwide.
- His Excellency's leadership promotes regulatory innovation, inter-state cooperation, and the integration of smart grid technologies, thereby advancing **SDGs 11 (Sustainable Cities and Communities), 12 (Responsible Consumption and Production), and 16 (Peace, Justice, and Strong Institutions)**.



## International Level

From an international standpoint, His Excellency the Governor prioritising renewable energy contributes to global decarbonisation efforts and positions **Enugu State** as a responsible player in the energy transition.

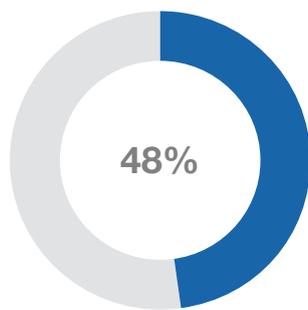
- **Enugu State** becomes an attractive destination for Foreign Direct Investment (FDI), climate finance, and international development partnerships. This aligns with **SDG 17 (Partnerships for the Goals)**, as well as broader multilateral objectives spearheaded by the **United Nations, International Renewable Energy Agency (IRENA), and the World Bank.**
- By leading sub-national action, His Excellency reinforces the importance of bottom-up climate diplomacy and demonstrates how localised efforts can influence global climate stability and just transitions.
- Embracing renewables bolsters long-term energy security by reducing exposure to geopolitical shocks, fossil fuel price spikes, and supply chain disruptions.
- A diversified, renewable-driven energy system is inherently more stable and predictable, supporting strategic industries and national defence.
- His Excellency can play a central role in building resilient energy infrastructures and emergency preparedness systems powered by decentralised, renewable technologies.
- This positions Enugu State as leaders in the **energy trilemma: balancing security, affordability, and sustainability—foundational principles for any future-ready energy system.**

By supporting renewable energy ventures, **His Excellency the Executive Governor of Enugu State, Dr Peter Mbah**, not only advances environmental and economic resilience but also aligns his leadership with **global sustainability norms and strategic national interests.** They become catalysts for **inclusive growth, job creation, environmental justice, and technological advancement.** His Excellency's commitment to the energy transition places the state at the forefront of a global movement toward **a just, equitable, and secure energy future—ensuring prosperity for current and future generations while upholding the integrity of our planet.**



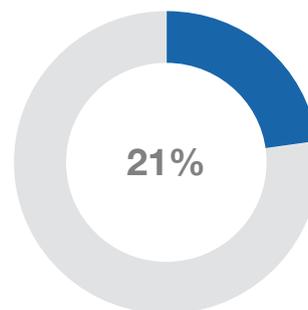
## 02 Continental and National Energy Landscape

### 2.1 Africa's Energy Sector: State of Play



**Electricity Access:**

About 600 million Africans lack electricity. Sub-Saharan Africa's access rate 48%.



**Generation Mix:**

Dominated by hydro, gas, and diesel; renewables 21%.



**Key Issues:**

High costs (\$0.25–\$0.45/kWh), poor grid penetration, low investment, underutilised potential.



**Energy Transition Pressure:**

COP28 outcomes, the IEA's Net Zero by 2050, and the AfDB's Desert-to-Power initiative are shaping policies.



**Emerging Models:**

Solar mini-grids, green hydrogen pilots, and regional interconnections (e.g., WAPP).

### 2.2 Nigeria's Energy Sector: Current State

**Installed Capacity:**

13,000 MW; available 4,000–5,000 MW due to gas constraints and grid failures.



**Access to Electricity:**

National average 55%; rural areas <35%.



**Energy Mix:**

80% gas, 10% hydro, <1% renewables.



**Grid Infrastructure:**

Obsolete transmission (8,000 km), high ATC&C losses (>40%).



**Energy Subsidies:**

\$2B annually; fiscal pressure to reform.



**Institutions:**

NEC, NERC, REA, NBET, and TCN — fragmented coordination.



**Transition Challenge:**

Need to balance security, affordability, and sustainability (Energy Trilemma).



## 03 Enugu State Energy Profile

### 3.1 Geographical & Economic Context



**Population:**

5.7 million (2023 est.)



**Economic Activities:**

Agriculture, mining (coal, clay, limestone), trade, education.



**Climate Zone:**

Tropical with high solar irradiation (5.5 kWh/m<sup>2</sup>/day).

## 3.2 Energy Supply & Demand



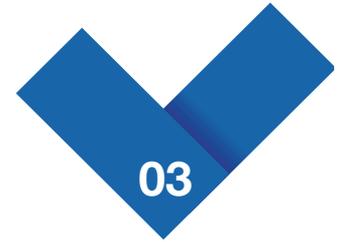
### Grid Access:

Urban 55–60%;  
Rural 20–25%.



### Electricity Sources:

Grid supply from TCN;  
heavy use of diesel/petrol  
generators (65% of supply).



### Unserviced Demand:

Estimated at  
>200 MW.

### Renewable Potential:



#### Solar:

High, scalable for  
mini-grids.



#### Biomass:

Agricultural and  
forest residues.



#### Hydro:

Limited run-of-river  
potential.



#### Coal:

Abundant but  
unsuitable for  
modern transition  
frameworks without  
CCS.



## 04 Trends, Threats, and Disruptions

### 4.1 Key Trends

- **Decentralisation:** Surge in solar home systems and mini-grids.
- **Climate Finance:** Access to green funds (GEAPP, SDG7, SEFA).
- **Digitalisation:** AI for energy analytics, smart meters, remote monitoring.
- **Transition Fuels:** Role of LPG, mini-LNG, and gas-to-power.
- **Energy-as-a-Service:** Private sector-led distributed energy models.

### 4.2 Emerging Threats

- **Grid Insecurity:** National grid collapse ( $\geq 98$  times in past 10 years).
- **Diesel Dependence:** \$7B annual cost in generator set O&M.
- **Climate Risk:** Drought, flooding affecting hydropower and infrastructure.
- **Policy Incoherence:** Inconsistent federal vs. subnational mandates.
- **Subsidy Reforms:** Inflationary pressure from rising tariffs.



### 4.3 Disruptive Innovations

01

#### AI-Powered Energy Optimisation:

Demand prediction, loss detection.

02

#### Blockchain for Energy Trading:

Peer-to-peer models in test phases.

03

#### Pay-as-you-go Solar:

Mobile-money-driven access solutions.

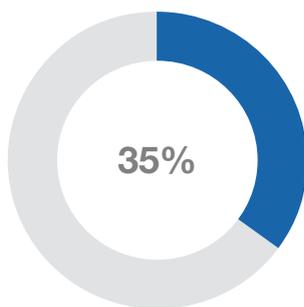
04

#### Green Hydrogen R&D:

Pilot stages in North Africa and SA.

# 05 In-Depth Sectoral Breakdown: Enugu State

## 5.1 Electricity Infrastructure



high technical losses



**Transmission:**

No direct TCN substation; reliance on long radial feeders.



**Distribution:**

Served by Enugu Electricity Distribution Company (EEDC); high technical losses (35%).



**Reliability:**

Frequent outages (>10 per week in most areas).

## 5.2 Household Energy Use



**Lighting:**

Mix of grid, solar lanterns, and generator sets.

**Cooking:**

65% biomass (wood, charcoal), 25% kerosene, <10% LPG.

**Affordability:**

High energy poverty; >30% spend >10% of income on energy.

## 5.3 Commercial & Industrial

## 5.4 Renewable Energy Assets

**01 Backup Power:**  
Diesel generator set capacity >120 MW.

**02 SME Impact:**  
Average 3–6 hours daily power loss; productivity losses estimated at \$500M/year.

**03 Industrial Demand:**  
Concentrated in coal-based cement and food processing sectors.

**01 Existing:**  
Pilot solar mini grids (Nsukka, Udi).

**02 Planned:**  
REA pipeline includes 8–10 mini-grids, 3 under procurement.

# 06 Key Considerations by Energy Component

 Component	 National (Nigeria)	 State (Enugu)
Electricity Generation	Gas-dependent, volatile supply	No major plant; opportunity for IPPs, solar farms
Transmission & Distribution	Weak, congested grid, centralised control	Long radial lines; high losses; limited redundancy
Renewable Energy	Under 1% of mix; national target: 30% by 2030	High solar potential; mini-grid zone expansion needed
Regulation & Policy	Fragmented; federal control dominates	Opportunity to set up State Electricity Market (post-Electricity Act 2023)
Financing & Investment	High-risk perception; few bankable projects	Need PPP frameworks, blended finance, DFI engagement
Capacity Development	Weak technical pipeline	Leverage local universities (e.g. UNN, ESUT) for RE and O&M training
Institutional Readiness	Many bodies, low integration	Create Enugu State Energy Development Agency (ESEDA)



# 07 Global Framework Alignment

## 7.1 Internal Energy Agency's Energy Access Framework



## 7.2 World Bank SDG7 Metrics

 SDG7 Target	 Enugu's Current Status	 2030 Target Actions
<b>Universal Access</b>	40% access	80% via grid + DRE + SHS
<b>Clean Cooking</b>	<10% use of LPG	60% via LPG expansion + improved cookstoves
<b>Renewable Energy Share</b>	<2% of total supply	25% through solar farms and mini-grids
<b>Energy Efficiency</b>	Lacking policy or incentives	Introduce standards, appliance labelling

08

## Recommendations and Implementation Plan



### 8.1 Institutional Setup

- Establish **Enugu State Energy Development Agency (ESEDA)**.
- Develop **State Energy Master Plan** with a 2030 roadmap.
- Create a **State Electricity Market Authority** post-2023 Electricity Act.



### 8.2 Grid and Off-grid Expansion

- Build 2–3 dedicated **33/11kV substations** in Nsukka and Awgu.
- Support the deployment of **50+ solar hybrid mini-grids** in rural clusters.
- Launch **solar rooftop incentives** for public buildings and SMEs.



### 8.3 Investment Framework

- Create a **PPP Office for Sustainable Energy (PPPOSE)**.
- Develop a **bankable project pipeline** and investor prospectus.
- Secure blended finance via AfDB, SEFA, GEAPP, and local banks.



### 8.4 Clean Cooking Strategy

- Establish an **LPG Expansion Program** with subsidies and retail infrastructure.
- Distribute **200,000 improved biomass stoves** over 5 years.

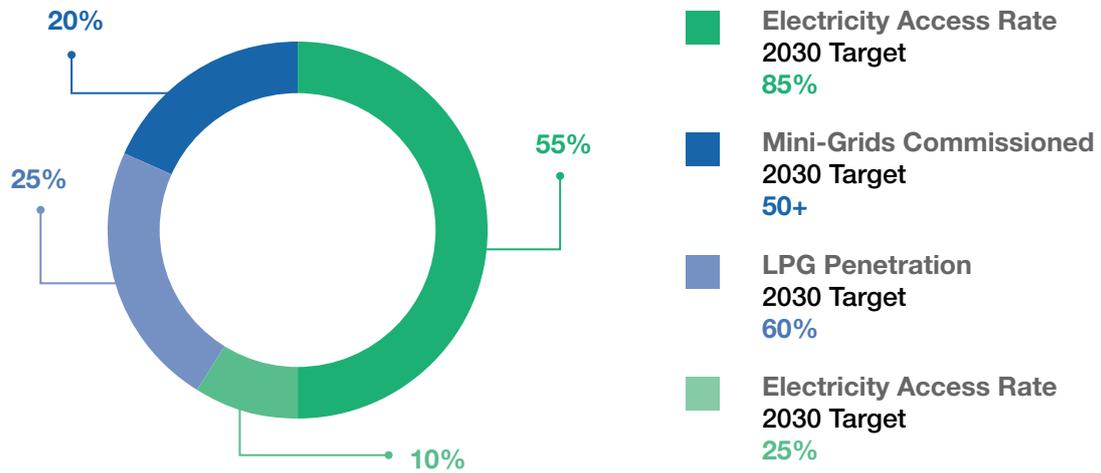


### 8.5 Capacity Building

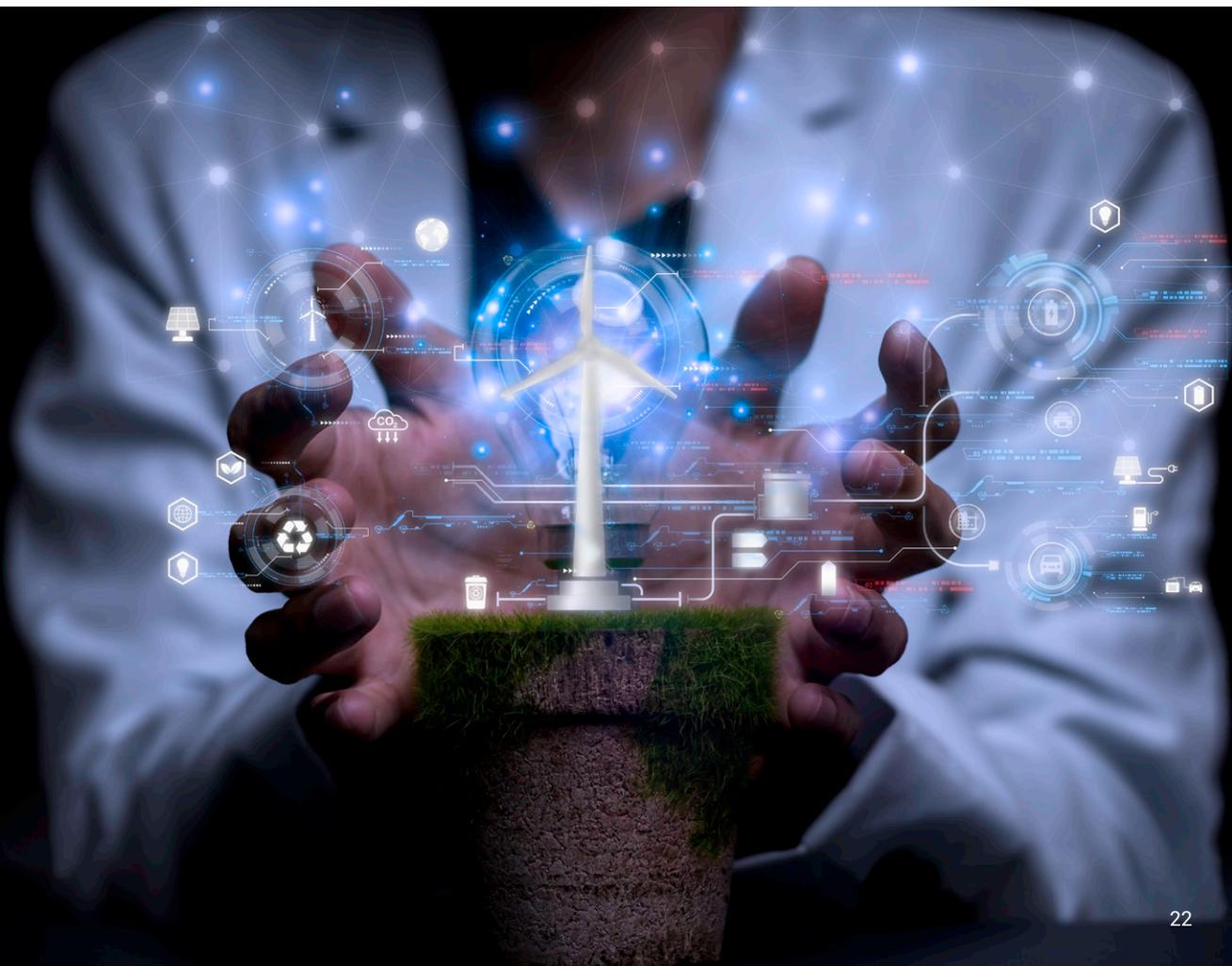
- Partner with **University of Nigeria Nsukka (UNN)** to launch an Energy Innovation Hub.
- Train 2,000+ technicians on renewable energy O&M and solar installation.

09

# Monitoring, Metrics, and Governance



Governance should include a **Sustainable Energy Council** chaired by the Governor, with representation from EEDC, local councils, civil society, youth, and DFIs.



**10**

# Enugu State’s Energy Trilemma & Current Energy Security Analysis

## The Energy Trilemma: Current Status

 Dimension	 Current Rating	 Strategic Use Case
Security of Supply	Low	Overreliance on grid from national transmission (TCN), minimal local generation
Affordability	Low-Medium	High cost of petrol/ diesel generators; minimal renewables penetration
Sustainability	Low	Fossil fuel dominance, no integrated energy transition plan

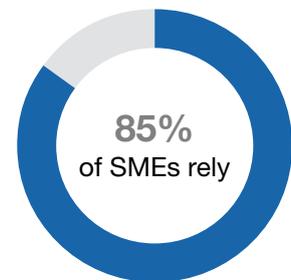
## Security Risks

**Electricity Access:** 52% electrification (rural <40%)

**Grid Reliability:** High transmission losses, frequent blackouts

**Fuel Dependence:** 85% of SMEs rely on diesel/petrol generators

**Climate Vulnerability:** Rainfall/flood patterns disrupt hydro and infrastructure



## Strategic Energy Security Goals

- 
 Establish a decentralised, clean, and resilient energy infrastructure
- 
 Develop localised generation (solar, biogas, mini-grids)
- 
 Reduce import dependence on diesel and petrol by 70% by 2032

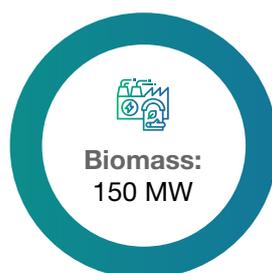


# 11 Strategic Economic Growth Through Renewable Energies

## Key Opportunities

Renewable Source	Resource Availability	Strategic Use Case
Solar PV	5.5–6.5 kWh/m <sup>2</sup> /day	Mini-grids, utility-scale farms, roof-top solar
Biomass	High (agro waste, urban waste)	Bioenergy for heating, rural electrification
Hydro	Micro/mini potential in Udi, Nsukka	Local hydro generation
Wind	Moderate in upland areas	Niche industrial uses

## Projected Renewable Capacity Targets (By 2032)



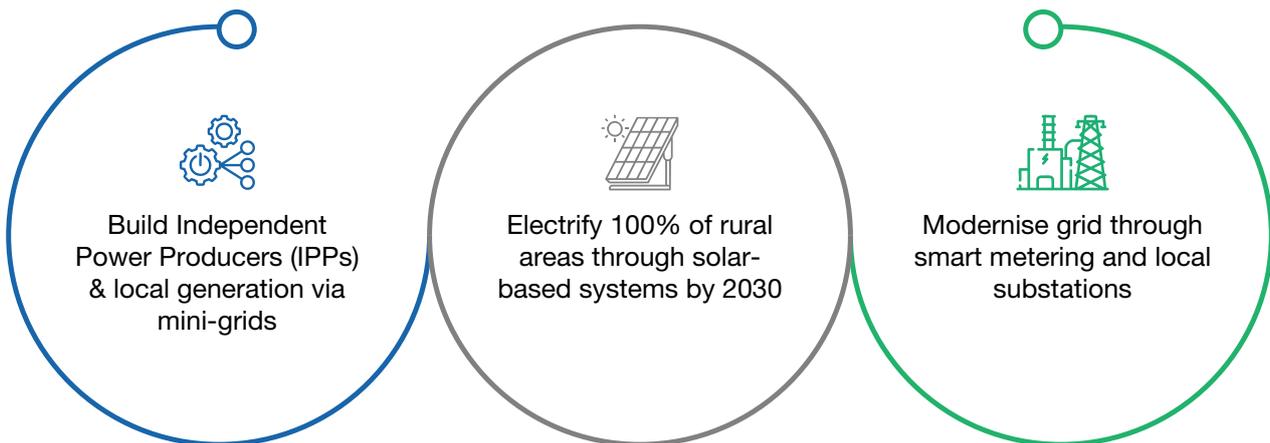
## GDP Impact

- Projected energy-led growth of 2.5% p.a. in state GDP
- 250,000 new green jobs (installation, maintenance, local manufacturing)
- Catalysed SME growth through stable power access

12

# Sectoral Impact Analysis: Power, Housing, Agriculture, Transport & Aviation

## Power Sector



## Housing

- Enforce **Green Building Code** for all public and private buildings
- Mandatory rooftop solar for government housing schemes
- Deploy Energy Performance Certificate (EPC) standards

## Agriculture

- Solar-powered irrigation and cold storage
- Bioenergy from agro-waste for off-grid rural communities
- Electrify processing centres for cassava, rice, and palm oil

## Transport

- Transition public buses to electric or hybrid
- Solar-powered EV charging infrastructure across major roads
- Pilot an EV taxi/transport cooperative in Enugu metropolis

## Aviation

- Develop a **solar-powered airport terminal**
- Pilot use of **Sustainable Aviation Fuel (SAF)** blends
- Implement a smart grid for MRO (Maintenance, Repair, Overhaul) zones at the airport

# 13 Energy and the SDGs: Enugu's Path to 2030

## SDG 7 – Affordable and Clean Energy



- Achieve universal electricity access by 2032
- Reach a 50% renewable energy share in the total energy mix by 2035

## Cross-SDG Alignment



## 14

## Strategic Economic Advantage

### Competitive Advantage

-  Geographic hub of Eastern Nigeria with growing infrastructure
-  Abundant solar radiation and agro waste for renewable development
-  Skilled youth workforce and policy-friendly government

### Strategic Role of FDI

- De-risking via Public-Private Partnerships (PPPs)
- Create a **Renewable Investment Promotion Unit (RIPU)**
- Tax incentives, duty waivers, and sovereign guarantees for IPPs

### Global Financial Institutions

Institution	Strategic Role
<b>World Bank</b>	Off-grid electrification, rural mini-grids
<b>IFC</b>	Commercial project co-financing
<b>AfDB</b>	Large-scale solar, transmission lines
<b>GEAPP</b>	Distributed energy systems
<b>IRENA</b>	Technical assistance, investment matchmaking
<b>Green Climate Fund</b>	Climate-resilient infrastructure

## 15

## Strategic Recommendations

### Policy & Regulatory



Enact the Enugu State Renewable Energy Act



Establish the **Enugu State Energy Commission (ESEC)**



Launch **Sustainable Energy Development Fund (SEDF)**

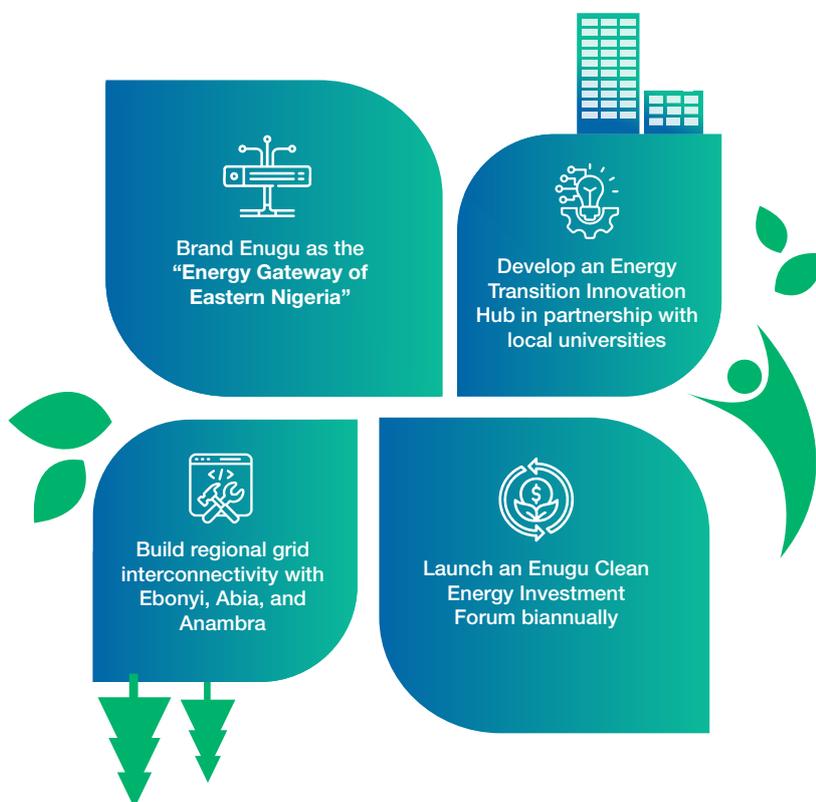
### Infrastructure Investment Pipeline (Assuming a \$2 Billion Project)

Project Type	Budget (\$M)	Timeline
10 x 50 MW Solar Parks	800	2025–2032
250 Solar Mini-grids	300	2025–2030
Smart Grid Modernisation	200	2025–2032
Electric Bus Fleet	150	2026–2030
Airport Clean Energy Hub	100	2026–2028
Rural Cold Chain Hubs	100	2025–2029
Capacity Building (TVET)	50	Ongoing
Governance & Digitisation	50	2025–2027
Contingency & Maintenance	250	Ongoing

### Governance & Delivery

- Form **Project Management Unit (PMU)** under the Governor's Office
- Leverage international advisors and PPP facilitators
- Use **results-based financing** and milestone-driven disbursements

## 16 Key Considerations for Strategic Positioning

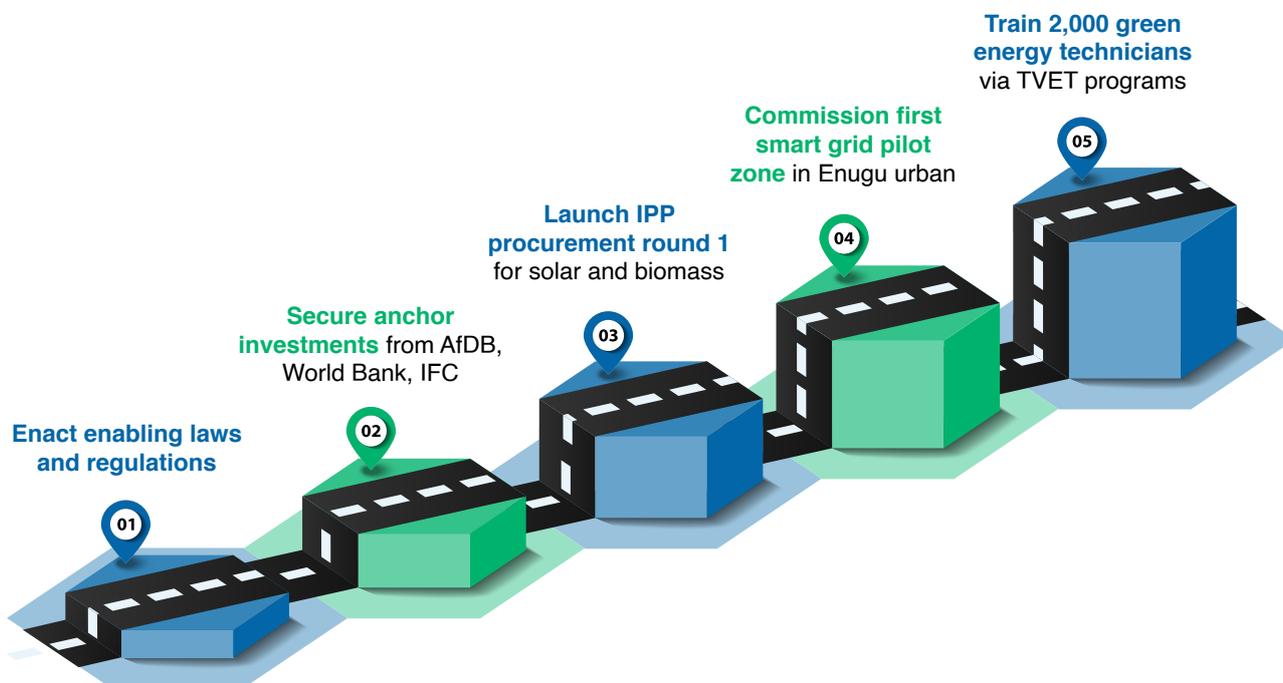


## 17 Global Energy Framework Alignment

 Project Type	 Budget (\$M)
IEA Energy Security	Localised resilient energy systems
IRENA Just Transition	Green jobs, capacity building
World Bank ESMAP	Off-grid electrification tools
UN SDGs	Integrated development alignment
IEA Access to Electricity	Electrification KPIs and targeting
African Union's PIDA	Cross-border energy infrastructure planning

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## Next Steps (Implementation Phase 1: 2025–2027)



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## Conclusion

Enugu State has a once-in-a-generation opportunity to leapfrog fossil-intensive development models and become a clean energy innovation hub in West Africa. This strategy set the foundation for energy self-sufficiency, job-rich growth, and global climate leadership—positioning the state as a sub-national trailblazer in Nigeria’s green energy future. However, success will demand bold policy reforms, institutional leadership, investment partnerships, and community participation. The implementation window is narrow—decisions made in the next 3–5 years will determine outcomes for the next 30. Energy security and sustainability are not optional—they are imperative. Enugu State can and must lead Nigeria’s regional green revolution. With disciplined execution, stakeholder alignment, and global partnerships, this strategy will yield energy sovereignty, climate resilience, inclusive growth, and a thriving green economy.

This report offers a transformative, actionable framework for Enugu State to lead in sustainable energy in Nigeria’s southeast. Implementation of these strategies will unlock productivity, enhance energy access, and attract climate-aligned investments. The time for decisive, future-forward action is now. This strategy delivers more than power — it builds resilience, jobs, and prosperity. Enugu State can lead Nigeria’s energy transition with visionary governance, smart investments, and an unwavering focus on people-centred, planet-positive development. Enugu State stands at a historic crossroads where strategic investments in energy security and sustainability can catalyse inclusive economic transformation. With smart leadership, committed institutions, and visionary partnerships, Enugu can become Africa’s benchmark for state-led clean energy development.



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Empowering the Future.**



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