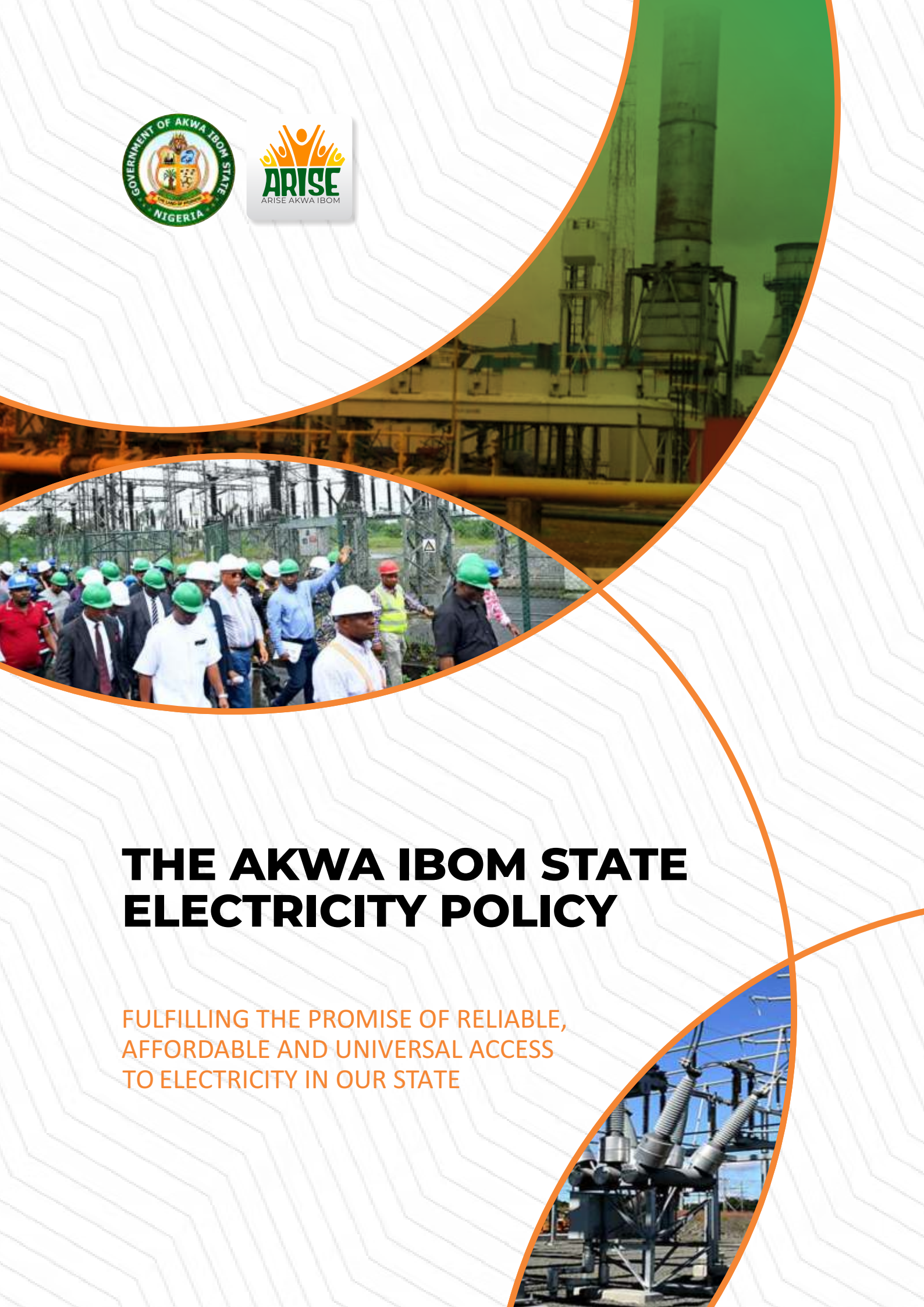




THE AKWA IBOM STATE ELECTRICITY POLICY

FULFILLING THE PROMISE OF RELIABLE,
AFFORDABLE AND UNIVERSAL ACCESS
TO ELECTRICITY IN OUR STATE



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ACRONYMS

AKEM	- Akwa Ibom State Electricity Market
AISERC	- Akwa Ibom State Electricity Regulatory Commission
AISEA	- Akwa Ibom State Electrification Agency
AISEF	- Akwa Ibom State Electrification Fund
AIIRP	- Akwa Ibom Integrated Resource Plan
AKICORP	- Akwa Ibom Investment Corporation
AKSG	- Akwa Ibom State Government
ASDC	- Additional Successor Distribution Company Limited
FGN	- Federal Government of Nigeria
IPPs	- Independent Power Producers
IPC	- Ibom Power Company Limited
IUC	- Ibom Utility Company
NERC	- Nigerian Electricity Regulatory Commission
NEPA	- National Electric Power Authority
NCP	- National Council on Privatisation
REA	- Rural Electrification Agency
PHED	- Port Harcourt Electricity Distribution Company
NBET	- Nigerian Bulk Electricity Trading Company
NDPHC	- Niger Delta Power Holding Company
NEMSA	- Nigerian Electricity Management Services Agency
TCN	- Transmission Company of Nigeria
RAB	- Regulated Asset Base
OGS	- Off-Grid Solutions
PV	- Photovoltaic
SHS	- Solar Home Systems
GESI	- Gender Equity and Social Inclusion

ToU - Time of Use

DSM - Demand Side Management

ETP - Energy Transition Plan

EPC - Engineering, Procurement, and Construction

M&E - Monitoring and Evaluation

FOREWORD

As Governor of Akwa Ibom State, I am honoured to present the **Akwa Ibom State Electricity Policy**, a cornerstone of our administration's commitment to delivering reliable, affordable, and universal access to electricity for all residents of our State. This Policy marks a decisive step in our journey towards energy security, economic prosperity and sustainable development, reflecting our deep understanding of the critical role electricity plays in continuing to drive Akwa Ibom's socio-economic growth.

Akwa Ibom State is blessed with abundant natural resources, including vast reserves of natural gas, a skilled and industrious population and a steadily growing industrial base. Despite these endowments, our State continues to face significant electricity challenges, including insufficient supply, dependence on an inadequate national grid, and the unacceptable fact that 25 years into the 21st century, in this Age of Information, Akwa Ibom State still has some of its communities completely without electricity access while it is fair to say that the rest of the State is still underserved from an energy security point of view. This Policy is our response to these challenges, crafted with the singular vision to empower Akwa Ibom to take full control of its energy future.

The 5th Amendment to the 1999 Constitution in March 2023 followed by the enactment of the **Electricity Act, 2023** are two seminal and strategically important events in the evolution of Nigeria's federalism. Reading both together, it is apparent that the constitutional responsibility of the States of the Federation to make provisions for electricity in their respective territories and promote their energy security has been fully vindicated. This has created a unique opportunity for Akwa Ibom State by enabling the necessary legal framework for the **Akwa Ibom State Electricity Market (AKEM)**. Our State Electricity Market will therefore become an ecosystem designed to foster private sector participation, leverage our natural gas and renewable energy resources, and build a resilient electricity sector that meets the needs of every resident, business, education and health care institution and place of physical and spiritual rejuvenation.

This Policy outlines a clear roadmap for achieving our energy security objectives, including the establishment of the **Akwa Ibom State Electricity Regulatory Commission (AISERC)**, expansion of electricity generation and distribution infrastructure, and development of innovative off-grid solutions for underserved communities, all initiatives that make an Akwa Ibom Electricity Market real. Of utmost importance to us all, they also pave the way to the full realisation of the forward-looking vision of my predecessors in establishing and sustaining our 191MW Ibom Power Company Limited and the years of continued investment into the Akwa Ibom network of the Port Harcourt Electricity Distribution Limited.

The path is now clearer to the full domestication and commercialisation of these historic and valuable investments in the State's electricity infrastructure. We will gain access to the large pool of private sector management experience, capacity and capital needed to exponentially grow these early investments to serve not only the good people of Akwa Ibom State but also Nigeria. By embracing private sector investment, we will not only further unlock the economic potential of our State but also ensure that electricity becomes a catalyst for industrial growth, improved standards of living and environmental sustainability.

The journey ahead will require the collective effort of all stakeholders, including the State and Federal Governments, private sector, development partners, and the people of Akwa Ibom State. I sincerely thank all those who provided feedback to the state government during the process of developing this policy. I believe that this Policy will inspire the collaboration, investment and innovation that will enable us to transform our electricity landscape into one that reflects the promise of Akwa Ibom as the true "Land of Promise."

May this State Electricity Policy serve as a declaration of our commitment and a signpost of our determination to deliver a brighter, more prosperous future for all our people. Together, we will ensure that electricity powers not just our homes and businesses but also our dreams, ambitions and aspirations for our beloved Akwa Ibom.

DATED AT UYO THIS 24TH DAY OF SEPTEMBER 2024

PASTOR UMO ENO

GOVERNOR, AKWA-IBOM STATE

EXECUTIVE SUMMARY

The **Akwa Ibom State Electricity Policy** provides a strategic framework for ensuring reliable, affordable, and universal access to electricity for all residents of the State. The policy leverages Akwa Ibom's abundant natural resources, strong economic base, and recent constitutional and legislative changes under the **Electricity Act, 2023** to establish a viable State Electricity Market (AKEM).

Background and Context

Akwa Ibom, with a population of approximately 7.2 million, is a leading contributor to Nigeria's economy, particularly through its oil and gas sector. Despite significant public and private sector investments across the electricity delivery value chain from gas supply through to distribution, the State still faces chronic energy security issue due to its total reliance on supply via the national grid. This policy aims to transition Akwa Ibom from dependence on federal electricity systems to a State electricity market that prioritises the deployment of its various assets to assuring its energy security and socio-economic growth.

Key Objectives

1. **Energy Security:** Achieve universal electricity access for residents and businesses by enabling the development of an integrated fuel supply, generation, distribution and transmission value chain.
2. **Private Sector Participation:** Promote private investment and management of electricity assets to attract quality management, gain sustainable access to capital and thereby enhance operational efficiency and service delivery.
3. **Infrastructure Development:** Expand electricity generation capacity to meet intra-State demand and become a net exporter of electricity, leveraging both natural gas and renewable energy sources.
4. **Regulatory Transition:** Establish the Akwa Ibom State Electricity Regulatory Commission to regulate technical and economic activity in the State's electricity market.
5. **Sustainability:** Emphasise renewable energy integration, energy efficiency, and environmental sustainability in the State electricity market.

Proposed Market Structure

The Akwa Ibom State Electricity Market (AKEM) will feature:

- A State Electricity Regulatory Commission (AISERC) to license and regulate electricity operators.
- Gas companies to assure continued availability of fuel for State-based thermal generation.
- Generation companies, including the State-owned Ibom Power Company.
- A newly incorporated distribution company to assure reliable and customer-driven electricity distribution system.
- Both thermal and renewal energy-powered off-grid solutions for underserved areas.
- A State Electrification Agency to coordinate rural electrification efforts and manage a State Electrification Fund.

Implementation Framework

1. **Integrated Resource Planning (IRP):** Develop a comprehensive energy plan to align demand forecasts with generation and distribution capacity.
2. **Off-Grid Solutions:** Deploy mini-grids, solar home systems, and hybrid renewable energy projects for underserved and unserved communities.
3. **Energy Transition:** Leverage natural gas as a bridge fuel while integrating renewable energy sources like solar and hydro.
4. **Consumer Protection:** Introduce robust regulations to ensure fair pricing, reliable service, and consumer rights enforcement.

Investment and Funding Needs

The policy estimates a \$4.5 billion investment requirement over the next decade to achieve the desired electricity infrastructure. It prioritises private sector investment, facilitated by regulatory incentives, fiscal policies, and public-private partnerships.

Socio-Economic Impact

The policy envisions significant benefits, including:

- Full universal electricity access by 2034, assuring 20+ hours of daily supply to all identified communities in the State.

- Lower costs of doing business, spurring industrial growth and multisector economic activity.
- Greatly reduced reliance on self-generation, improving environmental sustainability.
- Creation of a skilled workforce through training and capacity-building initiatives.

Conclusion

The Akwa Ibom State Electricity Policy sets the foundation for transforming the State into an energy-secure, economically vibrant region. By aligning infrastructure development with sustainability goals and prioritising private sector engagement, the policy positions Akwa Ibom as a model for subnational electricity markets in Nigeria. Regular policy reviews and collaboration with stakeholders will ensure the effective realisation of its objectives.



Chapter One – Defining the Promise and its Challenge

1. INTRODUCTION

- 1.1** Akwa-Ibom State is our "Land of Promise". It stands out as one of Nigeria's geographically smaller States but is celebrated for its rich cultural heritage, scenic beauty, modern facilities and significant investment in multi-modal infrastructure. With an estimated population of 7.2 million¹, a significant portion of which resides in the key metropolitan centres of Uyo, Eket and Ikot Ekpene, Akwa Ibom has thrived on being one of Nigeria's leading oil and gas producers, positioning the State as the 3rd highest contributor to Nigeria's GDP at approximately ₦7.77 trillion.²
- 1.2** Beyond hydrocarbon extraction, however, agriculture, tourism, manufacturing, and service industries also play pivotal roles in Akwa Ibom's economic landscape. Positioned as it is along the Atlantic coast and with fertile land, Akwa Ibom's strategic location encourages economic growth, trade opportunities and agricultural productivity, thus attracting investments that fuel further growth. The State's economic strength further reinforces its promise of prosperity and development³. However, despite its robust economic activity and its significant investments in the electricity sector, Akwa Ibom faces challenges in electricity supply, with electricity demand expected to rise due to population growth and increased socio-economic activity.
- 1.3** At creation in 1987, Akwa Ibom state was supplied electricity by NEPA and thereafter Following sector reforms initiated in 2005 under the Electric Power Sector Reform Act, Akwa Ibom's electricity customers

¹ <https://www.publicfinance.ngf.org.ng/nigeria-state-budget/akwa-ibom-state-public-finance-database/>

² <https://businessday.ng/news/article/top-10-richest-states-in-nigeria-ranked-by-gdp/>

³ AKWA -IBOM STATE, THE LAND OF PROMISE (arcgis.com)

became served by the Port Harcourt Electricity Distribution Limited (PHED). Established from the former Port Harcourt Zone of the National Electric Power Authority, PHED was privatized in 2013 to oversee power distribution in four states, including Akwa Ibom. PHED is the only electricity distribution company (Disco) that has significant ownership by its constituent States. This was due to the farsighted decision by previous Governors of these constituent States that their energy security would best be assured if they had a direct say in PHED's corporate governance. Long before the 5th Alteration to the 1999 Constitution and the Electricity Act, 2023 came into force, Akwa Ibom and the three other PHED States had resolved that their path to energy security lay in establishing State electricity markets designed to suit their purpose and peculiar endowments.

1.4 To this end, Akwa Ibom stands uniquely positioned to attain full energy security. This is because within its borders exist the key elements of a viable electricity value chain, including:

- 1.4.1** The Accugas (subsidiary of Savannah Energy Plc) 200MMScf/day gas processing plant at Uquo, which is a supplier to the State-owned 191MW Ibom Power Plant, Ikot Abasi;
- 1.4.2** An extensive 33kV/11kV/415v electricity distribution network that nominally belongs to PHED, but a very sizeable portion of which network was funded by the State Government before and after its privatisation;
- 1.4.3** A citizenry and electorate that is acutely aware that, with per capita GDP (2021) at \$7,700 and total GDP of \$50.3bn (approximately =N=7.7 trillion), it is home to socio-economic activity that justifies the establishment of a State electricity market capable of delivering energy security to them;
- 1.4.4** A change in the constitutional and legal framework that has evolved towards enabling State electricity markets to rise and eliminate the persistent inability to deliver consistent and reliable universal access nationally.

- 1.5 In other words, Akwa Ibom State is endowed with all the elements that enable it to attain self-sufficiency in supply, attain universal access and export energy outside the State to any credible buyer within the country. Therefore, given our ambitions as a State and considering the limitations of the national grid, we must explore all the legal and commercial alternatives available to enable the establishment in the State of a robust electricity sector that enables the achievement of its developmental goals
- 1.6 In the absence of a definitive Integrated Resource Plan, the preparation of which will be immediately and urgently prioritised, a conservative rule of thumb may be applied that requires 100MW per million population. With a projected population of approximately 11 million by 2034 at 3.4% per annum compounded annual growth from today's 7.2m, this means 1,100MW by 2034 serving a projected 820,000 customers, residing in approximately 750,000 households and conducting business in approximately 70,000 SMEs, commercial and industrial establishments across the State.
- 1.7 This capacity will be provided by generation sources located within and outside the State, delivering on average 20 hours of supply daily to customers connected at 33kV voltage level and below (11kV and 415V, to meet anticipated energy demand of approximately 22,000MWh daily by 2034. It is also expected that a significant portion, not less than 25% of this total capacity will be derived from renewable sources, apart from utilising the abundant reserves of natural gas in the State. Achieving all these from the current baseline of approximately 30MMSCF/day of natural gas, 191MW nominal capacity in Ibom Power Company, a 132kV/33kV/400MVA/250MW transmission network and a 33kV/11kV/415v/600MVA/380MW distribution network will require mobilising investments amounting to just over \$4.5bn during the next 10 years across this energy value chain. This excludes the equally significant investments that must be made in educating and providing continuing education to the highly

educated workforce that must be generated and deployed into making policy for, regulating and operating, the Akwa Ibom State Electricity Market (AKEM).

- 1.8** Embracing this ambitious whole-of-sector approach to developing this Market is the reason why this policy document is now presented to the citizenry and to external stakeholders. It seeks to remove the socio-economic burden placed on the citizens by inadequate and unstable power supply. It also seeks to drastically minimise the need to resort to expensively and environmentally damaging self-generation in preference for public on-and off-grid power sources. This Policy focuses on enabling the delivery of least cost, consistent, reliable and environmentally sustainable energy to propel Akwa Ibom's socio-economic development. In the Chapters that follow, it elucidates the State's overarching strategy and the policy initiatives required to implement this strategy and ultimately ensure dependable and affordable electricity that is universally accessible to all Akwa Ibom residents.



Chapter Two – The Akwa-Ibom State Electricity Sector

2.1 Current Structure and Assets

- 2.1.1** The current public electricity market status in Akwa-Ibom State derives from the national electricity market model. Like all other Nigerian States, Akwa-Ibom sources its public electricity supply from the national grid, facilitated by the transmission network operated by the Transmission Company of Nigeria (TCN). Even though, Akwa Ibom State possesses all the elements that assure its security of public supply, it continues to depend on the national grid for that supply. Thus, although Ibom Power Company (IPC) delivers between 85MW to 100MW daily to the national grid, the State typically receives in return less than 60MW of capacity across an average of 10-12 daily. This is delivered to residential, commercial and industrial customers via the electricity distribution network operated by PHED.
- 2.1.2** Thus, the State receives significantly less than the energy generated by IPC and taken out of the State via the TCN 330kV Switching Station at Ikot Ekpene. The supply into the State from the national grid is delivered through the four TCN 132kV/33kV transmission substations at Eket, Ekim, Itu and Uyo, which all together have a nominal transformation capacity of 400MVA or approximately 250MW, at least triple the capacity currently available to the State from the national grid. The four TCN substations deliver energy into the nineteen 33kV distribution feeders in the State, each of the latter having a nominal capacity of 20MW for a total feeder capacity in the State of 380MW or 600MVA of transformation capacity, as shown in Table 1 below.



Table 1

GAS SUPPLY	Savannah Energy, Ikot Abasi
	Nominal Processing Capacity: 100MMScf/day
GENCO CAPACITY	Ibom Power Company Limited
	Nominal: 191MW
	Licensed: 685MW
	Available: 100MW
330kV TRANSMISSION	Ikot Ekpene 330kV Switching Station
132kV TRANSMISSION (SUB-STATION)	Eket 100MVA
	Ekim 60MVA
	Itu 60MVA
	Uyo 180MVA
33kV FEEDERS	Abak
	Eket/Etinan
	Eket/Ekpenukpa
	Mbo
	Onna
	Feeder 1/Industrial
	Feeder 2/Ikot Abasi
	Feeder 3/Ekim
	Itam feeder 1
	Itu/Oku Iboku feeder 3
	Four Lane Feeder 8
	Uyo Town/Ibesikpo feeder 5
	Uyo Town/Champion Breweries feeder 3
	Le Meridien Five Star feeder 9
	Ikot Ekpene/Ikono/Ibiono/Ini feeder 6
	Uyo Town/Oron Road feeder 4
	Abak/ Ika/Etim Ekpo/Orukanam/Ukanafun feeder 1
	Ikot Ekpene/Obot Akara/Essien Udim feeder 2
	Spare Feeder 7 to feed Ibom Specialist hospital

2.1.3 Table 1 very clearly illustrates the gross imbalance across the entire energy value chain in the State. This imbalance is illustrated by the following facts:

2.1.3.1 The Savannah Energy has enough pipeline capacity to carry up to 600MMscf/day and current processing capacity for up to

200MMscf/day, which, with credible financing in place, can be ramped up to deliver more, all of which are more than enough to supply;

2.1.3.2 IPC, which for various technical reasons is presently only able to deliver about a maximum of 100MW/day, which is barely 55% of its 191MW nominal capacity and 30% of Savannah's current gas supply capacity;

2.1.3.3 But the combined minimum nominal capacity of the four 132kV transmission sub-stations is 480MW (assuming maximum loading of 120MW per sub-station), which is approximately 2.5x the nominal capacity of IPC; and

2.1.3.4 At the distribution level, which is next to the customer, there is a total nominal feeder transformation capacity of 380MW or 600MVA of transformation capacity that can be energised and delivered to customers across the State, with 200MW or over 50% of that capacity concentrated in the Uyo-Ikot Ekpene metropolitan area of less than 500km².

2.1.4 In other words, juxtaposed with all these capacities is the conservative estimate of a further 50MW of diesel-powered self-generation capacity, each individually rated at over 150kW, owned by various large public and private sector players. This is capacity that ideally should be phased out of self-generation and switched back to public power supply, which would happen only if public supply could become more reliable and cost-efficient. If IPC could deliver more energy to the State distribution network, the distribution network would find more customers to contract for even more energy supply **IF** that supply could be delivered reliably.

2.1.5 In other words, there is significant potential for human capital and financial investment in additional generation capacity and in making the distribution network more reliable and singularly focused on customer satisfaction and revenue assurance. ***Accordingly, a key strategic objective of this Policy is to see to it that the phase-out of the use of distillate fuels for large capacity self-generation (assumed here to be 100kW and above) and the transition of such users to***

utilising the Akwa Ibom State Electricity Market (AKSEM) for baseload supply.

2.1.6 Furthermore, it is now well established, from valuations undertaken by the Nigerian Electricity Regulatory Commission (NERC), that up to December 2013, Akwa Ibom State Government investments into the PHED network accounted for 22.5% of the regulated asset base value of PHED, which was translated to its equity value at the time of privatisation in 2013. All these assets are in the State. The State Government's contributions to the PHED asset base in the State have continued to be made year-on-year after 2013, right up to the present time.

2.1.7 *Therefore, AKSG expects, and will take steps to ensure, that the State electricity distribution company will be created in the State out of PHED, as mandated by the Electricity Act, 2023; and that AKSG's appropriate equity share in the State electricity company is duly allotted to the State through its designated entity, Akwa Ibom Investment Corporation. This is in accordance with the resolution of 19th March 2020 of the National Economic Council (NEC), which adopted the recommendations of its Ad Hoc Committee on Ownership Review and Analysis of the Electricity Distribution Companies and Electricity Reform, to wit, that equity in each Disco should be allotted to the States that they cover in direct proportion of the States' investments into the regulated asset base of the Discos, in accordance with the decision of the National Council on Privatisation taken at its meeting of February 2012.*

2.1.8 AKSG will be proactive in ensuring that the above-noted strategic policy decisions are fully implemented. Thus, AKSG's 22.5% contribution to the PHED equity base when translated to the Akwa Ibom electricity distribution company soon to be incorporated, will amount to a significant equity share in that new company to be incorporated in accordance with Section 230, Electricity Act, 2023. This new company will then be expected to play a key role in creating a private sector-led and -operated Akwa Ibom Electricity Market built around resetting the imbalanced value chain described herein.

2.1.9 The fundamental objective of clearly defining the State Government's focus on IPC and the State's electricity distribution endowments is to enable the realisation of the historical strategic aim that underpins the acquisition of the 60% core investor equity in PHED in 2013 by 4Power limited, the investment vehicle established by the four States (Akwa Ibom, Bayelsa, Cross River and Rivers States) covered by PHED. The aim was for the States to create incorporated electricity distribution companies for each State, which would then focus on bringing together each State's significant gas thermal generation capacity with their domesticated distribution assets, thereby creating an integrated electricity value chain in each State that would be financed, operated, maintained and grown by professional private sector interests.

2.1.10 These State integrated value chains would thereby operate with commercial intensity and effectiveness and, combined with targeted State investments in extending access to the unserved and underserved communities on the State, achieve universal access across the State and bring value creation to the operations of the State-owned generation and distribution assets. These activities will be facilitated by significant private sector-led investments and upgrades across the entire energy value chain in the State, from the privately-owned gas processing and supply infrastructure in the State down to the smallest connected customer at the 415V level. ***Our target is to enable and catalyse the estimated \$450m per annum of energy sector investments estimated to be required across the State energy value chain to achieve the target of approximately 1,100MW of generation capacity in the State by 2034 consistently and reliably delivering not less than 20hours (22,000MWh) of supply daily.***

2.2 State and Federal Government Interventions

2.2.1 Unfortunately, in the eighteen years since it was established, the REA's activity in the State has been at best minimal. It is expected that in its new incarnation under the Electricity Act, 2023, the REA will be more proactive in the State, especially in the development of minigrids in the State and connecting them to the State electricity

grid. (there is one REA-supported 20Kv solar power minigrid undertaken by Prado Power at Mbiabet Ikot Esieyere, Ini LGA)

2.2.2 The other area in which prospective Federal Government of Nigeria (FGN) intervention will be highly desirable is in supporting the work of the State electrification agency as it seeks to reduce the capital cost of extending supply connections in those areas of the State that are still regarded as uneconomic to serve. The State Government will ensure that the State electrification agency and the State electricity distribution company work with the provider of any FGN intervention funding, for example, through the REA or the Presidential Metering Initiative.

2.2.3 *The State Government will also ensure that the sole purpose of any such intervention is to ensure coordination and collaboration with institutional State stakeholders in a bottom-up manner that recognises the goal of reducing capital costs of connections and achieving universal access. The effect will be that commensurate electricity tariffs for such new or upgraded connections are reduced to the full extent of any capital contributions or subsidies made by the State and/or Federal Government.*



Chapter Three – Catalysts for the Proposed Akwa-Ibom State Electricity Market

3.1 The Amendment to the Constitution of the Federal Republic of Nigeria, 1999 and the Enactment of the Electricity Act, 2023 (EA 2023)

3.1.1 The establishment of the Akwa-Ibom State Electricity Market (AKEM) is influenced by several significant factors. These include the recent alteration (amendment) to the Constitution of the Federal Republic of Nigeria, 1999, which clarified the States' powers and roles in the electricity sector concurrent with those of the Federal Government. Additionally, the Electricity Act (EA) 2023, which came into effect following the constitutional amendments, mandated specific actions to facilitate the development of State electricity markets. Another crucial factor is the State's abundant oil and gas resources, its evolution towards clean energy, and how it plans to leverage its gas reserves.

3.1.2 Historically, under the Constitution of the Federal Republic of Nigeria, 1979, the States had well-defined concurrent powers to enact laws for the generation, transmission and distribution of electricity for their respective territories. However, the enactment of the National Electric Power Act in 1972 during military rule curtailed these powers, and the subsequent short-lived civilian rule from 1979 to 1983 prevented States from exploring the benefits of creating their electricity markets. This worsened under the 1999 Constitution, which adopted the concurrent powers of the 1979 Constitution but with a literal twist in Paragraph 14(b) of the Concurrent Legislative List that severely restricted the States' ability to legislate for their electricity markets.

3.1.3 Since 1972, Nigeria's population grew exponentially faster than the rate of expansion in capacity and quality of service in the electricity sector. The Federal Government's inability to fund commensurate capital asset growth and the consequent failure in capacity and

quality-of-service indices highlighted the need for a more decentralised electricity market tailored to serve the multifaceted needs of Nigeria's vast geography and population. This necessitated the amendment of the 1999 Constitution to remove barriers preventing States from fully exercising their constitutional powers. Thus, the 5th Alteration to the Constitution, 2023 came into effect and empowered States to legislate for the generation, transmission and distribution of electricity within their territories without hindrance.

3.1.4 This process of constitutional amendment was matched simultaneously by the legislative process of repealing the Electric Power Sector Reform Act, 2005 and enacting in its place the Electricity Act, 2023. Section 230 subsections (2) to (9) give legislative force to the constitutional amendment and effect a very significant shift in the structure of the Nigerian Electricity Supply Industry. The Act explicitly empowers States to make laws for electricity markets within their territories. It also recognises the need for a gradual transition from central control of electricity provision by enabling each State to determine the timing of the transition to it of policymaking and regulatory responsibility for its territory from the Federal Government.

3.1.5 *This deliberate process of transition is one that the State Government is now utilising as a prelude to the establishment of the AKEM; which is a paramount strategic objective for this Administration.*

3.2 The Akwa-Ibom State Electricity Legal Framework

3.2.1 The State Electricity Law will follow this Policy and provide the statutory foundation for establishing and operating a full-fledged Akwa-Ibom Electricity Market that comprises:

- a. The Akwa-Ibom State Electricity Regulation Commission (AISERC);
- b. The Akwa-Ibom State Electrification Agency (AISEA);
- c. The Akwa-Ibom Electrification Fund (AISEF);
- d. State-based generating companies such as Ibom Power Company Limited licensed by AISERC;

- e. State-based distribution companies such as Ibom Utility Company Limited and the additional successor company to be established for the State out of PHED; and
- f. A transmission company that may be established for the State either by TCN or by private interests.

The Law will make provision for other matters offences, penalties, contracts, tariffs, and consumer protection standards.

3.3 The Akwa-Ibom Integrated Energy Resource Plan

3.3.1 The Akwa-Ibom Integrated Resource Plan (AIIRP) will be designed as the States key electricity sector planning and marketing tool. It will be designed to anticipate and fulfil the State's electricity requirements by analysing the availability of generation fuel and sources, electricity generation resources within the State. The AIIRP will deploy cutting-edge technology tools and methods to determine the most cost-effective approach to meet the identified energy demand in Akwa-Ibom. It will also examine both supply and demand-side resources, deployment strategies, constraints, as well as the financial, economic, social and environmental impacts associated with meeting the State's projected energy needs over a long-term planning horizon. Once finalised, the AIIRP will play a critical role in laying the groundwork for a commercially viable Akwa-Ibom Energy Market. Regular reviews and assessments will be conducted to ensure that the Plan is updated and remains aligned with the State's evolving needs.

3.3.2 The AIIRP will place paramount emphasis on promoting environmentally sustainable and climate-efficient energy solutions, leveraging the abundant natural gas reserves found in the Akwa-Ibom Inland Basin. It will mandate the phase-out of distillate-fuelled self-generation, particularly by large capacity self-generation diesel-powered machines; while encouraging the adoption of cleaner energy sources, such as the State's natural gas and renewable alternatives for current and future energy needs. ***The State Government will engage stakeholders on its plans to introduce a raft of suitable incentives to encourage the adoption of renewable energy solutions throughout the State.***

3.3.3 The AIIRP will also be the foundational document that guides the future competitive and transparent procurement of more electricity generation resources as the State transitions to establishing a credible, generation-adequate, climate-sensitive and commercially viable State electricity market. In the absence of an independent system operator, some other neutral entity, probably the State Regulator, will develop and oversee the competitive and transparent procurement framework for potential market participants. This will ensure the most cost-effective means of financing, constructing and operating energy projects, while transparency enables all interested and qualified parties to bid for the construction and operation of new generation sources to deliver energy to consumers.

3.4 Private Sector Management of the AKEM

3.4.1 From the initial stages of the AKEM, given the significant need for quality management and long-term capex that covers the wide gap between current demand and available supply in the State, the focus will be on ensuring the commercial effectiveness of the State's existing assets. As it has done in the aviation sector, AKSG recognises the acute and apparent limitations of direct public sector involvement in the management and operation of the State's electricity generation and distribution assets. As it also acknowledges the importance of private sector involvement in enhancing access to capital, performance and efficiency of these assets, the State Government will ensure that private sector management of the State's electricity assets is implemented immediately.

3.4.2 Consequently, the State aims to attract well-managed, well-funded private entities through enhanced incentives, expecting them to contribute specialised expertise and ability to efficiently access capital to invest in and optimise the performance of the State's electricity assets and services. Private management is deemed indispensable for ensuring the effective operation of AKEM's valuable assets and the attainment of the State's stated objective of achieving sustainable universal access to reliable electricity supply by all communities in the State.

3.4.3 The State Government has no doubt that private sector-led operation and maintenance of the State's electricity generation and distribution assets is essential to the upgrade and modernisation of the State electricity sector, which will end the continuous and long-running suboptimal and deficient operation and financing that has been the lot of IPC since its inception.



Chapter Four – The Proposed Akwa-Ibom State Electricity Market Design and Institutional Framework

4.0 The primary objective of establishing the Akwa-Ibom State Electricity Market (AKEM) is to ensure reliable, affordable, and universal access to electricity for all residents of Akwa-Ibom State who desire it. However, this strategic goal is accompanied by other important objectives, including:

- i) Enabling sustained investment into the AKEM and the full capitalisation of all State-based electricity licensees.
- ii) Promoting gender and social inclusion and poverty reduction.
- iii) Promoting full commercial operations in the AKEM to foster the socio-economic development of Akwa-Ibom State to its farthest extent.

4.0.1 In delivering universal electricity supply via the AKEM, the State Government aims to ensure that every town and its constituent villages covered by an electricity retail company are connected to a form of reliable electricity supply that does not require the customer-resident to be its own primary provider of electricity. Similarly, in keeping with best practice, reliability in this context means the cost-efficient delivery of electricity to all customers in the state to meet quality and quantity demands at the time of need, while maintaining an acceptable reserve margin within the State.

4.1 THE PROPOSED MARKET DESIGN

4.1.1 The Akwa-Ibom Electricity Value Chain and Its Key Stakeholders

The AKEM, under its established policy and legal framework, envisions an electricity value chain with multiple private and public sector stakeholders, including:

- i. The State Electricity Regulatory Commission;
- ii. Intra- and Inter-State Wholesale and Distributed Generation IPPs;
- iii. State-based fuel (natural gas) processing and supply companies;

- iv. The electricity distribution company for the State;
- v. The State Ministry of Power;
- vi. The State Electrification Agency; and
- vii. Customer groups (special, industrial, commercial and residential).

4.1.2 The State Electricity Regulatory Commission (SERC):

4.1.2.1 The SERC plays a singularly crucial role in the development of the AKEM because the quality of the exercise of its regulatory functions will determine the efficiency of the market's design/structure. The SERC will be an independent economic and technical regulator that will oversee all electricity generation, transmission, and distribution activities within the State. Given the fact that the State's basic market design is already established along the existing gas-to-power value chain, the focus of the SERC will be on establishing a credit-worthy commercially driven market framework capable of consistently attracting credible private sector investment into the AKEM without the need for long term State Government guarantees.

4.1.2.2 The SERC will have the authority to issue operating licenses to entities seeking to enter the AKEM to provide services to customers in Akwa Ibom State. These licenses will cover various aspects such as generation, transmission services (construction and maintenance), transmission operation (planning and independent system operations), distribution (construction and maintenance), distribution operations (operations, retail and customer care), trading, integrated utility (distributed generation/mini grids) as determined by the SERC in line with the State's policy goals.

4.1.2.3 Additionally, the SERC will be responsible for approving competitive procurement processes for entities to ensure adequate generation capacity for the State in accordance with the IRP discussed in Chapter 3, setting efficient and cost-reflective tariffs, planning and procuring energy supply, for wholesale and

retail supply contracted and for supply within the State (with particular emphasis on incentivising efficiency and sanctioning inefficiency), promoting competition for entry into and within the AKEM and ensuring attention to and the enforcement of consumer rights.

4.1.3 Wholesale and Distributed Generation IPPs:

- 4.1.3.1** Akwa-Ibom State's strategic location in the Nigeria hydrocarbon basin and the Niger Delta positions it well to benefit from the growth of gas-to-power and hydroelectric generation. Being so well served by both natural gas and renewable energy generation sources, it is envisaged that in the next 15-20 years, the growth of the AKEM will at least partially be driven by gas-to-power electricity generation.
- 4.1.3.2** However, the evolution of hydroelectric generation technology, for example, has made turbine blades much more efficient and minimised the massive environmental impact that damming rivers can cause. Today, run-of-river turbines are available with very fast EPC schedules that do not require any dams to be built with minimal footprint for switchgear and other ancillary equipment.
- 4.1.3.3** Thus, technological advancements have made it possible to derive more energy from the same or lower volumes of natural gas, as well as deploy more efficient and environmentally friendly hydroelectric turbines. The blending of hydro and thermal generation is expected to create a market with lower wholesale electricity costs.
- 4.1.3.4** In addition, wherever renewable energy technologies are deployed effort will be made, through the State Electrification Agency working in collaboration with the State electricity distribution company and local communities supported with funding from the State Electrification Fund wherever possible, to introduce solar home systems along with other RE technologies so that the need for expensive battery storage systems is eliminated or at least minimised.

4.1.4 The State Electricity Distribution Company:

- 4.1.4.1** In Nigeria today, the transmission/distribution voltage interface is at 132kV/33kV while interactions with most customers subsist at the 11kV/415v interface while a few large commercial and industrial customers are served at 33kV level. The market structure now being taken over from NERC regulation is one that has a single licensee sitting at all three voltage levels from 33kV down across all customer classes. This single license covers two distinct businesses – one being the wires business at 33kV/11kV/415V; whilst the other is the customer care business at these levels but particularly at the 11kV and 415V levels.
- 4.1.4.2** The proposed State electricity company structure is expected to be set up as follows. First, the incumbent NERC-regulated PHEDC is required by the Electricity Act, 2023 to incorporate an Akwa-Ibom -focused subsidiary. Next, thereafter, yhis subsidiary, described in the EA, 2023 as the "additional successor distribution company" (the ASDC), will be expected to undergo a series of corporate actions to allot equity to AKSG in value commensurate with the State's historical investments in the State distribution network. Thereafter, the company will establish itself and operate as a viable entity that is also the primary electricity distribution licensee in the AKEM.
- 4.1.5 Other Licensees:** The State Electricity Regulatory Commission (SERC) is expected to be agnostic about license types and categories. While it will establish standard license classes in its application regulations, it will also emphasize the flexibility to create new license classes as needed in the future. Additional license types outlined in the State Electricity Law include integrated utility, generation licensees, electricity supply and trading licenses and a single system operator licensee.
- 4.1.6 The State Ministry of Power (SMoP):** The State Ministry of Power will be defined by a detailed ministerial mandate in an Executive Order issued at the discretion of the Governor, who is the State Chief Executive, and subject to modification at any time. The Ministry's responsibilities will involve advising the State Government on

formulating and proposing electricity policies, monitoring policy implementation, representing AKSG at national and international forums and liaising with legislative bodies on electricity matters.

4.1.7 The State Electrification Agency:

4.1.7.1 This Agency's primary task will be the management of the State Electrification Fund (SEF) and the allocation of capital to deserving projects selected following a strictly conducted procurement exercise in which communities compete for grants from the Fund. The rules for contributing to and managing the Fund will be clear. The procedures for winning capital grants from the Fund will be transparent and fully accountable.

4.1.7.2 The primary purpose of a grant from the Electricity Fund is to reduce the capital cost of extending connections to the underserved and unserved areas of the State. In this way, the connection becomes more economically viable and the cost-reflective tariff ultimately charged to connected customers, in turn, becomes lower and more affordable. The SEA will receive funding from multiple sources, including donations, grants, gifts, assistance, or loans made by local or international, bilateral or multilateral agencies or NGOs, the private sector, the Federal and State Governments, local communities, businesses, and any other entity as may be specified in the Akwa-Ibom State Electricity Law. Grants from the Fund will be applied 100% to deserving projects proposed by any distribution licensee working in tandem with a qualified community.

4.1.7.3 The Law establishing the Fund will state clearly that no part of the Fund is to be applied to the operating and capital budgets of the Agency itself. In addition, the Fund's operations, implementation of procedures, and deployment of monies will be conducted transparently and in accordance with written rules; the conduct will also be audited annually and reported separately from the Agency and the Ministry.

4.1.8 Customer Classes: Customers are central to the AKEM. Historically, they have been categorised into special, industrial, commercial, and residential classes. While it is understood that NERC has introduced a service-based tariff methodology based on service hours, this may not necessarily be adopted in the State beyond a short-term transition period while less discriminatory classification and cost recovery methods will be determined and put in place by the State's Electricity Regulatory Commission. Emphasising consumer education, customer care, and incentivising responsible behaviour, the SERC will establish a Consumer Bill of Rights and Responsibilities to promote ideal behavioural standards for consumers and suppliers alike.

4.2 The Transition from NERC to the SERC: The transmission of regulatory responsibility from NERC to the SERC will not be a one-day event. Rather it is a process that is expected to unfold through three key stages:

4.2.1 Pre-Transition Stage: This is the State's current situation where FG-controlled MDAs – primarily the Federal Ministry of Power, the REA, NDPHC, NBET, NEMSS and NERC – have for decades made policy, taken and/or failed to take regulatory action and conducted electricity business under directives from FG authorities with hardly any recourse to State policy objectives for the sector or consultation with State authorities. This was the case before the EA, 2023 came into effect and will continue to be the case until AKSG activates Section 230(2) – (8), EA 2023.

4.2.2 Transition Stage: This stage begins immediately AKSG delivers to NERC and National Council on Privatization (NCP) an appropriate notice under Section 230(2)(c) and (2)(d), of the EA, 2023. The transition stage will apply to NERC-licensed entities and does not preclude the SERC receiving, processing and granting licenses for other electricity businesses that may be carried on in the State. Rather than simply write to NERC advising of the matters stated in Section 230(2)(c), AKSG will seek to ensure that both SERC and NERC discuss and agree a transition plan with actions and timelines and understanding of

resources required for execution to be embodied in the NERC transition order. Following the six-month period defined in the Act, AKSG will take over full responsibility for regulating all electricity business in the State.

4.2.3 At the time of drafting this Policy, NERC has issued a Transition Order under Section 230, EA 2023 in favour of other States which serves as an important first step. It is doubtful, however, that a single order from NERC issued without consultation with the relevant State regulator will be sufficient to facilitate an effective transition. There is a considerable historical body of regulations, orders, databases of reports from licensees and other information to be provided by NERC that ought to accompany any credible transition. It is also important that NERC facilitates engagement between the SERC and prospective licensees whose licenses are to be transferred to the SERC. ***It is therefore envisaged that the State government and its Electricity regulatory commission (when established) will monitor this process and engage with NERC even before formal letters are written to consider and agree the detailed transition plan.***

4.2.4 Post-Transition Stage: Upon the transition of regulatory responsibility to the SERC, the Commission will:

- 4.2.4.1** issue appropriate orders applicable to all entities located and engaged in electricity business in Akwa-Ibom State;
- 4.2.4.2** evaluate all licenses in force with such entities;
- 4.2.4.3** adopt such licenses with textual and substantive amendments that make them appropriate SERC licenses;
- 4.2.4.4** Initially adopt all NERC-issued tariff orders currently in force with licensees;
- 4.2.4.5** thereafter issue notices to commence review of the extant tariff methodology to determine whether it will continue; and if not, set out the process for determining a new tariff methodology;
- 4.2.4.6** Capture and adopt all extant NERC-issued consumer protection, consumer education and other consumer-related orders in force with licensees;

- 4.2.4.7** issue appropriate notices to review these above orders to keep them in place or upgrade them so they remain protective of consumer interests;
 - 4.2.4.8** Capture and adopt all NERC-issued technical and engineering orders in force with licensees mentioned above, and issue appropriate notices to review these orders to keep them in place or upgrade them; and
 - 4.2.4.9** Adopt and adapt NERC's current portfolio of regulatory tools, orders and directives derived from its recently developed databases and dashboards.
 - 4.2.5** The overall design of the AKEM emphasizes sustainability, clear lines of responsibility, and a structured transition process that empowers the Akwa Ibom State to regulate its electricity market effectively from the start.

4.3 The Evolution of the AKEM: As the AKEM evolves to attainment of its goals and its maturity, there are several key targets in the short, medium and long term that must be achieved between 2024 and from 2028 onwards. These are:

 - 4.3.1 Short Term:** Short term objectives (October 2024 – December 2025) including the:
 - 4.3.1.1** Promulgation of this Electricity Policy and an Electricity Law by 1st October 2024;
 - 4.3.1.2** Design and implementation of a focused campaign of education and outreach to Akwa-Ibom State residents, communities and interest groups, Federal Government stakeholders, capital providers and potential licensees to explain this Policy and seek their interest and collaboration in becoming stakeholders in the success of the State electricity market;
 - 4.3.1.3** Establishment of the State Electrification Agency no later than 31st March 2025 with directives to immediately establish criteria and undertake identification and enumeration of all unserved and underserved communities in Akwa-Ibom State

and have them published across all media channels no later than 30th September 2025;

- 4.3.1.4** Physical establishment of the SERC and appointment of its first Commissioners no later than 31st March 2025;
- 4.3.1.5** SERC engagement with NERC no later than 30th April re transition of regulatory responsibility to it;
- 4.3.1.6** Development and completion of the Akwa Ibom Integrated Resource Plan by the SERC no later than 31st December 2025;
- 4.3.1.7** Establishment of a framework of licensing, engineering, commercial and consumer protection regulations for the AKEM no later than 30th September 2025; and
- 4.3.1.8** Commencing of licensing procedures and issuance of licenses to AKEM market participants no later than 30th September 2025;

4.3.2 Medium Term: Medium term objectives (January 2026 – December 2027) are:

- 4.3.2.1** Unserved and underserved communities in the State have been identified by the electrification agency, and projects to extend access to them or improve their access have started being procured by 31st March 2026;
- 4.3.2.2** Full commercial operations (credible, commercially sound, technically- and environmentally compliant, well-funded, financially viable and consumption not subsidised by the State Government) with peak State-based energy cumulatively traded in the AKEM reaching a minimum of 100MW/1,800MWh (100MW delivered 18 hours/day) by 31st March 2026, increasing to 190MW/3,800MWh (20 hours/day) by 31st December 2027; and
- 4.3.2.3** Institute a process for transiting the State from distillate fuel-based self-generation dependency to utilisation of the AKEM for baseload supply and the use of natural gas and renewable sources for self-generation by 1st December 2026.

4.3.3 Long term (2028 onwards): The State Government expects that:

- 4.3.3.1 Long-term, consistent year-on-year growth in capacity will be the primary objective of policymaking, regulation and investment and operations by market participants, attaining 80% reliability (average 20 hours of supply daily) and delivering exponential growth in the State electricity market from its 2027 baseline of 190MW/3,800MWh daily as from 1 January 2028;
- 4.3.3.2 ***The State Government expects that by 31st December 2034, there will be a reliable supply of electricity in the AKEM, not less than 350MW/7,000MWh daily, deploying the most efficient generation technologies to buyers within and outside the State, offering clean, adequate and constant electricity access/reliability to all citizens in all communities, cities, town and villages without widespread recourse to self-generation.***

4.4 SUBSIDIES AND THEIR APPLICATION IN THE AKEM

- 4.4.1 Akwa-Ibom State Electricity Market's commercial framework, from generation to supply, is designed to operate with minimal or without tariff subsidies, which traditionally keep electricity prices below market rates for consumers or producers. This absence of subsidies carries diverse implications for all stakeholders. For the government, it presents an opportunity to reduce heavy financial losses and attract much-needed private investment in the downstream sector. However, this also results in a financial burden on the public, as the lack of subsidies may lead to nominally higher electricity tariffs for consumers and increased production and operational costs for businesses.
- 4.4.2 While providing energy subsidies could potentially yield economic benefits and enhance social welfare if applied transparently and efficiently, the historical experience in Nigeria suggests such subsidies have seldom had a net positive socio-economic effect. To mitigate the immediate impact of

eliminating historical tariff subsidies, the State Government plans to:

- 4.4.2.1** implement measures that encourage local manufacturing of key components, such as meters, transformers, and feeder pillars to stimulate economic activity and reduce import costs;
- 4.4.2.2** extend all available federal and State fiscal incentives to all market participants, further reducing their business costs and enabling them to pass on the benefits to their members and customers through lower tariffs;
- 4.4.2.3** Strongly support and thereafter commence full responsibility for regulating the AKEM the Ibom Utility Company and the additional distribution successor company as they seek to persuade customers in large/key customer groups to reduce dependency on self-generation and return to utilising public supply provided by IUC and/or the ADSC;
- 4.4.2.4** Focus on ensuring that the implementation of the AKS electricity tariff methodology focuses sharply on ways and means of making the costs operating the value chain as cost-efficient as possible.

4.5 CONSUMER PROTECTION

The SERC is mandated to develop robust technology-focused consumer protection regulations. These will ensure fair pricing, accurate billing, quality service delivery, effective customer complaint handling, and transparent procedures for assisting customers, disconnecting non-payers, and responding to emergencies. Until the State establishes an economy-wide consumer protection body, the SERC will drive the State Government's desire for a robust, customer-oriented electricity supply system that ensures consumer safety and the reliability and quality of service.

4.6 Natural Gas, Renewable Energy and the Low-Carbon Transition

- 4.6.1** The Akwa-Ibom State Electricity Market is focused on driving an energy transition, identifying natural gas as a critical transition

fuel. While AKSG aligns with the recognition of the urgency of the global shift from fossil-based energy systems to renewable energy sources, the State also believes that the imperative for transitioning to a low-carbon economy to mitigate climate change and ensure sustainable development should not mean adding further jeopardy to Nigeria's already dire socio-economic conditions.

- 4.6.2** With natural gas positioned as the "bridge fuel" to facilitate Akwa-Ibom's transition from fossil fuels to renewables, attention must be focused on making the most and the best out of the State's very significant proven gas reserves in the Akwa-Ibom Inland Basin, estimated at over 10 trillion cubic feet. At current energy efficiency levels, this gas potential could generate up to 4,000 MW of electricity for 40 years. With technology evolving to cost-effectively extracting maximal efficiency from less natural gas quantities, it is certain that the same capacity can be delivered with much less natural gas.
- 4.6.3** The State-owned 191MW Ibom Power Company (IPC) Limited has not operated at full capacity since its commissioning in 2006 and has suffered serial breakdowns over the years. The plant is supplied natural gas by the privately owned Accugas Company Limited, whose capacity has been earlier discussed. However, the current gas production from Accugas and the production from IPC are all exported with only a fraction of that energy returned to Akwa Ibom through the national grid. This limited energy retention is the primary source of the State's lack of energy security.
- 4.6.4** To resolve this situation, the State will take full advantage of the 5th Alteration to the 1999 Constitution, 2023 and the Electricity Act, 2023 to assure its energy security within the context of a federal framework. ***This is the basis for the State to actively pursue its energy security objectives, earlier discussed, via the full commercialisation of its electricity assets and natural gas endowments, ensuring that domestic demand within the State***

is prioritised while also expanding the State's generation assets to trade on full commercial terms with third parties via the national grid. Universal access for Akwa Ibom residents and a good return on our investments are thus assured.

4.6.5 Aligning with the national energy transition plan requires a systematic, diversified approach to leveraging not just natural gas, but also available RE sources such as solar, hydroelectric and biomass to support Akwa-Ibom's low-carbon transition. Identified potential sites for greenfield investments in these renewable energy sources exist across the State's economic and industrial hubs. Akwa-Ibom has a relatively small geographical area but has density populated economic/industrial clusters in Uyo, Ikot Ekpene, Eket. We note that the future of renewable energy lies in distributed generation that minimises the need for extensive energy transmission infrastructure, thus promoting sustainable energy solutions at the local level and making financing much easier to access.

4.6.6 The State's transition from a fossil-fuelled electricity market to one powered by renewable energy, using natural gas as a bridge fuel will be supported by utilisation of research, development and the steady deployment of renewable energy technologies, development incentives, streamlined regulations and effective implementation of the State's energy transition plan. The State Ministry of Power and the SERC will be jointly working to bring together a multi-disciplinary, multi-agency collaboration with relevant State sister MDAs such as the Ministry of Environment, relevant SEM participants, National Wholesale Electricity Market stakeholders, the Federal Ministry of Power, other relevant FGN MDAs and donor partners. Their objective is to develop the State's energy transition plan (ETP) for approval and implementation. ***This plan should be prepared in consideration of the larger State Integrated Resource Plan and submitted to the State Executive Council for discussion and approval no later than 30th June***

2025. Subsequently, the State ETP will be integrated with the State IRP when the latter is completed and approved.

4.7 TRANSMISSION AND DISTRIBUTION DESIGN AND INFRASTRUCTURE

4.7.1 AKSG expects PHEDC to incorporate the ASDC around its 33kV and below assets located entirely in the State in accordance with the provisions of the EA 2023. This company incorporation will happen alongside the NERC's transfer of regulatory responsibilities to the State Regulatory Commission. In the proposed AKEM design, the ASDC will be merged with the State's wholly owned and NERC-licensed Independent Electricity Distribution Network (IEDN) company, Ibom Utility Company (IUC).

4.7.2 This merged entity will take responsibility for financing, operating and maintaining two separate businesses under the same corporate umbrella. One business – the hardware business – will be the medium voltage transmission/low voltage distribution business that will construct, monitor and maintain all electric wires and installations in the State from 131kV and below. The other – the customer care business – will be a technology-driven electricity supply business that will take responsibility for the direct interface with customers in all aspects. ***Given the suboptimal status of all PHED assets in the State, it is apparent that these two businesses are in dire need of recapitalisation, financially and in terms of the regulated asset base. It is also obvious that the fully commercialised operation of the merged entity is crucial to the realisation of this recapitalisation objective.***

4.7.3 In executing its corporate mission, the hardware business will consider the need to mitigate transmission risk either by acquiring the TCN 132kV assets within the State via a PPP arrangement or build a low-to-medium voltage transmission network up to 122kV level or collaborate with TCN to reinforce its 132kV network within the State in a way that assures the

State's energy security. On the other hand, the software business will handle all other electricity distribution business including billing, vending, payment and customer care services.

- 4.7.4** The License granted by the SERC to IUC will be clear about these specific and distinct responsibilities and ensure that the expectations of the State infrastructure planning process developed in the State IRP complied with the sole focus being to build a resilient SEM that will meet future challenges and contribute to building a more sustainable and prosperous State economy.



Chapter Five – Electrifying Unserved and Underserved Communities

5.1 An underserved community or area is one within the State having an existing but dysfunctional electricity distribution network in place resulting in poor supply quality. An unserved community or area, on the hand, is one without an existing distribution system, either based on some off-grid distributed generation system or technology or connected to the State’s grid-connected distribution system. While it is understood that the extent of historical State-sponsored investment in the RAB has seen all thirty-one Local Government Areas of the State connected to the national grid through the PHED network, it is also true that there are still a few communities in the State that would qualify as unserved. The State Electrification Plan anchored by the State electrification agency will not only enumerate all underserved and unserved areas, it will also set out high level proposals for improving the quality of access in each listed community.

5.2 Given the challenges of grid extension to unserved areas, focusing on off-grid solutions (OGS) such as PV Hybrid mini-grids, mini-hydropower plants, solar home systems (SHS), and standalone renewable energy systems emerges as a pragmatic approach to increase electrification rates rapidly. These off-grid solutions are modular, scalable, and suitable for deployment in areas lacking extensive grid infrastructure. Mini-grid projects offer faster and more cost-effective electrification and a delivery timeline of a few months compared to longer gestation grid extension projects.

5.3 *Embracing off-grid solutions also promise a drive for deploying innovative funding options, such as working with fintechs to fund SMEs and SHS customers, thereby driving job creation and boosting socio-economic development, which are key elements of this Policy’s Gender-Equity-and-Social-Inclusion (GESI) focus.* The State Electrification Agency will work with communities and stakeholders to develop a

comprehensive State Electrification Plan, for implementation primarily utilising the State Electrification Fund.

5.4 The Electrification Plan will:

- 1) identify all unserved or underserved communities and their Local Government Areas by name;
- 2) identify the most likely cost-effective solution in serving each identified community;
- 3) identify incentives that may be available to each community;
- 4) provide a Monitoring & Evaluation (M&E) framework to track the implementation of the Plan; and
- 5) Identify the key players in implementing the Plan and the roles they will be expected to play, either independently or in collaboration with each other and with State and Federal MDAs, private sector participants and donor partners.

5.5 The State Electrification Agency will present the State Electrification Plan to the Governor and the State Executive Council for approval. The State Government will ensure every possible support is provided to implementing the Plan by simplifying access to land, the regulatory approval and identifying potential locations for facilities to be installed. The Electrification Fund from which all projects are expected to be funded will receive contributions from the State budget, communities and cooperatives in the State, Public-Private Partnerships (PPPs), collaboration with the Rural Electrification Agency (REA) and contributions by private entities and DFIs.



Chapter Six – Improving Market Efficiency and Reducing the Cost of Doing Business

Overview

- 6.1 Akwa-Ibom State is known for its vast and rapidly growing tourism and industrialisation efforts. The State recently introduced its economic growth plans, also known as the Arise Agenda. In 2023, Akwa-Ibom State was ranked 4th in Nigeria for ease of doing business by the 2023 Nigeria Subnational Ease of Doing Business Report.
- 6.2 In the State, as it is across much of Nigeria, the current electricity supply situation remains inconsistent, unreliable, and insufficient, leading many large commercial and industrial users to rely on self-supply. However, the presence of the key elements of a viable energy value chain, from gas supply to the customer, point directly at the ***opportunity of AKSG working with private sector interests to develop the State as a key Nigerian energy hub. Strategically, the State's energy value will focus on four key objectives. First, all self-generation above 160kW (100kVA) should transit to gas fuel as soon as possible. Second, the IPC/IUC entity must work hard to persuade large commercial and industrial users to return to grid supply. Third, the State Government and Accugas should work together to attract a cluster of gas-based industries to locate in the State. Fourth, as much energy as possible should be exported to credible buyers outside the State WITHOUT jeopardising the State's energy security.***
- 6.3 These four objectives are all attainable and if this happens, it is certain that socio-economic engagement in the State will expand exponentially while the cost of living will become more affordable. The virtuous cycle of productivity engendered by increased energy consumption will lead to significant expansion in the SEM. In turn, this creates the conditions for investment that are certain to make the SEM become more efficient and dependable, which in turn leads to a reduction in the cost of living and doing business that in its own turn enables further personal investment by citizens.
- 6.4 Reducing the cost of doing business in the electricity sector in the State also requires focus on simplifying regulatory frameworks and

prioritising consumer interests in the sector by setting and enforcing regulatory precepts that encourage both customers and licensees to be cost-conscious and incentivises licensees to invest in technology-driven and climate-friendly initiatives. In addition, AKSG will implement several initiatives aimed at reducing the cost of doing business and growing an efficient electricity market, including:

- 6.4.1** Collaboration with educational institutions in the State to promote learning and experience exchange and sharing and support for R&D initiatives and develop specialised energy programs;
- 6.4.2** Fostering industry-academia partnerships that ensure collaboration between the private sector and academia for technology transfer, skill development, and talent pipeline creation;
- 6.4.3** Investment in and encouraging every opportunity for IPC to export energy out of the State; and
- 6.4.4** The establishment of monitoring and evaluation mechanisms that actively monitor policy implementation, assess market impact and make necessary adjustments for continuous improvement.



Chapter Seven – Energy Efficiency and Demand Side Management (DSM)

- 7.1** In an era of significant generation inadequacy, a focus on energy efficiency or conservation does seem odd. However, as energy costs rise under national macroeconomic challenges, it is appropriate that a concerted effort is made to get consumers to be more interested in controlling and adjusting their energy use. This Policy provides measures to modify consumer behaviour to prioritise energy efficiency and demand-side management and thus improve availability of supply and the stability of the electricity market.
- 7.2** A multifaceted approach to promoting energy efficiency and sustainability is vital. The SERC will promote and make rules to encourage such well-known measures as programmes to promote the use of energy-efficient appliances, turning off lights when leaving a room and switching from incandescent bulbs to compact fluorescent bulbs (CFLs) and light emitting Diodes (LEDs). Other methods include consideration being given to applying Time-of-Use (ToU) tariffs that impose higher rates during peak use and reduced prices during off-peak hours. Setting a tariff methodology that sets a base rate that increases as more energy is consumed is another form of DSM that helps distribute electricity use more evenly.
- 7.3** Public awareness and education campaigns will be prioritised to inform consumers, businesses, and communities about energy conservation benefits and encourage adoption of energy-saving practices. In this regard, public sector/AKSG leadership is critical. AKSG MDAs will be encouraged to lead by example in implementing energy-saving measures, including transiting away completely from the use of diesel and petrol generators above a certain capacity in any AKSG facility, thus enhancing overall energy efficiency by one of the biggest users of energy in AKS and contributing to grid stability and more efficient load management.
- 7.4** Furthermore, as electricity reliability improves and the AKEM becomes more cost-efficient, regulatory efforts will focus on demand-side management principles and regulations to promote efficient electricity consumption patterns. Initiatives to establish

market-driven systems while maximising public and donor funds to expand access to electricity across the State, particularly in areas with limited or no previous access will continue to be pursued. These strategic policies will foster sustainable energy practices, reduce environmental impacts, and drive economic growth in the State. In addition, leveraging technology like smart meters and real-time monitoring tools that enable data-driven decision-making and empower consumers to control their energy usage will also contribute to a more efficient and sustainable infrastructure growth in the State.

- 7.5** The utilisation of energy audits across various tariff classes is very useful in identifying areas of energy inefficiency while also offering incentives and technical support to encourage the adoption of energy-saving technologies. Regular energy audits will be mandated by the SERC and implemented for major consumers to assess energy usage patterns, identify inefficiencies and recommend cost-effective energy-saving measures. SERC regulations will require that these audits are conducted by qualified audit professionals, ensuring high quality assessments and accurate recommendations. Reports from such audits must be detailed with findings and energy-saving opportunities and submitted to regulatory authorities and the audited entities.
- 7.6** The SERC will also focus on developing energy efficiency standards and codes for buildings, appliances, equipment, and industrial processes that align with national and international best practices and are designed to promote energy-efficient practices and technologies. Compliance mechanisms, incentives such as tax credits and grants, public awareness campaigns, and capacity-building initiatives will be integrated into the policy to encourage stakeholders to actively participate in energy conservation efforts and achieve significant energy savings.

Chapter Eight – Conclusion

- 8.1** The Akwa-Ibom State Electricity policy aims to optimize market efficiency and alleviate businesses' financial burdens while simultaneously fostering long-term sustainability within the State electricity sector. Recognizing the critical role of human capital, the policy places a significant emphasis on advancing the workforce's skills and expertise. Through targeted training programmes, educational initiatives, and skill-building opportunities, the aim is to cultivate a highly skilled workforce capable of driving innovation and efficiency within the electricity industry.
- 8.2** This policy framework is designed to create an enabling environment for attracting investment into the State that adds to and expands the productivity of the population. Through investor-friendly regulations, transparent governance practices and active support for private sector participation, Akwa-Ibom State will attract both domestic and foreign investments into the State energy sector and, in turn, into the State economy. This influx of capital and expertise will not only catalyse the growth of the local energy market but also contribute to overall economic prosperity in the State.
- 8.3** Collaboration among various stakeholders, including government agencies, private sector entities, academic institutions, and civil society organizations, is central to the policy's success. By fostering partnerships and leveraging collective expertise, Akwa-Ibom State seeks to address its development challenges and capitalise on emerging opportunities in the energy sector.
- 8.4** Akwa Ibom is fortunate to be endowed with significant investments in the gas-to-power value chain. Unfortunately, these investments have not delivered full value in the nearly two decades since they were made. This Policy, coming as it does as the national electricity sector landscape is undergoing a major change, seeks to promote private sector investment in, and management of, State electricity assets, innovation in delivering service to residents of the State and environmental sustainability.

- 8.5** By focusing singularly on bringing private sector management and financing into the operation, maintenance and expansion of its owned assets, adopting forward-looking regulatory frameworks and seeking to create an energy hub within the State served by these endowments, Akwa-Ibom State will ensure that the AKEM creates opportunities to lower the cost of doing business in the State, grow citizens' productivity and standards of living while also delivering universal access to reliable electricity supply across the State and so in an environmentally sustainable manner.
- 8.6** This Policy sets the foundations for a major evolution in the State electricity landscape as it seeks to transit from central Federal Government regulation and operation to a sector whose policy, regulatory and commercial or operating initiatives are driven and overseen through the prism of seeking and enabling the State's energy security while engaged in strategic collaboration with the Federal Government and its MDAs. In these early stages as various initiatives (the State Electrification Plan, IRP and the implementation of bringing private sector management into IPC and IUC) are implemented, this Policy and the Law that follows it will be constantly under review and possibly updated or amended as experience and insights are gained about what may be best for the State.
- 8.7** A formal review and update of each iteration of the Policy will be undertaken no later than every five years from the date of last publication. What is critical is that the objectives of private sector participation, universal access, reliability, affordability for the citizenry and environmental sustainability and responsibility will be our constant watchword.
- 8.8** This Akwa-Ibom State electricity policy is a comprehensive and multifaceted approach to fostering a vibrant, efficient, and sustainable energy sector in the State. By prioritising investment in assets and human capital development, fostering innovation, supporting the local industrial and commercial base and promoting collaboration, the Policy lays the foundation for long-term economic growth and the sustainable development and productivity of the State's residents.



