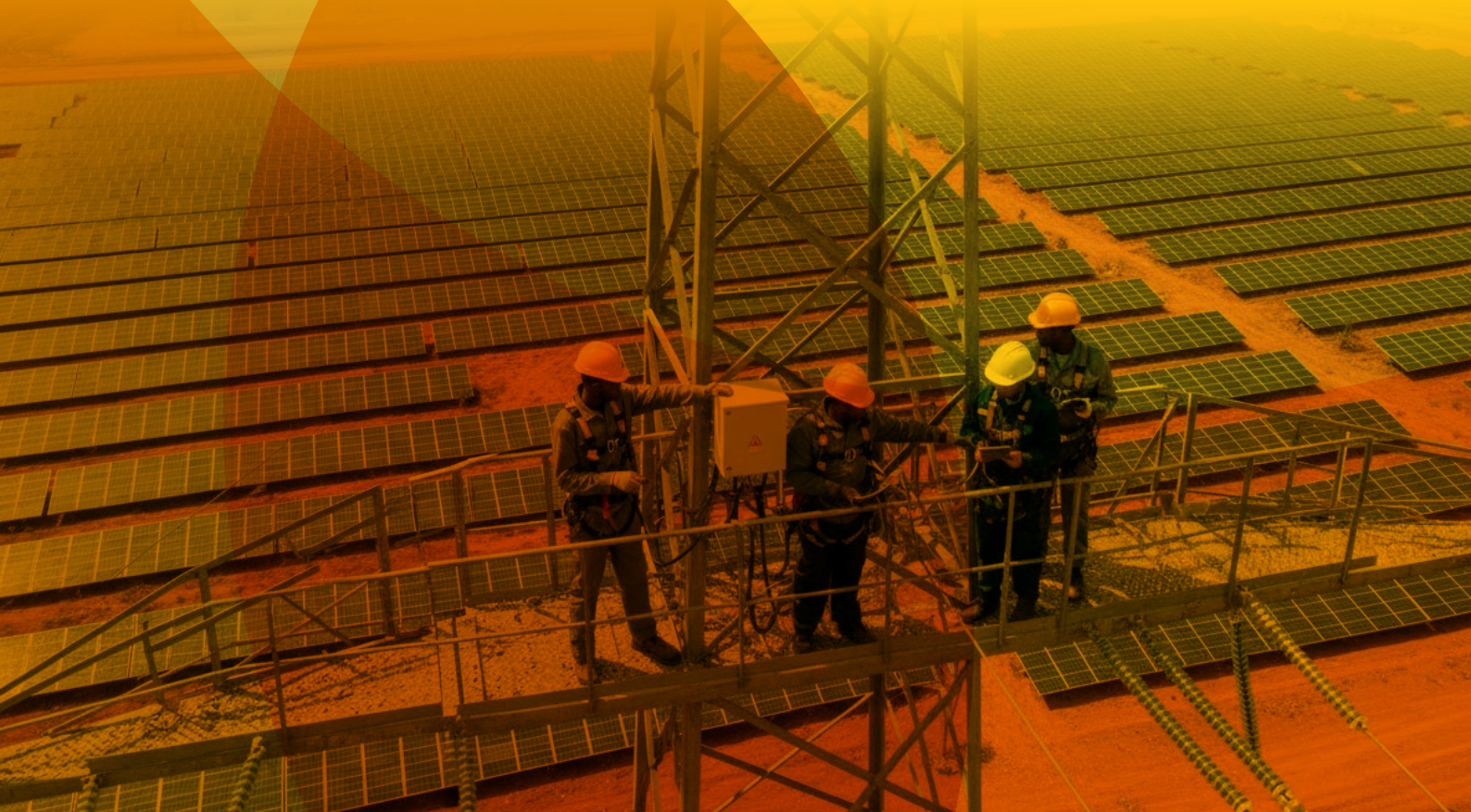




MEMNON
CAPITAL

RENEWABLE ENERGY UGANDA:
FUELING THE GREEN TRANSITION
IN EAST AFRICA'S POWER SECTOR



EXECUTIVE SUMMARY

Uganda is entering a decisive phase in its energy evolution. As electricity demand accelerates alongside industrialization, urban growth, and regional integration, the country is uniquely positioned to develop a modern, renewable-driven power system.

With a strong base in hydropower and significant untapped potential across solar, geothermal, and distributed energy systems, Uganda offers a rare combination of resource availability, policy alignment, and investment accessibility. At the same time, structural gaps in transmission, access, and energy utilization create a clear need for targeted infrastructure development.

This environment presents a compelling opportunity for investors seeking exposure to scalable, impact-aligned infrastructure in a high-growth market. Renewable energy is emerging as a central pillar of Uganda's economic expansion, supporting key sectors such as mining, agriculture, water, and transport.

Memnon Capital Africa operates at the intersection of capital, infrastructure, and execution, positioning itself as a strategic platform to develop, structure, and deliver renewable energy projects across Uganda and the broader East African region..



INTRODUCTION

Energy is the foundation of economic growth. In Uganda, the next phase of development will be defined not only by increased power generation, but by how effectively energy is distributed, integrated, and applied across productive sectors.

While significant investments have expanded national generation capacity, access and reliability remain uneven. Industrial demand continues to grow, rural electrification remains incomplete, and energy costs still constrain competitiveness.

Renewable energy provides the most efficient pathway to address these challenges. Advances in solar, storage, and decentralized systems enable faster deployment, lower capital intensity, and greater flexibility compared to traditional infrastructure models.

This paper examines the structure of Uganda's renewable energy sector, the key investment opportunities emerging across the value chain, and the role of Memnon Capital Africa in delivering large-scale, execution-ready projects.



UGANDA'S ENERGY LANDSCAPE

Uganda's energy system has evolved rapidly over the past decade, driven primarily by large-scale hydropower investments. These projects have significantly increased national generation capacity, creating a strong foundation for future expansion.

However, the sector faces three defining challenges:

1. DISTRIBUTION AND ACCESS CONSTRAINTS

Grid expansion has not kept pace with generation capacity. Large portions of the population and many productive regions remain under-electrified.

2. LIMITED INDUSTRIAL ABSORPTION

Energy demand from industry is growing, but infrastructure gaps and cost structures limit full utilization of available power.

3. CENTRALIZED INFRASTRUCTURE MODEL

Traditional grid-based expansion is capital-intensive and slow, particularly in rural and semi-urban areas.

These dynamics create a clear opportunity for renewable energy solutions that are modular, scalable, and closer to end users.



RENEWABLE ENERGY POTENTIAL

Uganda benefits from a diversified renewable resource base, enabling a balanced and resilient energy mix.

SOLAR ENERGY

High solar irradiation across the country makes solar the most immediately deployable renewable resource. Applications include utility-scale plants, commercial and industrial systems, and decentralized mini-grids.

HYDROPOWER

Hydropower remains the backbone of Uganda's energy system. In addition to large dams, there is significant potential for small and medium-scale hydro projects to support localized demand.

GEOTHERMAL ENERGY

Geothermal resources along the Rift Valley represent a long-term opportunity for stable, baseload renewable power.

BIOMASS AND WASTE-TO-ENERGY

Uganda's agricultural sector provides a strong foundation for biomass-based energy solutions, particularly in agro-processing regions.

HYBRID SYSTEMS

The integration of solar, storage, and other renewables into hybrid systems enables reliable, cost-effective power delivery in off-grid and weak-grid environments.

MARKET GAP AND INFRASTRUCTURE NEEDS

Despite strong resource potential, several structural gaps continue to constrain sector performance:

- Insufficient transmission and distribution infrastructure
- Limited deployment of decentralized energy systems
- Underinvestment in storage and grid balancing solutions
- Financing gaps for mid-scale and distributed projects.

Addressing these challenges requires a shift toward integrated infrastructure development, combining generation, distribution, and end-use applications into cohesive investment platforms.

INVESTMENT OPPORTUNITIES

Uganda's renewable energy sector offers opportunities across multiple segments:

GENERATION

- Utility-scale solar projects
- Small and medium hydropower
- Hybrid renewable systems

DISTRIBUTION

- Mini-grids and rural electrification
- Industrial park energy systems
- Embedded generation solutions

ENERGY SERVICES

- Commercial and industrial power solutions
- Energy-as-a-service models
- Efficiency and demand optimization

STORAGE

- Battery systems for grid stabilization
- Hybrid solar-storage installations

SECTOR INTEGRATION

- Power solutions for mining operations
- Energy infrastructure for agro-processing
- Water and energy project integration

TRANSPORT ELECTRIFICATION

- Electric mobility infrastructure
- Charging networks powered by renewables

WHY UGANDA

Uganda presents a differentiated investment environment within East Africa:

MACROECONOMIC STABILITY

Sustained economic growth, stable monetary policy, and increasing foreign investment flows provide a strong foundation for long-term projects.

POLICY ALIGNMENT

Government priorities emphasize infrastructure development, energy access, and industrialization, with clear support for renewable energy investment.

RESOURCE AVAILABILITY

Abundant renewable resources enable scalable project development across multiple technologies.

REGIONAL INTEGRATION

Access to regional markets through the East African Community and continental trade frameworks enhances long-term demand potential.

EARLY-STAGE MARKET ADVANTAGE

Relatively low market saturation allows investors to establish strategic positions in key segments.



THE ROLE OF MEMNON CAPITAL AFRICA

Memnon Capital Africa is positioned as a strategic investment and execution platform focused on infrastructure development in East Africa, with a core emphasis on energy, mining, and water.

INTEGRATED DEVELOPMENT APPROACH

Memnon identifies, structures, and develops projects across the full lifecycle—from early-stage opportunity identification through financing, execution, and operation.

STRATEGIC PARTNERSHIPS

The platform works in partnership with international engineering firms, infrastructure developers, and capital providers to deliver large-scale projects efficiently and at speed.

GOVERNMENT ALIGNMENT

Direct engagement with government institutions enables streamlined project development, regulatory alignment, and access to priority infrastructure opportunities.

CAPITAL STRUCTURING

Memnon brings together multiple sources of capital, including development finance institutions, private investors, and strategic partners, ensuring bankable project structures.

SECTOR INTEGRATION

Renewable energy projects are developed as part of broader infrastructure ecosystems, supporting mining, agriculture, water, and industrial development.

EXECUTION CAPABILITY

Local presence and operational expertise ensure that projects move from concept to delivery with reduced friction and strong on-the-ground coordination.

STRATEGIC OUTLOOK

The next phase of Uganda's energy sector will be defined by:

- Expansion of decentralized energy systems
- Integration of renewable energy with industrial demand
- Increased deployment of storage technologies
- Growth of public-private partnerships in infrastructure
- Alignment with global capital flows toward sustainable investments

Renewable energy will play a central role in enabling economic expansion, improving energy access, and supporting long-term industrial development.

CONCLUSION

Uganda's renewable energy sector represents a significant and underpenetrated infrastructure opportunity. Strong resource availability, supportive policy frameworks, and growing demand create a favorable environment for long-term investment.

Memnon Capital Africa provides a platform for accessing this opportunity through structured, execution-ready projects and integrated infrastructure development.

As the energy transition accelerates across East Africa, Uganda stands out as a market where renewable energy investment can deliver both strong financial returns and measurable economic impact.



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