



# Mini-Grid in the City™.

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WorkCity Polystar Building Lekki Phase 1,

Lagos, Nigeria.

## Problem Statement

In Nigeria, more than 23 million households and 17 million businesses suffer from intermittent electricity supply and rely on fuel-guzzling and polluting generators to power their homes and businesses (National Bureau of Statistics, 2017). The main challenge in a city such as Lagos is the rapid urbanization and population growth rate which is outpacing the infrastructure development efforts to meet growing demand for electricity, adequate housing and seamless transportation. This leads to the spread of shanty towns and poorly planned suburbs within the city which affects the efficient distribution of electricity and other resources.

## Our Target

Mini-Grid in the City™ is a comprehensive solution for powering estates, new towns and off-grid communities with reliable and affordable solar energy. Our goal is to provide a sustainable and cost-efficient energy source that will benefit our customers while strengthening urban sustainability.

## Our Innovation

Kiru Energy partners with real estate developers who develop properly planned estates and new towns by providing hybrid solar mini-grids with smart-metering technology that allows households and businesses to have access to clean and reliable energy. Kiru Energy investors provide up to 60% of the project finance while the Real Estate companies make an initial payment of 40% to install the smart solar mini-grids while the balance is spread across a 3 to 6 months period. Kiru Energy operates and maintains the energy network while ensuring stakeholders get returns on investment. This solution is designed to deliver measurable value to the real estate developers by offsetting their total annual energy cost by 40% and boost the value of their estates while reducing their overall carbon footprint.

## Our Implementation Plan

To implement this project, we start by engaging potential investors and real estate developers who are major stakeholders throughout the lifespan of the project. Next, we engage with local licensed original equipment dealers to discuss favorable deals. Then, we engage with regulators to obtain necessary permits and approvals to ensure project

credibility. Afterwards, we deploy materials and human resources required for the execution of the project within achievable timelines.

[W Annexe 2 - Logframe - World Cleantech StartUPs Awards 2023.docx](#)

## Replicability & Upscaling


Mini-Grid in the City™ can be replicated and scaled up across cities and micro-cities springing up all over Africa. By 2040, more than 80% of Africans will live in cities and drive demand for energy, food, housing and transportation. Through our sustainable partnership with real estate developers and investors, we can replicate Mini-Grid in the City™ as they develop estates, new towns and micro-cities within any city across Africa. The potential challenges include insufficient data for predicting energy demand and unfavorable government policies towards project implementation. We plan to address these challenges by collaborating with regulators in our industry to advocate for favorable economic policies and incentives. To address insufficient data, we plan to collaborate with data providers and statistics departments in the cities we operate while developing artificial intelligence enabled predictive methods as we grow in revenue. We will need technical grants to upskill our growing team and to subsidize the energy assets we acquire.

## Collaboration & Co-financing

The stakeholders of this project are the real estate companies, investors, regulatory bodies and the end users of our innovation. We employ a co-financing strategy that guarantees a good return-on-investment up to 17% per annum for investors while real estate developers enjoy high subscriptions to their estates, improved brand image and tax incentives for adopting sustainable energy solutions. Our investors provide 60% upfront financing while real estate developers provide 40% over a 3-6 month payment plan before the project is commissioned.

## Impact & Benefits

Mini-Grid in the City™ aims to benefit people and the environment in the short, medium and long-term. The first transformation is a change towards sustainable lifestyles as clean energy is made accessible via technology and innovative financing. Households and



businesses can reduce drastically their own carbon footprints while enjoying improved air quality and serenity within living and business environments. Families can save money on electricity bills by using only what they need per time while channeling savings to education, healthcare and other investments.