

## Project Proposal: Kilongo Community Microgrid Deployment

Submitted by: SolUnity Energy

Location: Kilongo, Tanzania (Latitude: -6.7924, Longitude: 39.2083)

Project Duration: March 10 – March 30 (20 days)

### Project Overview

SolUnity Energy proposes the development of a 25 kW solar-battery hybrid microgrid in the off-grid village of Kilongo, located in Tanzania's Coastal Region. The project aims to provide consistent, clean power to households, a community clinic, and several small enterprises currently reliant on diesel generators and kerosene lighting.

### Financial Overview

Capital Expenditure (CAPEX): \$142,000

Operational Expenditure (OPEX): \$9,500 annually

Total Funding Requested: \$151,500

### Sustainability Plan

SolUnity will establish a local energy committee composed of residents and small business owners. This committee will oversee basic system maintenance after one year of on-site technician support. Revenue will be generated through prepaid smart meters, with tariffs aligned to national rural energy benchmarks.

### Projected Impact

Households Connected: 240

Estimated People Impacted: 1,080

Projected CO<sub>2</sub> Emissions Avoided Annually: 94 tons

Productive Uses of Energy: Powering cold chain for vaccine storage at the health center, supporting solar milling for cassava processing, and enabling evening lighting for a secondary school.

This project contributes directly to SDG 7 (Affordable and Clean Energy) and demonstrates a replicable model for community-led, off-grid electrification in East Africa.