

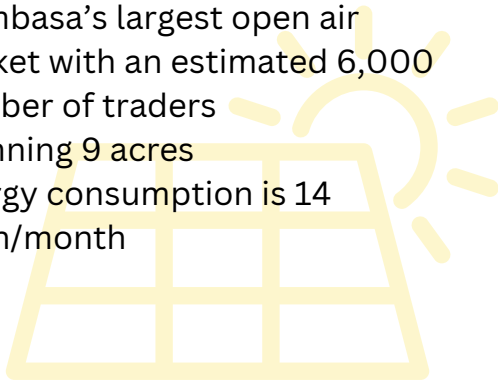


# SOLAR MICRO-GRIDS IN KISUMU, NAKURU AND MOMBASA COUNTY MARKETS

## PROJECT DESCRIPTION

The project intends to install **solar mini-grids in 12 markets** across 3 different counties: **Kisumu, Nakuru and Mombasa**. The targeted markets are the following 3 main markets:

- **Kibuye market:**
  - Kisumu City biggest 24-hour market
  - housing an estimated 10,000 number of traders
  - spanning 13.6 acres
  - energy consumption is 7 MWh/month
- **Wakulima market:**
  - Nakuru County's biggest open air market
  - housing an estimated 10,000 traders
  - spanning 4.5 acres
  - energy consumption is 6 MWh/month
- **Kongowea market:**
  - Mombasa's largest open air market with an estimated 6,000 number of traders
  - spanning 9 acres
  - energy consumption is 14 MWh/month



## PROJECT RATIONALE AND OBJECTIVE

The markets are **24-hour markets** requiring **lighting for night trading and electricity** to power cold storage and SMEs in the stalls. The cold storage will reduce post harvest losses (fish, meat and horticultural products).

**The project will ensure:**

- energy transition in the markets from grid powered mixed source whose energy bills are comparatively high to fully renewable off grid power with a backup from grid power.
- optimum lighting to power the markets' 24-hour economy.

## PROJECT IMPACT

Reduced emissions from:

- Energy access, energy efficiency and clean energy/ generation
- Waste disposal

## ESTIMATED TIMELINE

- Preparation (concept note/ pre feasibility study) - 3 months
- Development (feasibility study) - 3 months
- Realisation (approval procedure, procurement, construction) - 14 months
- Operation - 25 years

**The plan to implement solar mini grids and solar installations in markets is at the heart of Kisumu, Nakuru and Mombasa County Integrated Development Plans (CIDP 2023-2027), FY 2023/24 Annual Development Plans (ADP), and the Governors' manifestos.**



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## PROJECT OUTPUTS



Across the three markets,  
the **size of the solar  
micro-grid** systems is  
**130kW**



60kWp for Kibuye market  
50kWp for Wakulima market  
20kWp for Kongowea market



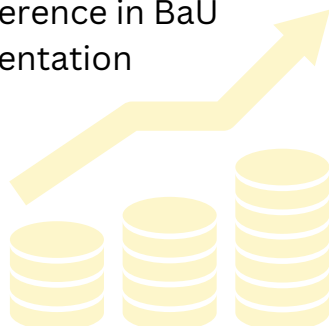
Number of **traders** served across the  
Nakuru, Kisumu and Mombasa Counties is  
estimated at **26,00 traders**

## PROJECT PHASE

Concept note: Pre-feasibility study  
of Wakulima market

## POTENTIAL SOURCE OF REVENUE/ FUNDING

- **Fees for utilisation of the cold room** containers in Kisumu and Nakuru counties
- **Fees for provision of electricity** to the SMEs in market stalls (County Finance Acts to be updated)
- **Own source revenue** (Kibuye market Ksh. 2.7M /month)
- **Savings** from difference in BaU and post-implementation electricity bills



## PROJECT INITIAL COST ESTIMATE

The project requires:

- initial **CAPEX investment of Ksh 735,000,000** equivalent to EUR 4,445,000 and
- **annual OPEX spending of Ksh 6,300,000** equivalent to EUR 38,000.

## PROPOSED FUNDING STRUCTURE

Conditional Grant or Equity

For more information please contact:  
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