ADVANCING COMMERCIAL ELECTRIC MOBILITY IN KISUMU COUNTY

PROJECT DESCRIPTION

The project envisions a public-private partnership, involving e-mobility service providers to:

- manufacture/retrofit the e-vehicles as well as develop and operate the charging infrastructure
- provide subsidy to retrofit 3000 2-wheelers and 1000 3-wheelers
- install 70 charging stations
  - 42 in peripheral and rural wards, 28 in city centre wards
- raise awareness to promote uptake.

The project will involve:

- Ministry of Energy: obtain approval and oversight of regulation
- County Government of Kisumu to provide the land
- National banks
- United Nations Institute for Training and Research (UNITAR)
- Potential operators: Knights Energy (charging infrastructure), Roam Electric (Charging Infrastructure, EVs manufacturer, battery supply)
- E-mobility association in Kenya (for advisory on the project)
- Boda Boda Riders Association: potential users of retrofitted 2 and 3-wheelers

PROJECT RATIONALE AND OBJECTIVE

Kisumu County’s transport sector is a significant contributor to greenhouse gas emissions, comprising 84.62% of total emissions in 2021, for 7,845,864 MtCO2e. This is set to increase.

Motorcycles (2-wheelers) and tuk-tuks (3 wheelers) are the primary modes of transportation for Kisumu County residents, both in urban and rural settings, offering a great opportunity for electric mobility (e-mobility).

Project’s objectives:

- Facilitate the transition from conventional fossil fuel-powered commercial vehicles to 2W & 3W (e-mobility).
- Raise awareness for Kisumu citizens on the benefits and operation of 2W & 3W (e-mobility).
- Training programs on retrofitting techniques.
- Contribute towards achieving a 50% reduction in GHG emissions in the Kisumu County transport sector.
- To replace 5% - 20% of the motorcycles and tuk-tuks used within the County with e-mobility 2W & 3W vehicles.

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The project's main goal is to reduce greenhouse gas emissions in Kisumu County's transportation sector, aligning with national climate change plans. Kisumu County aims to replace 5% of the motorcycles used within the city with electric motorbikes as outlined in the Kisumu County Integrated Climate Change Action Plan (2022-2027).

**PROJECT IMPACT**

**Mitigation** | Reduced emissions from:
- Low-emission transport
- Air quality

**Adaptation** | Increased resilience of:
- Most vulnerable people and communities – resilience to fuel price volatility
- Health and well-being,
- Infrastructure and built environment

**ESTIMATED MITIGATION IMPACT**

Overall 14,400 metric tCO2e per year:
- 2-wheelers: 12,053 metric tCO2e per year
- 3-wheelers: 2,340 metric tCO2e per year

**PROJECT INITIAL COST ESTIMATE**

The project requires an initial CAPEX investment of 2,900,000 USD

**POTENTIAL SOURCE OF REVENUE/ FUNDING**

- Funds will be sourced from National Banks and subsidy from the County Government of Kisumu.
- Loans to individuals

The individual economics of the project are strong as the initial investment in retrofitting a bike generates important OPEX savings.

**PROJECT PHASE**

Conditional Grant or Equity