



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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PROJECT OUTPUTS			
70 charging stations: 42 in peripheral and rural wards 28 in city center wards	4,000 subsidized retrofit of 2-/3- wheelers	Awareness and training programs	Percentage of motorcycles and tuk-tuks replaced by electric vehicles

PROJECT IMPACT
<p>Mitigation Reduced emissions from:</p> <ul style="list-style-type: none"> • Low-emission transport • Air quality <p>Adaptation Increased resilience of:</p> <ul style="list-style-type: none"> • most vulnerable people and communities – resilience to fuel price volatility • Health and well-being, • Infrastructure and built environment

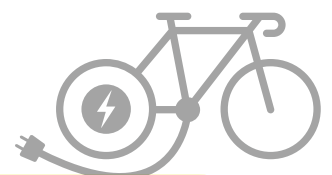
ESTIMATED MITIGATION IMPACT
<p>Overall 14,400 metric tCO₂e per year:</p> <ul style="list-style-type: none"> • 2-wheelers: 12,053 metric tCO₂e per year • 3-wheelers: 2,340 metric tCO₂e per year

INDICATIVE DEVELOPMENT TIMELINE
<ul style="list-style-type: none"> • Preparation (concept note/ pre-feasibility study) - 2 months (in progress) • Development (feasibility study) - 2 months • Realization (approval procedure, procurement, construction) - 2 years • Operation - 10 years

PROJECT INITIAL COST ESTIMATE
The project requires an initial CAPEX investment of 2,900,000 USD

POTENTIAL SOURCE OF REVENUE/ FUNDING
<ul style="list-style-type: none"> • Funds will be sourced from National Banks and subsidy from the County Government of Kisumu. • Loans to individuals <p>The individual economics of the project are strong as the initial investment in retrofitting a bike generates important OPEX savings.</p>

PROJECT PHASE
Conditional Grant or Equity



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).