Green transition and economic development through e-mobility

Benchmarking in Uganda

giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

E-mobility in Uganda

- **Climate change & global supply chain disruptions disproportionally affect developing countries**
- **Green energy mix** - 98% of electricity fed into national grid comes from RE sources

- **Uganda National E-mobility Strategy (2023)** envisions full transition to E-mobility in public transport and motorcycles by 2030
  - Building the domestic E-Mobility Value Chain is consistent with Uganda's aspirations and pathways to Vision 2040 outlined in the National Development Plan III.

- **Presidential Directive (2022) for e-mobility** with an emphasis towards interventions drawing synergies between the State, Private Sector, Academia, and Development Partners
- Kira Motors Cooperation (KMC) – State enterprise with plant in Jinja, in the lead for manufacturing of electric busses
- Multiple companies (Bodawerk, Zembo, etc) focusing on bike conversion and battery production

Enablers:

- Climate Mitigation and achievement of Country NDCs
- Potential sustainable development benefits:
  - Contribution to economic growth
  - Green industry developed through local value addition;
  - Reduced dependency on fossil fuel imports;
  - Lower operating and maintenance costs
  - Reduced air and noise pollution

Barriers:

- Lack of policy framework
- Standards & Regulations
- Limited energy access & reliability of power supply
- Charging infrastructure (and maintenance)
- Human Capacity Development
- Limited awareness
- High costs

In Uganda, public transport in urban areas is majorly conducted using ‘boda bodas’,

# of motorcycles in Uganda has increased by almost 200% between 2010 and 2018; from 354,000 to over 1 million.

- At least 150,000 new motorbikes per year – adding to congestion and air pollution
- Challenges facing boda industry:
  - high energy costs (fuel),
  - high maintenance costs,
  - low ownership rates (limits wealth building)
  - accident rates
- **E-mobility for 2-wheelers**
  - Electric engines are non-polluting, more efficient, require comparatively accessible charging infrastructure and have low maintenance cost, meaning more savings for the riders

Source: CSMonitor.com

Policy framework

E-Mobility Strategy 2023

Key Policy Commitments (by 2033)

1. An E-Mobility Energy Tariff for Public and Commercial Charging Points
2. 0% Import Duty, 0% VAT and 0% Withholding Tax on Original Equipment Manufacturer Vehicle Parts, Components, EV Chargers, EV Batteries, and Materials imported for Motor Vehicle Production;
3. 0% VAT and 0% Withholding Tax on sale of Electric Vehicles, parts and components produced in Uganda;
4. 0% Import Duty, 0% VAT, 0% Infrastructure Levy and 0% Withholding Tax on Plant Machinery, Tools and Equipment and All Industrial Replacement Spare Parts imported by registered Mobility Industry Value Chain Actors;
5. 0% VAT on Charging and Battery Swapping Services;
6. 0% Income Tax on Expenditure on Mobility R&D;
7. Income Tax Holiday for registered Mobility Industry Value Chain Actors operating in dedicated Industrial Parks to enable reinvestment of profits for expansion and to encourage new investments of Plant and Machinery in the Mobility Industry Value Chain;
8. Requisite standards for E-Mobility in the areas of Charging Infrastructure, Vehicle Safety, Energy Efficiency, Interoperability, among others;
9. Exemption of Electric Vehicles from paying road tolls and street parking fees

Sector Policies

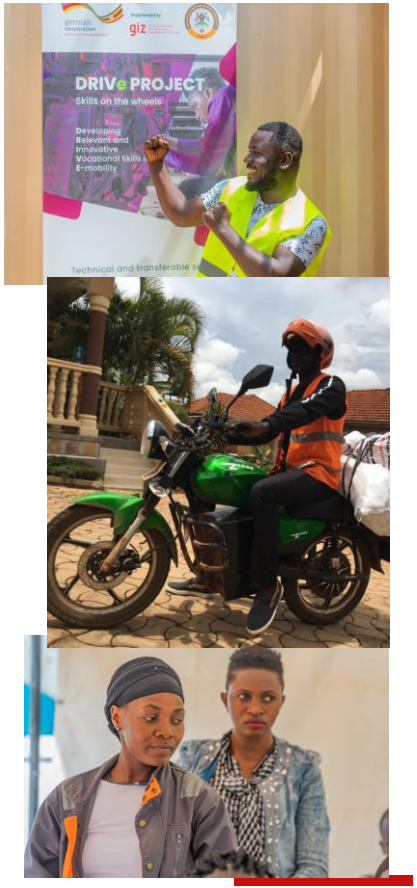
- National Energy Policy (2023)
- National Transport and Logistics Policy (2021)
- Nationally Determined Contributions (2022) & Kampala Climate Change Action Strategy (2016)

MEMD & UNBS: E-Mobility Standards?

MoTW & MEMD: E-mobility policy?

GIZ Initiatives in the E-mobility Sector

- **Developing Relevant and Innovative Vocational skills for Emobility (DRIVE) Project**: Bodawerk Ltd & GIZ (PREEEP and E4D)
- **Support to charging infrastructure for e-bodas along the Kampala-Masaka Highway**: Zembo and GIZ (GBE)
- **Transformative Urban Mobility Initiative (TUMI):** Institute of Transportation and Development Policy (ITDP) & World Resources Institute (WRI) and GIZ (Sector project on Sustainable Mobility)
- **E-mobility and Global Carbon Markets:** Bodawerk Ltd and GIZ (GBE Small Project Fund)
- **E-mobility fleet and charging infrastructure at GIZ country office**



Discussion

- Based on the existing policy landscape in Uganda, with which kinds of policies / regulations could the country start or develop as next steps? What has been the policy development pathway / process in the other participating countries?
- From a project development perspective, what has been the role of development cooperation (GIZ and others) in supporting the participating delegations / countries in this policy development process?
- Based on government commitments, what specific support can GIZ provide to develop the requisite and appropriate enabling frameworks for e-mobility?

References and Further Reading

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- PREO (2022), Charging Ahead: Accelerating e-mobility in Africa
- Climate Focus (2022), The VCM Dashboard
- Ecosystem Marketplace (2022), The State of the VCM Q3 2022
- Taskforce on Scaling Voluntary Markets (2021), Summary Presentation
- McKinsey Sustainability (2021), A Blueprint for Scaling the VCM to meet the climate challenge
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