Electric Vehicles Adoption in Rwanda

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Outlines

I. Introduction and rationale
II. Government Agenda
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IV. Current status of Electric Vehicle fleet in Rwanda
V. Solutions Plus Project_ CoK
VI. Other e-mobility initiatives
Transport sector in Rwanda is rapidly growing and much dependent on imported fossil fuel. ICE vehicles have negative environmental impact:

1. air pollution hazardous to health
2. noise pollution
3. emission of greenhouse gases that accelerate climate change

The overdependence on fossil fuel has a strong effect on the trade balance.

GHG emissions from transport grew from 302kt CO2eq in 2006 to 547kt CO2eq in 2015 (6.8% per annum).

Introduction of electric mobility was proposed as one of the solutions to address the aforesaid issues.
➢ Rwanda through Vision 2050, 2020 updated NDCs is encouraging the shift to electric vehicles as part of its climate action plan to promote green mobility and reduce emissions and air pollution.

➢ As stipulated in the 2020 updated NDCs: GoR’s e-mobility programme aimed at achieving a phased adoption of electric buses, passenger vehicles (cars) & motorcycles from 2020 onwards

➢ The program objective is three-fold:
  ❖ Reduce air quality degradation and climate change
  ❖ Reduce dependence on fossil fuels and associated GHG emissions
  ❖ Use locally produced products

➢ Total cost for the program including EVs and charging infrastructure is estimated to 900 million USD (19%)
Government support

Fiscal incentives to attract electric transport

- Electricity tariff for charging stations are capped at the industrial tariff level (large industry category).
- The electric vehicles are benefiting from a reduced tariff during the off-peak time.
- Electric vehicles, spare parts, batteries and charging station equipment are treated as VAT zero rated products.
- Exemption of import and excise duties on electric vehicles, spare parts, batteries and charging station equipment.
- Exemption of withholding tax of 5% at customs.
- Introduce carbon tax to discourage polluting vehicles.
Government support cont’d

Non-fiscal incentives to attract electric transport

Rent free land for charging stations (for land owned by Government)

Provisions of electric vehicle charging stations in the building code and City planning rules

Access to High Occupancy Vehicle lanes (Dedicated Bus Lanes)

Free license and authorization for commercial EVs

Green license plate to allow EVs getting preferential treatment in parking, free entry into congested zones that will be determined
Government support cont’d

Administrative Measures

1. Enforcement of existing emission standards to discourage the purchase of polluting vehicles
2. Establish restricted zones for green transport
3. Regulate importation of used vehicles by imposing age limit
4. Provide preference to electric vehicles for Government hired vehicles

Other measures

Companies manufacturing and assembling electric vehicles in Rwanda are given other incentives in the investment code such as 15% Corporate Income Tax (CIT) and tax holiday (irrespective of the investment value)
Current Status of Electric Vehicles fleet

- **Ampersand**
  - 779 e-motos in operation
  - 12 charging stations

- **Safi Universal Link**
  - 123 e-motos in operation
  - 5 Charging stations
  - 280 e-motos are coming soon

- **Rwanda Electric Motorcycle (REM)**
  - 280 e-motos in operation
  - 80 ICE bikes retrofitted
  - 5 Charging stations
  - 32 modern BEV SUV

- **Victoria Autofast**
  - 124 PHEV operational
  - 130 domestic charging infra installed
  - 10 Public Charging station operation

- **Volkswagen Mobility**
  - 20 e-Golfs used for ride-hailing service
  - 2 Public charging stations
E-mobility projects

SOLUTIONSplus
City of Kigali
Project progress and deliverables

Support to Electric bikeshare system in Kigali

Support to scaling up of electric motorcycle-taxis

Initiation of Mobility as a Service app

Gender-inclusive component

Electric motorcycle taxis
- 24 electric motorcycle taxis financed
- Gender-inclusive component: training for 36 women to become drivers.
- Construction of 80 e-bike racks.

Technical feasibility e-buses
Project progress and deliverables

Setting up of an **E-Mobility Technical Coordination Committee**

- Four times per year
- Dialogue between private and public stakeholders
- Multiple government agencies
- Topics: policies, fleet updates, requests from e-mobility companies, updates from donors and investors
- Review of impact of GoR incentives in the sub sector
Other e-mobility initiatives

1. Electric Bus Concept Validation in Kigali study under finance of IFC

- The study provided a comprehensive analysis and proof of concept on the feasibility of e-buses and e-vehicles as a model for larger scale deployment to the rest of the Rwanda and other parts of Sub-Saharan Africa

<table>
<thead>
<tr>
<th>Zone</th>
<th># of buses</th>
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<tbody>
<tr>
<td>Zone 1</td>
<td>51</td>
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<tr>
<td>Zone 2</td>
<td>0</td>
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<tr>
<td>Zone 3</td>
<td>92</td>
</tr>
<tr>
<td>Zone 4</td>
<td>19</td>
</tr>
<tr>
<td>Total</td>
<td>162</td>
</tr>
</tbody>
</table>

2. Quick Scan Charging Infrastructure for Kigali e-buses under finance of the GGGI

- Feasibility of electrification of buses in Kigali, where all currently existing e-buses charging infrastructure variants were meticulously investigated

- The results of this study provided an insight on initial technology choice for electric bus charging infrastructure for e-buses in Kigali
Thank you

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