

LEGAL AND REGULATORY HURDLES FOR A KENYAN-WIDE CHARGING INFRASTRUCTURE

GLOBAL EXPERIENCES IN E-MOBILITY REGULATION: THE WAY FORWARD FOR KENYA

E-Mobility Conference

Crowne Plaza, Nairobi

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Presentation by: Louise Mathu



Advisory | Research | Training

E-MOBILITY

A term used to refer to the electrification of **transport** and the use of electric vehicles.



E-MOBILITY...contd.



STATISTICS

- Urbanization in Africa: 4% per year vis-à-vis Global average of 2%
- EV market growing exponentially: 3 million sold globally
- 2040: 54% of new global car sales will be EVs
- 2040: 33% of the world's car fleet will be EVs



POLICY & REGULATORY FRAMEWORK

WHAT IS AN ELECTRIC VEHICLE?

Article 2(2) of the Directive 2014/94/EU

UK Parliamentary Office of Science and Technology (POST)

- 1) *All-electric vehicles:* Battery, only power source. Must be charged.
- 2) *Plug-in hybrids:* Battery, may be charged+ a small capacity fossil fuel engine

POLICY & REGULATORY FRAMEWORK...contd.

- 3) *Hybrids*: Battery + small capacity fossil fuel engine. Battery is charged solely through the engine.
- 4) *Fuel Cell Vehicle*: Non-fossil fuel system is used to charge a battery
- 5) *Fuel cell vehicles*: Powered by a non-fuel system and/or recharge a battery such hydrogen fuel cells. Can be refueled with gaseous hydrogen.

POLICY & REGULATORY FRAMEWORK...contd.



Charging Stations



Charging Rates



**Alternative Fuel
Infrastructure**



**Licensing Charging
Station Operators**



**Tax incentives for
manufacturers,
importers**



**Adaptation of Existing
Infrastructure**

POLICY & REGULATORY FRAMEWORK...contd.



National Government



County Governments



Funding Incentives



Existing fossil fuel options (phased)

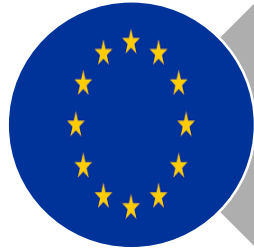


Independent Regulator



Reporting, M&E

SAMPLE REGULATORY POLICIES/LAWS



Framework for decarbonising light transport



Renewable Energy Directive



Alternative Infrastructure Directive

SAMPLE REGULATORY POLICIES/LAWS...contd.



The Promotion of the Use of Energy from Renewable Sources Regulations 2011

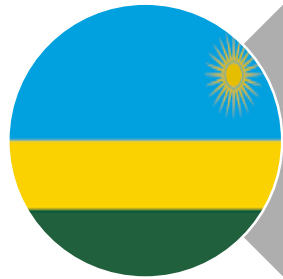


Alternative Fuels Infrastructure Regulations 2017



The Automated and Electric Vehicles Act 2018

SAMPLE REGULATORY POLICIES/LAWS...contd.



National E-Mobility Plan



Green Transport Strategy
(2018 -2050)

KENYA: WHERE ARE WE?



Electric Load Bicycle –
WeTu/Siemens Stiftung



Nopia – Taxi Company

KENYA: WHERE ARE WE?...contd.



18th June 2018 - Standards on Electric Vehicles

KS ISO 8715:2001 Kenya Standard — Electric road vehicles — Road operating characteristics, First Edition

KS ISO 12405-1:2011 Kenya Standard — Electrically propelled road vehicles — Test specification for lithium-ion traction battery packs and systems Part 1: High-power applications, First Edition

KS ISO 23273:2013 Kenya Standard — Fuel cell road vehicles — Safety specifications — Protection against hydrogen hazards for vehicles fuelled with compressed hydrogen, First Edition

CHALLENGES & OPPORTUNITIES



Lack of an e-mobility policy/regulatory framework



Limited energy access



Poor infrastructure



Skills and knowledge gap among relevant professionals



Public awareness

THANK YOU!



Madonna House Annex, 3rd Floor, Suite A309,
Westlands Road, Westlands, Nairobi
+254722939946 | +2540101939946
louise.mathu@gennisconsulting.com
www.gennisconsulting.com