

Electric Mobility Taskforce, Kenya



DRAFT NATIONAL E-MOBILITY POLICY, KENYA

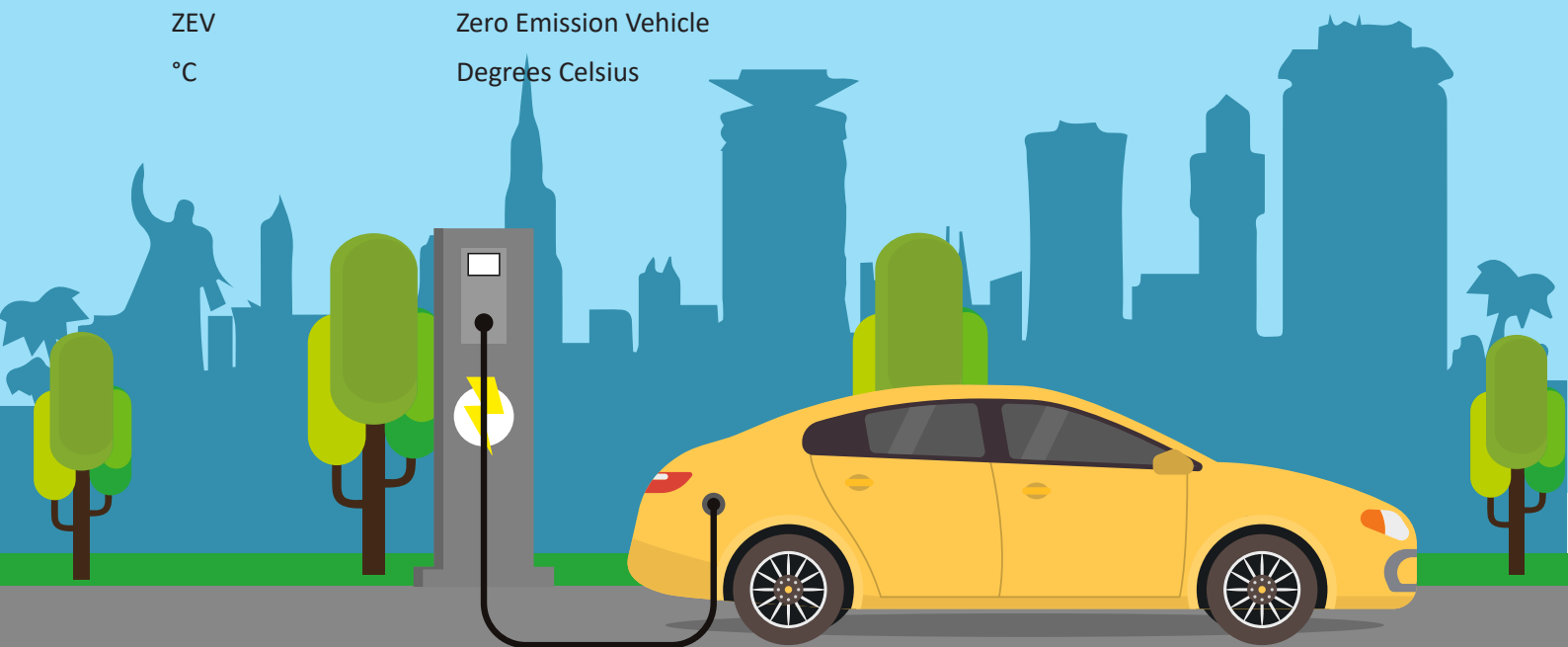
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MINISTRY OF ROADS AND TRANSPORT

List of Abbreviations, Notations and Acronyms

BETA	Bottom-Up Economic Transformation Agenda
CO ₂	Carbon dioxide
EPRA	Energy and Petroleum Regulatory Authority
EV	Electric Vehicle
GHG	Greenhouse gas
GtCO ₂ -eq	Gigatonnes of carbon dioxide equivalent
INTP	Integrated National Transport Policy
ICE	Internal Combustion Engine
ICEV	Internal Combustion Engine Vehicle
IPCC	Intergovernmental Panel on Climate Change
MDA	Ministries, Departments & Agencies
MW	Megawatt
MWh	Megawatt-hour
NCCAP	National Climate Change Action Plan
NDC	Nationally Determined Contribution
PLWD	Persons Living With Disability
PWD	Persons with Disability
RML	Road Maintenance Levy
SOF	Special Operating Framework
TVET	Technical and Vocational Education and Training
UNFCC	United Nations Framework Convention on Climate Change
VAT	Value Added Tax
ZEV	Zero Emission Vehicle
°C	Degrees Celsius



Introduction

Background

An efficient transport system and network are key in spurring national and regional integration and promoting trade and economic development. Kenya's modes of transport include road, rail, maritime and inland water, pipeline, aviation, and non-motorized and intermediate means of transport. Kenya's transportation is critical for economic growth. However, Kenya's transport infrastructure is also increasingly exposed to weather variability and climate change challenges. The world has committed to limiting global warming to 1.5 °C or 2 °C through the Paris Agreement, which Kenya ratified in 2015. This requires rapid, deep and immediate greenhouse gas (GHG) emission reductions mainly through the reduction of fossil fuels.

According to Article 6 synthesis report by the Intergovernmental Panel on Climate Change (IPCC), in 2019, direct GHG emissions from the transport sector were 8.7 GtCO₂-eq (up from 5.0 GtCO₂-eq in 1990). They accounted for 23% of global energy-related CO₂ emissions. 70% of direct transport emissions came from road vehicles, while 1%, 11%, and 12% came from rail, shipping, and aviation, respectively.

The transport sector in the world is predominantly driven by fossil fuels and accounts for around 30% in the case of developed countries and about 23% in the case of the total man-made CO₂ emissions worldwide. In Kenya, the transport sector is almost entirely powered by fossil fuels, given that the sector utilizes about 72% of petroleum products that are imported into the country. In 2015, the transport sector accounted for 13% of GHG emissions with projections indicating that the same would increase to 17% by 2030 due to population growth and industrialization among other factors. Between 2009 and 2019, domestic transport emissions increased by 59.4%, with road transport being the most significant contributor. Meeting climate goals would require transformative changes in the transport sector, including the electrification of vehicles as a global initiative.

In 2020, Kenya submitted an ambitious Nationally Determined Contribution (NDC) to the United Nations Framework Convention on Climate Change (UNFCCC) Secretariat that committed to reducing emissions by 32% by 2030. As one of the main contributors to emissions in the country, the transport sector is at the heart of the realization of this target. The National Climate Change Action Plan (NCCAP) 2018-2022 and its successor 2023-2027 identify the uptake of electric vehicles (EVs) as one of the climate actions in the transport and energy sectors. Equally, the National Energy Efficiency and Conservation Strategy (2020) envisions that by 2025, 5 % of all registered vehicles in Kenya will be electric powered. Similarly, the Long-Term Strategy for GHG emissions reduction aims at net zero by 2050 targeting transition to e-mobility. The use of electric power to power transport locomotives, e-mobility, significantly reduces the emission of GHGs and hence addresses their attendant health and environmental consequences.



The Kenya grid capacity is sufficient to support e-mobility. Kenya has expanded the generation capacity of a well-diversified mix with nearly 90 % of energy being generated from clean sources (mainly geothermal, hydro and wind). Kenya has a total electricity installed capacity of 3,713.4 MW as of June 2023. The country recorded a new peak demand of 2,177 MW on 21st February 2024. Based on this peak demand, there is a healthy margin of over 40% of the installed capacity that is left unutilized. The difference

between peak and off-peak demand in Kenya on a normal day is about 1000 MW. To maintain system stability, power generation is generally curtailed during these off-peak periods. According to the Energy and Petroleum Regulatory Authority (EPRA) statistics, a total of 495,437 MWh of energy was curtailed between July 2022 and June 2023. This is an average daily curtailment of over 1357 MWh. This is a lot of energy that could be used to create demand at night. E-mobility can help bridge this gap by charging EVs, especially at night. On average, a 51-seater bus has a battery capacity of 180-200 kWh to give a 200 km range. The daily curtailed energy can therefore put about 7,000 electric buses or over 200,000 electric motorcycles on the road.



*Cabinet Secretary of the Ministry of Roads and Transport,
Kipchumba Murkomen, EGH,*

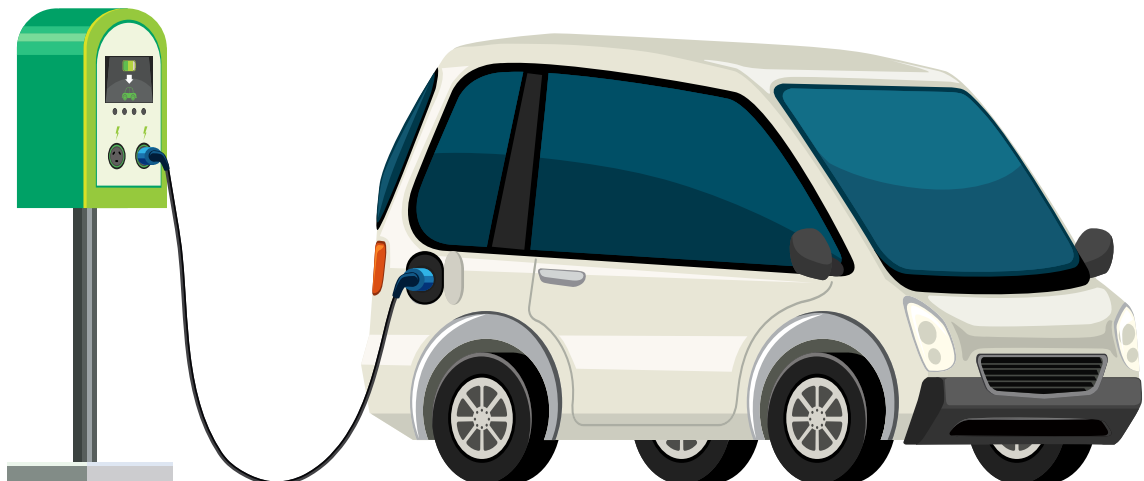
The Kenyan Government Bottom-Up Economic Transformation Agenda (BETA), which is currently implemented as Fourth Medium Term Plan 2023-2027 under the Kenya Vision 2030 Agenda, recognizes the role that e-mobility could play in the attainment of national development and environmental goals. The Integrated National Transport Policy (INTP), 2009, currently under review identifies electric mobility as a key opportunity for the transport sector.

The Cabinet Secretary of the Ministry of Roads and Transport, Kipchumba Murkomen, EGH, through Gazette Notice 10132 of 2023 dated 4th August 2023 appointed the Taskforce on the Development of National Electric Mobility Policy, Strategy and Regulations.



*Principal Secretary State Department for Transport
Mohamed Daghar, CBS*

The objectives of the e-Mobility Taskforce include development of a National Electric Mobility Policy (the e-Mobility Policy) to create an enabling environment for the growth and adoption of electric vehicles in Kenya





Vision of the Policy

To position Kenya as leader in electric mobility transition in Africa



Mission of the Policy

Creating a pathway towards a more sustainable, efficient, and equitable transportation powered by e-mobility

Objectives of the Policy



01

Develop an integrated and comprehensive policy, legal and regulatory framework to promote adoption of E-mobility.

02

Promote Local Manufacturing & Assembly of EVs

03

Develop and Enhance E-mobility Infrastructural Capacity to accelerate adoption of EVs

04

Enhance local technical capacity and skills across the E-mobility Value Chain

05

Improve fiscal and non-fiscal measures to accelerate the adoption of EVs

06

Scale up socioeconomic measures to promote the adoption of EVs

07

Reduce over-reliance on Road Maintenance Levy (RML) collected on petrol and diesel fuel.

No	POLICY OBJECTIVES	CRITICAL ISSUES	POLICY STATEMENT	POLICY MEASURE
	<p>To develop an integrated and comprehensive policy, legal and regulatory framework to promote adoption of E-mobility.</p>	<ul style="list-style-type: none"> Limited coordination between different MDAs within government, county government and other partners who are involved in the electric mobility ecosystem. Inadequate legal and regulatory framework on e-mobility. Limited data collection and management systems on EVs, Inadequate research and studies to inform clear targets and monitor the progress of achieving different e-mobility targets. 	<p>The government will:</p> <ol style="list-style-type: none"> Establish an Electric Mobility Institutional Framework to facilitate the widespread adoption of electric vehicles and establish transition targets. Establish and review legal and regulatory framework to promote adoption of E-mobility 	<ol style="list-style-type: none"> Establish an Electric Mobility steering committee under the direction of the Presidency to provide overall coordination of Electric Mobility initiatives undertaken by various governmental Ministries Departments and Agencies (MDAs) and County Governments Undertake a national-level electric vehicle demand assessment study. Set target timelines when all new vehicles registered will be required to be zero-emission vehicles (ZEVs) with different timelines for different categories of vehicles. Prioritize addition of EVs in their vehicle fleets in government vehicle procurement with a minimum local content requirements. Develop a regulatory framework for EV asset financing Develop countrywide framework for adoption of electric based mass passenger transportation systems in urban areas <ol style="list-style-type: none"> Introduce vehicle emissions standards with periodic inspections to ensure compliance. Introduce certification programs for electricians, installers, and maintenance technicians involved in the EV industry. Harmonize EV codes and standards to ensure consistency, interoperability and compatibility across different regions and jurisdictions. Ensure that building codes and regulations accommodate EV charging infrastructure. Develop residual battery life requirements on importation of used electric vehicles. Establish clear safety regulations and standards for manufacture/assembly, importation and operation of EVs Establish end-of-life disposal methods for EVs in compliance with other existing policies. Mandate data sharing on aspects such as (usage patterns, charging behavior among others) to inform strategic planning and infrastructure needs

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II	<p>To promote Local Manufacturing & Assembly of EVs</p> <ul style="list-style-type: none"> • Limited capacity in local manufacturing and assembly of EVs. • Low investments in e-mobility sector. 	<p>3) Ensure establishment of local Manufacturing & Assembly of EVs</p> <p>4) Establish local up-stream ecosystem for EV auto components.</p> <p>5) Establish supportive measures for EV charging infrastructure.</p>	<p>3) Ensure establishment of local Manufacturing & Assembly of EVs</p> <p>4) Establish local up-stream ecosystem for EV auto components.</p> <p>5) Establish supportive measures for EV charging infrastructure.</p>	<p>a. Implement ZEV sales targets/investment requirements for automakers and assemblers to qualify for government incentives</p> <p>b. Establish a clear local content requirement on EVs phased over time.</p> <p>a. Put in place measures to support manufacture of EV parts</p> <p>b. Support local battery manufacturing, recycling and repurposing.</p>
III	<p>To develop and Enhance E-mobility Infrastructure Capacity to accelerate adoption of EVs</p> <ul style="list-style-type: none"> • Inadequate charging infrastructure. • High capital cost for setting up charging infrastructure • High cost of electricity for both domestic and commercial charging. • Limited electricity network reach in the country. • Unreliability of the electricity grid 	<p>6) Ensure availability of reliable electricity supply to support E-mobility</p>	<p>6) Ensure availability of reliable electricity supply to support E-mobility</p>	<p>a. Establish targets for deploying EV charging infrastructure to ensure widespread coverage.</p> <p>b. Encourage interoperability of EV charging systems and interoperability of public charging stations</p> <p>c. National government and County governments will facilitate installation of charging infrastructure in public spaces.</p> <p>a. Develop a coordination framework between major players in the electricity sector (Generation, Transmission and Distribution) to improve electrification and reliability.</p> <p>b. Undertake periodic review to determine optimal charging locations to inform investments in EV charging infrastructure.</p>
IV	<p>To enhance local technical capacity and skills across the E-mobility Value Chain</p> <ul style="list-style-type: none"> • Limited local technical skills to support manufacturing and assembly of electric vehicles in the country. • Limited capacity to operate, service and maintain electric vehicles. • Dynamic technological advancements in e-mobility 	<p>7) Promote development and integration of EV based public transport.</p> <p>8) Ensure development of local technical capacity and skill to support local EV manufacturing/assembly, operation and maintenance.</p>	<p>7) Promote development and integration of EV based public transport.</p> <p>8) Ensure development of local technical capacity and skill to support local EV manufacturing/assembly, operation and maintenance.</p>	<p>a. Develop a framework for the transition of public transportation from ICEVs to EVs through a phased approach and with defined timelines in line with Kenya's climate commitments.</p> <p>b. Develop a financing and insurance mechanism to incentivize public transport players to transition their vehicles from ICEVs to EVs.</p> <p>a. Develop E-mobility curriculum/module that can be integrated in the relevant programs in TVETs/Universities.</p> <p>b. Promote research and development initiatives related to electric vehicles, battery technology, charging infrastructure.</p> <p>c. Mandate suppliers to integrate user training and provide manuals for their products. This should include basic diagnosis procedures and maintenance</p> <p>d. Promote EV knowledge sharing locally and internationally.</p>

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V	<p>To improve fiscal and non-fiscal measures to accelerate adoption of EVs</p>	<ul style="list-style-type: none"> • High upfront cost of EVs compared to internal combustion engine (ICE) vehicles. • Inadequate incentives offered to manufacturers, infrastructure developers and consumers of e-mobility. • Limited budgetary allocation to finance e-mobility incentives. 	<p>9) Provide fiscal and non-fiscal incentives to manufacturers and assemblers.</p> <p>10) Provide fiscal and non-fiscal incentives to promote infrastructure development</p> <p>11) Provide fiscal and non-fiscal incentives to EV consumers to accelerate adoption</p>	<p>a. Provide tax incentives including Import Duty, Excise Duty and VAT exemptions for EV parts over a specified period of time.</p> <p>b. Ensure expedited and access green channels for EV parts importation</p> <p>c. Develop a special operating framework (SOF) which will provide special fiscal and non-fiscal incentives to attract establishment of an EV manufacturing plants in Kenya and for exportation of locally built EVs across the continent.</p> <p>a. Provide incentives for businesses and property owners to develop and install EV public charging infrastructure.</p> <p>b. Reduction of stamp duty for EV infrastructure developments</p> <p>c. Review electricity tariff for EV charging stations</p> <p>d. Integrate charging infrastructure with transport and energy planning.</p> <p>a. Waive vehicle registration fees for EVs</p> <p>b. Develop and implement an electricity tariff for EVs charging.</p> <p>c. Provide unique license plate to allow EVs to get preferential services such as access to restricted zones, subsidized parking fees among others.</p> <p>d. Provide tax incentives including the waiver of import duty, VAT and excise duty on completely built up EVs for a defined period.</p> <p>e. Provide tax incentives, including the waiver of import duty, VAT and excise duty for locally manufactured and assembled EVs.</p> <p>f. Develop a framework for grant of subsidies to public service transport players who acquire high capacity EVs for passenger transportation.</p>

No	POLICY OBJECTIVES	CRITICAL ISSUES	POLICY STATEMENT	POLICY MEASURE
VI	To scale up socioeconomic measures to promote the adoption of EVs	<ul style="list-style-type: none"> Inadequate inclusion of women, youth and persons living with disability (PLWD) in the E-mobility ecosystem. Limited funding schemes to access low interest loans to finance e-mobility investments. 	<p>12) Enhance gender equality and social inclusion in the E-mobility ecosystem.</p> <p>13) Enhance financial inclusion in the E-mobility ecosystem.</p>	<ul style="list-style-type: none"> Develop targeted programs that incentivize women, youth and PLWDs to engage in economic activities enabled by E-mobility. Develop programs to employ women, youth and PLWDs in different E-mobility activities. Develop targeted programs for creation of public awareness on e-mobility's benefits, cost savings, and environmental advantages. Provide fiscal and non-fiscal incentives to players in the E-mobility value chain to employ women, youth and PLWDs. Establish data security and privacy standards for EVs to protect consumer data, ensure confidentiality, and prevent unauthorized access or misuse of personal information. Establish low-interest loan programs to provide financial assistance to businesses and organizations investing in EVs. The Government to collaborate with financial institutions to develop affordable E-mobility financing products that support women, youth and PLWDs
VII	To reduce over-reliance on Road Maintenance Levy (RML) collected on petrol and diesel fuel.	<ul style="list-style-type: none"> Inadequate funding mechanism for funding road maintenance, rehabilitation and development. 	<p>14) Develop sustainable alternative financing structures to reduce reliance on RML for road maintenance, rehabilitation and development arising from increased adoption of E-mobility.</p>	<ul style="list-style-type: none"> Establish the impact of adopting e-Mobility on the long term sustainability of the Road Maintenance Fuel Levy Fund. Develop alternative financing structures for road maintenance, rehabilitation and development Apply the "user pays" principle in the financing of road maintenance, rehabilitation and development. Apply a phased approach in the implementation of any alternative financing structures developed for road maintenance, rehabilitation and development.

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6. Zacharia Lukorito	-	Member
7. Chris Mugo	-	Member
8. Judy Chepkirui	-	Member
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12. Githaiga Weru	-	Member
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