Africa E-Mobility Alliance

Africa E-Mobility Report 2025: Trends, Policies, and Investments in Electric Mobility

September | 2025

Introduction

Africa has its foot firmly on the accelerator in the global move to e-mobility, stimulated by a combination of its unique opportunities as well as announcements by major economies to halt the sales of internal combustion engine vehicles from 2035. The European Union passed a law that bans new ICE vehicle sales from 2035 (Light-duty vehicles - European Commission). The United Kingdom ban on new petrol and diesel cars from 2035 (Government sets out path to zero emission vehicles by 2035 - GOV.UK). Canada, on the other hand, has a 100% zero-emission new vehicle sales mandate by 2035 (Canada's Zero-Emission vehicle sales targets). The United States (California + 17 other states) banned new ICE vehicle sales from 2035 (Advanced Clean Cars II | California Air Resources Board). China targets 100% new energy vehicle sales by 2035 (2021_NEV_Development_Plan_2035.pdf) (New Energy Vehicle Industry Development Plan (2021-2035) – Policies - IEA). South Korea is also phasing out out new ICE vehicle sales by 2035 (InfluenceMap Korea Zero Emissions Vehicle (ZEV) Policy) (South Korea to phase out ICE vehicles by 2035 - Just Auto)
This global direction reinforces the urgency for Africa to accelerate its own E-mobility strategies and investments, to remain competitive in trade, supply chains and climate goals. At the same time, several emerging issues are beginning to define Africa's e-mobility pathway. Circularity, particularly around the management and reuse of end-of-first-life batteries, remains an underdeveloped but essential area for long-term sustainability. Gender is also a critical dimension, as women remain underrepresented across the e-mobility ecosystem, from participation in the workforce to access and use of EVs.

Between electric 2-wheelers (E2W), 3-wheelers (E3W), 4-wheelers (E4W), and E-buses, there are at least 30,000 EVs active on the continent as of May 2025 (AFEMA Data Portal, 2025). According to the AfEMA Data Portal, as of May 2025, the growth rates have been impressive as follows:

- E2/3W: **38% YoY**
- E4W: **28% YoY**
- E-buses: **44% YoY**

Key developments:

Investments: Over USD 100 million has been mobilised in every African region except Central Africa, supporting early-stage pilots, infrastructure rollout, and the scaling of proven e-mobility models. In East Africa, BasiGo secured a landmark USD 42 million package comprising USD 24 million in equity led by Africa50 and USD 17.5 million in debt from BII and USAID/DFC to expand its e-bus assembly with Kenya Vehicle Manufacturers and deliver 1,000 buses across Kenya and Rwanda over the next three years (Africa50, BasiGo). In Uganda, GOGO Electric received a USD 3 million equity investment from the Uganda Development Bank (UDB) to expand local e-motorcycle manufacturing, battery-swapping infrastructure, and pay-as-you-go financing solutions (PCTechMag). More broadly, the *Uganda E-Mobility Outlook Report 2024* highlights that the country has attracted over USD 160 million in e-mobility investments between 2018 and 2024, 70% of which came from the government,

with a projected USD 800 million private investment pipeline over the next five years (Independent). These cases illustrate a wider pattern: while early-stage and catalytic capital have enabled pilots and demonstrations, more early-stage financing remains necessary to help smaller companies cross the "valley of death" between innovation and commercialisation. At the same time, more affordable debt and late-stage financing are required to allow proven business models such as E-bus and E-motorcycle fleets to scale rapidly across multiple markets.

Policy trends:

East Africa:

- Uganda reversed its zero-rated EV import duty in mid-2024, now charging 25%, which significantly increased EV costs (Uganda Finance Bill 2024).
- Kenya retained VAT exemptions on electric motorcycles, bicycles, buses, and solar batteries in the Finance Bill 2025 (Kenyan Treasury).
- Rwanda exempted EVs from import duties and announced an ICEV ban starting in January 2025 (Rwanda National Strategy).
- Ethiopia announced a ban on new ICEV imports starting in 2024, becoming the first in the world (AP News).

Southern Africa:

- South Africa offers a 150% tax deduction for EV and hydrogen vehicle production effective March 2026 (Polity.org.za).
- Malawi waives import and excise duties on imported electric 2-wheelers (Cliffe Dekker Hofmeyr).
- Namibia has introduced incentives for EV imports and is drafting a National EV Policy (Engineering for Change).
- Zambia is pursuing e-mobility through tax waivers and pilot programs, with support from development finance institutions (Clean Technology Hub, 2025).

West Africa:

- Ghana offers VAT and import duty exemptions on EVs, and is piloting assembly plants for electric buses (Reuters).

- Nigeria launched a National EV Policy (2023) and provides incentives for EV manufacturing and imports (Clean Technology Hub, 2025).
- Senegal has included EV adoption targets in its climate strategies and urban transport plans (Engineering for Change).

North Africa

- Morocco has attracted over $15B in EV and battery investments, including a $1.3B Gotion High-Tech gigafactory (Reuters, 2024).
- Egypt is supporting domestic EV assembly and aims to produce 20,000 EVs annually by 2030 (AP News).
- Tunisia is implementing reduced duties for hybrid and electric vehicles as part of its green transport plan (Cliffe Dekker Hofmeyr)

Deployment drivers: Strong uptake of electric two-wheelers (E2W) continues to dominate commercial electrification, riding boda bodas in Kenya, Okadas in Nigeria, and motos in Central Africa, driven by maturing product-market fit powered by available and innovative pay-as-you-go financing. For instance, taxi motorcycle services in Kenya alone contribute around USD 4.4 billion annually to the economy Boda boda sector contribution to Kenyan economy hits Sh660billion - survey. Meanwhile, electric buses are expanding steadily, with companies like BasiGo operating 100 e-buses that now serve tens of thousands of passengers daily.BasiGo Deploys 100th Electric Bus in East Africa — BasiGo. In comparison, electric three-wheelers (E3W) have lagged behind due to limited model availability, weaker financing models, limited market familiarity, and constrained infrastructure Electrifying Kenya's Two- and Three-Wheelers | WRI Africa.

Private vs. Commercial: Electric vehicle uptake in Africa remains heavily commercial, with the strongest adoption in two wheelers, and increasingly in e-bus fleets. A smaller but growing segment is E4W minibuses and taxis services, where operators benefit from lower running costs and high utilisation. Examples include Moove's EV ride-hailing fleets in Nigeria, South Africa, and Ghana (moove.io), and new product offerings like BasiGo's matatu (BasiGo launches Kenya's first inter-city electric matatu pilot) This commercial dominance reflects structural factors:

- **High public transport reliance:** 60–80% of city residents use shared or public transport daily (engineeringforchange.org).
- **Low motorisation rate:** Africa averages 43 vehicles per 1,000 people, compared to the global average of 197 per 1,000 (tcc-gsr.com, energyforgrowth.org).

1. Vehicle Distribution

1.1 Fleet Numbers & Growth Rates

- At least 30,000 EVs are active on the continent.

- Regional deployment is led by commercial E2W, driven by strong product–market fit and supportive financing models. EV motorcycles now perform on par with, or better than, ICE equivalents, with upfront costs reduced by separating battery ownership from the vehicle purchase through battery-swapping business models (Solutions Plus, 2024).

- Access to microfinance solutions allows riders to enter the market with deposits as low as 10%, repaid through daily or weekly installments comparable to ICE motorcycles, but with much lower running costs. (It's All In The Numbers! A Deep Dive Into ICE Motorcycle Fleet Data Convinces Kimosop & Co-Founder Steve To Start Ecobodaa Kenya - CleanTechnica)
- This growth is reinforced by Africa's large existing ICE motorcycle market—over 90% of motorcycles sold are new, with fleets turning over every 5–10 years (World Bank, 2021, ITDP, 2020)—creating a natural pathway for e-motorcycles to capture the next wave of purchases. Alongside these drivers, the growth of charging and battery-swapping infrastructure continues to support adoption (Engineering for Change, 2024).
- E4W adoption is limited by higher purchase costs; e-buses and electric taxis are gaining traction.

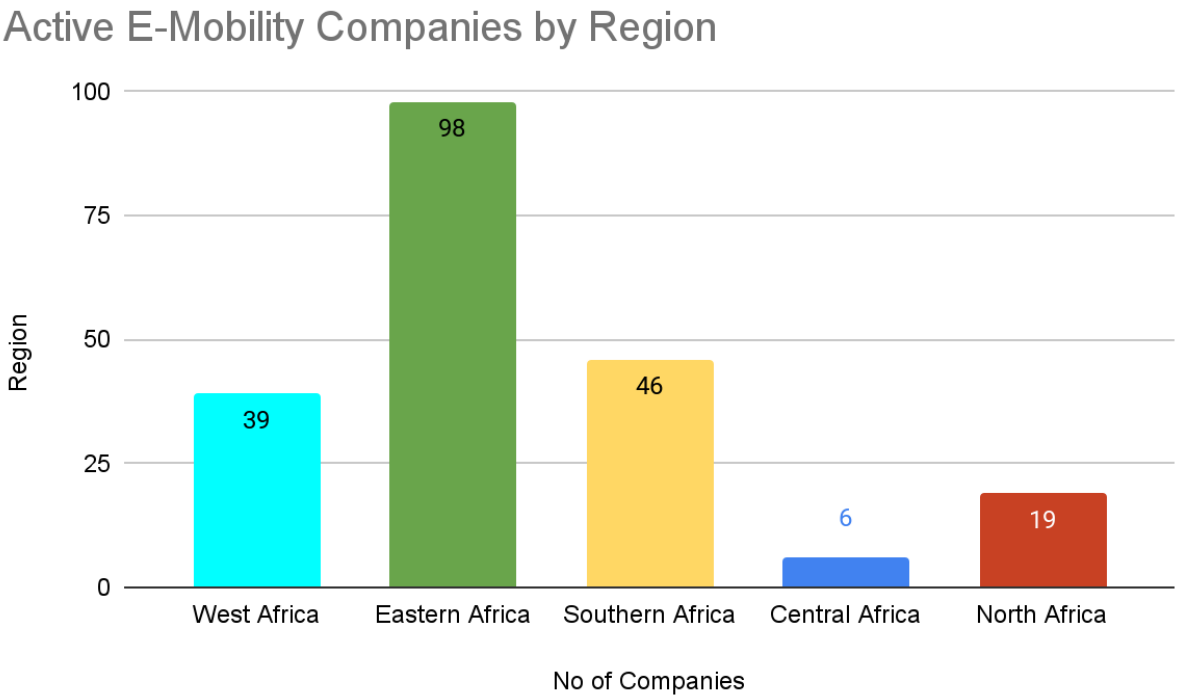
1.2 Regional Vehicle Distribution (2025)

As of May 2025, the distribution of electric vehicles (EVs) across selected African countries shows significant variation in adoption levels, with a total of 30,077 two- and three-wheelers (2&3W), 545 buses, and 4,778 light-duty vehicles (LDVs) recorded. Tanzania leads with an estimated 10,000 (most of which are lead-acid scooters), followed by Kenya (8,421), Togo (4,000), and Uganda (3,200). In the bus segment, Egypt has the highest stock at 200 units, while Senegal(155) and Kenya (54) also show notable uptake. For LDVs, South Africa dominates with 1,559 vehicles, alongside Egypt (380), and Kenya (326). These figures highlight the dominance of electric two- and three-wheelers in East Africa, growing bus fleets in North and West Africa, and relatively higher LDV penetration in countries with stronger automotive markets such as South Africa and Egypt. (AfEMA Data Portal)

2. Industry & Market Activities

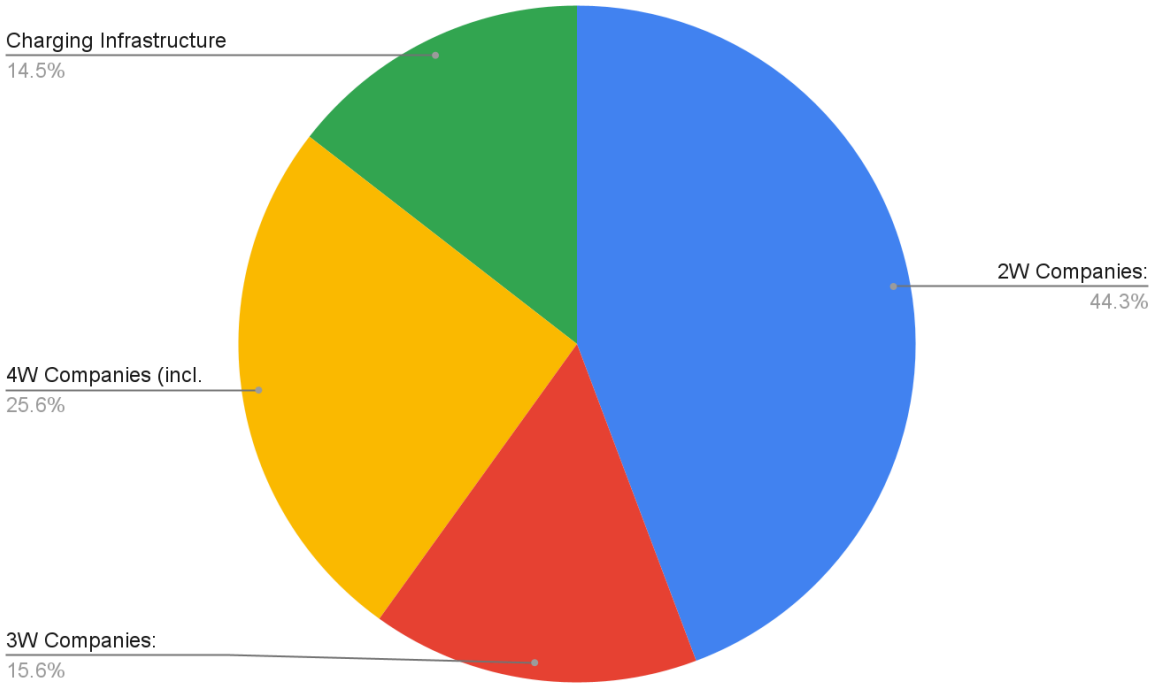
2.1 Active E-Mobility Companies

According to the AFEMA E-Mobility Companies Database (2025), there are 208 active e-mobility companies across Africa, with their distribution showing clear regional patterns. East Africa leads with 98 companies, driven by dynamic markets in Kenya, Rwanda, and Uganda, where electric motorcycles and charging solutions are scaling quickly. Southern Africa follows with 46 companies, led by South Africa's automotive sector and growing adoption in countries like Zambia and Zimbabwe. West Africa accounts for 39 companies, concentrated in Nigeria and Ghana, where motorcycles and delivery services dominate. North Africa hosts 19 companies, largely in Egypt and Morocco, reflecting connections to global automotive value chains, especially in Europe. Central Africa trails with 6 companies, marking an early but important stage of market development.



The pie chart below illustrates the distribution of active E-mobility companies across Africa by vehicle and infrastructure type, based on the AFEMA E-Mobility Companies Database as of August 2025.

- E2W dominates the sector, representing 44% of the market, reflecting the strong adoption of motorcycles and E-bikes for urban mobility and last-mile delivery. E3W players account for 16%, remaining significant in markets where tuk-tuks and cargo 3Ws are prevalent. E4W companies, including buses, make up 25%, showing growing interest in electric cars, vans and public transport solutions. Charging infrastructure companies represent 15%, highlighting ongoing efforts to expand the ecosystem and support vehicle uptake.



2.2 Market Trends

- Commercial uptake dominates over private ownership. In African cities, E-mobility adoption is primarily through shared and commercial vehicles due to deeply ingrained transit patterns and low private vehicle ownership: Up to 80% of motorised trips are via communal taxis or moto-taxis Engineering For Change. Only 43 vehicles per 1,000 people exist on average, compared with a global rate of 197 per 1,000, highlighting the continent's growth potential tcc-gsr.comEnergy for Growth Hub. Paratransit, including minibuses and motorcycle taxis, accounts for 40–98% of urban transit in different cities, underpinning the strategic suitability of electrifying these commercial segments tcc-gsr.com.
- Across Africa, E-bus activity is dominated by local assembly and deployment of largely Chinese brands rather than full manufacturing. Notable examples include BasiGo–KVM assembly in Kenya, BKG–Golden Dragon CKD assembly in Ethiopia, BYD deployments (Golden Arrow) and MAN localisation in South Africa and MCV's electric bus body manufacturing in Egypt. BasiGo+1Bus-Newsm.chinabuses.orgEngineering NewsSustainable BusAfrica Energy Portal

3. Economy & Investment

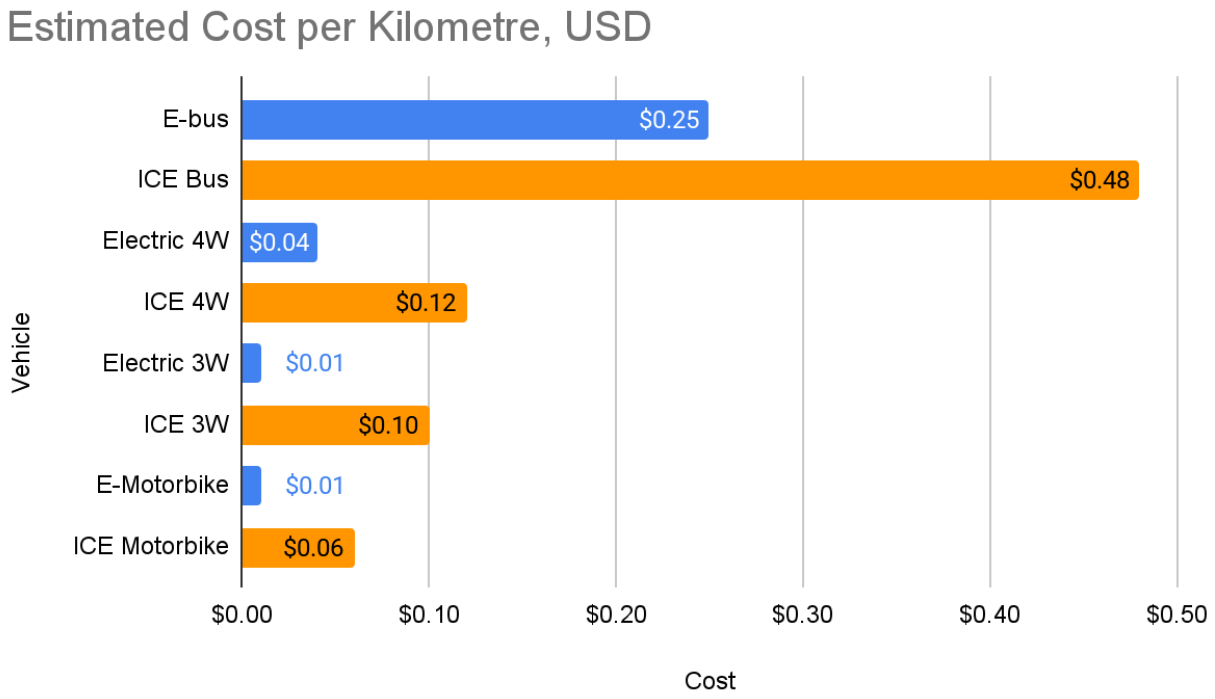
3.1 Economics of EVs

The operating costs of EVs (energy, maintenance) are lower than ICE. For example, driving an EV in Kenya is cheaper (up to 8 times in some cases) than driving an ICE vehicle, regardless of

whether the vehicle is charged during off-peak or peak hours. Below is a table illustrating this difference.

Table: Cost of Driving 100km – EV vs ICE in Kenya (Kenya E-Mobility Tariff Review)

Vehicle Type	Energy Consumption	Energy Cost Per Kilometre (USD)	EV Charging Cost (USD)	Fuel Consumption	ICE Fuel Cost per Kilometre (USD)	% Diff of EV vs ICEV Cost Per Kilometre
Light duty (2W/3W)	4 kWh/100 km	0.01 (Ksh 1)	0.62-0.92 (Ksh 79-118) (off-peak vs peak)	3.74 L/100km	0.06 (Ksh 6.62)	83.33%
Medium duty (small car/van)	15.6 kWh/100 km	0.04 (Ksh 3.9)	2.40-3.58 (Ksh 310-462)	8.6 L/100km	0.12 (Ksh 15.22)	66.67%
Heavy duty (Bus)	124.6 kWh/100 km	0.25 (Ksh 31.15)	19.14-28.50 (Ksh 2,472-3,682	34.5 L/100km	0.48 (Ksh 61.07)	47.92%



The main roadblock to adoption is the high cost of vehicles. Below is a summary of the cost of electric buses (EVs) in parts of Africa from the TUMI report. Building Visibility on Electric Bus Initiatives in Africa

Table: Cost of Electric Buses in Africa (TUMI Report)

Country/City	Bus Type/Size	Cost in USD	
Kenya (Nairobi)	25–35 seater (BasiGo, Roam)	**$55,000 – $60,000**	Locally assembled mini/mid-size buses used for matatu routes.
Kenya (Nairobi)	51–60 seater (BYD, Yutong imports)	**$200,000 – $250,000**	Fully built imports from China.
Uganda (Kampala – Kiira Motors)	Kayoola EVS, 35–90 seater	**$58,800 – $90,000**	Locally developed; costs vary by configuration.
South Africa (Cape Town, Tshwane)	35–65 seater	**$250,000 – $300,000**	Imported BYD buses for BRT systems.
Ethiopia (Addis Ababa)	Standard 35+ seater	**$250,000+**	Imported electric buses for city transit.

Egypt (Alexandria, Cairo)	40–50 seater	**$180,000 – $200,000**	Imported from China, with some assembly taking place locally.
Senegal (Dakar BRT)	121 electric buses (standard BRT size)	**$300,000+**	Funded by World Bank & EIB for Africa's first all-electric BRT.

3.2 Funding Stages

3.2.1 Early-Stage & Catalytic Funding

Early-stage and catalytic financing, such as grants, blended finance and venture capital, has played a critical role in piloting business models and supporting market entry. However, more such financing is still needed to help smaller E-mobility companies get off the ground, particularly to bridge the Seed–Series A gap. According to Shell Foundation's analysis, rolling out electric two-wheelers at scale across countries like Ethiopia, Kenya, Nigeria, Rwanda, and Uganda will require USD 3.5- 8.9 billion in asset financing, vehicle assembly and charging infrastructure. Shell Foundation

At the pilot level, E-mobility entrepreneurs benefit from grants, technical assistance, and blended finance that help test and refine business models. For instance, the African Development Bank's Sustainable Energy Fund for Africa (SEFA) supports the Green Mobility Facility for Africa (GMFA), which provides technical assistance and investment capital to accelerate and expand private sector investments in sustainable transport. GMFA targets seven countries: Kenya, Morocco, Nigeria, Rwanda, Senegal, Sierra Leone and South Africa, with activities ranging from pilot projects and e-mobility startups to enabling regulatory frameworks (Press Releases | African Development Bank Group). Similarly, the SOLUTIONSplus initiative has funded Living Lab demos and capacity-building in Kigali (Rwanda) and Dar es Salaam (Tanzania) Rupprecht ConsultSOLUTIONSplus+1. These early investments lay the groundwork for scalable e-mobility while focusing on inclusion and local relevance.

3.2.2 Growth-Stage and Debt Funding

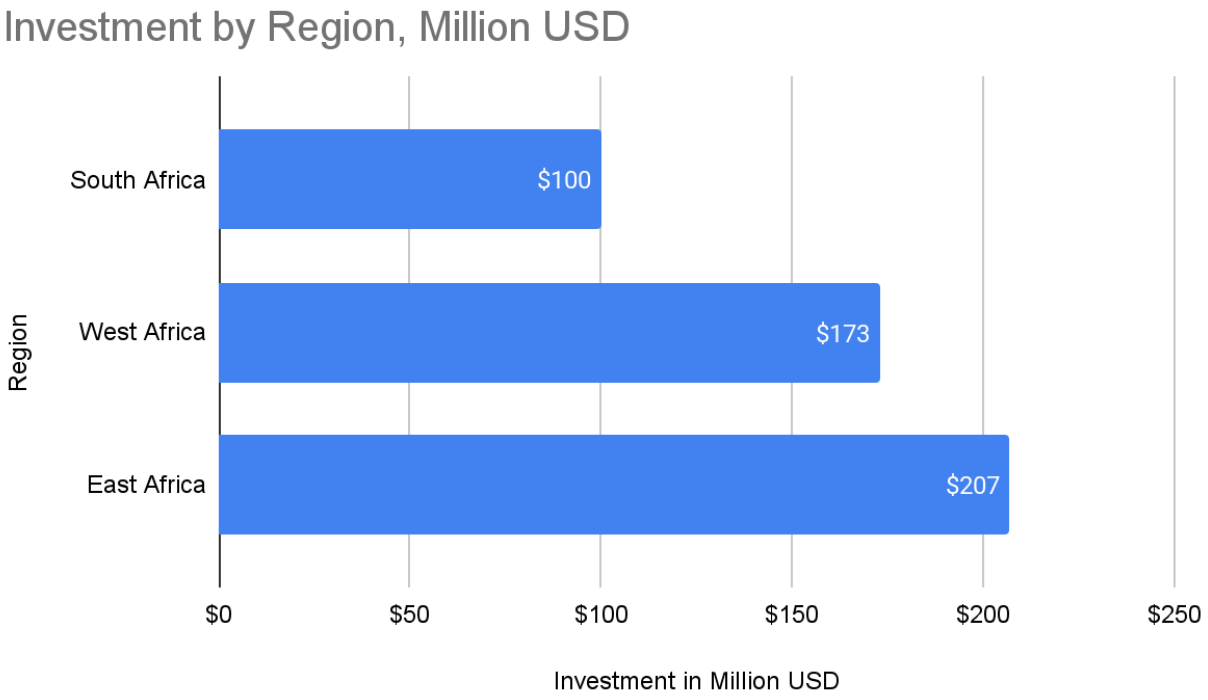
On the other hand, as proven E-mobility business models mature, there is a growing need for scalable debt and late-stage financing to expand fleets, infrastructure and regional operations. Without these financing options, many successful pilots risk stagnating before reaching market-wide impact. The Africa Finance Corporation, New Development Bank and similar institutions have been identified as key players to provide this patient, medium- to long-term capital. World Bank Blogs

Once pilots gain traction, scaling requires equity, venture, or debt financing. Ampersand secured backing from IFC and AfricaGoGreen to expand E-motorcycle networks across Rwanda and Kenya; ROAM attracted Series A and debt financing to grow its electric bus and motorcycle operations in Kenya SOLUTIONSplus. In Nigeria, early-stage companies like MAX.ng have been supported by venture funds targeting last-mile electric transport solutions.

3.2.3 Late-Stage & Institutional Capital

For large-scale deployment charging infrastructure, assembly facilities, or fleet procurement, E-mobility players turn to concessional development-bank and DFI capital. The Development Bank of Rwanda (BRD) and Uganda Development Bank (UDB) have climate finance lines enabling local operators to scale Kenyan Wall Street.

3.3 Investments



4. Policy

The policy landscape in E-mobility in Africa is rapidly evolving, and policy rollout is in the infancy stages. Governments use a mix of pilot programs, fiscal incentives and nascent national strategies to stimulate the market. The focus is on commercial and public transport vehicles which, as indicated above, have an immediate economic and social impact than private cars.

Only a few African countries (Egypt, Rwanda as examples) have a comprehensive e-mobility policy ecosystem. Many others have strategies on paper but lack fiscal/non-fiscal incentives, regulations or integration with the energy sector. This uneven landscape is one of the challenges to EV adoption in Africa.

	E-Mobility		Incentives		Sector	
Country	**Strategy**	**Regulations**	**Fiscal**	**Non Fiscal**	**Industry**	**Energy**
Morocco	Present	Absent	Absent	Absent	Present	Absent
Algeria	Present	Absent	Absent	Present	Absent	Absent
Tunisia	Absent	Absent	Present	Absent	Absent	Absent
Ghana	Present	Absent	Present	Absent	Present	Absent
Togo	Present	Absent	Present	Absent	Absent	Absent
Nigeria	Present	Absent	Absent	Absent	Absent	Absent
Cameroon	Absent	Absent	Present	Absent	Absent	Absent
Egypt	Present	Present	Present	Present	Present	Present
Angola	Present	Absent	Present	Absent	Present	Present
Rwanda	Present	Present	Present	Present	Present	Present
Tanzania	Absent	Absent	Present	Absent	Absent	Absent
Kenya	Present	Present	Present	Absent	Present	Present
Zambia	Absent	Absent	Present	Absent	Absent	Absent
Zimbabwe	Present	Absent	Present	Absent	Present	Absent
South Africa	Present	Present	Absent	Absent	Absent	Absent

4.1 National Strategies

At least thirteen African countries: Kenya, Rwanda, Uganda, Ethiopia, Morocco, Togo, Algeria, South Africa, Egypt, Angola, Zimbabwe, Ghana and Nigeria have published national strategies or major policy initiatives to support EV adoption; however, implementation is often weakened by annual budget politics, shifting finance acts, and limited regulatory follow-through. Engineering For ChangeSTI - SecretariatAP NewsCliffe Dekker Hofmeyrcleantechnologyhub.com

4.2 Import Incentives

Import Incentives reduce tariff barriers on EVs and components. These are common throughout Africa and both nascent and maturing e-mobility markets. Malawi waives import and excise duties on imported E2W, and Rwanda exempts E2 and E4W from tariffs. Kenya does not charge excise duties for locally-assembled E2 or E4W, and reduces duties on certain components. Uganda has repealed many of its tariff exemptions for imported EVs.

Country	Tax Incentive Summary
Kenya	VAT exemption for locally assembled E2- and E4W. 10% import duties on E4W. Various exemptions for parts.
Rwanda	Electric motorcycles and E4W are exempt from import duties.
Uganda	Tariff exemptions for EVs were revoked in 2024. Domestic manufacturers are exempt from stamp duty.
Ethiopia	Partially-assembled EVs are subject to lower (5%) tariff rates. Surtax and excise taxes are also waived on EVs.
Morocco	Limited tariff exemptions for Japanese hybrid vehicles, none for EVs. VAT is sometimes exempted for vehicles used for international transport.
South Africa	Import duty tax is 25% with a 15% VAT. ICEVs face an 18% import duty, while EVs are subject to higher import duties, making them less competitive in the local market.

4.3 Assembly Incentives

Within the East African Community (EAC), assembly is guided by the Common External Tariff (CET), which uses lower rates for CKD/SKD kits (via the Duty Remission Scheme) and higher rates for fully built units (FBUs) to encourage local assembly. The current CET (HS-2022) applies 0%, 10%, 25% and 35% bands, and partner states regularly use duty remission to grant 0–10% for CKD kits, e.g., Kenya's CKD motorcycle kits at 10% through June 2024, while FBUs face the standard CET rates. EV-specific relief has also been applied: Rwanda was authorised to apply 0% duty on electric & hybrid vehicles for one year. aa-eac-gazette-dated-2024-04-29-no-11.pdf

At the national level, Uganda exempts domestic manufacturers such as Kiira Motors from stamp duty, while also offering a ten-year income tax holiday, VAT exemptions on locally produced EVs, excise duty relief on construction materials, and 0% import duty on EV production inputs. (Uganda's Kiira Motors unveils Kayoola EVS buses for Kampala - EV24.africa - Buy Electric Cars for Africa)

In Rwanda, incentives include zero import and excise duty, VAT exemptions on EVs, spare parts, and charging equipment, as well as a reduced corporate tax rate of 15%, with the possibility of extended tax holidays. Charging station operators also benefit from rent-free land, while electricity tariffs for charging are set at the lower industrial rate. Rwandan government extends incentives for electric vehicle imports - Automag.rw

In Ethiopia, local assembly of electric vehicles is encouraged through significant duty reductions: e-vehicle CKD kits are customs duty–free, semi-knocked-down (SKD) kits incur just a 5% duty, and fully assembled EVs face a 15% duty. The policy also includes tax exemptions such as no VAT, excise tax, or surtax on EV imports, making local assembly highly cost-competitive. (Ethiopia electric vehicle adoption triples in two years on policy drive - Energy in Africa)

In Nigeria, the National Action Plan on EVs introduces reduced import duties, VAT exemptions, and 10-year tax holidays for local assemblers and component makers, with the goal that at least 30% of EVs be locally produced by 2032 (Nigeria's National Action Plan: EV tax breaks to 2025 launch - EV24.africa - Buy Electric Cars for Africa)

4.4 Supply-Side Regulations

These regulations impose restrictions or bans on imported internal-combustion engine vehicles (ICEVs), forming a crucial lever in advancing electric mobility from the supply side.

- **Ethiopia**: In January 2024, Ethiopia became the first country in the world to impose a blanket ban on all gasoline- and diesel-powered private vehicle imports, effectively allowing only electric vehicles. This was part of a strategic economic shift to reduce reliance on imported fuel and leverage its abundant hydropower output. Electric Vehicle Import Mandate and ICE Vehicle Ban | Climate Policy Database

- **Rwanda**: Rwanda has announced a ban on new internal-combustion engine Motorcycles in Kigali starting in 2025, positioning itself alongside Ethiopia as one of the first nations globally to adopt such sweeping supply-side mandates. Final Draft revision Rwanda Piece November 2024 TS Final Edits

- **Kenya**: The Kenya Bureau of Standards (KEBS) has prohibited the import of used electric vehicles whose battery health is below 80%, ensuring vehicle quality and reducing e-waste. This regulation applies to used EVs entering from key exporter countries and is enforced through mandatory pre-inspections. Capital FMThe StarallAfrica.com

5. Emerging Issues

5.1 Gender Inclusion

Women remain underrepresented in the e-mobility space and account for less than 20%. Cultural resistance to gender equality has slowed progress on this front, although major e-mobility companies like Ampersand, BasiGo, and eBee have workforces that are around 40% female. UNEP's Gender E-Mobility Report, 2024 conveys a clear gender message centered on equity, inclusion, and empowerment within the e-mobility transition. Specifically, it emphasizes women's role in E-mobility, that they are critical stakeholders who can benefit from improved safety, affordability and accessibility in e-mobility systems. The report further

emphasizes the need to include women across the value chain-policy, business, manufacturing, driving and maintenance rather than restricting them to end user roles.
This means that there are still gender disparities limiting women's participation as entrepreneurs, technicians and beneficiaries. However, the e-mobility sector has in the recent past presented opportunities for women. Here are some of the gender inclusive e-mobility initiatives over the last couple of years in Africa.

Country	Project	Gender Inclusion Efforts and Impact
Rwanda: Electric Motorcycle Taxis (e-Motos) and Women Drivers	Ampersand and Gura Ride	• Training women as e-moto taxi drivers and mechanics • Providing safer, GPS-tracked electric motorcycles to reduce harassment risks • Partnering with organizations like UNDP to fund women led e-mobility businesses.[1] • This has led to an increase in women participation in Rwanda's e-moto sector and improved safety for women passengers.
Kenya: Women Led E-Bike Startups	Ecobodaa (electric boda bodas) & Roam Electric	• Roam's Women in EV Program trains women in EV assembly and maintenance • Ecobodaa's Financing Model offers flexible payment plans for female riders • Women-Only Charging Hubs piloted in Nairobi to improve safety.[2] • This has led to women entering Kenya's e-boda boda industry as riders and entrepreneurs.
South Africa: Women in EV Manufacturing	BAIC-SA's Electric Vehicle Plant (in partnership with the Industrial Development Corporation)	• 30% Female Workforce Target Hiring women in EV assembly lines and engineering roles • STEM Scholarships for women, through partnering with universities to train female engineers.[3] • This has led to one of Africa's first EV manufacturing plants actively promoting gender diversity.
Uganda: Women Led Solar Powered Charging Stations	Zembo Motorcycles (e-bikes with solar charging)	• Training women to operate solar charging kiosks • "Women Ride Free" Campaign which has subsidized e-bike access for market traders.[4] • This has reduced reliance on petrol bikes and empowered women in energy and transport sectors

[1] https://www.ampersand.solar/about
[2] https://www.roam-electric.com/
[3] https://baic.co.za/about-us.html
[4] https://www.zem.bo/

Nigeria: Female-Friendly E-Tricycles (Keke EVs)	MAX.NG Electric Keke (three-wheelers)	• They created a Women-Only Driver Network which is a safe space for female e-tricycle operators • Child Friendly Designs that include baby seats for working mothers.[5] • This initiative has improved mobility for market women and safer transport options.

Regional initiatives have been started for instance the Afri-EV Women's Alliance, which is led by African Women in Energy and Power (AWEaP)[6] that advocates for gender quotas in e-mobility policies, has created a continental network of women in EV tech and business and pushes for affordable financing for women led e-transport ventures. The Flone Initiative is another women-led organization that provides a platform for women in e-mobility focused on transforming the public transport sector to be safer, more inclusive and accessible especially for women, persons with disabilities, youth and other vulnerable groups across Africa Flone Initiative

While there might be challenges, i.e, financial constraints and safety concerns, strides have been made, and those in policy positions, investors and industry leaders must prioritise equity to unlock the sector's full potential.

5.2 Circularity

Africa's e-mobility sector is embedding circular economy principles across the continent, with innovators in Kenya (Drivelectric, Enviroserve, WEEE Centre, Acele Africa), Rwanda (SLS Energy), Nigeria (Hinckley Recycling, Inno-Neat, Thinkbikes), Ghana (Jekora Ventures, Envirotech, E-Waste Ghana), and South Africa (REVOV) repurposing EV batteries for solar mini-grids, telecom backup, and residential energy storage. These efforts show that repurposing used lithium-ion batteries for community power, schools, clinics, and off-grid applications is an immediate and profitable opportunity. To maximise impact, it must be formalised through structured systems for collection, safety certification and deployment, while local recycling capacities continue to develop.

Despite these advancements, challenges persist. Limited local recycling infrastructure often leads to exports, with Enviroserve sending 15% of its waste, such as solar panel components,

[5] https://www.maxdrive.ai/impact
[6] https://aweap.africa/

to specialised facilities in Europe. High repurposing costs, lack of technical skills, and absent regulatory frameworks for battery standards hinder scalability, while stockpiling risks environmental hazards without proper storage protocols. The Kenya E-Mobility Battery Initiative (KeEBI) - an initiative by Africa E-Mobility Alliance-and Drivelectric's GIZ-supported projects are helping to inform and develop Kenya's battery circularity ecosystem through collaborative and in-depth research. Collaborative research with local universities and the International Electrotechnical Commission, as seen with Acele Africa, is establishing standards for second-life batteries. Together, they work to create a regulated, scalable framework for battery lifecycle management that fosters economic value and environmental sustainability in Africa's e-mobility sector.

Near-term **Circular Economy** policy should prioritise facilitating and promoting the proper collection of used lithium-ion batteries, **with a focus on repurposing** them for secondary applications such as stationary energy storage. This approach offers a more immediate and profitable opportunity, while overseas recycling for mineral recovery can continue until local manufacturing capacity and skilled workforce development enable such processes within the continent.

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