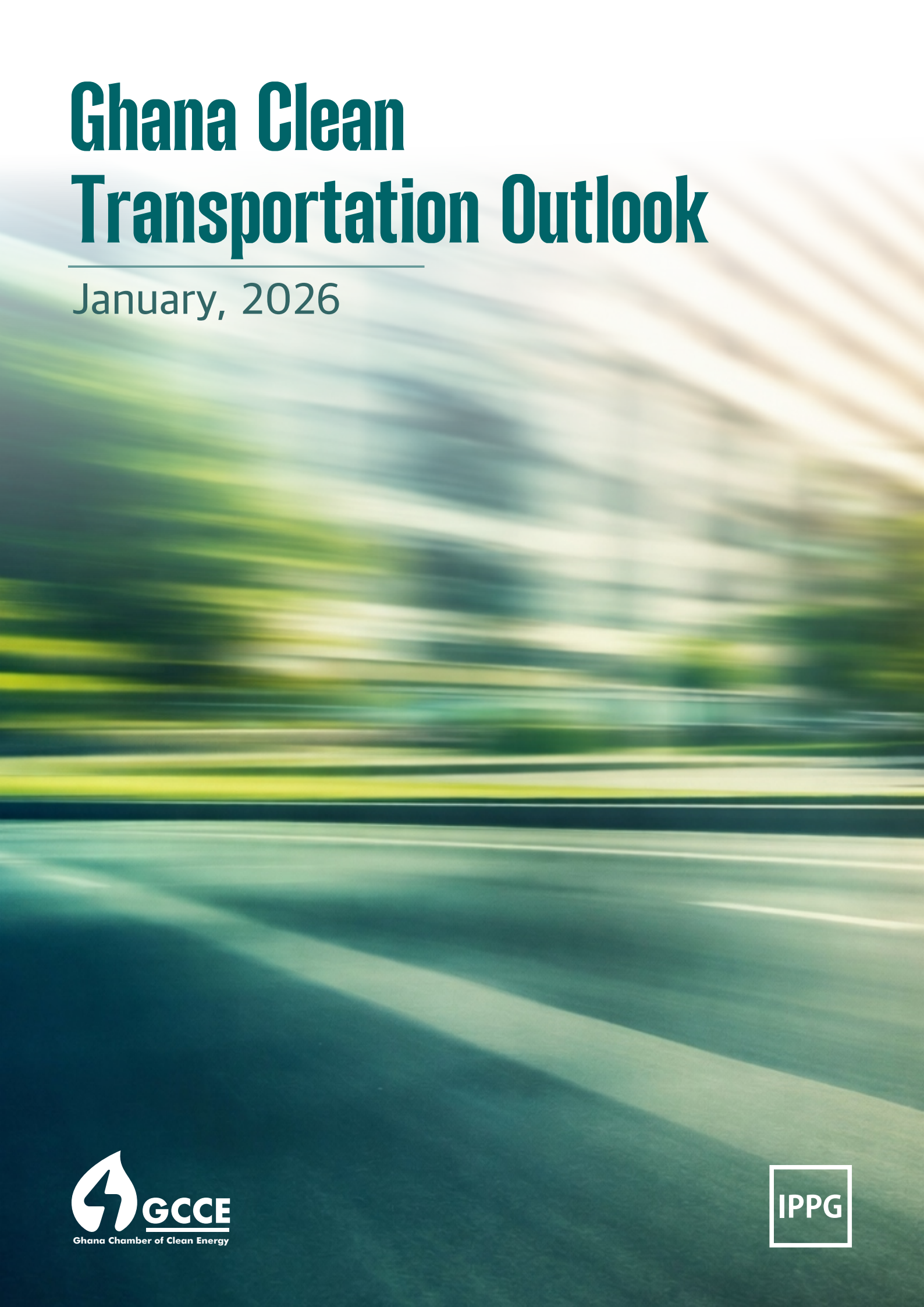
Ghana Clean Transportation Outlook

January, 2026



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GHANA CLEAN TRANSPORTATION OUTLOOK

Joint Publication

by

Ghana Chamber of Clean Energy (GCCE)

&

International Perspective for Policy & Governance (IPPG)

About This Publication

This is the first edition of the Ghana Clean Transportation Outlook, developed to examine the market dynamics shaping electric mobility in Ghana and to identify the policy, investment, and business environment needed to accelerate deployment. It responds to the growing gap between policy ambition and market outcomes, and focuses on where adoption is emerging, where constraints continue to limit progress, and how targeted interventions can unlock scale across key segments of the clean transportation sector.

The Outlook is produced by the Ghana Chamber of Clean Energy (GCCE), with analytical and institutional support from its parent organization, the International Perspective for Policy & Governance (IPPG). It marks the beginning of an annual series intended to track progress, update evidence, and refine policy recommendations over time. This edition focuses on clean transportation as a deliberate starting point in a broader analytical effort. The Ghana Clean Transportation Outlook is a core component of the broader Ghana Clean Energy Outlook publication series and will be integrated into the main Outlook, which encompasses renewable power generation, clean cooking, and other pillars of Ghana's clean energy transition.

About GCCE

The Ghana Chamber of Clean Energy (GCCE) is a non-profit and the nation's premier industry association committed to advancing the growth, competitiveness, and long-term impact of Ghana's clean and renewable energy sector.

The Chamber operates with a dual focus: first, it provides a unified platform for clean energy businesses to promote, protect, and strengthen their collective interests and second, it champions the strategic role of clean energy in accelerating Ghana's just energy transition and contributing to inclusive job creation, socio-economic development, and climate resilience.

About IPPG

The International Perspective for Policy & Governance (IPPG) is an independent international development think tank dedicated to strengthening policy implementation, governance, and sustainable development across Africa. IPPG provides policymakers with data-driven policy recommendations to foster effective governance, informed decision-making, and socioeconomic progress. Drawing on research, comparative policy learning, and strategic partnerships, IPPG adapts global best practices to African contexts to help shape a more prosperous, resilient, and inclusive future for the continent.

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Disclaimer

This publication reflects the analysis and views of the author and does not necessarily represent the positions of all members of GCCE, and all institutions, stakeholders, or market actors consulted in the course of this work. The findings and recommendations are intended to inform policy dialogue and investment decision-making and should not be interpreted as endorsement of any specific company, product, or commercial strategy. We regret any errors or omissions that may have been unwittingly made.

Design & Layout

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ABBREVIATIONS

BAU	Business as Usual
BPA	Bui Power Authority
BoG	Bank of Ghana
CKD	Completely Knocked Down
DFI	Development Finance Institution
DVLA	Driver and Vehicle Licensing Authority
ECG	Electricity Company of Ghana
EV	Electric Vehicle
GHG	Greenhouse Gas
GoG	Government of Ghana
GADP	Ghana Automotive Development Policy
GCCE	Ghana Chamber of Clean Energy
G-CAP	Ghana Conformity Assessment Programme
GRA	Ghana Revenue Authority
GRIDCo	Ghana Grid Company Limited
GSA	Ghana Standards Authority
ICE	Internal Combustion Engine
IEC	International Electrotechnical Commission
IPPG	International Perspective for Policy & Governance
IPP	Independent Power Producer
ISO	International Organization for Standardization
MoF	Ministry of Finance
MoT	Ministry of Transport
MESTI	Ministry of Environment, Science, Technology and Innovation
NDC	Nationally Determined Contribution
NEDCo	Northern Electricity Distribution Company Limited
PURC	Public Utilities Regulatory Commission
RE	Renewable Energy
SKD	Semi Knocked Down
UNDP	United Nations Development Programme
VRA	Volta River Authority

EXECUTIVE SUMMARY

1. Purpose and Strategic Context

Ghana's transport sector is a major driver of economic activity, yet it remains overwhelmingly dependent on fossil fuels, exposing the economy to fuel price volatility, rising emissions, urban air pollution, and fiscal pressure from petroleum imports. Transport electrification has therefore emerged as a strategic priority within Ghana's climate commitments, energy transition agenda, and industrial policy ambitions. Despite strong policy intent, however, Ghana's clean transportation transition remains at an early and uneven stage, with limited market scale and weak translation of policy into sustained market outcomes.

2. Core Finding 1: Ghana's e-mobility transition is segmented, not uniform

The Outlook finds that Ghana's clean transportation market is evolving through distinct pathways, rather than a single coherent transition. Passenger electric vehicles (EVs) and electric two- and three-wheelers differ fundamentally in cost structures, usage patterns, financing needs, infrastructure requirements, industrial growth, and readiness for scale. Uniform policy instruments applied across these segments risk misalignment with market realities and may inadvertently slow adoption rather than accelerate it.

3. Core Finding 2: Cost and financing, not technology, are the major constraints

Across all segments, high upfront costs driven by fiscal treatment, combined with limited access to appropriate financing, constitute the most immediate barriers to adoption. EVs currently face higher effective tax incidence than ICE vehicles, while electric two- and three-wheelers lack differentiated fiscal support despite their commercial viability. Financing markets remain conservative, with short loan tenures, high interest rates, and limited risk appetite, suppressing demand even where operational savings are clear.

4. Core Finding 3: Market formation is being led by the private sector, largely unsupported

Early progress in Ghana's clean transportation ecosystem has been driven predominantly by private actors importing vehicles, investing in local assembly, deploying charging and battery-swapping infrastructure, and developing service-linked business models. This market formation is occurring with limited public incentives, limited regulatory clarity, and high investor risk.

The persistence of private initiativeindicates underlying demand and entrepreneurial capacity, but the absence of targeted public support is constraining scale and sustainability.

5. Core Finding 4: Electric two- and three-wheelers represent the most immediate industrial scale opportunity

Electric motorcycles and tricycles demonstrate stronger near-term industrial viability than passenger EVs due to their role as income-generating assets, high utilization rates, and compatibility with battery-as-a-service and fleet-based models. This segment is already showing early signs of local assembly, service integration, and demand aggregation, making it structurally better suited for early industrial deepening than passenger EVs at this stage of market development.

6. Core Finding 5: Energy and tariff uncertainty undermines charging economics

The absence of a dedicated electricity tariff for EV charging and battery-swapping infrastructure significantly weakens the operating economics of electric mobility (e-mobility). Commercial tariff treatment increases costs for operators, erodes the fuel-cost advantage of EVs, and discourages private investment in charging infrastructure, particularly outside high-income urban areas.

Priority Policy Recommendations

Short Term (0-2 Years)

7. Recommendation 1: Implement time-bound import-duty reductions

Government should introduce a clearly defined 3–5-year import-duty exemption for passenger EVs and electric two- and three-wheelers to build the market demand for e-mobility in Ghana. Where full exemptions are not feasible, duties should be reduced to parity with ICE vehicles, with targeted relief for fleets and commercial operators to accelerate early adoption. Beyond the eight-year waiver for CKD/SKD imports by registered EV and electric two- and three-wheeler assembly firms, the government should further identify and approve supplementary incentives aligned with the specific operational needs of assembly firms already active in the market to unlock greater market demand.

8. Recommendation 2: Issue implementation guidelines for 2024 budget fiscal incentives

Policy credibility requires converting announced incentives into enforceable measures. Clear implementation guidelines should be issued for the EV import-duty waiver for public transportation announced as part of the 2024 budget, explicitly defining what qualifies as "public transport," including eligible vehicle types, operators, and use cases. Predictable and transparent application is essential to reduce investor uncertainty.

9. Recommendation 3: Introduce electricity tariff relief for charging and battery-swapping

Non-commercial electricity tariff relief for EV charging and battery-swapping infrastructure would lower ongoing operating costs, improve commercial viability, and support the geographic expansion of charging networks. This would help preserve the cost advantage of e-mobility for users and fleet operators, particularly during the market-formation phase.

10. Recommendation 4: Introduce targeted tax incentives to support renewable energy–based e-mobility charging

Targeted tax incentives provided by government for renewable energy developers and IPPs investing in EV charging and battery-swapping infrastructure would reduce upfront capital costs, enable innovative financing and ownership models, and accelerate the deployment of clean charging infrastructure. These effects would make public EV charging more affordable and strengthen the long-term economics of e-mobility.

11. Recommendation 5: Adopt segment-specific implementation guidelines under the National Electric Vehicle Policy

Distinct implementation frameworks must be adopted under the National Electric Vehicle Policy (2023) for passenger EVs, electric two- and three-wheelers, and public transport to reflecting their different economics, stages of market development, and policy needs. This differentiation is essential to ensure that fiscal incentives, financing instruments, and regulatory measures are targeted, sequenced, and effective, rather than diluted by a one-size-fits-all approach.

12. Recommendation 6: Expand EV-specific financing and risk-sharing mechanisms

Government should create and leverage partnerships with DFIs, climate finance vehicles and funds, and financial institutions to expand EV-specific financing instruments, including leasing, fleet finance, battery-separation models, and partial risk-sharing facilities. These mechanisms are critical to extending loan tenures, lowering effective interest rates, and broadening access beyond high-income consumers.

13. Recommendation 7: Strengthen demand-responsive local assembly and industrial development

Strengthened industrial policy should follow market uptake. Once demand for passenger EVs grows, policy incentives should be reinforced to expand local assembly to support a gradual transition away from import-led growth. For electric two- and three-wheelers, where demand is already accelerating and local assembly is more established, policy can progressively shift toward selective component manufacturing as volumes grow and domestic supply capabilities mature. This approach ensures that industrial development follows proven demand, limits fiscal risk, and anchors localization in commercially viable market conditions.

14. Recommendation 8: Strengthen regulatory standards and consumer protection frameworks

To aid market expansion, EV-specific regulatory standards should be introduced, including battery health certification, safety inspections, and quality assurance for imported and locally assembled vehicles. These measures are essential for consumer protection, insurance underwriting, financing, and the development of secondary markets.

15. Strategic Outlook

Ghana's clean transportation transition can be accelerated through evidence-driven policy action that aligns incentives with real market conditions. Prioritizing market formation, reducing cost and risk for early adopters, and strengthening segments where strong commercial viability already exists will crowd in private investment and lay the foundation for a durable, competitive, and inclusive clean transportation ecosystem. With disciplined implementation and continuous monitoring, Ghana can translate strong policy ambition into tangible economic, environmental, and industrial outcomes.

Medium Term (3-5 Years)

SECTION 1

Introduction

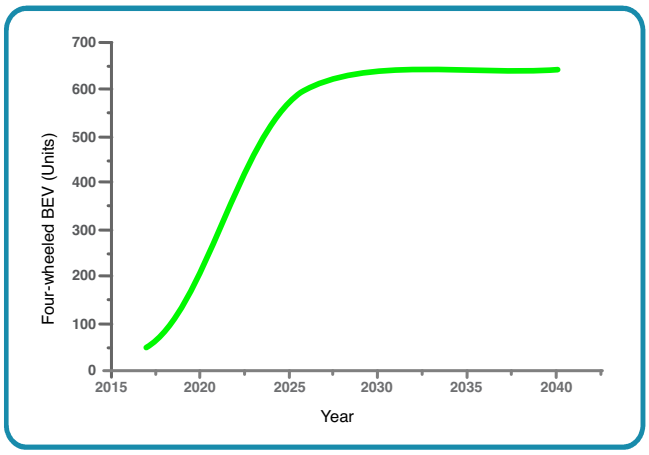
Ghana's transport sector is a central pillar of economic activity and social mobility that support the movement of people and goods across urban, peri-urban, and rural areas. Road transport dominates the sector, with internal combustion engine (ICE) vehicles and motorcycles accounting for the vast majority of passenger and freight movement. As a result, nearly all vehicles in Ghana rely on fossil fuels; diesel (28 percent), petrol (61 percent), and liquefied petroleum gas (11 percent) as of 2023, according to the National Electric Vehicle Policy (2023). This fuel-intensive structure has made transport a major and growing source of greenhouse gas (GHG) emissions, urban air and noise pollution, and traffic congestion, particularly in rapidly expanding cities such as Accra, Kumasi, Takoradi, and Tamale.

Recognizing the risks associated with heavy dependence on imported petroleum products, including exposure to global oil price volatility and its implications for transport costs, inflation, energy security, and negative environmental and health impacts, the Government of Ghana (GoG) has increasingly identified the transport sector as one of the country's most pressing energy, environmental, and fiscal challenges. In response, transport electrification has emerged as a key strategic pathway to reduce emissions, improve air quality, strengthen resilience to external fuel price shocks, and support job creation through local assembly, manufacturing, and the development of supporting infrastructure and services. These priorities are firmly embedded in Ghana's national policy frameworks and international climate commitments. Under its Updated Nationally Determined Contribution (2020–2030), Ghana commits to avoiding 64 $MtCO_2e$ of GHG emissions by 2030 relative to a business-as-usual (BAU) trajectory, with associated air-quality benefits that include the avoidance of at least 2,900 premature deaths annually, to be driven in part by reductions in transport emissions.

Despite the growing imperative for transport electrification, Ghana's clean transportation ecosystem remains at an early stage of development. Adoption of electric mobility (e-mobility) technologies is still limited in scale, supporting infrastructure is nascent, and implementation of existing policy commitments has yet to translate into sustained market outcomes. According to the 2022 Ghana Electric Vehicles Baseline Survey Report by the Energy Commission (Ahenkorah et. al., 2022), approximately 17,660 plug-in electric vehicles (EVs)[1] were imported between January 2017 and December 2021.

During the same period 9,431 electric two- and three-wheelers were imported into the country, predominantly sourced from China. DVLA records published by UNDP (2025) indicate that about 1,363 EVs[2] were registered by the end of 2022, corresponding to an average of roughly 190 vehicles per year since 2015. Under a BAU forecast, registrations are projected to increase by only 645 additional EVs by 2040 (see Figure 1), a scale that remains insufficient to constitute a viable or transformative e-mobility market relative to Ghana's stated clean transportation policy objectives (discussed in Section 2).

Figure 1: Business as Usual Forecast of EVs by 2040



Source: UNDP (2025)

Against this backdrop, this Outlook provides a comprehensive assessment of the current state of Ghana's clean transportation transition. It offers a structured analysis of policy frameworks, market dynamics, opportunities, and constraints, with particular attention to the distinct pathways shaping different segments of the e-mobility market. The analysis draws on observed market outcomes, policy research conducted by the Climate and Energy Team at the International Perspective for Policy & Governance (IPPG) over the past three years, and sustained consultation and engagement with market actors in the lead-up to the establishment and operationalization of the Ghana Chamber of Clean Energy (GCCE).

[1]Plug-in EVs include battery electric vehicles (BEVs) and plug-in hybrid electric vehicles (PHEVs).
[2]For the purposes of this Outlook, the term electric vehicles (EVs) refer exclusively to battery electric vehicles (BEVs), which are fully electric and rely entirely on battery-based charging, and therefore excludes hybrid and plug-in hybrid vehicles unless explicitly stated otherwise.

The Outlook clarifies where progress is taking place, where constraints remain very challenging, and where targeted interventions could most effectively accelerate adoption in line with Ghana's policy ambitions. It also establishes a baseline for informed policy dialogue and investment decision-making, and advances sequenced and evidence-based recommendations aimed at strengthening market formation in the near term and deepening adoption over the medium term. For analytical clarity, this Outlook distinguishes between light-duty four-wheel EVs and electric two- and three-wheelers, including electric motorbikes and tricycles.

> *"In response, transport electrification has emerged as a key strategic pathway to reduce emissions, improve air quality, strengthen resilience to external fuel price shocks, and support job creation through local assembly, manufacturing, and the development of supporting infrastructure and services."*

While both fall under the broader category of e-mobility, they differ markedly in cost structures, usage patterns, infrastructure requirements, and policy implications. Light-duty EVs include electric sedans, SUVs, and light commercial vehicles used primarily for private transport, corporate fleets, and ride-hailing services. Electric two- and three-wheelers constitute a distinct segment, typically supporting short-distance urban travel, last-mile delivery, and other forms of informal transport services. Accordingly, this Outlook focuses exclusively on these two segments and does not examine EVs used for public transport, such as buses and minibuses.

Three key findings are presented. First, Ghana's e-mobility transition is not unfolding as a single uniform market shift, but rather through distinct and uneven pathways across passenger EVs and electric two- and three-wheelers. While both segments face common constraints; high upfront costs, limited access to tailored financing, weak charging and energy infrastructure, and implementation gaps in existing policy, these constraints interact differently with each segment's market dynamics. As a result, uniform policy instruments applied across the segments risk misalignment with market realities and may slow adoption rather than accelerate it.

Second, the Outlook finds that Ghana's clean transportation market, while still small, is already being formed and led largely by private-sector initiative. Early adoption across both passenger EVs and electric two- and three-wheelers has been driven by private importers, innovators, and clean energy entrepreneurs, operating in the absence of strong or consistent public incentives. Although existing policy incentives remain limited and unevenly implemented, the presence of early commercial activity indicates that underlying demand and entrepreneurial capacity exist. With more deliberate, targeted policy support particularly to reduce costs, improve regulatory clarity, and ease access to financing, the market has the potential to scale more rapidly and sustainably.

These findings carry important policy implications. They underscore the need for demand-responsive policy interventions that prioritize market formation, cost reduction, and support for existing innovators and assembling facilities in the short term, deepen adoption and financing access in the medium term, and strengthen industrial development when the market scale and utilization justify it. Effective implementation will require clearer differentiation across e-mobility segments, stronger alignment between fiscal incentives and observed uptake, and more deliberate monitoring of outcomes to inform adaptive policy adjustment. The remainder of the Outlook proceeds as follows. Section 2 reviews Ghana's clean transportation policy landscape.

Section 3 examines the EV market and assesses supply channels, cost structures, financing constraints, charging infrastructure, and emerging investment opportunities. Section 4 focuses on electric two- and three-wheelers, analyzing market structure, local assembly dynamics, business models, and the segment's relative readiness for scale. Section 5 sets out sequenced policy recommendations for the short and medium term, grounded in the evidence presented, and aimed at strengthening market formation, crowding in private investment, and supporting a more durable clean transportation transition in Ghana. Section 6 presents the concluding insights of the Outlook.

SECTION 2

Policy and Stakeholder Landscape

2.1. Policy Landscape

Ghana's approach to transport decarbonization is guided by a set of national policies that have direct or indirect implications for reducing emissions in the transport sector, in line with the country's national and international climate commitments. Six major policies are identified from a review of Ghana's climate and transport policy framework as relevant to decarbonizing the transport sector. These include the National Transport Policy (2008) and its updated version, the National Transport Policy (2020); and the Ghana Automotive Development Policy (GADP), 2019. More recent instruments include the National Electric Mobility Policy and Market Readiness Framework for Ghana (2022), the National Electric Vehicle Policy (2023), and the Emissions Levy Act, 2023 (Act 1112), which was subsequently repealed in 2025. Collectively, these policies form part of the GoG's efforts to advance sustainability and emissions reduction within the transport sector.

Among these policies, the National Electric Vehicle Policy (2023) serves as the principal policy framework guiding Ghana's clean transport transition. It is the most comprehensive policy to date, with clearly defined objectives, measurable targets, and an implementation framework aimed at accelerating the adoption of clean transport technologies. The policy outlines eight key objectives:

1. Promoting sustainable demand for EVs;
2. Supporting the development of domestic and regional EV supply chains;
3. Positioning Ghana as a hub for lithium-ion battery production and supply;
4. Ensuring a reliable and adequate supply of electricity for EV charging;
5. Providing a regulatory framework for the EV ecosystem, including charging infrastructure;
6. Developing human capital across the EV value chain;
7. Supporting research and development in e-mobility technologies; and
8. Ensuring the environmentally sound management of waste associated with EV deployment.

Importantly, the policy establishes a phased roadmap for the transition from ICE vehicles to EVs, with explicit timelines and penetration targets as outlined below:

- Phase I (2024–2026) focuses on addressing market and infrastructure barriers to early adoption.
- Phase II (2027–2035) targets market take-off, with an indicative goal of achieving 35 percent EV penetration.
- Phase III (2036–2045) envisages the phasing out of new ICE vehicle imports and sales, along with a target of 70 percent EV penetration.

This phased approach provides a long-term policy signal to investors, manufacturers, and infrastructure providers, while recognizing the need for gradual market development and institutional readiness. The Ghana Automotive Development Policy (GADP), launched in 2019, sets out a vision to establish Ghana as a fully integrated and competitive automotive industrial hub in West Africa. The policy provides an important industrial framework through which the National Electric Vehicle Policy (2023) can be operationalised, ensuring that the transition to electric vehicles is supported by a domestic manufacturing and assembly base.

The objectives of the GADP can be grouped into two broad areas. First, through private sector investment and partnership, the policy aims to build a competitive local automotive industrial ecosystem by promoting vehicle assembly, including EVs and electric two- and three-wheelers, component manufacturing, and the development of skilled employment in automotive assembly and parts production. Second, the policy aims to improve vehicle affordability, trade performance, and environmental outcomes through asset-based vehicle financing, import substitution and export development, enhanced vehicle safety and environmental standards, and improvements in the overall quality of the national vehicle fleet.

To support these objectives, the GADP provides a set of fiscal and trade-related incentives aimed at encouraging local vehicle assembly and reducing reliance on fully built imports. Under the policy, registered automotive assemblers benefit from corporate tax holidays and differentiated import-duty treatment based on the level of local assembly, with lower duties applied to completely knocked down (CKD) and semi-knocked down (SKD) kits relative to fully built units. This incentive structure is designed to lower production costs for local assemblers, attract foreign and domestic investment into vehicle assembly, and gradually deepen local value addition.

Beyond transport-specific policies, Ghana's e-mobility agenda is supported by broader economy-wide policy frameworks. The National Energy Transition Framework and the accompanying Energy Transition Investment Framework position transport electrification as part of Ghana's long-term decarbonization and energy security pathway by reducing dependence on imported fossil fuels and expanding the role of clean electricity across end-use sectors.

While these policies do not prescribe detailed EV regulations, they provide the strategic and investment context that underpins the National Electric Vehicle Policy (2023).

2.2. Other Policy Incentives

In November 2023, as part of the proposed 2024 national budget, Ghana's Ministry of Finance (MoF) announced an eight-year import duty waiver for electric vehicles intended for public transportation. As of 2026, however, key implementation details remain unclear. In particular, it is uncertain whether the waiver applies exclusively to public buses and passenger vans (locally referred to as trotros), or whether it also extends to other categories of vehicles, including used EVs and hybrid vehicles imported for commercial or fleet use. Currently, EVs imported for ride-hailing and app-based transport services have not benefited from the waiver.

In the same budget, the MoF also announced an eight-year import duty waiver on SKD and CKD electric vehicles imported by registered EV assembly companies in Ghana. This measure reinforces the GADP, which applies lower import duties to CKD and SKD kits relative to fully built units, and strengthens the policy incentive for local EV assembly over direct vehicle imports.

2.3. Regulatory and Compliance Framework for Clean Transport in Ghana

2.3.1. Vehicle Importation, Conformity, and Registration

EVs and electric two- and three wheelers imported into Ghana are subject to the country's general vehicle import and conformity regime, administered through the Customs Division of the Ghana Revenue Authority (GRA), the Ghana Standards Authority (GSA), and the Driver and Vehicle Licensing Authority (DVLA). EVs and electric two- and three wheelers must comply with existing vehicle import procedures, including pre-shipment inspection under the Ghana Conformity Assessment Programme (G-CAP), which applies to both new and used vehicles.

However, these requirements are technology-neutral and were not designed specifically for EVs or electric motorbikes and tricycles. As a result, they do not currently mandate e-mobility-specific assessments such as battery state-of-health certification, high-voltage safety verification, software integrity checks, or long-term performance. In practice, used EVs and electric motorbikes and tricycles imports can be cleared by Customs and registered by the DVLA without standardized evaluation of battery degradation or electrical risk. This regulatory gap has implications for consumer protection, insurance underwriting, residual value assessment, and long-term market confidence.

2.3.2. Technical Standards and Standardization

Ghana has taken an important foundational step toward e-mobility regulation through the declaration of Electro-Technical and Automobile Standards by the GSA. These standards adopt globally recognized International Electrotechnical Commission (IEC) and the International Organization for Standardization (ISO) specifications covering EV charging systems, connectors, communication protocols, battery swapping systems, and electrical safety.

While these standards align Ghana's technical framework with global best practice, they currently function as technical reference specifications rather than binding regulatory instruments. The declaration of standards does not, by itself, impose mandatory compliance obligations, define enforcement mechanisms, or establish penalties for non-compliance. Their regulatory effect depends on formal incorporation into licensing, inspection, import control, or registration processes administered by sector regulators such as the DVLA, Customs, the Energy Commission, or local authorities.

2.3.3. Regulation of Charging and Battery-Swapping Infrastructure

Unlike vehicle standards, EV charging and battery-swapping infrastructure is subject to a clearer regulatory requirement. Under the Energy Commission Act, the Energy Commission requires prior approval for the installation and operation of EV charging stations and battery swap systems.

> *"The Ghana Automotive Development Policy (GADP), launched in 2019, sets out a vision to establish Ghana as a fully integrated and competitive automotive industrial hub in West Africa. The policy provides an important industrial framework through which the National Electric Vehicle Policy (2023) can be operationalised, ensuring that the transition to electric vehicles is supported by a domestic manufacturing and assembly base."*

This introduces a binding control over infrastructure deployment, particularly with respect to electrical safety, system design, and grid integration. Nevertheless, regulatory uncertainty persists around the commercial operation of charging infrastructure, particularly in relation to electricity tariff classification.

2.4. Stakeholder Landscape

Ghana's e-mobility transition is shaped by a complex and interdependent stakeholder landscape, in which authority, influence, and operational responsibility are distributed across multiple actors. Progress in the sector is therefore contingent on how these actors interact, align incentives, and coordinate decision-making across policy design, infrastructure development, financing, and service delivery.

Key stakeholders include:

1. Government institutions, including the Ministry of Transport (MoT), the Ministry of Energy and Green Transition, the Ministry of Trade, Agribusiness, & Industry, the Ministry of Environment, Science, Technology and Innovation (MESTI), and the Energy Commission, which set policy direction, establish regulatory frameworks, and oversee sector planning.

2. Electricity utilities and regulators, notably the Electricity Company of Ghana (ECG), Northern Electricity Distribution Company Limited (NEDCo), Ghana Grid Company (GRIDCo), Volta River Authority (VRA), the Bui Power Authority (BPA), independent power producers (IPPs), and the Public Utilities Regulatory Commission (PURC), which collectively shape grid readiness, tariff structures, and power system reliability for charging and battery-swapping infrastructure.

3. Private sector actors, including EV importers, local assemblers, charging and battery-swapping infrastructure providers, ride hailing companies, and renewable energy (RE) developers, which are driving early investment and market formation.

4. Financial institutions and insurers, whose lending products, risk frameworks, and underwriting practices directly affect affordability, investment viability, and market scale.

5. Transport unions and associations, including taxi, trotro, and okada unions, whose acceptance and participation will shape the pace and scale of fleet electrification, particularly in urban public and semi-formal transport systems.

6. Civil society organisations, research institutions, and development partners, which contribute to advocacy, data generation, pilot initiatives, and technical assistance.

SECTION 3

Electric Vehicles (EVs)

EV adoption in Ghana remains at an early stage, with the passenger vehicle fleet still overwhelmingly dominated by ICE vehicles which accounts for more than 95 percent of passenger vehicles. Within this nascent market, EV supply in Ghana is shaped by three main channels that operate across both formal and informal segments:

1. Established automobile distributors that import and retail brand-new EVs through formal dealership arrangements. These firms typically maintain pre-imported inventory and provide after-sales support. Key players in this segment includes Grace Mobility.

2. Local EV assembly, which remains extremely limited. At present, Solar Taxi is the only known and operational EV assembly company in Ghana.

3. Private importers, operating across both formal and informal channels, that bring in EVs, predominantly used vehicles from China and other international markets. This segment includes both made-to-order imports, driven by specific customer preferences, and inventory-based imports, where selected models are pre-imported for resale. Notable players in this segment include EcoDrive, Drive EV Gh, Afro-Arab Group of Companies, among others.

In addition to these commercial channels, individual consumers are also able to import EVs directly for personal use, outside dealership or importer arrangements. Across these pathways, EVs entering the Ghanaian market are sourced mainly from international manufacturers, including Chinese and European brands such as BYD, XPeng, Hongqi, Jetour, Geely, Volkswagen, and Toyota.

3.1. Challenges to EV Adoption.

3.1.1. Cost Barriers Driven by Fiscal and Policy Treatment

A first and major barrier to the acceleration of EVs in Ghana is cost, which is largely shaped by policy and fiscal treatment rather than technology or supply constraints. All passenger EVs, regardless of brand or size, currently attract a uniform import duty of approximately 20 percent. This compares unfavorably to ICE vehicles that attract a 10 percent import duty. When combined with additional taxes and charges[3], the total tax incidence on EVs can rise to 50 percent or more of the vehicle's landed cost.

This fiscal structure directly undermines EV affordability and market competitiveness. It places EVs at a price disadvantage relative to ICE vehicles, particularly used ICE vehicles, which dominate the Ghanaian passenger vehicle market. In the Ghanaian market, where purchasing decisions are highly price-sensitive, even relatively small price differences can decisively shift demand toward cheaper ICE alternatives. As a result, the current tax regime places EVs beyond the reach of the average Ghanaian consumer and also weakens incentives for wider market adoption.

3.1.2. Financing Constraints and Limited Adoption Pathways

Beyond upfront cost, financing constraints represent a second and distinct barrier to EV adoption in Ghana. Globally, EV uptake has been strongly correlated with the availability of affordable and innovative financing mechanisms, including consumer credit facilities, leasing arrangements, and subsidy-backed loan programs (IEA, 2023). These instruments reduce upfront payment requirements and create more accessible adoption pathways for households and businesses.

In Ghana, however, the absence of flexible financing options continues to suppress demand, even among environmentally aware consumers. Financial institutions often perceive EVs as high-risk assets, citing uncertainties around battery lifespan, resale values, insurance coverage, and long-term maintenance costs. As a result, EVs are frequently subjected to higher interest rates, stricter lending conditions, or exclusion from conventional auto-loan portfolios altogether.

While some banks, such as Ecobank and Société Générale, have begun piloting EV-specific financing products, access to these facilities remains highly constrained. Lending is largely limited to formally employed salaried workers who can demonstrate stable monthly income over an extended period. Interest rates typically range from 15–18 percent for new EVs and 18–24 percent for used EVs, with loan tenures generally

[3]These include Value Added Tax (VAT), National Health Insurance Levy (NHIL), African Union (AU) Levy, Economic Community of West African States (ECOWAS) Levy, Export & Import (EXIM) Levy , Ghana Education Trust (GET) Fund Levy, Examination Fee (for used vehicles), and Special Import Levy.

limited to two to five years. These terms translate into high monthly repayment obligations, effectively restricting access to upper-middle-income consumers. These financing conditions, however, reflect broader credit assessment practices in Ghana, where lending decisions rely heavily on formal employment status, employer guarantees, and conservative collateral requirements.

Beyond pricing, the loan application process itself constitutes a significant barrier: it is often complex, slow, and intrusive, frequently requiring employer approval. This requirement discourages potential buyers who prefer to keep personal financial decisions private and further narrows the deployment and adoption of EVs.

3.1.3. Weak policy implementation and failure to catalyze market creation

Beyond cost and financing barriers, a major challenge to EV adoption in Ghana is weak policy implementation, particularly the lack of deliberate actions to catalyze early-stage market demand. Although the National Electric Vehicle Policy (2023) sets out a phased roadmap for EV adoption. with 2024 - 2026 earmarked for addressing market formation and infrastructure barriers as the foundation for wider uptake, experiences from actors currently operating in the EV space point to a persistent gap between policy intent and what is happening on the ground. While the policy signals direction, it has not yet translated into practical, time-bound measures that lower upfront costs, stimulate demand, or reduce the risks faced by investing companies.

Companies consistently noted that interest in EVs exists, but without visible incentives or support, this interest does not convert into sustained purchasing decisions. As a result, early adopters continue to face high prices and uncertainty, that limit sales volumes and slow market formation. In reality, much of the responsibility for building the EV market has fallen on private actors. EV suppliers are importing vehicles, installing charging infrastructure, and providing after-sales services largely with their own resources, and with limited public support. Several actors highlighted that charging infrastructure is being deployed ahead of clear regulatory guidance, approvals, or tariff clarity, which increases costs and risks for early investors. Without targeted demand-side measures and policy incentives, the market remains stuck in a situation where low EV uptake discourages further investment, and limited investment keeps uptake low.

Stakeholders also highlighted the GoG's emphasis on local assembly and long-term EV penetration, noting that these ambitions are advancing faster than the foundational conditions needed to support them. Local assembly can only be sustained where demand, affordability, and consumer confidence are predictable; conditions that are still developing in Ghana's EV market. As a result, investment decisions for EV assembly remain difficult to justify at this stage, given that the retail market has yet to take shape with sufficient confidence.

> *"In Ghana, however, the absence of flexible financing options continues to suppress demand, even among environmentally aware consumers. Financial institutions often perceive EVs as high-risk assets, citing uncertainties around battery lifespan, resale values, insurance coverage, and long-term maintenance costs."*

3.1.4. Used ICE Vehicle Imports as an Operational and Political Economy Constraint

EV adoption in Ghana is further hindered by the dominance of a well-established ICE vehicle ecosystem, comprising used-vehicle traders, spare-parts dealers and importers, and associated decentralized and a network for servicing mechanics. Ghana remains highly open to the importation of used ICE vehicles, many of which enter the market at very low-price points including salvaged vehicles and are supported by an extensive and mature spare-parts market. The widespread availability of spare-parts markets, familiarity among mechanics, and entrenched informal supply chains reduce maintenance costs and reinforce consumer confidence in used ICE vehicles, even where vehicle quality and safety are compromised.

Beyond market depth, this ecosystem is underpinned by strong and politically influential spare-parts and used-vehicle trading networks that have developed over decades. As a

result, EVs are required to compete not only on upfront price, but against a deeply rooted market structure and political economy that systematically favors conventional vehicles and resist rapid structural change.

3.1.5. Electricity Tariffs and Charging Infrastructure Uncertainty

Ghana's public EV charging infrastructure remains severely limited in both scale and geographic coverage. As of January 2026, we identified 16 public charging stations nationwide, with 14 located in Accra, one in Takoradi, and one in Kumasi. This represents more than a doubling of the number of public charging stations in Accra from seven in 2024, with most facilities concentrated in high-income urban areas of the capital. Ownership of existing public charging infrastructure is highly concentrated among a small number of private actors (see Table 1), with no large-scale public-sector-led deployment to date. The only known government-owned EV charging station was installed in 2025 at the Energy Commission and is not intended for public use.

Private investment in public EV charging infrastructure, however, remains constrained by the absence of a dedicated electricity tariff for EV charging and the resulting regulatory uncertainty. Electricity supplied to public charging stations is billed under existing commercial electricity tariffs, rather than a tariff designed for transport electrification.

This treatment substantially increases operating costs for charging operators and, in turn, raises end-user charging prices. As a result, one of the core economic advantages of electric mobility; lower energy costs relative to conventional fuels is meaningfully weakened, which reduces the attractiveness of EVs for both personal users and fleet operators.

3.2. Investment Opportunities in Ghana's EV Market

Despite the slow adoption to date, Ghana's EV market segment presents a set of emerging, first-mover investment opportunities that are likely to strengthen as policy and market conditions evolve positively.

Table 1: Public Charging Stations in Ghana

	Type of Charging Station	Location	Owner / Operator
1	Level 3, 60 kW DC Fast charging station	North Industrial Area, Accra.	iJANU
2	Level 2, 22 kW AC charging station	A&C Mall, East Legon, Accra.	POBAD
3	Level 2, 22 kW AC charging	Silver Star Tower Ltd, Airport City, Accra	Silver Star Tower Limited
4	Level 2, 11 kW AC charging station	Kempinski Hotel, Accra.	Porsche Ghana
5	Level 2, 11 kW AC charging station	Palace Mall, Spintex Road, Accra.	Porsche Ghana
6	Level 2, 11 kW AC charging station	37 liberation road, near Lancaster Hotel, Accra.	Porsche Ghana
7	Level 2, 22 kW AC charging station	Stanbic Heights, Airport City, Accra.	POBAD
8	Level 3, 120 kW DC charging station	Lagos Avenue, East Legon, District 24, Restaurant	Drive EV
9	Level 2, 44 kW AC & Level 3, 160 kW DC charging station	Drive EV Showroom, Burma Hills, Accra	Drive EV
10	Level 3, 120 kW DC charging station	Dzorwulu, Danube Homes.	Drive EV
11	Level 3, 160 kW DC charging station	Cantonment, Diamond City, Apartment.	Drive EV
12	Level 3, 160 kW DC charging station	Spintex, Friendly Mall	Drive EV
13	Level 3, 160 kW DC charging station	A&C Mall, East Legon, Accra.	Charge Express
14	Level 3, 160 kW DC charging station	Mabet Junction, Sointex Road	Charge Express
15	Level 2, 44 kW AC charging station	Takoradi, Efua Anoah Hotel	Drive EV
16	Level 2, 44 kW AC charging station	Kumasi, KNUST campus	Drive EV

Source: UNDP, 2025 & Authors

3.2.1. Vehicle Importation and Retail Models

The EV market in Ghana is currently served largely through imports of new and used vehicles, with growing consumer awareness and consumer interest reported by stakeholder. However, demand is highly price-sensitive but responsive once affordability thresholds are approached. This creates opportunities for investors and companies to develop specialized EV import and retail models, including curated used-EV offerings, certified pre-owned EV programs, and bundled after-sales services that reduce perceived technology risk and maintenance risks.

As fiscal barriers are eased over time, investments that establish brand recognition, supplier relationships, and local market knowledge are likely to capture disproportionate market share. Investors with access to international EV supply chains particularly from Asia and Europe are well positioned to translate declining global EV prices into competitive offerings for the Ghanaian market.

3.2.2. Fleet and Institutional EV Deployment

Closely related to import and retail models is opportunities for fleet-based EV deployment, which represents one of the most immediate and scalable investment opportunities in Ghana's EV market. Corporate and government fleets, logistics operators, delivery services, and institutional vehicle users including universities, hospitals, banks, and large organizations operate vehicles with predictable routes, centralized management, and high fuel expenditures. These characteristics allow investors to structure EV offerings around leasing, managed fleets, or asset-as-a-service models that internalize fuel and maintenance savings over time. Unlike individual consumers, fleet operators are better positioned to absorb early-stage risks related to asset depreciation, charging infrastructure, financing constraints, and regulatory uncertainty, making fleet electrification a practical entry point for capital deployment ahead of mass consumer adoption.

3.2.3. Consumer Financing and Credit Innovation

One of the most significant investment gaps in Ghana's EV ecosystem lies in financing solutions. Traditional auto-loan products are poorly suited to EVs, creating space for non-bank financial institutions, fintechs, and blended-finance vehicles to design EV-specific consumer credit products. Here, opportunities include:

- Leasing and pay-as-you-drive models for personal and commercial uses;
- Financing models that separate or lease the battery component to reduce upfront EV purchase costs;
- Risk-sharing facilities that partner with banks to extend loan tenures and reduce interest rates.

Given the strong correlation between EV uptake and financing availability observed globally, targeted investment in EV financing platforms could unlock demand even in the absence of large upfront subsidies

3.2.4. After-Sales Services, Maintenance, and Battery Solutions

EV adoption creates downstream investment opportunities in maintenance services, diagnostics, battery health monitoring, and replacement solutions. Concerns around battery lifespan and resale value remain a key barrier for consumers, suggesting strong demand for warranties, battery leasing, refurbishment, and second-life applications. Investors that develop localized after-sales ecosystems can significantly reduce consumer risk perceptions, while also creating recurring revenue streams independent of vehicle sales volumes. Over time, these services will be critical to stabilizing resale markets and improving EV asset valuation in Ghana.

3.2.5. Import Inspection, Certification, and Quality Assurance Services

The growing trend of imported used EVs creates a commercially attractive opportunity for EV inspection, certification, and quality-assurance services. Ghana currently lacks standardized battery health assessment and EV-specific safety screening at the point of import, which leads to increased uncertainty for buyers, insurers, and lenders. Investors can address this gap by developing independent certification services that offer battery state-of-health reports, electrical safety verification, and certified used-EV labeling. In doing so, such services reduce information gaps, improve risk assessment for financiers and insurers, and strengthen trust and functionality across the used-EV market.

3.2.6. Insurance and Risk-Pooling Platforms

EV insurance and risk-management services present a compelling investment opportunity in Ghana's nascent EV market. Electric vehicles are currently insured under conventional motor policies that do not account for EV-specific risks such as battery strengths, degradation, and replacement costs, home and depot charging-related electrical risks, or residual value uncertainty.

Investors and insurers can establish leadership by offering tailored EV insurance products including battery coverage, fleet-based policies, and residual-value protection supported by battery diagnostics and repair partnerships.

Early entrants can shape underwriting standards, build proprietary performance data, and position insurance as a key enabler of EV adoption as the market develops.

SECTION 4

Electric Two-and Three- Wheelers

Electric two- and three-wheelers, particularly electric motorbikes and tricycles constitute a distinct pathway for transport electrification in Ghana. Motorcycles and tricycles play a central role in daily mobility and income-generating transport services across urban and peri-urban areas, making them structurally important within the transport system. Motorbikes, for instance, popularly known as "okada", are widely used for commercial purposes, including delivery services, ride-hailing, informal logistics, and the transport of passengers from one location to another.

Evidence from early market actors indicates a stronger market presence for electric two- and three-wheelers compared to passenger EVs, given that these vehicles function primarily as income-generating assets rather than personal-use vehicles. Many users are riders engaged in passenger transport, delivery services, and other commercial activities, making operating costs central to adoption decisions. The market entry has been driven by specialized firms focused on commercial riders, battery-swapping services, and fleet deployment. Key players here include Solar Taxi, WAHU Mobility, Kofa, Kada Mobility, among others. Unlike EVs, where the market is split across dealerships, private importers, local assembling, and individual buyers, two- and three-wheelers are increasingly deployed through fleet-based or service-linked models, which reduces barriers related to financing, charging access, and technical unfamiliarity.

A defining feature of this market is the growing role of local assembly, with designs increasingly customized to Ghana's terrain and usage conditions. Firms operating in this space typically import key components while integrating frames, electronics, and final assembly domestically. Although production volumes remain modest, this approach reflects early efforts to adapt electric two- and three-wheelers to local operating conditions, reduce importation, and build domestic capabilities within the value chain.

This localized assembly model is closely supported with innovative battery-as-a-service and battery-swapping business models, which have become central to the ecosystem. Rather than treating batteries as embedded vehicle components, key market actors have deliberately unbundled battery ownership from vehicle ownership. Riders access energy through subscription or per-swap payment models, using standardized, portable batteries supported by distributed swap stations, some of which are already integrated with solar generation.

These models shift battery performance and replacement risks away from riders, lowers upfront vehicle costs, and ensures high asset utilization conditions that are particularly well suited to commercial and high-mileage users. The supply chain is further reinforced through partnerships with delivery platforms, logistics providers, and ride-hailing services, which provide predictable demand, revenue visibility, and scale.

4.1. Challenges to the Adoption of Electric Two- and Three-Wheelers

4.1.1. Cost and Fiscal Treatment Constraints

Cost remains a central constraint to electric two- and three-wheeler adoption in Ghana, though it manifests differently from that of EVs. While upfront purchase prices for electric motorcycles and tricycles are lower than those of EVs, they remain high relative to comparable ICE motorcycles that dominate Ghana's informal and okada transport economy. The absence of differentiated fiscal treatment, especially on import duties means costs for electric two- and three-wheelers will continue to be higher even for locally assembled brands. This fiscal burden undermines affordability, particularly for individual riders and small operators with limited incomes. However, because most two- and three-wheeler users are commercial riders, purchasing decisions are driven primarily by daily cash flow rather than long-term asset ownership.

4.1.2. Financing Constraints and Limited Adoption Pathways

Similar to the passenger EV segment, financing constraints constitute a major barrier to the scaled adoption of electric two- and three-wheelers. Access to affordable credit tailored to electric motorcycles and tricycles remains limited, and the typical user profile, largely commercial riders and small operators does not align with the risk and collateral requirements of most commercial banks. Green or concessional financing mechanisms for e-mobility more broadly are also scarce. These financing constraints limit the ability of assembling firms to scale deployment models and expand battery-swapping infrastructure, which further constrains market growth.

4.1.3. Electricity Tariffs and Energy Cost Uncertainty

In line with challenges identified in the broader EV ecosystem, electricity tariff classification and pricing uncertainty also affect the economics of electric two- and three-wheeler operations. Charging and battery-swapping facilities are generally billed under commercial or industrial

electricity tariffs, which increases operating costs. In addition, uncertainty around how electricity supplied to charging and swapping stations will be treated in the future combined with already high commercial tariff levels undermine cost planning, complicates investment decisions, and discourages further capital deployment, particularly during this early stage of market development in Ghana.

4.1.4 Weak Policy Implementation and Limited Market Catalysis

Consistent with experiences in the EV market, there exist a gap between policy signaling and implementation. While government interest in e-mobility has been expressed, market actors report that this has not translated into concrete and time-bound measures to support early-stage adoption of electric two- and three-wheelers. Engagements with relevant institutions are described as fragmented and slow-moving, leaving private actors to shoulder much of the risk associated with market creation and infrastructure deployment.

4.2. Opportunities for Electric Two- and Three-Wheelers

Despite the challenges confronting the adoption of electric two- and three-wheelers in Ghana, early market experience points to a number of concrete opportunities that could support scale-up if appropriately leveraged. Insights from market actors highlight that these opportunities are grounded in business model innovation, user engagement, institutional coordination, and the alignment of e-mobility with Ghana's broader energy transition.

> *"Cost remains a central constraint to electric two- and three-wheeler adoption in Ghana, though it manifests differently from that of EVs. While upfront purchase prices for electric motorcycles and tricycles are lower than those of EVs, they remain high relative to comparable ICE motorcycles that dominate Ghana's informal and okada transport economy."*

4.2.1. Commercial Use Cases and Income-Generating Applications

The experiences of companies operating and championing this market demonstrates that electric two-wheelers are particularly well suited to commercial and income-generating use cases, in particular riders engaged in delivery services, okada business, and other high-utilization. Thus, when electric motorcycles are positioned as productive assets rather than consumer goods, the adoption dynamics can improve. This creates an investment opportunity to strengthen early market growth in commercial fleets and rider-based enterprises where daily usage and predictable demand support viable business models.

4.2.2. Industrial Opportunity for Electric Two- and Three-Wheelers

The recent passage of the Road Traffic Amendment Bill, 2025 which amends the Road Traffic Act, 2004 (Act 683) creates a significant industrial opportunity for electric two- and three-wheelers in Ghana's transport and clean energy sectors. The Bill legalizes the commercial use of motorcycles, tricycles, and quadricycles to formally recognize this market segment that accounts for a growing share of urban and peri-urban mobility and has historically operated in informality. This regulatory recognition provides a foundation for structured policy development, standards setting, and long-term planning that can steer the sector toward cleaner technologies.

The Bill thus enables the strengthening of the existing local value chains around electric motorcycles and tricycles, including vehicle assembly, battery systems, charging and swapping infrastructure, and after-sales services. With a more improved and appropriate government incentive, Ghana can leverage this shift to attract private investment, create skilled and semi-skilled jobs, accelerate its industrial growth in the sector, and position itself as a regional hub for electric two- and three-wheeler manufacturing and deployment.

4.2.3. User-Centred Design and Continuous Rider Engagement

Another important opportunity lies in the use of structured and continuous engagement with riders to inform product innovation and service development. Regular meetups, feedback sessions, and surveys with riders can enable firms to identify operational challenges early and adapt technologies and services accordingly. This user-centred approach can strengthen rider trust, improve service quality, and turn early riders into informal ambassadors for brands.

Such engagement-driven models offer a pathway to organic market growth through word-of-mouth rather than high-cost marketing campaigns for firms.

4.2.4. Integration with Distributed Renewable Energy Solutions

A further opportunity lies in closer collaboration between renewable energy developers and e-mobility operators. Rising electricity tariffs and concerns around grid reliability have made on-site solar generation and battery storage increasingly relevant for EV charging and battery-swapping operations. For e-mobility operators, integrating renewable energy can help manage operating costs and improve reliability.

For renewable energy developers, charging and battery-swapping sites represent an emerging investment opportunity by providing a source of predictable and recurring electricity demand, and offering scope for the development of innovative ownership and financing models. Such arrangements are particularly relevant for electric two- and three-wheelers, where battery-dependent business models require predictable energy supply and tight cost control. Aligning renewable energy deployment with e-mobility operations therefore offers a practical way to support early-stage market development while improving project economics on both sides.

SECTION 5

Policy Implication & Recommendations.

The preceding sections clearly indicate that Ghana's clean transportation and e-mobility transition does not follow a single or a uniform pathway. Instead, it is unfolding across distinct vehicle segments, each with its own economic logic and adoption profile. Treating these segments as if they face the same constraints risks obscuring where policy can be most effective. This carries important policy implications, several of which are discussed below.

First, recognizing the differences across the market is essential for the effective implementation of policy interventions. Ghana's e-mobility landscape spans three clearly defined segments:

- passenger EVs, including private, ride-hailing, taxis, and fleet use;
- electric two- and three-wheelers, primarily motorcycles and tricycles used for commercial and income-generating activities; and
- public transport vehicles, such as buses, minibuses (trotros) and other high-capacity modes.

These segments differ markedly in cost sensitivity, usage intensity, infrastructure needs, financing structures, and readiness for local production. Policy approaches that apply uniform fiscal treatment, import rules, or incentive frameworks across these segments such as flat import duties or undifferentiated financing assumptions would be misaligned with market realities and risk slowing adoption rather than accelerating it. The National Electric Vehicle Policy (2023), Ghana's primary framework for electrifying road transport, does not adequately account for the differentiated market structures, adoption dynamics, and implementation pathways across the various vehicle segments.

Second, the state of the passenger EV segment demonstrates the importance of sequencing market development and industrialization correctly. Ghana's current EV market remains relatively small, highly price-sensitive, and dominated by imports, conditions under which local assembly cannot yet be sustained at scale. Experience from attempts at local assembly of ICE vehicles further reinforces this point. Despite the presence of SKD and enhanced SKD assembly capacity in Ghana including Toyota Tsusho Manufacturing Ghana, Volkswagen Ghana Limited, Kantanka Automobile Limited, among others, limited and inconsistent market demand driven in part by continued inflows of used vehicle imports and limited production volumes undermine the commercial viability of domestic assembly operations. This experience points to the risks of advancing industrialization in the absence of a sufficiently deep and protected market base and other export channels.

For Ghana to derive strategic value from the e-mobility transition, industrialization must eventually be central to policy planning, given its potential to create jobs, deepen value addition, and build domestic capabilities. However, attempting to push industrialization ahead of market formation risks repeating past outcomes, that could result in underutilized assembly capacity or vehicles that struggle to find buyers domestically or within the region, particularly where the brand lacks strong recognition across African markets. Policy efforts should therefore prioritize demand expansion, affordability, and confidence-building, together with clear and realistic plans to sequence industrial development in line with market growth. In parallel, targeted support for assembling firms already operating in the system remains important to contribute to market formation, strengthen brand recognition, and accelerate the emergence of a viable passenger EV market.

In contrast, however, electric two- and three-wheelers present conditions that are already aligned with early industrial deepening in Ghana. Local assembly activities are taking root, business models are closely tied to income generation, and adoption decisions are driven by clear operating cost advantages rather than long-term asset ownership considerations. These characteristics reduce demand uncertainty and make the segment structurally more amenable to immediate domestic production than passenger EVs at this stage. Policy efforts should therefore focus on consolidating and strengthening existing assembly activities to deepen the market, while deliberately introducing the transition toward manufacturing in areas where Ghana can build competitive advantage and position itself as a leading hub for electric two- and three-wheeler production across the sub-region and the continent.

Third, public transport electrification also requires distinct policy treatment. Although this Outlook does not examine the segment in detail, electrification of buses, minibuses, and mass transit remains an important pathway that warrants deliberate policy attention, separate from both passenger EVs and electric two- and three-wheelers. Currently, the GoG's 2024 budget provides an eight-year tax waiver for the importation of EVs intended for public transport fleets; however, the scope of this incentive remains unclear, particularly with respect to eligible vehicle types, qualifying operators, and the definition of what constitutes public transportation. To date, public transport electrification, especially for trotro services in Ghana remains underdeveloped.

Collectively, these policy implications point to a central challenge for Ghana's transport electrification agenda: a gap between policy intent and the development of differentiated and concrete implementation pathways across market segments with fundamentally different economic and institutional characteristics. Although existing policy framework establishes an important foundation for e-mobility, it does not yet fully reflect the distinct market structures, adoption dynamics, and readiness levels across passenger EVs, electric two- and three-wheelers, and public transport.

Addressing this gap requires moving beyond a uniform policy approach toward a more targeted approach that aligns incentives, industrial objectives, and infrastructure development with segment-specific realities. The recommendations that follow are therefore structured to support market formation in the short term and enable selective industrial deepening in the medium term to lay the groundwork for system-wide integration over the longer term.

5.1. Short-Term (0–2 Years): Market Formation and Cost Reduction

The immediate priority for Ghana's e-mobility transition is to lower entry costs, reduce policy uncertainty, and convert policy intent into visible market signals.

> *"Experience from attempts at local assembly of ICE vehicles further reinforces this point. Despite the presence of SKD and enhanced SKD assembly capacity in Ghana including Toyota Tsusho Manufacturing Ghana, Volkswagen Ghana Limited, Kantanka Automobile Limited, among others, limited and inconsistent market demand driven in part by continued inflows of used vehicle imports and limited production volumes undermine the commercial viability of domestic assembly operations."*

5.1.1. Implement time-bound import-duty reductions for EVs and electric two- and three-wheelers

Action: The GoG must consider implementing a time-bound import-duty exemptions for EVs and electric motorcycles and tricycles for a strengthened 3–5year market formation phase, informed by broader stakeholder consultations and fiscal impact assessments. Where full exemptions prove fiscally challenging, import duties should be reduced to at least parity with ICE vehicles, with targeted relief for fleet operators and ride-hailing service operations. Access to these measures should be limited to registered and tax-compliant importers, retailers, and companies.

Lead institutions: Ministry of Transport (MoT), Ministry of Finance (MoF), and the Ghana Revenue Authority (GRA).

Indicators:

- At least a 20-25 percent reduction in landed cost of qualifying EVs and electric two- and three-wheelers.
- Sustained year-on-year increase in EV and electric two-/three-wheeler imports and registrations.

5.1.2. Issue implementation guidelines for existing fiscal incentives

Action: The GoG should issue clear and binding implementation guidelines to operationalize the 2024 budget import-duty waivers. These guidelines should explicitly clarify eligibility and scope on what constitute EVs for public transportation beyond electric buses, including applicability to used EVs, hybrid vehicles, ride-hailing and other public transport services operated by private firms.

Beyond the eight-year waiver for CKD/SKD imports by registered EV and electric two- and three-wheeler assembly firms, the government should further identify and approve supplementary incentives aligned with the specific operational needs of assembly firms already active in the market, including fiscal incentives beyond annual volume thresholds currently applied under GADP. This is to create conditions that encourage local production to strengthen market formation over the next three to five years.

Lead institutions: Ministry of Transport (MoT), Ministry of Finance (MoF), and Ghana Revenue Authority (GRA).

Indicators:

- Official gazette notice or administrative directive issued and publicly accessible
- Consistent application of incentives across all Customs points
- Increase in the number of locally assembled EVs and electric two- and three-wheelers
- Measurable reduction of about 30 percent in the unit cost of locally assembled EVs and electric two- and

three-wheelers, relative to fully built imports.

5.1.3. Introduce interim electricity tariff relief for EV charging and battery-swapping infrastructure

Action: The GoG should consider developing a dedicated electricity tariff classification for EV charging and battery-swapping facilities during this strengthened market-formation phase. These tariffs should lower operating costs for charging operators, encourage gradual scale-up of charging infrastructure deployment, nationwide, and reduce charging prices for consumers to encourage more private-sector investments in the space.

Lead institutions: Ministry of Transport (MoT), Ministry of Energy and Green Transition, Energy Commission, Public Utilities Regulatory Commission (PURC), and Electricity Company of Ghana (ECG)

Indicators:
- Published interim or pilot tariff guidance for EV charging and battery-swapping operators.
- Measurable reduction in electricity operating costs for charging and battery-swapping facilities.
- Increased number and geographic spread of publicly accessible charging and battery-swapping sites.
- Reduction in average charging costs passed on to EV users and an increase in the number of public charging users.

5.1.4. Introduce targeted tax incentives to support renewable energy–based EV charging and innovative financing models

Action: The GoG should consider introducing targeted tax incentives for renewable energy developers and independent power producers (IPPs) that invest in, or provide dedicated financing for, EV charging and battery-swapping infrastructure. These incentives could include tax credits, or exemptions on solar, storage, and charging equipment deployed specifically for electric mobility. The objective is to encourage renewable energy developers to structure innovative installation, ownership and financing models that reduce upfront capital costs for charging and battery swap operators and accelerate charging infrastructure deployment.

Lead institutions: Ministry of Finance (MoF), Ministry of Energy and Green Transition, Ministry of Transport, Energy Commission, Ghana Revenue Authority (GRA), and Public Utilities Regulatory Commission (PURC)

Indicators:
- Introduction of tax incentives or fiscal relief measures explicitly linked to renewable energy–based EV charging infrastructure.
- Increased participation of renewable energy developers in the financing or ownership of EV charging and battery-swapping assets.
- Reduction in upfront capital costs for charging infrastructure deployment.
- Increased number of charging and battery-swapping sites supported by on-site or dedicated renewable energy systems.

5.1.5. Develop segment-specific implementation guidelines under the National Electric Vehicle Policy (2023)

Action: The GoG should develop segment-specific implementation guidelines under the National Electric Vehicle Policy (2023) that explicitly recognize and differentiate between passenger EVs, electric two- and three-wheelers, and public transport vehicles. These guidelines should translate the policy's high-level objectives into distinct fiscal, regulatory, financing, and infrastructure pathways aligned with the differing cost structures, usage patterns, adoption dynamics, and readiness levels across segments.

Lead institutions: Ministry of Transport (MoT), Ministry of Energy and Green Transition, Ministry of Finance (MoF), Energy Commission, and Driver and Vehicle Licensing Authority (DVLA).

Indicators:
- Publication of segment-specific implementation or operational guidelines linked to the National Electric Vehicle Policy (2023).
- Differentiated fiscal and regulatory provisions clearly adopted for passenger EVs, electric two- and three-wheelers, and electric public transport vehicles.
- Improved alignment between policy instruments and observed market uptake across segments.

5.1.6. Strengthen short-term market data and monitoring systems

Action: Evidence-based policymaking requires more robust data on the size and composition of Ghana's e-mobility market. As part of short-term measures, government agencies should mandate improved tracking of EV and electric two- and three-wheeler imports, registrations, and active fleet sizes. Strengthening market intelligence will support better policy calibration, improve investor decision-making, and enable more effective monitoring of adoption trends.

Lead institutions:
Ministry of Transport (MoT) Driver, Vehicle Licensing Authority (DVLA), Energy Commission, GRA, and civil society groups.

Indicators:

- Regular publication of EV and electric two-three-wheeler market and registration statistics.
- Availability of disaggregated data by vehicle type, use case, and geography.
- Use of market data to inform subsequent fiscal and regulatory adjustments.

5.2. Medium Term (3–5 Years): Market Deepening and Selective Industrialization

The medium-term priority for Ghana's e-mobility transition is to consolidate early market gains, deepen adoption across viable segments, and selectively align industrial development with demonstrated demand.

5.2.1. Strengthen demand-responsive local assembly and industrial development

Action: Once early demand is established, policy should shift toward market deepening and demand-responsive industrial development that is aligned with demonstrated uptake rather than aspirational targets. The GoG should align market growth with selective support for existing and new local assembly firms by reviewing and strengthening fiscal incentives when demand is predictable and value-chain participation shows clear promise. This approach would enable a gradual transition from import-led growth to local assembly while encouraging regional market integration to expand demand beyond Ghana. Assembly incentives should remain conditional on minimum production and sales thresholds, compliance with quality and safety standards, and the explicit provision of after-sales support.

Lead institutions: Ministry of Transport (MoT), Ministry of Trade, Agribusiness, and Industry, Ministry of Finance (MoF), Ghana Revenue Authority (GRA)

Indicators:

- Increase in the number of locally assembled EVs and electric two- and three-wheelers plus increased local sales of assembled vehicles.
- Improved utilization rates of existing assembly facilities.
- Measurable reduction in unit costs of locally assembled vehicles relative to fully built imports.
- Compliance with defined quality and after-sales service benchmarks.

5.2.2. Expand EV-specific financing and risk-sharing mechanisms

Action: The GoG should support the expansion of EV-specific financing instruments to unlock demand beyond early adopters and niche commercial users. This includes facilitating partnerships between financial institutions, development finance institutions (DFIs), development partners, and private operators to introduce leasing, asset-based financing, battery-separation models, and risk-sharing facilities. These mechanisms should aim to extend loan tenures, reduce effective interest rates, and improve credit access for fleet operators and commercial users.

> *"The objective is to encourage renewable energy developers to structure innovative installation, ownership and financing models that reduce upfront capital costs for charging and battery swap operators and accelerate charging infrastructure deployment."*

Lead institutions:
Ministry of Finance (MoF), Bank of Ghana (BoG), Development Finance Institutions (DFIs), Multilateral Development Banks, and commercial banks.

Indicators:

- Introduction of EV-specific loan, leasing, battery-financing products, or other forms of innovative financing.
- Longer average loan tenures for EV and electric two- and three-wheelers.
- Reduction in effective interest rates for EV-related financing.
- Increased EV adoption among fleet operators and middle-income users.

5.2.3. Strengthen regulatory standards and consumer protection frameworks

Action: As market volumes grow, the government should deepen regulatory oversight by introducing EV-specific

technical and safety standards, particularly for used and new EV imports, locally assembled EVs and electric two- and three-wheelers. This should include mandatory battery health certification, high-voltage safety checks, and EV-specific inspection requirements at the point of importation, sales, and vehicle registration. These measures will improve consumer confidence, support insurance underwriting, and stabilize secondary markets.

Lead institutions:
Ministry of Transport (MoT), Ministry of Energy & Green Transition, Energy Commission, Driver and Vehicle Licensing Authority (DVLA), Ghana Standards Authority (GSA)

Indicators:
- Adoption of EV-specific inspection and conformity standards
- Establishment of accredited battery testing and certification services
- Reduced variability in vehicle quality entering the market
- Increased participation of insurers and financiers in the EV sector

Overall, Ghana's electric mobility pathway should remain market-led and evidence-driven, with policy interventions calibrated to observed uptake and operational realities. Concentrating on these short- and medium-term actions allows government to address current constraints, crowd in private investment, and build the foundations for a viable and competitive electric mobility ecosystem. Regular review, monitoring, and evaluation of these measures should inform future policy adjustments to ensure that subsequent directions are guided by outcomes achieved during these phases rather than pre-committed long-term mandates.

SECTION 6

Conclusion

This Outlook has examined Ghana's clean transportation transition through a focused assessment of passenger EVs and electric two- and three-wheelers and highlights both the shared constraints that cut across the sector and the distinct market dynamics shaping each segment. Across all vehicle categories, adoption remains constrained by high upfront costs, limited access to tailored financing, regulatory uncertainty, and gaps in charging and energy infrastructure. However, the analysis also makes clear that these constraints manifest differently across segments, and that effective policy responses must therefore be calibrated to the specific economics, usage patterns, and maturity of each market.

For EVs, adoption continues to be held back by affordability challenges, financing limitations, and uncertainty around fiscal and regulatory treatment. Progress in this segment will depend on sustained efforts to reduce entry costs, improve policy clarity, and build confidence among consumers and investors. In contrast, electric two- and three-wheelers exhibit stronger near-term promise, driven by income-generating use cases, high utilization rates, and business models that are already better aligned with Ghana's transport realities. Importantly, this segment is supported by a growing ecosystem of local assembly, battery-swapping services, and service-linked deployment models, which indicate early pathways toward domestic value creation that are grounded in actual market demand.

The Outlook therefore reinforces a central conclusion: Ghana's e-mobility transition is not a single market shift, but a set of parallel pathways that require differentiated policy interventions. Uniform fiscal, regulatory, or financing approaches risk misalignment with market realities and may slow adoption rather than accelerate it. Instead, policy should prioritize market formation in the short term, deepen adoption in segments where demand is emerging, and support industrial activity where scale and utilization justify it. The short- and medium-term recommendations outlined in this report are designed to reflect this sequencing to link policy ambition to evidence from the market.

Ultimately, Ghana's success in clean transportation will depend on its ability to remain market-led, evidence-driven, and adaptive in adjusting policies, incentives, and regulatory tools as market conditions evolve. Regular monitoring, review, and evaluation of policy measures will be essential to ensure that interventions continue to respond to observed outcomes rather than fixed assumptions. If implemented with discipline and coordination, the actions set out in this Outlook can help build a competitive and inclusive electric mobility ecosystem, one that reflects Ghana's transport realities, supports local enterprise, and delivers long-term economic and environmental benefits.

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