EGYPT OIL&GAS RESEARCH & ANALYSIS

Driving the Future

Egypt's Transition to Low-Emission Mobility

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Egypt's Transition to Low-Emission Mobility

By Nermeen Kamal & Abdullah Mostafa

Compressed natural gas (CNG) and electric vehicles (EVs) have emerged as two of the most viable and cost-effective alternatives for achieving energy efficiency and reducing greenhouse gas (GHG) emissions in the transportation sector. Egypt's experience with CNG vehicles dates to the early 1990s, marking steady progress in expanding this market as part of its broader energy diversification agenda.

Building on this foundation, the government has intensified efforts to expand the use of CNG as a cleaner substitute for liquid fuels, with the dual objective of improving air quality and protecting public health while harnessing the domestically produced natural gas. At the same time, electric mobility is increasingly recognized as the future of the automotive industry, with EVs offering a pathway to reduce petroleum consumption and further mitigate emissions.

To align with these global shifts, Egypt has adopted a comprehensive strategy to localize the EV industry and strengthen domestic capabilities across the automotive value chain. The plan extends beyond vehicle assembly to full-scale manufacturing, emphasizing higher local content, the integration of clean energy, and the production of both electric and natural gas-powered vehicles to meet local demand.

This report offers an analytical overview of Egypt's transition to sustainable transportation during fiscal years (FYs) 2023/24 and 2024/25, with a focus on four interconnected dimensions: the development of the CNG vehicles market, the evolving dynamics of EVs, the policies and initiatives supporting alternative fuels and green mobility solutions, and the growing emphasis on public transportation as a driver of change.

CNG Vehicles Transition Path

The use of CNG in vehicles in Egypt has been expanded as an environmentally friendly fuel, following the 2030 Nationally Determined Contribution (NDC) to reduce emissions in the transport sector by 7%. This initiative aims to reduce emissions from liquid fuel combustion by gradually replacing it with natural gas across all vehicles.

Current Adoption Levels

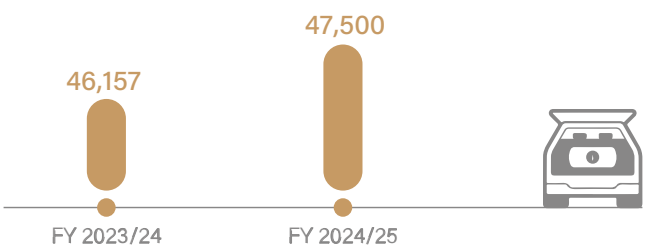
A Presidential initiative launched in July 2020 to promote compressed natural gas (CNG) as an alternative vehicle fuel has significantly advanced the development of a national program encouraging citizens to convert their cars. The initiative gained traction due to CNG's cost-efficiency and competitive advantage over liquid fuels. Since its inception, the government—under directives from the Prime Minister —has ensured strong inter-ministerial coordination to design financing mechanisms that facilitate the program's implementation. Priority has been placed on converting public transport fleets and replacing vehicles older than 20 years with CNG-powered alternatives.

The Ministry of Petroleum's strategy has been central to this process, focusing on rapidly expanding infrastructure by deploying new fueling stations nationwide, while also adopting a pricing policy that maintains a favorable price gap between CNG and petroleum products. This approach ensures sustained consumer incentives, even when petroleum product prices are adjusted upward, according to the GASTEC annual report.

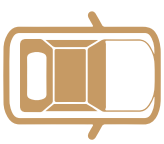
Between FYs 2023/24 and 2024/25, the number of vehicles converted to CNG recorded an 8.6% increase. Since its launch in July 2020, the program has cumulatively converted 600,500 vehicles in FY 2024/25, up from 553,000 in FY 2023/24, underscoring its growing effectiveness in reducing reliance on liquid fuels and advancing environmental goals according to the Egyptian Natural Gas Holding Company (EGAS) annual report. Additionally, the Ministry of Petroleum and Mineral Resources (MoPMR) has set a target of converting 165,000 vehicles in FY 2025/26, according to the MoPMR.

Complementing this effort, in May 2025, the Egyptian state launched a presidential initiative to scale up the conversion and replacement of vehicles to run on natural gas. This initiative is designed to convert approximately 220,000 vehicles between FY 2025/26 and FY 2027/28, beginning with 50,000 vehicles in FY 2025/26, according to the Egyptian Cabinet.

CNG Converted Vehicles



Targeted CNG Converted Vehicles for FY 2025/26*



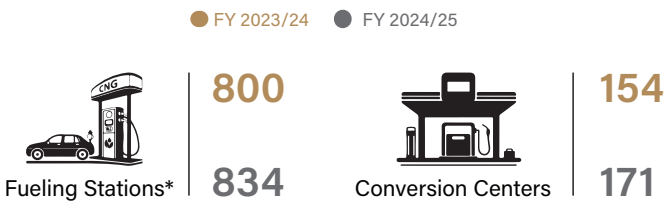
165,000

*MoPMR's target

Between FYs 2023/24 and 2024/25, the MoPMR expanded infrastructure by adding 17 new vehicle conversion centers and 34 fueling stations. Looking ahead to 2025/26, the plan includes the establishment of 30 additional gas filling stations and 30 vehicle conversion centers.

This planned expansion highlights the Ministry's strategy to strengthen the supporting infrastructure required for large-scale adoption of natural gas vehicles, ensuring both accessibility and sustainability of the conversion program, according to the MoPMR.

CNG Fueling Stations Development



*Covering Most of Egypt's Governorates

Cost Saving Compared to Other Fuels

CNG presents a more economic and affordable alternative to conventional fuels. CNG has been priced at EGP 7 per cubic meter since October 2024, while the most recent adjustment in April 2025 set gasoline prices at EGP 15.75 for 80-octane and EGP 17.25 for 92-octane. Based on an average daily consumption equivalent to 10 liters of 80-octane gasoline, a vehicle owner can save approximately EGP 2,625 per month when switching to natural gas. The savings increase to about EGP 3,075 per month for 92-octane gasoline.

These savings allow the cost of conversion to be recovered within three to six months, depending on consumption levels. Moreover, higher daily fuel consumption accelerates the recoupment period, reinforcing the economic viability of the shift to natural gas, according to Egyptian International Gas Technology Co. (GASTEC).

Some studies have shown that gasoline demonstrates higher overall efficiency, while CNG proves more cost-efficient in terms of distance traveled, but it directly affects the vehicle's engine performance.

The analysis revealed that although CNG reduced output parameters such as torque, horsepower, volumetric efficiency, and specific fuel consumption, these drawbacks can be mitigated through engine modifications and optimized fuel injection systems to enhance combustion.

Environmentally, CNG offered clear advantages by significantly lowering carbon monoxide (CO) and carbon dioxide (CO_2) emissions compared to gasoline, although it was associated with higher emissions of nitrogen oxides (NO, NOx) and unburned hydrocarbons.

The findings highlight the trade-off between performance and sustainability: while gasoline ensures stronger engine output, CNG delivers meaningful economic benefits and emissions reductions, balancing efficiency with environmental responsibility, according to two studies: "CNG impact on combustion quality of a diesel engine fueled in diesel-gas mode" (Heliyon, 2024, Vol. 10), and "Effect of Natural Gas Usage as Fuel in Gasoline-Based Vehicle Using 100% Substitution Method" (Research Square, 2023).

Electric Vehicles Market Dynamics

EV Market Size

Although still in its early stages, Egypt's electric vehicle (EV) market has shown remarkable progress over the past year. The number of licensed EVs more than doubled between December 2023 and December 2024, recording an annual growth rate of around 164%, according to the Central Agency for Public Mobilization and Statistics (CAPMAS).

Despite this acceleration, EV penetration remains marginal, representing less than 0.1% of the total licensed vehicle fleet in Egypt. Nevertheless, the rapid increase in market share from 0.03% to 0.08% highlights rising consumer interest and the gradual materialization of policy incentives supporting sustainable mobility.

Licensed Vehicles in Egypt

	2023	2024
Evs	3,244	8,560
Overall Vehicles	9,849,377	10,311,484
EVs Share of Total	0.03%	0.08%

Charging Infrastructure Status and Planned Expansion

The Ministry of Electricity and Renewable Energy (MoEE) and other authorities emphasize a shift to electric mobility and the development of related charging networks, according to the Egyptian Cabinet. Several private charging operators have since begun deploying stations in major urban centers and along highways, indicating the gradual growth of the network.

Regulatory Framework

EV charging is regulated under Electricity Law No. 87/2015 and its executive regulations (Ministerial Decree 230/2016), supplemented by the Electricity Utility & Consumer Protection Regulatory Agency (EgyptERA) board decisions on charging rules. EgyptERA requires licenses for commercial charging activities. In contrast, Level-1 home chargers are exempt from permitting under Periodic Book No. (5). Licensed charging companies must comply with EgyptERA technical codes and distribution-company supply contracts and may not be distribution utilities themselves.

Each EgyptERA license is valid for five years and obliges the firm to deploy a minimum of 50 new stations per year (at least 250 stations over the license term), with no more than 10% of points being high speed (DC) chargers. Violations of the licensing rules can lead to permit revocation, according to the EgyptERA Periodic Book No. (5).

Charging Tariffs & Grid Fees

Public EV charging prices in Egypt are based on two main components. The first is the supply tariff, which is the regulated electricity price applied by EgyptERA and charged to charging stations' operators.

The second is the final consumer price, which is set by the MoEE through official ministerial decrees. This system ensures that charging costs are calculated in a transparent and standardized way across the country, according to the MoEE Ministerial Decree No. 101 of 2025.

Supply Tariffs* — Connection Class — EGP/kWh

Low Voltage (LV)	Medium Voltage (MV)	High Voltage (HV)	Extra-high Voltage (EHV)
2.34	1.94	1.74	1.60

*Effective Since September 2024

These are EgyptERA supply/reference tariffs published in piasters per kWh. They are the regulator's supply baseline and not, by themselves, the final consumer sale prices for EV users.

Transmission & Network-use Fees* (EGP/kWh)

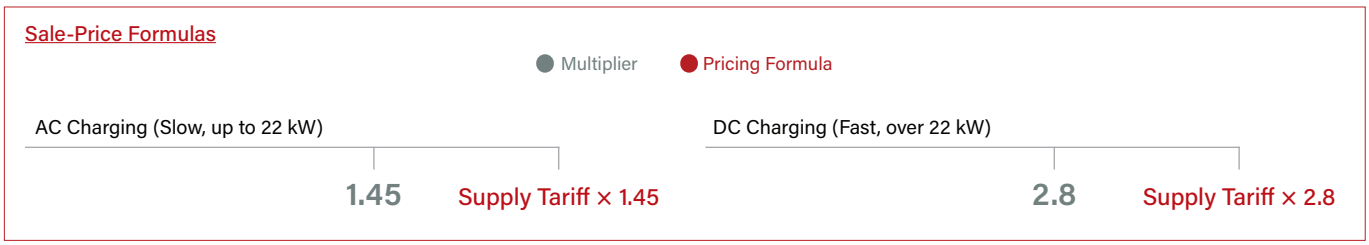
EHV	HV	MV
0.0725	0.1666	0.1909

*Effective Since September 2024

These regulated transmission/network fees apply in addition to the supply tariff, depending on the connection voltage, and must be included when calculating the full energy cost stack.

Consumer Sale-Price Formulas & Final Tariffs

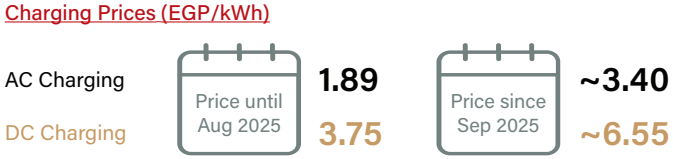
The MoEE has introduced a standardized pricing system for public EV charging to ensure transparency and consistency across the market. There are two types of tariffs: Alternating Current (AC) charging (slow) and Direct Current (DC) charging (fast), each with its own multiplier applied to the base electricity supply tariff, as stated in the Ministerial Decree No. 101 of 2025.



These formulas are regulated by the MoEE and are the method for calculating the final tariffs that can be charged to EV users at public charging stations. This ensures a standardized pricing model across the market.

Prices Development

The growth rate for AC charging is approximately 80%, while for DC charging it is around 75%. This reflects the price adjustment implemented under Ministerial Decree No. 101 of 2025, effective since September 2025, ensuring that the figures presented are up to date. This shift is a critical factor for both existing and prospective EV owners, as it impacts the economic feasibility of using public charging infrastructure.



Government Action & Policy Highlights

The Egyptian government, through proactive policies and partnerships with the private sector, aims to strengthen the automotive industry by enhancing energy utilization, supporting local demand, and positioning the sector as a key driver of exports and economic growth.

In November 2023, Egypt introduced the National Automotive Development Program (AIDP), a comprehensive framework designed to align with international standards while positioning the private sector as the main engine of growth, aiming to provide a conducive environment to enhance the long-term prosperity of the automotive industry by linking it with the global system of production and trade, according to the Egyptian Cabinet.

A core objective of the program is to accelerate the adoption of green technologies through the establishment of EV infrastructure, the promotion of low fuel-consumption engines, environmentally friendly vehicles, and CNG adoption, according to Investinegypt.

In July 2025, there were amendments to Egypt's AIDP to boost local manufacturing and sustainable production. The revised incentives require automakers to produce 1,000–7,000 EVs over the program's seven-year period, with an initial 10% local content, reviewed annually, and a minimum 25% local value-added ratio.

Incentives are tied to production volumes, local component ratios, investment, and environmental compliance, capped at 30% of the vehicle price, with price and engine limits (EGP 1.25 million, 1,600 cc).

actories surpassing 35% local content gain an additional incentive of EGP 5,000 per 1% increase, on top of the base incentives (beyond the 30% cap). Export-oriented firms qualify for incentives on both domestic and exported vehicles, with bonuses for exceeding targets, aiming to enhance competitiveness in international markets, according to the Egyptian Cabinet.

Private Sector & International Role in Transition

The Egyptian government is working to localize the auto-feeding industries through an agreement with leading international companies and the private sector.

In November 2024, Al Nasr Automotive Manufacturing Company (NASCO) established a joint-stock venture with Tron Energy Technology Corporation and the Euro Emirates Group.

The partnership focuses on producing Egypt's first electric minibus, with a planned capacity of 300 units by 2026, alongside an electric battery production line capable of manufacturing 600 batteries within the same timeframe, according to the Egyptian Cabinet.

In August 2025, domestic bus manufacturing is being revitalized, with El Nasr Automotive in Helwan producing new city buses that include about 63% local content, and developing eco-friendly electric and natural gas models for public transport and tourism fleets, according to the Ministry of Labour press release.

In February 2024, the foundation stone was laid for the Yazaki Egypt €30 million automotive wiring harness project in Fayoum, fully financed through foreign direct investment. he project received the Gold License in December 2022 and was established as a special free zone under Prime Ministerial Decree No. 99 of 2022. The factory is expected to export 100% of its output, with an estimated annual export value of €100 million, according to the Egyptian Cabinet.

In September 2023, the Egyptian Cabinet granted a golden license to Egypt Sat Auto to establish and operate an electric vehicle manufacturing plant. This pioneering project will be located in 10th of Ramadan City, with investments amounting to EGP300 million.

In June 2023, Sumitomo Electric Egypt inaugurated the first phase of its new wiring harness factory in 10th of Ramadan City, with an annual capacity to supply harnesses and electronic systems for one million vehicles. The company currently operates eight factories across Port Said, 10th of Ramadan, and 6th of October City, with total investments of around $100 million, exporting 100% of its output, according to the Egyptian Cabinet.

CNG & EV Finance Programs

Agency	CENTRAL BANK OF EGYPT	JAMEEL FINANCE	European Bank for Reconstruction and Development	GASTEC
Initiative	EGP 15 billion allocated & loans at 3% flat interest	EGP 3 million	Senior loan of up to EGP 341 million	-
Objective	Convert private vehicles to dual fuel (gasoline + CNG)	Facilitate ownership of EVs	Support the acquisition of up to 100 Range Extended EVs	Ninth phase to finance the conversion of 8500 vehicles to run on CNG

Egypt's Public Transport Transition

Egypt has recently advanced a national program to convert diesel public buses to run on natural gas as part of its sustainable transport strategy. In August 2025, the Ministry of Military Production agreed with the Ministries of Local Development, Petroleum and Mineral Resources, and Finance, alongside the Cairo and Alexandria public transport authorities, to convert 2,262 buses into six phases (377 buses each). The first phase has already been completed, while the second phase is underway and scheduled for completion by December 2025, according to the Ministry of Military Production press release.

At the same time, Egypt has placed electrification at the center of its transport modernization strategy, launching several large-scale projects between 2023 and 2025 with support from the World Bank, European Bank for Reconstruction and Development (EBRD), and domestic manufacturers. Under the World Bank–financed Greater Cairo Air Pollution Management and Climate Change Project, the Electric Bus Demonstration will replace 75 diesel and CNG buses at the Al-Ameriyah depot with 98 battery-electric units. The project also includes retrofitting the depot in Cairo's Al-Sawah district with infrastructure for up to 110 e-buses and deploying the new fleet on five priority routes in the city's busiest corridors, according to the World Bank Environmental and Social Impact Assessment Report.

In July 2025, the Cairo Transport Authority (CTA) advanced its own electrification program when Geyushi Motors won an international tender to deliver 100 electric buses. These units will be manufactured locally to international standards, reinforcing Egypt's policy to increase domestic content in strategic industries, according to Geyushi Motors.

At the intercity level, the EBRD approved in September 2025 a loan worth €10.6 million to Go Bus, Egypt's leading intercity operator. The financing package will cover up to 30 electric coaches, 6 electric minibuses, and 3 service vehicles, making Go Bus the first Egyptian operator to deploy electric buses on longer-distance national routes, according to the EBRD.

Egypt's journey toward green mobility has already laid strong foundations, with natural gas vehicles and electric mobility emerging as key pillars of its sustainable transport strategy. The progress made between 2023 and 2025 demonstrates both the government's commitment and the private sector's growing role in shaping a cleaner, more resilient future.

Looking ahead, opportunities to expand charging and fueling infrastructure, strengthen local manufacturing, and attract new investments will be central to accelerating this transition. By building on today's momentum, Egypt is well-positioned to establish itself as an adopter in low-emission transportation, delivering long-term economic, environmental, and social benefits for generations to come.

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