



INSIDE THIS ISSUE

PG. 2
Overview

PG. 3
Developments in the
Egyptian electric vehicles
sector in 2018-2019

PG. 4
Challenges and barriers

PG. 5
Government efforts to
develop an e-mobility
strategy

PG. 6
Initial recommendations
for government and
industry

ELECTRIC VEHICLES IN EGYPT

OPPORTUNITIES AND CHALLENGES

Electric vehicles are likely to represent the future of the automotive industry. Egypt is keen on promoting electric vehicles to help reduce the consumption of petroleum products, mitigate greenhouse gas emissions, improve air quality, and attract foreign investments in the car manufacturing industry. However, the necessary infrastructure, policy and regulatory frameworks for a vibrant electric vehicles platform have yet to be developed.

ELECTRIC VEHICLES IN EGYPT

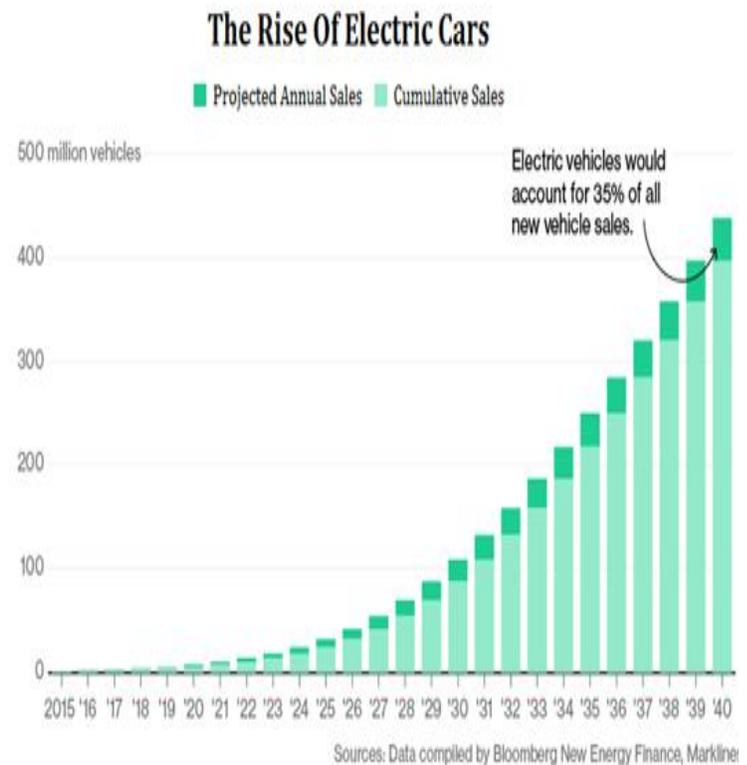
OVERVIEW

Electric vehicles (EVs) are likely to represent the future of the automotive industry. Since the 1990s, national governments and local authorities adopted specific policies and incentives to enhance electric mobility as a tool to mitigate greenhouse gas emissions, improve air quality, increase energy independence and decrease petroleum dependency.

Despite rapid growth over the past decade of electric car sales, the penetration of electric cars is still limited to less than 1% of the global car fleet today. According to the International Energy Agency, the global electric car stock grew by 57% in 2017, but sustaining such a high growth rate will become increasingly difficult as absolute stock numbers increase.

So far, EV deployment has mostly been driven by policy. The main markets by volume (China) and sales share (Norway) have the strongest policy push. This is true for light-duty vehicles (LDVs) as well as for buses and two-wheelers. Policies also support the development of both private and publicly accessible charging outlets.

Manufacturers are developing numerous electrified models, primarily to compete in Europe, the US and China, where government subsidies and strict environmental laws are stimulating sales of zero-emission vehicles. The outlook for sales is less certain in the Middle East and Africa, including Egypt, in part because gasoline prices remain relatively cheap, emissions regulations are weak or unenforced, and the necessary infrastructure, policy and regulatory frameworks for a vibrant EVs platform have yet to be developed.



ELECTRIC VEHICLES IN EGYPT

INDUSTRY DEVELOPMENTS

The Egyptian EV market, limited in size and scope, witnessed several developments in 2018-2019:

- On January 1st 2019, the Egyptian Customs Authority implemented the final tranche of tariff reductions on all imported cars from the European Union and Turkey, in accordance with the Egyptian-EU Association Agreement, to reach customs zero value. (Cars will be subject to other types of duties, namely a VAT of 14 %, an industrial and commercial profit tax of 0.5 %, a resources development fee of 3 %, and a table tax 1 %, bringing the total duties to a total of 18.5 %.)
- The Minister of Trade and Industry issued a decree exempting imported used EVs from custom duties (on condition that they are no more than 3 years old). Egyptian regulations do not permit the import of used cars. However, an exception has been made for electric cars to encourage their use and enhance future market opportunities for the industry.
- Egypt's Passengers Transportation Authority signed a deal with Chinese automobile manufacturer, BYD, for the sale of 15 electric buses in the northern city of Alexandria. These buses will be part of the city's public transport fleet. According to the agreement, 18 electricity charging points for the buses will be installed across the city. Once operational, Alexandria will become the first city in the Middle East to operate electric buses.
- A number of automobile manufacturers, such as BMW, announced plans to import EVs into the Egyptian market in 2019.



- The first wave of electric vehicle charging stations were introduced to the market. A private company, Revolta Egypt, inaugurated the country's first EV charging station at a state-owned Wataniya gas station on the Cairo-Suez highway in February. Revolta Egypt has since announced ownership of 17 charging stations in Egypt and plans to open- by the end of 2018- a total of 65 charging units in seven governorates (Cairo, Giza, Alexandria, Port Said, Ismailia, Suez, and the Red Sea). The electric charging company also publicized plans to open additional stations to meet the needs of whole Delta area (by 2019) and Upper Egypt and South Sinai (by 2020).
- An Egyptian company, Drshall, signed partnership agreements with Chinese companies Dongfeng Motor Corporation and Vasworld Power Corporation Limited to create the DFLZ M5 model. According to press reports, the Chinese companies will begin exporting electric cars and batteries to Egypt while Drshal will construct an electric car assembly plant for production. Drshal also announced plans to build EV charging station, including one on the Cairo-Alexandria desert road.
- Other Chinese and European car manufacturers expressed interest in partnering with the government on producing EVs. For example, Daimler has offered its expertise in modern mobility concepts, electro-mobility and electric cars as well as autonomous driving, particularly with regard to the new capital in Egypt and the planned new "smart cities."

ELECTRIC VEHICLES IN EGYPT



established institutional framework has yet to emerge to regulate the sector, a national committee consisting of representatives from the Ministries of Electricity and Renewable Energy, Transport, Trade and Industry, Environment, Finance, Interior Affairs, the Administrative Control Authority and other relevant authorities, has reportedly convened several times to develop a joint vision on the EVs certification and licensing procedures.

- The institutional framework for the operation and maintenance of the electric charging industry is also unclear. Deliberations are ongoing among the Ministries of Electricity, Environment, Industry, and other government authorities to develop alternative charging infrastructure business models and assess the EV industry's overall impact on energy demand.

CHALLENGES AND BARRIERS

Administrative challenges

- According to a press statement by the Prime Minister's office in January 20, 2019, the PM instructed the Ministries of Electricity and Investment to present a technical and financial assessment of the different aspects of the production of electric cars in Egypt. This announcement is a signal that the development of a national EV strategy in Egypt is still in an initial phase.
- Despite the government's decision to allow for the importation of new and used electric cars into Egypt, a lack of certainty exists among EV manufacturers and importers regarding the government authority in charge of regulating the process of certifying and licensing EVs, as well as the associated decision-making process. While an

Regulatory challenges

- EVs are not categorically recognized in the customs regime and lack a clear licensing mechanism. The General Traffic Directorate recently resorted to a method of calculating the motor equivalent of petrol engines to determine licensing fees for EVs, but this resulted in inaccurate and inconsistent fees in the view of many importers and customers.
- The regulatory framework for the electricity requirements, pricing and other operational features of electric charging has yet to be determined.

ELECTRIC VEHICLES IN EGYPT

Infrastructure

- The state has prioritized the goal of upgrading and expanding the roads network in Egypt. It is also building new (smart) cities and mega projects which could in turn enhance investment in the EVs industry.
 - Despite these efforts, the industrial infrastructure for the production of electric cars has yet to be developed. In the absence of a clear policy and regulatory EV framework and investment strategy to promote the local production of EVs, EV importation may emerge as the only viable option to promote the use of environment-friendly cars in Egypt, hence missing out on a significant opportunity to develop the EV industry in the country as global interest grows.
 - The electric charging infrastructure necessary to support the acceleration in EV adoption requires significant expansion. A public debate has yet to transpire on what different EV charging models (location, type of charging, number of stations) are needed to promote EVs in Egypt, and on means of making EV charging financially viable.
2. Parliament has engaged the government on e-mobility. In November 2018, a hearing was held by the Energy and Environmental Committee to discuss the government's plans to enhance the use of EVs in Egypt.
 3. The European Bank for Reconstruction and Development (EBRD) is advising and supporting the government on the development of an e-mobility strategy, including by offering to hire a consultant to assess the short to medium term market potential and readiness to roll out EVs in selected cities as well as assist in the development and design of the associated charging infrastructure.
 4. According to the terms of reference of the EBRD supported e-mobility strategy and market study, the objectives of the assignment include;
 - Performing an analysis of the current e-mobility policies, the market potential, the national readiness and policy framework;
 - Providing a critical assessment on the technical aspects (proposed size, electricity requirements, costs, configuration, etc.) as well as project risks, ownership and actors involved;
 - Setting out alternative charging infrastructure business models, based on an analysis of successful business models in countries that are very successful with the introduction of electric vehicles and charging infrastructure (e.g. the Netherlands and Norway);
 - Assessing the potential economic benefits (including reduced energy use and environmental benefits on air quality and emissions) of the strategy and its recommended policy measures;
 - Identifying the additional investment needs and benefits (in terms of reduced energy use and reduced environmental impacts) of electrifying specific captive fleets;
 - Assessing the overall impact of the strategy and take up of EV's on energy demand.

Consumer Awareness

- Consumer understanding of the availability and viability of EVs is crucial. A general lack of knowledge and awareness persists among consumers, and various stakeholders, regarding the policy regulations, benefits, charging options, infrastructure needs and affordability of EVs.

GOVERNMENT E-MOBILITY STRATEGY

1. The government signaled its intention to develop an e-mobility strategy to promote the use of environmental friendly vehicles on Egyptian roads. An inter-agency process, led by the Ministry of Electricity and Renewable Energy, is underway to develop an electric charging policy to align the rollout of charging infrastructure with the emerging needs of EVs in the market.

ELECTRIC VEHICLES IN EGYPT

INITIAL RECOMMENDATIONS

1. Government efforts to develop an e-mobility strategy are still in their early stages. Much work remains to be done to ensure the emergence of a constructive EV policy and regulatory framework; one that places the sector at the forefront of the Egypt 2030 Vision, and falls in line with government plans to end fuel subsidies and enhance reliance on renewable energy resources.
2. The government should be encouraged to be bold and strategic in its approach to place Egypt at the forefront of the global shift towards electric vehicles, including by:
 - a. The development of relevant laws and regulations to deliver the essential requirements of an emerging EV market and ensure that local institutions enhance- rather than block- the sector's development. Legislations requiring special attention should include:
 - The traffic law (currently under consideration by Parliament), to develop an EV licensing mechanism.
 - Energy regulations to enhance the electric charging infrastructure.
 - Environmental regulations, to adapt to the changing needs of the emerging EV market.
 - Tax and customs laws, to ensure that EVs are categorized in the customs regime and put in place the right policy driven incentives to enhance the sector.
 - b. A vigorous assessment of the implications of the e-mobility strategy on Egypt's integrated sustainable energy strategy should be conducted. The aim is to execute charging strategies based on an assessment of potential power generation needs due to transport electrification, as well as develop a greater reliance on Egypt's growing renewable energy resources.
 - c. The development of policies, particularly in the new administrative capital and other new cities, that facilitate the regulation of land usage to allow for the efficient extension of the electricity grid, installation of charging infrastructure, vehicle parking, and the creation of charging hubs.
 - d. The set-up of a clear institutional structure to put in place the anticipated policy and regulatory framework for the EV sector. The establishment of a national regulator, acting as a facilitator for the electric car charging industry, would be a step in the right direction. The role of local authorities and municipalities should also be elevated in facilitating the emergence of an efficient EV sector.
 - e. Awareness raising and championing the low carbon economy and electric mobility should be projected as means of enhancing quality of life, economic reform and promoting investment.
3. The car manufacturing industry should strategically engage the government by expressing shared support for a national policy and enhancing local understanding of the underlying economics of providing charging services and driving EVs. The industry should partner with the relevant stakeholders to incrementally advance the larger-scale adoption of EVs in Egypt, introduce global best practices, and provide a constructive input into the policy debate when necessary.