Nairobi energy storage for electric vehicles

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As the number of secondhand fossil-fuel vehicles increases, switching to electric mobility will be an innovative way to build sustainable transport in Nairobi City County. Shifting to electric mobility will also help to reduce the burden of fossil fuels and emissions--essential for better air quality, improved public health, and environmental protection. Furthermore, it will create job opportunities in automotive, electronics, and other supporting industries.

These efforts notwithstanding, Kenya"s electric mobility sector is still in its nascent stages with an estimated 671 electric motor vehicles in total. The sector is also heavily dominated by two-wheelers that account for almost half of the electric vehicles. However, a recent Mckinsey study points to rapidly increasing demand and estimates that Kenya will transition faster than most countries in the region, with electric vehicles accounting for 60 to 75 percent of all two-wheeler sales by 2040.

Nairobi"s electric mobility is promising based on the demand for electric vehicles, as well as the growing number of related innovations and startups in the last few years. These innovations are primarily driven by private actors based in Nairobi, including BasiGo, Kiri, and Opibus. Currently the city hosts more than six assemblers of electric vehicles focusing on two-wheelers; multiple infrastructure providers for charging facilities; and several interested financiers for mobility solutions.

By switching to electric mobility, Nairobi will derive social and economic benefits from decarbonization, inclusive mobility, improved air quality, and local manufacturing of electric vehicles. To accelerate the adoption of electric mobility in Nairobi City County, the following should be considered:

In August of last year, the Kenyan government took a significant stride toward sustainable transportation by establishing a 15-member team dedicated to formulating an e-mobility policy. This policy, once developed, will play a pivotal role in shaping the future of the country"s transport sector. This progressive move was officially gazetted in August, underlining Kenya"s commitment to embracing electric mobility.

According to Kenya Power"s E-Mobility Conference Report released earlier this year, only 5% (1,350) of newly registered vehicles in Kenya are electric, with motorcycles and three-wheelers contributing significantly to this figure. While the majority of businesses in the Kenyan e-mobility space are concentrated in the two and three-wheeler segments, the country has set an ambitious target for 2025 - aiming for 5% of all newly registered vehicles to be electric.

Kenya has set a clear target in its Nationally Determined Contribution (NDC) to reduce Greenhouse Gas (GHG) emissions by 32% by 2030. Recognizing the impact of road transport on emissions, the country sees embracing e-mobility as a crucial step towards achieving this goal. The transition to electric vehicles aligns

with Kenya"s commitment to sustainability and environmental responsibility.

Kenya boasts the largest e-mobility start-up ecosystem on the continent, supported by enthusiastic startup investors diving into the realm of electric mobility. The country"s reliable energy infrastructure provides a solid foundation for the growth of e-mobility. With a rapidly expanding ecosystem, access to domestic and export markets, and a relatively reliable energy infrastructure, Kenya positions itself for long-term growth in the e-mobility sector.

While the electric vehicle (EV) market in Kenya is still in its early stages, a burgeoning start-up ecosystem presents substantial potential for venture capital investment. Over 50 startups have entered the EV sector, showcasing a growing interest and entrepreneurial spirit. Although public charging infrastructure remains limited, initiatives are underway to scale it up, exemplified by BasiGo"s launch of a charging station in Nairobi in 2023.

In a proactive move towards addressing the challenges of capacity building, Kenya Power, in collaboration with Advanced Mobility Africa, conducted its second edition of AfricanEV Training for technicians from the Transport department. This week-long training, held from 22/1/2024 - 26/01/2024, covered crucial topics such as the history and fundamentals of EVs, charging systems, basic diagnosis, and more.

The training, hosted at the Roam workshop in Nairobi, provided hands-on experience, including the disassembly of an electric Nissan LEAF by four Roam employees and 60 other electrical engineers. This practical experience offered invaluable insights into the intricacies of electric vehicle technology, fostering a deeper understanding among the participants.

As Kenya Power aims to fully convert its fleet of 2,000 vehicles to EVs, the significance of capacity building cannot be overstated. In this Financial Year, the Company plans to acquire 10 EVs and 25 electric motorbikes, further demonstrating its commitment to supporting the growth of electric motorization in the country while actively contributing to environmental conservation.