Topic: The Transition to Electric Two- and Three-Wheelers in Ghana

Overview

In order to meet climate targets and reduce air pollution, it is argued in a recent UNEP report[1] that the adoption of electric two- and three-wheelers should be the first priority in moving to electric mobility for Low- and Middle- Income Countries (LMICs). This is because two- and three-wheelers are the fastest growing transport mode in many LMICs, particularly in Africa. Electric two- and three-wheelers are relatively inexpensive to produce and are more suitable than heavier vehicles for innovations such as battery swapping.

Currently, there are several policy gaps and windows of opportunities that are relevant to the fast adoption of electric two- and three-wheelers in Ghana. These are:

a) Motorcycle taxis, although common in Ghana, are not currently legal, although the ban is not enforced. If they were allowed, proper regulation would need to be introduced.
b) The most recent National Transport Policy (2020)[2] does not explicitly recognise the contribution made by two- and three-wheelers to employment and mobility in Ghana. However, the adverse effect of motorcycles on accident rates is properly mentioned.
c) Although the introduction of electric vehicles has been considered by the Energy Commission[3], the 'Updated Nationally Determined Contribution under the Paris Agreement (2020-2030)' for Ghana[4] has no mention of electric vehicles as a measure to mitigate for climate change.
d) There appears to be a considerable gap in the availability of up-to-date National Transport Statistics, particularly relating to the composition of the national transport fleet.
e) The legalisation and electrification of two-and three-wheeler taxis have become political, particularly following former President Mahama's pledge to introduce commercial electric two- and three-wheelers if elected.[5] Yet, the implementation processes are not clear.

A range of research papers have been written on the role of motorcycles and tricycles in Ghana together with the prospects and opportunities for electrification. Nonetheless, further work is required to update and bring the material together and also to outline and identify possible pathways to inform the Ghanaian government's policy framework. The serious issue of motorcycle accidents does need to be addressed; however, several authors have highlighted the need for proper training courses, which could be a route towards legal acceptability for taxi services.

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[1] Electric two and three-wheelers | UNEP - UN Environment Programme
[2] https://www.brr.gov.gh/reg_details.php?id=NjMz
[3] https://www.energycom.gov.gh/files/BASELINE%20SURVEY%20REPORT%20online.pdf
[4] Ghana's Revised Nationally Determined Contribution under the Paris Agreement (unfccc.int)
[5] https://www.myjoyonline.com/mahama-promises-to-enhance-okada-business-with-electric-tricycles-maintains-need-for-legalisation/

Scope of Work.

There is a need to review current research and policy related to two- and three-wheelers and their electrification in Ghana. Relevant experience from other countries, particularly in Africa, should also be considered. If appropriate additional surveys may be undertaken. The review should identify key gaps in current knowledge and should prepare a framework for the development of future policy.

Areas of work that could be covered:

a. The current and future role of two-and three-wheelers in Ghana, in providing mobility, employment, and the movement of goods. Gender Equality and Social Inclusion (GESI) issues should also be considered, along with vehicle accidents and mitigation measures such as training and traffic law enforcement.
b. The relative costs of operating electric two- and three-wheelers compared with conventionally powered vehicles
c. The long-term prospects for local assembly, manufacturing, and servicing of electric two- and three-wheelers and the related implications for employment and skills development.
d. Possible key constraints on electrification such as grid capacity, power cuts, and diversity of charging infrastructure and solutions such solar energy and battery swapping.
e. The legal framework for the use of two- and three-wheelers as taxis and for hire work.
f. The structure of regulations, taxes, and duties relating to electric vehicles and their components.
g. The identification of politically and socially feasible pathways for transitioning two-and three-wheelers to low-carbon fuel.
h. Suggestions for the future integration of electric two- and three-wheelers in climate and transport policy documents (eg NDC update)

Key stakeholders

- Ministry of Transport
- Energy Commission
- Vehicle Importers and Assemblers
- Representatives of operators of two- and three-wheelers
- District/municipal/metropolitan assemblies
- National Road Safety Authority
- UNEP, World Bank and other international donors.

Expressions of interest should include a clear plan for stakeholder engagement and policy impact. It is expected that the research team will coordinate close with local stakeholders, as well as existing activities supported by international donors such as World Bank and UNEP.