E-Mobility in Africa: Scenarios of implementing E-Mobility in Dakar

SENEGAL

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Urban and Economic Situation

Dakar Map

Senegal Map

- Dakar
- Thiès
- Diourbel
- Fatick
- Kaolack
- Sédhiou
- Kolda
- Kédougou
- Saint-Louis
- Louga
- Matam
- Tambacounda
Agenda.

1) Research question
2) Methodological approach
3) Change of the transport system
4) Modern Infrastructures
5) The need to Integrate E-mobility in transport policies
6) Challenges
7) Turning challenges into opportunities.
Research question.

E-mobility Trend

Ways to implement E-mobility in Senegal?

Renewal of the automobile fleet

Increase of car-ownership in Senegal
A new lifestyle

Traffic congestion, Pollution
Methodological approach.

Review of studies

News
E-mobility review
Methodological approach.

Political debates

E-mobility

Creation of conditions for the shift from conventional to EVs

Acceptance: Consumer attitude of purchasing
The Existing informal modes of transport in Dakar

“Car Rapid  Ndiaga Ndiaye
AFTU minibus to formalize the system
The Bus called Dakar Dem Dikk

Under ancient regime

New Regim
Taxies – Renewal of fleet

Private

public-private partnership Taxies
Taxi – Renewal of the fleet

Taxi sisters

Taxi Sisters
The growing demand for individual mobility in Senegal, in particular in urban areas in Dakar, increases environmental pressures and authorities should develop innovative solutions.

E-mobility has been identified in developed countries as one of the possible answer to the issues of mobility.

At the transport level Senegal can through the program of renewing its automobile fleet start focusing on importing vehicles that meet the requirements for environmental friendly need such as E-buses, low-speed Evs, etc.
This can be done through importing also other means of transport such as E-scooters, charging with solar energy, solar plants in rural areas.

In October 2016, Senegal has already inaugurated Bokhol photovoltaic plant, raising renewable-energy production share in West Africa.

The Bokhol photovoltaic plant covers a 40-hectare site. The 75,000 solar panels deployed here produce 20 MW of electricity, making Bokhol the largest solar plant in West Africa.
Integrating infrastructures required by e-mobility
Another way of establishing e-mobility in Senegal can be through policy, regulations such as the one concerning the limitation of vehicles age limitation of 8 years. This regulation could be a concern of the import of e-vehicles to Senegal with some incentives such as free tax treatments, facilitating the import at the stage of customer.
Urban Structure

Mixture of industries in residential and commercial area

Construction of standard factories/Facilities

Relocation of Industrial Zones

Source: JICA Study Team
Figure 7.1.1 Stages of Industrial Location
New urban structure
Challenges

• The insecurity of energy security and dependence on foreign oil at the moment would be some of the challenges in establishing e-mobility in Senegal.

• The most relevant challenges would be also the high cost of e-mobility

• The diffusion of a recharging station network; the cost of batteries; the user-friendliness of new technologies, practicality, etc
Transform the challenges into opportunities.

• There is potential for the development of renewable energy.

• Discoveries of substantial offshore oil and gas reserves have been found in Senegalese waters and on the border with Mauritania including the largest gas reserve of West Africa. In this respect.

• The political stability which constantly attracts foreign investors.
Conclusion

• The deployment of e-Mobility, in fact, will depend not only on specific technologies that will be adopted, but on the ability to organize and manage operations of a complex landscape of players: car manufacturers, battery producers, mobility service providers, energy suppliers and distributors, and institutions (Fédération Internationale de l’Automobile).
Thank you for your attention

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