ELECTRIC MOBILITY AND SHIFT TO THE ELECTRIFICATION OF PARATRANSIT IN BANGLADESH

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Bangladesh Electric Vehicle Market

Bangladesh’s electric vehicle market primarily comprises of:

**Electric bikes, e-rickshaws and hybrid vehicles.**

- It is estimated that 2m electric 2/3 wheelers are on road, primarily serving in rural communication
- The first locally manufactured electric 3-wheeler was introduced in 2004 by a local company.
- Various local companies assembling and manufacturing local electric three-wheelers.
- Some city corporations and municipalities facilitate the operation of electric 2-and 3-wheelers by providing local registration numbers.
- Dhaka, Narayanganj and Gazipur City Corporations have banned the electric 3-wheelers within their city limits.
Modal share of total registered vehicles in Bangladesh from 2010 to Jun. 2022

Total Vehicle: 5348160
as of June 2022
(5.35M)
Motorcycle:3790142
(3.8M)
Passenger car:392629
(0.4 4M)
Vehicle Growth in Bangladesh

REGISTERED MOTOR VEHICLES IN BANGLADESH (YEARWISE)

<table>
<thead>
<tr>
<th>Year</th>
<th>Auto Rickshaw</th>
<th>Motor Cycle</th>
<th>Private Passenger Car</th>
<th>Truck</th>
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Year 2010 - Feb. 2022
Dhaka’s air quality turns unhealthy in winter and improves in monsoon. The city ranked 22 in the list of cities with the worst air quality in the world. Transport Emission is of the main reason for air pollution.

In COP 26, the declaration by governments, businesses, and investors committing to all new passenger cars and vans being 100% zero-emissions no later than 2035 in leading markets, followed by the rest of the world by 2040.

Bangladesh has proposed 3.4 million tons CO₂ eq. (Mt) GHG emission reduction by 2030 as a total contribution from the Transport sector.

Mujib Climate prosperity plan also targets for 30% of newly registered vehicles will be EV by 2030.
Electric Vehicle Policies in Bangladesh

Automobile Industry Development Policy 2021 (Responsible Ministry: Ministry of Industry)

Targets to transform the majority of the passenger cars, bus, trucks and 3-wheeler auto rickshaws to EV by 2030.

The proposals are as follows:

• 10-year tax holiday for local EV assembling and manufacturing.
• Proposes financial incentives, purchase subsidies, waiver of road tax and EV registration fee, reduction of VAT/Import Duty.
• Proposes incentives to set up battery recycling industry and charging station networks.
• Proposes establishment of an EV Cell in Bangladesh Road Transport Authority.
• Proposes establishment of "Energy-Efficient Vehicle Manufacturing Fund" where fines and taxes collected from environment polluting vehicles will be deposited.
Proposed draft Policy

Electric Vehicle Registration & Operation Policy - 2022 (Under Review)

- Responsible Ministry: RTHD

- Electric vehicles will be granted registration under “E” or “EV” category.

- The registration fee of an EV will be determined based on the motor capacity (kW) like ICE vehicles which is presently fixed on the engine CC.

- Imported EVs must be brand new. Import of reconditioned EVs may be allowed in future after analyzing the technical development of EVs.

- EVs must use lithium ions or more advanced highly efficient and eco-friendly batteries. However, lead-acid batteries can be used in EVs until 31 December 2025.

- The manufacturer/assembler of the EVs have to register with the Bangladesh Investment Development Authority (BIDA) for operation.
Proposed draft Policy

EV Charging guideline/policy(draft)

Executing Agency: SHREDA

- Charging stations:
  - Private Vs Commercial,
  - Technical standards, Connection compliance
- Institutional arrangement
- Tariff, incentives
Other Policy Issues

• **Legalizing EV:**

  BRTA has issued SRO, draft guidelines on EV, registration, fitness certificate and tax token

• **Tax incentives:**

  Government has been promoting hybrid vehicles by providing substantial tax incentives apart from having various tax exemptions for two-wheelers and three-wheelers

• **Promoting sustainable charging infrastructure:**

  BERC has introduced new tariff for charging stations
  - 7.70 Tk./kWh energy charge
  - 40 Tk./KW/month for additional demand charge

To promote renewable energy for EV charging stations, BREB is installing solar-powered charging stations.
EV Technology and Bangladesh Market

Full hybrid: Plug in Hybrid - 9:1

Source: BRTA|UNDP

Electric 3 Wheelers

- Estimated number- 10 Lakhs or even more
- Milage: 5-10 Km/Kwh
- 4-5 piece of 12v 200A battery
- Cost: 2 Lakh - 6 lakh depending on design & Capacity
- Charging Cost: 100-160 tk per charge

Source: SREDA, Face to face interview
Easy Bikes in Bangladesh

- Popular Transport mode in Rural Area and suburban areas
- Bangladesh Road Transport Authority does not issue registration, route permit and fitness
- Local Government bodies (Purashavas and City Corporations) provide permission
- Carry about 25 million passenger per day
- Government banned easy bikes to ply on 22 highways
- Lead acid batteries are used
Easy Bikes in Bangladesh
Proposed EV Industry

- Bangladesh Auto Industries Limited (BAIL) is setting up the country's first ever electric car plant in Mirsarai Economic Zone. They plan to manufacture all sorts of vehicles starting from two/three wheelers, sedan, hatchback and subsequently SUVs and pickup trucks.

- Nitol Motors is also setting up an EV assembly plant with the brand name "Suvare".
Barriers/Challenges in EV Adoption in Bangladesh

- Absence of a clear policy-institutional framework
- Limited EV Regulation (i.e. registration of existing EVs, guidelines for EV operation);
- Not enough incentives for EV users and EV businesses;
- Very few EV charging facilities in the country;
- Existing fossil fuel-based charging stations;
- Lack of availability of EV-related statistics and information (i.e. number of EVs, that different sources mentioned different numbers);
- No technical guidance for standard and quality accessories;
- Shortage of Technical Manpower on EV
- Lack of appropriate awareness on EV operation, use, and business;
thank YOU