

MAY  
2024

# EASY BIKE

A SAVIOR FOR  
THE POWER SECTOR  
OF BANGLADESH

HASAN MEHEDI  
SHEZINA KHAN  
KANIZ RABEYA

# EASY BIKE

## A Savior for the Power Sector of Bangladesh

Hasan Mehedi  
Shezina Khan  
Kaniz Rabeya

MAY 2024



© CLEAN 2024

## **Easy Bike: A Savior of the Power Sector of Bangladesh**

**First Impression:** May 2024

**Author:** Hasan Mehedi

**Data Analysis:** Shezina Khan and Kaniz Rabeya

**Cover Design:** Mostafa Ashif Iqbal



This publication is registered under Attribution-NonCommercial-ShareAlike 2.0 Generic. Anybody can copy, alter, remix, transform, redistribute, or build upon this publication in any medium or format for non-commercial purposes only with proper attribution.

**Disclaimer on Maps:** The designations employed and the presentation of the materials showing political borders contained in this report do not imply the expression of any opinion concerning the legal status of the territory, city, or area or its authorities.



CLEAN is not any investment consultant or advisor and does not make any representation regarding the advisability of investing in any particular company, fund, or vehicle. The opinions expressed in this publication are based on the documents specified in the references and do not necessarily reflect the views of CLEAN.

**Expected Citation:** Mehedi, H., Khan, S., Rabeya, K. (2024). Easy Bike: A Savior of the Power Sector of Bangladesh. Coastal Livelihood and Environmental Action Network (CLEAN): May 2024

### **For further information, please contact:**

Coastal Livelihood and Environmental Action Network (CLEAN)  
4 Mallick Bari Road, Boyra-Rayermahal, Khulna 9000, Bangladesh  
Phone & Fax: +88 02 477 701 458, Email: [clean.khulna@gmail.com](mailto:clean.khulna@gmail.com)  
Website: <https://cleanbd.org>

# CONTENTS

- 05 Key Findings
- 07 Introduction
- 11 Economic Aspects
  - 13 Road Safety
  - 15 Electricity Use
  - 19 Energy Crisis
- 21 Green Transport
- 25 Recommendations
- 27 Acronyms
- 29 References





Photo: Reuters

# KEY FINDINGS

Bangladesh has around 1.4 million battery-powered auto rickshaws (easy bikes). Most of those are locally made using local and imported technologies. Around 45 million people are involved with manufacturing, repairing, driving, servicing, and charging these easy bikes.

In the absence of adequate public transport systems, easy bikes became a savior for ordinary commuters in urban and rural areas. Around 25 million people use easy bikes for short-distance commuting.

This transport system contributes around BDT 97,625 crore (USD 9.4 billion) to the national economy, including BDT 7,500 crore (USD 802 million) in the manufacturing industry, BDT 8,000 crore (USD 942 million) in the battery market, and BDT 82,125 crore (USD 7.6 billion) in commuting, servicing and charging services.

These vehicles also help the power sector reduce its stranded assets. The industry consumes 4,905 GWh (million units) of electricity annually, equal to 659 MW of installed capacity. The power sector is currently experiencing 64.2%% of overcapacity, so easy bikes reduce at least 5.64% of the stranded assets.

An easy bike is the cheapest mode of transportation because of the energy cost. It costs BDT 0.97 per km, nine times more affordable than a sedan car (BDT 8.60/km).

The energy cost of easy bikes is even cheaper than popular bus services (BDT 2.15/km).

Easy bikes are safer than trucks, buses, and motorbikes on the urban streets. On average, 8.6% of accidents happened by easy bikes in the last seven years (2017-2023), while 27% occurred by trucks, 24.6% by motorbikes, and 15.71% by buses.

Battery-powered auto rickshaws are also the greenest vehicles on city streets. They emit 49.56 grams of carbon dioxide per km, a 1,200 cc sedan car 159.16 grams, and a microbus 198.03 grams.

Easy bikes must be safer and greener to compete in the changing world of electric vehicles (EVs). To this end, the Government of Bangladesh (GOB) must take policy actions and schemes, including:

1. Legalizing battery-powered three-wheel vehicles with minimum licensing fees and other conditionalities considering their social, environmental, and economic contributions.
2. Formulating guidelines and building institutions to assess the capacity of EVs, including easy bikes.
3. Providing short driving courses on easy bikes and other auto-rickshaws through the Department of Youth Development.
4. Providing battery-powered three-wheeler driving licenses through a short test on driving such a vehicle in urban areas.
5. Ensuring financial, technical and policy support to convert lead acid batteries to more efficient lithium-ion batteries.
6. Undertaking an all-out campaign to charge easy bikes during off-peak hours, until solar power systems charge all of them.
7. Encouraging the investors to take on more projects to install small-scale solar charging stations (SCS) nationwide.
8. Allocating financial resources in the national budget for installing SCS under the GOB agencies.
9. Provide subsidies for rooftop solar systems and solar charging stations at small-scale, and
10. Ensuring proper ESIA for the easy bike manufacturing factories.

# INTRODUCTION



**Image 1.** Different types of easy bikes in Bangladesh. **Photo:** Dynamic Cars Limited

In Bangladesh, battery-run rickshaws are known as *autos*, *autorickshaws*, *battery bikes*, *easy bikes*, *pakhi*, *tom-tom*, or *tuk-tuks* because of their different shapes and designs. They are electric three-wheelers usually run by lead-acid batteries, wholly imported or locally made with imported accessories (Rahman et al., 2016). The State Minister for the Ministry of Power, Energy and Mineral Resources (MOPEMR) praised the easy bikes, terming them the '*Banglar Tesla*' in a parliamentary session (Daily Star, 2024a).

It is said that the easy bikes started playing for the first time in Dinajpur town in the late 1990s (Majumdar, 2021). It spread out all over Bangladesh in the early 2000s in response to demands. Most easy bikes used to be imported from China at the initial



stage (TBS, 2021). In May 2011, GOB banned the import of manufactured easy bikes (bdnews24, 2011). Since then, local companies, including the Bangladesh Army-led Bangladesh Diesel Plant Limited, have assembled easy bikes based on local and imported accessories and technologies. 95% of these vehicles, including 70% of the parts, are made in Bangladesh (Haque, 2022).

**Image 2. A Clash broke out between Police and Easy Bike Drivers in Dhaka City.**



Photo: The New Age (19 May 2024)

On 18 May 2024, the Bangladesh Road Transport Authority (BRTA) decided to ban battery-run autorickshaws in the streets of Dhaka city (Chowdhury, 2024). BRTA made the decisions following the order of the Minister of Road Transport and Bridges (MORTB) on 15 May 2024 (DT, 2024b). In response to this decision, the autorickshaw owners and drivers started protesting on the streets. At least 13 rickshaw pullers were injured in the protest (New Age, 2024b). Some protesters clashed with police; at least 2,500 people were accused, and 42 were arrested (DT, 2024c; DT, 2024d). After two days of protest, the Prime Minister of Bangladesh ordered the respective authorities to cancel the decision to ban these vehicles in Dhaka city (New Age, 2024c).

The Parliamentary Standing Committee on the Ministry of Communication recommended licensing easy bikes in 2011

([Banglanews24, 2011](#)). However, BRTA has never given licenses, route permits, or fitness certificates to those, although they are imported and manufactured legally. Local Government Institutions (LGI), e.g., City Corporations, Municipalities, and Union Parishads, provided temporary parking numbers to run easy bikes in those urban areas ([Daily Star, 2017](#)). On the other hand, the respective ministries, i.e., the Ministry of Environment, Forest and Climate Change (MOEFCC), Ministry of Industries (MOIND), Ministry of Road, Transport and Bridges (MORTB), and Ministry of Commerce (MOCOM), have not taken any measures to stop manufacturers or importers from bringing more easy bikes on the streets.

### **Image 3. Queue of Easy Bikes on a City Street**



*Photo: The Business Standard*

In August 2015, GOB banned these electric three-wheelers on 22 national highways following the Supreme Court's order ([Daily Star, 2022b](#)). In December 2021, the High Court Division again ordered GOB to ban easy bike imports ([TBS, 2021](#)). The Supreme Court modified the order in April 2022 and ordered the ban of easy bikes on the highways ([Daily Star, 2022a](#)). However, in the absence of a proper public transport system, easy bikes spread out everywhere due to the interest of ordinary passengers. Even the parliamentary standing committee on MORTB deferred with the court and recommended easy bikes run on the highways ([Hasan, 2023](#)).

In 2023, GOB formulated the Electric Vehicle Registration and Operation Policy to legalize and regulate the country's EVs (BRTA, 2023). The policy includes battery-run three-wheelers in it. However, the conditionalities are too high for the locally-made easy bikes to meet. MORTB and BRTA have yet to take any initiative to lower the bars for registration, route permits, or fitness certificates of easy bikes (Zami, 2022). Although there is a policy and several EVs are imported and running on the streets, standards or institutions are still being determined to assess their capacity. As a result, an academy, Bangladesh University of Engineering and Technology (BUET), is referred to as the testing institution for EVs (Masum, 2019).

The respective agencies have been discussing legalizing battery-run three-wheelers since 2011, but a final decision has yet to be made. GOB endorsed the Automobile Industry Development Policy 2021, but easy bikes are not considered EVs in the policy (MOIND, 2021). Instead of policy support, legalization, permitting, and regulation, there is a common trend in the policymaking arena of defaming this new locally-built solution for public transport (Mirza, 2022).

# ECONOMIC ASPECTS



**Image 4.** *Locally made Easy Bikes are kept at a Showroom in Jashore, Bangladesh. Photo: Jashore Bike and Rumi Enterprise*

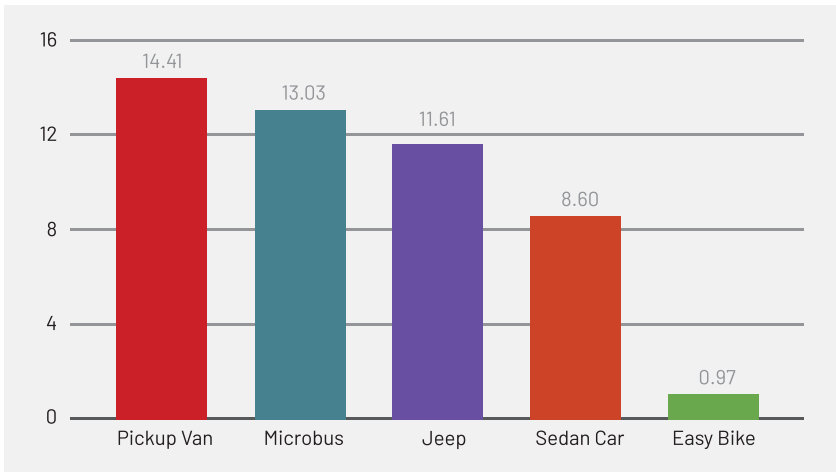
According to media reports, around 1.4 million easy bikes are running on the streets of Bangladesh, of which 1.1 million easy bikes were imported, and around 400 thousand are made in Bangladesh (Haque, 2022). However, the State Minister for MOPEMR stated that Bangladesh has 4 million easy bikes (Daily Star, 2024a). Rickshaw Van Easy Bike Sramik Union echoed the number (DT, 2024e). However, the number does not match the demand for accessories and electricity. If the number is concisely 1.4 million, at least 4.5 million people manufacture, drive, repair, and charge these vehicles.

The market size of easy bike manufacturing is at least BDT 7,500 crore (USD 802.4 million) in the country (Haque, 2022). At least 60% of the BDT 8,000 crore



(USD 942 million) battery market is contributed by EVs. The market is growing by 15% yearly (Parvez, 2020). The commuting, repairing, and charging services contribute an additional BDT 82,125 crore (USD 7.64 billion) to the economy. Thus, these vehicles contribute around BDT 97,625 crore (USD 9.38 billion) annually to the national economy.

**Figure 1. Fuel Cost of Small and Medium Vehicles in Bangladesh (BDT/km)**

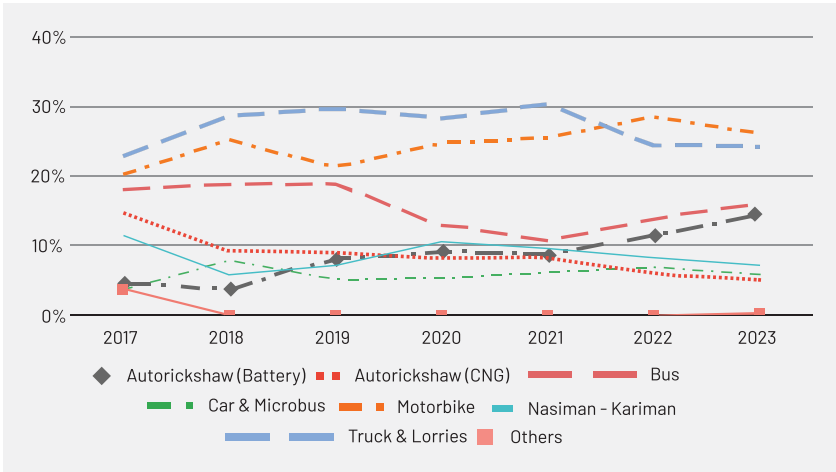


Source: Analysis of the Study Team

A Sedan car consumes 0.07 liter of petroleum per km, costing BDT 8.60 (BPC, 2024). On the other hand, an easy bike consumes 80 watt-hours (0.08 kWh) of electricity per km, which costs only BDT 0.97, nine times cheaper than regular cars (Power Division, 2024). Commuting on easy bikes is more affordable than any public transport system in the cities, i.e., the bus, which takes BDT 2.15/km (BSS, 2024).

Banning these vehicles on the city streets will significantly impact the income of a large portion of the population and the national economy. On the other hand, legalizing, licensing, and renewing these autorickshaws could add at least BDT 8,000 crore (USD 942 million) to the national revenue income (Desh, 2024). The only requirement is to make and implement intelligent decisions.

# ROAD SAFETY



**Figure 2.** Seven-year data shows that Bus, Truck and Motorbikes are more accident-prone than battery-run autorickshaws (2017-2023)

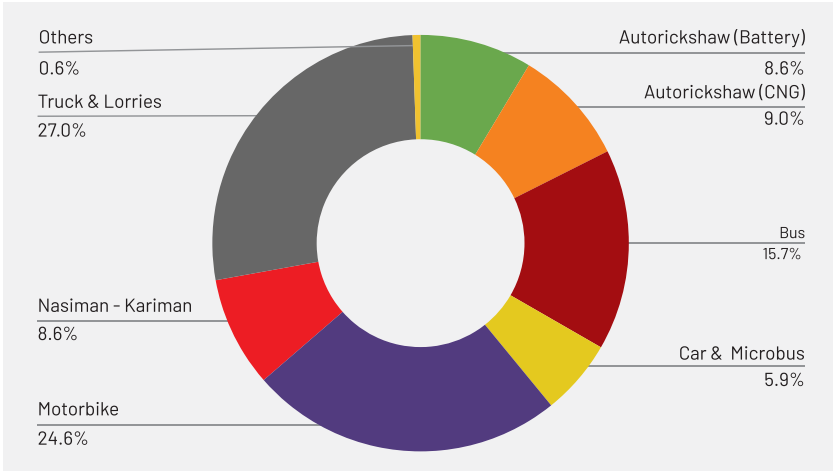
There is widespread defamation against easy bikes related to road safety in Bangladesh. Battery-powered rickshaws are more topple-prone than regular vehicles due to their low aerodynamic efficiency. However, easy bikes using small wheels are not that risky. Besides, the Easy Bike Action Committee (EBAC) demanded policy support to develop a safer e-rickshaw instead of banning it (Zami, 2022).

Some experts have told the media that easy bikes are often involved in accidents, and most are fatal (Akhter, 2020). It is true that the accidents due to auto-rickshaws increased to 8.56% in 2023, compared to 4.3% in 2017 (PWAB Reprints). It is also true that most easy bikes are made of low-quality materials.

However, the Annual Accident Reports of

the Passenger Welfare Association of Bangladesh (PWAB) says that the average number of accidents that happened by CNG auto rickshaws (8.98%) in the last seven years (2017-2023) is higher than battery-powered auto rickshaws (8.56%) in the same period (bdnews24, 2022; bdnews24, 2024; CHT Media, 2021; Jugantor, 2020; New Age, 2023; NewsG24, 2019).

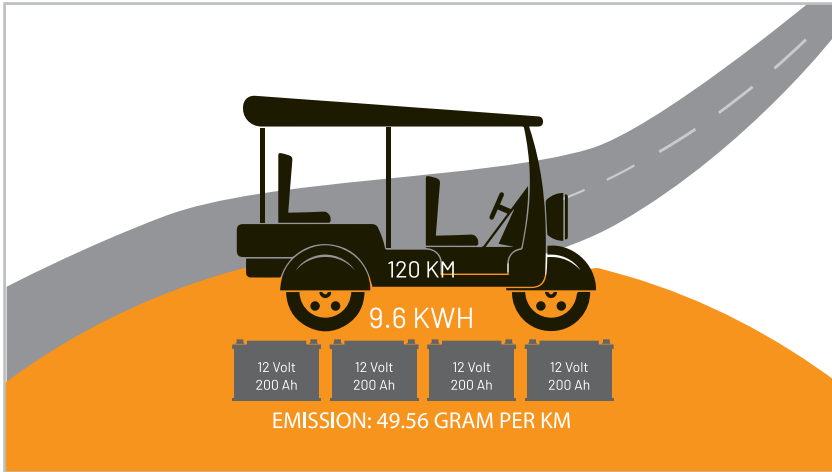
**Figure 3. Average share of Accidents by Vehicles (2017-2023)**



Source: Analysis of the Study Team based on Annual Accident Reports

According to the reports, Trucks, Lorries, and Covered vans are the most dangerous vehicles on the road, with (27%) of accidents, followed by motorbikes (24.6%), buses (15.7%), and CNG-run Autorickshaws (9%). On the other hand, Cars and Microbuses are the safest on the road, with (5.9%) of accidents, followed by Battery-powered auto rickshaws and Indigenous three-wheelers (commonly called nasiman-kariman) with (8.6%). Here, motorbikes are more accident-prone than easy bikes, but none of the experts are talking about banning motorbikes.

# ELECTRICITY USE



**Image 5:** Easy bikes use minimum energy among the vehicles available in Bangladesh

In February 2024, one of the parliament members told in a parliamentary session that easy bikes take 700-800 MW of electricity per day (Daily Star, 2024b). The number is arguable. Even then, MOPEMR could have started a campaign encouraging people to charge these vehicles after midnight when the country's electricity demand is the lowest (5:00 PM to 11:00 PM is the peak hours in Bangladesh, while off-peak hours start at midnight).

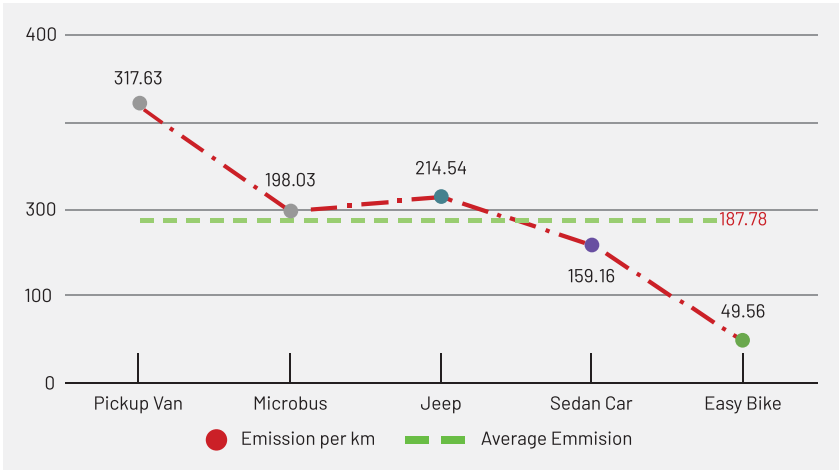
It is to be noted that GOB began such a campaign for irrigation pumps in the early 1990s and is still running (VB, 2024). MOPEMR could have also taken an effective plan to install Solar Charging Stations (SCS) nationwide with installation subsidies and Feed-in-tariff (FIT) so that the country can shift to a green economy, which ultimately

saves foreign exchange (Forex) reserves by reducing fossil fuel imports.

Easy bikes are more environmentally friendly than other petroleum-run vehicles in Bangladesh. According to the State Minister for MOPEMR, these car engines run at 20% efficiency, while easy bikes run at 80% (DT, 2024a). A sedan car with 1,200 cubic centimeters (cc) capacity requires 8.28 liters of petroleum to run 120 km at a constant speed (GFEI, 2019a), which emits 19.04 kgs of carbon dioxide (CO<sub>2</sub>e)(GFEI, 2019b).

On the other hand, an easy bike requires 9.6 kWh of electricity (see next paragraph) for the same distance, which emits 5.95 kg CO<sub>2</sub>e in the atmosphere, 3.2 times less than small cars, even if it gets charged by the grid electricity (average emission of the power sector was 619.49g/kWh in FY 2022–23). Even knowing this positive impact, MOEFCC has yet to take any action to promote battery-powered autorickshaws in the country.

**Figure 4. Emissions of Small and Medium size Vehicles (g/km)**

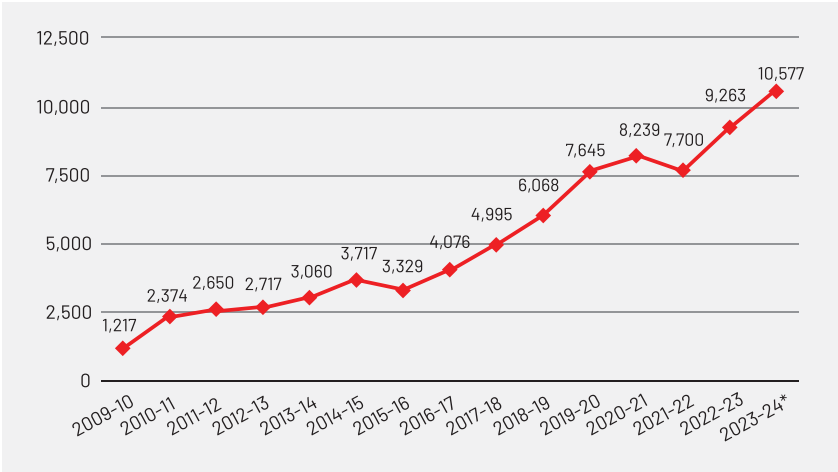


Source: Analysis of the Study Team based on Energy Consumption

An easy bike uses four 12 Volt 200 Ah batteries to run 120 km. Each battery needs 2,400 watt-hours (2.4 kWh) of electricity to charge at its total capacity. Thus, four batteries require 9.6 kWh of electricity per day. So, each easy bike can consume a maximum of 3,504 kWh of electricity annually.

Suppose there are 1.4 million such vehicles in the country. In that case, 4,905 GWh of electricity is required, which is 5.64% of the total electricity generated (87,024 GWh) in FY 2022-23 (BPDB, 2024a). The government needs only 659 MW of net installed capacity to fulfill the demand for easy bikes at 85% Plant Load Factor (PLF), according to the Power Purchase Agreements (PPA) with the private power producers.

**Figure 5. The Overcapacity in the Power Sector (MW)**

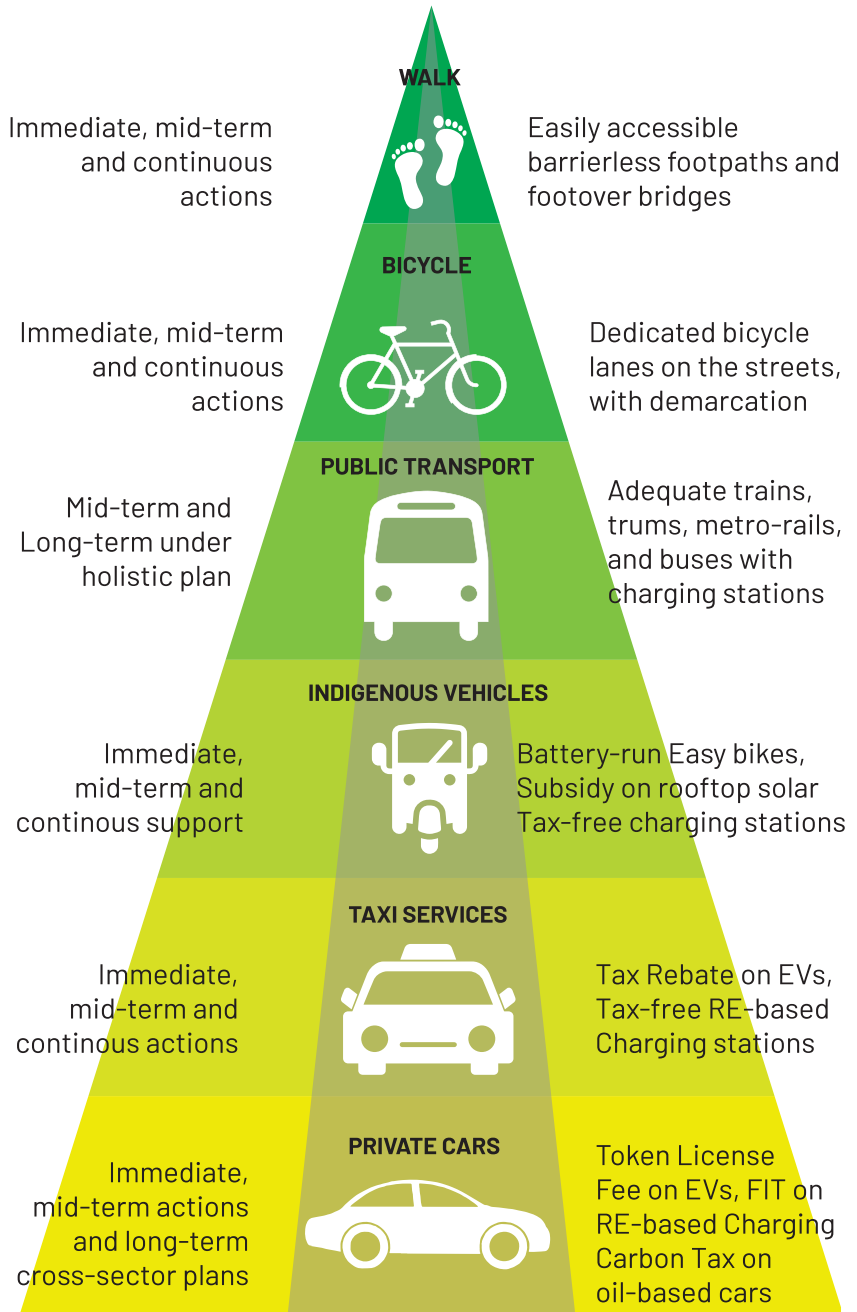


Source: BPDB Annual Report and Power Sector Progress Report

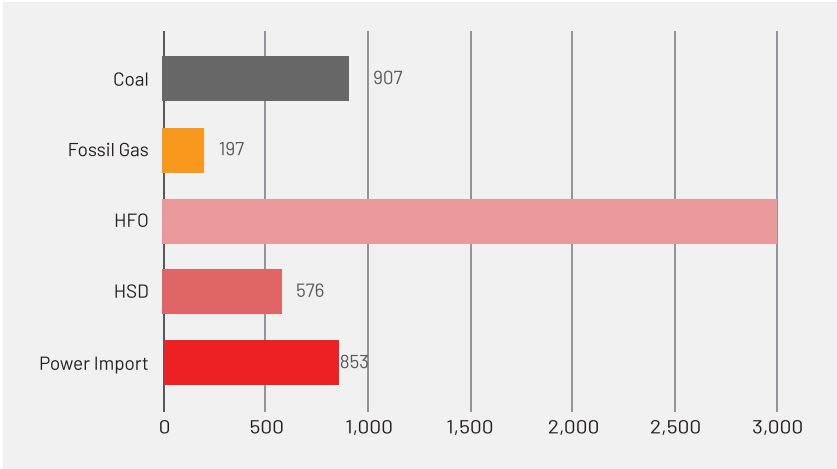
As of 30 March 2024, Bangladesh's power sector's capacity was 27,054 MW (BPDB, 2024b), which can generate 190,313 GWh of electricity annually at an 85% PLF rate. However, the maximum peak hour demand is 16,477 MW (30 April 2024), which means 10,577 MW (64.2%) of the capacity becomes stranded assets.

Besides, the annual electricity supply may reach only 96,200 GWh this year (FY 2023-24) if the demand growth continues at 8.8% annually. That means 49.5% of capacity will be kept idle in the power sector. Thus, easy bikes are helping GOB reduce stranded assets and overcapacity in the power sector.

**Figure 6. Green Transition in the Transport Sector**



# ENERGY CRISIS



**Figure 7.** *Import cost in the Power Sector including electricity import (USD Million). Source: BPDB Annual Financial Report 2022-23*

When easy bikes are helping the power sector by reducing its stranded capacity, it is unclear why MORTB is trying to ban these vehicles on city streets. Road accidents were a valid cause before 2015, but as easy bikes are forbidden on national highways, there is no chance of fatal road accidents caused by them. In reality, many easy bikes are still on the highways, and the implementation of strict traffic rules can stop them.

The actual problems should be discussed publicly. GOB installed and approved more fossil fuel-based power plants without confirming fuels or considering the risks. The actual problem is overdependence on fossil fuels for power generation. Despite the overcapacity in the power sector, the Bangladesh Power



Development Board (BPDB) is quite unable to supply electricity as per demand due to a shortage of fossil fuels, i.e., coal, domestic gas, liquefied natural gas (LNG), heavy fuel oil (HFO), and high-speed diesel (HSD).

Last year, the import cost (fuel and power) for electricity generation was BDT 59,858 crore (USD 5.53 billion), which means USD 461 million per month. It is one of the major causes of declining Forex reserves. In this crisis, the Bangladesh Petroleum Corporation (BPC) struggles to import fossil fuels from the exporting countries (Mohiuddin, 2024; Rahman, 2023). In February 2024, BPC had to take a USD 2.1 billion hard loan as a supplier's credit from the International Islamic Trade Finance Corporation (ITFC) to pay due bills for petroleum and LNG (Abdullah, 2024).

Thermal power plants cannot be run without primary energy, aka fossil fuels. Besides, BPDB has failed to pay Independent Power Producers (IPP) electricity bills regularly since the financial crisis started in 2022 (Hashim, 2023). As a result, BPDB struggles to fulfill the electricity demands of different sectors and started load-shedding (New Age, 2024a). The crises are piling up while the electricity demand is increasing at 9% per year. That is why the gap between demand and supply crossed 2,000 MW in 2022–23 after almost half a decade (BPDB, 2024a).

As policymakers and bureaucrats made the electricity crisis, particularly those related to MOPEMR, the first hit should not be easy-bike drivers. Instead, strict policy actions are to be taken against large consumptions, e.g., excessive use of air conditions, massive lighting, and luxury cars.

# GREEN TRANSPORT



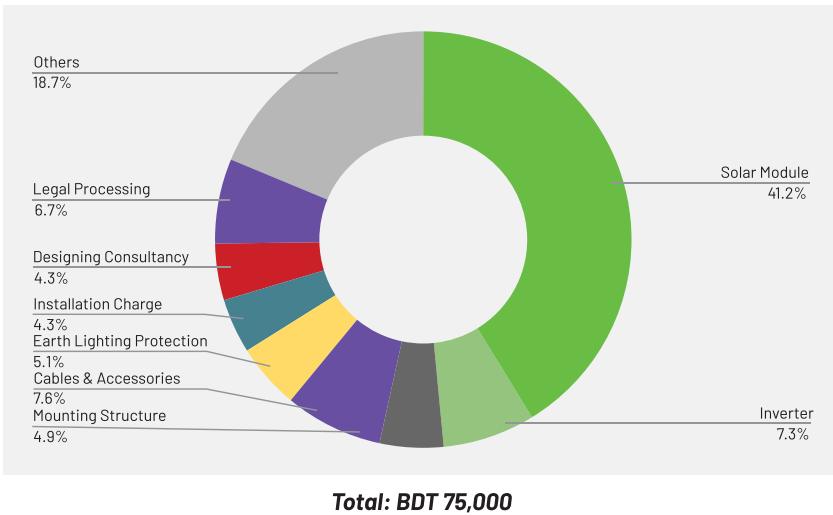
**Image 6.** A safe, green and sustainable transport system should be the ultimate goal of the country. **Photo:** The Asian Age (June 2022)

Individual off-grid Rooftop Solar PV Systems (RSPS) could be an option for charging easy bikes at the household level. An easy bike requires 9.6 kWh of electricity daily or 3,504 kWh annually. A 2.5 KWp solar power system is required to generate this much electricity. Here comes the first challenge. According to the calculation of the Infrastructure Development Company Limited (IDCOL), each KWp RSPS costs BDT 75,000 (USD 640), which means at least BDT 187,500 (USD 1,600) is required to install an RSPS for each easy bike.

Arranging the amount is difficult for any easy bike driver or owner of 1-3 easy bikes. Recently, the Government of India (GOI) has allocated INR 75,021 crore (USD 9.05 billion) for an exemplary scheme to promote residential RSPS, which could be replicated

in Bangladesh (ET, 2024). Under this policy, households may get up to INR 30,000 for 1 KWp (40%) RSPS, INR 60,000 for 2 KWp (40%), and INR 78,000 for 3 KWp (35%) (Dutta, 2024). The subsidy should be given at the same rate in Bangladesh, provided that the minimum subsidy is BDT 40,000 per KWp. This scheme may encourage individual easy bike owners and citizens to install and operate RSPS, ultimately decreasing fossil fuel import costs.

**Figure 8. Installation Cost of 1 KWp Rooftop Solar Systems (BDT)**



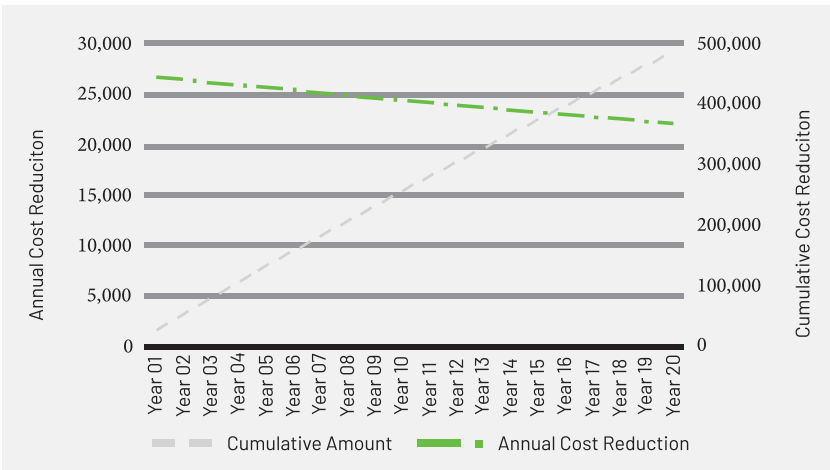
A 1 KWp solar system can generate 1620.6 kWh of electricity annually. The HFO import cost was BDT 13.54 per kWh of electricity in FY 2022-23. Thus, a 1 KWp solar system can save BDT 21,942 of Forex reserves by reducing HFO import annually, which is 55% of the subsidy. Besides, it can save BDT 4,797 of capacity payments (BDT 2.96/kWh in 2022-23) per year, 12% of the subsidy. So, GOB can recover the subsidy amount within 1.5 years of the payment. In 20 years of period, at least BDT 486,805 could be saved from import and capacity payments, which is 12.17 times higher than the proposed subsidy.

Taking this initiative, GOB should target fulfilling 15% of the electricity demand for easy bikes from residential RSPS by 2027, 25% by 2030, and 35% by 2041. However, the electricity demand for

easy bikes is too high for the RSPS. Supplying 4,905 GWh of electricity for 1.4 million easy bikes requires at least 3,027 MWp of Solar PV systems. SCS has no alternative to meet the demand.

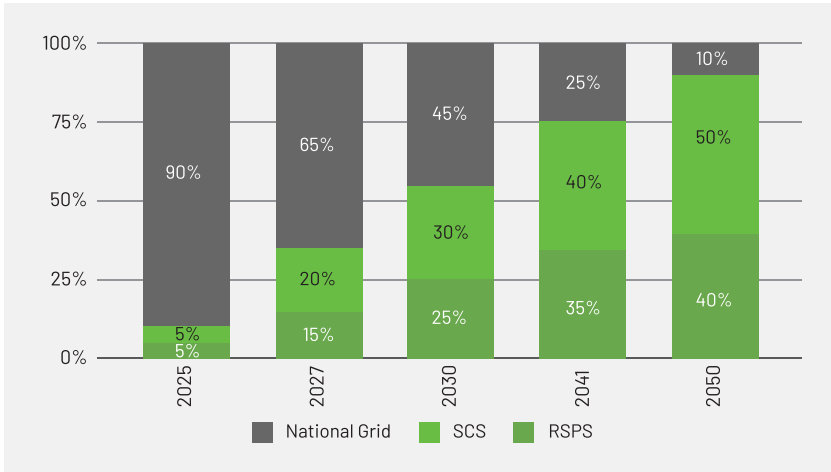
In July 2022, the GOB endorsed the Electric Vehicle Charging Guideline with an obligation of at least three charging points in private charging stations (Power Division, 2022). However, the first SCS (14.4 KWp) was installed in January 2016, six years before the Guidelines came to the public (Rasel, 2016). Since then, only 15 SCS, with a combined capacity of 291 KWp, have been installed in the last eight years (SREDA, 2024). These SCSs can supply around 0.47 GWh of electricity annually, which is 0.01% of the demand. So, rapid installation of SCS is required to green the easy bikes, and the transport sector as well.

**Figure 9. Cost Reduction in the Power Sector by Insalling 1 KWP Rooftop Solar PV System (in BDT)**



A small SCS that can charge three easy bikes requires 8.2 KWp of Solar Modules, which costs BDT 963,000 (BDT 117,400/KWp) on 2.5 decimals of land. As seasonal variation affects the electricity generation capacity of solar panels, and electricity demand fluctuates regularly, the small SCS might be connected with the national grid under the Net Energy Metering (NEM) Guidelines 2018 (SREDA, 2019). A feed-in tariff (FIT) of a minimum of 20% is required to make the scheme attractive to small investors.

**Figure 10. Proposed sources of Electricity for EVs, incl. Easy Bikes**



Taking this initiative, GOB should target to fulfill 20% of the electricity demand for easy bikes from SCS by 2027, 30% by 2030, and 40% by 2041. In this way, 75% of the electricity demand for easy bikes can be taken out of the national grid by 2041, which will support GOB's goal of ensuring 100% renewable energy (RE) by 2050, as targeted under the Mujib Climate Prosperity Plan (MCPP) 2022-2041 (MOEFCC, 2022). By 2050, 40% of easy bikes could be charged by RSPS, 50% by SCS, and 10% by the national grid.

# RECOMMENDATIONS



**Image 7:** *Procession and Memorandum submission program organized by the Rickshaw, Battery-run Rickshaw-van and Easy Bike Drivers' Movement Committee. Photo: The Dhaka Post*

As ordinary people, easy bike owners, and drivers are not responsible for this energy crisis and most of the fatal accidents, stopping easy bikes on the roads is neither constitutionally legal nor economically viable. GOB, especially MOIND, MOPEMR and MORTB, should take immediate measures to legalize and govern these battery-powered three-wheeler vehicles. As the most environment-friendly vehicle, GOB must take the necessary steps to support easy bikes, including -

1. Legalize Battery-powered three-wheel vehicles with minimum licensing fees and other conditionalities under the Electric Vehicle Registration and Operation Policy 2023.
2. Formulate a guideline to assess the capacity of EVs, including the easy

- bikes. Keep the licensing fees minimum and impose zero tax, considering their positive impacts on climate change.
3. Provide short driving courses for unemployed youths through the Department of Youth Development (DOYD).
  4. Ensure financial, technical and policy support to convert the lead-acid batteries to more efficient lithium-ion batteries.
  5. Provide battery-powered three-wheeler driving licenses through a short test to ensure that the candidate drivers can comply with essential knowledge and skills of driving such a vehicle.
  6. Undertake an all-out campaign to charge battery-powered three-wheelers during off-peak hours, especially after midnight and before 8:00 a.m.
  7. Encourage the investors to take on more projects to install small-scale solar charging stations (SCS) nationwide.
  8. Allocate financial resources in the national budget for installing SCS under the GOB agencies, e.g., BPDB, Distribution Companies (Discom), Bangladesh Road Transport Corporation (BRTC), Power Division, and Sustainable and Renewable Energy Development Authority (SREDA).
  9. Provide financial subsidies of at least BDT 40,000 per KWp of residential rooftop solar systems and Feed-in Tariff (FIT) for the operation of SCS at small-scale (up to 3 MWp) and individual (up to 3 KWp).
  10. Ensure Environmental and Social Impact Assessment (ESIA) for the easy bike, its accessories and battery manufacturing factories to ensure proper governance.

# ACRONYMS

Ah	Ampere-hour
BDT	Bangladesh Taka
BPC	Bangladesh Petroleum Corporation
BPDB	Bangladesh Power Development Board
BRTA	Bangladesh Road Transport Authority
BRTC	Bangladesh Road Transport Corporation
BUET	Bangladesh University of Engineering and Technology
CC	Cubic Centimeter
CO <sub>2</sub> e	Carbon Dioxide equivalent
Discom	Distribution Company
DOYD	Department of Youth Development
EBAC	Easy Bike Action Committee
ESIA	Environmental and Social Impact Assessment
EV	Electric Vehicle
EVRDP	Electric Vehicle Registration and Operation Policy
FIT	Feed-in Tariff
Forex	Foreign Exchange
GFEI	Global Fuel Economy Initiative
GOB	Government of Bangladesh
GOI	Government of India



GWh	Gigawatt-hour (1 million kWh)
HFO	Heavy Fuel Oil
HSD	High-speed Diesel
IDCOL	Infrastructure Development Company Limited
ITFC	International Islamic Trade Finance Corporation
INR	Indian Rupee
IPP	Independent Power Producer
KW	Kilowatt (1,000 watts)
kWh	Kilowatt-hour (1,000 watt-hours)
KWp	Kilowatt peak
LGI	Local Government Institutions
LNG	Liquefied Natural Gas
MCPP	Mujib Climate Prosperity Plan
MOCOM	Ministry of Commerce
MOEFCC	Ministry of Environment, Forest and Climate Change
MOIND	Ministry of Industries
MOPEMR	Ministry of Power, Energy and Mineral Resources
MORTB	Ministry of Road Transport and Bridges
MW	Megawatt (1,000 KW)
MWp	Megawatt peak
NEM	Net Energy Metering
PLF	Plant Load Factor
PPA	Power Purchase Agreement
RE	Renewable Energy
RSPS	Rooftop Solar Photovoltaic Systems
SCS	Solar Charging Station
SREDA	Sustainable and Renewable Energy Development Authority
USD	United States Dollar

# REFERENCES

- Abdullah, S. (2024). "Bangladesh secures \$2.1b loan for energy imports." *the Business Standard*: 7 February 2024
- Akhter, S. (2020). "Easy bikes keep running on Dhaka roads." *the New Age*: 16 October 2020
- Banglanews24 (2011). "ইজিবাইক লাইসেন্স ইস্যুর কর্তৃত্ব বিআরটিএকে দেওয়ার সুপারিশ." *the Banglanews24.com*: 3 May 2011
- bdnews24 (2011). "Govt bans import, production of Easy-bikes." *the bdnews24.com*: 5 May 2011
- bdnews24 (2022). "২০২১ সালে সড়কে বাড়েছে ৭৮০৯ প্রাণ: যাত্রী কল্যাণ সমিতি." *the bdnews24.com*: 23 January 2022
- bdnews24 (2024). "Bangladesh lost 7,902 lives to road accidents in 2023: study." *the bdnews24.com*: 14 January 2024
- BPC (2024). *Local Selling Price of Petroleum Products*. Bangladesh Petroleum Corporation (BPC): 12 May 2024
- BPDB (2024a). *Annual Report 2022-2023*. Bangladesh Power Development Board (BPDB): 1 January 2024
- BPDB (2024b). *Information on the Progress of the Power Sector*. Bangladesh Power Development Board (BPDB): 8 April 2024
- BRTA (2023). *Electric Vehicle Registration and Operation Policy 2023* (Bengali). Bangladesh Road Transport Authority (BRTA): 23 February 2023
- BSS (2024). "Govt committee recommends reducing bus fares by three paisa per km." *the BSS News*: 1 April 2024

- Chowdhury, K. R. (2024). "Bangladesh cracks down on 3-wheelers in Dhaka over traffic, health concerns." *the Benar News*: 17 May 2024
- CHT Media (2021). "২০২০ সালের বার্ষিক সড়ক দুর্ঘটনার প্রতিবেদন প্রকাশ করেছে যাত্রী কল্যাণ সমিতি." *the CHT Media*: 9 January 2021
- Daily Star (2017). "Easy bikes outgrowing limitations." *the Daily Star*: 29 September 2017
- Daily Star (2022a). "Easy-bikes cannot run on highways: SC." *the Daily Star*: 4 April 2022
- Daily Star (2022b). "Govt goes soft on 3-wheelers on highways." *the Daily Star*: 16 November 2022
- Daily Star (2024a). "Tesla of Bangla': Nasrul Hamid defends battery-run three-wheelers." *the Daily Star*: 8 February 2024
- Daily Star (2024b). "Tesla of Bangla!." *the Daily Star*: 9 February 2024
- Desh (2024). "বহুরে অন্তত ৮ হাজার কোটি টাকা রাজস্ব বঞ্চিত হচ্ছে সরকার." *the Desh*: 23 April 2024
- DT (2024a). "Nasrul Hamid: Battery-run auto-rickshaws are 'Tesla of Bangla.'" *the Dhaka Tribune (DT)*: 8 February 2024
- DT (2024b). "Battery-run rickshaws to be banned in Dhaka." *the Dhaka Tribune (DT)*: 15 May 2024
- DT (2024c). "Autorickshaw protests: 2,500 accused in four cases." *the Dhaka Tribune (DT)*: 20 May 2024
- DT (2024d). "Autorickshaw protests: 42 people land in jail." *the Dhaka Tribune (DT)*: 20 May 2024
- DT (2024e). "Battery-run autorickshaw drivers present 4-point demand." *the Dhaka Tribune (DT)*: 21 May 2024
- Dutta, S. (2024). "Who can use PM's rooftop solar scheme, what are the benefits." *the Times of India*: 9 March 2024
- ET (2024). "Cabinet approves rooftop solar subsidy scheme at an outlay of Rs 75,021 cr." *the Economic Times (ET)*: 29 February 2024
- GFEI (2019a). "Bangladesh shares fuel economy baseline." Global Fuel Economy Initiative (GFEI): 10 May 2019
- GFEI (2019b). *Developing a Clean and Efficient Vehicle Policy for Bangladesh*. Global Fuel Economy Initiative (GFEI): May 2019
- Haque, Ashraful (2022). "Easy bikes: We like them, we like them not." *the Business Standard*: 3 January 2022
- Hasan, R. (2023). "Three-wheelers will not be banned on highways." *the*

*Daily Star*: 31 July 2023

- Syed, M.H. (2023). "Power producers facing uncertain future." *the Financial Express*: 22 December 2023
- Jugantor (2020). "২০১৯ সালে সড়কে নিহত ৭৮৫৫." *the Jugantor*: 11 January 2020
- Majumdar, B. (2021). "ইজি নয় ইজি বাইক চালকের জীবন." *the Biporit Srot*: 18 February 2021
- Masum, O. (2019). "Bangladesh moves to charge electric car revolution with legal cover." *the bdnews24.com*: 24 January 2019
- Mirza, M. (2022). "Questions Bangladeshi media does not ask about easy bikes." *the Prothom Alo*: 25 September 2022
- MOEFCC (2022). *Mujib Climate Prosperity Plan 2022-2041*. Ministry of Environment, Forest and Climate Change (MOEFCC): February 2022
- Mohiuddin (2024). "Huge dues in the power-energy sector due to dollar, taka crisis." *the Prothom Alo*: 29 January 2024
- MOIND (2021). *Automobile Industry Development Policy 2021*. Ministry of Industries (MOIND): 16 September 2021
- New Age (2023). "Road accidents killed 9,951 in 2022." *the New Age*: 2 January 2023
- New Age (2024a). "Frequent power cuts at places as heatwave returns." *the New Age*: 3 April 2024
- New Age (2024b). "Police clash with battery-run rickshaw pullers." *the New Age*: 19 May 2024
- New Age (2024c). "Govt backtracks on ban on battery-run rickshaw." *the New Age*: 20 May 2024
- NewsG24 (2019). "২০১৮ সালে সড়ক দুর্ঘটনায় ৭২২১ জন নিহত." *the NewsG24.com*: 25 January 2019
- Parvez, Sohel (2020). "Battery market swells riding on fast-expanding easy-bikes." *the Daily Star*: 27 October 2020
- Power Division (2022). *Electric Vehicle Charging Guideline*. Power Division, Ministry of Power, Energy and Mineral Resources (MOPEMR): 4 July 2022
- Power Division (2024). *Electricity Tariff*. Power Division, Ministry of Power, Energy and Mineral Resources (MOPEMR): 29 February 2024
- Rahman, M.A. (2023). "Fuel import faces a risk for payment default." *the Financial Express*: 7 November 2023

- Rahman, M.M, Baky, M.A.H., Islam, A.K.M.S. and Matin, M.A.A. (2016). "Conference Paper: A techno-economic assessment for charging easy bikes using solar energy in Bangladesh." *4th International Conference on the Development in Renewable Energy Technology (ICDRET)*: January 2016
- Rasel, A.R. (2016). "First solar-powered easy bike charging station opens today." *the Dhaka Tribune*: 21 January 2016
- SREDA (2019). *Net Metering Guidelines 2018*. Sustainable and Renewable Energy Authority (SREDA): November 2018
- SREDA (2024). *National Database of Renewable Energy: Solar Charging Station*. Sustainable and Renewable Energy Development Authority (SREDA): 15 May 2024
- TBS (2021). "HC imposes ban on import of battery-run easy bikes, orders them to be removed from roads." *the Business Standard*: 15 December 2021
- VB (2024). "Irrigation to run from 12:00 pm to 6:00 am." *the Views Bangladesh*: 13 March 2024
- Zami, M.T. (2022). "Legalising Bangladesh 'easy bike' taxis could drive safer, greener industry." *Reuters*: 30 April 2022

Coastal Livelihood and Environmental Action Network (CLEAN) is an environmental and human rights organization working in the sectors of Energy and Power, Climate Justice, and Forest Biodiversity. Besides our working areas, we work in partnership with local, national, and international organizations, networks, alliances, and forums to amplify people's voices for rights, justice, and equality.

As the secretariat of the Bangladesh Working Group on Ecology and Development (BWGED), we work in the districts of Bagerhat, Barguna, Barishal, Bhola, Chattogram, Cox's Bazar, Dhaka, Jamalpur, Khulna, Munshiganj, Mymensingh, Narayanganj, Netrokona, Noakhali, Panchagarh, Patuakhali, Rajshahi, Rangpur, Satkhira, Sunamganj and Sylhet.

We are also responsible for operating the secretariat of the South Asia Just Transition Alliance (SAJTA). Through SAJTA, we work with the grassroots campaign and research organizations of India, Nepal, Pakistan, and Sri Lanka.

### **Contact**

#### **Coastal Livelihood and Environmental Action Network (CLEAN)**

4 Mallick Bari Road, Boyra-Rayermahal, Khulna 9000, Bangladesh

Phone: +88 02 477 701 458, Email: [info@cleanbd.org](mailto:info@cleanbd.org)

Website: <https://cleanbd.org>