

Wind of Change

Renewable Energy in Bangladesh

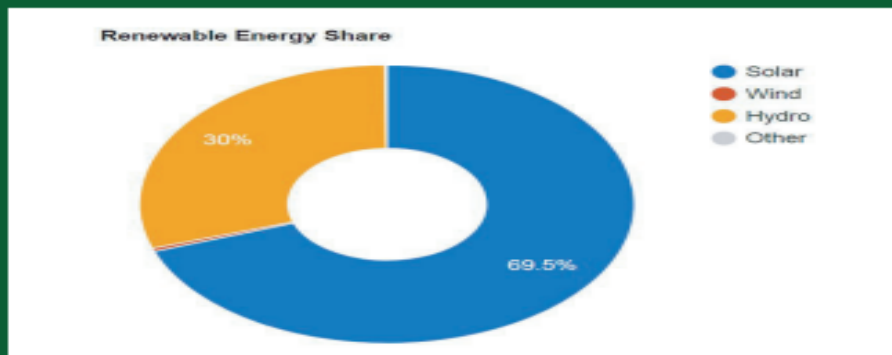


"... Bangladesh is the pioneer in climate change adaptation and mitigation efforts. We have recently submitted an ambitious and updated Nationally Determined Contributions (NDC). We have adopted the 'Mujib Climate Prosperity Plan' focusing on green growth, resilient infrastructure and renewable energy..."

-Sheikh Hasina, Hon'ble Prime Minister, Government of the People's Republic of Bangladesh

(Collected from the speech of the Prime Minister at the 9th Annual International Conference on Sustainable Development, 20 September 2021 at the United Nations, New York)

RE Scenario in Bangladesh



Technology	Off-grid (MW)	On-grid (MW)	Total (MW)
Solar	346.7	186.11	532.81
Wind	2	0.9	2.9
Hydro	0	230	230
Biogas to Electricity	0.69	0	0.69
Biomass to Electricity	0.4	0	0.4
Total	349.79	417.01	766.8

Source: www.sreda.gov.bd

Around 6 million solar home systems (SHS) have already been set up that meets the basic electricity needs of more than 20 million people which is larger than the population of Sweden, Denmark and Finland Combined.

The international community recognizes Bangladesh's SHSs as the largest and fastest growing solar power dissemination programme in the world.



Photo Credit:IDCOL

Solar Home System

Solar Park



50 MW Solar Park at Shutiakhali, Mymensingh, Bangladesh

So far, 7 solar parks have been set up across the country with total capacity of 130 MW

As on 30 September 2021, 29 Solar parks with a total capacity of 1350 MW is under implementation and planning.

SREDA has set up 'National Solar Help Desk' for providing information stakeholders.

Web: <http://shd.sreda.gov.bd>

Email: nshd@sreda.gov.db

Hotline No: +880 1550 777 777

National Solar Help Desk



Renewable Energy Database

SREDA has developed a National Database of Renewable Energy to collect and collate renewable energy data.

Web: www.renewableenergy.gov.bd

There is also a database of renewable energy stakeholder with detailed information of government and non-government organizations.

Web :<https://stdb.sreda.gov.bd>

Rooftop Solar



20 MW Rooftop Solar in Korean EPZ Corporation (BD), Chattogram,



Bangladesh

The government formulated 'Net Metering Guidelines-2018' with the aim of connecting the rooftop solar system through net metering to feed surplus electricity to the grid.

An online net metering calculator has been developed by SREDA to facilitate the Initial assessment of net metering system.

As on 30 September 2021, The number of Net Metered connection reaches close to 1500 with an aggregated capacity of 34 MW.

Solar Irrigation

The government aims to replace diesel-powered pumps by solar powered pumps to prevent environmental pollution and reduce carbon emissions.

As on 30 September 2021, a total of 2154 solar irrigation pumps have been installed across the country with a combined capacity of around 45 MW.

SREDA Formulated 'Grid Integration Guidelines for Solar Irrigation Pumps-2020' allowing surplus energy generated by the system to feed into the grid thereby increasing economic viability.



Floating Solar System



Bangladesh's first Floating Solar PV of 10 kwp Capacity atop Mongla port Municipality Water Treatment Reservoir.

Initiative has been taken to implement a 50 MW floating solar power plant at two pit lakes (created due to subsidence) of Barapukuria Coal Mining Company Limited Dinajpur.

Wind Energy

Site-specific wind data collection has been started in 4 coastal areas at the initiative of SREDA to facilitate site selection and bidding Process for IPP based wind power plants.

In addition, the data of all the sites where wind data has been collected so far has been uploaded on the SREDA website which is easily accessible through <http://sreda.gov.bd> web link.

SREDA has also taken initiative to get an idea about Offshore Wind Data by a LiDAR in Sonadia Island, Cox's bazar.



Wind Energy

To date 5 wind power projects with an aggregated capacity of 245MW is under implementation.

Wind data has been collected under the "Wind Resource Mapping Project" to assess the potential of wind power in 9 (nine) places of Bangladesh.

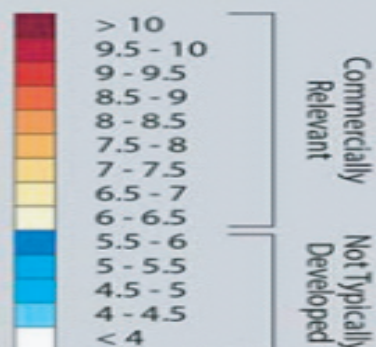
NREL has developed a universally accessible Renewable Energy Data Explorer Toolkit and a Modeled Bangladesh Wind Data Set to obtain the basic data required for wind power projects. Easily accessible via the web link

<https://WWW.re-explorer.org/launch.html> and

<https://WWW.re-explorer.org/ban-gladesh-data.html>.

Wind Resource at 120 meters

Wind Speed (m/s)



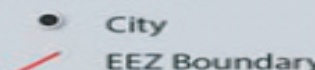
Transmission (kV)



Measurement Station



Other Features



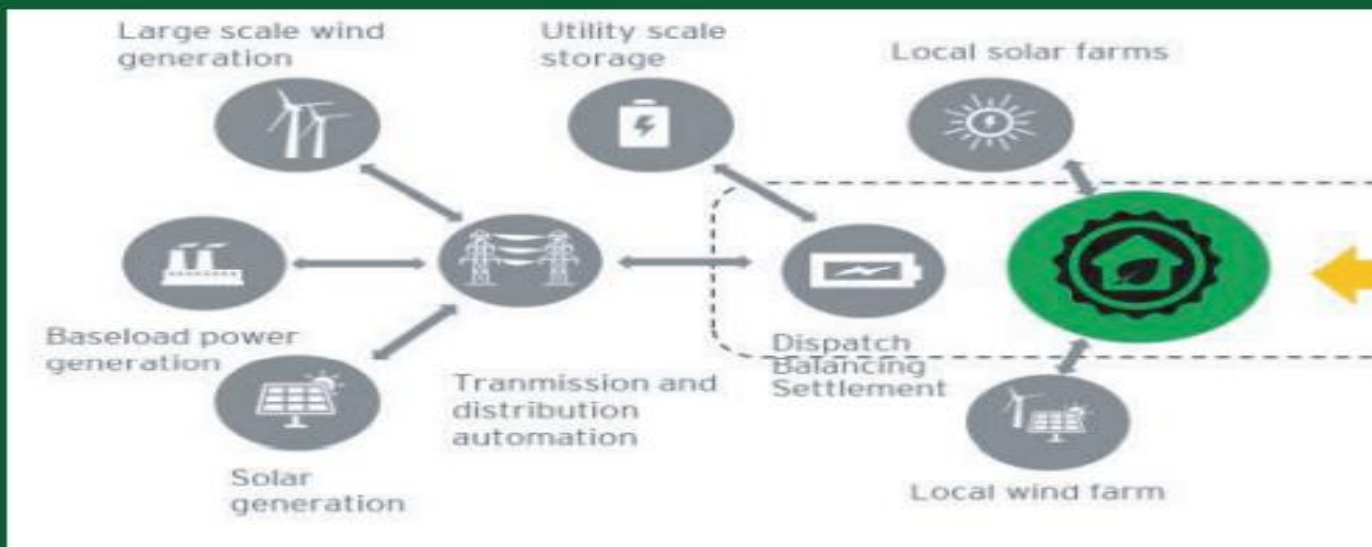
Electric Vehicle Charging



More than 1 million battery-run electric three-wheelers are operating across Bangladesh, consuming a significant amount of energy every day.

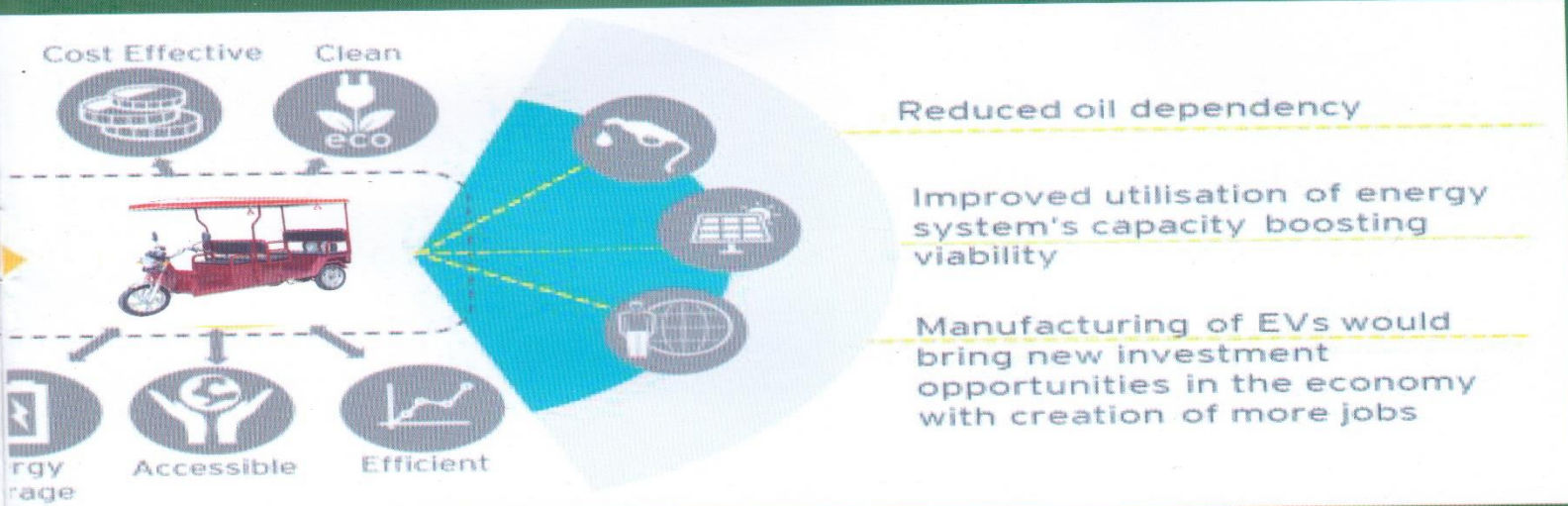
Battery-run three-wheelers are replacing fuel-operated three-wheelers in the rural areas at an increasing rate.

With a proper regulatory framework, these have the potential of creating huge economic, social and environmental benefits in Bangladesh.



SREDA has taken the initiatives to generate employment opportunities for small entrepreneurs and proactively support the creation of EV charging Infrastructure.

SREDA has already prepared Electric Vehicle Charging Guideline for smooth operation of charging stations for electric vehicles in Bangladesh.



The number of biogas system reaches close to 0.1 million. Around 1.09 MW of electricity generation from Biogas Plants.

Biogas Technology



Domestic Biogas Plant

Photo Credit:IDCOL

Letter of Intent (LoI) has been issued for 02(two) waste to energy plant [42.5 MW at Amin Bazar, 6 MW at Narayanganj]



*Honorable Prime Minister Sheikh Hasina has been awarded prestigious
“SDGProgress Award”*