

ENERGY  
CATALYST

# Country Guide: Bangladesh

June 2020



## Country Guide: Bangladesh

Bangladesh is located in South Asia. It is the 92<sup>nd</sup> largest country by area and the eighth most populous country in the world. Bangladesh shares land borders with India to the west, north and east, Myanmar to the southeast, and the Bay of Bengal to the south. It is separated from Nepal and Bhutan by India's Siliguri Corridor, and from China by the Indian state of Sikkim in the north, respectively. Dhaka, the capital of Bangladesh is the largest city in the country and is the hub of the nation's economic, political and cultural activity. Chittagong is the second largest city and has the largest seaport. With numerous criss-crossing rivers and inland waterways, the Ganges delta is the dominant geographic feature of Bangladesh, and empties into the Bay of Bengal.

**Table 1: Bangladesh at a glance**

<b>Capital</b>	Dhaka
<b>Total Area</b>	0.15 million km <sup>2</sup>
<b>Population</b>	0.16 billion (2018)
<b>Official languages</b>	Bengali
<b>Rural Population</b>	62% (2018)
<b>GDP</b>	USD 0.3 trillion (2018)
<b>GDP Per Capita</b>	USD 1,875 (2018)
<b>Currency</b>	Bangladeshi Taka(BDT)
<b>Exchange rate 01/03/2020</b>	1 USD = 85.10 BDT
<b>Exchange rate 01/03/2018</b>	1 USD = 81.50 BDT
<b>Access to Electricity</b>	90% (2018)



*Figure 1 Map of Bangladesh. Source: d-maps*

### Geography and climate

Located in the belt of the Tropic of Cancer, Bangladesh has mild winters from October to March, hot and humid summers from March to June, and a warm and humid monsoon season from June to October supplying most of the country's rainfall. The country experiences natural calamities such as floods, tropical cyclones, tornadoes and tidal bores almost every year along with the effects of deforestation, soil degradation and erosion. Bangladesh is also widely recognised to be one of the countries most vulnerable to climate change in the world.

### Government

Bangladesh is a de jure representative democracy under its constitution, with a unitary parliamentary republic. The head of government is the Prime Minister, who is invited to form a government every five years by the President. The country is divided into eight divisions. Each division is named after the

major city (e.g. Dhaka, Chittagong, Khulna, Slyhet, Rangpur, Rajshahi, Mymensingh and Barisal) within its jurisdiction and also serves as the administrative headquarter of that division. Each division is further split into several districts which are then further sub-divided into Upazillas or sub-districts.

## Economy

Bangladesh is one of the world's fastest growing economies, the world's 39<sup>th</sup> largest economy by nominal GDP and 29<sup>th</sup> largest economy by purchasing power parity. It is a member of the South Asian Association for Regional Cooperation (SAARC), the United Nations, the Commonwealth nations, Organization of Islamic Cooperation, Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) and various other global platforms.

Bangladesh had an average GDP growth rate of 7.5% over the last two years (FY 18 and FY 19). The service sector contributes to the highest share of GDP, followed by industries and agriculture sectors.

In the annual World Bank survey on "Doing Business", a comparison of business regulations in 190 economies, Bangladesh secured 168<sup>th</sup> position in 2020, improving from 176<sup>th</sup> in the previous year. This was driven by three key factors including reduction in expenses for setting up new businesses, improvements in the access to credit information, and greater efficiency in obtaining an electrical connection. The study ranks Bangladesh as 131 out of the 190 countries with a score of 82.4 out of 100 for the ease of starting a business.

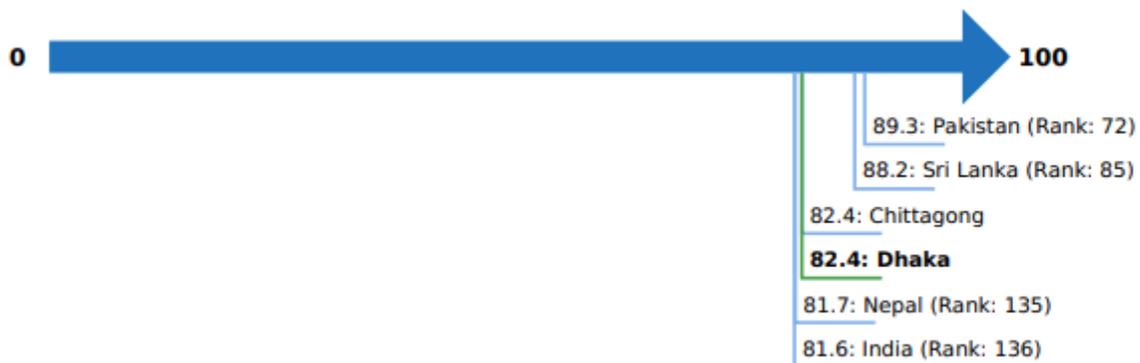


Figure 2: Doing Business 2020 score for starting a business. Data from: World Bank Group, 2020

Figure 2 provides a comparison of Bangladesh to similar economies for starting a business.

There has been a marked improvement in the overall standard of living in Bangladesh over the years. Between 1990 and 2018, Bangladesh's HDI value increased by 58.3%, with life expectancy at birth increasing by 14.1 years, mean years of schooling increasing by 3.2 years and expected years of schooling increasing by 5.6 years. The literacy rate in Bangladesh has also increased from 47.5% in 2001 to 73.9% in 2018. As of 2018, the infant mortality rate in the country was 25.1 infants per 1000 live births, a reduction of 60% over the last two decades. The population living below the national poverty line in Bangladesh dropped to 21.8% in 2018 from 31.5% in 2010.

## The energy sector in Bangladesh

The energy sector in Bangladesh is highly dependent on fossil fuels such as natural gas, oil and coal, which are the main sources of power generation in the country. In 2020, the installed power capacity in Bangladesh was 22.56 GW. About 48.12% of the capacity came from natural gas, 2.36% from coal, 32% from heavy oil, and 2.83% from renewable sources. The balance 15% was derived from captive power plants and imported from neighbouring countries.

By 2018, about 90% of the population in Bangladesh had access to electricity, according to the Bangladesh Power Development Board (BPDB), a public sector organisation responsible for planning and developing Bangladesh's power infrastructure and for operating most of its power generation facilities. The Government's vision is to ensure universal access to electricity for all citizens by 2021. According to the 2016 Power System Master Plan (PSMP) of the government, power generation capacity will be 24,000 MW by 2021, 40,000 MW by 2030 and 60,000 MW by 2041.

**Table 2: Breakdown of RE capacity in Bangladesh**

Technology	Off-grid (MW)	On-grid (MW)	Total (MW)
Solar	312.1	80.92	393.01
Wind	2.0	0.9	2.9
Hydro	0.0	230.0	230.0
Biogas	0.63	0.0	0.63
Biomass	0.4	0.0	0.4
<b>Total</b>	<b>315.13</b>	<b>311.8</b>	<b>626.94</b>

626.94 MW of the total installed power capacity is attributed to Renewable Energy (RE). The detailed break-up of power generated from RE is shown in Table 2.

Assessments in the Bangladesh Climate Investment Fund's (CIF) Scaling Up Renewable Energy Program (SREP) investment plan suggest a potential of additional 3,666 MW of RE capacity in Bangladesh. To exploit this potential, the government has introduced several plans and targets for adding RE capacities, including the 2008 National Renewable Energy Policy (2,000 MW by 2020), the 2016 Renewable Energy Development Targets (3,100 MW by 2021) and the 2016 Power System Master Plan (2,470 MW by 2021 and 3,864 MW by 2041). The Sustainable and Renewable Energy Development Authority (SREDA) was established in 2014 to coordinate the activities related to the development of RE technologies and financing mechanisms.

The RE development targets call for an additional 3,100 MW of RE capacity to be installed by 2021. Most of the new capacity will be provided by solar (1,676 MW, or 54%) and wind (1,370 MW, or 44%). There are also targets for waste-to-energy (40 MW), biomass (7 MW), biogas (7 MW) and hydro (4 MW).

As per Bangladesh's Nationally Determined Contribution (NDC), 10% of its electricity will be derived from renewable sources by 2020, by adding 1,000 MW of utility-scale solar capacity and developing a 400 MW wind power generation capacity by 2020. The country has pledged to reduce its GHG emissions by 5% below 'business-as-usual' level by 2030.

To boost the RE sector, in 2014, the Bangladesh Bank established a BDT 2 billion revolving fund to refinance RE energy projects through commercial banks and financial institutions with concessionary terms and conditions. The Infrastructure Development Company Limited (IDCOL) in Bangladesh also finances projects and programs that utilize renewable energy sources by providing start-up subsidy, concessionary credit, and capacity development support. In February 2019, the World Bank approved USD 185 million in financing to

support the addition of 310 MW of RE generation capacity (mainly utility-scale RE and rooftop solar PV) in Bangladesh, under the [“Bangladesh Scaling-Up Renewable Energy Project.”](#)

However, despite multiple initiatives by the government and development organisations, the progress on increasing the share of RE in the energy mix has been fairly slow. Bangladesh’s energy sector continues to suffer from regular power shortages, increasing demand, declining domestic natural gas reserves, and inadequate transmission infrastructure.

Other key barriers to the growth of RE in Bangladesh include the following:

- **Institutional challenges and limited project experience:** There are very few utility-scale projects in the country, leading to low knowledge and implementation capacities. The institutional capacity to negotiate power purchase agreements (PPAs) with independent power producers (IPPs) is also low.
- **Poor access to land resources:** Accessing land is a major roadblock for utility scale RE projects. Land has various alternative uses such as agriculture, residential and industrial uses and most of the suitable land for RE is often owned by the government in low lying areas which are also prone to seasonal flooding.
- **Financing market challenges:** There remains a lack of financing market to provide long term financing to RE projects (especially utility-scale projects), limited due diligence capacity and lack of a functioning syndication market. Other key issues include limited experience and knowledge of managing utility scale RE projects, limited foreign currency financing capacity, small base of institutional investors and insufficiently developed capital markets.
- **Project development challenges:** There are multiple barriers to project development, including insufficient data on resource availability, inadequate due diligence on projects and lack of technical studies.

### Solar energy

Bangladesh receives an average daily solar irradiation of 4–6.5 kWh/m<sup>2</sup> with average peak sun hours of 5 hours/day. The current on-grid and off-grid installed solar power capacity in Bangladesh is 80.9 MW and 312.1 MW respectively. The CIF-SREP investment plan estimates the total potential for ground-mounted solar and solar rooftop to be 2,035 MW.

Bangladesh has one of the largest domestic solar energy programmes in the world. Relevant programs are presented below:

**Table 3: Installed capacity and no. of SHS and solar street lights**

Off-grid technologies	Installed capacity	Numbers installed
SHS	248.3 MW	5,804,222
Solar street lights	10.59MW	2,02,017

*Off-grid projects:* Based on data provided by SREDA, Table 3 shows the total installed capacity and number of off-grid solutions like SHS and solar streetlights in Bangladesh till date.

IDCOL plays a pivotal role in the promotion of off-grid SHS in Bangladesh. IDCOL is a non-banking financial institution, established by the Government of Bangladesh in 1997 to bridge the financing gap for developing medium to large scale infrastructure and RE projects in Bangladesh. IDCOL started the SHS program in January 2003 to provide electricity to rural and remote areas that are not connected to the grid. By December 2019, a total of 4.13 million SHSs with an installed capacity of 185 MWp had been disseminated under the programme. The programme has received credit and grant support from the World Bank, GEF, GIZ, KfW, ADB, IDB, GPOBA, JICA, USAID and DFID. Small-scale SHS deployed by IDCOL provided electricity to more than four million households and about 20 million people in rural areas, constituting one-eighth of the country's population. IDCOL has a target to finance six million SHS by 2021, with an estimated capacity of 220 MW.

Under the programme, IDCOL recruits Participating Organisations (POs) who are provided subsidies and concessionary credit by IDCOL to buy the equipment from suppliers and extend financing to customers. The POs select potential SHS buyers in off-grid areas, extend loans, install the systems and provide after-sales service support. IDCOL's PO selection committee screens these POs against eligibility criteria for inclusion in the programme. IDCOL's technical standards committee approves the suppliers and the SHS equipment prior to installation. Until 2018, 56 POs, including non-government organisations, micro-finance institutions, societies, foundations, and/or private entities were implementing the programme and had installed a total of 4,135,512 SHSs in rural areas of Bangladesh. IDCOL also provides necessary trainings and promotional support to POs to ensure the quality of the programme. IDCOL's total investment under the programme until March 2018 was USD \$696.50 million, including loans of USD \$600 million and grants worth USD \$96.50 million.

IDCOL provides low cost credit to POs at an interest rate of about 6%–8% (lower than the market rate of 12%–15%), and POs sell the SHS to customers on credit at a 12% interest rate, payable in instalments over three years. The IDCOL programme also involves subsidies in the form of a capital buy-down grant and an institutional development grant. For SHS, loans are provided by IDCOL on the terms highlighted in Table 4 below.

**Table 4: Lending terms offered by IDCOL for SHS**

Particulars	Term Details	
<b>Loan amount</b>	Up to BDT 250 M	80% of POs loans to households
	> BDT 250 M	70% of the POs loans to households
<b>Interest</b>	Up to BDT 250 M	6% p.a.
	> BDT 250 M	7% p.a.
<b>Tenure including Grace</b>	Up to BDT 250 M	Up to 7 years
	> BDT 250 M & <= BDT 500 M	Up to 6 years
	> BDT 500 M & <= BDT 100 M	Up to 6 years
	> BDT 1000 M	Up to 5 years

Although 56 POs are involved in the programme, until 2019 the aggregate share of two POs was 52.7%, with [Grameen Shakti](#) at 38.2% and the Rural Services Foundation (RSF) at 14.5%. A few other prominent POs include [Srizony Bangladesh](#) and [UBOMUS](#), [BRIDGE](#). The Ministry of Disaster Management and Relief (MoDMR) and Bangladesh Rural Electrification Board (BREB) are two other government organisations that deploy SHS in rural Bangladesh.

Under the Hill Tracts Electrification Project, the Bangladesh Power Development Board (BPDB) has implemented three solar projects in Juraichori Upazilla, Barkal Upazilla and Thanchi Upazilla of Rangamati District in order to provide electricity access to the population in Chittagong Hill tracts. The project had three phases under which 1,200 sets of SHSs of 120 Wp each, 30 sets of solar PV streetlight systems of 75 Wp each, three sets of solar PV submersible water pumps of 1,800 Wp each, six sets of solar PV vaccine refrigerators for the health care centres of 360 Wp each and two sets of 10 kWp capacity centralised solar system for market electrification have been installed. As a whole, a total of 173.81 kWp solar systems have been installed under this project.

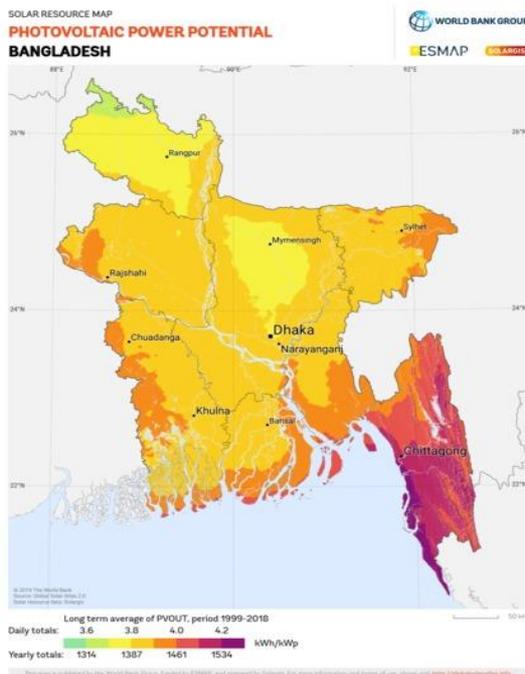


Figure 3 Solar Resource Bangladesh. (2019 The World Bank, Source: Global Solar Atlas 2.0, Solar resource data: Solargis)

are in operation with a cumulative capacity of about 3.07 MWp. IDCOL has a target to finance a total capacity of 300 MWp by 2022.

Some of the key players in the solar rooftop sector in Bangladesh are [Rahimafrooz Renewable Energy Limited](#), [Joules Power Ltd](#), [Solarland Bangladesh Co. Ltd](#) and [Enargion Bangladesh Ltd](#).

**Solar irrigation:** Agriculture is a major contributor to Bangladesh's economy in terms of employment generation and GDP growth. Solar-based irrigation can be an appropriate solution to boost the agro-based economy, especially in a country where there are 1.4 million diesel pumps using one million tons of diesel per year.

According to SREDA, the total installed capacity of solar irrigation systems is 30.68 MW, with a further potential of 545 MW.

IDCOL's solar irrigation programme was initiated to extend irrigation facilities in off-grid areas. IDCOL has approved 1,429 solar irrigation pumps of which 1,186 are in operation. It has a target to finance 50,000 solar irrigation pumps by 2025. The programme is supported by the World Bank, KfW, GPOBA, JICA, USAID, ADB and the Bangladesh Climate Change Resilience Fund (BCCRF).

Lending terms by IDCOL for the solar irrigation programme are provided in table 5 below.

**Table 5: Lending terms offered by IDCOL for solar irrigation**

Particulars	Term Details
Loan amount	Up to 50% of the Project Cost
Tenure and Grace	8 years including up to 1 Year grace period
Interest Rate	6.00% p.a.

**Solar Parks:** While the installed capacity of solar parks to date is 38.4 MW, the solar park projects under implementation have a combined capacity of 615 MW. SREDA estimates a potential of 1,400 MW from solar parks.

A 200 MW Solar Park by Beximco Power Co. Ltd. in Sundarganj, Gaibandha is one of the largest solar parks under the implementation stage in Bangladesh. To date the largest solar PV project in Bangladesh is 28 MW, located in Teknaf in the Cox Bazar region, which became operational in September 2018. It was developed by Joules Power Limited through its SPV, Technaf Solartech Energy Ltd. (TSEL). Some of the key developers of solar parks in Bangladesh include [Joules Power Ltd.](#), [Parasol Energy Limited](#), [Beximco Power Co. Ltd.](#), [Sun Beam solar Ltd.](#), [Solarland Bangladesh Co. Ltd.](#), [Solar construction & Engineering Ltd.](#) and many more. The list of developers is available on [SREDA's website](#).

Solar park projects in Bangladesh face various risks such as scarcity of suitable land, harsh weather conditions, insufficient local human resources, low economies of scales, gaps in supply chain, weak grid networks, insufficient transmission infrastructure, lack of technical standards and low awareness levels among consumers about the technology and grid economics. SHS, on other hand, are characterised by challenges such as lack of financing to cover the upfront installation cost of SHS, limited technical knowledge and capacity among the locals for maintaining the SHS, lack of customer awareness, and institutional weaknesses such as in processing statutory clearances. The rooftop solar projects grapple with poor enforcement of regulations and apprehension among utilities about losing revenue from the high paying industrial sectors, absence of appropriate business models, poor access to affordable finance, lack of technical standards for net-meters and lack of quality standards for solar components, among others.

## Wind energy

The potential of wind energy in Bangladesh is high, but limited to coastal areas, offshore islands, riversides and other inland open areas with strong wind regimes. The Government of Bangladesh plans to install 1,370 MW of wind power capacity by 2021.

According to SREDA the total installed capacity of wind energy is 2.9 MW to date. The BPDB has installed the 900 kW capacity grid-connected wind plant at the Muhuri Dam area of Sonagazi in Feni, and the 2,000 kW wind battery Hybrid Power Plant (off-grid) at Kutubdia Island (100 wind turbines of 20 kW each). One 2 MW on-grid connected wind power plant is under construction at Siraj Ganj Sadar Upazilla. About 70 MW of wind power projects are in the planning stage.

Most of the wind power projects, whether under planning or fully operational, are owned by government agencies such as Bangladesh Power Development Board (BPDB), Rural Power Company Limited (RPCL) and Coal Power Generation Company Bangladesh Limited (CPGCBL).

Some of the major challenges pertaining to wind projects in Bangladesh include limited availability of accurate wind resource maps demonstrating wind potential, variable nature of wind resources over time and limited locations for installation of the wind turbines. The lack of rigour in existing modelling and measurement methodologies can also fuel uncertainty among investors.

## Bioenergy

Bangladesh has huge amount of biomass resources that include rice husk, crop residue, wood, jute sticks, animal waste, municipal waste, sugarcane bagasse and other related sources, due to its rain fed ecosystem. The agricultural and forest residues, livestock excreta, and municipal waste play a vital role in heating as well as power generation. CIF-SREP investment plan estimates the total potential to generate 275 MW of electricity from biomass alone. Farms in Bangladesh are also installing small-scale biogas plants that use animal waste to produce power. Organic waste resources available annually in Bangladesh have the potential to generate 10 MW of electricity and heat energy. The key programmes initiated by IDCOL in this segment are highlighted below.

**Biogas plants and bio-fertiliser:** Since 2006, IDCOL has been implementing the Biogas and Biofertiliser Programme for rural households in Bangladesh, with an aim to develop and disseminate biogas plants through its participating organisations (POs). Till December 2019, more than 53,200 biogas plants have been constructed through 38 POs. IDCOL has a target to install 100,000 domestic size biogas plants in Bangladesh by 2021. Lending terms for IDCOL's domestic biogas program are as follows:

**Table 6: Lending terms offered by IDCOL for biogas plants**

Particulars	Term Details
<b>Loan amount</b>	80% of the POs loans to the households
<b>Tenure and Grace</b>	7 years including 1 year grace period
<b>Interest Rate</b>	6% p.a.

**Biogas Based Electricity Projects:** IDCOL has also setup nine large-scale biogas projects. The capacity of these biomass gasification systems ranges from 10 to 400 kW. The plants use poultry litter and cow dung as feed material into the digesters to generate gas which is used to generate electricity. Until December 2018, IDCOL had financed these nine biogas-based power plants, with a total capacity of 618 kW. Lending terms for the Biogas-based Power Projects are provided in Table 7 below.

**Table 7: Lending terms offered by IDCOL for biogas-based power plants**

Particulars	Term Details
<b>Loan amount</b>	Up to 80% of the Project Cost
<b>Tenure and Grace</b>	Up to 8 years including up to 1 year grace period
<b>Interest Rate</b>	6% ~ 9% p.a.

**Biomass Gasification based Power Projects:** IDCOL has also provided concessionary loans and grants to two rice-husk-based power plants in Bangladesh (250 kW in Gazipur, and 400 kW in Thakurgaon). Lending terms for the Biomass-based Power Projects are provided in Table 8 below.

**Table 8: Lending terms offered by IDCOL for biomass-based power plants**

Particulars	Term Details
Loan amount	60% of the Project Cost
Tenure and Grace	8 years including 1 year grace period
Interest Rate	6% p.a.

IDCOL is the implementation agency for most of the biogas- and biomass-based power projects in Bangladesh.

The major challenges faced by the biogas projects include high upfront costs associated with the technology, poor access to credit and limited availability of feedstock. As for biomass projects, the key challenges are posed by limited availability of biomass resources, which are depleting with the growing population and their demands, and weak institutional infrastructure to provide necessary clearances and approvals on time, among other factors.

### Small hydropower

Currently there are no small hydropower projects (SHP) in Bangladesh according to SREDA. However, the CIF-SREP investment plan estimates a potential generation capacity of 60 MW of small-scale hydropower that could lead to a generation of 200 GWh of electricity annually. The Mineral Resources Department of Bangladesh has identified potential small hydropower sites, with capacities ranging from 10 kW to 6 MW at different locations. Studies suggest that there is significant potential for setting up small and micro scale hydro projects in the Chittagong Hill tract region of Bangladesh. There are lots of canals, tributaries of rivers like Karnafuli, Shangu, Matamuhuri, and tiny waterfalls which make this region suitable for SHP projects.

However, the scope of SHP generation is limited in Bangladesh due to its largely flat terrain, except for a few hilly areas in the north east and south east of the country. There are also concerns over land use and flooding in many areas. In addition, there are limited hydrological studies/data and inadequate policy plans for the SHP sector. The high installation cost, effects of climate change, degradation of water catchment areas, limited local capacity and infrastructure to manufacture small hydro components and delays in land acquisition add further to the challenges related to the development of small hydropower plants in Bangladesh.

### Renewable energy mini grids

Currently, there are about 21 solar mini grids in Bangladesh, with a total capacity of 4.5 MW. All of these have been developed by IDCOL. IDCOL had approved financing for 27 solar mini grid projects, by December 2018, of which six are under implementation. The capacity of the 21 operational mini-grids ranges from 100 kW to 650 kW. IDCOL has a target to finance 50 solar mini-grid projects by the year 2025. The project financing is supported by the World Bank, KfW, GPOBA, JICA, USAID, ADB and DFID.

Lending terms provided by IDCOL for solar mini grid projects are provided in Table 9 below.

**Table 9: Lender terms offered by IDCOL for solar mini grids**

Particulars	Term Details
Loan amount	Up to 40% of the Project Cost
Tenure and Grace	10 years including up to 2 years grace period
Interest Rate	6% p.a.

Some of the major mini grid projects include a 650 kW mini grid project at Sullah, Sunanganj; a 250 kW project at Kazipur, Sirajganj; and a 250 kW project at Bhedarganj Upazilla, Shariatpur, among others. About six solar mini grid projects of 1.18 MW capacity are under construction, which include a 280 kW project at Bhola Upazila and a 250 kW project at Harirampur.

Lack of consumer awareness about mini grid technologies, limited technical skills among local resources and lack of administrative human resources in rural areas, low income of rural households limiting their ability to pay, and remoteness of the site locations are some of the common challenges encountered by mini grid projects in Bangladesh.

## Key government institutions

Institution	Role
<b>Power Division , under the Ministry of Power, Energy and Mineral Resources (MPEMR)</b>	The Power Division under MPEMR formulates policies and regulations, and also develops laws, rules and regulations, related to power generation, transmission and distribution of both conventional and non-conventional energy sources. It prepares necessary short, medium and long-term plans and programmes to set the national targets of electricity generation. <b>Website:</b> <a href="http://www.mpemr.gov.bd">www.mpemr.gov.bd</a>
<b>Sustainable and Renewable Energy Development Authority (SREDA)</b>	SREDA facilitates an enabling environment for the development of projects related to renewable energy and energy efficiency. It is also involved in policy making and research for accelerating the growth of renewable energy in Bangladesh. It provides necessary support to access clean development mechanisms and similar climate change mitigation programmes. <b>Website:</b> <a href="http://www.sreda.gov.bd">www.sreda.gov.bd</a>
<b>Bangladesh Power Development Board (BPDP)</b>	BPDP is responsible for the generation and distribution of electricity primarily in urban areas of Bangladesh. It sits under the Power Division of the Ministry of Power, Energy and Mineral Resources. <b>Website:</b> <a href="http://www.bpdb.gov.bd">www.bpdb.gov.bd</a>
<b>Rural Electrification Board (REB)</b>	REB is the largest power distribution organisation in Bangladesh, primarily responsible for rural electrification in the country. <b>Website:</b> <a href="http://www.reb.gov.bd">www.reb.gov.bd</a>
<b>Infrastructure Development Company Limited (IDCOL)</b>	IDCOL is a government-owned non-bank financial institution responsible for driving private sector participation in the promotion, development, and financing of infrastructure, and renewable energy and energy efficient projects through public-private-partnership initiatives. It offers refinancing, grant support, and technical assistance to project sponsors and participating organisations (POs) for the implementation of RE projects and programmes. <b>Website:</b> <a href="http://www.idcol.org">www.idcol.org</a>

**Ministry of Finance**

MoF develops the energy sector documents such as Bangladesh's Power Energy Sector Road Map (2011). It also arranges public financing for energy projects.

**Website:** [www.mof.gov.bd](http://www.mof.gov.bd)

**The Bangladesh Energy Regulatory Commission (BERC)**

The commission has a mandate to regulate electricity, gas and petroleum products in Bangladesh. It issues, cancels, amends and determines conditions of licenses; determines tariff and safety enhancement of electricity generation and transmission, supply, storage, marketing and distribution of energy; frames and enforces codes and standards to ensure quality; and resolves disputes between licensees and/or between licensees and consumers.

**Website:** [www.berc.org.bd](http://www.berc.org.bd)

## Industry associations

The **Bangladesh Solar and Renewable Energy Association (BSREA )** is the largest association of business houses and NGOs working in the clean energy industry. It works closely with policymakers and other relevant stakeholders to promote clean energy in Bangladesh.

The **Solar Module Manufacturers Association of Bangladesh** represents the interests of local solar module manufacturers in Bangladesh, with an aim to boost local manufacturing and generate employment.

## References and further reading

### SREP investment plan for Bangladesh, 2015

[https://www.climateinvestmentfunds.org/sites/default/files/meeting-documents/bangladesh\\_srep\\_ip\\_final.pdf](https://www.climateinvestmentfunds.org/sites/default/files/meeting-documents/bangladesh_srep_ip_final.pdf)

### SREDA / National data base of Renewable Energy

<http://www.renewableenergy.gov.bd/index.php>

### IDCOL Annual Report 2018-2019

[http://idcol.org/home/an\\_report](http://idcol.org/home/an_report)

### Lending terms for different RE programs by IDCOL

[http://idcol.org/home/r\\_lending\\_terms](http://idcol.org/home/r_lending_terms)

### List of IDCOL's Participating Organisations

[http://idcol.org/download/POs\\_Contact\\_Address\\_Dec\\_2019.pdf](http://idcol.org/download/POs_Contact_Address_Dec_2019.pdf)

### List of SHS suppliers

<http://idcol.org/home/downloads/solar>

<https://solar.sreda.gov.bd/stakeholder/view/index.php?i=9&j=2>

### Bangladesh Scaling Up Renewable Energy Project, World Bank, 2019

<http://documents.worldbank.org/curated/en/218251551754892999/pdf/Bangladesh-Scaling-Up-Renewable-Energy-Project.pdf>

### BPDB reports on Renewable energy in Bangladesh

[https://www.bpdb.gov.bd/bpdb\\_new/index.php/site/page/5a3f-2fdb-e75f-3cab-e66b-f70d-5408-cbc9-f489-c31c](https://www.bpdb.gov.bd/bpdb_new/index.php/site/page/5a3f-2fdb-e75f-3cab-e66b-f70d-5408-cbc9-f489-c31c)

### Renewable energy in Bangladesh: Status and prospects

<https://reader.elsevier.com/reader/sd/pii/S1876610219313104?token=2DC95DF5B1892C114CF3E99D443E2541800BBEA4394DBFC6311CCFDACEB58FF691156133688C617A314F325D372EE627>

### Achievements, Opportunities, and Challenges in Bangladesh's Power Sector

<http://documents.worldbank.org/curated/en/936461540318296226/pdf/131216-REVISED-Edited-BD-Power-Sector-ASA-FINAL-Oct23-extrapage.pdf>

### Transforming the power sector in Bangladesh, PwC, 2018

<https://www.pwc.in/assets/pdfs/industries/power-mining/executive-summary-pwc-bippa-report-on-transforming-the-power-sector-in-bangladesh/transforming-the-power-sector-in-bangladesh.pdf>

### ADBI Working Paper Series - Default Risks, Moral Hazard, And Market-Based Solution: Evidence From Renewable Energy Market In Bangladesh, ADB, 2019

<adb.org/sites/default/files/publication/526896/adbi-wp1005.pdf>

### Bangladesh's Net-Metering Policy: Jump Starting the Solar Rooftop Market?

<http://reep.sreda.gov.bd/projects/2018-10-31-Bangladesh-Net-Metering-Policy-Jump-Starting-the-Solar-Rooftop-Market-BSW.pdf>

### Power systems master plan 2016

[https://powerdivision.portal.gov.bd/sites/default/files/files/powerdivision.portal.gov.bd/page/4f81bf4d\\_11804c53\\_b27c\\_8fa0eb11e2c1/\(E\) FR PSMP2016 Summary revised.pdf](https://powerdivision.portal.gov.bd/sites/default/files/files/powerdivision.portal.gov.bd/page/4f81bf4d_11804c53_b27c_8fa0eb11e2c1/(E) FR PSMP2016 Summary revised.pdf)

**Data base of Renewable Energy Stakeholders**

<https://solar.sreda.gov.bd/stakeholder/view/>

**Ease of doing Business**

<https://openknowledge.worldbank.org/bitstream/handle/10986/32436/9781464814402.pdf>

**Official UK Government travel advice for Bangladesh**

<https://www.gov.uk/foreign-travel-advice/bangladesh>

## Useful contacts

### British High Commission Dhaka

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### Bangladesh High Commission UK

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### Sustainable Renewable Energy Development Agency (SREDA)

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### Rural Electrification Board (REB)

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Please contact your Client Relationship Manager if you want help with introductions to specific individuals within these institutions.