



Renewables in the post- COVID-19 recovery package of Bangladesh



This project has been made possible through the generous support of the **German Federal Environmental Foundation (Deutsche Bundesstiftung Umwelt/DBU)** and the **Stiftung Mercator**. Additional support for this project was made available by **Mr. Amir Roughani**, Ambassador for the **World Future Council**.

IMPRINT

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PHOTO CREDIT

COVER: ISTOCK/NASTCO

SUPPORTED BY



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THIS ANALYSIS IS PART OF A [COMPILATION OF RECOVERY PACKAGE ANALYSES](#) AND AIMS AT EXPLORING THE ROLE OF RENEWABLES IN POST-COVID19 RECOVERY SCHEMES. AS A SERIES, THIS RESEARCH IS CONDUCTED CONTINUOUSLY AND WILL BE ADDED TO, ONCE INFORMATION IS AVAILABLE.

Introduction

Like most of the countries reeling under the pandemic, Bangladesh is no exception and witnessed a heavy blow to its economy. Especially the labor-intensive textile industry was hit by the lockdown measures which restricted the movement of human resources as well as materials. This supply chain disruption had a significant impact on the country's economy. Notably, however, Bangladesh's GDP fared comparatively well when compared to neighbouring countries and is expected to grow by around 2 percent, according to the World Bank and IMF¹. Compared to previous years this would be a stagnation of around 5%, but still better than many other countries.

Munawar Misbah Moin, President of Bangladesh's Forum Trust, stated that many companies took advantage of the low-interest loans and various other programmes rolled out by Bangladesh's Infrastructure Development Company Ltd (IDCOL) to re-start the economy and accelerate the deployment of renewable energy systems. All in all, these programs help to generate 10,000 jobs directly and another 50,000 indirectly. Further, the programs help establish 83 solar LED light manufacturing facilities, 74 solar charge controller suppliers, 22 solar battery makers and solar streetlight producers, 11 solar inverter companies, nine PV panel manufacturers and nine solar pipe manufacturing units. However, amid the pandemic situation, citing the liquidity deficit of customers, solar companies in Bangladesh sought for waiver of soft loans of USD 145 million borrowed from the government².

The outcome of these discussions is yet to be determined. Similarly, the solar manufacturers association also sought a stimulus package to support the industry crippled after the 40 days long industrial shutdown amidst the pandemic.³

Bangladesh's recovery package

In order to support the overall economy, Bangladesh's government provides tax incentives to businesses as well as loan incentives to consumers and workers to ensure liquidity in the market. Some of the provisions of the package are⁴:

¹ Salim Ruhul, East Asia Forum, "The shadow of COVID-19 lingers over Bangladesh's economy" <https://www.eastasiaforum.org/2020/11/07/the-shadow-of-covid-19-lingers-over-bangladeshs-economy/> published 07 November 2020.

² Syful Islam, PV Magazine, "Bangladeshi solar installers call for waiver of state loans" <https://www.pv-magazine.com/2020/05/18/bangladeshi-solar-installers-call-for-waiver-of-state-loans/> published on 18 May 2020 .

³ Syful Islam, PV Magazine, "Bangladeshi solar module companies seek Covid-19 stimulus package" <https://www.pv-magazine.com/2020/05/04/bangladeshi-solar-module-companies-seek-covid-19-stimulus-package/> published on 4 May 2020.

⁴ Selim Raihan, Springer Link, "Anatomy of the Stimulus Package in Bangladesh" <https://link.springer.com/article/10.1007/s41027-020-00253-2> published on 07 Sept ember 2020.

1. Providing concessional loans to support up to 3 months wages of workers in export-oriented industries through a BDT 50 million (appr. USD 590,000) package (2 years loan at 2% interest rate to factory owners)
2. Supporting working capital through a BDT 300 million (USD 3,5 million) loan at 9% interest rate (half to be borne by the borrower and half by the government as a subsidy)
3. Supporting cottage industry through a BDT 200 billion (USD 2,35 billion) loan at 9% interest rate through banks to provide working capital for small/ cottage industries and medium enterprises
4. BDT 50 million (USD 590,000) refinance scheme for the agriculture sector
5. Increasing the Export Development Fund of the Bangladesh Bank from USD 3.5 billion to USD 5 billion
6. Supporting local products and the export sector through BDT 50 billion (USD 590 million) pre-shipment credit refinance scheme

While the above measures supported economic activities in general and sought to stabilise the liquidity of the market, Bangladesh also sought to green its economy. The government made some well-intentioned first steps to a green future and address the high vulnerability of the country to climate change. Some of the policies/ initiatives are listed below:

Green Transformation Fund

Bangladesh launched a USD 218.7⁵ million Green Transformation Funds which will provide soft loans in particular to the renewable energy industry, energy efficiency, water conservation and management, waste management, resource efficiency and recycling sectors. The loan will be available to such industries at a very marginal interest rate. This relief is in addition to last year's USD 200 million funds.

National Solar Energy Action Plan

The National Solar Energy Action Plan was presented by the Sustainable and Renewable Energy Development Authority (SREDA), a separate entity of the Ministry of Power, in Oct 2020. It cites the observation made in the REN21 Global Energy Status Report that "Renewables have been the sole source of electricity to experience 'growth' in the Q1 of 2020. Distributed RE systems proved to be vital during this time period (of COVID 19 pandemic)"⁶.

In this document, SREDA chalks out a detailed plan to tap the potential of solar energy to deliver its envisaged capacity of 40 GW by 2041. The document presents a 'business as usual scenario', under which Bangladesh can deploy 8000 MW solar through various technologies. Under the 'Medium Case Scenario' it can achieve 25000 MW while in an ambitious scenario, it suggests that at the end of 2041, Bangladesh will be equipped with 16 GW of large 'solar hubs', 4 GW utility-scale plants, 5 GW through

⁵ Ivan Shumkov, Renewables Now, "Bangladesh backs renewables, energy efficiency through USD-218.7m fund" <https://renewablesnow.com/news/bangladesh-backs-renewables-energy-efficiency-through-usd-2187m-fund-697528/> published on 05 May 2020.

⁶ REN21, Global Energy Status Report 2020 <https://www.ren21.net/renewables-report-launch/> published June 2020.

private developers. 12 GW through rooftop installations, another 2.5 GW from irrigation pumps, 285 MW from individual-household solar home systems and as much as 16 MW from mini and micro-grids as well as off-grid installations.

The exhaustive list of recommendations is divided into two decades and enlist actions for policy and regulations, technical, supply chain, finance, market enhancement and capacity building. The document, though clear on the technology, offers very little insight on the budget and financing that can be allocated for the implementation of this plan.

Employable Workforce For Net-Metering Solar Rooftop Systems

In order to provide an employable workforce for net-metering solar rooftop systems, SREDA has started offering training for installing and maintaining net-metering solar rooftop systems in 2018. So far, 506⁷ people have been trained. It may be noted that with the installation of 5.8 million solar-home lighting systems resulting in an approximately 137,000 strong workforce, the IRENA report ranked Bangladesh as the fifth largest provider of solar jobs⁸.

Bangladesh has a considerable population that works in the informal sector with many living on daily wages. During the pandemic, the situation worsened for such parts of the population with no income during the lockdown. Such training measures could well prove to become a backbone of Bangladesh's workforce and in fact economic recovery post-COVID.

40,000 Free Solar-Home Lightning Systems

In order to provide reliable and sustainable power to remote locations, the government announced a USD 26 million project to provide home lighting systems to 40,000 households in three hilly districts in the Chittagong Hill Tract area.

With these 40,000 systems, another 42,500 people will receive maintenance training for solar-home lighting systems. The Rural Electrification Board plans to install 178,000 solar-home lighting systems by next year⁹.

⁷ SREDA website, E-Services Desk for Solar,

https://solar.sreda.gov.bd/training/trained_participants.php?pg=1

⁸ Syful Islam, PV Magazine, "Bangladeshi renewables regulator vows to supply skilled solar workforce"

<https://www.pv-magazine.com/2020/09/30/bangladeshi-renewables-regulator-vows-to-supply-skilled-solar-workforce/> published on 30 September 2020.

⁹ Syful Islam, PV Magazine, "Bangladesh to install another 40,000 free solar home systems" <https://www.pv-magazine.com/2020/07/16/bangladesh-to-install-another-40000-free-solar-home-systems/> published on 16 July 2020.

Saving Off-Grid Solar Systems From Electricity Grid¹⁰

Bangladesh has a long history of installing off-grid systems in remote locations where the power grid had been unable to reach. So far, the country has 26 solar mini-grids, having an aggregated capacity of 5 MW installed, under the “Remote Area Power Supply System (RAPSS)” agreement. As per the agreement, these mini-grids will not have to compete with the national grid for the next 20 years. However, grid extension was faster than anticipated and the national grid has reached some of those more remote locations and offers electricity at a cheaper rate than the mini-grids.

In order to safeguard the huge investment made in these solar off-grid systems, the power division will be buying the electricity from these off-grid systems and provide it at an equivalent rate as the grid systems while bearing the burden of excess amount to be paid to the installer (and IDCOL which was party to the investment). As a result, utilities like the Bangladesh Power Development Board now purchase off-grid power from individual power producers.

Role of Renewables

Bangladesh is one of the most vulnerable countries to climate change and frequently faces cyclones and seasonal floods in its delta region. In addition, Bangladesh’s topography is very hilly, leaving only small patches of land for housing and agriculture. This has been proven to hinder stable energy access and led to the rapid and large-scale deployment of solar home systems (SHS). Solar off-grid solutions have proven themselves as a worthy solution to provide resilience to the disaster-stricken communities. Hence, the government has been encouraging off-grid systems off-late. Further, Bangladesh is a hub for Ready-Made Garments (RMG). Solar rooftop systems deployed by many textile industries through the Net-Energy Metering scheme have helped the RMG manufacturers to offset the huge electricity bill, consequently reducing the operational cost. e.g. Robintex, a textile company in Naraynganj initiated the installation of 3.1 MW rooftop solar on its buildings in Naraynganj¹¹.

With the recovery measures in place, another solar home system drive is expected to provide 4200 new employment opportunities. Hence, it can be said that solar power has been a source of employment for a considerable part of the workforce.

¹⁰ UNB News, “Power Division finally comes up to save solar mini-grid investors”
<https://energybangla.com/amid-covid-19-bangladesh-completes-30-construction-of-first-nuclear-plant-2/>
published on 29 July 2020.

¹¹ Syful Islam, PV Magazine, “Bangladesh set for largest solar rooftop with industrial leasing deal”
<https://www.pv-magazine.com/2020/03/17/bangladesh-set-for-largest-solar-rooftop-with-industrial-leasing-deal/>
published on 17 March 2020.

Future Challenges & Opportunities

After the slump in demand due to COVID-19 and considering the fact that globally financial institutions are abandoning coal-fired power plants, the Bangladesh government is currently debating to scrape its plan for 13,000 MW of coal-fired power plants¹². However, instead of shifting to renewable energy, the Asian country seems to shift towards LNG. Besides the obvious effect on emissions, a shift to fossil natural gas would only amplify Bangladesh's current problem of oversupply. As is seen in the past, the overall utilisation of power stations dropped to 43% in 2018-19 while the Power Division still continued to pay the capacity charges to the power plants¹³. Adding LNG capacities would worsen this situation and create an additional financial burden in times of economic turmoil.

Rather, Bangladesh needs to realign its power generation with power demand which is expected to rise with the increasing electrification of industrial processes and transport. It should focus on building better renewable energy plants and a robust national grid to enhance the resilience of the power infrastructure.

With large water bodies abundantly available in the country and frequent severe flooding, Bangladesh is predestined for floating solar and wind technologies. The potential has finally been, at least partly, recognised in the portfolio of its National Solar Energy Action Plan. This plan has set a target of 40 GW solar by 2041, among the technologies encouraged is floating solar PV. However, there is not much clarity on how to finance the projects needed to reach the target. As part of the recovery efforts and measures stipulated above, the government needs to develop such a plan. Many international players are willing to invest in Bangladesh. Some of the examples of large scale investments in Bangladesh could be 2.2 GW by Eleris Energy¹⁴, 30 MW by Beximco Power & Jiangsu Zhongtian Technology¹⁵, 55 MW by Metito, JinkoSolar & AlJomaih Energy & Water¹⁶. Bangladesh

¹² Saura News Bureau, Saur Energy International, "New Solar Energy Plan for Bangladesh Provides Solutions for Energy Security, Rising Costs" <https://www.saurenergy.com/solar-energy-news/new-solar-energy-plan-for-bangladesh-provides-solutions-for-energy-security-rising-costs> published on 11 November 2020.

¹³ Saura News Bureau, Saur Energy International, "New Solar Energy Plan for Bangladesh Provides Solutions for Energy Security, Rising Costs" <https://www.saurenergy.com/solar-energy-news/new-solar-energy-plan-for-bangladesh-provides-solutions-for-energy-security-rising-costs> published on 11 November 2020.

¹⁴ Anu Bhambhani, Taiyang News, "Eleris Energy Of US Proposes To Build 2.2 GW Grid Connected Solar PV Capacity In Bangladesh, To Be Developed As 2x600 GW & 1 GW Projects: Media" <http://taiyangnews.info/markets/eleris-planning-2-2-gw-solar-capacity-in-bangladesh/> published on 17 December 2020.

¹⁵ Anu Bhambhani, Taiyang News, "Beximco Power & Jiangsu Zhongtian Technology Joint Venture In Bangladesh Signs Solar Power PPA With BPDB For 30 MW Project In Tentulia, Panchagarh District" <http://taiyangnews.info/markets/bangladesh-signs-ppa-for-30-mw-solar-pv-plant/> published on 02 February 2020.

¹⁶ Anu Bhambhani, Taiyang News, "ADB Backs 35 MW Solar PV Plant In Bangladesh" <http://taiyangnews.info/business/adb-backs-35-mw-solar-pv-plant-in-bangladesh/> published on 12 June 2020.

needs to highlight its changing investment attractiveness in the market and provide a level playing field for international investors and build back better after the crisis.