

# ECRL MONTHLY ECONOMIC & Business Review



**Cover Story:** Renewable Energy in Bangladesh: Solar Energy Leading the Way in the Renewable Energy Sector **ECRL Thought:** Transforming Bangladesh's Tourism Industry: Key Steps for Global Competitiveness

> **EDITOR** Mr. Arifur Rahman, FCCA, FCA, CSAA Chief Executive Officer



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# Table of Contents

### <u>Page 05.</u>

### **Cover Story:**

Renewable Energy in Bangladesh: Solar Energy Leading the Way in the Renewable Energy Sector

# <mark>∧</mark> <u>Page 16.</u>

### ECRL Thought:

Transforming Bangladesh's Tourism Industry: Key Steps for Global Competitiveness

### <u>Page 19.</u>

Asking the Expert
Interview with Mr. Alamgir Morshed,
Executive Director and CEO, IDCOL
and Mr. Mostafa Al Mahmud,
President, BSREA

# <u>† Page 24.</u>

**Stock Analysis:** Energypac Power Generation PLC

# <u>Page 29.</u>

ECRL KEY Person

# <u>Page 31.</u>

About ECRL



# Editor's Note



### Mr. Arifur Rahman, FCCA, FCA, CSAA Chief Executive Officer (CEO)

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Welcome to the January 2025 issue of the ECRL Monthly Economic & Business Review. This edition marks the beginning of another year filled with opportunities, challenges, and growth prospects for Bangladesh's economic and business landscape. Our focus this month is on a sector that stands at the crossroads of innovation, sustainability, and transformative growth: renewable energy.

The cover story, "Renewable Energy in Bangladesh: Solar Energy Leading the Way," explores the incredible advancements in the country's renewable energy sector, with solar energy emerging as a clear frontrunner. Solar power now accounts for a remarkable 80% of the renewable energy mix, signifying a paradigm shift towards greener, cleaner energy solutions. As the nation strives to meet its ambitious target of sourcing 40% of energy from renewables by 2041, the article delves into the opportunities and challenges that define this journey.

From rooftop solar installations to innovative floating solar farms, Bangladesh is demonstrating resilience and ingenuity in overcoming barriers such as land scarcity and financing gaps. The government's supportive policies, alongside the private sector's commitment to innovation, have laid a strong foundation for continued growth. However, as the article highlights, addressing critical issues—including infrastructure development, capacity building, and technology transfer—is essential to ensure long-term success. This feature provides an in-depth analysis of the sector's current status and offers actionable insights for policymakers, investors, and industry leaders.

To enrich our understanding of this vital topic, we bring you two exclusive interviews with thought leaders shaping the renewable energy landscape in Bangladesh. Mr. Alamgir Morshed, Executive Director and CEO of IDCOL, shares his vision for scaling up renewable energy investments through innovative financing mechanisms and capacity-building initiatives. His insights on the potential of rooftop solar and offshore wind energy are both inspiring and practical. Meanwhile, Mr. Mostafa Al Mahmud, President of the Bangladesh Solar and Renewable Energy Association (BSREA), discusses the importance of policy reforms, technological advancements, and collaboration between stakeholders. His emphasis on pioneering solutions such as agrivoltaics and floating solar installations underscores the sector's adaptability and potential for growth.

Beyond the cover story, this issue features a compelling exploration of Bangladesh's tourism industry in "Transforming Bangladesh's Tourism Industry: Key Steps for Global Competitiveness." With its pristine natural landscapes and rich cultural heritage, the country's potential as a global tourism destination is immense. The article examines the investments and strategic initiatives required to unlock this potential, highlighting the importance of connectivity, branding, and sustainable practices.

At ECRL, our goal is to provide readers with not just information but inspiration—a deeper understanding of the forces shaping our economy, with a particular focus this month on the renewable energy revolution. Solar energy, as explored in our cover story, stands as a beacon of hope and innovation, offering pathways to sustainable growth and energy independence. By showcasing the pioneering efforts and forward-thinking strategies within this sector, we aim to equip our readers with actionable insights to drive impactful decisions. As we embark on a new year, we hope this edition serves as a valuable resource for navigating the complexities of today's business environment with clarity and purpose.

Here's to a year of innovation, resilience, and sustainable growth.

# Cover Story

RENEWABLE ENERGY IN BANGLADESH: SOLAR ENERGY LEADING THE WAY IN THE RENEWABLE ENERGY SECTOR

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### Snapshot







### ABSTRACT

This industry analysis provides an in-depth examination of Bangladesh's renewable energy sector, with a special emphasis on the growing dominance of solar energy. The sector, with a total installed capacity of 1,449.37 MW as of 2024, has experienced a remarkable CAGR of 22.18% from 2020 to 2024. Solar energy alone accounts for 80% of this capacity, driving rural electrification and reducing reliance on fossil fuels. However, challenges such as land scarcity, financing gaps, and limited technical expertise hinder the sector's ability to scale further.

Global trends indicate opportunities for Bangladesh to learn from leading nations, adopting best practices in policy and technology. Regionally, renewable energy projects remain concentrated in specific areas like Chittagong and Rangamati, reflecting the need for equitable distribution. Socially, renewable initiatives align with several SDG goals, fostering job creation, education access, and climate resilience.

Key findings highlight the sector's potential to propel sustainable economic growth, provided stakeholders collaborate to address challenges and capitalize on emerging opportunities. This report underscores the importance of renewable energy in shaping Bangladesh's future energy security and environmental sustainability.

### INTRODUCTION

Bangladesh is undergoing a major transformation in its energy landscape to tackle rising electricity demand, enhance energy security, and combat the impacts of climate change. With a population exceeding 170 million and an expected GDP of USD 459.05 billion in the fiscal year of 2023-24 (BBS, 2024), the country's rapid economic expansion has highlighted the urgent need for sustainable energy alternatives. Historically reliant on fossil fuels, Bangladesh now faces growing environmental and economic challenges, pushing it toward adopting renewable energy sources.

Bangladesh's renewable energy sector encompasses a diverse range of sources, including solar, wind, hydro, biomass, and biogas. Notable power plants such as the Kaptai Hydroelectric Plant in Rangamati and the operational wind farms in the Chittagong division underscore the country's commitment to diversifying its energy mix. Among these, solar energy has emerged as the dominant contributor, leveraging Bangladesh's abundant sunlight and geographic advantages. Solar power currently makes up the majority of the nation's renewable energy capacity, playing a critical role in reducing electricity shortages and enhancing rural electrification. As of 2024, renewable energy contributes 4.65% to the total installed power capacity of 31,194 MW, supported by 13 solar parks, widespread rooftop solar adoption, and millions of solar home systems.

Globally, the growth of solar energy has accelerated, and Bangladesh has mirrored this trend by introducing innovative measures like the Net Energy Metering (NEM) 2018 guideline. This framework connects rooftop solar systems to the national grid, allowing prosumers to share surplus electricity with the grid and reduce their energy costs. Subsequent amendments in 2019 have further bolstered the adoption of rooftop solar through business-friendly models, fostering wider usage across various sectors. The government's targets of achieving 40% by 2041 highlight the importance of solar energy in national energy and environmental addressing objectives. Despite hurdles like financing challenges and infrastructure constraints, the sector's potential to drive sustainable development and secure the country's energy future remains vast.

This analysis will delve into the current status of renewable energy in Bangladesh, examining key sectors, stakeholders, government policies, and future opportunities within the solar energy sector. This report aims to provide a comprehensive understanding of how Bangladesh can leverage its renewable resources to secure a sustainable energy future while addressing pressing economic and environmental concerns.

### CURRENT STATUS OF RENEWABLE ENERGY

Bangladesh's renewable energy sector has reached a total installed capacity of 1,449.37 MW as of December 2024, representing a small but notable fraction of the country's overall 31,194 MW power generation capacity (SREDA, 2025b; Power Cell, 2024). This marks significant growth from 650.5 MW in 2020, achieved with a CAGR of 22.18% over the period, as the country continues its transition towards a more sustainable and environmentally friendly energy mix.



### **CONTRIBUTION IN TOTAL ENERGY**

The distribution of renewable energy sources reflects the dominance of solar energy, which accounts for 80% of the total renewable capacity. Hydropower contributes 16%, primarily from the Kaptai Hydropower Plant, while wind energy makes up 4%. Biomass and biogas collectively constitute less than 1% of the total capacity (SREDA, 2025b)









Each source plays a unique role in driving the country's renewable energy goals, offering solutions tailored to its specific strengths and challenges.

**Solar Energy:** Solar Energy is the majority contributor to Bangladesh's renewable energy, with an installed capacity of 1,155.38 MW, which includes both on-grid and off-grid plants from 416.22 MW in 2020. The Solar Energy Sector has grown by a CAGR of 29.08% from 2020 to 2024.

# 29.08% CAGR Growth over the past 4 years

**Wind Energy:** Wind energy, while still nascent, is gradually gaining traction. As of December 2024, 4 completed wind power projects have a total capacity of 62 MWp, all located in the Chittagong division. Furthermore, 11 ongoing projects are expected to add 717.9 MWp of capacity (SREDA, 2025c). A notable proposal involves the development of an offshore wind power plant near Matarbari Port in Cox's Bazar, aiming to tap into abundant wind resources. ("Offshore Wind Energy Fundamentals for Bangladesh," 2024). Despite these advancements, wind energy remains geographically concentrated, necessitating further exploration in other regions.

**Hydropower:** Hydropower's contribution is largely limited to the Kaptai Hydropower Plant in Rangamati, with an installed capacity of 230 MWp. Although no new large-scale projects are planned, research indicates that Bangladesh's 232 rivers offer potential for small-scale hydropower projects. These projects could improve energy access in remote areas, particularly in hilly regions, but require further feasibility assessments and investment (SREDA, 2025a).



**Biomass and Biogas:** Biomass and biogas systems are primarily utilized for cooking and small-scale electricity generation in rural areas. These resources leverage agricultural residues and organic waste, making them sustainable and locally available. Advancements in technology could unlock greater potential for these sources, enabling their integration into the broader energy mix. Currently, 8 biogas-to-electricity projects are operational with a total installed capacity of 0.99 MWp. Additionally, 5 more projects are in the planning stage, expected to contribute another 60.9 MWp (SREDA, 2025).

# EMPLOYMENT AND REVENUE IN THE SECTOR

A total of 150,000 people are currently employed in the Renewable Energy Sector in Bangladesh, as per correspondence with BSREA. According to a study by the Centre for Policy Dialogue (CPD), the renewable energy sector in Bangladesh could generate approximately 9,300 to 28,626 new jobs by 2030, primarily through ongrid electricity generation.

# TOTAL PEOPLE

### **KEY STAKEHOLDERS**

The renewable energy sector in Bangladesh is shaped by several key stakeholders, each playing a vital role in its growth and development. The Sustainable and Renewable Energy Development Authority (SREDA) is at the forefront, leading policy formulation and promoting renewable energy adoption across the country. The Infrastructure Development Company Limited (IDCOL) provides crucial financial and technical support for renewable energy projects, such as solar home systems and mini-grids and advocates in the creation of policies. The Bangladesh Energy Regulatory Commission (BERC) ensures fair regulation of electricity tariffs and compliance with renewable energy policies. The Ministry of Power, Energy, and Mineral Resources (MPEMR) oversees overall energy planning and implementation, including renewable energy initiatives. Lastly, the Bangladesh Solar and Renewable Energy Association (BSREA) represent private sector stakeholders, driving innovation and advocating for the adoption of solar and other renewable technologies.

### GOVERNMENT POLICIES AND TARGETS

Bangladesh has set ambitious goals to increase the share of renewable energy in its energy mix. Under the 2008 Renewable Energy Policy and the Mujib Climate Prosperity Plan, the country aims to achieve the following milestones:

- 15% of electricity from renewables by 2030
- 40% of electricity from renewables by 2041

These targets align with global sustainability efforts and demonstrate the government's commitment to combating climate change. Institutions like SREDA and the Power Division are spearheading initiatives to attract investments and expand renewable energy infrastructure.

### SOLAR ENERGY'S CONTRIBUTION AND GROWTH WITHIN THE RENEWABLE SECTOR

Currently there are 13 operational solar parks with a combined capacity of 605 MW. The largest solar park, Teesta Solar Limited in Gaibandha, contributes 200 MW. Additionally, 8 more solar parks under development will add 307.29 MW to the total capacity (SREDA, 2025). Over 6 million Solar Home Systems (SHS) have been deployed in off-grid areas, with 4.13 million systems financed by IDCOL, providing electricity to underserved communities and replacing traditional sources like kerosene lamps.



Furthermore, 4.1 million improved cook stoves have been distributed to promote cleaner energy use, reducing reliance on fossil fuels and improving rural livelihoods. These efforts collectively mitigate climate change and support sustainable development.

# SOLAR ENERGY INSTALLED CAPACITY 1,155.38 MW

Despite falling short of its 2020 renewable energy target, Bangladesh remains committed to solar energy expansion. Solar initiatives like large-scale parks and hybrid systems are critical in diversifying the country's total installed power capacity, currently dominated by natural gas at 39.97% ("Bangladesh Power Development Board Annual Report 2023-24," 2024). Bangladesh's solar energy push aligns with its low-carbon development strategy and nationally determined contributions (NDCs), showcasing how clean energy solutions can drive economic growth, reduce emissions, and enhance energy security.

### CHALLENGES IN THE RENEWABLE ENERGY SECTOR

**High Initial Costs:** Setting up solar and wind projects requires significant upfront investments, which, despite subsidies, remain a major hurdle for small businesses and rural communities (Hossain et al., 2023).

**Land Scarcity:** Limited land availability in Bangladesh poses challenges for large-scale projects like solar parks and wind farms, often competing with agricultural or residential needs (USAID).

**Technological Dependency:** Heavy reliance on imported solar panels and wind turbines increases costs and creates vulnerabilities in the supply chain, delaying local project development (Rahman et al., 2024).

**Geographic Constraints:** Renewable resources are unevenly distributed, with wind energy projects concentrated in the Chittagong division and hydropower potential limited to hilly regions (Rahman et al., 2024).

**Skilled Workforce and Awareness:** A shortage of trained professionals and low public awareness about renewable energy's benefits hinder adoption and maintenance, especially in rural areas (Rahman et al., 2024).

### SOLAR ENERGY ADOPTION THROUGH POLICIES AND GUIDELINES

By establishing frameworks that encourage renewable energy investments and innovations, the government aims to achieve its ambitious targets for renewable energy penetration. Key policies include the Mujib Climate Prosperity Plan (MCPP) and Net Energy Metering (NEM) Guidelines 2018.

### MUJIB CLIMATE PROSPERITY PLAN (MCPP)

The Mujib Climate Prosperity Plan (MCPP) underscores Bangladesh's commitment to climate resilience and renewable energy development. The plan emphasizes scaling up renewable energy projects to mitigate climate risks while promoting economic growth. Solar energy plays a central role in the MCPP, which aims to increase solar capacity through public and private investments, leveraging international climate financing to address funding gaps. The plan envisions solar energy as a tool for achieving energy security and reducing carbon emissions, aligning with global climate targets.

# NET ENERGY METERING GUIDELINES 2018

The NEM 2018 guideline was introduced to promote renewable energy adoption through rooftop solar systems. It enables prosumers—entities that both produce and consume electricity—to connect their solar PV systems to the grid, facilitating energy exchange. Excess electricity generated is exported to the grid, and the prosumer receives credits, which offset electricity bills. Through the Net Metering Guidelines and its subsequent amendments in 2019, the Government of Bangladesh has developed multiple business models to implement rooftop solar energy projects, including the CAPEX and OPEX model. The guideline ensures seamless integration of renewable energy while motivating consumers through cost savings.



### CAPEX AND OPEX MODELS

To facilitate solar energy adoption, the government and private sector have promoted two primary financing models—CAPEX and OPEX. Under the CAPEX model, the consumer owns the solar PV system, bearing the upfront installation costs and enjoying long-term energy savings. This model is ideal for entities with sufficient capital and a focus on asset ownership.

In contrast, the OPEX model, also known as the Energy Services Company (ESCO) model, eliminates the need for high initial investments. Here, a third-party investor owns and operates the system, supplying energy to the consumer through a Power Purchase Agreement (PPA). The OPEX model is particularly advantageous for small and medium enterprises (SMEs) and industries looking to reduce operational costs without the burden of capital expenditure.



Figure: OPEX Model

### DEMAND DRIVERS FOR SOLAR ENERGY IN BANGLADESH

Bangladesh's solar energy sector is expanding rapidly, driven by a combination of economic, technological, and environmental factors. The key elements propelling solar energy adoption and its role in increasing rural electrification and energy access are discussed as follows.

### **RISING ELECTRICITY DEMAND**

The rapid economic growth and increasing population of Bangladesh have led to a significant rise in electricity demand. According to the Power Division, peak power generation reached 16,477 MW in April 2024, with the demand projected to grow further in the coming years (Power Cell, 2024). Solar energy is playing an essential role in meeting this rising demand, especially in areas where grid expansion is challenging. It offers a sustainable solution to reduce dependency on fossil fuels and enhance energy security.



### DECREASING COSTS OF SOLAR TECHNOLOGY

Advancements in solar technology have drastically reduced the costs of solar energy systems. Globally, the cost of photovoltaic (PV) panels has dropped by around 90% in the past decade (IRENA, n.d.). This affordability has encouraged both individual households and industries to adopt solar energy. For instance, rooftop solar systems are increasingly popular in industrial sectors such as garments, helping businesses reduce operational costs and comply with environmental standards.

# GLOBALLY, THE COST OF PHOTOVOLTAIC (PV) HAS DROPPED BY, SINCE 2009

# ENVIRONMENTAL AND CLIMATE CONSIDERATIONS

Bangladesh, being one of the most climate-vulnerable countries, faces frequent natural disasters and rising sea levels. The adoption of solar energy aligns with the country's commitment to reducing greenhouse gas emissions and mitigating climate change impacts. By integrating solar power into its energy mix, Bangladesh contributes to global climate goals, such as the Paris Agreement targets. Furthermore, solar energy reduces air pollution and decreases reliance on imported fuels, fostering a cleaner and more resilient energy infrastructure.

### INCREASING RURAL ELECTRIFICATION AND ENERGY ACCESS THROUGH SOLAR SOLUTIONS

Solar energy has been transformative in providing electricity to rural and off-grid areas. Initiatives like solar mini-grids and solar irrigation systems are expanding energy access, empowering communities, and improving livelihoods. For example:

**Solar Mini-Grids:** According to the National Renewable Energy Database, over 28 solar mini-grids have been installed across remote areas, supplying electricity to more than 8,000 shops, businesses, and households (World Bank Group, 2021).

**Solar Irrigation Pumps:** Around 3,514 solar irrigation pump systems are currently in operation, benefiting farmers by reducing dependency on diesel-powered pumps and lowering irrigation costs (SREDA, 2025).

SOLAR IRRIGATION PUMP SYSTEMS ARE IN OPERATIONS HELPING FARMERS REDUCE DEPENDENCY ON TRADITIONAL 3,514

These initiatives not only enhance agricultural productivity but also contribute to rural development by enabling small businesses and improving access to essential services like healthcare and education.

### OPPORTUNITIES IN THE SOLAR ENERGY MARKET

Bangladesh, with its abundant sunlight and growing energy demands, presents opportunities in the solar energy market.

### GROWTH PROSPECTS FOR OFF-GRID AND RURAL AREAS FROM SOLAR RADIATION

Bangladesh is well-positioned to utilize solar energy to electrify its rural and off-grid communities. In areas where extending the national grid is impractical, solar energy has proven to be an effective and sustainable solution. The country receives 4-6.5 kWh/m<sup>2</sup> of solar radiation daily, providing immense potential for off-grid solar development (Mridul et al., 2021). According to the research, utilizing a fraction of this energy can significantly reduce reliance on fossil fuels while enhancing energy security for remote areas.

# **4-6.5kWh/m<sup>2</sup>** BANGLADESH RECEIVES SOLAR RADIATION DAILY

### EXPANDING SOLAR ENERGY THROUGH INVESTMENTS AND PARTNERSHIPS

Initiatives like USAID's BADGE program, with a planned USD 3 billion investment by 2026 (USAID, n.d.), and KfW's EUR 18.5 million solar rooftop program highlight the sector's potential (KfW, n.d.). Public-private partnerships (PPPs) are also instrumental in scaling large solar projects, such as the 68 MW solar plant in Sirajganj, a joint venture between Bangladesh's NWPGCL and China's CMC. With a USD 87.7 million investment, this project showcases the effectiveness of international collaboration (BCRECL, n.d.). Such initiatives, alongside planned solar parks and hybrid systems, align with Bangladesh's goal of sourcing 40% of its electricity from renewables by 2041. These partnerships and investments demonstrate the sector's capacity to attract global resources and expertise, paving the way for sustainable energy growth.



### ROOFTOP SOLAR SYSTEMS IN INDUSTRIES COST EFFICIENCY WITH CLEAN ENERGY

Rooftop solar systems are becoming a cost-effective and practical solution for industrial and commercial sectors, as renewable energy is often cheaper than traditional electricity tariffs. The ready-made garment (RMG) industry, driven by the need to meet clean energy compliance for buyers, has already embraced rooftop solar installations (Alam, 2023). Other businesses and commercial buildings can follow suit, using these systems to meet their electricity needs while distributing surplus energy to nearby communities, promoting sustainability and energy efficiency.

# CHALLENGES FACING THE SOLAR ENERGY SECTOR

As the solar energy sector in Bangladesh grows, it faces several challenges that must be addressed to unlock its full potential. These challenges are discussed below.

### **TECHNICAL ISSUES**

One of the significant technical barriers to scaling solar energy in Bangladesh is the limited capacity of the national grid to handle distributed solar energy. The grid infrastructure was primarily designed for centralized power generation, and integrating intermittent renewable sources like solar energy requires substantial upgrades. Without these improvements, the grid's reliability and ability to absorb large amounts of solar power remain constrained (Bangladesh Power Development Board Annual Report 2023-24, 2024).

### POLICY ISSUES, UNCLEAR GUIDELINES, AND LOW-QUALITY EOUIPMENT

Bangladesh's renewable energy sector faces significant challenges in meeting policy targets on time. The ambitious goals set in renewable energy policies are unlikely to be achieved without better alignment and implementation. For example, the 2008 Renewable Energy Policy aimed for 10% renewable energy by 2020, but the country has not even reached 5% as of 2024. Delays in project approvals, non-competitive tender processes, and insufficient incentives for initiatives like net metering have further slowed progress.

There are several cases observed in urban areas where installing solar panels in buildings for utility connections has been a failed initiative. This is due to the unclear guidelines, lack of proper policy, and quality of the panels and equipment used.

### **FINANCIAL CHALLENGES**

Financing renewable energy projects remains a significant challenge in Bangladesh. According to a study by CPD, the country requires USD 1.71 billion in annual investments starting from 2024 to achieve its goal of 40% renewable energy by 2041 (Moazzem et al., 2024). However, high interest rates and short loan repayment periods discourage investment and slow the sector's growth.



#### Chapter | 01 | 02 | 03 Т 04 L

### SKILLED WORKFORCE

The shortage of skilled personnel in the renewable energy sector is a pressing concern. Solar energy projects require expertise in areas such as system design, installation, maintenance, and grid integration. However, training programs and technical education focused on renewable energy remain limited in Bangladesh (Rahman et al., 2024).

### **PUBLIC AWARENESS**

Many people, especially in rural areas, are not aware of the long-term cost savings and environmental benefits of using solar energy. This lack of awareness makes it harder for solar solutions to gain acceptance. To address this, more awareness campaigns and community programs are needed to educate people about the advantages of solar energy. According to our discussions with IDCOL and BSREA, they are working on organizing seminars and promotional activities to encourage the use of solar energy across the country.

### COMPARISON WITH GLOBAL SCENARIO

Globally, renewable energy adoption has accelerated significantly. Renewable energy accounted for 86% of global power additions, with solar and wind energy being the leading contributors. By the end of 2023, the world's renewable energy capacity reached 3,865 GW, with solar energy becoming the largest contributor at 1,418 GW which increased after around 346 GW of Solar Energy was added in 2023 (Smart Energy Portal, 2024). China, the US, Brazil, India, and Germany were the top five countries adding the most renewable energy capacity in 2023, significantly boosting global renewable energy. (QERY, 2024).

Bangladesh is also moving towards green energy and solar constitutes the majority of renewable energy capacity of 1,449.37 MW, accounting for 80% of the total installed renewable energy capacity. In comparison, As Bangladesh endeavors to expand its renewable energy sector, learning from leading countries can provide valuable insights.

### **TOTAL GLOBAL RENEWABLE ENERGY**







**LESSONS FROM LEADING COUNTRIES China:** China has become a global leader in renewable energy, due to strategic investments and supportive policies. In 2023, China installed as much solar PV capacity as the rest of the world combined in 2022. China added 217 GW of solar capacity in 2023 alone, bringing its total to over 610 GW (QERY, 2024). Programs like the Top Runner Program have been key to this success, as they set high-efficiency standards that ensure that new installations use modern, efficient technologies. Additionally, China plans to use Building-Integrated Photovoltaics (BIPV), where solar panels are installed on building surfaces (More Alternative Energy Resources, 2023).

India: India possesses an installed capacity of 175.93 GW of Renewable Energy, representing 35.2% of the nation's total energy capacity. It is also the fifth-largest producer of solar energy, boasting 73.11 GW of capacity (QERY, 2024). The country has set an ambitious goal of achieving net-zero carbon emissions by 2070 and uses different programs to enhance domestic manufacturing of solar modules, batteries, and clean energy infrastructure. In January 2023, India entered the sovereign green bond market, raising USD 1 billion to support renewable energy, metro rail projects, and low-carbon hydrogen production. Investments in clean energy reached USD 68 billion in 2023, a 40% increase from previous years, with solar energy taking a significant share (International Energy Agency, 2024).

**Germany:** Germany is the leading producer of solar energy in Europe, with an installed capacity of 81.74 GW as of 2023. Renewable energy accounts for 63.3% of the country's total energy mix (QERY, 2024). Germany aims to increase this to 80% by 2030 under the Renewable Energy Sources Act (EEG). The amended Act in 2021 introduced annual reviews to ensure progress and lowered a renewable energy fee on electricity bills to EUR 0.065/kWh, reducing household costs by 1%, this reduction in costs will be covered by the government. These measures make solar energy more affordable, boosting adoption and advancing the transition to renewables (International Energy Agency, 2023).

Vietnam: it is the fifteenth largest producer of renewable energy globally, with an installed capacity of 46 GW, accounts for 55.60% of the nation's total energy capacity in 2023. The country is also ranked thirteenth for the production of solar energy globally (QERY, 2024). Vietnam's solar energy success stems from strategic policies and incentives. Generous feed-in tariffs, starting at USD 93.5/MWh for 20 years, encouraged rapid adoption, with solar capacity surpassing the 850 MW target to reach 16,500 MW by 2020. Tax breaks, including a 4-year corporate income tax exemption, and land lease payment waivers lowered costs further. Public demand for clean air and Vietnam's climate commitments provided additional momentum. Simplified regulations and decentralized approvals attracted investments, enabling the installation of over 100,000 rooftop solar systems by 2020 (Nam et al., 2021).

Chapter | 01 | 02 | 03 | 04 |



### **REGIONAL CONCENTRATION OF RENEWABLE ENERGY**

Renewable energy adoption in Bangladesh is heavily concentrated in regions with favorable geographic and climatic conditions. Solar energy is more evenly distributed in the country but has a strong presence in rural and off-grid areas. Small-scale solar home systems (SHS) power over 6 million households, benefiting approximately 20 million people, primarily in regions where the traditional grid is inaccessible. These systems are particularly prevalent in northern and coastal areas, where grid expansion is challenging due to geographic and infrastructural constraints (World Bank Group, 2021b). The Chittagong division stands out as a hub for renewable energy projects, hosting all operational and planned wind power plants, with a combined capacity of 62 MW from completed projects and an additional 717.9 MW from ongoing initiatives. Similarly, the Rangamati district in the Chittagong Hill Tracts is home to the country's only hydroelectric power plant at Kaptai, with an installed capacity of 230 MW.

### DYNAMICS OF REGIONAL CONCENTRATION FOR SOLAR ENERGY ADOPTION

**Resource Availability:** Bangladesh receives an average of 4–6.5 kWh/m<sup>2</sup> of solar radiation daily, making solar energy viable across most of the regions of the country. However, areas like the coastal regions and hill tracts are especially suited for wind and hydroelectric power (Mridul et al., 2021).

**Policy and Financial Support:** Initiatives such as the Net Metering Guidelines of 2018 have encouraged rooftop solar installations in urban and industrial areas. Additionally, international funding, such as the World Bank's support for solar home systems, has facilitated renewable energy adoption in underserved regions.

**Infrastructure Development:** Areas with better access to roads, transmission lines, and substations are more likely to attract large-scale renewable energy projects. Conversely, regions with poor infrastructure, such as remote islands and hill tracts, rely more on decentralized solutions like solar home systems.

### SOCIAL IMPACTS AND SUSTAINABLE DEVELOPMENT GOALS

Renewable energy initiatives in Bangladesh have significantly shaped various aspects of society, offering a mix of positive outcomes and challenges. Renewable energy sources, particularly solar and wind, have contributed significantly to environmental sustainability and rural electrification.

### POSITIVE IMPACTS OF RENEWABLE ENERGY

**Environmental Benefits:** Solar power, which constitutes 80% of Bangladesh's renewable energy capacity, has been pivotal in reducing reliance on non-renewable energy sources thus significantly lowering carbon emissions and pollution.

**Economic Upliftment:** Renewable energy projects have created around 150,000 direct and indirect jobs in Bangladesh as per BSREA. Moreover, it will have an indirect positive impact on foreign currency reserves as dependency on fuel imports will decline.

ROLE OF RENEWABLE ENERGY IN ACHIEVING SOCIAL GOALS

Renewable energy plays a critical role in advancing Bangladesh's social and developmental objectives, aligning with global frameworks like SDG (Sustainable Development Goals).

**Poverty Alleviation:** Renewable energy projects, such as the Solar Home System (SHS), have improved electricity access in off-grid rural and semi-urban areas of Bangladesh. These initiatives have supported sustainable development by reducing energy poverty, promoting sustainability, and fostering local progress.

Access to Education and Health Services: Solarpowered electrification in schools and health clinics has improved service delivery. Schools equipped with renewable energy experience longer operational hours and access to digital learning tools. Similarly, rural health centers now have reliable power for essential medical equipment.

### Alignment with SDG Goals:

**SDG 7 (Affordable and Clean Energy):** Renewables now account for 4.65% of Bangladesh's total energy mix, advancing affordable and clean energy access nationwide.

**SDG 9 (Industry, Innovation, and Infrastructure):** Investments in renewable energy infrastructure, including grid modernization and off-grid solutions, are fostering innovation and sustainable industrial growth.

**SDG 10 (Reduced Inequalities):** Renewable energy initiatives in rural and underdeveloped regions are reducing disparities by providing reliable electricity and creating local employment opportunities.

**SDG 13 (Climate Action):** Renewable energy projects have significantly reduced emissions, enhancing the country's climate resilience and contributing to global climate goals.

**SDG 16 (Peace, Justice, and Strong Institutions):** Stable energy access from renewables fosters community development, reducing energy conflicts and promoting inclusive governance.

**SDG 17 (Partnerships for the Goals):** Collaborative efforts between government, private sector, and international partners have driven renewable energy growth, showcasing the importance of partnerships in achieving sustainability goals.

### RECOMMENDATIONS

**Targeted Policy Interventions:** The government should introduce region-specific policies to address disparities. For example, offering higher subsidies or tax incentives for renewable energy projects in less developed regions can encourage investment and development.

**Improving Infrastructure:** Upgrading infrastructure like transmission lines and substations is essential for large renewable energy projects, such as solar farms and wind parks, to deliver power efficiently to the grid and consumers. Government and private sector partnerships (PPPs) can help by combining resources and expertise. As per our correspondence with BSREA, reducing import duties on key components like inverters can also lower the overall cost of setting up these systems.

**Promoting Regional Research and Development:** Establishing regional research centers focused on renewable energy can help identify localized solutions and innovations. These centers can collaborate with universities, industries, and international organizations to develop cost-effective and region-specific technologies.

Adoption of technologies such as Building-Integrated Photovoltaics (BIPV): Adopting technologies like BIPV can significantly boost renewable energy capacity. Following China's example, the government could introduce policies requiring all industries and new buildings (commercial and residential) to include BIPV systems. This would not only increase overall energy capacity but also encourage greater adoption of renewable energy.

### CONCLUSION

The shift to renewable energy is a critical step for Bangladesh's sustainable future. Solar energy, with its vast potential, stands at the heart of this transition. By increasing solar capacity and adopting innovative approaches like the OPEX financing model and advanced technologies, Bangladesh can secure its energy future while addressing pressing environmental challenges.

Bangladesh has observed slow progress in the renewable energy sector. This sector particularly solar energy needs to focus on overcoming the hurdles. Issues such as land scarcity, financing gaps, and limited technical expertise continue to hinder widespread adoption. Despite these challenges, solar energy already contributes 80% of the renewable energy mix, with policies like the Net Energy Metering guidelines providing a foundation for growth. The country is committed to mitigating 80% of carbon emissions by 2050, as outlined in the 2008 Renewable Energy Policy.



Achieving the goals requires collective action. Policymakers must streamline regulations and create more incentives to attract investment. Businesses should innovate and collaborate through public-private partnerships to expand renewable energy adoption. Additionally, public awareness campaigns and workforce training are essential to bridge existing skill gaps and foster community engagement in renewable energy solutions.

With a unified approach, Bangladesh's renewable energy sector can become a driver of economic growth, energy independence, and environmental stewardship. By prioritizing clean energy initiatives, the country cannot only meet its growing energy needs but also ensure a sustainable and prosperous future for its people.



# **ECRL** Thought

### TRANSFORMING BANGLADESH'S TOURISM INDUSTRY: KEY STEPS FOR GLOBAL COMPETITIVENESS

Shahela Nasrin\* Md. Shaiful Hasan\*\*



\*The author is Business Analyst, ECRL \*\*The author is Senior Business Consultant, ECRL

### Chapter | 01 | 02 | 03 | 04 |

Tourism holds immense potential to transform Bangladesh's economy by leveraging its natural beauty, cultural heritage, and historical significance. Despite world-class attractions such as Cox's Bazar, the world's longest unbroken sea beach, and the Sundarbans, the world's largest mangrove forest, Bangladesh significantly lags behind its neighbors in attracting foreign tourists and generating economic value from the sector. According to the World Economic Forum's Travel and Tourism Development Index 2023, Bangladesh ranked 109th out of 119 countries with a score of 3.19. In comparison, Sri Lanka ranked 76th, with India, Pakistan, and Nepal also outperforming Bangladesh. This stark contrast highlights the untapped potential and the urgent need for strategic reforms in the country's tourism industry.



In 2024, Bangladesh welcomed approximately 430,000 foreign tourists, a figure that pales in comparison to Sri Lanka's 2,053,456 visitors. Tourism contributed only 2.3% to Bangladesh's GDP in 2024, with a modest projection of 2.4% by 2034. By contrast, Sri Lanka's tourism sector accounted for 9.4% of GDP in 2024 and is expected to grow to 11.7% by 2034. These figures underscore the immense opportunity for Bangladesh to reposition its tourism industry and compete on a global scale. However, multiple barriers, including limited strategic marketing, inadequate infrastructure, and insufficient community involvement, continue to hold back progress.





Bangladesh lacks a compelling global tourism campaign that effectively showcases its unique offerings. Countries like India and Malaysia have successfully employed slogans such as "Incredible India" and "Truly Asia" to boost their appeal, while Bangladesh remains relatively obscure in the global tourism landscape. A robust marketing initiative that highlights the country's rich cultural heritage, breathtaking natural attractions, and unique experiences is essential. Furthermore, safety concerns and cumbersome airport procedures deter potential visitors. Addressing these issues by improving security, simplifying airport processes, and ensuring professional and respectful treatment of tourists would create a more positive and inviting image of the country.

Infrastructure challenges also pose a significant obstacle to the growth of tourism. Poor road networks, limited airport facilities, and insufficient transportation options make it difficult for tourists to access both popular and remote destinations. Strategic investments in upgrading airports, improving road connectivity, and developing accommodations near lesser-known spots could open up new opportunities for international tourists. For example, Kuakata, with its unique offering of both sunrise and sunset views over the Bay of Bengal, and Saint Martin's Island, renowned for its pristine beaches and coral reefs, could be further developed to attract more visitors. Additionally, Sajek Valley in Rangamati, famous for its breathtaking views and serene environment, holds significant potential for eco-tourism with appropriate infrastructure development.

The exclusion of local communities from the economic benefits of tourism is another pressing issue. Often, the financial gains are concentrated among larger businesses, leaving local populations with little incentive to support or engage in tourism activities. A more inclusive approach that involves local communities can not only enhance the authenticity of the tourist experience but also ensure that the benefits of tourism are widely distributed. For instance, in regions like Rangamati and Bandarban, involving indigenous communities through training programs in hospitality and tour guiding can empower local residents to participate actively in the tourism sector. Initiatives such as promoting homestays and community-based tourism can provide unique cultural experiences for tourists while fostering sustainable economic growth.

### Chapter | 01 | 02 | 03 | 04 |

The limited availability of recreational activities and nightlife options further restricts the overall tourist experience in Bangladesh. Iconic destinations like Cox's Bazar could be made more appealing by introducing activities such as pedal boating, scuba diving, snorkeling, and beach volleyball. Adding nightlife and entertainment options would enrich the visitor experience and help diversify the country's tourism offerings. Adventure tourism activities such as trekking, rock climbing, and river rafting could also be explored in hilly regions like Bandarban. Establishing safety standards and providing training for operators would be crucial in ensuring these activities' sustainable growth and long-term success.

The transformation of Bangladesh's tourism industry requires a cohesive vision supported by targeted investments and policy reforms. By addressing marketing deficiencies, infrastructure gaps, and community exclusion, the country can reposition itself as a competitive destination in the global tourism market. Diversifying tourist experiences and ensuring equitable distribution of benefits will not only drive significant economic growth but also improve the livelihoods of millions. With coordinated efforts and strategic planning, Bangladesh can unlock the full potential of its tourism sector and make a lasting impression on the global stage.





# Asking the Expert

### INTERVIEW WITH MR. ALAMGIR MORSHED, EXECUTIVE DIRECTOR AND CEO, IDCOL

(INFRASTRUCTURE DEVELOPMENT COMPANY LIMITED)

AND

MR. MOSTAFA AL MAHMUD, PRESIDENT, BSREA (BANGLADESH SOLAR AND RENEWABLE ENERGY ASSOCIATION )







### Meet the Expert

Alamgir Morshed, Executive Director and CEO of Infrastructure Development Company Limited (IDCOL) is a transformative leader in renewable energy and sustainable infrastructure financing in Bangladesh. With over 29 years of experience in banking and financial services, including senior leadership roles at Standard Chartered Bank, Mr. Morshed took charge of IDCOL in March 2022. Under his leadership, IDCOL has been at the forefront of Bangladesh's renewable energy transition, championing innovations such as solar rooftops, off-grid solutions, and carbon credits, while addressing the financing challenges of green startups. In this exclusive interview, he discusses IDCOL's role in shaping a sustainable future for Bangladesh and the strategies driving the organization's impact.

### Emerging Credit Rating Ltd.

IDCOL has played a pivotal role in renewable energy adoption in Bangladesh, from solar home systems to large-scale solar rooftop projects. With such a diverse portfolio, could you walk us through the organization's evolution and its current priorities?

### Mr. Morshed:

Certainly. IDCOL was established in 1997 to address the energy crisis and enable private sector participation in power generation. Initially, we focused on providing long-term financing to private power companies, with our first major project being Meghnaghat Power Plant in 2001. As the grid expanded, we saw an opportunity to address rural electrification through renewable energy.

From 2003 to 2015, we financed 4.13 million Solar Home Systems (SHS), bringing electricity to areas with no grid access. At the peak of this program, 60% of rural Bangladesh lacked electrification, but later over 80% of these areas were electrified. However, with the grid now covering nearly 100% of the country, demand for off-grid solutions has declined.

In response, IDCOL pivoted to grid-connected projects, particularly solar rooftops and utility-scale solar parks. For instance, we have approved 46 rooftop solar projects with a combined capacity of 146 MWp, of which 98 MWp is already operational. We aim to finance 300 MWp by 2026, aligning with Bangladesh's goal of achieving 40% renewable energy in the energy mix by 2041.

### Emerging Credit Rating Ltd.

The transition from off-grid to grid-connected renewable energy is strategic, but challenges such as high upfront costs and regulatory bottlenecks remain. How is IDCOL addressing these barriers to accelerate adoption?

### Mr. Morshed:

You're absolutely right—high initial costs and policy limitations are significant hurdles. At IDCOL, we've adopted several strategies to tackle these issues.

Firstly, we provide concessional financing to reduce the financial burden on project sponsors. For example, our loans for rooftop solar projects come with favorable terms that make investments more feasible for industries and commercial entities. Secondly, we focus on capacity building. Many local banks are hesitant to finance renewable energy projects due to perceived risks. To address this, we conduct workshops and training sessions to enhance their understanding of credit risk assessment for green projects.

Thirdly, we collaborate closely with policymakers. IDCOL has contributed to key initiatives like the Net Metering Policy of 2018 and is actively involved in drafting the Renewable Energy Policy 2025. These frameworks are essential for creating an enabling environment for renewable energy investments.

Lastly, we're exploring innovative financing models, such as blended financing and third-party guarantees in partnership with organizations like the IFC. These mechanisms help de-risk projects and encourage private sector participation.

### Emerging Credit Rating Ltd.

Bangladesh is committed to achieving 40% renewable energy in its energy mix by 2041, yet the current contribution is only about 4%. What are IDCOL's plans to bridge this gap, especially in the context of largescale projects?

### Mr. Morshed:

Achieving this target requires a multi-pronged approach. At IDCOL, we are focusing on scaling up utility-scale projects and rooftop solar installations. For instance, we have financed 209 MWp of grid-tied solar projects so far, with another 212 MWp in the pipeline. Additionally, we are supporting the development of solar mini-grids and exploring the potential of offshore wind projects, particularly along the Cox's Bazar coastline.

Land scarcity is a significant challenge in Bangladesh, but rooftop solar offers a viable solution. By leveraging industrial and commercial rooftops, we can maximize energy generation without additional land requirements. Our goal is to create a model where renewable energy not only meets domestic needs but also contributes to global sustainability efforts through carbon credits.

Another critical aspect is technological advancement. Modern wind turbines, for example, can operate efficiently even in areas with low wind velocity, making them suitable for Bangladesh. We are also looking into hydrogen as a future energy source, although its viability here is limited due to geographic constraints.

### Emerging Credit Rating Ltd.

IDCOL has been a pioneer in carbon credit initiatives, including pilot projects for solar home systems and improved cook stoves. How do you see this mechanism contributing to Bangladesh's sustainability goals?

### Mr. Morshed:

Carbon credits are a game changer for financing sustainability initiatives. Under the Paris Agreement, Bangladesh has committed to reducing carbon emissions by 20%, of which 5% will be self-financed. IDCOL is actively working to monetize emission reductions from projects like solar home systems and improved cook stoves.

For instance, our pilot project with the World Bank aims to register these technologies under the carbon credit framework. The revenue generated can be reinvested in scaling up renewable energy and other green projects. Additionally, we're exploring the potential of leveraging natural assets like the Sundarbans for carbon credits, emphasizing conservation over exploitation.

However, this requires a skilled workforce to navigate the complexities of carbon credit certification and trading. At IDCOL, we're building local expertise to ensure that Bangladesh can fully capitalize on this opportunity.

### Emerging Credit Rating Ltd.

What's next for IDCOL as it continues to drive sustainable development in Bangladesh?

### Mr. Morshed:

Our immediate priorities include scaling up renewable energy investments, particularly in solar rooftops, utilityscale projects, and energy storage solutions. We're also exploring emerging areas like electric mobility and waste-to-energy projects.

Capacity building will remain a cornerstone of our strategy. By empowering local banks, startups, and communities, we aim to create a robust ecosystem for green innovation. Additionally, we plan to expand our international partnerships to access concessional funding and technical expertise.

Ultimately, our goal is to align IDCOL's initiatives with the Sustainable Development Goals, particularly SDG 7 (Affordable and Clean Energy) and SDG 13 (Climate Action). By doing so, we hope to position Bangladesh as a global leader in renewable energy and sustainable development.





### Meet the Expert

Mr. Mostafa Al Mahmud is the President of the Bangladesh Solar and Renewable Energy Association (BSREA) and contributes significantly to Bangladesh's renewable energy sector. Mr. Mahmud is also the Chairman of Gtech Group and has over 20 years of business expertise spanning solar energy, infrastructure, and logistics. A graduate of the University of Dhaka, he is a visionary leader advocating for innovative renewable energy solutions and policies to drive sustainable development in Bangladesh. In this interview, he shares insights on the renewable energy sector's challenges, policy gaps, and the role of BSREA in advancing clean energy solutions.

### Emerging Credit Rating Ltd.

Bangladesh's renewable energy sector has seen significant progress, but there are still gaps in achieving energy sustainability. As the President of BSREA, what do you see as the key challenges, and how is the association addressing them?

### Mostafa Al Mahmud:

The renewable energy sector in Bangladesh indeed holds immense potential, but several barriers need to be addressed for its full realization. One of the primary challenges is the lack of stable, forward-looking policies. For instance, the repeal of the 2010 energy enhancement law led to the cancellation of around 40 approved projects, discouraging both local and foreign investors. This not only cost us USD 5 billion in direct investments but also created uncertainty in the market.

At BSREA, we work as a collective voice for businesses in this sector. Our primary focus is advocating for policy reforms that incentivize renewable energy adoption while ensuring investor confidence. We've been engaging with the government to restore critical elements of repealed laws, such as direct negotiations and internationally recognized contractual terms, to make investments more secure.

### Emerging Credit Rating Ltd.

You've mentioned the need for favorable policies. Could you elaborate on specific policy recommendations BSREA is advocating to drive renewable energy adoption in Bangladesh?

### Mostafa Al Mahmud:

Certainly. Our policy recommendations focus on creating an enabling environment for renewable energy businesses and investors. First, we propose that the government implement a robust net metering policy that encourages grid connectivity for surplus energy generated by solar projects. Currently, utility companies delay meter installations and grid connections, which discourages industries from investing in solar.

Second, we advocate for tax exemptions on critical components like solar panels and inverters. This would not only lower costs but also encourage wider adoption of renewable technologies across sectors.

Third, we are pushing for the replacement of 1.5 million diesel-powered irrigation pumps with solar-powered ones. Diesel pumps are expensive to operate, whereas solar-powered systems are far more cost-effective. A favorable policy framework here could save foreign currency, reduce carbon emissions, and provide reliable energy to farmers.

Finally, we recommend that large-scale rooftop solar installations be prioritized, particularly in industrial zones. With proper incentives and streamlined financing mechanisms, we estimate that thousands of megawatts could be added to the grid within a year or two.

### Emerging Credit Rating Ltd.

Land scarcity is often cited as a limitation for large-scale renewable energy projects. How is BSREA addressing this issue?

### Mostafa Al Mahmud:

Land scarcity is indeed a significant challenge in Bangladesh, but we see it as an opportunity to innovate. One solution we are advocating for is the utilization of riverbanks and unused water bodies for floating solar installations. For example, a 10-12 kilometer stretch of a river could host floating solar panels, which would not only generate electricity but also help in river conservation and erosion control.

Additionally, we are promoting the concept of agrivoltaics, where solar panels are installed above farmland, allowing for simultaneous agricultural and energy production. This approach optimizes land use and provides dual benefits to communities.

We are also in discussions with the government to allocate underutilized public lands for renewable energy projects through open tenders. This would ensure transparency and attract both local and foreign investors.

### 🔗 Emerging Credit Rating Ltd.

BSREA has been actively engaging with stakeholders, including the government and financial institutions, to accelerate the renewable energy transition. What role does the association play in facilitating financing for renewable energy projects?

### Chapter | 01 | 02 | 03 | 04 |

### Mostafa Al Mahmud:

Financing is a critical component of renewable energy adoption, and BSREA plays a pivotal role in bridging gaps between project developers and financiers. We collaborate with organizations like IDCOL and commercial banks to ensure that our members have access to concessional financing.

For smaller entrepreneurs, we advocate for risk-sharing mechanisms and reduced collateral requirements, which are essential for encouraging innovation in the sector. We've also been in discussions with the central bank to design policies that recognize the unique risks and returns of renewable energy projects, making them more attractive to financial institutions.

Moreover, BSREA provides training and technical assistance to its members, equipping them with the skills needed to design viable projects and secure funding. This holistic approach ensures that even smaller players can contribute to the sector's growth.

### Emerging Credit Rating Ltd.

Looking ahead, what is your vision for BSREA and the renewable energy sector in Bangladesh?

#### Mostafa Al Mahmud:

My vision is for Bangladesh to become a leader in renewable energy in South Asia. To achieve this, BSREA aims to create a unified platform where businesses, policymakers, and financiers can collaborate effectively. We are committed to advocating for policies that prioritize sustainability, innovation, and inclusivity.

In the near term, we plan to focus on expanding rooftop solar installations, replacing diesel pumps with solar alternatives, and introducing energy storage solutions. These initiatives align with Bangladesh's goal of achieving 40% renewable energy in the energy mix by 2041.

Ultimately, we want to ensure that renewable energy is not just a business opportunity but a driver of socioeconomic transformation in Bangladesh. By addressing challenges and fostering innovation, I believe we can create a sustainable future for generations to come.





# **Stock** Analysis

### ENERGYPAC POWER GENERATION PLC



### Company Business Overview



Aspect	Information
Name	Energypac Power Generation PLC.
Establishment	1995
Key Business Activity	The company specializes in the distribution and marketing of gas and diesel generators, LPG bottling and distribution, pre-engineered steel building solutions, and a diverse range of machinery, including automobiles, agricultural equipment, construction machinery, and material handling equipment. It also engages in Engineering, Procurement, and Construction (EPC) contracts, operates CNG refueling stations, and provides installation and maintenance services for power plants. Additionally, the company assembles generators and offers complete solutions for industrial, commercial, and residential steel constructions.
Sector	Fuel & Power
About the company	The company is a leading provider of power generation, LPG, and industrial solutions in Bangladesh. It offers products such as gas and diesel generators, JAC automobiles, John Deere agricultural machinery, and JCB construction equipment. Additionally, it specializes in EPC contracts, pre-engineered steel buildings, and operates CNG refueling stations.

### **Stock Statistics**

Stock Price as on 14-Jan-2025	12.40
Authorized Capital -BDT(mn)	5,000.00
Paid Up Capital -BDT(mn)	1,901.63
Total Shares	190,163,216
Market Capitalization -BDT(mn)	2,377.04
P/E (Interim) as on 14-Jan-2025	0
P/E (Audited) as on 14-Jan-2025	0
Market Category	В
Market Lot	1
Last Dividend Declaration Date	24-Nov-24
AGM Date	22-Dec-24
Credit Rating	LT: "BBB-" & ST: "ST-4"
Number of shares outstanding	190,163,216
52 Weeks' Moving Range	12.10 - 34.50
CAGR of EPS in 2024 % (2020-2024)	-231.08%
CAGR of NAV in 2024 % (2020-2024)	-13.43%
Dividend Yield	0.00%
Free Float Share (%)	45.87%





### **Key Takeaways**

Energypac Power Generation PLC is a well-established player in Bangladesh's Fuel & Power sector, with a diversified portfolio ranging from power generation solutions to LPG distribution, industrial machinery, and pre-engineered steel buildings. However, the company's financial performance and market valuation indicate a challenging environment. Its market capitalization remains relatively modest, reflecting limited investor confidence, while the absence of a positive P/E ratio and dividend yield highlights weak profitability and shareholder returns. The company's declining NAV and negative EPS CAGR further emphasize a struggle to maintain financial stability and growth over the years.

Despite these challenges, Energypac's broad business scope and strong market presence in industrial and power solutions offer growth potential, particularly if it can address operational inefficiencies and leverage its assets more effectively. The company is currently undervalued, with its stock trading near the lower end of its 52-week range, which may appeal to risk-tolerant investors looking for turnaround opportunities in an essential industry like energy and industrial infrastructure. However, conservative investors seeking stable returns and lower risk may find the lack of dividend payments and current financial instability less attractive.

In the context of Bangladesh's capital market, where institutional and retail investors often favor growth and dividend-paying stocks, Energypac's ability to regain profitability and improve cash flows will be critical to rebuilding market confidence. Investors should consider this stock if they believe in the company's potential for operational recovery and growth in the long term but remain cautious of the associated risks in the near term.

### **Shareholding Position**

The shareholding structure of Energypac Power Generation PLC has experienced notable changes over recent years. The sponsor/director category has maintained a stable stake of 54.13%, reflecting consistent commitment and confidence from the However, institutional investors' management. shareholding has decreased from 22.8% in 2020 to 18.03% in 2024, signaling a decline in interest from informed and market-savvy investors. This shift could stem from the company's recent financial challenges or changes in institutional investment strategies. On the other hand, public shareholding has increased to 27.84%, possibly due to retail investors seeking value in the stock's lower price range. While the rise in public participation adds liquidity, the decline in institutional confidence suggests the need for the company to strengthen its fundamentals to attract strategic investors.





### **Historical Financial Performance**

Energypac Power Generation PLC's historical financial performance reflects a company grappling with significant operational and financial challenges over recent years. The decline in turnover from BDT 20.33 billion in 2022 to BDT 5.44 billion in 2023 underscores a substantial contraction in revenue generation. This revenue decline has also pressured profitability metrics, as evidenced by a marginal net profit margin of 2.6% in 2023, a notable recovery from the previous year's negative margin but still a far cry from earlier performance.

The company's asset turnover ratios have steadily declined, with total asset turnover at a low of 0.216 in 2023, reflecting inefficiencies in utilizing its substantial asset base of BDT 25.23 billion. While gross profit margins have improved slightly, indicating better cost management, the operating profit margin and EBITDA margin remain weak, pointing to challenges in controlling operational expenses. Furthermore, liquidity remains a pressing concern, with the current ratio consistently below 1, indicating difficulty in meeting short-term obligations.



On a positive note, cash flow from operating activities rebounded to BDT 599.47 million in 2023 after a significant outflow in 2022, signaling a partial recovery in operational efficiency. However, the company's leverage remains high, with a financial leverage ratio of 3.07 in 2023, underscoring its reliance on debt amid shrinking equity. The receivables turnover ratio improved, reflecting better credit management, but the cash ratio of 0.014 highlights a concerning scarcity of liquid funds.

In the context of Bangladesh's stock market, Energypac's recovery hinges on addressing these operational inefficiencies and improving asset utilization. While the return to profitability is a positive sign, the company must focus on stabilizing revenue streams, reducing financial leverage, and enhancing liquidity to rebuild investor confidence and sustain long-term growth.

Ratio	2023	2022	2021
Asset Management & Asset Quality			
Total Asset Turnover	0.216	0.414	0.275
Net Fixed Asset Turnover	0.430	0.795	0.583
Equity Turnover	0.663	1.865	0.995
Cash Flow & Capital Adequacy			
Operating Cash Flow to sales	0.110	-0.051	0.163
Efficiency & Productivity & Capital Strength			
Receivable Turnover	2.169	1.810	3.306
Inventory Turnover	6.087	3.670	3.001
Payables Turnover	5.696	2.903	7.015
Liquidity & Leverage			
Current Ratio	0.906	0.704	0.723
Quick Ratio	0.848	0.548	0.587
Cash Ratio	0.014	0.027	0.134
Financial Leverage	3.073	4.508	3.622
Profitability & Investment Return			
Gross Profit Margin	0.334	0.167	0.284
Operating Profit Margin	0.158	0.100	0.169
EBITDA Margin	0.033	-0.001	0.044
Net Profit Margin	0.026	-0.004	0.036
Return on Equity (ROE)	0.017	-0.007	0.036
Return on Assets (ROA)	0.006	-0.002	0.010

Particulars	2023	CAGR
Balance Sheet		
Total Assets	25,234,346,347.00	-5.79%
Total Equity	8,212,049,233.00	4.49%
Total Current Liabilities	10,259,651,066.00	-13.88%
Total non-current liabilities	6,762,646,050.00	1.02%
Income Statement		
Turnover	5,441,447,451.00	-21.59%
Gross Profit	1,816,115,988.00	-13.95%
Profit After Tax	143,455,561.00	-26.06%
Cash Flow Statement		
Net Cash from Operating Activities	599,470,503.00	-27.94%

### **Financial Highlights**

### Figure 3. Earning Per Share



### Figure 4. Dividend %













### **Peer Analysis:**

Energypac Power Generation PLC (EPGL) and Summit Power Limited are both prominent players in Bangladesh's power generation sector, yet they exhibit notable differences in their financial metrics and market positions. Summit Power's market capitalization significantly surpasses that of EPGL, indicating a stronger market valuation and investor confidence. This is further reflected in Summit's higher turnover, suggesting a more substantial revenue base. In terms of liquidity, Summit Power demonstrates superior current and guick ratios, highlighting better short-term financial health compared to EPGL. Additionally, Summit's lower financial leverage points to a more conservative capital structure with reduced reliance on debt financing. Both companies maintain similar net profit margins and returns on assets, indicating comparable efficiency in generating profits from their assets. However, EPGL's higher gross and operating profit margins suggest it retains a larger portion of revenue as profit before accounting for interest and taxes. Despite these strengths, EPGL's lower asset turnover ratios imply less efficient utilization of its assets to generate sales relative to Summit Power. Summit Power's higher inventory turnover indicates more efficient inventory management, while EPGL's higher receivable turnover suggests better effectiveness in collecting outstanding credit. Overall, while both companies are key contributors to Bangladesh's energy sector, Summit Power's stronger market presence and financial stability position it favorably against EPGL.



Symbol	EPGL	SUMITPOWER
Market Captital(mn)	2377.04	15697.80
PE Interim	-	4.56
PE Audited	-	7.05
NAV	35.54	40.50
Turnover	931.25	30295.17
Dividend Yield(%)	-	6.80
Current Ratio	0.91	1.30
Quick Ratio	0.85	1.28
Financial Leverage	3.07	2.06
Interest Coverage	-	1.31
Operating Cash Flow to sales	0.11	0.14
Gross Profit Margin	0.33	0.08
Operating Profit Margin	0.16	0.08
EBITDA Margin	0.03	0.03
Net Profit Margin	0.03	0.03
Cash Ratio	0.01	0.23
Total Asset Turnover	0.22	0.50
Net Fixed Asset Turnover	0.43	1.25
Equity Turnover	0.66	1.03
Return on Equity (ROE)	0.02	0.03
Return on Assets (ROA)	0.01	0.02
Receivable Turnover	2.17	1.88
Inventory Turnover	6.09	59.53
Payables Turnover	5.70	2.49

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### **DR. JAMALUDDIN AHMED, FCA**

### Chairman

Dr. Jamaluddin Ahmed is one of the sponsor directors of Emerging Credit Rating Ltd. (ECRL). He is also the Chairman of the company. Professionally a Chartered Accountant and a fellow member of the Institute of Chartered Accountants of Bangladesh (ICAB) since 1990; he has been awarded PhD in Accounting from Cardiff Business School, University of Wales, under Commonwealth Scholarship in 1996, and secured First Class in Masters Degree and Bachelors with Honours from Accounting Department of Dhaka University.

He has many years of experience in the financial sector of Bangladesh and has used his expertise and experience to carry out numerous research work and publications. He is the Audit Engagement Partner of 10 banks and leasing companies, 4 energy companies, 10 listed non-bank companies, and a tax advisor for many local and multinational companies. He also performs the following responsibilities:

- The Board of Directors of Janata Bank Limited (2008-2013), Essential Drugs Limited, Power Grid Company of Bangladesh Limited.
- The Chairman of the Board Audit Committee of Janata Bank Limited (2008-2013) and Power Grid Company of Bangladesh Limited.
- The Member of the Board of Directors and Chairman of the Audit Committee of Grameen Phone Limited, Advisor to the Board and Audit Committee of Bangladesh Bank.
- Previously He had been the representative of ICAB to the Board of Dhaka WASA, Dhaka Stock Exchange Ltd., Consultative
- Committee at the Security and Exchange Commission, Bangladesh Telecommunication Company Limited. From 1999 to 2013 he was a partner at Hoda Vasi Chowdhury & Co., An Independent Firm of Deloitte Touche & Tohmatsu. He has taken several training courses in the power and energy sector and has completed assignments at numerous banks.

### MR. N K A MOBIN, FCS, FCA

### Executive President

Mr. N K A Mobin is a veteran businessman and skilled in a broad range of trade ventures. He is one of the 4 sponsor Directors of the Emerging Credit Rating Ltd, the eminent credit rating agency in Bangladesh. Mr. Mobin has completed his Bachelor of Business Administration & Master of Business Administration from the University of Dhaka majoring in Finance with first class results. He has been a Fellow Member of the Institute of Chartered Accountants of Bangladesh (ICAB) & Institute of Chartered Secretaries and Managers of Bangladesh (ICSMB) since 1992 & 1998, respectively. He is also a Member of the Institute of Financial Consultants (IFC) of the USA since 2002.

Mr. Mobin has working experience of more than 34 years in different corporate arenas financial management systems including the budgeting and reporting system, Tax management and optimization in tax expenses, involved in different projects cost optimization/efficiency and revenue maximization areas, etc. He has been Director of Projects and administration Director Finance and Company Secretary in Grameenphone Ltd. (GP). He has also been the Director of Finance and Company Secretary at Novartis (Bangladesh) Limited. He also performs the following responsibilities:

- People's Leasing and Financial Services Limited Court appointed as the Director of People's Leasing and Financial Services Limited.
- Dhaka Chamber of Commerce and Industry (DCCI) Appointed as one of the Board members for 2020-2022 and Senior Vice President for 2021.
- Institute of Chartered Accountants of Bangladesh (ICAB) Elected Council member for 2019-21 and Ex-Vice President (Education and Examination) for 2019.
- Unique Hotel And Resort Appointed as the Independent Director of Unique Hotel And Resort

### MR. ARIFUR RAHMAN, FCCA, FCA, CSAA

Chief Executive Officer (CEO)

Mr. Arifur Rahman is a dynamic professional representing the Emerging Credit Rating Limited as the Chief Executive Officer (CEO), the distinguished credit rating agency in Bangladesh. He has completed his B.Sc. (Hons) in Civil Engineering with first class result from Bangladesh University of Engineering & Technology (BUET) and also completed BSc (Hons) achieving higher second class honors (2:1) in Applied Accounting from Oxford Brookes University.

Mr. Rahman has 21 years of expertise in the various sectors like Civil Engineering, Auditing, Financial Consultancy, Feasibility Studies, and Tax Advisory and Planning etc. He is also a Certified Sharia Adviser & Auditor (CSAA). He is actively involved in taking charge of the technical and organizational interests and advising the company in articulating current business strategies as well as future growth potentials. He is responsible to administer different departments and plays an important role in taking the managerial and operational decisions of the organization. Mr. Rahman is also the Fellow Member of the Association of Chartered Accountant. Mr. Rahman is qualified as a chartered accountant from the institute of the Institute of Chartered Accountants of Bangladesh (ICAB).









### MD. SHAIFUL HASAN

Senior Business Consultant

Mr. Shaiful Hasan holds the position of Senior Business Consultant at ECRL, where he oversees the department's comprehensive operations. His responsibilities extend to enhancing and refining ECRL's digital footprint and brand identity through meticulously curating financial infographics, YouTube video productions, and other captivating content for various social media platforms. Furthermore, he conducts insightful interviews with subject matter experts and serves as an anchor for financial literacy videos, bolstering the organization's educational outreach efforts. Mr. Shaiful has over eight years of financial analysis and project management expertse. Throughout his professional journey, he has successfully executed over 2,000 projects, offering his clients extensive services. These services encompass diverse areas, including feasibility studies, intricate financial modeling, comprehensive asset and company valuation, strategic M&A consultancy, in-depth industry analysis, meticulous company profiling, data visualization and report enhancement, publication in magazines, credit rating evaluations, distribution assessments, rigorous background verifications, thorough assessments of customer credit lines, the development of business plans and startup strategic marketing plans. Mr. Shaiful completed his academic journey at East West University and earned a Master of Social Science degree in Economics and a Bachelor of Business Administration in Finance and Economics. Notably, he received the prestigious Dean's Scholarship in recognition of his exceptional academic achievements.

### NABIHATUL AFROOZ

Senior Research Associate

Ms. Nabihatul Afrooz is a Senior Research Associate at ECRL, where she conducts financial and economic research on various industries and projects. She has more than six years of experience in data analysis, report writing, credit rating assessments, and survey design. She also handles special assignments from the management and collaborates with other team members to achieve common goals. Ms. Afrooz holds two Master of Social Science degrees in Economics, one from City University London, UK, and another from East West University. She also completed her Bachelor of Business Administration in Finance and Economics from East West University. She has a strong academic background and a keen interest in financial markets and economic development.



### **MD. ASADUZZAMAN**

**Business Analyst** 

Mr. Md. Asaduzzaman has been working as a research associate at Emerging Credit Rating Limited since 2022. He has more than three and half years of experience in various projects, financial research, and credit rating assessments. He is responsible for industry research, financial infographics and video making, data visualization, and macroeconomic analysis for ECRL monthly magazine. Other than that, he is involved in ECRL's special projects. He completed his BBA and MBA in Finance and Banking from Manarat International University, Bangladesh.



### **MS. SHAHELA NASRIN**

**Business Analyst** 

Ms. Shahela Nasrin has served as a Business Analyst at Emerging Credit Rating Limited since 2023. In this role, she fulfills crucial responsibilities, including data collection, visualization, and analysis, as well as industry analysis and preparation of working papers and monthly magazines. Additionally, she actively contributes to ECRL's special projects, which encompass feasibility studies, project profiles, company valuations, distributor assessments, supplier verification, and financial loan assessments for suppliers. Ms. Shahela holds a Bachelor of Social Science in Economics from East West University and a Master of Science in Economics from North South University. Her academic background and professional interests are centered around development economics and business research, with a specific emphasis on market and financial analysis.



### MD. SAAD SIDDIQUE

Business Analyst

Mr. Md. Saad Siddique is a recent graduate from North South University, where he earned his BBA with a major in Finance and Economics. He is currently a Business Analyst at Emerging Credit Rating Limited, where he is involved in data collection, visualization, industry analysis, and financial assessments. Before this, he interned at SEAF Ventures Management Ltd., assisting the Investment team with developing business and financial models, conducting market research, and competitive analysis.

# About ECRL

Emerging Credit Rating Limited (hereinafter referred to as ECRL) began its journey in the year 2009 with the motive to deliver credible superior & quality credit rating opinions in various industry segments around Bangladesh. ECRL obtained a credit rating license from Bangladesh Securities and Exchange Commission (BSEC) in June 2010 as per Credit Rating Companies Rules 1996 and also received Bangladesh Bank Recognition as an External Credit Assessment Institution (ECAI) in October 2010 to do the rating of Banks, Financial Institutions and their borrowers and also from Insurance Development & Regulatory Authority (IDRA) in 2015 to do the rating of Insurance Companies & affiliated with Malaysian Rating Corporation Berhad.

Emerging Credit Rating Limited's team is oriented towards the continuous improvement of processes, striving for an important role in the leadership of the business world. Every individual in ECRL is committed to providing topmost ingenious Credit Rating Services and Comprehensive Research Services in Bangladesh. ECRL's rating services and solutions reflect independence, professionalism, transparency, and impartial opinions, which assist businesses in enhancing the quality of their decisions and helping issuers access a broader investor base and even smaller known companies approach the money and capital markets. The Credit Rating process is an informed, well-researched and intended opinion of rating agencies on the creditworthiness of issuers or issues in terms of their/ its ability and willingness to discharge its financial obligations in a timely manner. Issuers, lenders, fixed-income investors use these risk assessments for the purpose of lending to or investment in a corporation (such as a financial institution, an insurance company, a non-banking corporation or a corporate entity) as well as evaluating the risk of default of an organization's financial obligations in terms of loan or debt.

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ECRL Research provides insights, opinions, and analysis on Bangladesh and International Economies. ECRL Research conducts surveys and produces working papers and reports on Bangladesh's different socio-economic issues, industries, and capital market. It also provides training programs to professionals from financial and economic sectors on a wide array of technical issues.

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