Volume 01 | Issue 04

April 2025

A Quarterly Publication

ENERGY OUTLOOK

GREEN GROWTH IN BANGLADESH: TURNING CLIMATE CHALLENGES INTO DEVELOPMENT OPPORTUNITIES

Selim Raihan

This article highlights green growth as essential for Bangladesh’s development, urging a shift to renewable energy, sustainable industry, and low-carbon urban planning. It critiques current policy fragmentation and calls for international support, financial reform, and a just transition to ensure inclusive and resilient progress.

GREEN JOBS AND THE RENEWABLE ENERGY TRANSITION IN BANGLADESH

Afia Mubasshira Tiasha and Sudeepto Roy

The authors highlight the potential of green jobs in Bangladesh’s renewable energy transition, emphasizing the need for policy reform, skills development, and formal employment structures. It calls for a national green jobs strategy to ensure an inclusive, low-carbon economy that boosts youth employment and climate resilience.

GREEN FINANCING IN RENEWABLE ENERGY TRANSITION

Ekramul Hasan

This article highlights Bangladesh's energy financing challenges amid declining gas reserves and rising import costs, arguing that green finance is crucial for a sustainable renewable energy transition. It calls for scaling up green bonds, blended finance, and institutional reforms to unlock investment and meet ambitious clean energy targets.

Editor: Selim Raihan

Associate Editor: Md. Tuhin Ahmed

Designer: Md Hasin Israq

Green Growth in Bangladesh:
Turning Climate Challenges into Development Opportunities

Selim Raihan

In a world grappling with intensifying climate emergencies, the concept of "green growth" is a powerful story of balancing economic development and ecological responsibility. For Bangladesh, a country very vulnerable to climate change but committed to becoming an upper-middle-income country by 2031, the green growth agenda is both a policy choice and a development necessity.

Climate Vulnerability and the Development Paradox

Bangladesh is one of the frontline states of the climate crisis. Its low-lying ground, high population, and dependency on climate-sensitive activities such as agriculture, fisheries, and water resources make it vulnerable to floods, cyclones, sea-level rise, and salinity intrusion. Climate impacts have a direct bearing on livelihood, infrastructure, and long-term growth.

Ironically, while Bangladesh's share in global greenhouse gas emissions is minuscule, it is disproportionately vulnerable to their effects. Yet, as the country industrialises and urbanises, its own emissions profile too is transforming, especially in the sectors of energy, transport, and industry. In this context, the imperative is two-pronged: to address existing climate vulnerabilities while transitioning to a low-carbon, climate-resilient economy. That is the essence of green growth.

The Green Growth Opportunity

Green growth offers Bangladesh the chance to pursue a more inclusive, efficient, and sustainable development path. It is all about stimulating economic growth and poverty reduction while ensuring that natural resources continue to provide the ecosystem services on which growth and human wellbeing depend.

Bangladesh's green growth transition rests on three pillars of fundamentals:

1. Energy Transition: The energy sector is at the core of any green growth strategy. The energy mix of Bangladesh today relies heavily on imported fossil fuels and natural gas. The renewables share in the power generation mix is still below 4%, lagging behind what was anticipated by the Mujib Climate Prosperity Plan (MCPP) targets. Solar, wind, and other clean energy development must become a country-level priority. Grid modernisation, decentralisation of the power system, and incentives for private investment in the form of green tariffs and power purchase agreements can fuel this transition. Solar rooftop, solar irrigation pumps, and mini-grids are scalable solutions in both urban and rural sectors.

2. Sustainable Industrialisation: The ready-made garment (RMG) sector, Bangladesh's export lifeline, is becoming increasingly exposed to global buyers' climate and environmental criteria. Fortunately, Bangladesh has already moved ahead as an international green garment manufacturing leader with over 200 LEED-certified buildings. The next step will be to take it beyond compliance and infuse ESG thinking throughout the entire industrial value chain. The green industrial policy will have to include eco-industrial parks, resource-efficient processes, circular economy, and clean logistics. All this will enhance competitiveness as well as attract climate-sensitive investors. Access to green finance, technology transfer, and capacity building are key enablers.

3. Urban and Transport Reform: As urbanisation is advancing at such a rapid rate, Bangladesh's cities are becoming increasingly congested, polluted, and unlivable. Dhaka alone is one of the most polluted cities in the world. Green growth demands a complete overhaul of urban planning—low-carbon public transport, energy-efficient buildings, solid waste management, and green spaces. Investment in mass transit, non-motorised transport infrastructure, and electric vehicles (EVs) has the potential to drastically lower emissions and clean the air in urban areas. Urban areas also have to be facilitated and supported in order to become nodes for climate action and innovation.

Policy Alignment and Institutional Readiness

To realise the green growth potential, Bangladesh should align its policies, plans, and institutions. The country has already in place a variety of relevant instruments — the Delta Plan 2100, the Bangladesh Climate Change Strategy and Action Plan (BCCSAP), the National Adaptation Plan (NAP), the Renewable Energy Policy, and the MCPP, to mention a few. Yet there is still not much coherence among these instruments.

There needs to be a Green Growth Strategy complemented by institutional coordination by the Ministry of Finance, the Ministry of Environment, the Ministry of Power and Energy, the Ministry of Industries, and local governments. The Planning Commission needs to drive this agenda in the development plans and complement a results-based monitoring system.

At the centre of all this is green growth being mainstreamed within fiscal and financial mechanisms. This includes green budgeting, environmental tax reform, public-private partnerships in green infrastructure, and deepening domestic capital markets for green bonds. The role of Bangladesh Bank and financial regulators will be central to making green finance mainstream through risk assessment frameworks, sustainability disclosures, and refinance facilities.

International Partnerships and Climate Finance

Bangladesh cannot and must not try to do this in isolation. International cooperation and climate finance are necessary. Bangladesh requires access to concessional finance, technology, and capacity building to scale up its green ambitions. Institutions like the Green Climate Fund, World Bank, and regional development banks can help catalyse funding of the green transition, especially in energy and infrastructure.

However, accessing climate finance remains a major challenge. Bureaucratic hurdles, limited project readiness, and weak pipeline development capacities have constrained fund mobilisation. Strengthening the capacity of line ministries and local governments to design and manage green projects is a pressing need.

At the same time, Bangladesh should play an active role in global and regional platforms—especially the G77, COP, V20, and South Asian regional initiatives—to push for climate justice, climate-compatible trade, and fair access to green technologies.

A Just and Inclusive Transition

Along with the transition towards green growth for Bangladesh, social consideration cannot be overlooked. Brown to green changes may drive certain jobs off and relocate livelihoods. Informal workers, women workers, and climate-vulnerable individuals need to be protected and empowered.

This entails a "just transition" strategy, a strategy that ensures social safety nets, re-skilling programs, inclusive green jobs, and participatory planning. That way, green growth can be more than a technocratic dream but a social contract for shared prosperity.

Conclusion: A Defining Moment

The green growth agenda is not without its pitfalls. But for Bangladesh, the larger risk is to remain with the status quo. With the right investments, institutional change, and international partnerships, Bangladesh can demonstrate that economic ambition and climate resilience are complementary. Far from it, green growth is the path to a wiser, more prosperous, and more resilient future. The question in the coming years will not be whether Bangladesh can pay for green growth, but whether it can grow without green growth.

Dr Selim Raihan *is a* ***Professor of Economics****, University of Dhaka and Executive Director, SANEM. Email:* ***selim.raihan@gmail.com***

Green Jobs and the Renewable Energy Transition in Bangladesh

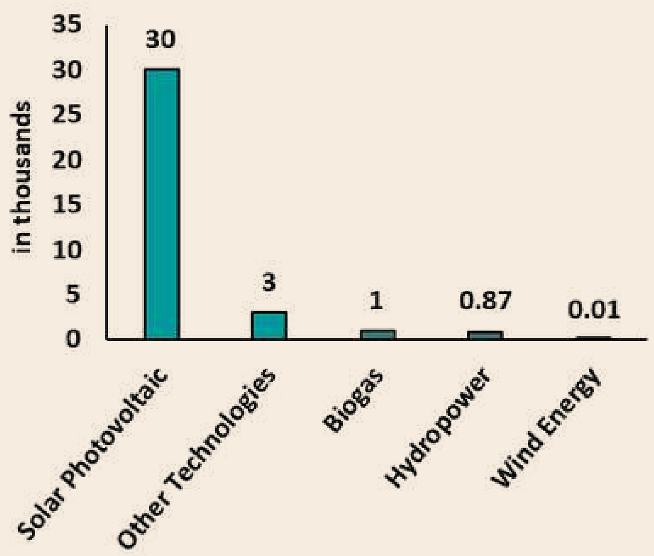
Afia Mubasshira Tiasha and Sudeepto Roy

The global energy landscape has reached a turning point in the third decade of the twenty-first century. Countries are attempting to deplete their use of fossil fuels such as coal, oil, and gas, substituting them with cleaner, renewable energy like wind, solar, and hydroelectric power. And in order to address climate change and environmental damage, every country has to implement this shift. As a result, the term "green jobs" evolved. International Labour Organisation (ILO) defines “Green Jobs” as ‘green jobs’ that are reasonably good work opportunities where one directly or indirectly aids in protecting or restoring the environment. However, green jobs do not perpetuate only to those employed in energy efficiency and renewable energy. Traditional sectors like manufacturing and construction also fall under green jobs. Bangladesh is marked as the seventh climate-vulnerable country according to Global Climate Risk Index 2021. Thus, it is essential that green jobs proliferate in this country.

There lies a huge scope of green employment opportunities in Bangladesh. This shift towards renewable energy sources has the potential to bring economic development and social equality. According to the National Database of Renewable Energy, Bangladesh has an installed capacity of renewable energy of 1,557.09 MW. The contribution of solar energy is the highest at 81.1%. As for the rest, hydropower contributes 14.8%, and wind and biogas constitute 4% (SREDA, 2025).

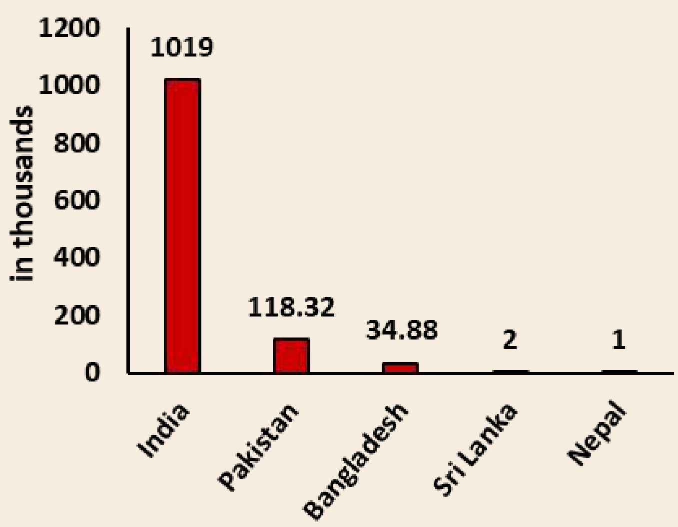
In the South Asian region, Bangladesh ranks third in renewable energy employment. India leads the way, employing around 1.02 million people, the highest in South Asia. Pakistan ranks second in the region with 118,322 jobs. According to BBS 2022, the age group under 35 comprises more than 60% of the population. However, getting a suitable job is a challenge for many young people.

Figure 1: Renewable Energy Employment by Technology in Bangladesh



Source: IRENA Jobs database, 2023

Figure 2: Renewable Energy Employment in South Asia



Source: IRENA Jobs database, 2023

More than 10% of young people are unemployed. Around 85% of workers are employed in the informal sector, which offers inadequate compensation and limited job security.

Bangladesh's energy consumption is rising concurrently as well. One of the government's top priorities is to have more renewable energy included in the country's energy mix. The Bangladesh Delta Plan 2100; the Integrated Energy and Power Master Plan (IEPMP) 2023; and the National Solar Energy Roadmap (2021-2041) are part of these initiatives. It is projected that the transition to clean energy will reduce greenhouse gas emissions and improve energy security. It also creates space for potential future employment.

Sustainable agriculture, waste management, energy efficiency, solar energy, and other green jobs help improve sustainability in economies. According to the International Renewable Energy Agency (IRENA), by 2022, there will be approximately more than 13.7 million people working within the renewable energy sector, mostly in solar, wind, and bioenergy. Bangladesh has made good progress in sustainable garment manufacturing and now has 237 LEED-certified green garment factories. Not surprisingly, 62 of the world's top 100 green garment factories are located in the country (BGMEA, 2025). So, Bangladesh is making an impact on green jobs in traditional sectors as well. Around 100 million green jobs may be added by 2030, which will add a net of 25 million jobs (ILO, 2022).

Indeed, the need for skilling and reskilling the workforce becomes unavoidable as Bangladesh moves towards a clean-energy economy. This transition will create all sorts of new jobs – from traditional ones like mechanical, electrical, and chemical engineering, to business ones like executive, sales, and marketing experts, specialist ones like energy storage specialists, smart grid engineers, and environmental planners, and more advanced ones as energy analysts. However, as renewables become more widely adopted, jobs in fossil fuel-based power plants will decline. New jobs will be available in solar and wind power, energy efficiency technologies, etc. This transition requires a new range of skills like multidisciplinary project management, data analysis, system design, installation, and maintenance.

Apart from this, Bangladesh's Solar Home System initiative has generated more than 100,000 jobs in customer support, sales, maintenance, and system installation. However, the majority of the employment is informal, and the renewable energy sector needs more sustainable, formal employment. Thus, green jobs are on the rise and have vast scope in Bangladesh. In addition, staff development training will be required for new employees in advanced areas such as environmental sustainability, smart grid technologies, and energy storage.

Specific funding for retraining initiatives is necessary to assist workers in dwindling industries to re-enter the expanding green economy with new jobs. Renewable energy technology should be incorporated into the curricula of vocational training facilities, and industry and educational institutions should collaborate more closely. Many workers can be left behind throughout this shift if they don't receive the right support for skill development. Therefore, to guarantee a fair, inclusive, and fruitful energy transition in Bangladesh, deliberate reskilling and upskilling initiatives are essential.

Bangladesh does not have a comprehensive national policy approach for green jobs and the Renewable Energy Policy (2008) is already outdated. The Government needs to improve statistics on the labour market, ensure transitions for employees in legacy energy systems, revise technical vocational education and training (TVET) program frameworks, create a Green Skills Fund, and develop a national strategy for green jobs to address these issues. This entails determining priority industries, projecting employment potential, and offering an implementation roadmap. The fund might be backed by grants and public-private partnerships.

Bangladesh is experiencing a shift towards renewable energy that is very crucial in achieving climate goals and will also affect the improvements of the labour market. Green jobs will help bridge the gender gap, promote rural development, and reduce unemployment. But funding, policies, and efforts in education are needed to make that happen. A comprehensive approach to green jobs will contribute to low-carbon economic development and greater social inclusion

Afia Mubasshira Tiasha *is a* ***Senior Research Associate*** *at the South Asian Network on Economic Modeling (SANEM). Email:* ***tiashaafia@gmail.com***

Sudeepto Roy *is a* ***Research Associate*** *at the South Asian Network on Economic Modeling (SANEM). Email:* ***sudeeptoroy232@gmail.com***

Green Financing in Renewable Energy Transition

Ekramul Hasan

Despite having an installed power generation capacity of 27,536 MW, Bangladesh's highest recorded demand between January 2024 and April 1, 2025, stood at just 16,435 MW. This has left the country with a reserve margin of nearly 40 percent—double the globally accepted standard of 20 percent. On the surface, this may suggest energy abundance, but in reality, the real challenge lies in securing adequate fuel supplies to keep even a portion of this capacity operational on a daily basis, just enough to meet actual demand. For decades, Bangladesh relied heavily on its domestic natural gas reserves to power homes, industries, and infrastructure. But with gas reserves dwindling, the country has increasingly turned to imported fuels—liquefied natural gas (LNG), coal, and fuel oil—to bridge the growing energy gap. The situation was exacerbated in 2022 when global energy prices surged following geopolitical tensions, making imports financially burdensome and leading to energy shortages. The financial strain is further intensified by the country's limited foreign exchange reserves and the continuous devaluation of the Bangladeshi Taka against the US Dollar. This economic pressure hampers Bangladesh's ability to pay for energy imports, as evidenced by difficulties in settling debts with international power suppliers.

Amid this backdrop, the current model—heavily reliant on fossil fuels and international markets—is not only financially unsustainable but also environmentally costly. As the impacts of climate change intensify and global pressure to decarbonize grows, the case for transitioning to renewable energy (RE) has never been stronger. This is where green financing, financial activities — including investments, loans, bonds, and subsidies — that support environmentally sustainable and climate-resilient development, could play a transformative role. Recognizing this, Bangladesh has taken several early steps to develop a green finance ecosystem, particularly through the proactive role of Bangladesh Bank (BB). As early as 2009, the central bank introduced a green refinance scheme to promote investments in RE, energy efficiency, and environmentally sustainable practices. In 2016, BB set a minimum target for direct green finance at 5 percent of total loan disbursements for all banks and financial institutions. More recently, in 2020, Bangladesh Bank launched a broader Sustainable Finance Policy, which integrated green and social finance under a unified framework. By the first quarter of 2024, sustainable finance constituted 31.85% of total loan disbursements, with banks contributing 32.22 percent and non-bank financial institutions (NBFIs) 24.60 percent.

However, despite this policy groundwork, the scale and impact of green financing in Bangladesh remain limited. Most banks treat green finance more as a regulatory formality than a strategic investment area, and the volume of green lending is still negligible compared to the country's overall financing needs. Most green financing to date, has been channeled through institutions like the Infrastructure Development Company Limited (IDCOL), which has financed over 6 million solar home systems, solar irrigation pumps, and mini-grids. However, financing for on-grid renewable energy remains critically underdeveloped. As of early 2025, on-grid renewable energy constitutes only 3.61 percent of total installed generation capacity—993 MW according to the Bangladesh Power Development Board (BPDB) and 1,178.07 MW as per the Sustainable and Renewable Energy Development Authority (SREDA). This falls well short of national targets. The Integrated Energy and Power Master Plan (IEPMP) 2023 aims to achieve 11 percent of total capacity from renewables and 40 percent from clean energy sources by 2041. In addition, the Mujib Climate Prosperity Plan (MCPP) sets a far more ambitious goal of generating 40,000 MW from renewable sources, highlighting the urgent need for large-scale investment and policy action to scale up clean energy deployment.

In contrast, India, for instance, has emerged as a global leader in RE adoption. It ranks fourth globally in renewable capacity additions and has seen solar energy grow 30-fold in nine years, reaching 74.3 GW by January 2024. A key driver behind this surge is India's diversified financing landscape. Mechanisms such as Accelerated Depreciation (AD), Generation - Based Incentive (GBI), Viability Gap Funding (VGF), and green bonds have fostered investor confidence. India also pioneered innovative financial instruments, including green masala bonds. In 2017, its first such bond raised USD 300 million at 7.13 percent interest, and by 2019, India had issued USD 8.6 billion in green bonds—80 percent of which funded renewable energy. Similarly, Indonesia and Malaysia have been proactive in issuing green sukuk (Islamic bonds) to finance environmentally friendly projects.

Bangladesh's green bond market is still in its infancy. A significant development came with the issuance of the Bangladesh Securities and Exchange Commission's (BSEC) "Debt Securities Rules" in 2021, which formally enabled the issuance of green bonds in the domestic capital market. In 2022, BB published its comprehensive "Policy on Green Bond Financing for Banks and FIs," which included a nationally tailored green bond taxonomy. The policy aims to facilitate investments in environmentally friendly projects, including renewable energy initiatives. Nonetheless, the actual issuance of green bonds in Bangladesh has been limited. Notably, in 2021, the Sajida Foundation, a non-governmental organization, issued a Green Zero-Coupon Bond worth BDT 1 billion to enhance its microcredit program and promote environmental development. Additionally, Beximco issued a Green Sukuk Al Istisna worth BDT 30 billion in the same year to finance solar power plants. Despite these promising beginnings, the momentum has not continued. As of 2025, the green bond market in Bangladesh remains significantly underdeveloped. Very few new issuances have occurred since 2021, and green bonds still represent a negligible fraction of total capital market activity.

Looking ahead, Bangladesh has considerable opportunities to expand its green finance portfolio. Establishing a clear green taxonomy and regulatory framework will be essential to attract global investors. Enhancing the capacity of banks and project developers to design bankable green energy projects can unlock new financing avenues. India's experience with green bonds—particularly its targeted use through institutions like IREDA—could guide Bangladesh in designing specialized green financing agencies or platforms to attract institutional investors. Moreover, public-private partnerships (PPPs) should be promoted more vigorously, particularly in RE and energy efficiency projects, where risks can be mitigated through policy support and concessional finance. In both India and Vietnam, governments have facilitated the entry of commercial banks, non-banking financial institutions, and even crowdfunding platforms into the green energy space. Bangladesh should consider developing blended finance models that combine concessional funding from multilateral banks with private capital, thereby reducing overall project risk. Finally, institutional capacity building is critical. Bangladesh's regulatory bodies, including the BB, BSEC, SREDA, and the Power Division, must be equipped to design and monitor green financial instruments.

__Ekramul Hasan__ is a __Consultant, Poverty and Equity GP__, at the The World Bank. Email: __ekram.eco.du@gmail.com__

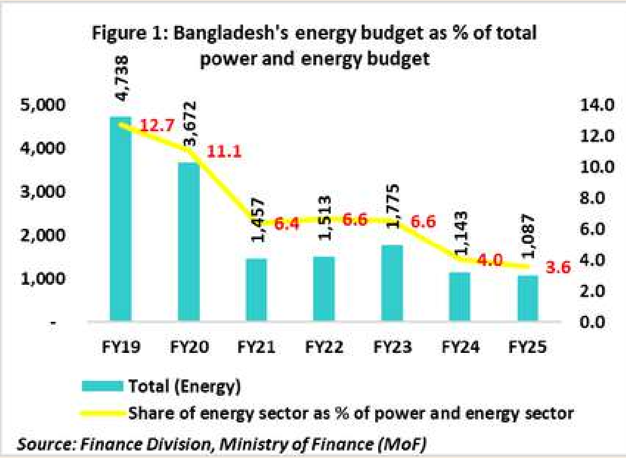


Figure 1: Bangladesh's energy budget as % of total power and energy budget

Source: Finance Division, Ministry of Finance (MoF)

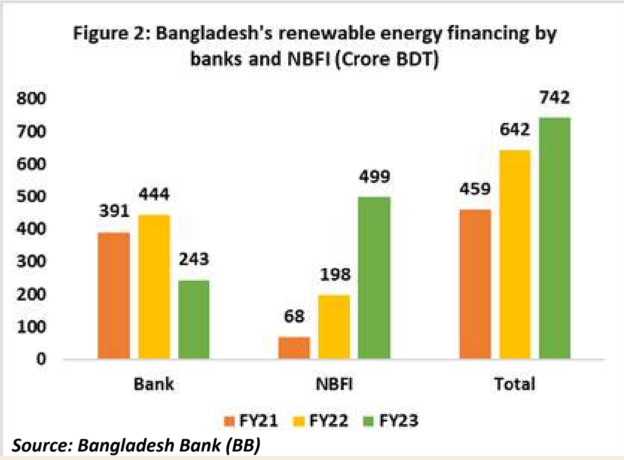


Figure 2: Bangladesh's renewable energy financing by banks and NBFI (Crore BDT)

Source: Bangladesh Bank (BB)

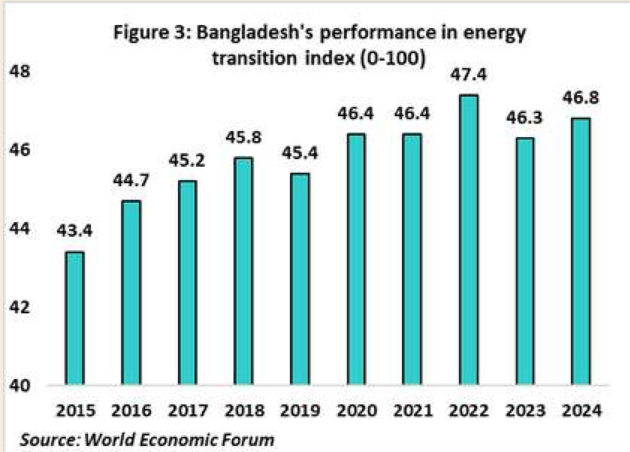


Figure 3: Bangladesh's performance in energy transition index (0-100)

Source: World Economic Forum

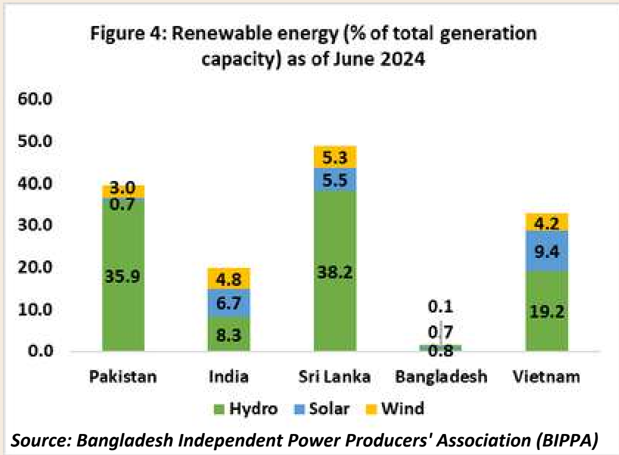


Figure 4: Renewable energy (% of total generation capacity) as of June 2024

Source: Bangladesh Independent Power Producers' Association (BIPPA)

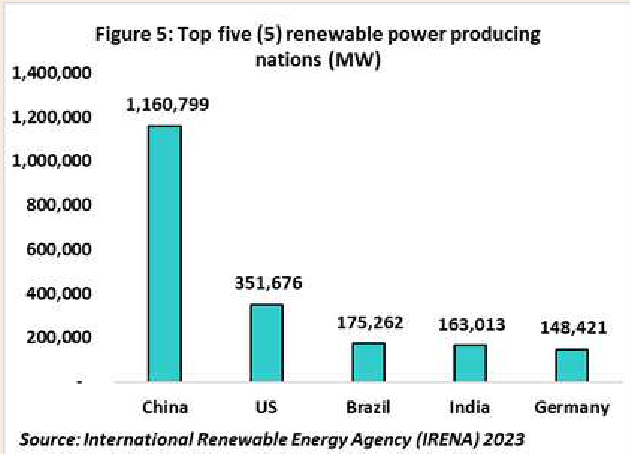


Figure 5: Top five (5) renewable power producing nations (MW)

Source: International Renewable Energy Agency (IRENA) 2023

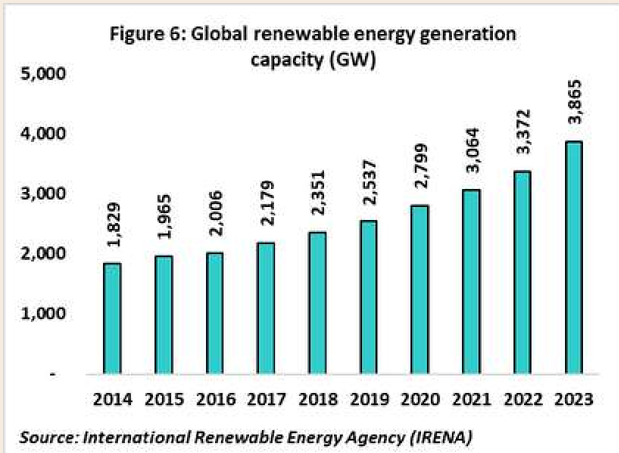


Figure 6: Global renewable energy generation capacity (GW)

Source: International Renewable Energy Agency (IRENA)

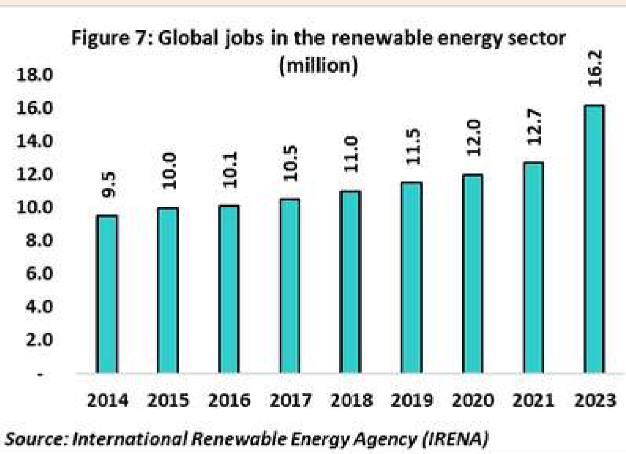


Figure 7: Global jobs in the renewable energy sector (million)

Source: International Renewable Energy Agency (IRENA)

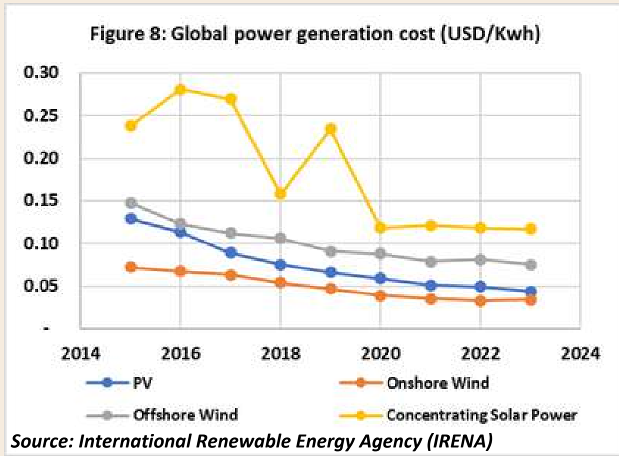


Figure 8: Global power generation cost (USD/Kwh)

Source: International Renewable Energy Agency (IRENA)

SANEM Energy Outlook is a quarterly newsletter dedicated to disseminating SANEM's research on Bangladesh's transition to green and clean energy. SANEM, a non-profit research organization established in January 2007 in Dhaka and registered with the Registrar of Joint Stock Companies and Firms in Bangladesh, focuses on economic modeling and policy research specific to South Asia. It aims to deliver high-quality, objective research to support policy-making in the region. SANEM collaborates extensively with global, regional, and local think tanks, research organizations, universities, and individual researchers to enhance its research impact.

+88 02 58813075
http://www.sanemnet.org
Flat K-5, House 1/B, Road 35, Gulshan 2
Dhaka 1212, Bangladesh
sanemnet@yahoo.com