

Policy Brief on

An Analysis of the Power and Energy Sector in the FY2023-24 National Budget

1. Introduction and background

There is no denying that to continue the growth momentum of Bangladesh and meet the country's development challenges, a continuous and uninterrupted supply of energy is a prerequisite. The energy landscape of the country is primarily characterized by natural gas with more than half of the electricity being generated by domestic natural gas and imported Liquefied Natural Gas (LNG) and the rest of the power generation is sourced from coal, diesel, furnace oil, hydro and solar (BPDB, 2022). However, the increasing dependence on LNG against the backdrop of the volatile and costly source of imported energy has created tremendous pressure on the government budget. In this context, the global energy supply chain disruption due to the recent Russia-Ukraine war and the COVID-19 pandemic has made imported energy more costly. On the other hand, the growing environmental concern about the negative consequences of increased use of fossil fuel, coupled with the target of attaining 30% renewable energy (RE) in the total energy mix of the country by 2030 requires a thorough assessment and immediate focus in terms of budgetary allocation as well as policy planning.¹

During FY2021-22, the country has been able to cover all of its population under electricity facilities. Its electricity generation target is set at 40,000 megawatts by 2030 and 60,000 megawatts by 2041.² However, the frequent disruption in electricity generation as well as the high cost of different sources of energy have not only negatively affected the production processes but also is hampering the day-to-day activities and putting pressure on household expenditure. When it comes to clean energy, the GoB has set the target of producing 40% of the nation's electricity from clean sources by 2041. In this regard, to attain an energy transformation towards clean and RE, the government has recently formulated the "Mujib Climate Prosperity Plan" in November 2022 which sets an ambitious RE target of attaining RE target of 30% by 2030 and 40% by 2041.³

Detailed and long-term financial planning is needed to attain the targets as outlined in the national plans. In the FY 2023-24 budget, the allocation for the Ministry of Power, Energy and Mineral Resources (MoPEMR) was BDT 34,819 crore, which was 4.6% of the national budget and 0.70% of the GDP (MoF, 2023). Moreover, the recent trends of budgetary allocation give rise to serious concern as to the effectiveness of resource mobilization for the transition to clean and renewable energy as stated in various plans of the GoB. Therefore, for attaining the targets as set by the policy documents the national budget of the MoPEMR needs to be re-designed in terms of both spending as well as financing.

2. Context of the power and energy sector in the FY2023-24 national budget

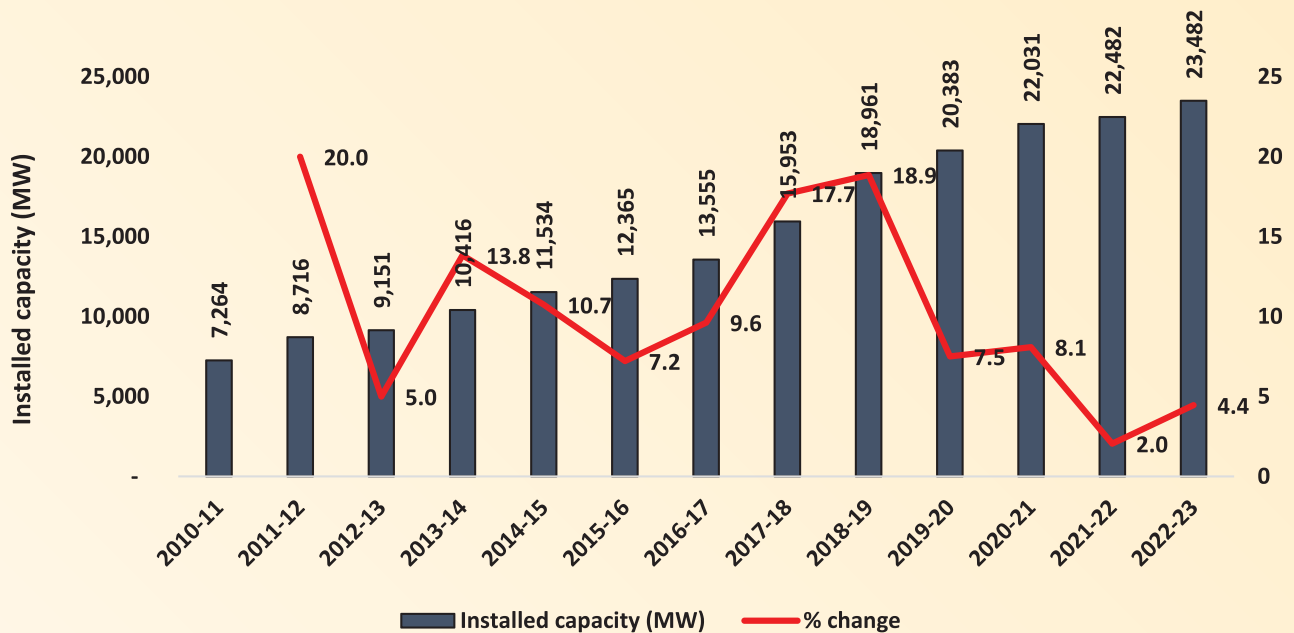
Over the years, the country has witnessed an increase in its grid-based power generation capacity, although the pace of growth has declined since FY2019-20 (Figure 1). While natural gas has traditionally been the primary source of power generation, its contribution has gradually decreased over time, whereas the use of coal and furnace oil has seen an increase (Figure 2).

¹During the COP-26, the Prime Minister of Bangladesh announced to meet the RE target of 30% by 2030 and 40% by 2041. Afterwards, the 40% renewable energy target has been replaced by 40% clean energy target including nuclear powerplant with other renewable sources.

²<https://www.thedailystar.net/business/economy/news/100pc-population-comes-under-electricity-coverage-2983111>

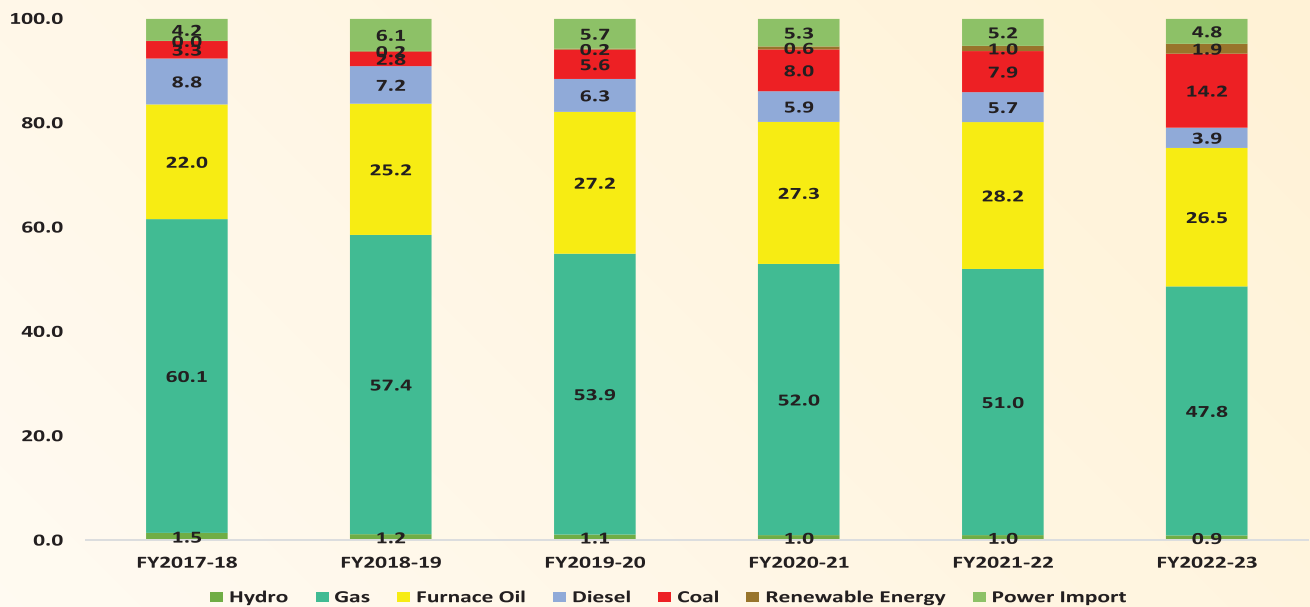
³https://mujibplan.com/wp-content/uploads/2021/12/Mujib-Climate-Prosperity-Plan_ao-21Dec2021_small.pdf

Figure 1: Power installed capacity (MW)



Source: Power Division (*Up to January 2023)

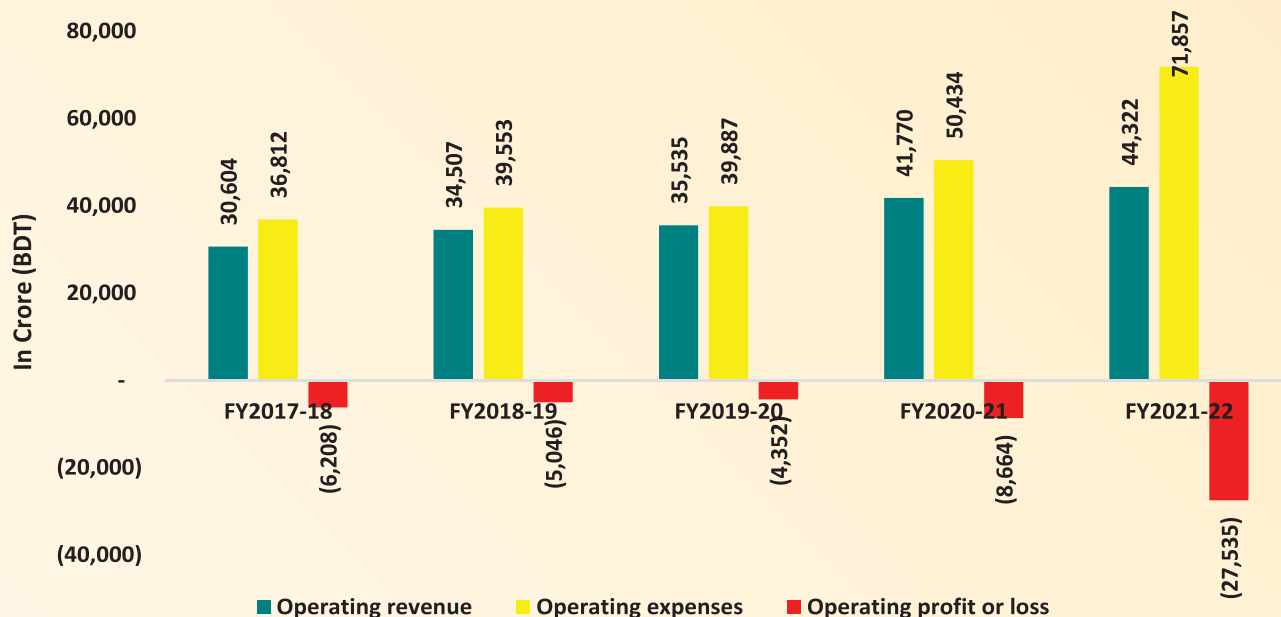
Figure 2: Distribution of power installed capacity by fuel mix (%)



Source: Annual Report Various Years, Bangladesh Power Development Board (BPDB)

In the country's power generation landscape, according to the latest data for FY2022-23, the public sector holds the majority share with a power generation capacity of 43.2%, closely followed by the private sector at 41.3%. Within the public sector, the main power producer is BPBD, while in the private sector, Independent Power Producers (IPPs) take the lead in power generation. However, over the years, there has been a consistent trend where the maximum power generation falls short of the installed capacity, resulting in a surplus of power generation capability. Despite this overgeneration capacity, the country has struggled to meet its peak electricity demand in recent years. This shortfall can primarily be attributed to fuel shortages and the inefficiency of power plants, which have led to the underutilization of their full capacity.

Figure 3: BPDB's operating loss



Source: Various Annual Reports, Bangladesh Power Development Board (BPDB)

To address the increasing electricity demand, BPDB places a strong emphasis on its power generation and procures electricity from various sources, including Independent Power Producers (IPP), Rental Power Plants, Public Power Plants, and imports from India. However, between FY2020-21 and FY2021-22, BPDB has witnessed an 18.8% increase in its generation costs, a substantial 77.4% increase in energy procurement from IPPs, and a modest 1.4% uptick in energy acquisition from Public Power Plants.

The capacity charge represents the payment made by BPDB to power plants in exchange for the right to utilize their power generation capacity. The capacity payment has seen a substantial increase, rising from BDT 5,600 crore in FY2017-18 to BDT 28,000 crore in FY2022-23. Notably, the capacity payment for FY2022-23 was 16.7 times higher than that in FY2021-22. In alignment with this trend, there has also been a noteworthy increase in subsidies provided to BPDB, surging from BDT 3,550 crore in FY2017-18 to BDT 32,000 crore in FY2023-24.

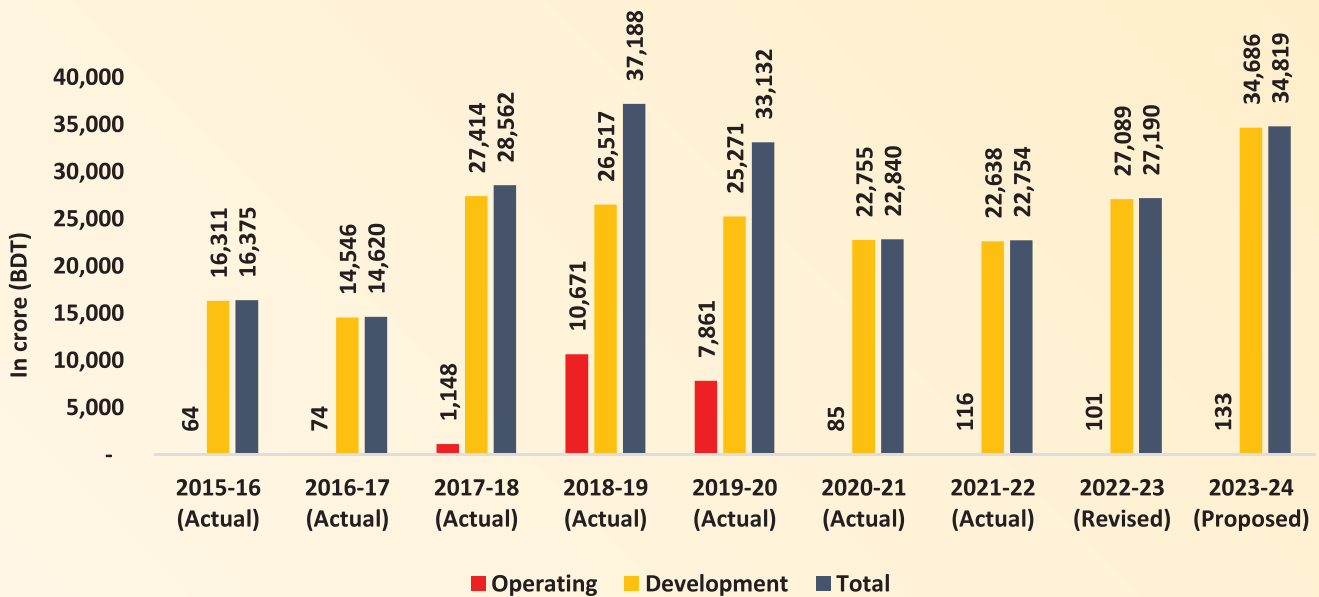
As a result of capacity payments, irregularities, and various inefficiencies, the BPDB has accumulated substantial operating losses over the years. BPDB's operating loss has surged from BDT 6,208 crore in FY2017-18 to BDT 27,535 crore in FY2021-22 (Figure 3). Remarkably, the operating loss for FY2021-22 was 217.8% higher than that in FY2020-21. Out of BPDB's overall operating expenses, a significant portion of 68.5% was allocated to procuring electricity from IPPs. Notably, the IPPs' share of costs within BPDB's total operating expenses has climbed from 28.3% in FY2017-18 to 68.5% in FY2021-22. This indicates that the increased expenditure on purchasing electricity from IPPs is the primary factor driving the escalation of BPDB's total operating expenses over time.

3. An analysis of the power and energy sector in FY2023-24 national budget

As outlined in the FY 2023-24 budget, out of the BDT 34,819 crore allocation for the MoPEMR, the majority of allocation was in the Power Division (PD) (BDT 33,825 crore), while only BDT 994 crore has been allotted for the Energy and Mineral Resources Division (EMRD).

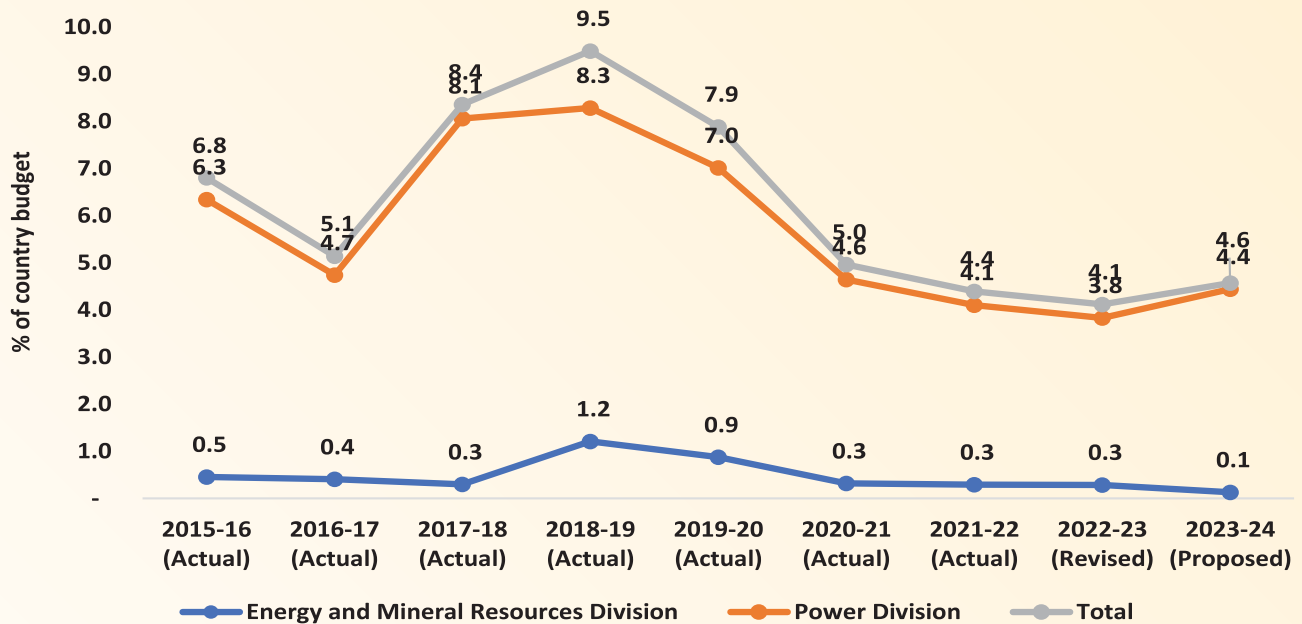
As suggested in Figure 4, for the recent two plan documents (the 7FYP and the 8FYP) though we do not observe any consistent pattern, in comparison to the allocation for the MoPEMR in FY2022-23, there has been an increase of around 28 per cent in FY2023-24. A disaggregation of the budgetary expenditure of the MoPEMR into two of its divisions, namely the Energy and Mineral Resources Division (EMRD) and Power Division (PD) reflects that in FY2023-24 on one hand the EMRD budget decreased by 47.7 per cent while on the other hand the budget of PD increased by 33.8 per cent.

Figure 4: Budgetary allocation for the power and energy sector



Source: Finance Division, Ministry of Finance

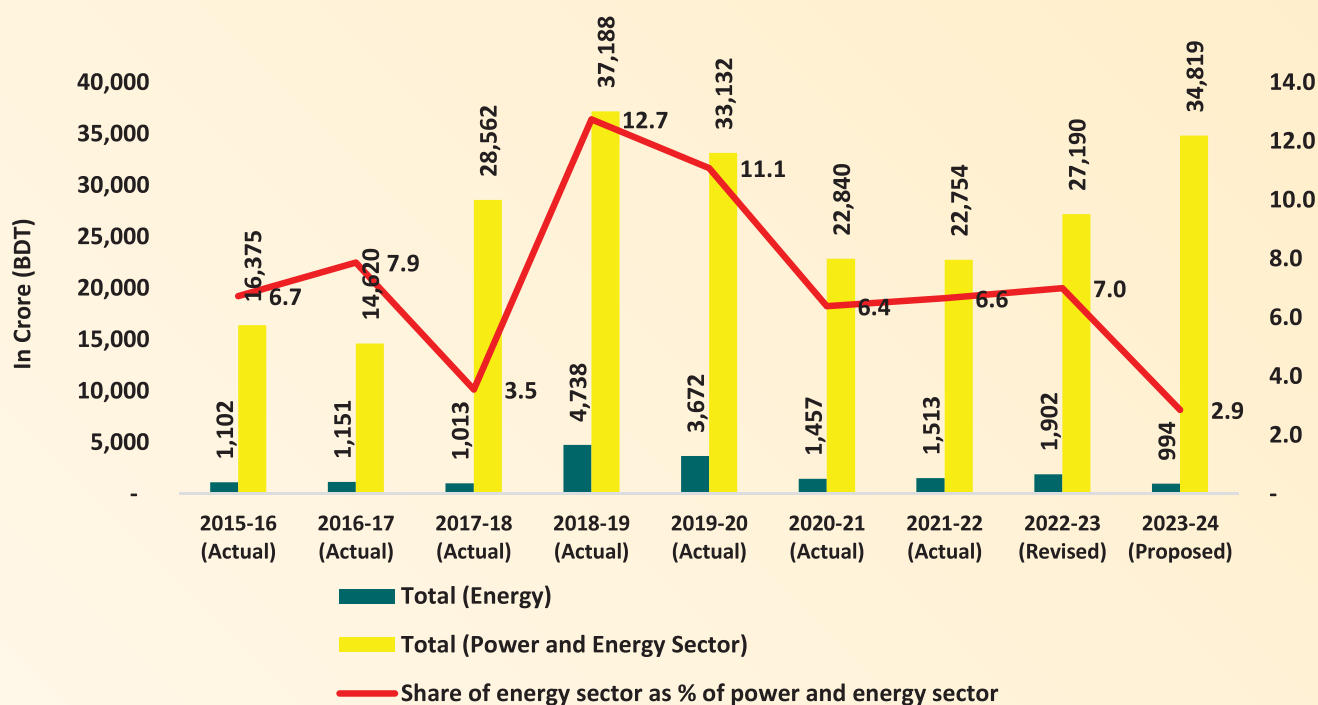
Figure 5: EMRD, PD and MoPEMR budgets as a percentage of the total budget



Source: Finance Division, Ministry of Finance

As a percentage of the total budget, the budgetary allocation of the EMRD, PD and MoPEMR has shown a decreasing trend since FY2018-19, and in FY2023-24, the corresponding percentages have fallen to only 0.1 per cent, 4.4 per cent and 4.6 per cent respectively (Figure 5). A similar trend can also be observed for the ministry as well as its divisions when examined as a percentage of the GDP. Moreover, the ADP allocation for the ministry as well as its divisions as a percentage of the national ADP has been decreasing since FY2016-17.

Figure 6: Share of the energy sector as a percentage of the power and energy sector



Source: Finance Division, Ministry of Finance

The trend and pattern of the budgetary allocation thus far do not match the ambitious targets set in the plans for different sources of energy. In addition, the share of the EMRD budget in the total power and energy sector budget shows a declining pattern (Figure 6), while the share PD budget increased over the last few years, implying that the government is more focused on short-term import-based power generation but less inclined toward domestic exploration efforts. There are also no specific growth patterns in the EMRD, PD and MoPEMR budgets during the 7FYP and 8FYP indicating that the government had no specific plans in line with its rather ambitious plans.

4. Renewable energy in the FY2023-24 national budget

In the proposed FY2023-24 budget, except for the re-iteration of the targets of using renewable energy at 10 per cent of the total electricity by 2030, and generating 40 per cent of total electricity production from clean energy by 2041, no clear plan of action has been proposed for RE in the budget. Among the projects in ADP under the power and energy sector, only a few of the projects are RE-based and most of these are continuations of previous years' projects with three of the six projects getting lesser allocation in this fiscal year with the total ADP allocation has shown a decline of BDT 25.4 crore.

In terms of fiscal incentives for clean energy, apart from the exemption of advance import tax on solar desalination plants to produce fresh water, there were no specific fiscal incentives, instead, there were steps towards encouraging the use of fossil fuel (e.g. removing 15 per cent VAT and 5 per cent advance tax on the import of petroleum goods and furnace oil). For example, different components related to cleaner sources of energy e.g. the import of an inverter, aluminium frame, import a walkway for solar projects are subject to high import duties (37, 58.6, and 15.26 per cent respectively) with Lithium-ion batteries required for solar storage, solar panel, UV-resistant DC cable etc. also being taxed at high rates (89 per cent, 26 per cent, 59 per cent). Thus, the budget for FY2023-24 discourages investments in renewable energy sources and promotes the import of liquefied natural gas and domestic coal exploitation.

5. Policy Recommendations

Reducing the fiscal burdens relating to the energy sector:

To create a more inclusive power and energy sector and to allocate more resources to domestic gas exploration and developments of RE, steps should be taken to reduce the cumulative effects of capacity payment, subsidies, and direct tax expenditures.

Overcoming the deadlocks on the way to domestic gas exploration through budgetary stimulus:

Prioritizing domestic gas production should be one of the core strategies and in this connection, building new power plants should be conditioned upon domestic gas availability and the budget allotted to the EMRD should be structured in line with such an objective.

Formulating a single coordinated policy document for the overall power and energy sector and RE:

The existing policy documents related to the energy sector need to be revisited and the strategic goals and targets should be in alignment. There should be a unique guiding principle and a single coordinated plan with certain core national objectives in terms of energy strategy.

Ensuring transparency and accountability of the existing regulatory and implementing authorities:

The government must ensure transparency and accountability in the process of setting tariffs and energy prices by strengthening the existing regulatory institution, namely, the Bangladesh Energy Regulatory Commission (BERC). The implementation capacity of BAPEX and SREDA must also be enhanced for autonomous operation.

Formation of a separate segment in the national budget for RE and a separate division at the ministry level for facilitating RE:

A separate segment with highlighted provisions in the budget and a separate division at the ministry level are required to facilitate RE.

Promoting private investment in RE through adequate budgetary incentives:

To attract FDIs and private investments in RE, the national budget has to offer appropriate incentives and policy stimulus.

Providing fiscal incentives for RE:

In the national budget, exemption/reduction of relevant duties on RE-related products should be considered.

Exploring cost-effective use of battery storage for flexible generation of RE:

To have an efficient and cost-effective storage system of RE, more research is needed to accommodate battery storage systems with grid-scale solar projects, install power-mix mobility in the system, and reduce oil-based power generation. Sufficient allocation in the energy and power sectors' budget is necessary for making these technologies commercially viable.

Popularizing solar-powered irrigation in rural Bangladesh:

Utilizing solar power in the irrigation system and thereby replacing diesel-based irrigation systems in Bangladesh has the potential to ensure an uninterrupted and green energy supply. Budgetary incentives will be crucial to popularize the solar irrigation system.

Motivating the private sector towards RE and resolving the conflict of interests in the power sector:

Necessary steps in terms of relevant policies and budgetary incentives are needed to tackle the vested interests of big business blocks and to encourage big business enterprises to shift the investment to RE gradually.

This policy brief is based on the report titled, "An Analysis of the Power and Energy Sector in the FY2023-24 National Budget". The authors are Dr Selim Raihan, Dr Sayema Haque Bidisha, Md. Tuhin Ahmed, Israt Hossain, Omar Raad Chowdhury, Mohammad Asaduzzaman, and Takrem Ferdous Surid. Report Link: <https://sanemnet.org/an-analysis-of-the-power-and-energy-sector-in-the-fy2023-24-national-budget/>