

CPD Power and Energy Study on

# **Challenges in the Energy and Power Sector**

## ***Can the Proposed National Budget Address those Challenges?***

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## Discussion Points

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# 1. Introduction

# 1. Introduction

- The power and energy sector has been passing a **difficult time** after experiencing considerable attainments over a decade
  - Indicators of this difficult period include **overwhelming dominance** of imported fossil-fuel, inappropriate selection of energy mix, rising debt burden, subsidy-based power generation, rising electricity tariff, using fiscal-budgetary support for the promotion of fossil-fuel and lack of attention to alternate sources of energy particularly renewable energy)
- Consequently the sector has confronted a **number of challenges** over the last one year
  - Lack of capacity to pay bills of imported fossil fuels, disruption in power supply due to ongoing energy crisis, overburdened with dues of capacity payment to IPPs and requirement of substantial amount of subsidy
- Addressing the above-mentioned challenges would **not be possible only through** fiscal-budgetary measures under the national budget
  - Major reform is needed in the power and energy sector in order to overcome those challenges
- It is **expected that proposed** national budget for FY2023-24 will try to address those challenges
  - A part of those could be addressed through policy-directives and another part could be through fiscal-budgetary measures
- CPD study is intended to analyse the proposed national budget for FY2023-24 to **find out the answers** of following questions
  - Are the fiscal-budgetary measures proposed in the upcoming budget **able to address** the ongoing challenges?
  - Are the proposed measures **in favour of** clean/renewable energy and power?
  - Are the power and energy sector's **structural reform** related issues got attention in the proposed budget?

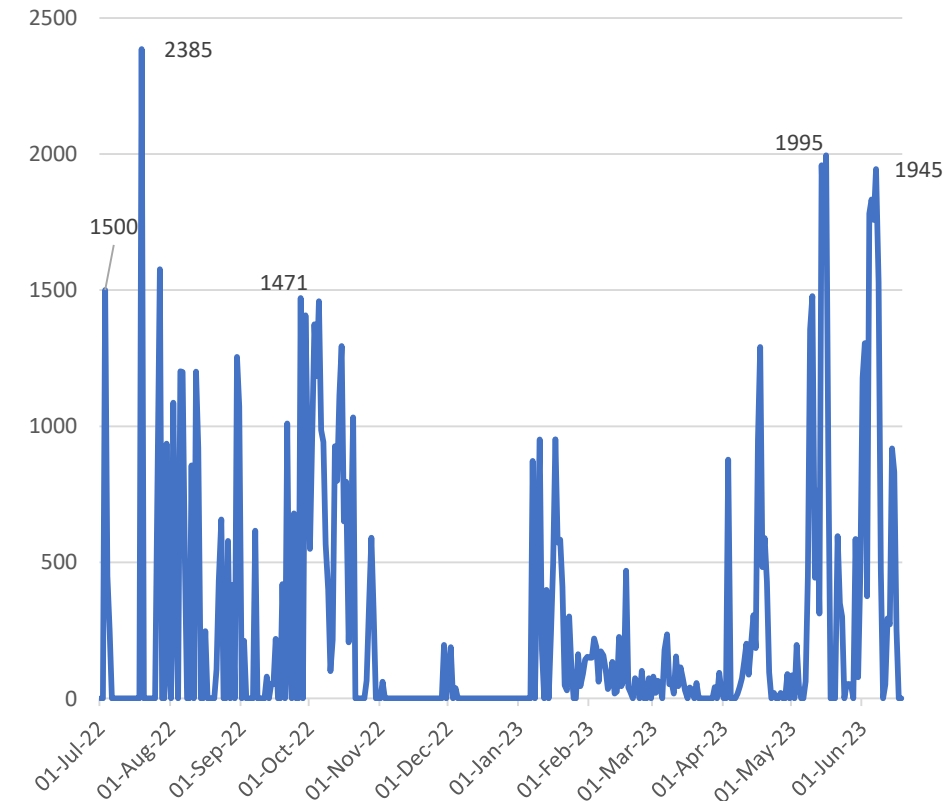
## **2. Challenges in the Power and Energy Sector**

## 2. Challenges in the Power and Energy Sector

### 2.1 Consequences of Power and Energy related Challenges

- The country is suffering for a regular power outages (load shedding) **over the last one year** (Figure 1)
  - The power outage is found to be the **highest** in the regions such as Dhaka (July, 2022), Khulna (06/01/2023), Mymensingh (08/05/2023) and Cumilla (11/05/2023)
  - Rural areas experienced an overwhelming power outage as high as 10 hours (04/06/2023)
- A number of big power plants were **intermittently** shut down
  - Rampal was shut down for 11 days (23/04/2023-03/05/2023)
  - Payra was initially shut down on 25 May, 2023. Then it was assumed to be run again from June which seems unlikely now
- A huge amount of payment is **due to a number of IPPs** which is as much as **BDT 20000 crore**
- The supply of energy for the power plants were found to be low against the operation with the maximum capacity
  - **Furnace oil import:** BPC needs to open **17 to 18 LCs** per month to import 500,000 tones of refined fuel and 100,000 tones of crude oil
  - BPC had **outstanding bills of USD 350 million** in total until April, 2023. No private bank has been opening LCs. Sonali, Janata and Rupali banks are opening **4-5 LCs/month**
  - **Diesel import:** As of 2<sup>nd</sup> June, diesel stock is only for **30 to 35 days**. The government has already taken a **record \$2.3 bln loan** from Jeddah-based Islamic Trade and Finance Corporation (ITFC) to meet the need for US dollars to import fuel.
  - BPC said the ITFC loan will not be used to import refined oil or diesel; instead, it will be used to import crude oil only.
  - 13-14 shipments of refined oil are imported per month and 16-17 shipments are brought if the demand rises, according to BPC

Figure 1: Daily Load Shedding (MW):  
July, 22-June, 23



Source: Authors' Illustration from BPDB Load shedding Data

## 2. Challenges in the Power and Energy Sector

### 2.1 Consequences of Power and Energy related Challenges

- A number of measures have been undertaken to address those challenges but with little impact in lessening the adversities
  - Measures taken to reduce electricity use in **government offices** as well as in private offices (Jun'22)
  - Measures taken to early shut down of shops, departmental stores and other commercial places at night (Jun'22)
  - **Rationing of supply of gas** to different industries and household level (Apr'22)
  - **Raising the gas tariff** with a view to reduce the loss incurred by the Petro Bangla as well as assuring uninterrupted gas supply for the industries (Jan'23)
  - Raising the tariffs of diesel and furnace oil with a view to reduce the loss incurred by the BPC (Aug'22)
  - Raising the electricity tariff with a view to reduce the loss incurred by the BPDB (Jan'23)
  - Signing **long term agreement with** Qatar and Oman for importing LNG for 10-15 years (25 Sep'17, 6 May'18)
  - **Loan taken from China** to make payment of the dues of energy import bills (Mar'23)
  - Signed contract with **IMF** with the commitment of taking a number of reform measures (Jan'23)
- Except the measures committed/initiated under the IMF loan, **none of the other measures** are found to be of high merit in addressing the energy and power crisis
- Understanding the depth of the crisis is crucial for taking appropriate measures

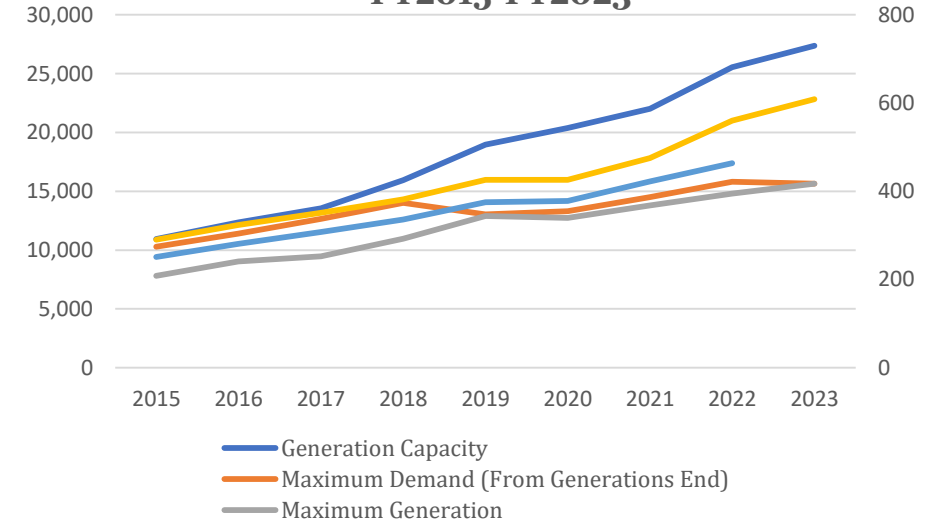


# 2. Challenges in the Power and Energy Sector

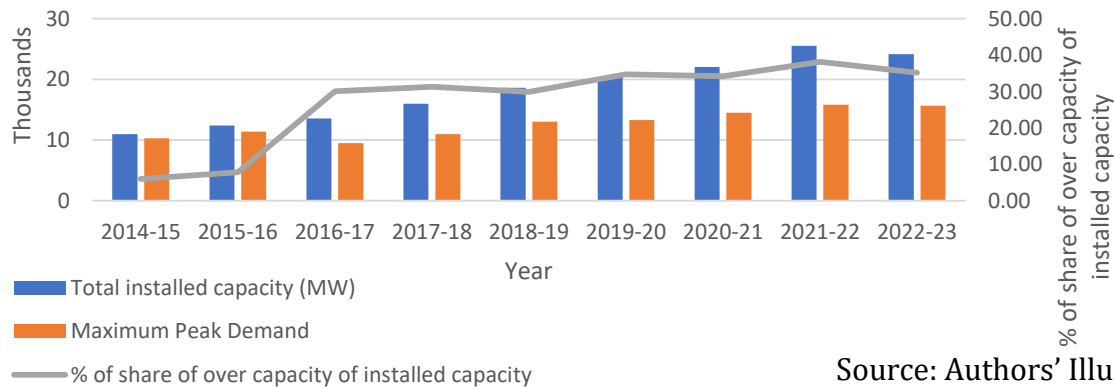
## 2.2 Generation related Challenges

- Huge power generation capacity (27,361 MW) of which 24,143 MW is in on-grid and 3,218 MW is in off-grid (as of 1 May, 2023) has become a **growing concern** for the power and energy sector (Fig. 2)
  - **About 97% of this capacity is dependent** on fossil fuel and the dominance has increased (Fig. 3)
  - Against the official position, **share of coal in** power generation has increased; moreover, an **additional 6167 MW** worth of coal-based generation capacity to be added into the grid by 2026
  - Being the sole importing authority, BPDB, Petrobangla, RPGCL, coal power and BPC have **limited financial capacity** to import energy to operate the power plants in maximum capacity
  - **Rise of reserve margin** (excess generation capacity) has raised question about the 'actual' demand and financial ability of the public agencies (Fig. 4)
  - The **burden for capacity payment** has been sky-rocketing which is difficult to accommodate even with subsidy
  - Overall the fossil-fuel based energy infrastructure in the country is in **big question**

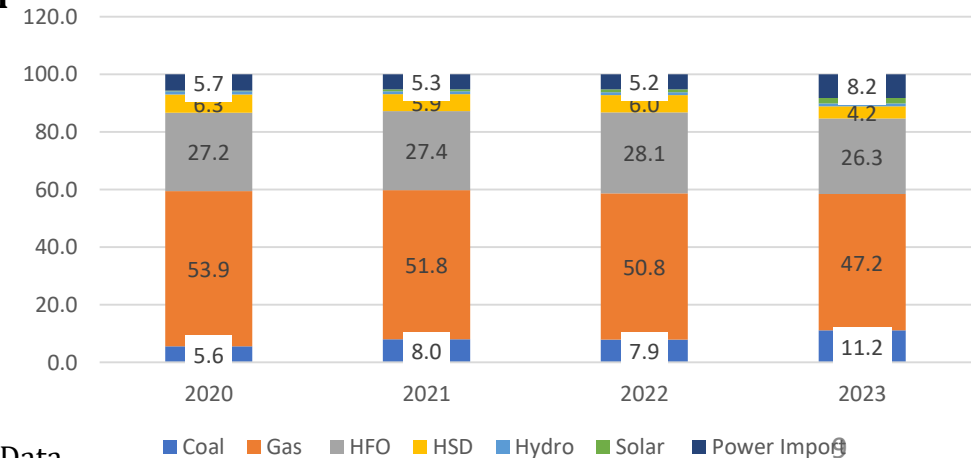
**Figure 2: Trend in Power Generation: FY2015-FY2023**



**Figure 4: Rise of Reserve Margin**



**Figure 3: Share in Fuel Mix (in %)**



Source: Authors' Illustration from BPDB Data

## 2. Challenges in the Power and Energy Sector

### 2.3 Growing Difficulty in Adjustment of BPDB's Huge Losses

- Against the backdrop of huge generation capacity, the BPDB's financial condition is **getting worse** over the years– operating loss reached from Tk.-6,200 crore in FY18 to Tk.-27,477 crore in FY22 (Fig. 5)
- BPDB's financial loss is largely happened **due to increasing requirement** of capacity payment to the IPPs, rental and quick rental power plants (Fig. 6)
  - From Tk. 5,376 crore in FY17 to as high as Tk. 28,000 crore in FY23 (estimated)
- The payment has been made by the BPDB **through borrowing** from the government as 'subsidy'
  - Amount of subsidy has been increasing from Tk. 4,000 in FY17 to Tk.23,000 crore in FY23 which is apprehended to rise **to Tk.32,000 crore in FY24** (Table 1)
  - The subsidy to the power sector alone is accounted for 37.9% (Table 2)
- Over the last few years, BPDB is **passing through its capacity payment** in the following years which made it difficult to understand its actual state of financial condition – the **actual situation seems much bleak.**

Table 1: Capacity Payment over the Years

	Subsidy to PDB (Crore Taka)	Share of subsidy in total subsidy (%)	Subsidy to Gas and others (Crore Taka)	Share of subsidy in total subsidy (%)
FY17	4000	24.8	300	1.9
FY18	3550	19.4	3605	19.8
FY19	7966	24.7	2514	7.8
FY20	7439	17.7	3516	8.4
FY21	8945	23.4	5297	13.8
FY22	12000	28.1	11487	26.9
FY23	23000	29.5	21300	27.3
FY24	32000	37.9		

Table 2: Subsidy in Power and Gas over the Years

Year	Capacity Payment (crore taka)	% Change in capacity payment
2016-17	5376	6.6
2017-18	5600	4.2
2018-19	6241	11.4
2019-20	8929	43.1
2020-21	13200	47.8
2021-22	24000	81.8
2022-23 (Estimated)	28000	16.7

Figure 5: BPDB's Financial Condition

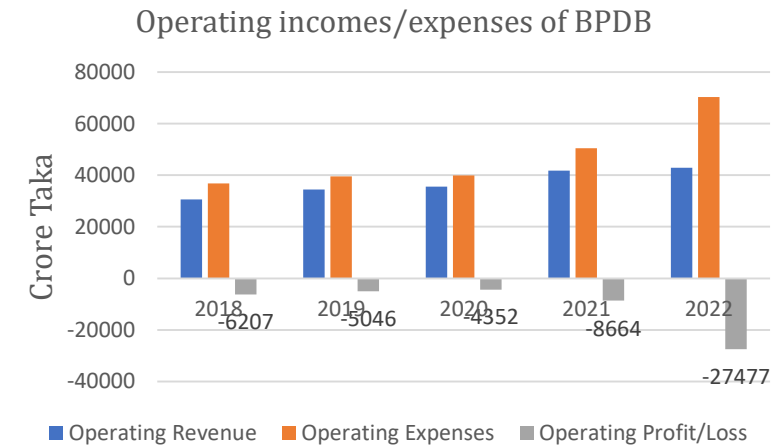
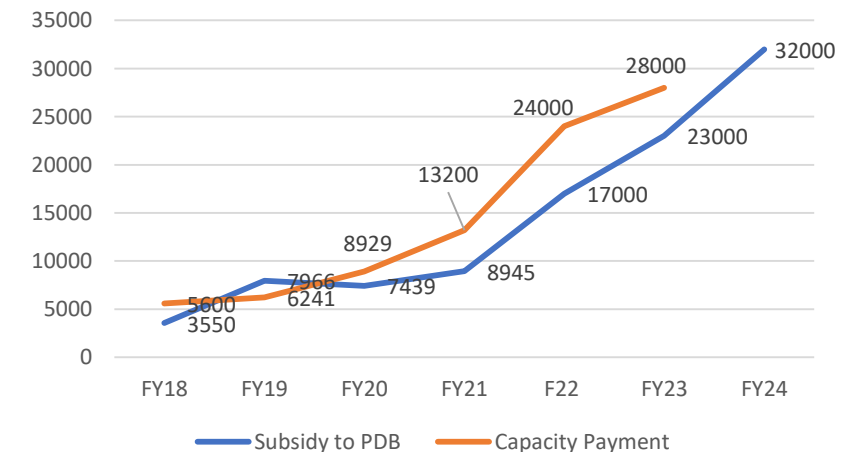


Figure 6: Trend of Subsidy and Capacity Payment



## 2. Challenges in the Power and Energy Sector

### 2.4 Huge subsidy use in Bangladesh deprived social sectors for adequate funding

- Most of the net energy-importing countries have undertaken various **subsidisation measures** in order to address the global high price of energy in recent years
- Among the peer countries, Bangladesh has been **providing highest level of subsidy**
  - Its subsidization rate in 2021 was 34% which is the highest among Asian energy importing countries though amount of subsidy per capita is still at modest level
  - The subsidy-GDP ratio is also highest in Bangladesh
- In other words, **social sectors are deprived of** getting adequate fund from the government due to over use of subsidy for energy import in Bangladesh.

Table 3: Share of subsidies of some energy-importing Asian countries, 2021

Country	Average subsidisation rate (%)	Subsidy per capita (\$/person)	Total subsidy as share of GDP (%)
China	5%	37	0.6%
India	16%	34	2.6%
Indonesia	32%	89	2.7%
Malaysia	9%	93	1.0%
Pakistan	21%	37	3.3%
Thailand	5%	34	0.6%
Sri Lanka	21%	49	1.6%
Viet Nam	11%	46	2.3%
<b>Bangladesh</b>	<b>34%</b>	<b>45</b>	<b>5.6%</b>

Source: IEA website, accessed on 20 June, 2023

## 2. Challenges in the Power and Energy Sector

### 2.5 Lack of transparency in Financial Reporting of the Energy Importing and Power Producing Companies

- Despite the losses incurred by the BPDB, BPC and Petrobangla during FY2021/FY2022 and other years, the transfer to government exchequer indicates a **'faulty' accounting practices**
  - Official data shows these public entities incurred losses on one hand, **transferring cash** to the ex-chequer, dividend and **investment in fixed assets** on the other, without adjusting their financial accounts and again **taking subsidy** from the government.
  - Even a part of losses is carried over to the following years, as reported in the media

Figure 7: BPC Profit & Loss Statement (Crore Taka)



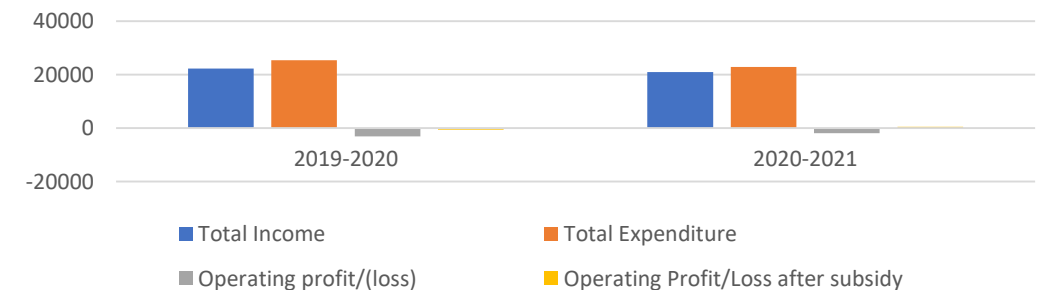
Source: SOE Budget Summary FY 2023-24, BPC and Petrobangla Annual Reports

Table 4: Budget Summary of BPC, BDDDB and Petrobangla (in Crore Tk.)

BPC			
	FY2021-22	RFY2022-2023	BFY2023-24
Net Profit/Loss	-2706	-7985	-10019
Dividends payable to Government Exchequer	1000	200	100
Total Contribution Payable to Government Exchequer	25798	11867	14263
Long Term Loan Repayment	0	15274	14000
Investment in Fixed Asset	1013	2052	3924
BPDB			
	FY2021-22	RFY2022-2023	BFY2023-24
Net Profit/Loss	-3233	-6958	-4959
Dividends payable to Government Exchequer	0	0	0
Total Contribution Payable to Government Exchequer	1933	2051	2102
Long Term Loan Repayment	2543	2170	1809
Investment in Fixed Asset	4064	4878	5570
Petrobangla			
	FY2021-22 (Temporary)	RFY2022-2023	BFY2023-24
Net Profit/Loss	696	472	449
Dividends payable to Government Exchequer	618	460	460
Total Contribution Payable to Government Exchequer	618	460	460
Long Term Loan Repayment	448	300	280
Investment in Fixed Asset	56113	5	19

Source: SOE Budget Summary FY 2023-24

Figure 8: Petrobangla Profit & Loss Statement (Crore Taka)



## 2. Challenges in the Power and Energy Sector

### 2.6 IMF Conditionalities would not be sufficient to subsidy from the power and energy sector

#### Increasing green initiatives to address the challenges of the Power and Energy Sector

- IMF conditionalities related to the power and energy sector have touched upon **two broad areas**:
  - **Reducing fiscal burden** by withdrawing address the climate vulnerabilities
- Although the measures have implications on the sector but **those are not sufficient and in some instance** counter-productive to address the key challenges

**Table 5: Phase-wise implementation of the reform conditions**

Reforms for Bangladesh	Periodic Reviews					
	1st	2nd	3rd	4th	5th	6th
Adoption of periodic- formula-based price						
Implementation of periodic formula-based price						
Adjustment mechanism for petroleum products						
Setting price adjustment mechanisms for petroleum products						
Adoption of a sustainable PPP paper and an associated action plan						
Adoption and implementation of a methodology for embedding climate change in the MTMF						
Issuing a circular on an update to the Green Book						
Adoption of an updated PPP policy and framework						
Updating green bond financing policy, particularly the green taxonomy						
Adoption of an updated PPP policy and framework						
Conducting and publishing climate stress testing by BB						
Updating the policy on Green Bond Financing by BB						

Source: Authors' illustration

## 2. Challenges in the Power and Energy Sector

### 2.7 High Energy Price Continues to Dominate the Global Market and High Import Bills for Energy Would Cause Major Part of Depletion of country's Forex Reserve

- The market for fossil fuels have started to decline since early to mid-2022 (Fig. 9 & 10). However the deceleration **may not continue further** given the recent declaration.
  - Saudi Arab has **declared to reduce supply** of 1 million barrel per day from 1 of July, 2023 as part of its understanding with OPEC countries
- The projected high price of crude oil, natural gas and coal reflects the same (Tab. 6 & 7)
  - All the prices of energy is **likely to rise** end of 2023 and early 2024
- Hence, the financial burden for importing coal, LNG and furnace oil would not be eased within the next one year

Table 6: Energy Price Forecast

	Q3/23	Q4/23	Q1/24
<b>Crude oil, Brent (\$/bbl)</b>	81.122	83.626	86.199
<b>Natural gas (\$/mmbtu)</b>	2.9913	3.1952	3.4131
<b>Coal (\$/mt)</b>	138.93	144.49	150.27

Table 7: Energy Price Forecast

	Crude oil, Brent (\$/bbl)	Coal, South African (\$/mt)	Natural gas, US (\$/mmbtu)	LNG, Japan (\$/mmbtu)
<b>2024 F</b>	86	155	3.7	16

Figure 9: Coal and Crude oil price trend

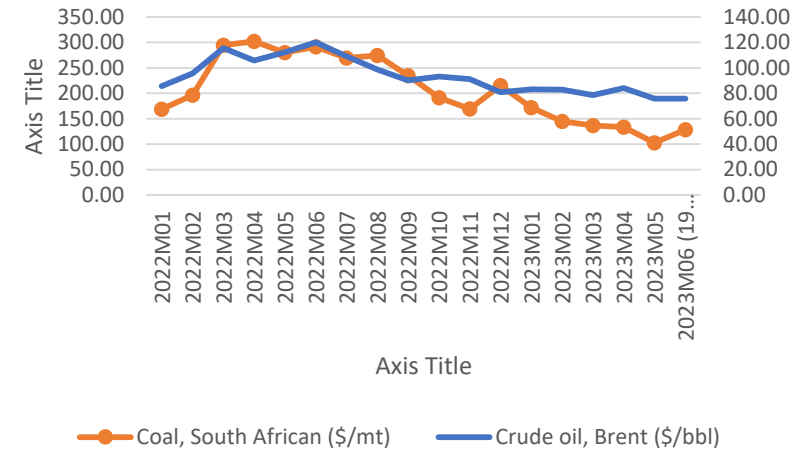
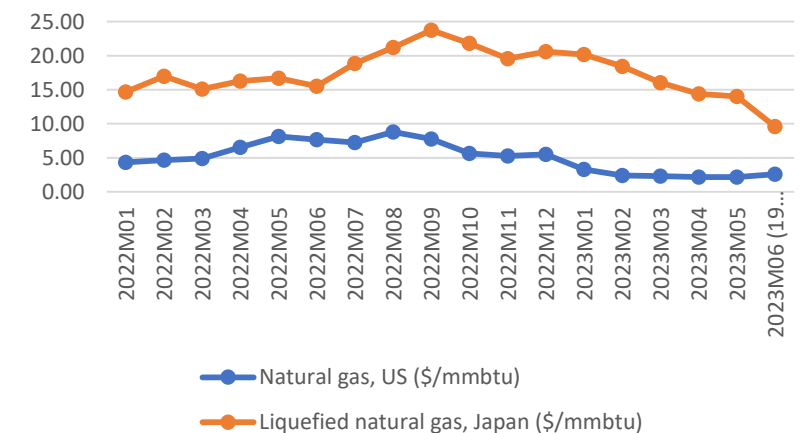


Figure 10: Natural Gas and LNG price trend



## 2. Challenges in the Power and Energy Sector

### 2.8 Difficulty in continuing import of fossil fuels at high cost to operate the power plants in maximum capacity

- Between FY19-22, the costs for importing furnace oil and crude oil has increased by **36.6%** (Table 8)
  - An additional amount of **Tk.2694.7 crore** were spent within three years
  - The additional expenditure is made to reduce the load-shedding which would not help in ensuring operation with maximum capacity
- To operate the power plants at their maximum capacity (15000 MW), the **companies need to spend USD10 billion per year** or, USD833 million per month (Table 9)
  - Whereas, in a normal fiscal year of 2018-19, only BDT7,363 crore (USD883.7 million) was required to import the required amount of fossil fuels
- Given the situation of forex reserve, will the banks be **able to open LCs in favour of** public entities for importing such a high amount every month

Table 8: Import cost of furnace oil and Crude Oil

Financial Year	Furnace Oil		Crude Oil	
	Quantity (M.Ton)	Value (Crore Tk.)	Quantity (M.Ton)	Value (Crore Tk.)
2016-17	5,21,199	1,240.66	13,87,966	4,132.35
2017-18	6,50,540	2,091.52	11,72,175	4,603.81
2018-19	3,18,634	1,282.49	13,58,159	6,080.39
2019-20	1,75,693.95	687.04	11,51,814.22	3,854.64
2020-21	47,923.72	151.41	15,05,710.47	5,169.27
2021-22	3,16,086.19	1,710.86	14,66,177.69	8,346.69

Source: BPC Website

Table 9: Estimated Fuel Import Requirement and Dollar Needed to Import

Fuel type	Requirement to generate per MW	Unit	Peak Capacity	Requirement for 1 year	Unit	Billion USD required to import
Coal	9.2	TON	2,668	8959144	TON	1.39
HFO	2.2	TON	5,255	4282106	TON	3.2
HSD	1.2	TON	787	333216	TON	0.27
Gas (including RLNG)	0.14	MMCF	7,406	378447	MMCF	
LNG						5.3
<b>Total (Billion USD)</b>						10.16
<b>Total in BDT (lakh crore)</b>						1.1

Source: Authors' Estimation

## 2. Challenges in the Power and Energy Sector

### 2.9 Burden of capacity payment will continue to rise and made it difficult to pay in the future

- Ongoing plan of setting up new power plants by 2025 (6218 MW) will further rise the excess capacity in the upcoming years and thereby will further rise the pressure on capacity payment
  - As high as **14,166MW worth** of overgeneration capacity will be there which will be about 46% of the total generation capacity
  - If the power demand remain same as it is in current year, the over generation capacity **would be as high as 50%**
- The capacity payment will rise further. How BPDB will pay the earlier dues and future dues of capacity payment is difficult to apprehend.
- BPDB is behind in clearing the capacity payment due to its weak financial situation.
  - BPDB cleared the capacity payment of FY21-22 in FY22-23 using the allocated subsidy of FY23 (Tk 17,000 crore)
- The **aggregated unpaid capacity payment in FY22-23** is expected to be Tk 28,000 crore
  - This big chunk of due is also supposed to be settled using FY24's allocated subsidy for power and energy sector

**Table 9: Estimates of Power Generation Capacity and Reserve Margin (Excess Capacity)**

	Capacity in MW
Present Generation Capacity	27361
Generation to be added by 2025	6218
Capacity to be phased out	2487.9
Generation Capacity by 2025	31091
Possible Maximum Demand as per BPDB	19900
Possible Maximum Demand considering 4% growth rate in demand	16925
Overgeneration capacity as per PDB's demand	11191
Share of overcapacity (%)	36
Overgeneration capacity as per CPD's estimation	14166
Share of overcapacity (%)	46
The demand will remain same as the current year	15648
Overgeneration capacity	15443
Rate of overgeneration capacity	50%

Source: Authors' Estimation



## 2. Challenges in the Power and Energy Sector

### 2.10 Flattening the Progress in Transmission and Distribution Continuously Made it Difficult to Get the Maximum Benefit

- While the length of transmission and distribution lines have increased over the years, the growth has been flattened particularly in distribution lines (Fig. 11)
  - Distribution lines have increased by merely 0.3% - **a gradual deceleration over the years** (from 16% in FY18 to 0.3% in FY23) (Fig. 12)
  - The growth of transmission lines is noticeable- transmission lines have increased at 8.3% in FY2023 maintained a **change in 4-6% level** over the years
- **Slow progress in transmission** and distribution lines is a major reasons behind **poor load management**
  - This is happened at a time when a huge excess power generation capacity remains- a paradoxical situation indeed!

Figure 11: Transmission and Distribution Lines: FY2017-23

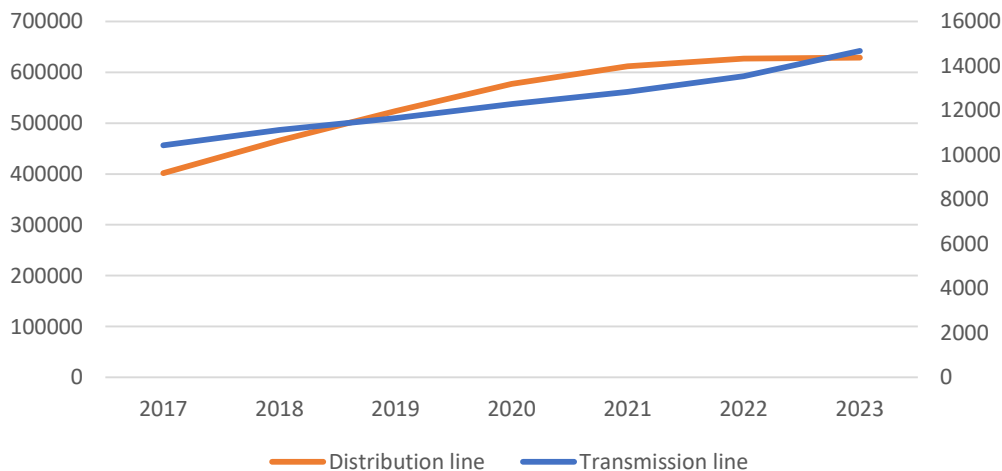
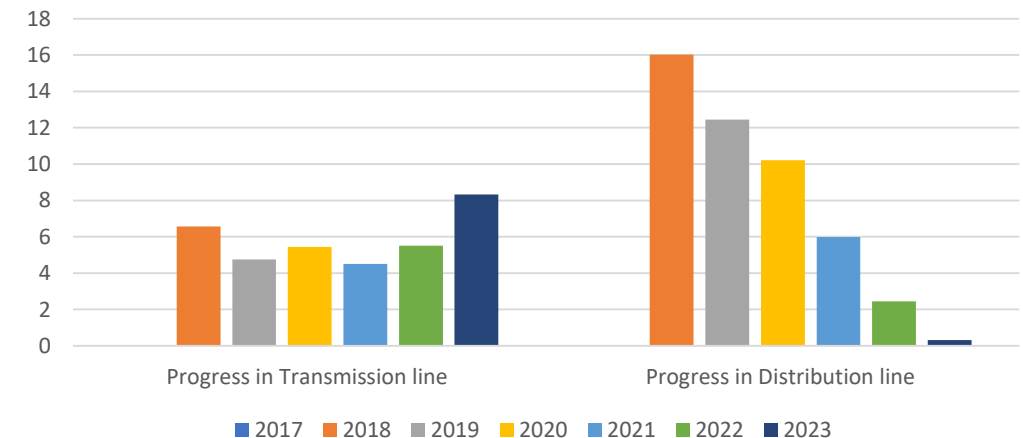


Figure 12; Changes in Lines of Transmission and Distribution



Source: BPDB Annual Reports

## 2. Challenges in the Power and Energy Sector

### 2.11 Continuous Negligence towards Renewable Energy reduces the opportunity to diversify the fuel-mix and address fossil fuel related challenges

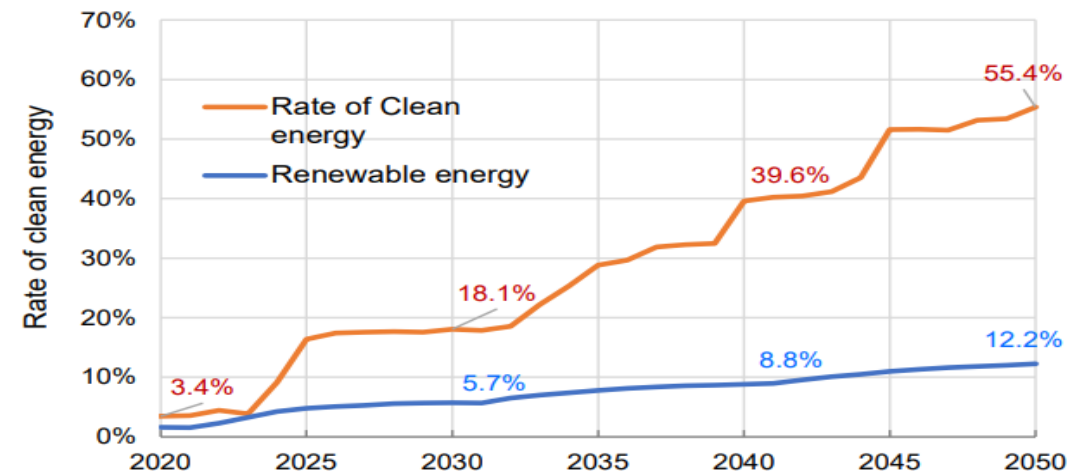
- Although the renewable energy target is set at 40% by 2041 (24,000 MW), total installed renewable energy based generation capacity **at present is only 1183.63 MW** which is only 4.3% of total installed capacity of electricity (Table 10)
- No major effort is taken to **address the renewable energy** based power sector development
- The new Master Plan (**IEPMP**) has set to undermine the potentials of renewable energy target set by the Prime Minister
  - The target is faultily revised to “Up to 40 per cent of power from cleaner energy by 2041” (Figure 13)
  - Such a shift in narratives weakens the government’s stance and creates confusion among the masses regarding renewable energy
  - The cleaner energy includes non-tested technologies such as ammonia, hydrogen, critical and super critical carbon capture unit
- IEPMP shows that **only 8.8% of total electricity (5280MW)** to be generated from renewable energy sources
- PM’s directives to convert all irrigation pumps into solar-based irrigation pumps – is highly appreciated.

Table 10: Present Renewable Energy Situation

Technology	Off-grid (MW)	On-grid (MW)	Total (MW)
Solar	365.51	584.13	949.64
Wind	2	0.9	2.9
Hydro	0	230	230
Biogas to Electricity	0.69	0	0.69
Biomass to Electricity	0.4	0	0.4
Total	368.6	815.03	1183.63

Source: SREDA

Figure 13: IEPMP on RE and So-called Clean Energy



Source: IEPMP 4<sup>th</sup> Draft

## 2. Challenges in the Power and Energy Sector

### 2.12 Neglecting the domestic gas sector development at the cost of promoting import of LNG

- With depleting domestic reserve of natural gas, there is a considerable **rise of unmet demand for natural gas** (Table 11)
  - Over the years the unmet demand has been increasing – 1.35% in FY2018 to as high as **16% in FY2022**
- This unmet demand has been partly met by **increasing import of LNG**
  - Its import has been increasing – from 0.12tcf in FY2019 to 0.26 tcf in FY2023
  - However, this amount of supply met **only 26%** of total gas demand. The cost incurred for imported LNG was much higher compared to that in domestic supply of gas.

**Table 11: Domestic Production, Demand for Gas and Imported LNG**

FY	Domestic Production (TCF)	Total Consumption (TCF)	% of Demand unmet with only natural gas reserve	R-LNG Supply (TCF)
2017-18	0.97	0.98	-1.35	
2018-19	0.96	1.04	-7.69	0.12
2019-20	0.89	0.99	-10.6	0.2
2020-21	0.88	1.02	-13.26	0.22
2021-22	0.84	1	-16	0.26

Source: Authors' Estimation from Bangladesh Economic Review

- Unfortunately, the government **put less effort to explore** more gas so far from domestic gas wells.
  - Instead there is a tendency to import LNG at a high cost to meet the demand.
- Import from spot market at high cost has been introduced in FY21 which continued in FY23 is causing high fiscal burden
- The state minister said that the country's primary gas reserve, including the stock of the newly invented Ilisha gas field, stands at 40.43 trillion cubic feet while the extractable gas reserve stands at 28.76 trillion cubic feet.
  - As much as 19.94 trillion cubic feet of gas has already been extracted and the remaining reserve is 8.82 trillion cubic feet which would be depleted **within 10 years**.
- Since 2009, **only 19 wells have been** drilled which is very low to meet the requirement – despite having fund no major effort is taken to generate gas wells.

## 2. Challenges in the Power and Energy Sector

### 2.12 Neglecting the domestic gas sector development towards promoting import of LNG

- According to the MTMPS, government has a plan to dig **another 46 wells by 2024 with** the objective of increasing gas generation capacity 618 million cubic ft. (Table 12)
- According to the Gas Development Fund, at present only 7 drilling of wells (exploratory and appraisal cum development) are ongoing.
  - The allocated budget for these drilling projects are Tk.1074.7 crore
  - However the rate of implementation of these projects is poor - as low as 6.4% to as high as 63.25%
- The fund has been allocated for 2D and 3D seismic surveys which were long overdue
  - However, the progress is poor in most cases except in one project (69.6%)
- Interestingly, the fund for gas development has been used for **purchasing LNG (Tk.2000 crore)**
  - A major **counter-measure** towards gas sector development in the country

Table 12: Projects being implemented under Gas Development Fund (FY23)

No.	Name	Budget (Lac BDT)	Implementation Rate	
			Real	Fiscal
1	Drilling of 2Nos Exploratory Wells (Tabgi-1 & Illisha-1) and 1No Appraisal cum Development Well (Bhola North-2):	69463	32.76%	32.76%
2	Bijoy 10, 11, 12, IDECO Rig Maintenance, IPS Rig Upgradation & Rig Supporting Equipment Replacement Project	19952	22.16%	22.16%
3	Shariatpur-1 Exploratory Well Drilling Project	9590	63.25%	63.25%
4	2D Seismic Survey Over Exploration Block 15 & 22	14838	69.66%	69.66%
5	Procurement & Installation of Wellhead Compressors at Srikail Gas Field	19240	0.82%	0.82%
6	1 Exploratory Well (Srikail North-1A) 2 Appraisal cum Development Well (Sundalpur-3 & Begumgonj-4 (West)) Drilling Project	28419	6.47%	6.47%
7	2D Seismic Survey Over Exploration Block 6B South and 10 Project	15195	0.67%	0.67%
8	3D Seismic Survey Over Zakiganj and Patharia West Project	11104	-	-

Source: BAPEX Monthly Report

## 2. Challenges in the Power and Energy Sector

### 2.12 Neglecting the domestic gas sector development towards promoting import of LNG

- As per CPD's calculation, majority of the **required fund for importing energy in the coming years**, as estimated (USD5.3 billion) will go for importing LNG
- This large amount of money can be saved if the focus is **given to invest on local production**
  - **Extractions from the unutilized and** unexplored gas mines should be started to meet the immediate demand
  - LNG import should be **reduced and LNG based processing plants** should not be encouraged

## 2. Challenges in the Power and Energy Sector

### 2.13 Tariff rate adjustment as part of IMF conditionality faultily passed on the burden to the consumer

- Government has been increasing the tariffs of fuels and electricity as a part of adjustment of subsidy (Figures 14 and 15)
- In January 2023, the retail price of gas has been increased by as much as 179% (Figure 16)
- From January to March 2023 power tariff has been hiked from Tk. 7.49 to Tk. 8.25/kwh
  - The tariff has been increased by **5% every month from January to March**
- The tariff of petrol, octane, kerosine and diesel have been last revised on 30<sup>th</sup> August 2022 (Figure 14)
- However, the burden is **fully passed on to the consumers** which is supported to be adjusted from ‘capacity payment’.
  - Hence, measures to be taken to phase out capacity payment for IPPs power generation

Figure 14: Change in Fuel Oil Price

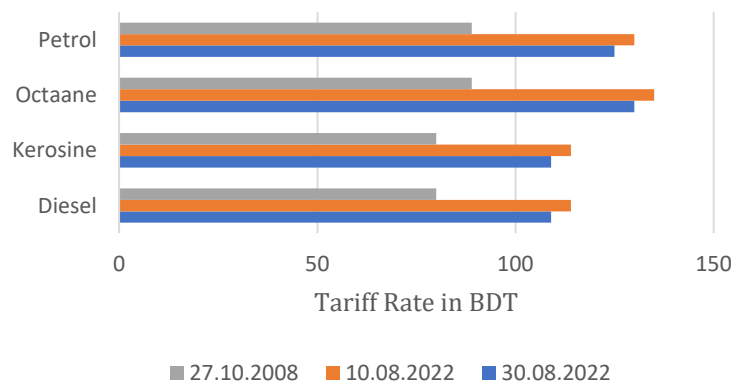


Figure 15: Change in Electricity Tariff

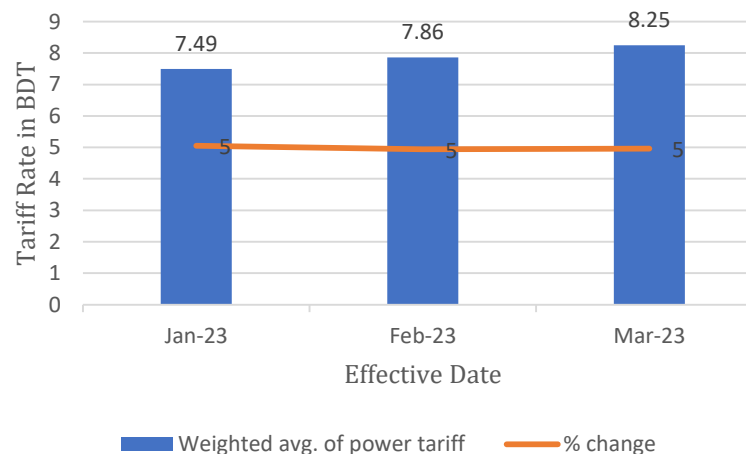
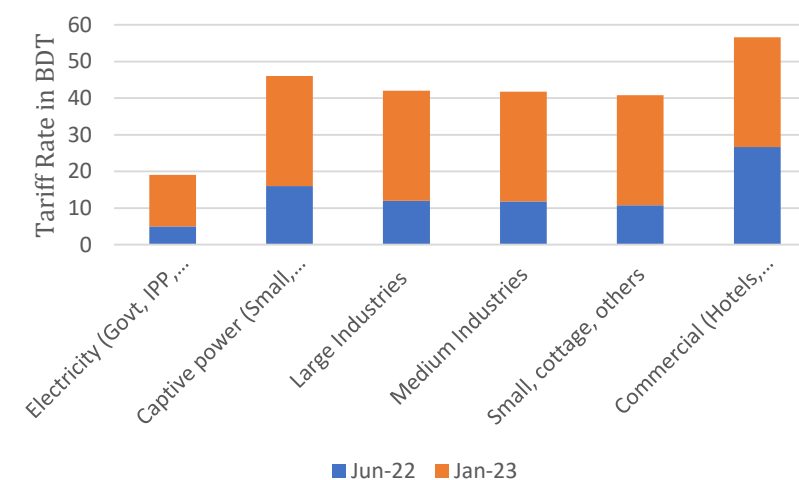


Figure 16: Change in Gas Price (Tk per CM)



Source: Authors' Illustration from BPC, BPDB and BAPEX Website

## 2. Challenges in the Power and Energy Sector

### 2.14 Amendment to the BERC Ordinance 2022 has weakened the governance structure

- Bangladesh Energy Regulatory Commission (BERC) now consults with the government before any move towards holding a public hearing on retail power tariff hike proposals
- The GoB has amended the BERC Act 2003 to **create scope for the government to take arbitrary decisions** on raising retail and bulk power and energy prices
- This decision has further **weakened the institutional capability** of BERC
- In fact under the IMF's condition of adopting the market based pricing mechanism, BERC could have played the role **to monitor and adjust** the prices regularly
- This system could have for both electricity and fuel oil prices similar to that of LPG
- BERC's role will be much-needed during the period of **market-based pricing system** which is difficult to ensure in its current stature.

### 2.15 Continuation of the Quick Enhancement of Electricity and Energy Supply (Special Provision) Act 2010 is anti-competitive which is perhaps the reason for inefficient and less competitive contracting parties in power and energy sector

- The **Quick Enhancement of Electricity and Energy Supply (Special Provision) Act 2010** has been **extended on 2021** for another five years till 2026
- Such an act is highly **anti-competitive and stops** opportunity to go for competitive bidding to find out the most efficient contracting party
- As part of reform, this law should be **repealed and to create space** for a competitive market environment

# **3. Power and Energy Sector in the National Budget for FY2024**

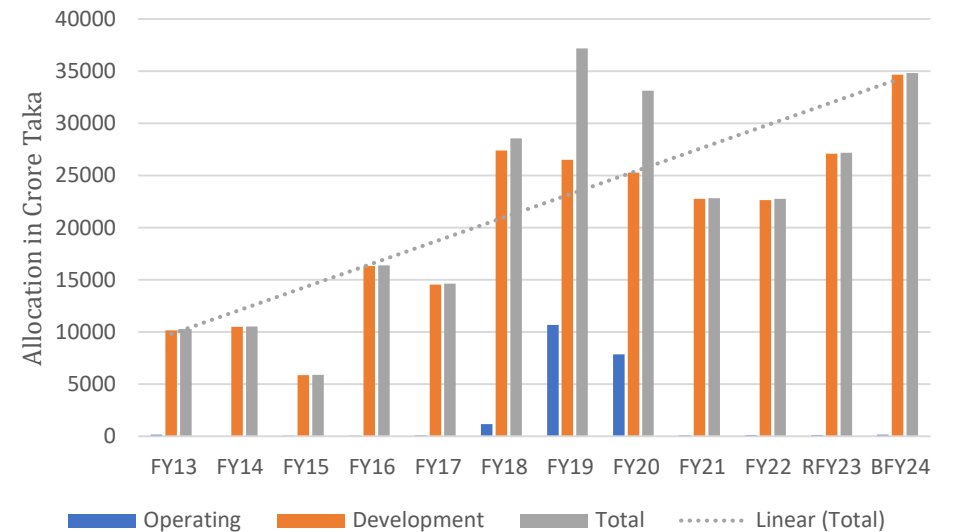


# 3. Power and Energy Sector in the National Budget for FY2024

## 3.1 Overview

- The Power and Energy sector in the proposed budget for FY2023-24 has received major share of budget allocation (Figure 17)
  - In last one decade, the budgetary allocation of this sector shows a linear upward trend
- In FY2023-24, the Power and Energy sector has received an allocation of **Tk.34,819 crore (increased by 28% from RFY23)**
  - This accounts for **4.6% of FY24 total budget**, higher than that of FY23 revised budget (RFY23: 4.1%)
  - Both the operating and development budget for FY24 have increased compared to the revised budget for FY22 by 32% and 28% respectively

Figure 17: Power and Energy Sector Budget



Source: Budget in Brief, Ministry of Finance

# 3. Power and Energy Sector in the National Budget for FY2024

## 3.2 Budget for the Power Division

- The power division gets **the lions share** of total budget allocation (93%) (Figure 18)
  - There is an upward trend in the allocation over the last four years (Figure 19)
- As much as 93% of total budget for the ministry is being allocated for the power division in the proposed budget for FY2023-24
  - This indicates the **overall priority of the power sector** under the power and energy sector development in the country
- The allocation for power division has increased by 34% compared to RFY23 mainly because of higher allocation for the development budget which also increased by 34%.
  - Share of operating budget is **quite small (only 0.15% of total power division budget)**

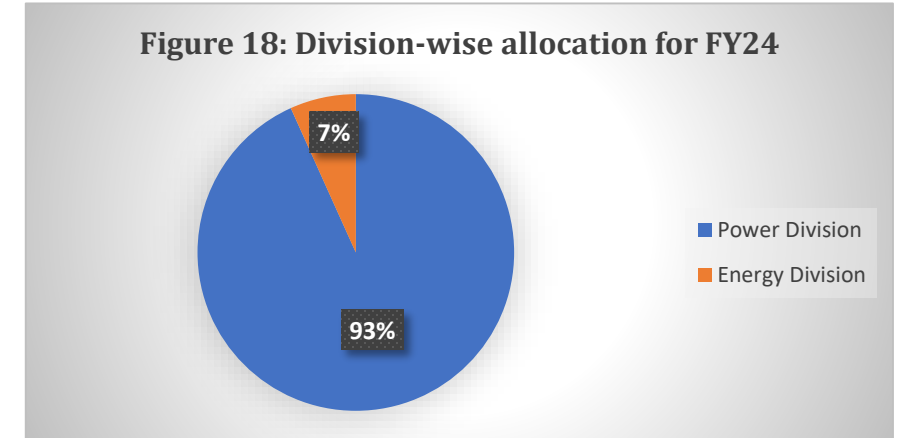
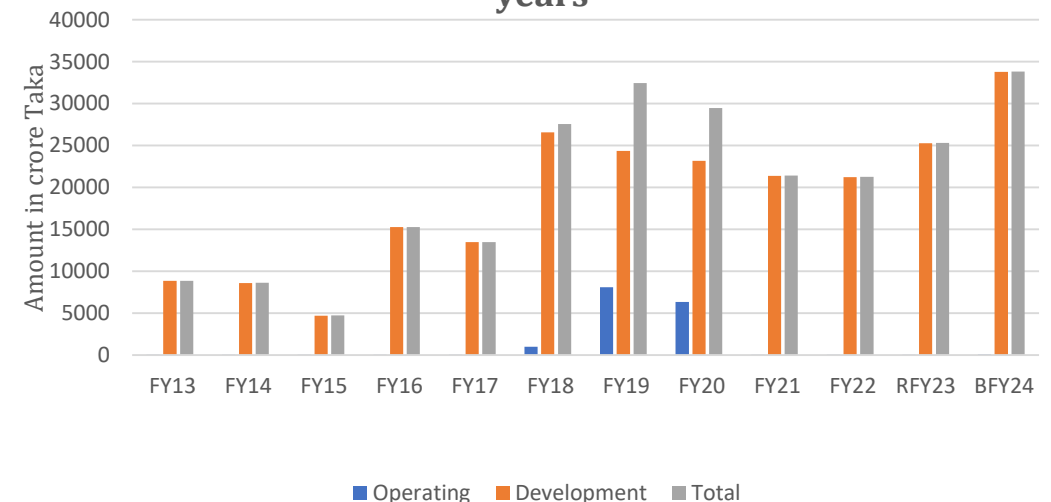


Figure 19: Budget of the Power Division over the years

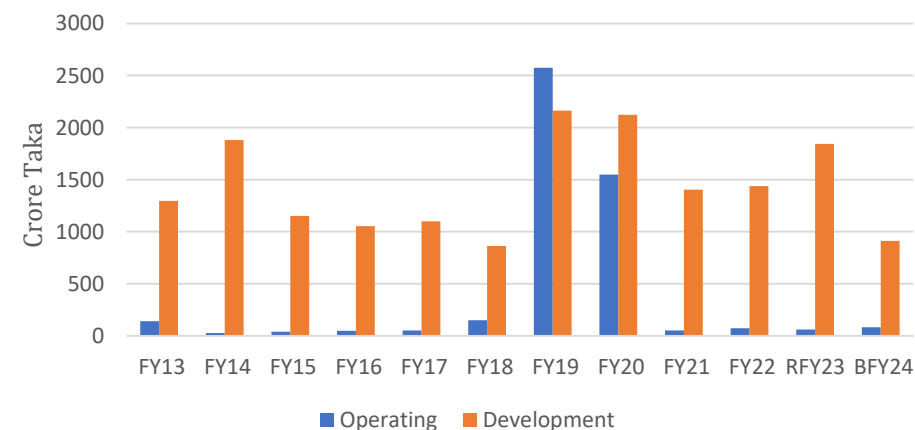


## 3. Power and Energy Sector in the National Budget for FY2024

### 3.3 Budget for the Energy and Mineral Resource Division

- The budget allocation for energy and mineral resource division is miniscule – **only 7% of total budget** for the MoPEMR is allocated for this division (Figure 20)
- Even this small amount of allocation was **not found with consistent trend** during the last decade
  - In fact, the allocation has **significantly declined** during FY14-FY18 period and after some rise in allocation in FY19 and FY20, the allocation has again **shown a declining trend**.
- In the proposed budget for FY23-24, allocation for energy and mineral resources division has **drastically reduced** – as high as 48%
  - This is mainly reduction of the development budget by 51%
- Dropping the budgetary allocation for energy sector particularly development budget is **quite surprising**
- This indicates further **negligence of domestic gas sector** as well as a **tendency to promote imported LNG** for meeting the energy requirement

Figure 20: Budget of Energy and Mineral Resources over the years



Source: Budget in Brief, Ministry of Finance

## **4. Power Sector's Development Budget FY2023-24**

## 4. Power Sector's Development Budget FY2023-24

### 4.1 Overview

- Compared to last year, the number of generation related projects have decreased (from 22 to 17)
- The number of carry-over projects have decreased as well
  - Majority of the projects are in the **concluding phase**
- Two new projects have been undertaken in the power and energy sector and those are related with distribution
- FY24 budget didn't give due importance towards generation of renewable energy-based power generation
  - In FY24, there are allocation for **only 5 renewable energy-based projects**

**Table 13: Project completion status by types of project (in number)**

Project	Carry-over	Concluding	Continuing	New	Total
<b>Generation</b>	8	6	3	0	17
<b>Transmission</b>	8	3	4	0	15
<b>Distribution</b>	0	9	11	2	30
<b>Fuel and Energy</b>	13	16	5	0	34
<b>Total</b>	<b>29</b>	<b>34</b>	<b>23</b>	<b>2</b>	<b>96</b>

Source: Authors' calculation from the ADP FY24

# 4. Power Sector's Development Budget FY2023-24

## 4.1 Overview

- During FY21-FY24, the highest number of projects are **related with distribution** (Fig. 21 & 22)
  - In FY24, the highest number of projects are related with fuel and energy
  - This is happened owing to allocation for large number of carry over and new projects
  - It is **interesting to examine** how the number of projects are high in power and energy when the allocation has cut down by 48%.
- Gradual deceleration of projects under **transmission is not encouraging** given the lack of proper transmission and distribution lines for integrated power T&D system
- The number of generation related projects is lower than the previous years
- The number of **carry-over projects (29) have decreased** compared to the last 2 fiscal years

Figure 21: Total Number of projects over the years

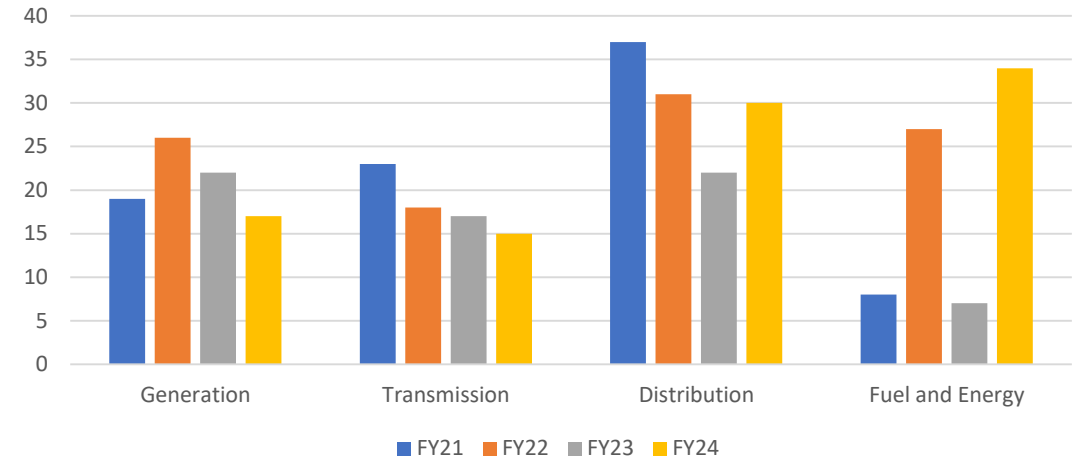
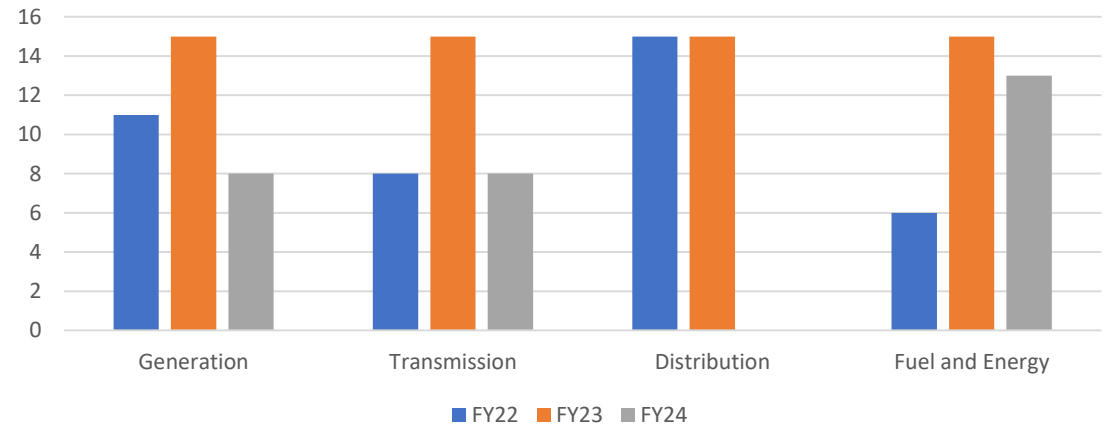


Figure 22: Number of Carry-over projects over the years



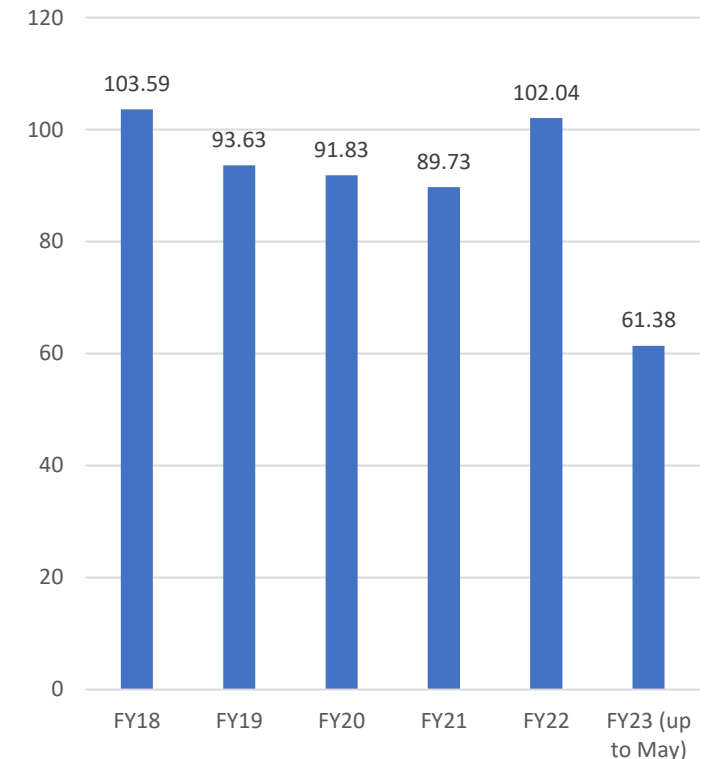
Source: Authors' calculation

# 4. Power Sector's Development Budget FY2023-24

## 4.1 Overview

- **IMED publishes budget** implementation rates for different ministries and division based on revised budget
  - Hence, there is a scope for over-reporting of the rate of implementation given downward revision of the revised budget
- For example, the IMED estimates show an implementation rate of **102%** while the FY2023-24 shows an implementation rate which is much lower – in case of revised budget it is **92.8%** while in case of main budget it is **83.6%** (Fig. 23)
  - Hence it is difficult to consider IMED data as a reliable source of information
- The performance of the power division is also not up to the mark.
- It is evident that the implementation rate of power division has decreased over the years
  - The rate has drastically reduced in FY23 (only 60%)
  - Is this because of restriction in allocation considering low priority of projects?
- Surprisingly, the Finance Minister in his budget speech has mentioned about establishing new power generation projects **with a capacity of 23000MW**
  - As per PDB, about 31 power plants equivalent to **11,734MW are currently** under implementation
- It is not clear why there is so many projects in pipeline for generation when the excess **capacity is as high as 40%**.

Figure 23: Implementation rate of Power Division over the years



Source: Authors' calculation from IMED

# 4. Power Sector's Development Budget FY2023-24

## 4.2 Major Development Projects in Generation

- In FY24, there are total **17 generation related projects** (Table 14)
  - Of these, 8 are carry-over projects, 6 are concluding and 3 are continuing projects
- It is positive that **no new generation based** projects have been approved for FY24
- Some of the projects need major reconsideration
  - **Land acquisition, development and conservation** for Patuakhali 1320 MW super thermal power plant – can be considered for alternate use for wind **based/solar based projects**
  - Similarly, **Matarbari 1320 MW** ultra super critical power project can be use for wind and **solar based power project**
- SREDA should **disclose the findings of the renewable** energy resource assessment and piloting
  - These findings are of importance both to the government, **private sector including foreign investors** and development partners to invest in the RE in Bangladesh
- Limited attention is paid by **SREDA to implement the projects** which indicates its institutional weaknesses as well

Table 14: Selected Generation Projects

Name of the Project	Maximum Completion Rate	Organisation	Project Status	Ministry
Ghorashal 3rd unit repairing programme	100%	BPDB	Carry-over	MoPEMR
Ghorashal 4th unit repowering programme (2nd revised)	93%	BPDB	Carry-over	MoPEMR
Land acquisition, development and conservation for Patuakhali 1320MW super thermal power plant	95%	APSCL	Carry-over	MoPEMR
Sonagaji 50MW solar power plant building	89%	EGCB	Carry-over	MoPEMR
Technical support project for renewable energy resource assessment and piloting	98%	SREDA	Concluding	MoPEMR
Technical assistance for power sector development and capacity building	99%	Power Division	Carry-over	MoPEMR
Matarbari 2*600 MW ultra super critical coal fired power project	85%	CPGCBL	Continuing	MoPEMR
Ruppur nuclear power plant	68%	BNEC	Continuing	MoPEMR



## 4. Power Sector's Development Budget FY2023-24

### 4.3 Major Development Projects in Transmission

- In FY24, there are **total 15 transmission related projects**
  - Of these, 8 are carry-over projects, 6 are concluding and 3 are continuing projects
- Number of transmission **related projects decreased** (from 17 to 15)
- Not only the number of projects is low, but also **rate of implementation** at the end of the fiscal would not be satisfactory
  - At the end, number of **carryover projects will increase**
- More allocation is needed to quickly implement the transmission related projects
  - Delay in funding in the power division would cause **high capacity payment** (Rooppur Nuclear project)

**Table 15: Rate of Implementation of Transmission related Projects**

Name of the Project	Maximum Completion Rate	Organisation	Project Status	Ministry
Power grid network strengthening project under PGCB (Revised)	40%	PGCB	Concluding	MoPEMR
Development of transmission infrastructure for generated power evacuation of Ruppur Nuclear Power Plant	51%	PGCB	Concluding	MoPEMR
Capacity expansion of existing grid sub-centre and transmission line	25%	PGCB	Continuing	MoPEMR
Dhaka and western grid transmission network enhancement project	30%	PGCB	Carry-over	MoPEMR
Feasibility test and technical assistance project for Madunaghat-Bhulta 765KV transmission line	11%	PGCB	Continuing	MoPEMR

# 4. Power Sector's Development Budget FY2023-24

## 4.4 Major Development Projects in Distribution

- The number of **distribution related projects has increased** in the upcoming fiscal year -from 22 to 30 which is positive
  - Of these, 8 are carry-over projects, 9 are concluding and 11 are continuing projects
  - One new project is undertaken (in Monpura island)
- However, a **number of 'concluding' project** would turn to be 'carry over' project due to lack of allocation.
- Projects are **less for outside Dhaka**
- There is limited focus of undertaking T&D projects to **quickly integrate the** country's transmission and distribution system

Table 16: Rate of Implementation of Distribution related Projects

Name of the Project	Maximum Completion Rate	Organisation	Project Status	Ministry
Expansion and upgradation of electricity distribution system in Monpura island	4%	WZPCL	New	MoPEMR
Pre payment metering for distribution of Cumilla and Mymensingh	98%	BPDB	Concluding	MoPEMR
100% sustainable and reliable electrification in Hatia, Nijhum and Kutubdia Island	99%	BPDB	Concluding	MoPEMR
Smart pre payment meter supply and establishment programme in DESCO region	98%	BPDB	Concluding	MoPEMR
Construction of 132/33/11 KV underground grid sub-station at Gulshan in Dhaka	16%	DESCO	Concluding	MoPEMR
Development of electricity distribution system in the area under DPDC	70%	DPDC	Concluding	MoPEMR

Source: ADP of FY24

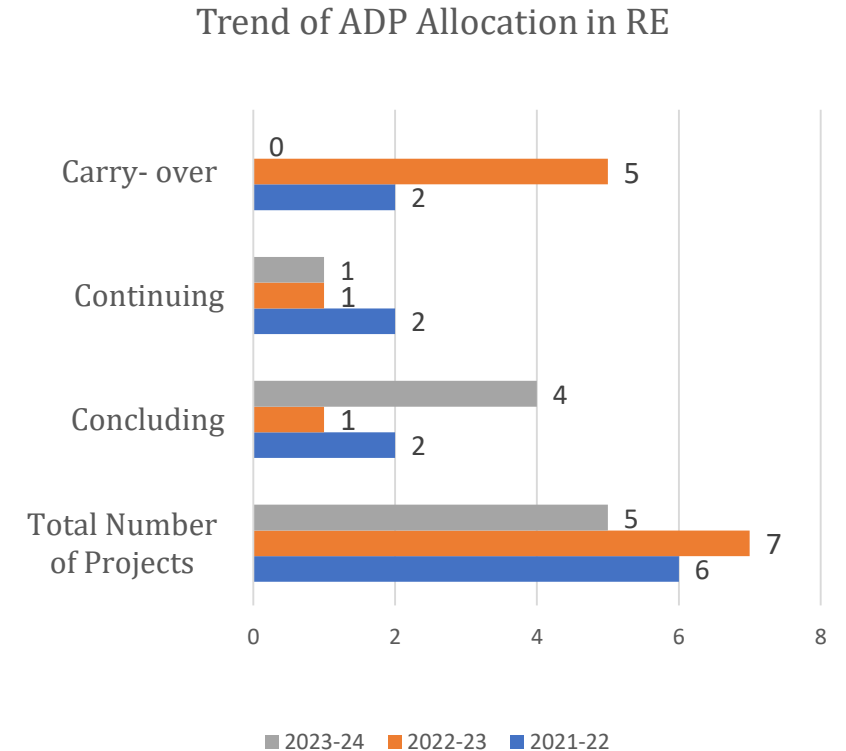
# **5. Renewable Energy in National Budget FY23- 24**

# 5. Renewable Energy in National Budget FY23- 24

## 5.1 Projects under Implementation (ADP)

- The number of projects has been **decreased in the ADP** allocation for FY 2023-24 compared to FY 2022-23 (Fig. 24)
  - From 7 projects in FY2023 to 6 projects in FY2024
- Majority of the renewable energy based projects are concluding projects (4 out of 6)
- The number of concluding projects has been increased over the last three years
- Simultaneously the number of carry over projects have reached to zero in FY 2023-24
- MoPEMR should **allocate more to commence** more renewable energy projects
- Surprisingly, the **lower number of public funded renewable** energy projects are a major weakness in allocative priorities
- SREDA shows **lack of proactiveness** in undertaking as well as implementing projects
- SREDA needs **major institutional reform** in order to play the lead role in Renewable energy development in the country

Figure 24: Implementation Rate RE related Projects



Source: Authors' Estimation from ADPs

# 5. Renewable Energy in National Budget FY23- 24

## 5.2 Projects under Implementation

- Among the 6 projects in renewable sector 5 are **generation related** and one is distribution related project (Table 17)
- **Only two out of 6 ‘concluding’** projects completed within the upcoming fiscal year
  - In other words, the rest four will **turn to be ‘carry over’ project**
  - **Unless properly funded**, the one continuing project (implementation rate: 40%) would turn to be carryover project

**Table 17: Renewable Energy based Major Development Projects for FY2023-24**

<b>Name of the Project</b>	<b>Maximum Completion Rate</b>	<b>Organisation</b>	<b>Type of Project</b>	<b>Project Status</b>	<b>Ministry</b>
Sonagaji 50MW solar power plant building	89%	EGCB	Generation	Concluding	MoPEMR
Technical support project for renewable energy resource assessment and piloting	98%	SREDA	Generation	Concluding	MoPEMR
TA for strengthening and development of sustainable power sector in Bangladesh	40%	Power Cell	Generation	Continuing	MoPEMR
Agriculture irrigation through solar driven pump	93%	BREB	Distribution	Concluding	MoPEMR
100 MW solar power plant building in Madariganj	54%	RPC	Generation	Concluding	MoPEMR

Source: Authors’ Estimation from ADP FY2023-24

# 5. Renewable Energy in National Budget FY23- 24

## 5.2 Projects under Implementation

- A total of 14 renewable energy based power plants with the generation capacity of **460 MWs** are in the pipe line by 2025 (Table 18)
  - Adding the upcoming power into the grid the renewable energy based generation will be **1644 MW**
- Only three projects are currently under pipeline of public investment with a total capacity of meagre **53 MW**.
  - Only **11.5% of total** RE projects in pipeline
- The projects under the pipeline should be commissioned with **proper allocation**
- Providing **fiscal support** as well as gradually reducing fiscal support for fossil-fuel based energy and power is important to attract private investment
- Foreign investment and foreign aid will be needed to undertake **more G-G, G-P and P-P projects** for the development of the renewable energy sector development

Table 18: Upcoming Renewable Energy based Projects

Name of the Power Plant	Capacity (MW)	Fuel Type	Possible Commissioning Date
<b>Public Projects</b>			
Sirajganj 2 MW Wind Power Station	2	Wind	Jun-23
Barishal 1 MW Solar Power Plant	1	Solar	Jun-23
Sonagaji 50MW solar power plant building	50	Solar	Dec-23
Sub- total	53		
<b>Private Projects</b>			
Patgram Lalmonirhat 5 MW Solar Power Plant	5	Solar	Dec-23
Goyangat 5 MW Solar Power Plant	5	Solar	Dec-23
Dharmapasha Sunamganj 32 MW Solar Power Plant	32	Solar	Dec-23
Tetulia Panchgar 30 MW Solar Park	30	Solar	Dec-23
Bera Pabna 3.77 Solar Power Plant	3.77	Solar	Dec-23
Pabna 100 MW Solar Power Plant	100	Solar	Dec-23
Sirajganj 68 MW Solar Power Station	68	Solar	Dec-23
Cox's Bazar 60 MW Wind Power Plant	60	Wind	Dec-23
Mongla Bagerhat 55 MW Wind Power Plant	55	Wind	Sep-24
Narayonganj 5 MW Biogass Power Plant	6	Biogass	Dec-24
Aminbazar 42.5 Biogass Power Plant	42.5	Biogass	Oct-25
Sub- total	407.3		
<b>Total (MW)</b>			<b>460.3</b>

Source: BPDB Progress Report, May'23

## 5. Renewable Energy in National Budget FY23- 24

- **Prime Minister has** instructed officials to take steps to power all irrigation pumps in the country with solar energy
  - This initiative will save **3.4-3.5 million tons** of diesel, which is equivalent to **about US\$1 billion**
  - At present, a total of **2954 pumps** are being operated under solar which is only **0.22% of total** pumps irrigated in Bangladesh (**13.4 lakh irrigation pumps**)
- Indian government launched the "**KUSUM**" (Kisan Urja Suraksha evam Utthaan Mahabhiyan) program to support the installation of solar pumps for irrigation
  - Main features of the programme include (a) **promoting decentralization** of solar power generation by encouraging the installation of small-scale solar power plants; (b) supporting the Indian solar industry by promoting **domestic manufacturing** of solar components and equipment
- Provinces like Gansu, Hebei, and Jiangsu of China had been implementing solar irrigation for the last few years
  - Main features of the programme include – (a) **both off-grid and grid-connected** systems are present; and (b) they are **scalable and customizable** i.e. they can be tailored to meet the specific needs of different **agricultural settings**, including small-scale farms or large-scale commercial operations

## **6. ADP in the Energy Sector in National Budget FY2023-24**

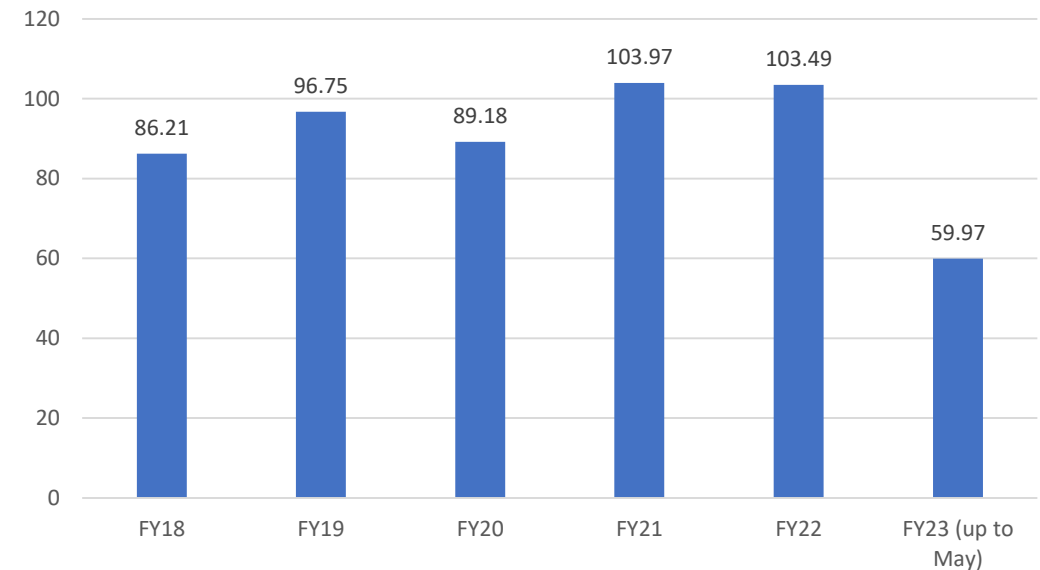


# 6. ADP in Energy Sector in National Budget FY2023-24

## 6.1 Overview

- The low rate of implementation in energy sector is a problematic issue (Figure 25)
  - The IMED data is **found to be faulty**- while it has shown a rate of implementation of **103.5% in FY22**, estimating the official data shows implementation rates of **92% and 72.5%** in case of revised and original budget for FY22 respectively.

Figure 25: Implementation rate of Energy and Mineral Resources Division over the years



Source: Authors' calculation from IMED

## 6. Energy Sector in National Budget FY2023-24

### 6.2 Major Development Projects in Gas

- In FY24, a **total of 23 gas related projects** is currently under implementation (Table 19)
  - Of these, 2 are carry-over projects, 14 are concluding and 7 are continuing projects
- Most of the gas sector related concluding projects will **turn to be ‘carry over’ project** because of lack of allocation.
- Neither the **gas development fund** nor the budget allocated projects have priorities **on drilling as wells**
  - Only one project** will be completed in Sylhet
- The exploration of new gas well as well as focusing on pre-paid gas meters is appreciated
- As per the budget speech, **46 wells will** be dug by December 2024
  - However, **only 6 new wells** are currently in the drilling phase
- Substantive allocation for drilling wells is needed
- The target set of drilling 46 wells by **2024 will not be possible** – in other words, the importance of LNG falsely make important in the coming years

**Table 19: Rate of Implementation of Gas related Projects**

Name of the Project	Maximum Completion Rate	Organisation	Project Status	Ministry
Project of Gas pipeline for Mymensingh combined cycle power station from Dhanua to Mymensingh	62%	RPC	Concluding	MoPEMR
Bakhrabad-Meghnaghat-Haripur gas transmission pipeline construction	71%	Petrobangla	Concluding	MoPEMR
Gas distribution network upgradation in Fauzdarhat-Sitakunda-Mirsarai	66%	Petrobangla	Continuing	MoPEMR
Establishing pre-paid gas meter for the residential consumers of KGDSL	12%	Petrobangla	Carry-over	MoPEMR
Digging Sylhet well no. 10 (evaluation/developing well)	96%	Petrobangla	Concluding	MoPEMR
Installation of 50,000 prepaid gas meters in JGTDSL affiliated areas	93%	Petrobangla	Concluding	MoPEMR
Gas transmission pipeline construction programme in Bangabandhu Sheikh Mujib Railway bridge	28%	Petrobangla	Continuing	MoPEMR
3D seismic survey at the exempted areas of acreage block 13 and 14	50%	Petrobangla	Continuing	MoPEMR

Source: ADP of FY24

## 6. Energy Sector in National Budget FY2023-24

### 6.3 Major Development Projects in LNG

- In FY24, there is only **1 LNG related** projects (Table 20)
  - It is a continuing project
  - The project should not advance to look into land based LNG terminal
- Recently, the **3<sup>rd</sup> FSRU has been approved** by the government under the controversial Quick Enhancement of Electricity and Energy Supply (Special Provision) Act 2010
- Even though the only project will achieve 90% completion rate by FY24, allocating resources in this project will only **hinder the transition path to renewables**
- Petrobangla is provided **Tk 2000 crore as a loan for importing** LNG through Gas Development Fund

Table 20: Rate of Implementation of Gas related Projects

Name of the Project	Maximum Completion Rate	Organisation	Project Status	Ministry
Perform technical and economic feasibility study, engineering and tender management services for the construction of the land based LNG terminal at Matarbari, Cox's Bazar.	90%	Petrobangla	Continuing	MoPEMR

Source: ADP of FY24

## **7. Fiscal Measures Proposed in the National Budget**

## 7. Fiscal Measures Proposed in the National Budget

- Government has proposed to **withdraw the existing 15% VAT and 5% advance tax** on the import of 13 oil and petroleum products
  - Simultaneously, **specific duty has been levied** at fixed rates on all types of petroleum products and fuel oils
  - This proposal has been made mainly **to not disrupt** the revenue collection due to the fluctuation of global price after the periodic formula-based price adjustment mechanism, likely to be introduced in September'23
  - As the import of diesel, furnace oil and other fuels yields **the highest revenue collection** (FY22: 56% of total NBR revenue), NBR would like to keep it intact
  - If the adjustment adversely impacts BPC's financial condition, **BPC will most likely pass it on consumer's shoulder**
    - Hence, the imposition of specific duties on petroleum products will help NBR to ensure the revenue generation but may not ensure consumers welfare
- Bangladesh Petroleum Corporation (BPC) has announced to **introduce periodic formula-based price adjustment mechanism** for petroleum prices from September 2023
  - **Finance minister** has mentioned about a formula-based price adjustment
  - According to the IMF, introducing a periodic formula-based fuel price adjustment mechanism will help ensure no structural subsidies for petroleum products
  - Existing tariff structure is **heavily dominated** by the structure of costs accounting practiced by the BPC and other organizations where the accounting of '**losses**', '**profits**', '**cash transfer**' to the public exchequer, and '**investment**' needs proper adjustment. After those adjustment, '**base level cost**' and '**base level tariff**' could be understood under which the market-based price could be set.

## 7. Fiscal Measures Proposed in the National Budget

- The **phase out of the minimum capacity charge** of the rental power plants has been announced in the budget FY24. This is a welcome initiative. However, it is important to **examine what method be followed** in addressing the withdrawal of capacity charges. Most importantly, whether those method of correction will **reduce the financial burden** of the BPDB.
- **CPD further recommends** that the rental and quick rental power plants should be phased out immediately
  - Expensive energy based power plants **need to be phased out**; dated, inefficient and old power plants are also need to phased out
- Fiscal measures of the proposed budget **completely ignores demand placed** by different stakeholders for the promotion of renewable energy
  - A major fiscal policy to promote renewable energy will be to withdrawal of discriminatory fiscal support provided to the fossil fuels and power in order to create a competitive environment in the power and energy sector

# **8. Concluding Remarks and Recommendations**

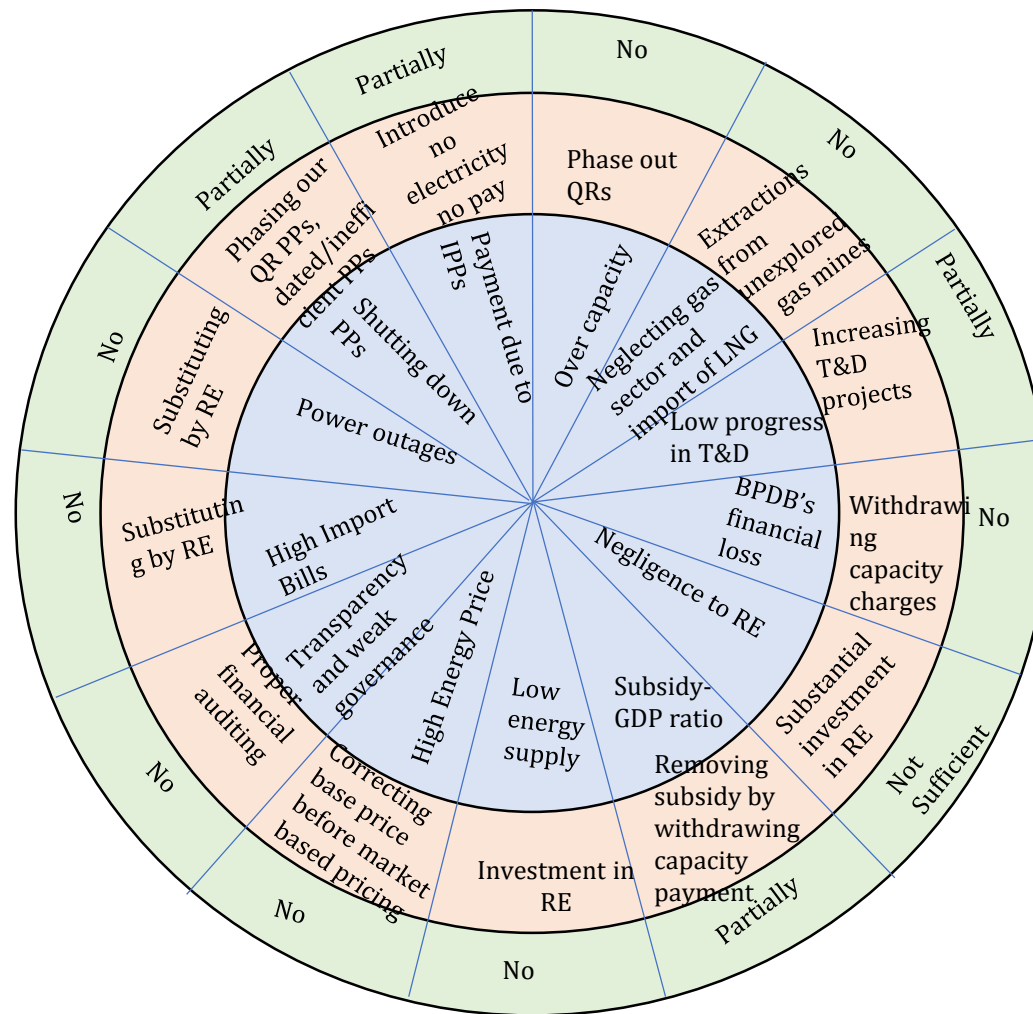
## 8. Concluding Remarks and Recommendations

- Bangladesh power and energy sector **did not take lessons properly** from the ongoing crisis **and moving towards a wrong direction** in case of power and energy sector's sustainability point of view
  - **Instead of putting effort** to domestic gas sector development, it has tried to **rely on imported LNG** which would further weaken the forex reserve
  - Instead of going for **energy diversification**, it has further increased **its reliance on coal** which is against the official position of not to promote coal
  - **Negligence to the renewable energy** sector continues and no major reversal in policy and initiatives is observed
- Analysis shows that the power and energy sector has **no good news in immediate future**
  - **Load shedding will continue in** the coming months/year which suffer the households, businesses and industry and commercial activities
  - **With huge excess reserve** (about 50%), the power sector will **further struggle** in handling with capacity payment, subsidy requirement and its financial position would get worse – as if the BPDB slowly moved towards **becoming a 'white elephant'** – financial viability of the public entities is in question?
  - The financial accounts of public entities such as BPC, BPDB and PetroBangla are **not transparent** where it continuously shown a negative balance in operative income but provide dividend to the exchequer, investment to assets and taking subsidy from the government
  - Under such a situation it is **difficult to set the base level price** for opening up of a market-based pricing model starting for petroleum



## 8. Concluding Remarks and Recommendations

Figure 26: Addressing the Challenges in the Power and Energy Sector in National Budget FY2023-24



Source: Authors' Illustration

## 8. Concluding remarks and Recommendations

- The **IMF conditionality** for subsidy management only through price adjustment **faultily passes the burden** to the consumers of energy. This subsidy management needs to be done through gradual phase out of capacity payment.
- **Institutional capacity of SREDA** needs to be thoroughly reviewed
- The proposed budget is hardly addressing major challenges rather a **'business as usual'** budget for the power and energy sector is placed. There is **little expectation** that the proposed budget if it passes in its current shape would make substantial improvement in the power and energy sector
  - It is expected that the fiscal and budgetary measures in the coming years **will be thoroughly revised targeting** a renewable energy based power and energy sector in the country
  - The **Quick Enhancement of Electricity and Energy Supply (Special Provision) Act 2010** needs to be repealed immediately as part of creating a complete market in the sector with better efficiency and low cost
  - **All contracts should be made public** in order to ensure transparency in the selection process
  - **Investment in renewable energy** based power generation, smart grid development, development of national load dispatch system, energy saving battery, wind mill, floating solar plant, micro grid, mini grid, net metering, roof-top PV, electric vehicle, solar based irrigation, bio-waste based energy, district wise/than wise renewable energy promotion and energy efficiency should be promoted
  - The **discriminatory fiscal support** provided to the fossil fuel based power and energy needs to be gradually phased out
  - **Supportive fiscal measures** need to be promoted in order to encourage domestic and foreign investment in the renewable energy sector development
- Finally, the IEPMP in its current draft **would not help to improve** the power and energy sector properly rather would push further push to increase the debt burden which would be difficult to sustain – hence its **thorough revision** is needed

Thank you.