Conference on

Recommendations by the Task Force on Re-Strategising the Economy

Session 3

Building Sustainable Futures: Connectivity and Energy

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Task Force on Re-Strategising the Economy

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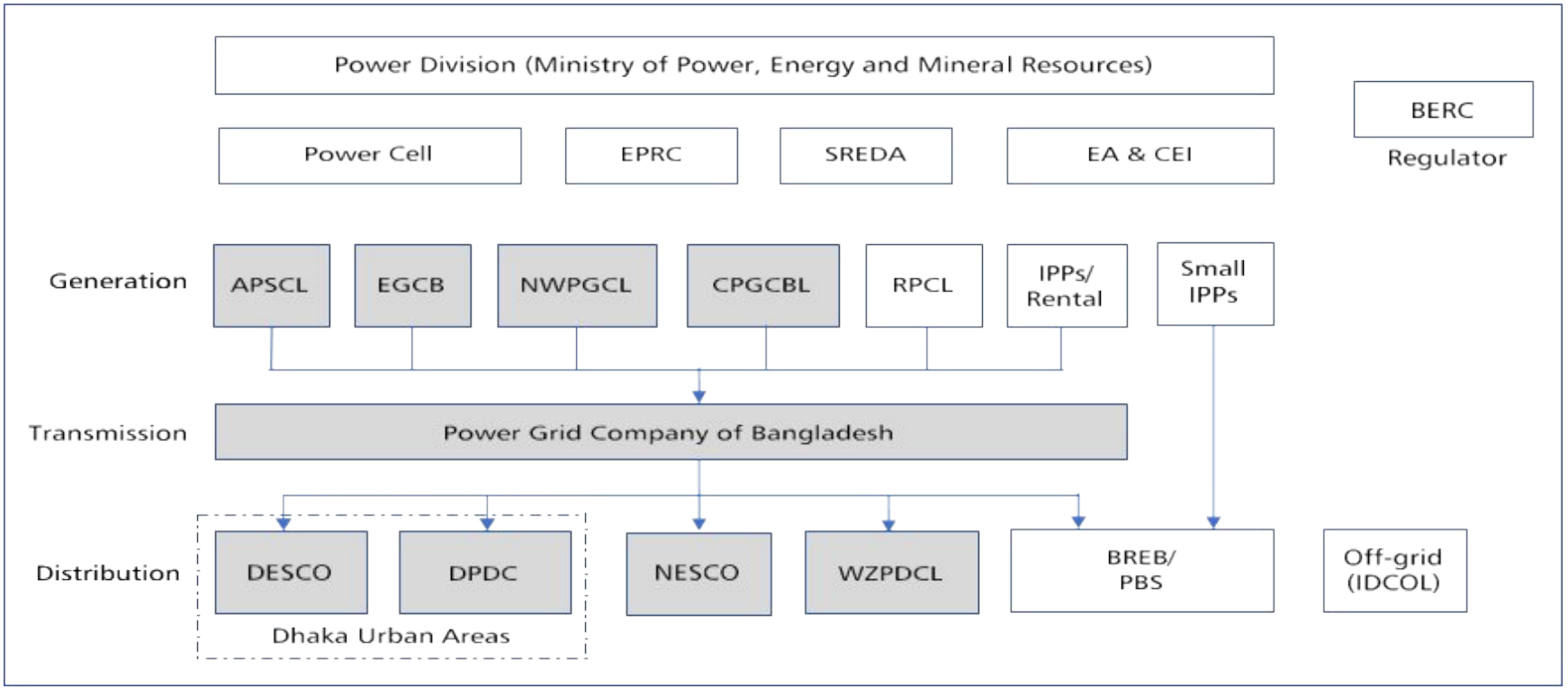
Transforming Energy Policy for a Sustainable Future

Background

- The power sector is vital to Bangladesh's economic growth, with close links to other sectors and significant impacts on national progress.
- Over the last decade, installed capacity and maximum generation have nearly tripled, achieving near-universal electricity access and reducing system losses by 8.90%.
- Despite progress, slowed reforms and structural weaknesses threaten the sector’s sustainability and future resilience.
- The government targets a threefold increase in capacity by 2050, aiming for 60 GW new generation capacity and USD 193 billion investment in infrastructure by 2041.
- Comprehensive reforms are crucial to addressing challenges and ensuring the power sector supports Bangladesh’s large development goals.

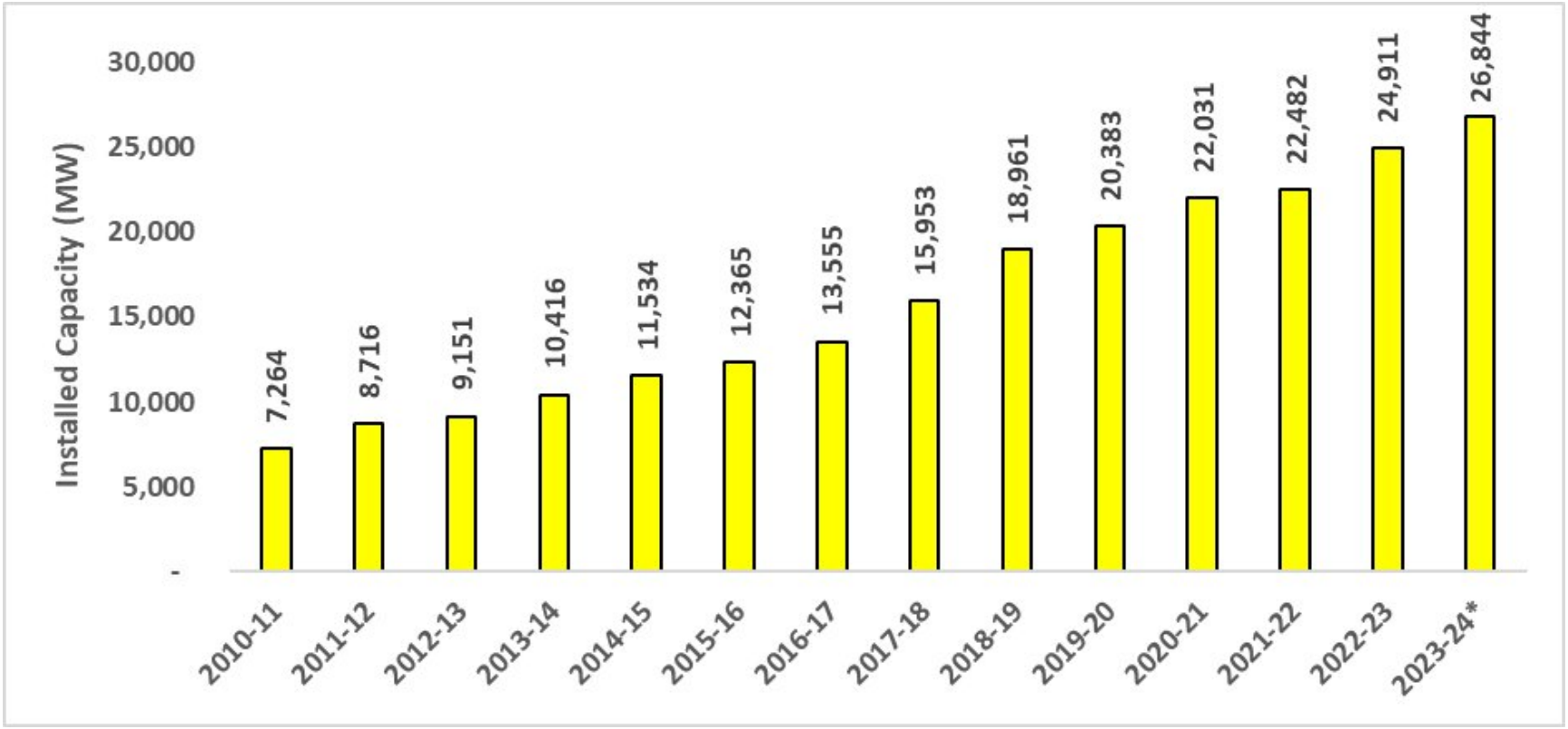
An overview of the power and energy sector in Bangladesh

Structure of the regulatory body of the power sector in Bangladesh



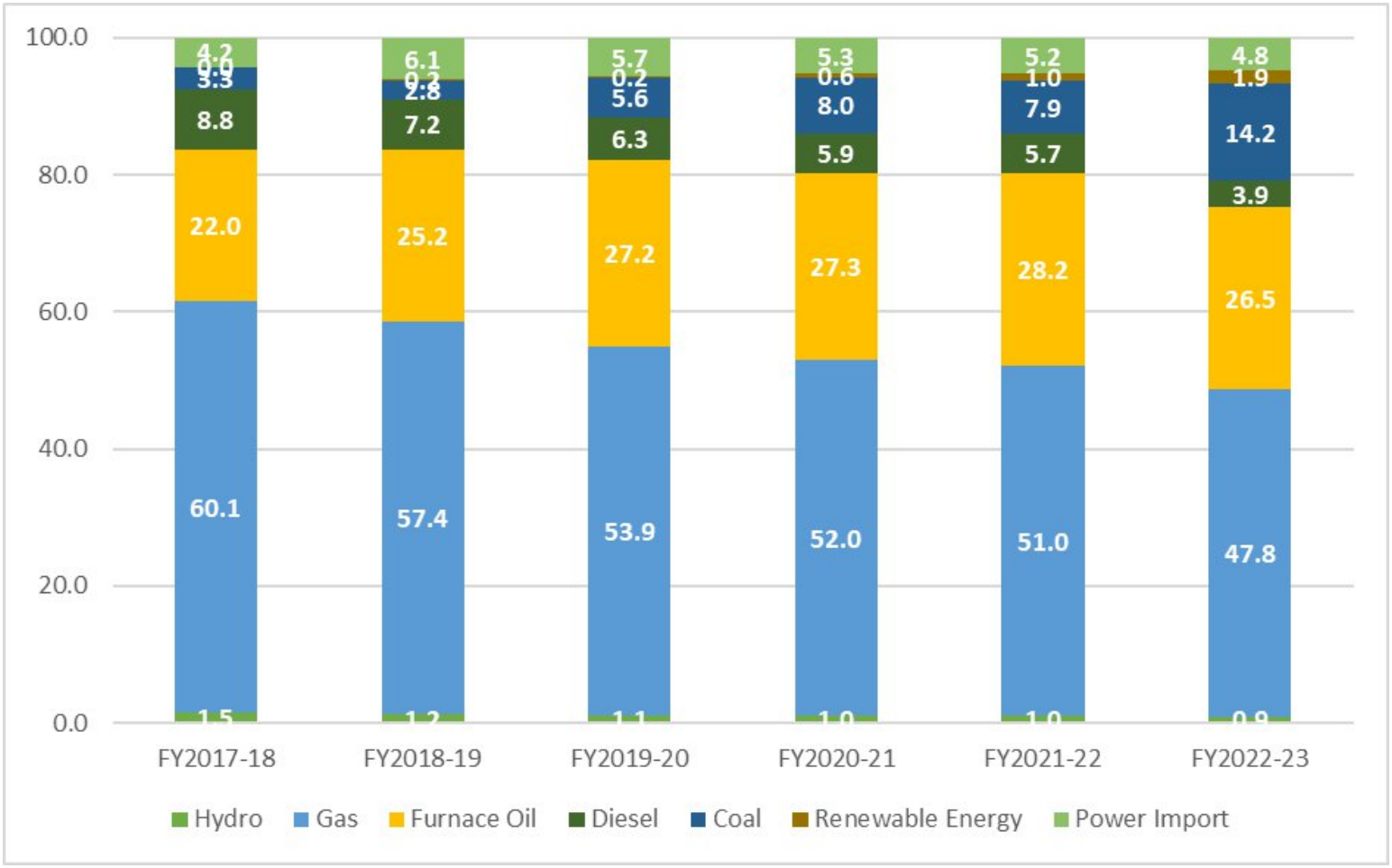
Source: Power Cell and (ADB, 2020)

Power installed capacity (MW)



Source: Power Division (*Up to February 2024)

Share of power installed capacity in fuel mix (%)



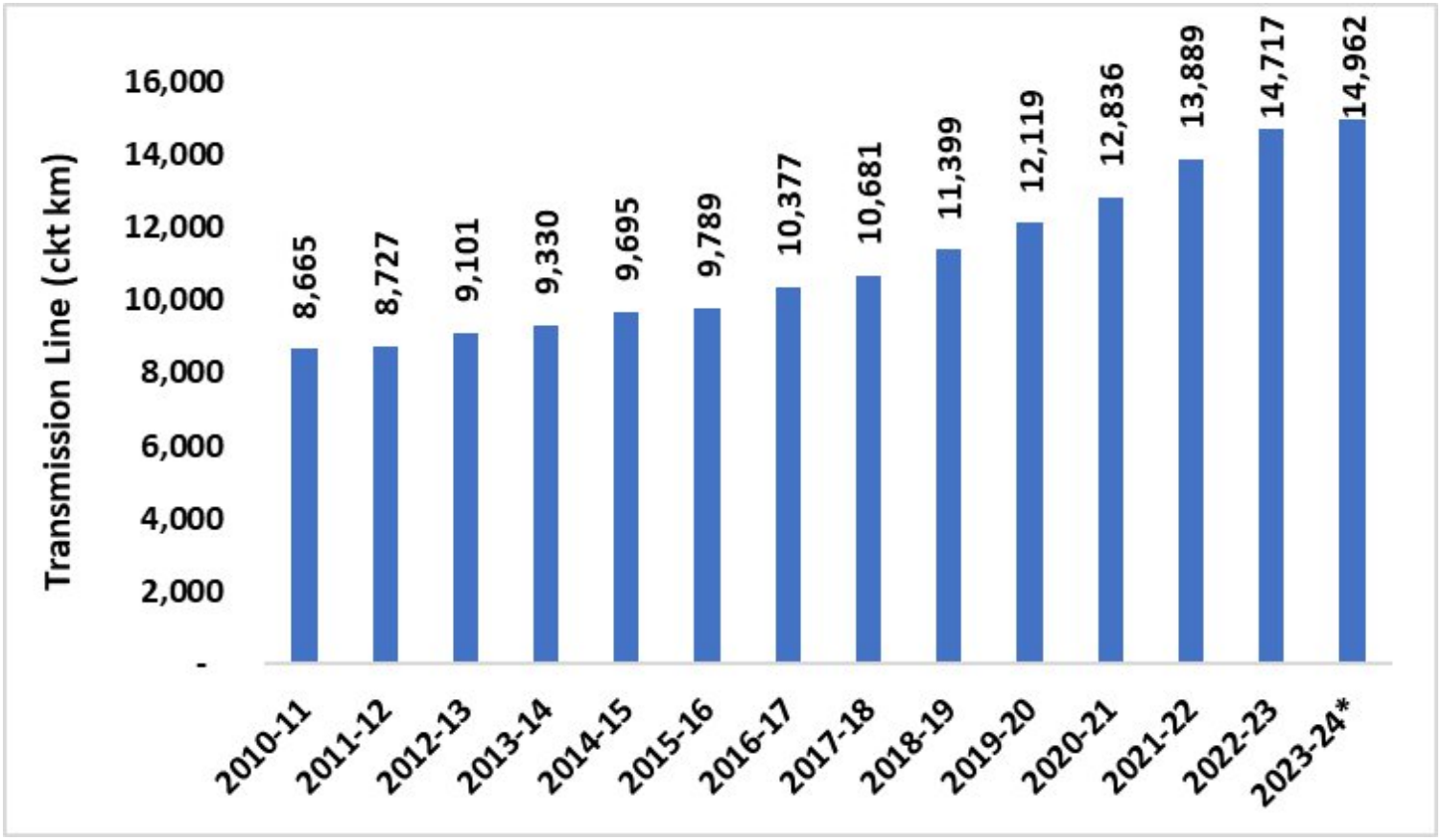
Source: Annual Reports from 2017-2023, Bangladesh Power Development Board

Overgeneration capacity of power

Fiscal Year	Installed capacity (MW)	Maximum generation (MW)	Overcapacity (per max generation) (MW)	% share of overcapacity of installed capacity
2010-11	7,264	4,890	2,374	32.7
2011-12	8,716	6,066	2,650	30.4
2012-13	9,151	6,434	2,717	29.7
2013-14	10,416	7,356	3,060	29.4
2014-15	11,534	7,817	3,717	32.2
2015-16	12,365	9,036	3,329	26.9
2016-17	13,555	9,479	4,076	30.1
2017-18	15,953	10,958	4,995	31.3
2018-19	18,961	12,893	6,068	32.0
2019-20	20,383	12,738	7,645	37.5
2020-21	22,031	13,792	8,239	37.4
2021-22	22,482	14,782	7,700	34.2
2022-23	24,911	15648	9,263	37.2
2023-24*	26,844	15,164	11,680	43.5

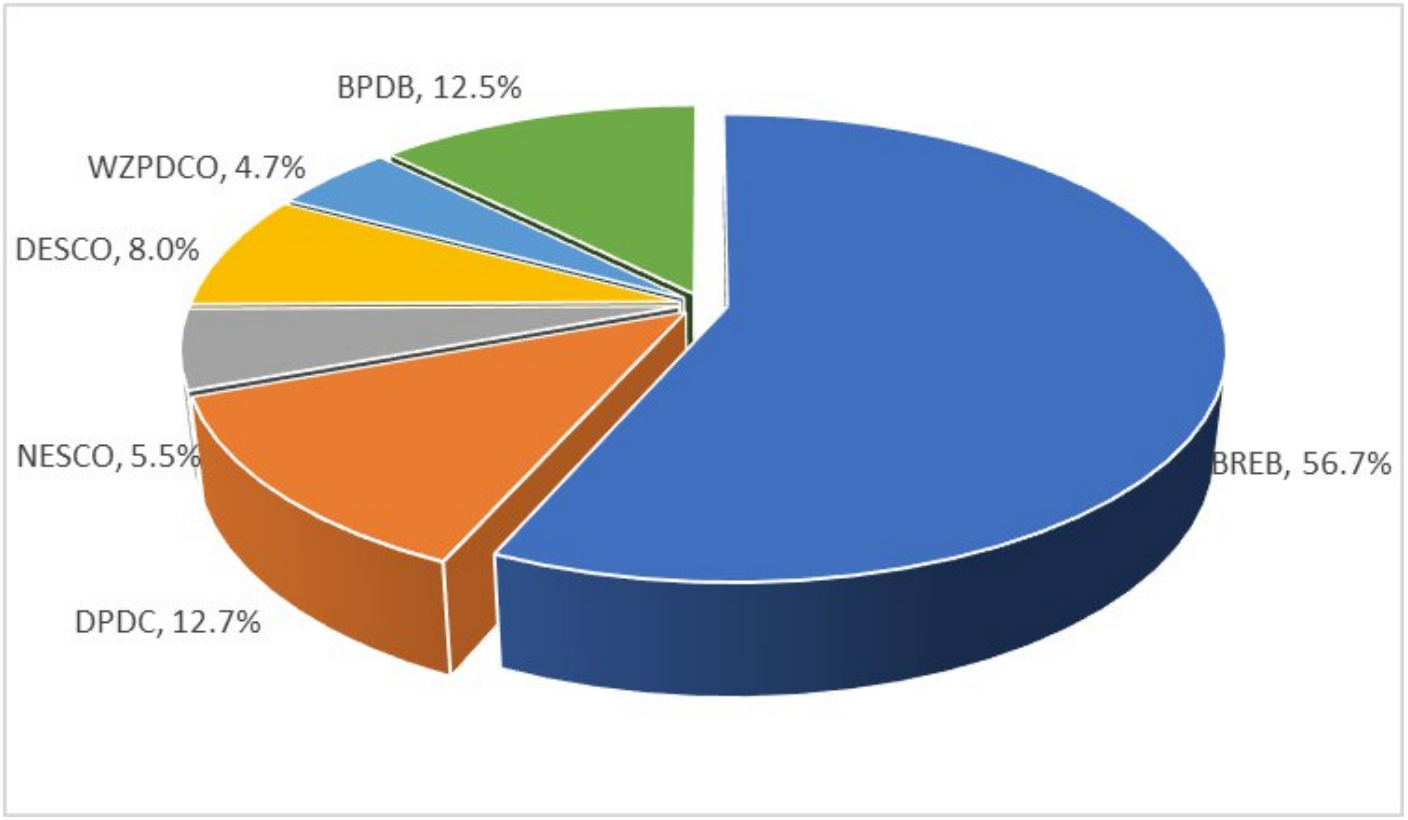
Source: Power Division (*Up to February 2024)

Transmission line (ckt km)



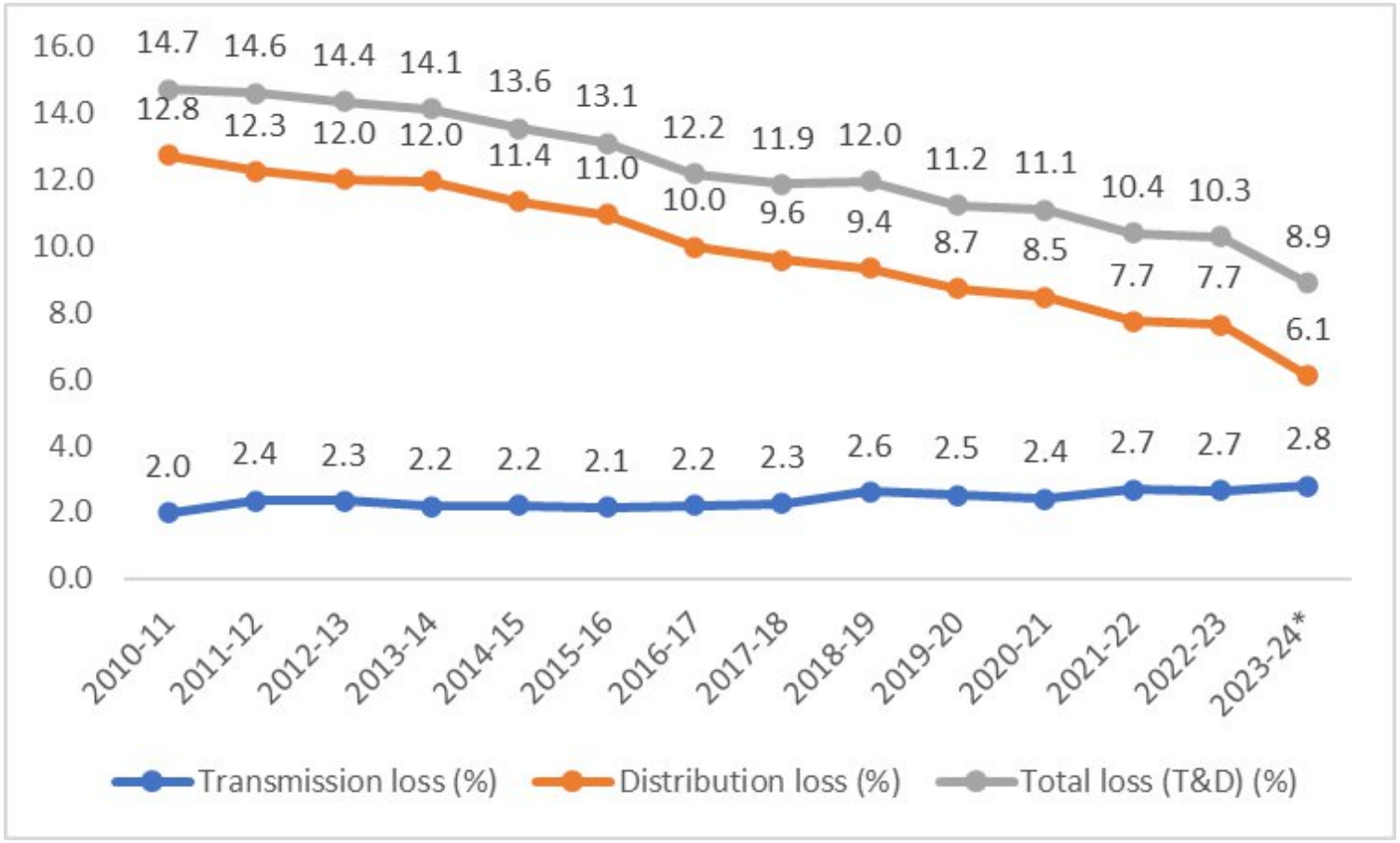
Source: Power Division (*Up to February 2024

Inter-utility power purchase for FY2023-24



Source: Power Division

Year-wise system loss (%)



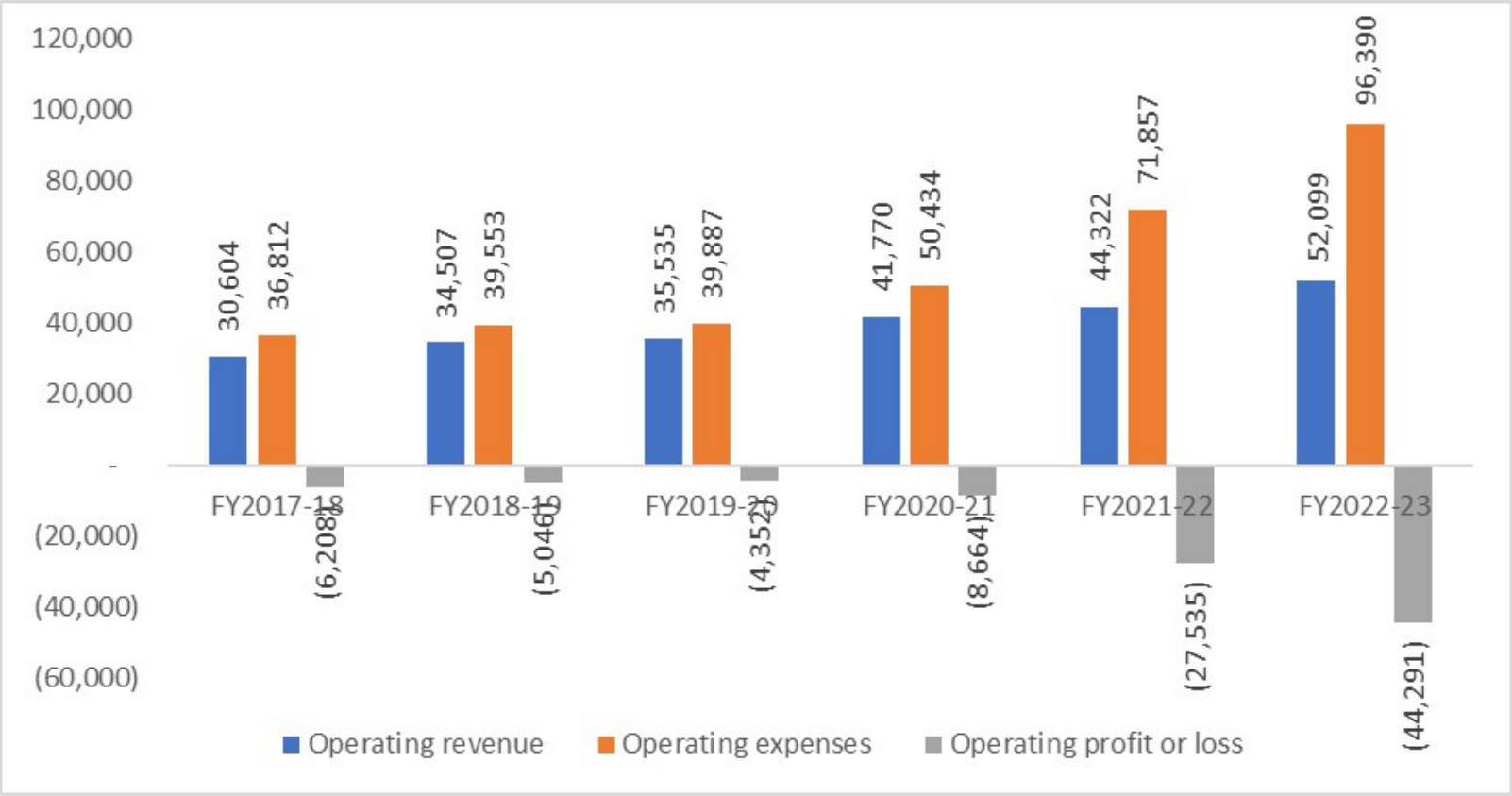
*Source: Power Division (*Up to December 2022)*

Cost of electricity generation

	FY2021-22		FY2022-23		% change of amount
	Amount (BDT crore)	Cost (BDT/kWh)	Amount (BDT crore)	Cost (BDT/kWh)	
BPDB's generation	8,014.7	5.0	13,306.6	7.6	66.0
Purchase from IPP	49,213.3	11.6	59,022.7	14.6	19.9
Purchase from Rental	2,789.4	9.8	3,743.9	12.5	34.2
Purchase from Public Plant	7,013.8	4.8	10,788.3	6.9	53.8
Purchase from India	4,673.2	6.1	9,223.4	8.8	97.4
Interest on Budgetary Support	1,294.8	0.2	1,294.8	0.2	-
Provision for Power Sector Development Fund	1,224.1	0.2	1,266.8	15.0	3.5
Total	74,223.3	8.8	98,646.4	11.3	32.9

Source: Annual Report 2022-23, Bangladesh Power Development Board (BPDB)

BPDB's operating loss



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

The progress of renewable energy in 2024

Technology	Off-grid (MW)	On-grid (MW)	Total (MW)
Solar	377.1	776.8	1153.9
Wind	2.0	60.9	62.9
Hydro	0.0	230.0	230.0
Biogas	0.7	0.0	0.7
Biomass	0.4	0.0	0.4
Total	380.2	1067.7	1447.9

Source: SREDA (2024)

Problems and Challenges in the Power and Energy Sector

Poor Regulatory Quality

- The Quick Enhancement of Electricity and Energy Supply (Special Provision) Act, 2010, extended until 2026, bypasses competitive bidding and the Public Procurement Act, raising concerns over transparency, governance, and the potential for favouritism and poorly planned projects.
- The Bangladesh Energy Regulatory Commission (BERC) Act Amendment (2022) allows the government to set tariffs without public hearings, reducing transparency, discouraging stakeholder participation, and undermining investor confidence in the energy market.
- The Integrated Energy and Power Master Plan (IEPMP) 2023 lacks a clear strategy for addressing BPDB's revenue shortfall, emphasizes fossil fuel reliance, and proposes unproven technologies, raising concerns about financial and environmental sustainability.
- Despite its references to "clean energy," the IEPMP fails to set renewable energy targets, phase out quick rental power plants, or provide a comprehensive roadmap for an effective and sustainable energy transition.

Lack of Institutional Capacity

- **Governance Structure:** Bangladesh's power and energy sector is governed by multiple agencies, including the Ministry of Power, Energy, and Mineral Resources (MPEMR), the Bangladesh Power Development Board (BPDB), the Bangladesh Energy Regulatory Commission (BERC), and the Sustainable and Renewable Energy Development Authority (SREDA), with policies like the Renewable Energy Policy 2008 and IEPMP 2023 guiding renewable energy transitions.
- **SREDA's Challenges:** Despite its mandate to promote renewable energy, SREDA lacks authority and institutional capacity, with key decisions on large-scale projects controlled by BPDB, MPEMR, and the Prime Minister's Office, leading to significant delays in project implementation.
- **BERC's Authority Undermined:** The 2023 amendment to the BERC Act allows the government to set tariffs without BERC's oversight, compromising transparency, investor confidence, and the regulatory balance in the energy market.
- **Institutional Weaknesses:** Both SREDA and BERC face challenges in authority and independence, highlighting the need for stronger institutional frameworks to support Bangladesh's renewable energy and energy market goals effectively.

Monopoly Market Structure

- **Centralized Energy Sector:** Bangladesh's energy sector is highly centralized, with significant government involvement through the Ministry of Power, Energy, and Mineral Resources (MPEMR) and state-owned enterprises (SOEs), including BPDB, which operates as a single buyer in the power market, creating a quasi-monopoly in procurement and distribution.
- **Limited Market Liberalization:** While private investment in power generation has increased capacity through Independent Power Producers (IPPs) and Power Purchase Agreements (PPAs), government control over pricing and subsidies limits competition and creates fiscal pressures.
- **State-Controlled Transmission and Distribution:** The Power Grid Company of Bangladesh (PGCB) holds a monopoly over transmission, while regional SOEs control distribution, leading to minimal competition, segmentation inefficiencies, and bottlenecks as demand grows.
- **Renewable Energy Development:** The renewable energy sector remains underdeveloped, with ambitious targets hindered by regulatory and infrastructure challenges, requiring stronger private sector involvement and long-term market support to accelerate growth.

Policy Incoherence: Various government plans and RE targets

Document	Organization(s)	Renewable Energy Targets
Perspective Plan 2041	GED, MoP	- Initial target of 3% renewable energy by 2021 -Future target projection is absent.
National Solar Energy Roadmap, 2021 - 2041	PD, MoPEMR & SREPGen, UNDP	- 40,000 MW of installed solar capacity by 2041
Mujib Climate Prosperity Plan 2022-2041	MoEFCC	- 30% renewable energy by 2030 - 40% renewable energy by 2041 - 100% renewable energy by 2050
Renewable Energy Policy (2008)	PD, MoPEMR	- 5% of total power demand by 2015 - 10% by 2020
Bangladesh Delta Plan 2100	GED, MoP	- 10% renewable energy by 2020 - 30% by 2041
Integrated Energy and Power Master Plan (IEPMP) 2023	JICA, IEEJ, MoPEMR	- 40% of energy from clean and renewable by 2041 - 26.2 GW of renewable energy capacity by 2050
Power System Master Plan 2010	PD, MoPEMR, JICA, TEPC	- 5% of total electricity demand with renewables by 2015 -10% by 2020 (510 MW by 2015, 1,760 MW by 2020)
Power System Master Plan 2016	JICA, TEPC, MoPEMR and Others	- 20% renewable ratio (RE20) by 2041

Source: Authors' compilation from various documents

List of Major Powerplants and their operating fuels

Sl. No.	Major Initiatives by GoB	Fuel
1	Rampal Power Plant (2010)	Coal*
2	500 MW Solar Program	RE
3	Rooppur Nuclear Power Plant (2013)	Nuclear*
4	Matarbari Ultra Super Critical Coal-Fired Power Project (2013)	Coal*
5	Payra Coal Power Plant Project (2014)	Coal*
6	Bangladesh-India Power Purchase Agreement	Import
7	Banshkhali Power Plant (2016)	Coal*
8	Bangladesh-Adani Power Purchase Agreement (PPA)	Import
9	Bangladesh-India Friendship Pipeline (2017)	Import
10	Floating Solar PV Initiative 2023	RE
11	Payra LNG Power Plant	LNG*

Source: Authors' compilation from various documents

Between 2022 and 2024, global prices for crude oil, LNG, coal, and natural gas declined

Figure 9: Global price of crude oil

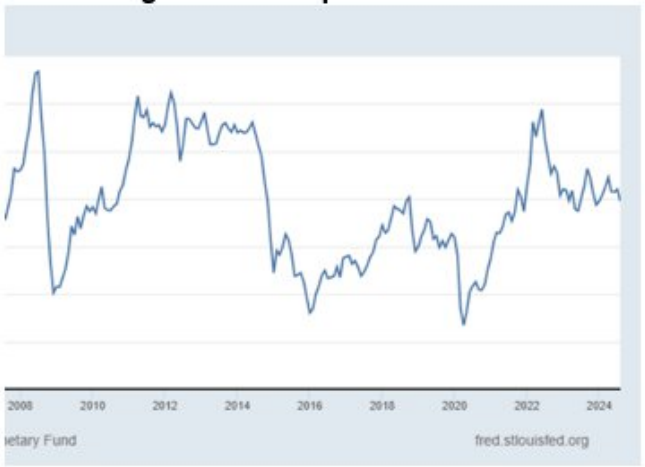


Figure 10: Global price of LNG

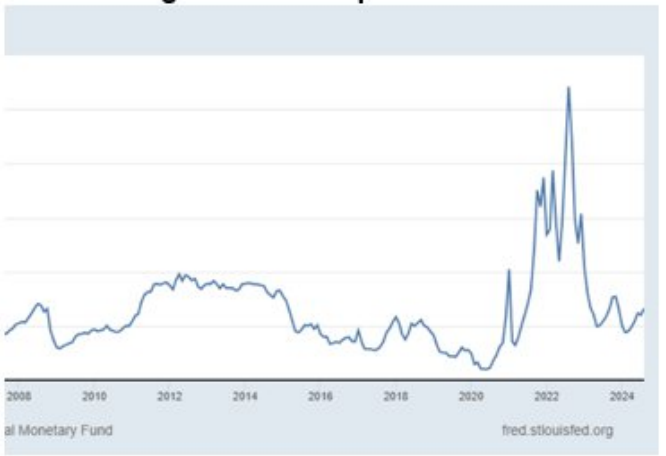


Figure 11: Global price of coal

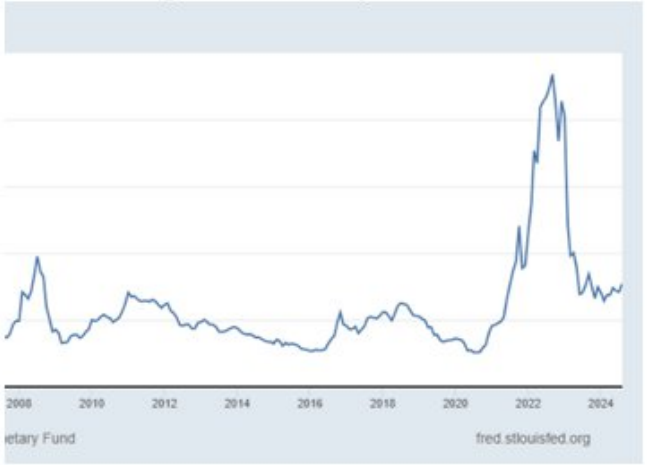
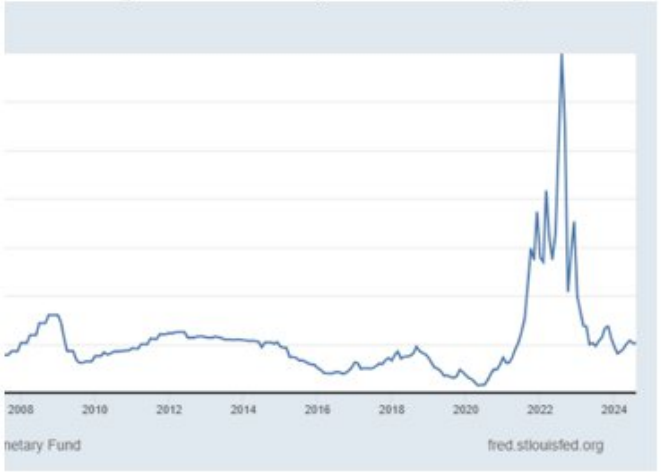


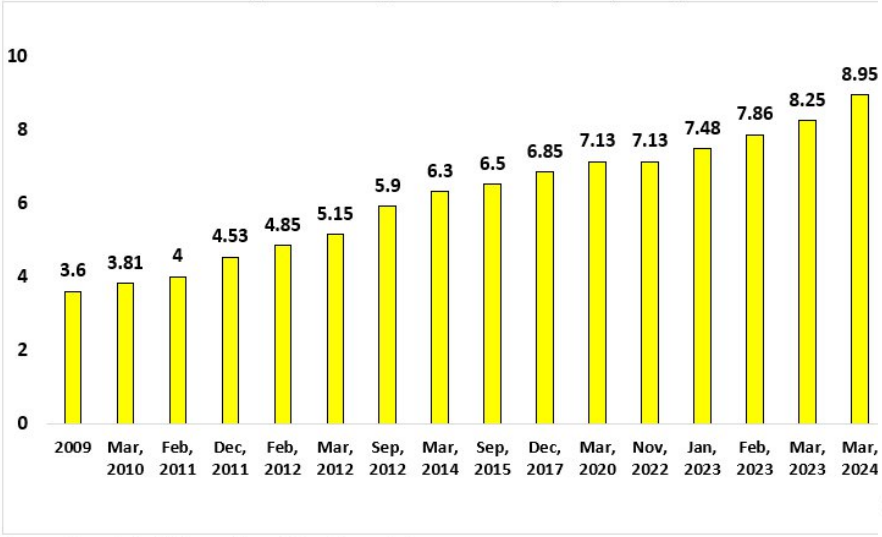
Figure 12: Global price of natural gas



Source: Primary Commodity Prices, IMF

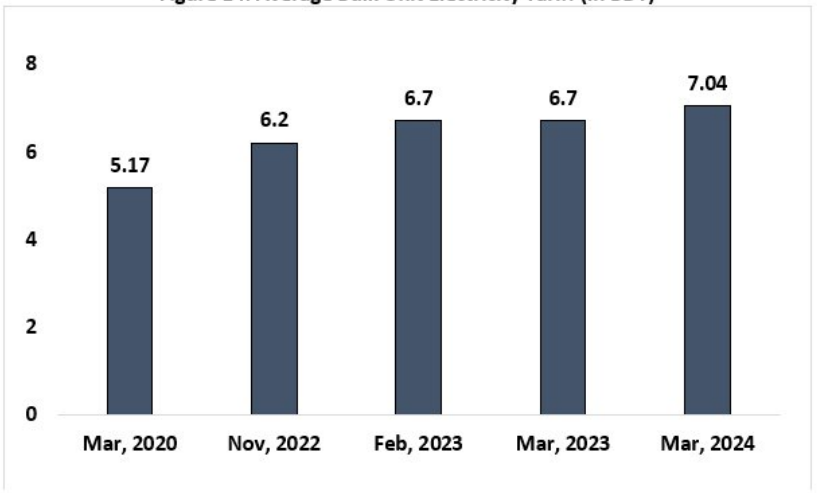
However, during the same period, both the average per-unit electricity tariff and the average bulk electricity tariff increased

Figure 13: Average Per Unit Electricity Tariff (In BDT)



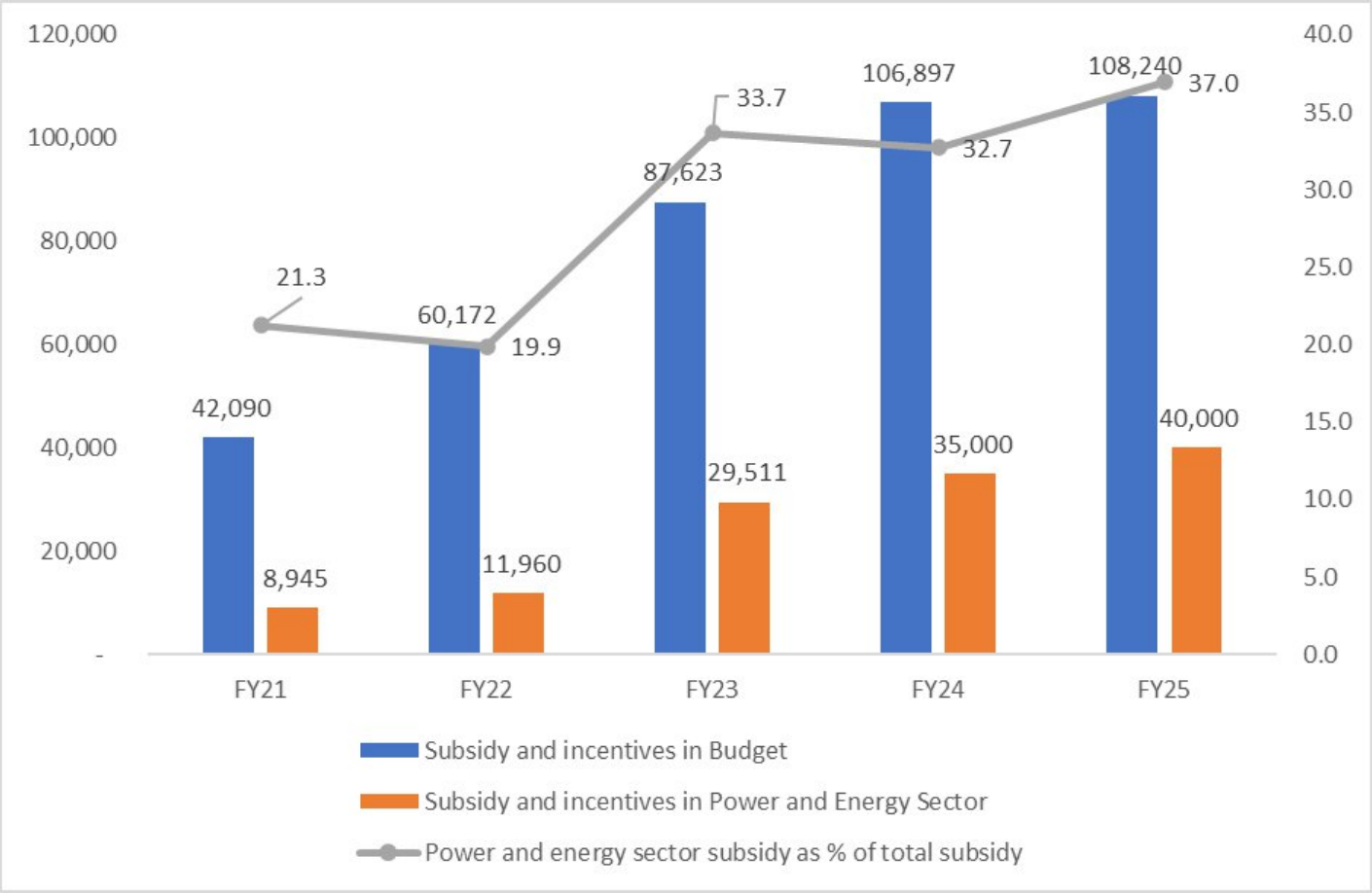
Source: Bangladesh Energy Regulatory Commission

Figure 14: Average Bulk Unit Electricity Tariff (In BDT)



Source: Bangladesh Energy Regulatory Commission

Subsidies and incentives in the power and energy sector



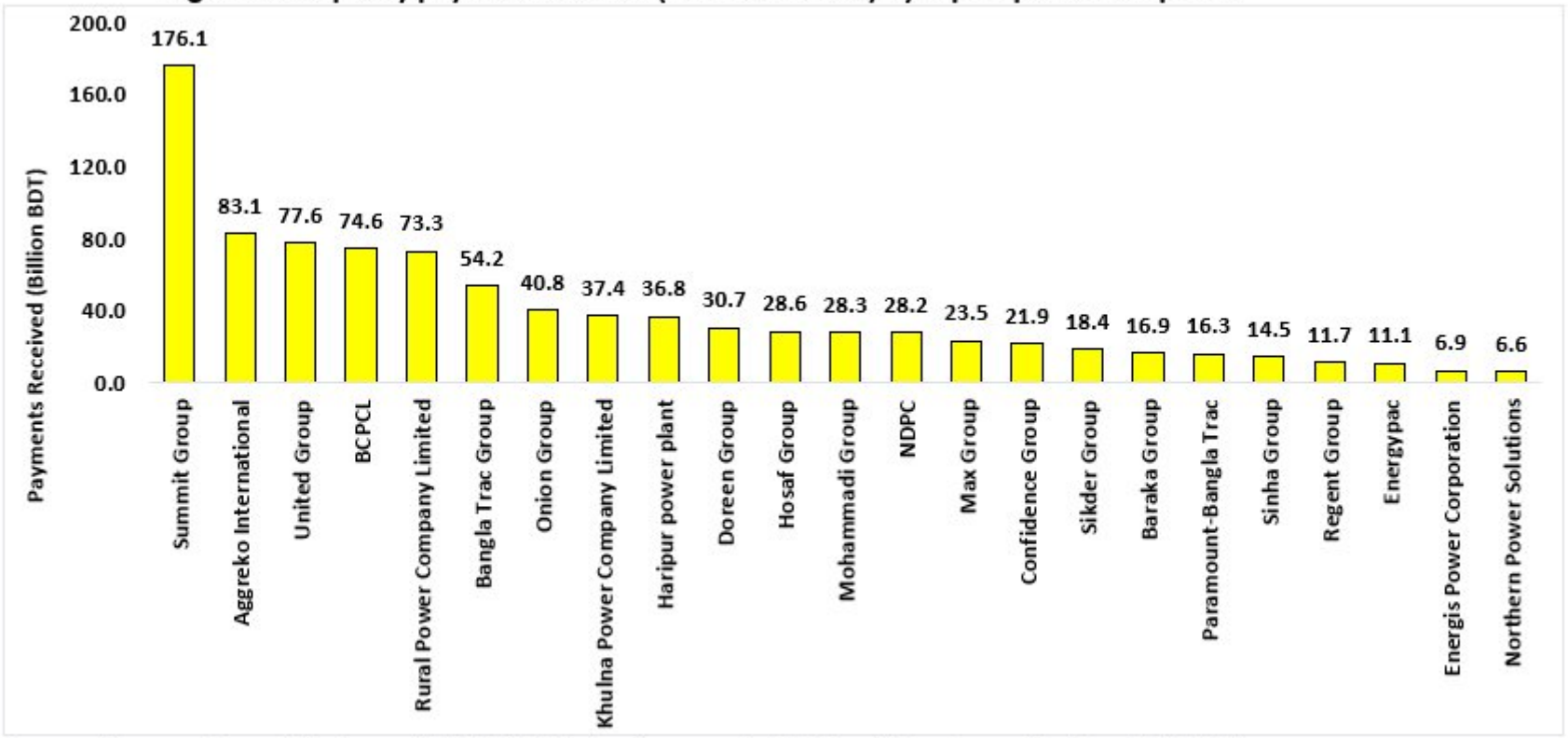
Source: The Daily Star (2024)

Rent-seeking in the power and energy sector

- Rent-seeking activities are more prevalent in coal, gas, LNG, and nuclear technologies compared to solar. These technologies are subject to greater regulatory capture, lobbying efforts, and vested interests, suggesting that powerful stakeholders in these sectors are able to influence policy and benefit from market distortions more effectively than in the solar energy sector.

Rent Distribution-Capacity Charge

Figure 16: Capacity payment received (2009-June 2023) by top 23 power companies



Source: Former State Minister of MoPEMR in Parliament in 2023 and Prothom Alo (Sep 05, 2023)

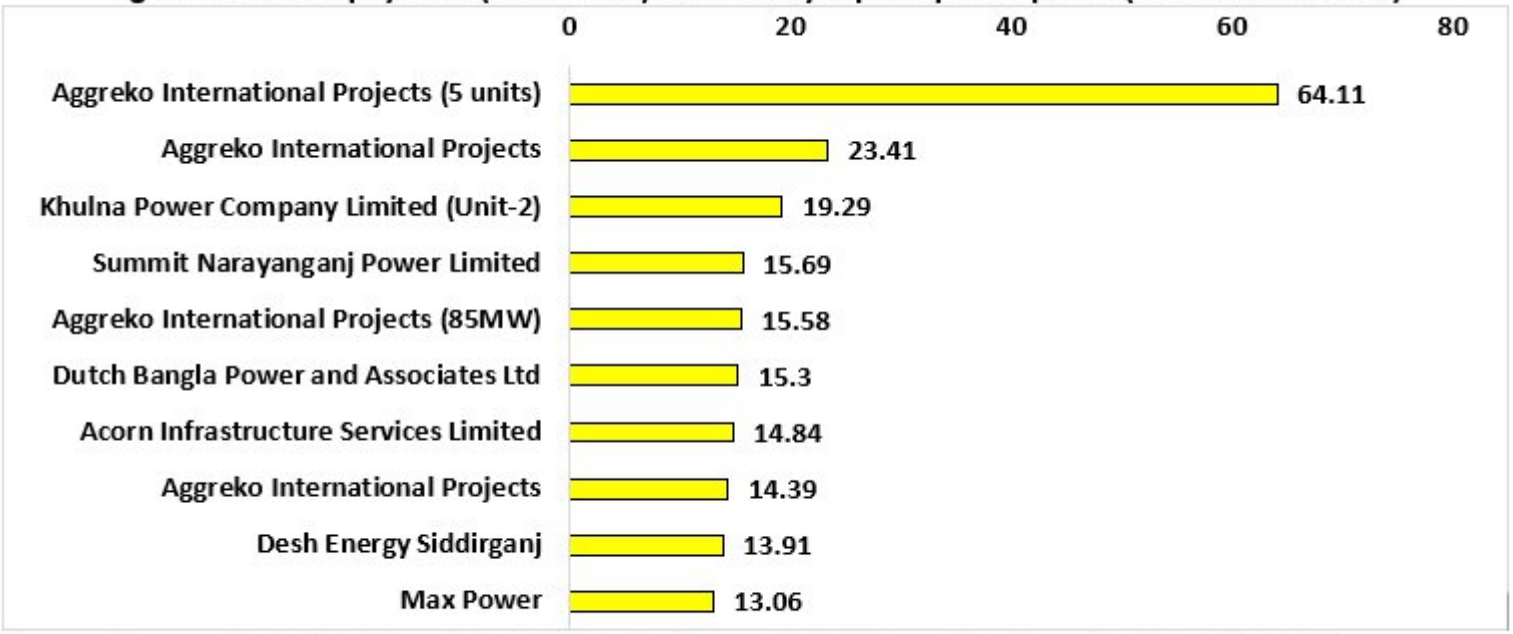
Capacity charge (Billion BDT) received by top ten IPPs (2009-30 June 2023)

Figure 17: Capacity charge (Billion BDT) received by top ten IPPs (2009-30 June 2023)

Source: Former State Minister of MoPEMR in Parliament in 2023 and Prothom Alo (Sep 05, 2023)

Rental payment (Billion BDT) received by top ten power plants (2009-30 June 2023)

Figure 18: Rental payment (Billion BDT) received by top ten power plants (2009-30 June 2023)



Source: Former State Minister of MoPEMR in Parliament in 2023 and Prothom Alo (Sep 05, 2023)

Lack of Transparency and Accountability

- Summit Group secured LNG terminal tenders through lobbying by Tawfiq-e-Elahi Chowdhury, energy adviser to former Prime Minister Sheikh Hasina, bypassing fair competitive procurement, which jeopardizes Bangladesh's energy security (Bonik Barta, 23 September 2024).
- Repeatedly awarding tenders to a few companies has created dependency, forcing the country to tolerate technical failures even during periods of high energy demand, while terms favoring these companies were dictated by the government's higher levels.

Corruption in the Power and Energy Sector

- Over the past 14 years, around 100 power plants have been licensed without tenders under the Indemnity Act of 2010, fostering corruption in the power sector, including low-quality procurement and irregularities in land acquisition (Kalbela, 17 August 2024; The Daily Star, 26 October 2024).
- Political lobbying and unqualified suppliers have inflated project costs and delayed completion, while proximity to the former Prime Minister enabled appointments based on connections rather than merit (The Business Standard, 06 July 2023; Jugantor, 18 August 2024).
- Corruption is pervasive across the power and energy sector, with parallels to the financial sector, prompting calls for strict actions against corrupt officials (The Financial Express, 29 August 2024; The Financial Express, 16 November 2024).

Policy Recommendations

Immediate Strategies

- Abolish the Quick Enhancement of Electricity and Energy Supply Act, 2010 to foster transparency and competition by eliminating provisions that bypass standard procurement processes.
- Strengthen BERC's Authority by amending the BERC Act to ensure autonomous and evidence-based regulation of pricing and tariffs, creating a fair and investor-friendly energy market.
- Phase Out Inefficient Power Plants like Quick Rental Plants (QRPs) and high-cost IPPs, replacing them with cost-effective and sustainable alternatives to stabilize tariffs and reduce fiscal burdens.
- Renegotiate IPP Contracts to eliminate capacity payments, adopting a "no electricity, no pay" model that aligns costs with actual energy production.
- Empower SREDA with resources and authority to lead renewable energy transitions and accelerate sustainable energy adoption, supporting long-term climate commitments.

Short-Term Strategies

- Revise the IEPMP 2023 to phase out fossil fuels and Quick Rental Plants (QRPs), focusing on scalable renewable energy solutions like solar and wind with realistic timelines.
- Eradicate Tax Mismatches for Renewables by reducing duties and VAT on renewable energy equipment, introducing performance-based subsidies to boost adoption across sectors.
- Implement Financial Incentives for Energy Efficiency by offering rebates or tax benefits for energy-efficient appliances and retrofitting, while addressing billing inconsistencies to promote sustainable consumption.
- Enhance Coordination of Government Policies by reducing overlaps and fostering collaboration among ministries, ensuring a cohesive approach to energy goals and eliminating inefficiencies.
- Strengthen SREDA's Capacity by establishing dedicated departments for specific renewable technologies and recruiting specialized personnel to drive the renewable energy transition.

Mid to Long-Term Strategies

- Establish a Centralized Energy Database to provide accurate, real-time data on energy production, consumption, pricing, and emissions, enhancing transparency and evidence-based policymaking.
- Phase Out Fossil Fuel Subsidies gradually, reallocating funds to support renewable energy investments while minimizing impacts on low-income groups and aligning with global climate goals.
- Expand Technical Capacity by investing in energy storage, smart grids, and training programs, fostering innovation in renewable energy technologies to manage a modern energy system.
- Promote Energy Justice through fair land acquisition processes and policies protecting vulnerable communities from exploitation and displacement during renewable energy projects.
- Arrange International Negotiations to secure favorable terms for technology transfer and establish partnerships for renewable energy technology-sharing, enhancing Bangladesh's transition capabilities.

Thank you

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