

COUNTRY REPORT

Bangladesh

Energy Sector Profile & Policy Overview

Ministry of Power, Energy and Mineral Resources

Md. Enamul Hoque
Senior Assistant Secretary
EMRD, Bangladesh

JICA Energy Policy Training | 202515103J001 | June 2026

1. General Information

Slide 1/2 | Country Profile

GDP (2025)

\$457 bn

Current USD, World Bank estimate

GDP per Capita

\$2,690

Current USD (2025)

Indicator	Value	Year/Source
Inflation (CPI)	9.13%	March 2026 est.
Population (2024)	173.6 million	World Bank
Number of Households	~40.6 million	BBS estimate
Human Dev. Index	0.685 (130th)	UNDP 2023
Poverty Rate	19.2%	World Bank 2025
Unemployment	3.6%	ILO 2024
Urbanization Rate	41%	World Urb. Pros.
Energy Import Dependency	~62%	IEEFA/BPDB
Industrial Electricity Demand Share	~45%	BPDB

Source: World Bank, Bangladesh Bureau of Statistics (2024)

99.5%

Grid/electricity access coverage reached though supply reliability remains uneven in some regions

8th

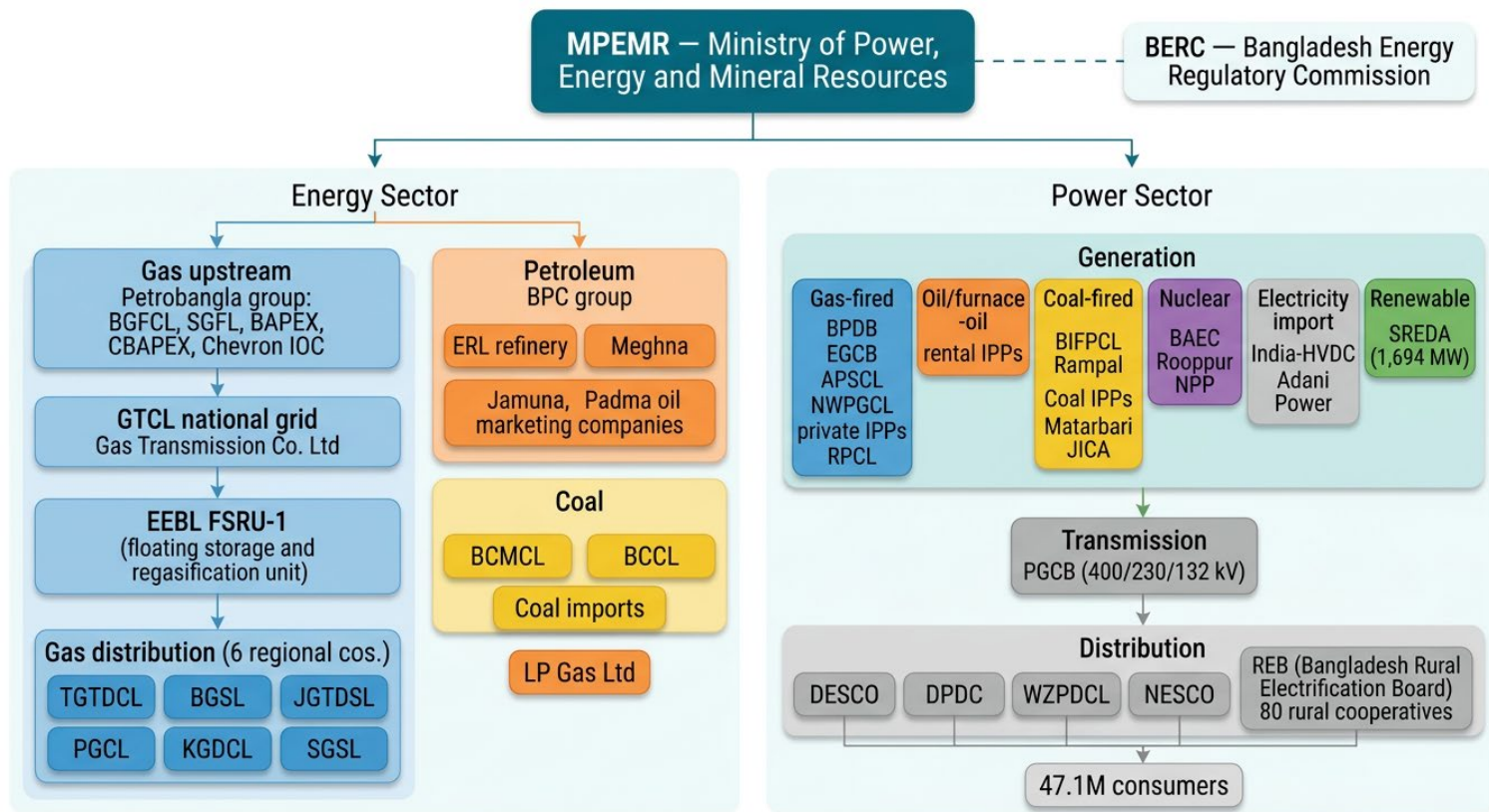
Most Densely Populated Country

2nd

Among the world’s largest ready-made garment exporters

1. General Information

Slide 2/2 | Economic Indicators & Organisational Structure



1. General Information

Slide 2/2 | Economic Indicators & Organisational Structure

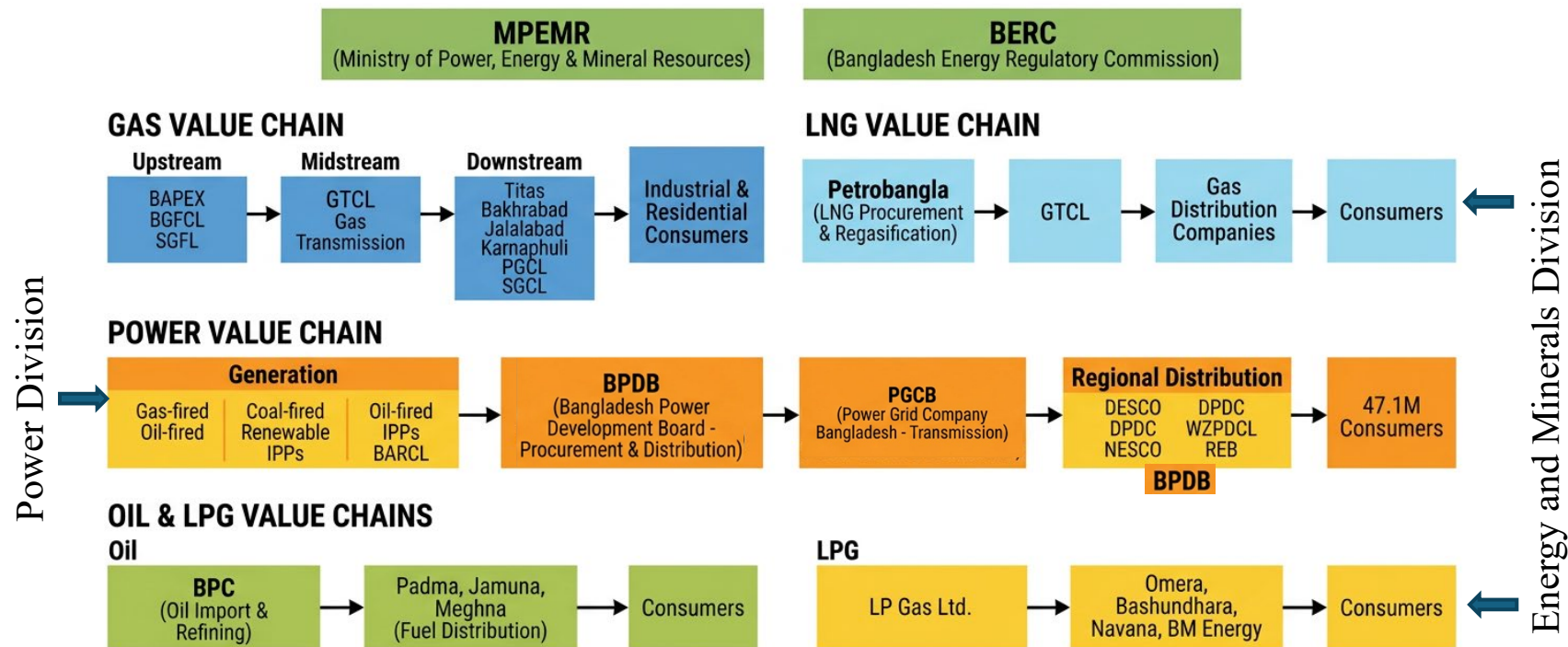
Value Chain of Energy and Power in Bangladesh

Sector	Buyer/Coordinator	Generation/Production	Transmission	Distribution	Price Regulator
Electricity	BPDB	APSCL, EGCB, NWPGL, RPCL, CPGCL, IPPs, Rooppur Nuclear Power Plant	PGCB	DPDC, DESCO, BREB, WZPDCL, NESCO, BPDB	Bangladesh Energy Regulatory Commission BERC EMRD
Natural Gas	Petrobangla	BGFCL, SGFL, BAPEX, LNG imports	GTCL	Titas, Bakhrabad, Jalalabad, Karnaphuli, PGCL, SGCL	
Petroleum	BPC	ERL + imports	BPC logistics	Padma, Jamuna, Meghna	
LPG	Various importers	LPG import/bottling	Own networks	Private distributors	

1. General Information

Slide 2/2 | Economic Indicators & Organisational Structure

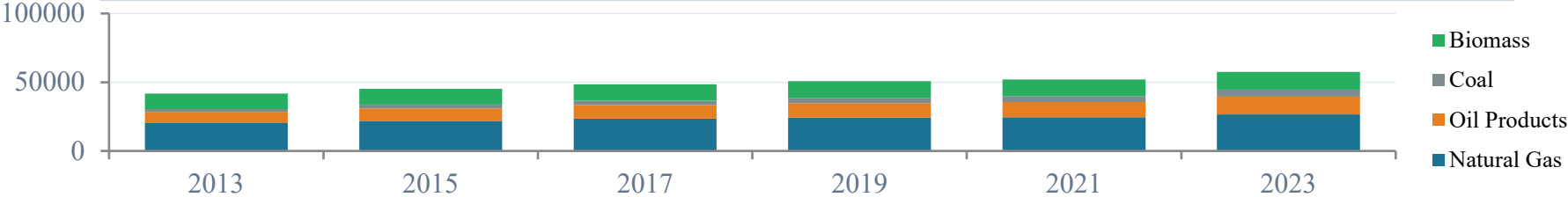
BANGLADESH POWER AND ENERGY SECTOR INSTITUTIONAL STRUCTURE



2. Past Energy Demand & Supply (2013–2023)

Slide 1/3 | Primary Energy Supply by Source (ktoe)

Present Domestic production: ~40% Import:~60% Export: <1% Import Gas: LNG(34%) Oil products: 90% Coal: 90%	Primary Energy Supply by Energy Source (ktoe)						
	Year	Natural Gas	Oil Products	Coal	Biomass	Renewables	Total
	2014	20,200	7,600	2,100	11,200	280	41,380
	2015	20,800	8,000	2,300	11,300	300	42,700
	2016	21,500	8,400	2,600	11,500	330	44,330
	2017	22,300	8,900	2,900	11,800	380	46,180
	2018	23,100	9,700	3,300	11,900	450	48,450
	2019	24,300	10,500	3,900	12,000	510	51,210
	2020	23,800	10,200	3,700	12,100	540	50,340
	2021	24,500	11,000	4,300	12,200	590	52,590
	2022	25,600	11,800	5,000	12,400	640	55,440
	2023	26,680	12,760	5,220	12,760	710	58,130



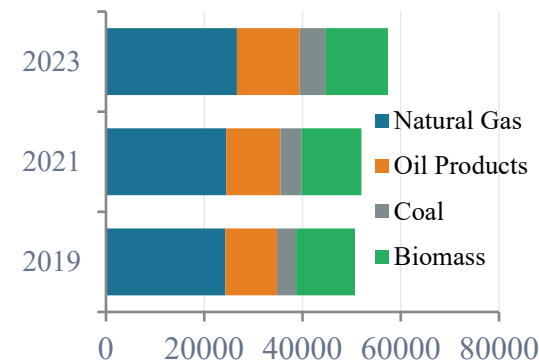
Sources: Enerdata Global Energy Statistics (2024); IEA Bangladesh Energy Data; Bangladesh Economic Review 2024

2. Past Energy Demand & Supply (2015–2024)

Slide 2/3 | Electricity Generation by Source (GWh)

Electricity Generation by Source (GWh)

Year	Gas	Coal	Oil/FO	Import	Solar/RE	Total
2015	36,500	2,300	9,300	2,500	120	50,720
2016	38,800	2,600	9,700	3,000	150	54,250
2017	41,000	3,500	10,000	4,000	220	58,720
2018	43,500	6,500	11,000	6,000	450	67,450
2019	46,000	10,000	12,000	7,800	700	76,500
2020	45,500	9,500	11,000	8,500	750	75,250
2021	47,200	14,000	10,000	9,400	860	81,460
2022	48,000	19,000	10,500	10,500	1,000	89,000
2023	48,000	23,000	10,000	11,500	1,200	93,700
2024	47,500	24,500	9,800	12,500	1,696	95,996



16,794 MW

Peak demand
(July 23, 2025)

95 TWh

Net generation
(FY 2023-24)

29,000+ MW

Installed capacity
(2025)

47.1 M

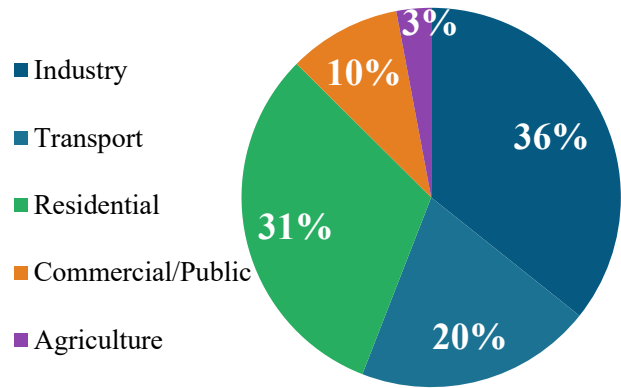
Total consumers
(2024)

Sources: Enerdata Global Energy Statistics (2024); IEA Bangladesh Energy Data; Bangladesh Economic Review 2024

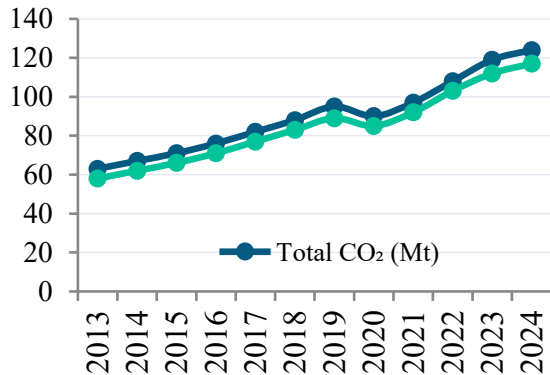
2. Past Energy Demand & Supply (2013–2024)

Slide 3/3 | CO₂ Emissions (Mt CO₂) by Sector & Energy Source

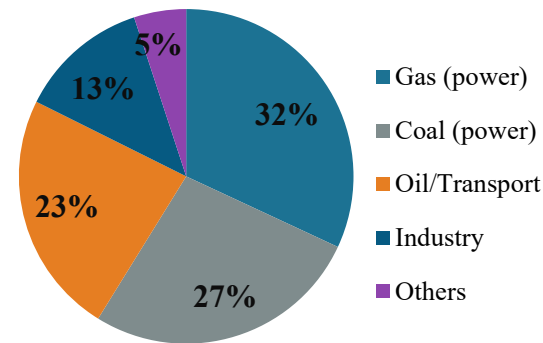
Final Energy Consumption by Sector (ktoe, 2023)



CO₂ Emissions Trend (Mt CO₂)



CO₂ Share by Source (2023)



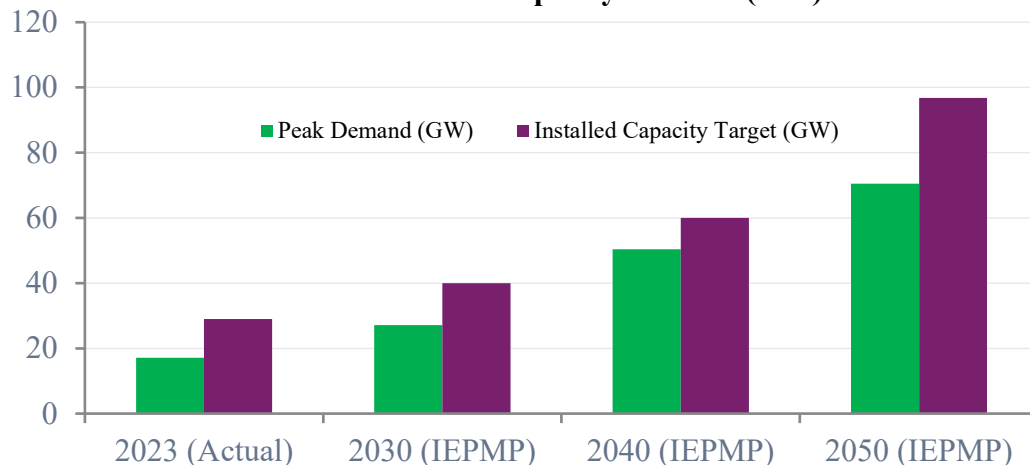
Sector	2013	2015	2017	2019	2021	2023	2024
Industry	17.5	19.5	22.3	25.8	26.5	30.2	32.1
Transport	12.1	13.4	15.0	17.2	17.8	22.0	23.4
Residential/Comm.	10.2	11.5	12.8	14.5	15.0	17.5	18.2
Power Generation	22.4	25.8	31.5	37.1	37.0	49.0	50.3
Total (approx.)	62.9	70.8	82.2	95.1	96.8	118.9	124.2

Sources: Worldometer/EDGAR GHG 2025; OECD Carbon Pricing Report 2024; IEA Bangladesh Emissions Data

3. Outlook of Energy Demand & Supply

Slide 1/2 | IEPMP 2023 & EPSMP 2026 Scenarios

Power Demand & Capacity Outlook (GW)



Scenario Summary (IEPMP 2023)

Indicator	2030	2040	2050
Peak demand (GW)	27.1	50.4	70.5
Installed cap. (GW)	40	60	96.8
RE share (gen.)	~10%	~15%	~17%
Nuclear (GW)	2.4	4.8	6.0
LNG import (MMcfd)	~1,200	~3,500	~6,400
CO ₂ target (MtCO ₂)	382	~600	>700 (BAU)
Total invest. (\$bn)	~\$30	~\$90	~\$157

Energy Mix 2050

IEPMP projects only
5.4% RE in primary
energy by 2050 – heavily
criticised by IEEFA

LNG Lock-in Risk

Import dependence
projected to rise from
~65% (FY25) to 80%+,
cost \$8–18 bn/yr by 2050

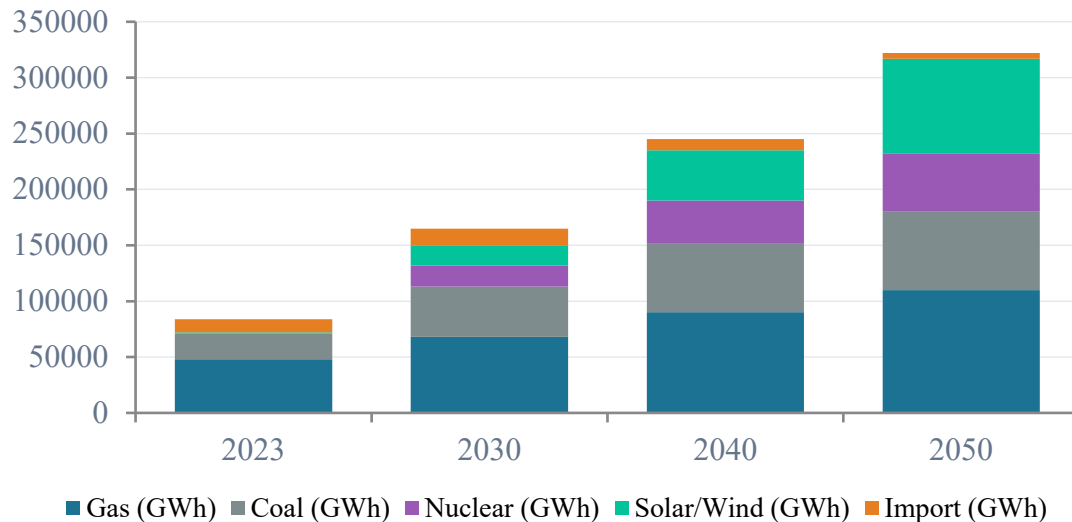
Nationally Determined Contribution (NDC) Commitment

6.7% unconditional GHG, reduction by 2030;
382 MtCO₂eq target vs. BAU 410 MtCO₂eq

3. Outlook of Energy Demand & Supply

Slide 2/2 | Electricity Generation Mix & CO₂ Forecast

Electricity Generation Mix Forecast (GWh)

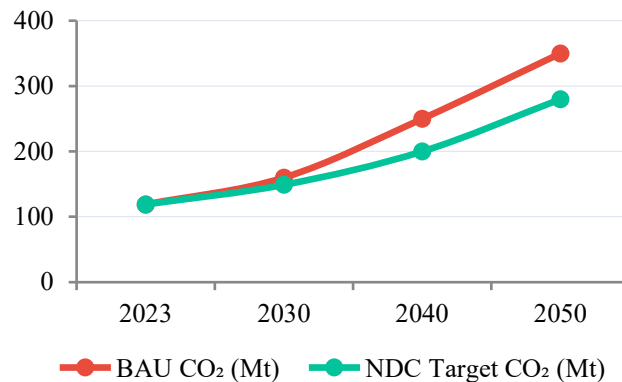


❁ Rooppur Nuclear Power Plant (2,400 MW) – Unit 1 expected operational 2025-26 (delayed); Unit 2 by 2027. Investment: ~\$12.65 bn (Russian Rosatom). First nuclear energy in Bangladesh.

Renewable Energy Targets

- › NDC (2021): 4.1 GW RE capacity by 2030
- › MCPP (2022): 30% RE in mix by 2030
- › MCPP (2022): 40% RE by 2041, 100% by 2050
- › Actual added (2017-2025): ~1,694 MW only
- › Draft RE Policy 2025 under consultation

CO₂ Outlook – BAU vs NDC Target (Mt)



4. Current Energy Policy & Major Challenges

Slide 1/2 | 3 Main Policy Points & 3 Main Bottlenecks

► Current Energy Policy Priorities (3 Main Points)

01

Transition to Renewable Energy (Draft RE Policy 2025)

Bangladesh gazetted its Draft Renewable Energy Policy 2025 with targets aligned to the Mujib Climate Prosperity Plan (MCP 2022-2041): 30% RE in energy mix by 2030, 40% by 2041. SREDA designated as nodal agency. Mechanisms include net metering (up to 100% sanctioned load), Renewable Energy Certificates (REC), and Renewable Purchase Obligations (RPO). Rooftop solar, floating solar, and utility-scale wind are priority areas. Investment requirement: ~\$3.1 bn (2023-2030).

02

Energy Security via LNG Import Diversification & Nuclear

As domestic gas production declines (~27 bcm in 2023, peak 28 bcm in 2017), Bangladesh has operationalised two FSRUs at Maheshkhali, Cox's Bazar, with combined regasification capacity of ~1,050 mmcsfd. Long-term LNG contracts with Qatar, Oman, and others supplement spot purchases. Rooppur Nuclear Power Plant (2×1,200 MW) represents Bangladesh's first nuclear investment of \$12.65 bn, aiming for baseload generation from 2025-26 onwards.

03

Energy Efficiency & Demand-Side Management

SREDA's Energy Efficiency & Conservation Master Plan (2016-2030) targets 20% reduction in energy intensity. Mandatory energy audits introduced for 189 large consumers in 2025 (IEEFA, 2025). Appliance efficiency standards expanded. Government mandated AC temperature not below 25°C (Feb 2025 circular). System losses reduced from 14.73% (FY 2010-11) to 10.06% (FY 2023-24). Smart metering rollout underway.

⚠ Major Difficulties & Bottlenecks (3 Main Points)

01

Financial Crisis: Overcapacity & Subsidy Burden

Bangladesh's installed capacity (>29,000 MW) far exceeds peak demand (~17,100 MW). Idle capacity charges cost Tk 39,000 crore (\$3.5 bn) in 2025 alone. BPDB's outstanding dues reached Tk 46,000 crore by Sept 2024. Total power-energy subsidy requirement ~Tk 50,000 crore (\$4.5 bn) annually, straining the government budget. Delayed Ruppur NPP adds further capacity-charge pressure.

02

RE Transition Gap: Targets vs. Reality

Only ~1,694 MW of RE capacity added since 2017 vs. MCP target of 6,000-16,000 MW by 2030. IEPMP 2023, the master plan, projects only 5.4% RE in primary energy by 2050, contradicting MCP and NDC targets. Weak grid infrastructure cannot absorb large intermittent RE. Land scarcity, absence of battery storage planning, and SREDA's limited resources (manpower, budget) compound the gap. Draft RE Policy 2025 criticised for lacking clear roadmap (IEEFA, CleanBD 2025).

03

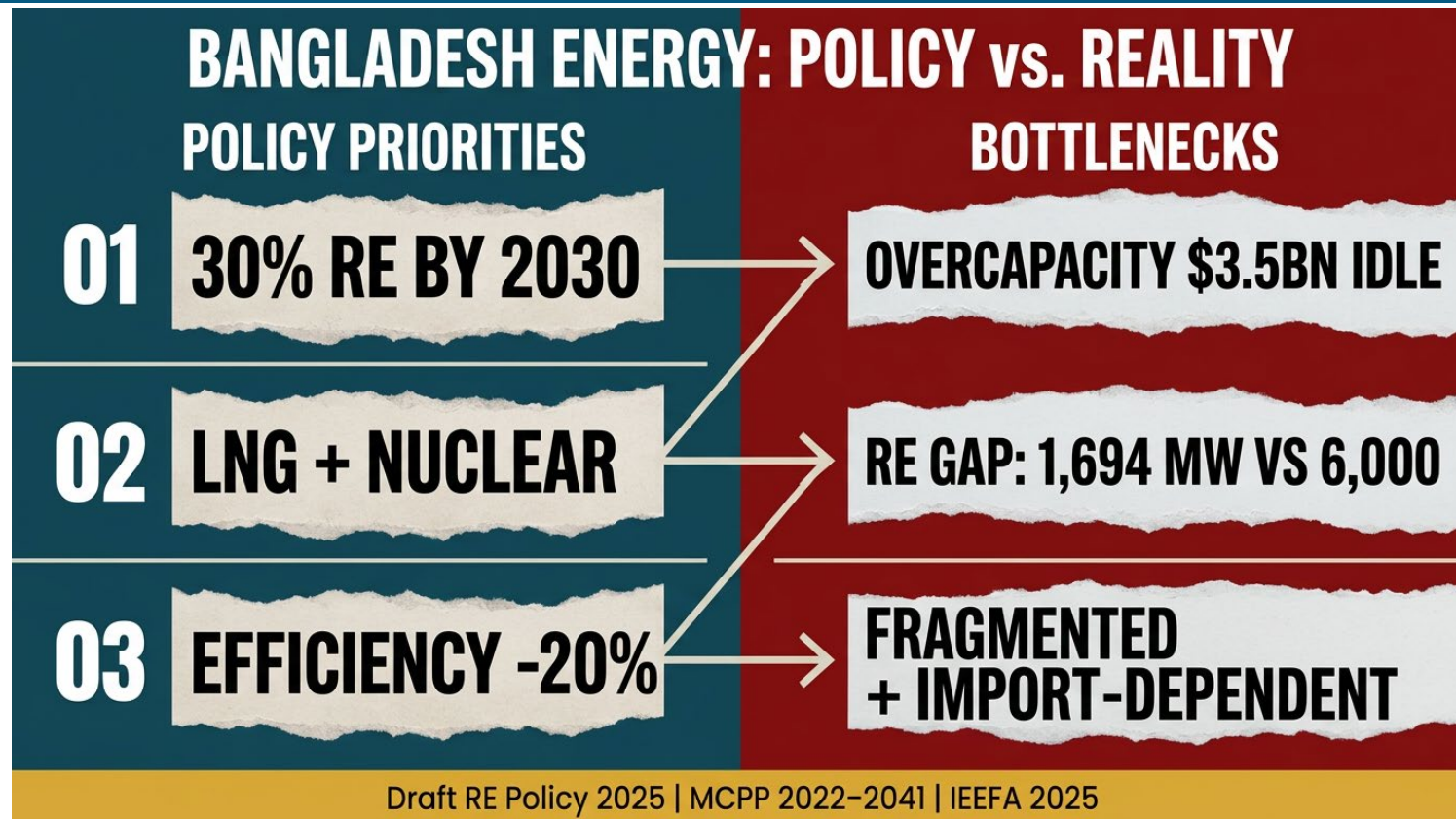
Institutional Fragmentation & Import Dependence

Multiple overlapping entities (BPDB, SREDA, BERC, MPEMR Power Division) create coordination failures. Bangladesh's import dependence rose from ~5% (FY10) to ~65% (FY25). Foreign currency pressure from LNG/coal imports worsened by taka depreciation. No carbon pricing mechanism exists (OECD 2024). Emergency procurement laws and non-transparent PPAs weakened investor confidence (Daily Star, Feb 2026). Policy documents (IEPMP vs MCP vs Draft RE Policy 2025) are contradictory.

Sources: New Age BD (Dec 2024); IEEFA (Oct 2025, Feb 2026); Daily Star (Feb 2026); CleanBD (2025); OECD Carbon Pricing (2024); CPD (2025)

4. Current Energy Policy & Major Challenges

Slide 1/2 | 3 Main Policy Points & 3 Main Bottlenecks



4. Current Energy Policy – At a Glance

Slide 2/2 | Policy Instruments & Regulatory Framework

Policy / Plan	Year	Key Target / Provision
National Energy Policy	2004	Framework for energy security & supply diversification
Renewable Energy Policy	2008	10% RE by 2020 (target missed)
SREDA Act	2012	Established SREDA as RE nodal agency
EE & Conservation Master Plan	2016	20% energy intensity reduction by 2030
LNG FSRU Commissioning	2018	Commercial RLNG supply begins; 2nd FSRU 2019
Updated NDC	2021	6.7% unconditional GHG cut; 4.1 GW RE by 2030 (cond.)
Mujib Climate Prosperity Plan	2022	30% RE by 2030; 40% by 2041; 100% by 2050
IEPMP 2023	2023	40 GW by 2030; 60 GW by 2041; LNG-heavy pathway
Net Metering Guidelines (revised)	2023	Up to 100% sanctioned load via rooftop solar
Draft Renewable Energy Policy 2025	2025	REC, RPO, floating solar, EV charging, P2P trading
Mandatory Energy Audits	2025	189 large energy consumers; SREDA oversight
Draft EPSMP 2026	2026	Revised master plan; 47% RE in capacity by 2050 (target)
Bangladesh Energy Reg. Commission	Ongoing	Licensing, tariff regulation; BERC Act 2003

Sources: MPEMR Bangladesh; SREDA; GlobalData RE Policy Handbook 2025; CPD/SANEM; IEEFA; TI Bangladesh (Dec 2025)

5. Learning Objectives & Expectations

Subjects I Would Like to Learn:

- Integrated Energy Planning & Modelling
- Renewable Energy Grid Integration
- LNG and Energy Security Strategy
- Energy Transition Financing
- Decarbonization & Carbon Neutrality Policy

Expectation of My Superior:

- Strengthen national energy planning capacity
- Learn Japanese best practices on energy security and efficiency
- Apply knowledge to support Bangladesh's energy transition

APPENDIX A1 – Energy Prices in Bangladesh (2024-25)

Energy Type / Tariff	Unit	Price (BDT)	Price (USD)	Notes
Natural Gas – Residential	m³	18.00	\$0.164	BERC tariff 2023
Natural Gas – Industrial	m³	30.00–42.00	\$0.27–0.38	Varies by category
Natural Gas – CNG	m³	43.00	\$0.39	Auto sector
LNG (regasified) – grid	MMBtu	~\$10–14	Market-linked	FSRUs at Maheshkhali
Electricity – Residential (Retail)	kWh	5.32–17.35	\$0.04–0.14	Lifeline to upper slab
Electricity – Industrial HV	kWh	11.47–16.06	\$0.093–0.13	BERC June 2026 revised tariff
Electricity – Commercial	kWh	12.28–18.43	\$0.099–0.15	BERC June 2026
Diesel (retail)	Litre	115.00	\$0.94	EMRD, 31 st May 2026 revised
Octane (retail)	Litre	145.00	\$1.18	EMRD, 31 st May Revised
LPG(Retail)	12 kg	1885	\$15.34	BERC June 2026
Furnace Oil	Litre	113.54	\$0.92	Power sector, bulk
Coal (imported, CIF Ctg.)	MT	~USD 120-180	Market-linked	For power plants
Avg. Generation Cost (BPDB)	kWh	~BDT 13–15	\$0.12–0.14	FY 2023-24 (incl. cap. charge)

Note: Bangladesh has no explicit carbon price or fuel excise tax as of 2023 (OECD 2024). Fossil fuel subsidies are implicit (below-cost pricing).

BERC = Bangladesh Energy Regulatory Commission. USD conversion: BDT 110 = USD 1 (approx. 2024).

Sources: BERC Bangladesh (2023); BPC; OECD Effective Carbon Rates 2024; New Age Bangladesh; Bangladesh Economic Review 2024

APPENDIX A2 – Mentionable Energy-Related Investment (Domestic & Overseas)

Project / Programme	Amount	Source / Funder	Status
Rooppur Nuclear PP (2×1,200 MW)	\$12.65 billion	Rosatom (Russia) + GoB	Under construction; Unit 1: 2025-26
Matarbari Ultra-super-critical Coal PP	\$4.6 billion	JICA ODA + GoB	1,200 MW; commercial ops ~2024-25
Meghnaghat II CCGT (583 MW)	\$400 million	Sumitomo + Private	Under commissioning 2025
2 FSRU Terminals, Maheshkhali	\$300 million	Excelerate & Summit	Operational; 1,050 mmscfd total
IEPMP Total Gen. Investment (2023-2050)	\$157 billion	Public + Private mix	Planned; ~\$64.4 bn for clean energy
1.5°C Path RE Investment (2026-2030)	\$1–2.3 bn/yr	MDBs + Private	Required; Climate Analytics 2025
1.5°C Path RE Investment (2031-2040)	\$5.6–9.7 bn/yr	MDBs + Private	Required for net-zero pathway
Climate Prosperity Plan (total)	\$30 bn/yr by 2030	JICA, GCF, ADB, WB, GoB	Aspirational; partly JICA ODA
Bangladesh Climate Change Trust Fund	BDT 4,000 cr+	GoB domestic budget	Annual allocation; adaptation focus
Solar Home Systems (IDCOL)	\$650 million	WB, ADB, JICA, KfW	6M+ SHS; mainly non-functional now

Sources: MPEMR Bangladesh; JICA; IEEFA (Oct 2025, Feb 2026); Climate Analytics (2025); World Bank; Bangladesh Economic Review 2024

APPENDIX A3 – References & Data Sources

1	Bangladesh Economic Review 2024 (Chapter 10 – Power & Energy)	Ministry of Finance, Bangladesh	2024
2	Enerdata Global Energy & CO ₂ Statistics – Bangladesh	Enerdata	2024
3	Integrated Energy and Power Master Plan (IEPMP) 2023	MPEMR / TEPCO	2023
4	IEEFA Analysis: Bangladesh IEPMP Raises More Questions	IEEFA	Oct 2024
5	IEEFA: Heavy Import Reliance Fuels Bangladesh's Power Sector Woes	IEEFA	Oct 2025
6	IEEFA: New Energy Policy, Same Challenges	IEEFA	Feb 2026
7	Mujib Climate Prosperity Plan 2022-2041	MoEF, Bangladesh / COP26	2022
8	Draft Renewable Energy Policy 2025 – CPD Analysis	CPD Bangladesh	May 2025
9	TI Bangladesh: Renewable Energy Governance Full Report	Transparency International BD	Dec 2025
10	OECD: Pricing Greenhouse Gas Emissions – Bangladesh	OECD	2024
11	Low Carbon Power – Bangladesh Electricity Mix 2024	Ember / IEA / EIA	2026
12	World Bank Data – Bangladesh (GDP, Population, Poverty)	World Bank	2024-25
13	Worldometer / EDGAR GHG – Bangladesh CO ₂ Emissions 2024	EDGAR / EC JRC	2025
14	Bangladesh 1.5°C National Pathway Explorer	Climate Analytics	2025
15	Chambers & Partners: Bangladesh Renewable Energy 2025	GlobalData / Chambers	2025
16	The Daily Star / TBS News – Energy Sector Reporting	Bangladeshi Press	2024-26
17	CDP: Interim Govt's EPSMP 2026-2050 Presentation	CPD Bangladesh	Jan 2026
18	Bangladesh NDC (Updated) 2021	MoEF Bangladesh / UNFCCC	2021

Thank You

Q/A