CPD Power and Energy Study

Power and Energy Sector Reform
Agenda for the Interim Government

Presentation by

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1. Background and Context

1. Background and Context

- Bangladesh has entered **a new political phase** with the starting of the operation of an interim government on 8 August 2024
  - **Major reforms are needed** in key economic sectors including power and energy because of **lack of competition,** inefficiencies, lack of transparency and accountability and dominance of big conglomerates in government's decision-making process
- Despite different challenges, the **earlier regime has made a considerable progress** in ensuring access to electricity across the country, considerable public and private investment in generation, transmission and distribution of electricity (See tables in the next slides)
  - At the same time, the sector **entered a phase of huge financial loss**, public debt and fiscal burden and thereby the government faced the major fiscal pressure
  - The fiscal and financial stress caused by the power and energy sector is **one the single most-important** factors for current macro-economic challenges
- The **old institutional and sectoral paradigm** has created some major financial burden, institutional inefficiency and operational limitations
- One of the concerning areas is **lack of readiness for energy transition** focusing on clean/renewable energy-based power and energy sector as well as energy-based economic activities
- It is **expected that the new interim government** will work on the priority areas to reform the sector within their timeline and help facilitate the energy transition
  - The Chief Advisor already instructed the **concerned secretaries to submit the priority areas** of work for the interim government within a week
- In this background, CPD Power and Energy Studies has arranged this media briefing with the objective of **putting forward a set of recommendations** for the new government to kick start the energy transition journey

1. Background and Context

Table 1: Current state of power sector

Issues	31 July 2024
Power Generation Capacity (Grid)	28,098 MW
Highest Power Generation (Grid)	16,477 MW
Reserve Margin (%)	41%
Total Transmission Lines	15,624 circuit km
Total Distribution Lines	643,000 km
Access to Electricity (including renewable energy)	100%
Per Capita Electricity Consumption	602 MW
Per Unit Power Generation Cost	Tk.11.03/kwh
Tariff (Electricity)	Tk. 8.95/kwh

Source: BPDB Progress report July 2024

Table 2: Power plants owned and operated by different private groups

Groups	No. of units	Capacity (MW)
Summit group	14	2196
Adani (India)	1	1496
Payra (BD-CH)	1	1244
Rampal (BD-IN)	1	1234
S Alam group	1	1224
Import (from IN)	5	1160
United group	6	985
Reliance group (IN)	1 (under construction)	718
Orion group	6	611
Unique group	1	584
Doreen group	9	518
Confidence group	5	404
Baraka group	4	316
Total	55	12,690

Source: Sharebiz.net (accessed on 17 August 2024; 11.30 am)

1. Background and Context

Table 3: Current state of renewable energy

Issues (Renewable Energy)	31 July 2024
Power Generation Capacity (Grid)	998.31
Power Generation Capacity (Off-Grid)	380.17
Total Power Generation Capacity	1378.48
Actual Generation (Renewable Energy)	1,126 MkWh
Tariff (Electricity)	Tk.8.95/kwh

Source: SREDA website and BPDB Annual Report

Table 4: Current state of gas sector

Issues	31 July 2024
Total Gas Supply	2634.0 mmcfd
Total LNG Supply	605.3 mmcfd
Domestic Proven Gas Reserve (tcf)	28.89 tcf
LNG Infrastructure	1. "Excellence LNG FSRU" (Length: 277 m, Width: 44 m, Draft:12.5 m) 2. "Summit LNG FSRU" (Length: 277 m, Width: 44 m, Draft:12.5 m)
Gas Tariff (Captive Power)	Tk 14/cubic meter
Gas Tariff (Other sectors)	Tk 30/cubic meter

Source: PetroBangla daily gas production report, 31 July 2024

1. Background and Context

Table 5: Power and energy supply challenges

Issues	31 July 2024
Load Shedding	590 MW
Deficit in Gas Supply	1,066 mmcfd
Payment Due to IPPs, rental and QRRs (as of June 2024)	Tk.10,000 crore
Import Payment Due to India (as of August 2024)	Tk.5736 crore

Source: BPDB website and newspaper reports

Table 6: Financial statement of BPDB, 2023

Issues	2022-2023
Operating Loss (BPDB)	Tk.43,539 crore
Net Loss (BPDB)	Tk. 11,765 crore
Capacity Payment (BPDB)	Tk. 28,000 crore
Subsidy (BPDB)	Tk. 39,535 crore

Source: BPDB Annual Report 2023

Table 7: Financial statement of BPC

Issues	2022-2023
Operating Profit (BPC)	Tk.58,589 crore
Net Profit after Tax (BPC)	Tk.45,861 crore
Subsidy (BPC)	0

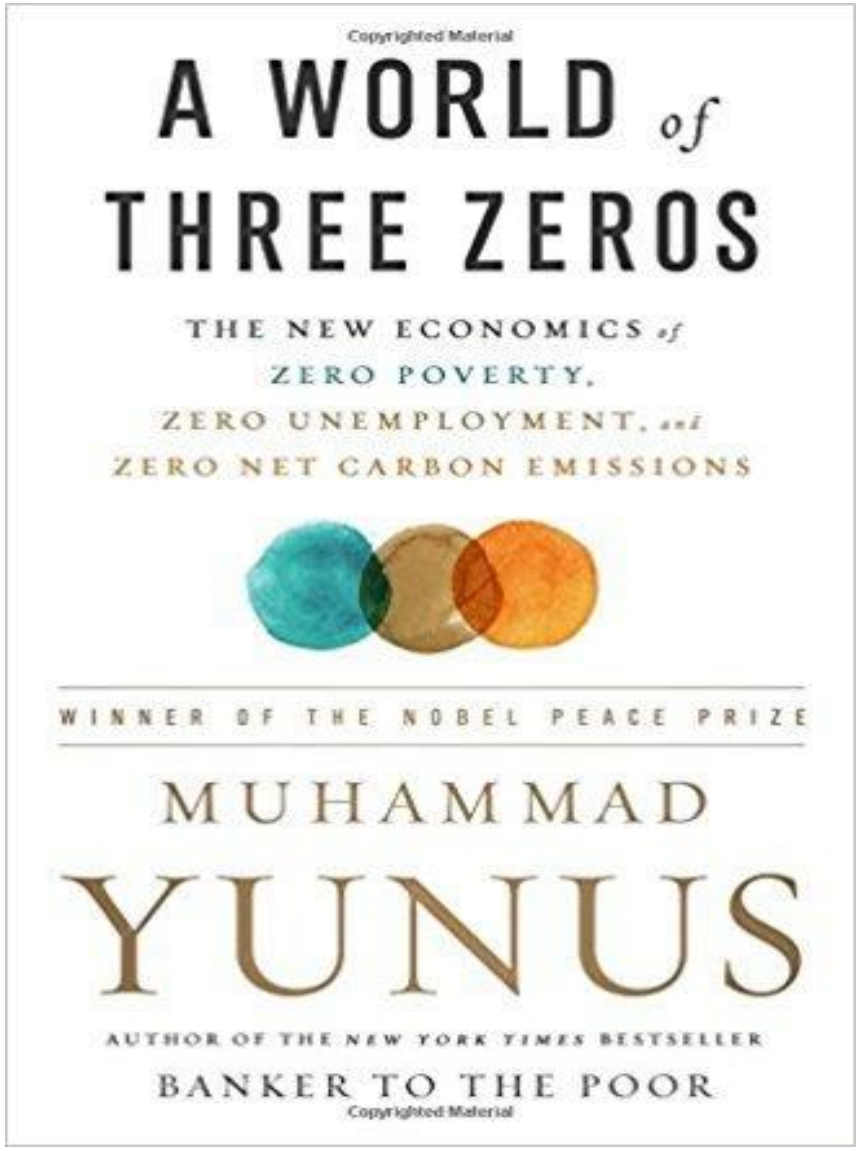
Source: BPC Annual Report 2023

2. New Interim Government
Its Political Perspective on Power and Energy Sector

2. New Interim Government: Its Political Perspective on Power and Energy Sector

- The Interim Government has been formed under the **leadership of Professor Muhammad Yunus**, renowned Noble Laureate
- **Professor Yunus's vision** of creating a **world of three zeros** by unleashing entrepreneurship in all
  - **Zero net carbon emission**
  - Zero wealth concentration for ending poverty, and
  - Zero unemployment
- Professor Yunus is the **founding chair of Grameen Shakti**
  - Grameen Shakti is one of the leading social enterprises in the world with an aim of **improving "Access to Energy" for the rural** people of Bangladesh
  - Providing **Sustainable Renewable Energy solutions** with an objective of socio-economic development, empowering women, creating green Jobs, alleviating poverty, **reducing GHG emission** and building up healthy community
- Overall, the Chief Advisor is **expected to take a bolder step** towards progressing renewable energy-based power generation as part of his global commitment for GHG emission
  - **His decarbonisation effort** is expected to further extend to other important GHG emitting economic activities including agriculture, transport, industry and household

Figure 1: Cover Page of the Book 'A World of Three Zeros'



https://uplbooks.com/shop/9789845062534-a-world-of-three-zeros-the-new-economics-of-zero-poverty-zero-unemployment-and-zero-net-carbon-emissions-12085#attr=21241

2. New Interim Government: Its Political Perspective on Power and Energy Sector

- The interim government is formed with the **fair share and participation of pro-environmentalists and renewable energy advocates**
- The **Advisor for Power and Energy**, who just took office, has prior experience working as Power Secretary as well as founding executive **director of IDCOL**
  - The **Advisor designed and implemented** the most successful **solar home systems (SHS) program** in the world under which more than 4 million SHSs have been installed in rural Bangladesh.
- The **Advisor for Environment and Climate Change** is one of the distinguished civil society leader for **environmental conservation** and development of clean energy
  - There are advisors who are human right activists and legal experts who are expected to work on **broader human rights issues**
- The new interim government is **expected to work for 'Just Energy Transition'** in the coming period
- However, the agenda for the interim government is **not only for ensuring just energy transition** but also **implementing sectoral reforms** which will ensure **a competitive, inclusive, transparent and accountable system** in the power and energy sector
- CPD would like **to see how the interim government is going to set and adopt agendas** for the power and energy sector and implement workplans in the coming months/years

3. Reforms in Policies, Laws and Acts related with the Power and Energy Sector

3. Reforms in Policies, Laws and Acts related with the Power and Energy Sector

Table 8: Key Policies/Laws/Acts/Plans: Major Reforms Required

Policies/Laws/Acts/Plans	Year of Adoption/Amendment	Reform Measures to be Taken
Quick Enhancement of Electricity and Energy Supply (Special Provision) Act, 2010	2021	Immediate Repealing
Amendment of Bangladesh Energy Regulatory Commission (BERC) Act, 2003	2023	Immediate Amendment
Integrated Energy and Power Master Plan (IEPMP)	2023	Revision of the Plan
Mujib Climate Prosperity Plan (MCPP)	2022	Updating
Nationally Determined Contributions (NDCs)	2021	Revision and Updating
Perspective Plan 2041 (PP 2041)	2021	Updating of the Plan
National Energy Policy 1996	1996	To be Newly Formulated
Renewable Energy Policy (Draft) 2022	2022	Revision of the Policy
Energy Conservation Act		To be Formulated
Energy Audit		To be Designed
Centralised Database		To be Built
Pricing and Investment Policy		To be Designed

3. Reforms in Policies, Laws and Acts related with the Power and Energy Sector

Table 8: Key Policies/Laws/Acts/Plans: Major Reforms Required (continued)

	Year of Adoption/Amendment	Reform Measures to be Taken
Competitive Bidding		To be Initiated
Just Transition Network		To be Designed
FiT Scheme		To be Designed and Practised
Request for Quote and Request for Proposal		To be Initiated
Auction Guidelines		To be Designed and Practiced

3. Reforms in Policies, Laws and Acts related with the Power and Energy Sector

3.1 Quick Enhancement of Electricity and Energy Supply (Special Provision) Act, 2010 (Amended in 2021)

- The act was **formulated in 2010** under the special provision for 2 years and its tenure was previously extended several times
  - The cabinet in September 2021 approved a proposal to extend its tenure for **five more years until October 2026**
- This act **removed the process of competitive bidding**, and the previous government awarded contracts in so-called "good faith"
- Though the act was supposed to implement decisions *on "urgent extraction and utilisation of minerals related to energy"*, it has never been on practice
- The Act **directly overrides "Public Procurement Act 2006"** (Section 3)
  - This **removes the transparency and accountability** of BPDB
- As per Section 4 of this Act, the government "may accept any proposal for undertaking any plan regarding import of electricity or energy from abroad"
  - This creates the **path of lobbying, favoritism and taking initiatives** without proper considerations
- Overall, the "Quick Enhancement of Electricity and Energy Supply (Special Provision) Act, 2010" **needs to be repealed immediately**.

Table 9: Current state and recommended changes

Issues	Current State	Recommended Changes
Competitive Bidding	Absent	Should be present
Procurement	Absence of Public Procurement Act, 2006	Public Procurement Act, 2006 should be implied in every negotiations
Acceptance of Proposal	In "good faith"	Should be transparent and public
Publicity of Plan or Proposal	Absent	Should be present

Source: Authors' findings

3. Reforms in Policies, Laws and Acts related with the Power and Energy Sector

3.2 Amendment of Bangladesh Energy Regulatory Commission (BERC) Act, 2003

- BERC Act was introduced in 2003 **to create an investor-friendly, competitive and transparent** national energy market
- However, two major amendments in **2020 and 2023** has **stripped down the capacities of BERC**
- Through these amendments, the government can adjust gas and electricity prices **without holding a public hearing** and can change tariff multiple times in a year
    - **Lack of public hearing** creates a non-transparent market
    - **Frequent tariff changes discourages** the investors, and foreign investors have complained about this issue
- The BERC Act 2023 must be **abolished to implement** the original BERC Act of 2003

Table 10: Current state and recommended changes

Issue	Current State	Recommended Changes
Authority to discuss and finalise tariffs	Ministry set price according to their wish without BERC's opinion	BERC should be the sole authority to set all kinds of price and tariffs
Price Adjustment	No public hearing	Should be transparent and based on public hearing
Tariff Setting	Changed multiple times in a year	Should be adjusted as per market-based price setting mechanism

Source: Authors' findings

3. Reforms in Policies, Laws and Acts related with the Power and Energy Sector

3.3 Integrated Energy and Power Master Plan (IEPMP)

- The IEPMP is approved by the previous government in November 2023 with **major criticisms from the CSOs**
  - **Faulty energy and power demand forecasting**, encouraging coal exploration, promoting LNG import, using **ambiguous definition** of clean energy, absent of target of 40% of renewable energy, absent of phase out plans, **absent of abolishment** of quick rental power plants
- The energy demand estimation in IEPMP has been made using **Ordinary Least Squares (OLS) method**
  - This method is a **faulty one to make a 5-year plan** since it only counts Nominal GDP resulting overestimation
  - **Vector Error Correction Model (VECM)** would be more appropriate model to estimate the demand since no selection of any particular variable is needed for calculation

Table 11: Current state and recommended changes

Issues	Current State	Recommended Changes
Energy Demand Forecasting	OLS Method	VECM Model
Power Demand Forecasting	Constant Demand-GDP Elasticity	VECM Model
Coal Exploration	Encourages	Should be Abolished
LNG Import	Promoted	No new contract should be signed
Definition of Renewable Energy	Ambiguous	Should be clear and no promotion of "false solutions"
Phase-out Plans	Absent	Should have a timeline
Quick Rental Power Agreements	No plans for abolishing	Should be abolished

Source: Authors' findings

3. Reforms in Policies, Laws and Acts related with the Power and Energy Sector

3.3 Integrated Energy and Power Master Plan (IEPMP) (Continued)

- A clear **definition of "Renewable Energy" is absent**
  - An ambiguous term "Clean Energy" has been used in IEPMP which promotes the use of Hydrogen and Ammonia co-firing along with **Carbon Capture and Storage (CCS)**
  - These 3 technologies are often termed as **"False Solution"** since there are yet to be any concrete evidence to prove that these technologies can reduce substantial amount of CO2
  - **Rather than investing** in such technologies to reduce emission, the funding should be allocated in renewable energy transition
- **Lack of any phase-out plan**
  - IEPMP fails to address how and to what extent the fossil fuel-based power plants would be phased-out
  - Introducing the **"false solutions"** is not a phase-out plan rather **reintroducing the fossil fuel-based** technologies
- **No plan for stopping Quick Rental Power Plants** after their current contract will be over
  - IEPMP fails to address the issue of stop quick rental power plants since it has no clear indication of abolishing the plan
- Overall, the IEPMP **needs a major revision** without which energy transition through power and energy sector would not get the right direction in the upcoming years

3. Reforms in Policies, Laws and Acts related with the Power and Energy Sector

3.3 Integrated Energy and Power Master Plan (IEPMP) (Continued)

- The whole plan has been made by **considering and projecting Nominal GDP**
  - The GDP calculation itself is wrong since the export-related data of Bangladesh has been found incorrect recently
  - Since Bangladesh is an import-oriented country, **not considering the exchange rate and inflation rate** creates a variance between the calculated and actual result
  - Multiple studies have showed that **GDP can not be the only variable** for making any Master Plan thus bringing the urgency of using VECM Model
- IEPMP **encourages more domestic exploration of coal**
  - This initiative directly **contradicts the 40% renewable energy target**
  - The budget to be allocated for the coal exploration should be allocated in the renewable energy implementation
- **LNG import is being promoted** through IEPMP
  - In addition, with the issue of fossil fuel-based power generation, importing LNG incurs a **growing economic burden**
  - **No new LNG project** and contract should be undertaken
  - The current two LNG projects mentioned in the **ADP of FY2025 should be immediately stopped** since they are in favour of land-based LNG terminal

3. Reforms in Policies, Laws and Acts related with the Power and Energy Sector

3.4 Mujib Climate Prosperity Plan (MCPP)

- Unlike most of the plans and policies, MCPP has **relatively fewer overestimation** and has plans to achieve 40% renewable energy target though it requires a few updates
- The MCPP aligns with the Paris Agreement, with Bangladesh aiming to achieve **30% renewable energy by 2030 and up to 40% by 2041**
    - This is a **significant commitment towards reducing greenhouse gas emissions** and meeting global climate target of reducing temperature by 1.5° Celsius
- **Specific projects** such as the **Bay of Bengal Independence Giga Array**, a 4-gigawatt wind generation array, are part of the strategy to boost renewable energy independence and security
- The plan **emphasizes grid modernisation** and the development of energy storage infrastructure to ensure resilience against climate impacts
    - It also includes strategic programs like the **conversion of coal plants into green energy** facilities
- GDP growth is projected to reach 9%, with GDP per capita increasing by 137% to approximately **USD 4,400 by 2030**, positioning Bangladesh to achieve upper-middle-income status by that time if the plan is followed
    - However, this is an overestimation since the GDP of FY2024 was 5.82%
- The plan emphasizes **grid modernization and the development of energy storage** infrastructure to ensure resilience against climate impacts
- The plan is designed to be updated every 5 years to **reflect evolving technologies** and resources, ensuring it remains effective and relevant through 2041 and beyond

Table 12: Current state and recommended changes

Issues	Current State	Recommended Changes
GDP growth is projected to reach 9% by 2030	5.82%	The projection should be revised in the next revision
GDP per capita would be USD 4,400	USD 2,646	The projection should be revised in the next revision
Bay of Bengal Independence 4-Gigawatt Wind Generation Array	No such initiatives has been initiated	Plans should be made so that wind energy becomes a viable source of renewable energy

Source: Authors' findings

3. Reforms in Policies, Laws and Acts related with the Power and Energy Sector

3.5 Nationally Determined Contributions (NDCs)

- Each of the NDCs of all the countries should have **9 indicators** based on which the quality of the **NDCs are determined**
  - Bangladesh's NDC **fulfills 7 indicators** namely Ambition of Targets, Clarity and Specificity, Transparency and Accountability, Inclusivity and Fairness, Integration with National Development Goals, Resilience and Adaptation, and Financial and Technical Support
  - However, it **fails to address 2 indicators** namely Long-term Vision and **Just Transition**
- For the Long-term Vision, **NDC should**
  - Articulate a **clear vision for net-zero** emissions by 2050
  - Develop **sector-specific roadmaps** for emission reductions beyond 2030
  - Establish an **institutional framework** for continuous NDC updates
- For developing a Just Transition Network, NDC should
  - Conduct a **social impact assessment** to identify vulnerable groups and propose mitigation measures
  - Implement **reskilling programmes and social protection** for workers affected by the transition
  - Promote **economic diversification in high-emission regions** to support new green jobs
- The new **NDC of 2026 should be more precise**
  - An **interim revision** of the existing NDC can be made by this time
  - Each of the indicators must be **quantified and updated on yearly basis** to understand the changes

Table 13: Current state and recommended changes

Issues	Current State	Recommended Changes
Long-term Vision	No detailed long-term strategy or roadmap extending beyond 2030	Sector-specific roadmaps for emission reductions beyond 2030
Just Transition	No plans that addresses the impacts on workers and communities as the country shifts to a low-carbon economy	Develop a Just Transition Network

Source: Authors' findings

3. Reforms in Policies, Laws and Acts related with the Power and Energy Sector

3.6 Perspective Plan of Bangladesh (2021-2041) (PP 2041)

- The new Perspective Plan is adopted in 2020
  - As per plan, it is supposed to be updated every 5 years based on the Master Plan and lessons learnt
  - The IEPMP should be quickly revised and accordingly the **Perspective Plan could be updated**
- There are multiple key objectives and targets for power and energy sector under the PP2041
  - Some of these objectives and **targets should be updated** and revisioned
- The objective of making the power sector **financially viable** is somewhat **unattainable** under the current state
  - The power sector has been incurring loss each year and the percentage of **loss is increasing each year**
  - As of 2022-23, BPDB has a loss of BDT 11765.5 crore
- Target of upgrading **grid-based electricity generation** capacity to 56,734 MW by 2041 is **unrealistic** and will **cause misallocation of resources**
  - According to the CPD estimates, electricity demand would be about **19,377 MW by 2030** which is still quite **lower than** the estimated amount of FY2031 in PP2041

Table 14: Targets, current state and recommended changes

Objectives/Performance Indicators	FY2041 Target	Latest Observations	Recommendations
Make power sector financially viable		As of 2022-23, BPDB has a loss of BDT 117,655 million	Competitive tariff while purchasing from IPPs
Total grid-based generation capacity of electricity	56,734 MW	As of 31 May 2024, on-grid generation capacity is 27,515 MW	Downward revision of projected demand
Maximum Peak Demand Based on PSMP 2016 base case	51,000 MW	As of 31 May 2024, peak electricity demand stands at 16,477 MW	Recalculate the peak demand estimation using VECM Model
Increase efficiency of energy use as well as reducing the system loss (T&D loss)	T&D loss target: Single digit	As of January 2024, T&D loss is 8.9%	Use of better wire, transformers and capacitor banks
Diversify fuel use in power generation capacity to balance use of low-cost fuel with low carbon content of the fuel mix	35% gas; 35% coal; 12% nuclear; 16% power import;1% liquid fuel; 1% hydro	48.6% gas; 17.9% import; 18.7% coal; 12.7% liquid fuel; 1.2% Hydro; 0.9% renewable	Promote renewable energy and be rigid on the 40% renewable energy goal by 2041
Increase private sector investments in electricity, gas, and other energy supply	60%	50%	Remove the administrative red tape and bring transparency
Encourage energy trade	9000 MW	As of 2022-23, 2656 MW	Readjust the bar of import and make the T&C of the imports transparent
Access to electricity	100%	100%	Ensure every region of the country is under proper grid system
Installed processing capacity of refinery	19.5 million tons	1.3 million tons	Recalculate the capacity demand with proper historical trend analysis

Source: Authors' findings

3. Reforms in Policies, Laws and Acts related with the Power and Energy Sector

3.6 Perspective Plan of Bangladesh (2021-2041) (PP 2041) (Continued)

- **Peak Demand estimation is also faulty** since it uses income elasticity approach
  - The peak demand should be estimated using VECM Model
- Though the **T&D losses are decreasing** over the years, it can be decreased further by 2041
  - Use of better wire, transformers and using capacitor banks to correct power factor can bring the number in less than 5%
- PP2041 has **no mention of traditional renewable energy** other than hydro
  - The plan should be revised and **40% of renewable energy should be committed**
- Use of **coal has been promoted** in PP2041
  - The plan should be revised to promote renewable energy and phase-out fossil fuels
- PP2041 has rightly **addressed the increment of private investment** issue by mentioning few guidelines
  - However, taking away the capacity of BERC has decelerated the process
- The **estimation of energy import** is quite high
  - The bar of **import should be readjusted**, and terms of import should be transparent
- Increasing the **refinery capacity promotes fossil fuel**
  - Rather than increasing the refinery capacity without proper historical trend analysis, the **amount should be recalculated**, and BPC has to make proper, reliable analysis to increase the capacity in a more realistic term
  - The future allocation for this kind of projects should be allocated in renewable energy transition
- Overall, the **Perspective Plan needs to be revised** from the perspective of energy transition

3. Reforms in Policies, Laws and Acts related with the Power and Energy Sector

3.7 National Energy Policy, 1996

- The National Energy Policy of 2004 is **quite backdated (1996)** and does not reflect the massive technological upgradation that took place in the energy sector globally over the years
  - The policy mentions the name of few **renewable technologies** and their potentials but **does not provide any specific guidelines or plans** to implement them
- The policy heavily relies on the **use of fossil fuels like gas and petroleum** as well as the **exploration of domestic coal reserve**
- A **centralised database** on different type of energy sources, their conversion, supply, consumption, prices were supposed to be made as per the policy which **is still not in formulation**
- The policy showed the importance of an **"Energy Conservation Act"** which is yet to come in fruition
  - As per this act, **energy audit were to be made mandatory** at all levels **which is still absent**
- The policy inferred that government would have a **fixed pricing and investment policy**
  - However, the prices changes multiple times a year and the policies are **yet to be investor-friendly in practice**
  - The policy also **fails to mention the authorities** for these duties

Table 15: Current state and recommended changes

Issue	Current State	Recommended Changes
Fuel Priority	Fossil fuel	Should be replaced by renewable energy
Centralised database for all kinds of fuels and energy	Absent	Should be implemented
Pricing and Investment Policy	Absent	Should be implemented
Environmental Policies	Many are not in practice	Policies should be updated and implemented strictly
Energy Regulatory Commission	In weak state	Need major overhauling and regulatory reform
Human Resource Development	Absent	Should be initiated
Encouragement of Joint Venture	Absent	Should be incentivised
Use of Locally Manufactured Equipment	Not in practice due to low quality	Quality of the equipment should be improved

Source: Authors' findings

3. Reforms in Policies, Laws and Acts related with the Power and Energy Sector

3.7 National Energy Policy, 1996 (Continued)

- Many **instruments of environmental policies** are not in practice
  - Use of Catalytic **Converter and Diesel Particulate Filter** in vehicles are **not imposed strictly**
  - Use of **lead-free petrol** is not imposed
- As per the policy, an Energy Regulatory Commission was supposed **to control and set the price** for the consumers
  - Over the years the Energy Regulatory Commission has experienced lots of ups and downs and lost its importance in many accounts
- A **provision of fund for human resource development** in the sector was sanctioned in the policy
  - More such initiatives should be undertaken
- Local private companies were to be **encouraged to seek joint ventures** with foreign companies and/or with BAPEX in exploration
  - BAPEX was **not capacitate to explore off-shore gas blocks**. Even onshore gas blocks were provided to foreign companies
- The investors were **encouraged to use locally manufactured equipment**
  - However, **poor quality of equipment** has led the investors to be import-oriented for machineries and no such operational initiatives are being undertaken to improve the quality
- The Energy Policy 1996 has **lost its relevance** in the current context and needs to be **reformulated** considering the **energy transition in mind**.

3. Reforms in Policies, Laws and Acts related with the Power and Energy Sector

3.8 Renewable Energy Policy (Draft) 2022

- Back in 2022, SREDA initiated to revise the Renewable Energy Policy of 2008
  - The newly formed document was not only more detailed but also **covered many aspects of the energy** system to achieve 40% renewable energy target by 2041
  - However, the new draft was **not passed on the parliament**
- Amidst a few lacking, the new draft is by far better than the one being in practice right now

Table 16: Summary of the contrasts between Renewable Energy Policy 2008 and Renewable Energy Policy (Draft) 2022

Issues	Renewable Energy Policy of 2008	Renewable Energy Policy (Draft) 2022
Vision	Energy security	Environment friendliness
Objectives	Prioritises investments	Prioritises climate goals
Renewable Energy Resources	Solar, wind and biogas	Focused on other resources as well
Policy Period	None	10 years
Institutional Frameworks	No role of other organisations	Mentioned roles of IDCOL, PGCB, BERC, etc.
Programme and Project Development	None	Mentions RPO, REC, and Green Building Policy
Allotment of Projects	None	Pre-conditional requirements
Investment Facilitations	Micro-credit support systems	Micro-credit support systems
Fiscal Incentives	Exemption of charging 15% VAT	Waived VAT and import duties
Regulatory Policy	None	RPO and REC

Source: Renewable Energy Policy (Draft) 2022: A Comprehensive Assessment; *Moazzem and Hridoy (2023)*

3. Reforms in Policies, Laws and Acts related with the Power and Energy Sector

3.8 Renewable Energy Policy (Draft) 2022 (Continued)

- Though it is expected that this policy draft is soon passed in the legislation, CPD believes **some issues are yet to be addressed in the new policy**
- The Renewable Energy Policy needs to be formulated with **broader vision of just energy transition**.

Table 17: Summary Table of the Issues

Issues	Current State	Recommended Changes
Reduction of GHG emissions	No fixed goal	Should have a fixed goal complied with the Paris Agreement
Employment generation	Not focused	Should be prioritised
Protection of other natural resources	Slightly focued	Should be detailed out in the policy
Auction Guidelines	Mentioned	Should be in practice
Electrification of Rural Areas	Only mentioned in the objectives	Should be prioritised
FiT Scheme	Not mentioned and practiced	Should have a proper guideline
Request for Quote and Request for Proposal	Only exist theoretically	Should have a guideline and be in practice
Sector wise Renewable Energy Diversification	Only mentioned	Inter-ministerial plans should be designed
Investment sources	Not mentioned	Should mention the sources and facilities
Tariff structure	Discussed	BERC should be the sole authority to do so

Source: Authors' findings

4. Reforms in Government Bodies related with the Power and Energy Sector

4. Reforms in Government Bodies related with the Power and Energy Sector

Table 18: Key Government Bodies: Major Reforms Required

Institutions	Reforms needed
Sustainable and Renewable Energy Development Authority (SREDA)	Institutional Overhauling and Upgradation
Bangladesh Energy Regulatory Commission (BERC)	Amendment including Reinstating Earlier Responsibilities and More Functionality
Bangladesh Petroleum Corporation (BPC)	Strengthening Dhaka Office with human resource and Accessibility
Establishing New Institutes for Renewable Energy Transition	• Renewable Energy Laboratory
	• Office of Energy Efficiency and Renewable Energy
	• Office of Scientific and Technical Information on Energy
	• Energy Information Administration
	• Council for Environmental Quality

4. Reforms in Government Bodies related with the Power and Energy Sector

4.1 Institutional Capacity of Sustainable and Renewable Energy Development Authority (SREDA)

- SREDA **lacks proper authority** and institutional capacity **to direct the energy transition** in Bangladesh
  - In fact, **Renewable Energy wing** of the BPDB holds more 'power' in taking decisions on renewable energy related projects
- SREDA is authorized to carry out **as many as 24 different types** of activities (see the next slide) but **hardly successful** in undertaking those activities
- SREDA's is allowed to issue licenses for **small scale power plants** (with a capacity of less than 10MW).
  - **Given the large-scale** renewable energy-based power plants currently being licensed, the authority should be in the hand of SREDA instead of the MoPEMR or the PMO (Chief Advisor's Office)
- SREDA paid little **attention to implement the projects** which indicates its **institutional weaknesses**
  - Till date, SREDA issued a **total of 32 LOI for renewable** energy-based power plants (2815 MW); but only 14 **plants are** in operation
  - During FY2024 a total of **15 renewable energy-based** power plants were at different levels of implementation with combined capacity of 477 MW
  - During the **first half of FY2024**, **no renewable energy-based power** plants were fully operational and on time

Table 19: Current state and recommended changes

Issues	Current State	Recommended Changes
Lack of Authority and Institutional Capacity	BPDB holds more power	SREDA should be given the autonomy and provided with adequate funding and manpower
Providing License to RE-based Power Plants	Only for small scale plants (<10 MW)	All the licensing authority irrespective of scale should be handed over to SREDA from PMO
Findings	Does not disclose	Should be made public
Skilled Personnel	Lacking	Should have designated experts on each field

Source: Authors' Findings

4. Reforms in Government Bodies related with the Power and Energy Sector

SREDA Activities

- **To take necessary measures to create public awareness and motivation for efficient use of power and energy and its conservation;**
- To encourage the use of power and energy efficient equipment and take necessary steps for standardization and labeling of power and energy using equipment and appliances;
- To establish testing laboratories or provide assistance in establishing laboratories in order to test and certify on standard equipments of using energy;
- **To encourage energy efficiency and conservation related research and development and to identify innovative financing for implementation of projects or associated works relating thereto, and arrange necessary training in this behalf;**
- To assist the Government in making and implementation of energy efficient building code;
- To make regulation for qualification and competency of energy manager and energy auditors and selection of accredited energy auditor firm;
- To coordinate the implementation activities of energy efficiency and conservation in government, semi-government and autonomous bodies and create commercial market for sustainable energy in private sector through demonstration;
- To assist the Government in making necessary laws, rules, regulations for sustainable energy development;
- To identify energy inefficient equipment and take necessary measures to stop its production, import and sales;
- To take necessary measures to declare designated consumers of different energy consumers or category of consumers;
- To prepare and update inventory of renewable energy resources and associated technologies ,indicating its geographical location of sites and verify its suitability for commercial use after assessing possibilities of its exploitation;
- To provide necessary technical assistance in preparing CDM or similar type of activities;
- **To prepare short-, medium-, and long-term development project to extend the use of renewable energy with specific targets and take necessary steps to implement it;**
- **To provide technical and financial assistance in research, development, demonstration and training on renewable energy;**
- To take necessary steps for creating public awareness and motivation in order to encourage the use of renewable energy in public and private sector;
- To assist to identify sources of financing and make necessary arrangement to provide financial incentives to attract and encourage private investment in renewable energy sector;
- To send tariff proposal of renewable energy to Bangladesh Energy Regulatory Commission established under section 4 of Bangladesh Energy Regulatory Commission Act, 2003 (Act No.13 of 2003), upon discussion with the Government;
- To assist the Government to coordinate the implementation of renewable energy development related activities in government, semi - government and autonomous bodies;
- **To encourage commercialization of renewable energy and energy efficiency activities in private sector through implementation of pilot project;**
- To assist the Government to formulate, update and implementation of policies made under this Act, including revision of Renewable Energy Policy;
- To coordinate with different Ministries, Divisions and organizations in matters related to sustainable energy;
- To establish linkage with regional and international organizations on sustainable energy;
- To perform such other functions as may be prescribed by rules or by the Government, from time to time.

4. Reforms in Government Bodies related with the Power and Energy Sector

4.1 Institutional Capacity of Sustainable and Renewable Energy Development Authority (SREDA) (continued)

- SREDA does not **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 renewable energy in Bangladesh
- There is a **lack of skilled personnel in SREDA**
  - Personnel without any prior academic or professional expertise on energy sector let alone in renewable energy is occupying some of the important position of the organisation
- SREDA **did not arrange training** or awareness programme regularly
  - Being the sole authority of renewable energy, SREDA **should have arranged a lot more training** and awareness programmes in the last few years for a just energy transition
- SREDA **lacks separate wing for solar, wind, hydro** and other emerging renewables
- **Renewable energy wing** under BPDB needs to be **abolished**
- Overall, SREDA's institutional **structure needs major modification and upgradation** taking the precedence of other successful countries such as **India, China, UK.**
  - It needs to be upgraded as a **fully functional Authority** to be run by a full **'Secretary'**
  - It should **establish separate wing for solar, wind and other** emerging renewable technologies

4. Reforms in Government Bodies related with the Power and Energy Sector

4.2 Weakening of BERC through Government's Decisions

- Through the amended BERC Act of 2023, BERC has been stripped of most of its institutional capacity
- **BERC were assigned with multiple powers** to ensure a number of important activities including just energy transition
    - BERC earlier had the **authority to conduct Energy Audit** which included determining the energy efficiency of an institution and quality check of its equipment
    - BERC had the **authority to implement standardisation** criteria of equipment
    - BERC had the **authority to introduce competitive bidding** and remove monopoly in the energy market
    - BERC had the **authority to assign to provide licenses** after thorough assessments of activities like
        - Power generation
        - Energy transmission
        - Energy distribution
        - Energy supply
        - Energy storage

Table 20: Current state and recommended changes

Issues	Current State	Recommended Changes
Energy Audit	Absent	Should be initated
Standardisation	Absent	Should be provided the authority
Licensing Authority	Absent	Should be provided the authority
Enforcing Orders	Absent	Should be provided the authority
Complaint Cell	Absent	Should be built nationally

Source: Authors' Findings

4. Reforms in Government Bodies related with the Power and Energy Sector

4.2 Weakening of BERC through Government's Decisions (continued)

- BERC had the **authority to enforce orders on private entities and IPPs** which are currently absent due to the presence of Quick Enhancement of Electricity and Energy Supply Act
- BERC had the authority **to impose punishments** on individuals for any kind of discrepancies
- BERC had the authority **to establish a complaint cell** for problems in energy usage
- BERC had the **authority to renew license of institutions** annually based on their prior performances

- Despite the authority, BERC **hardly enforced** the above-mentioned responsibilities
- Overall**, BERC** needs a major revision of the **Act reinstating the earlier responsibilities** as well as it needs full authority and functionality to enforce those responsibilities

4. Reforms in Government Bodies related with the Power and Energy Sector

4.3 Reformation of Bangladesh Petroleum Corporation (BPC)

- BPC's **Dhaka Liaison office lacks proper manpower** to run the office
  - It is understandable why the officers are in Chattogram office for majority of the time
  - However, **weak human resource** at the Dhaka office has created different problems including **access to communicate** with the officials as well as access to data and information
  - The **Chairman** of BPC **should have a fixed timeline** and schedule to be present in both the offices equally throughout the year
- The **analytical wing of BPC** should be **transparent** in terms of making all the data publicly available
  - They should **disclose their methodology of setting the price** of each fuel
- The price calculation **mechanism of BPC is unclear** and there are a few hidden charges without any proper justifications
  - BPC **claims to add a 3-5% margin** on the imported fuels on the consumers
  - However, the logic behind this per centage and its variability is not clearly defined
  - BPC claims to add a **"buffer" price of BDT 10/litre**
  - There is also a **15% VAT** on top of it
  - These pricing mechanisms **raises questions on the BPC's methodology** and BERC is also not aware of the logic behind this mechanism

Table 21: Summary Table of Issues

Issues	Current State	Recommended Changes
Human Resource	Low in Dhaka Office	Should have more manpower at the Dhaka Office
Availability of Chairman in Dhaka	Low	Should have a fixed schedule
Analytical Wing	Not transparent	Should make their methodology public
Price Calculation Mechanism	Unclear	Should be made public and should have no hidden charges

Source: Authors' Findings

4. Reforms in Government Bodies related with the Power and Energy Sector

4.4 Establishing New Institutes for Renewable Energy Transition

- Apart from SREDA and BPDB, there are **no other public institutes or organisations** that works dedicatedly for renewable energy transition in Bangladesh
- Following the model of **USA and China,** the following entities are required for a just transition

4.4.1 Renewable Energy Laboratory

- It would be the **premier research institution** in Bangladesh dedicated to renewable energy technologies
    - It would focus on **research, development, and innovation** in renewable energy sources such as solar, wind, hydro, and biomass
- The functions of this Laboratory will be
    - Conduct **cutting-edge research** on renewable energy technologies
    - Develop and **test new renewable energy solutions** tailored to geographic and economic conditions
    - **Collaborate with universities**, industry, and international research institutions
    - **Provide data, tools, and publications** on renewable energy for policymakers, researchers, and the public

4.4.2 Office of Energy Efficiency and Renewable Energy

- This office would focus on promoting energy efficiency and the development of renewable energy in Bangladesh with the following functions
    - Provide **resources and information on energy-saving practices** and renewable energy generation for homes, businesses, and industries
    - Promote **sustainable transportation solutions**, including electric vehicles and biofuels
    - Implement programs and incentives to **encourage energy efficiency** and the adoption of renewable energy technologies
    - **Organise workshops, seminars**, and public awareness campaigns on energy efficiency

4. Reforms in Government Bodies related with the Power and Energy Sector

4.4 Establishing New Institutes for Renewable Energy Transition (Continued)

4.4.3 Office of Scientific and Technical Information on Energy

- It would serve as the **central repository for scientific, technical, and engineering research** and development results in the field of energy in Bangladesh with the following functions
  - Collect, organise, and disseminate **scientific and technical information** related to energy, with a focus on renewable energy
  - Provide an **online platform for researchers, policymakers**, and the public to access energy-related research and data
  - Facilitate **collaboration between research institutions, universities, and industry** by sharing information and best practices

4.4.4 Energy Information Administration

- It would collect, analyse, and disseminate **independent and impartial energy information to support** sound policymaking, efficient markets, and public understanding of energy and its interaction with the economy and environment in Bangladesh with functions including
  - **Provide statistical data, analysis, and projections** on energy production, consumption, and trends, with a focus on renewable energy
  - **Produce regular reports and forecasts** on Bangladesh's energy landscape, including renewable energy adoption and its economic impacts

4. Reforms in Government Bodies related with the Power and Energy Sector

4.4.5 Council for Environmental Quality

- This will **coordinate national efforts to protect** Bangladesh's public **health and environment**
  - It would ensure the **timely and robust environmental reviews** and permitting for **infrastructure projects,** particularly those related to renewable energy development
- The functions of this council will be
  - Oversee the **implementation of environmental policies**, especially in renewable energy projects
  - Conduct **environmental impact assessments** and ensure compliance with environmental standards
  - Act as an **advisory body to the government on environmental matters** related to energy projects

Table 22: Summary Table of the Suggested Entities

Organisations	Responsibilities
Renewable Energy Laboratory	Premier research institution for renewable energy technologies; Focus on R&D in solar, wind, hydro, biomass; Collaborate with universities and industries; Provide data and tools
Office of Energy Efficiency and Renewable Energy	Promote energy efficiency and renewable energy; Provide resources and information; Promote sustainable transport; Implement programs and incentives
Office of Scientific and Technical Information on Energy	Central repository for scientific, technical, and engineering research; Disseminate scientific information; Provide online platform for collaboration; Facilitate research collaboration
Energy Information Administration	Collect, analyse, and disseminate energy information; Provide statistical data and analysis; Produce reports and forecasts on energy landscape
Council for Environmental Quality	Coordinate national efforts for public health and environment; Oversee implementation of environmental policies; Conduct environmental impact assessments

5. Operational Reforms related with the Power and Energy Sector

5. Operational Reforms related with the Power and Energy Sector

Table 23: Operational Issues: Major Reforms Required

Issues	Measures to be taken
Public procurement	Replacing the Quick Enhancement of Electricity and Energy Supply (Special Provision) Act 2010 by Public Procurement Act 2006 and Public Procurement Rules 2008
Capacity rationalisation	Phasing out inefficient and expensive power plants including those of QRRs, IPPs with low level of efficiency and high gen. cost
Ensuring transparency and accountability	Re- establish BERC's institutional power as part of moving towards a transparent and accountable power and energy sector
Reducing fiscal and financial burden	Revision of the contracts with IPPs as per 'no electricity no pay' without capacity payment clause
Withdrawal of subsidy	No further electricity tariff revision rather withdrawal of the provision of capacity payment
Market-based pricing	Revision of IMF conditionalities and review of the market-based pricing formula
Decarbonization of the power sector	Promoting renewable energy
Promoting energy transition	Revising the ADP allocation for the power and energy sector for FY2024-25
Addressing the anomalies in collection of electricity bill	Investigating the issue of faulty pre-paid meters causing troubles for consumer

5. Operational Reforms related with the Power and Energy Sector

5.1 Future Public Procurement under the Public Procurement Act 2006

- The **Quick Enhancement of Electricity** and Energy Supply (Special Provision) Act 2010 is **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 abolished** earliest possible and to create space for a competitive market environment
- After abolishment of the current Act, **a proper transparent mechanism needs to be set** up in the BPDB, BPC, Petrobangla and RPGCL in light of public procurement act 2006 and public procurement rules 2008.
    - The **provisions of the PPA and PPR are highly required** to ensure fair procurement process in the power sector
- According to the PPA 2006, there should be **an evaluation committee** for evaluating the contracts submitted to power division
- The most important provision of the PPA 2006 is, it states the government shall **ensure that the papers and documents related to the public procurement must made available** to the general public and properly preserved
- The procurement committee must **ensure competition within the bidders** and applicants of the power projects
    - Adopting the PPA and PPR will help **ensure a transparent bidding, procurement** and awarding process of the power plants

5. Operational Reforms related with the Power and Energy Sector

5.2 Phasing out inefficient rental and quick rental power plants

- The previous government **did not follow its plan** for phasing out of power plants
  - A total of 64 IPPs with the capacity of 10,445MW, 10 SIPs with 284 MW capacity, 2 rental power plant of 137 MW and 11 rental power plants (under No electricity No pay) of 852 MW capacity is currently in operation
- At present, there is an **overgeneration capacity of 41%** which is significantly higher than the maximum required reserve margin (30%)
  - There is scope for **reducing the capacity of 6,677MW** without having any major adverse effect on the electricity supply in the country
- Previous government did not **maintain the retirement schedule** of IPPs, QRPPs, Public and BPDB power plants.
  - All the QRRs (16 power plants) are supposed to be retired by 2023; however, as many as **13 QRRs are still in operation** of which 2 plants (137 MW) with capacity payment facility and 11 power plants (under no electricity no pay) with a capacity of 852 MW
  - According to Moazzem and Shibly (2024), a total of **28 power plant**s with a generation capacity of **3655MW** can be **phased out by 2030** after their current contracts will be over (see the table below)

5. Operational Reforms related with the Power and Energy Sector

Table 24: Power Plants which Could be Phased out on a Priority Basis by 2030

Generating Plant under Power Station	Capacity in 2022 in MW	Types of Plant	Ownership	Net Generation (kWh) 2022	CO2 Emission 2022 (in ton)	Total Generation Cost (BDT) 2022	Gen. Cost BDT/kWh 2022	Overall Index Score
EGCB Ltd. (412) MW	412	GAS	Public Plant	1981733402	1021167.4	4954975092	2.5	64.2
Dutch Bangla Power & Associates Ltd.	100	HFO	QRPP	161,026,042	122233.3	3,250,631,030	20.2	57.7
Paramount BTrac Energy Ltd. - Sirajganj	200	HSD	IPP	104571634	79379.3	5791953269	55.4	57.3
Ashuganj Power Co. Ltd (APSCL) (450 MW) North	450	GAS	Public Plant	2017615091	1039656.9	5960985814	2.95	57.0
Summit Power Co. Ltd Madanganj (100 MW)	102	HFO	QRPP	109,319,891	82983.6	2,100,228,103	19.2	55.7
APR Energy 300MW	300	HSD	IPP	259472196	196962.7	10835439637	41.8	54.2
Summit Meghnaghat Power Ltd.	337	HSD	IPP	1524542505	1157265.0	6428574957	4.2	52.0
Aggreko Energy Solution Ltd. - Bhahmangoan (100MW)	100	HSD	IPP	120485001	91459.0	4245841612	35.2	51.2
Shahjibazar Power Co. Ltd. 86 MW RPP (15 yrs)	86	GAS	QRPP	619,933,776	319445.7	2,194,442,394	3.5	50.0
Khulna (KPCL-U-2) 115 MW	115	HFO	QRPP	107,420,657	81541.9	2,138,624,001	19.9	49.8
Bhola 32 MW (Venture Energy Resources Ltd.)	33	GAS	QRPP	189,564,498	97680.7	672,491,504	3.6	43.0
Power Pac Mutiara Keraniganj	100	HFO	QRPP	91,903,200	69762.8	2,515,217,918	27.4	40.7
Acron Infrastructure Services Ltd (Julda)	100	HFO	QRPP	222,839,580	169155.3	4,110,168,523	18.44	39.6
Ashuganj 55 MW 3Yrs Rental (Precision Energy)	55	GAS	QRPP	276,586,308	142522.2	1,257,886,706	4.6	38.6
Aggreko, International Ltd.-Ashuganj (95 MW)	95	GAS	QRPP	103,561,853	53364.4	1,327,286,944	12.8	38.2
Energyprima Limited, Fenchuganj	44	GAS	QRPP	48,318,547	24898.1	146,415,205	3.0	35.6
Energyprima Limited, Kumargaon	54	GAS	QRPP	41,095,560	21176.1	119,125,405		35.4
Khanjahan Ali Power Ltd.	40	HFO	QRPP	29,896,435	22694.1	586,325,265	19.6	34.9
Amnura (Sinha Power Generation)	50	HFO	QRPP	20,839,351	15818.9	274,117,988	13.2	29.2
Baraka power co. Ltd.		GAS	QRPP	349,663,734	180178.2	1,120,522,242	3.2	27.4
GBB Power Ltd. Bogra RPP (24MW) 15 yrs	22	GAS	QRPP	167,469,576	86295.4	685,508,842	4.1	23.5
Desh Cambridge Kumargaon Power Co. Ltd.	10	GAS	QRPP	75,345,178	38824.6	273,009,147	3.6	17.9
Northern Power Solution Ltd.		HFO	QRPP	66,336,489	50355.4	1,696,707,045	25.6	
Orion Power Meghnaghat Ltd.		HFO	QRPP	165,454,808	125595.1	3,425,588,809	20.7	
Aggreko Energy Solution Ltd. - Aorahati (100MW)	100	HSD	IPP	131526563	99840.5	4417000846	33.6	47.9
Bangla Track Power Company Ltd.	200	HSD	IPP	159163968	120819.8	6736713233	42.3	46.0
Bangla Track Power Company Ltd. (Unit-2)	100	HSD	IPP	102068064	77478.8	3703225481	36.3	43.2
Meghnaghat Power Ltd.	450	GAS	IPP	2140792000	1103128.7	5709336569	2.7	42.7
Total	3655			11388545907	6691683.845	86678343581		

Source: Moazzem and Shibly (2024)

5. Operational Reforms related with the Power and Energy Sector

5.3 Revision of the contracts with IPPs as per 'no electricity no pay' without capacity payment clause

- The government paid a total of around **Tk.1.05 trillion in 14 years** as capacity payments to power plant owners up to August 2023
- The capacity payment is **paid by using the allocated subsidy** from the national budget
- More than a **third of the subsidies (37%) allocated** in the new budget is for the power sector totaling Tk 40,000 crore in FY2024-25
- Despite **giving much high subsidy and upward tariff revision BPDB** is still not being able to come out of loss
- The **provision of capacity payment** should be withdrawn from all the rental and quick rentals and the **'No Electricity No Pay'** clause should be applicable for them
    - The cost estimates of 'no electricity no pay' **must not hiddenly incorporate** a part of capacity payment
    - Hence the **contract with each IPP** should be made public

5. Operational Reforms related with the Power and Energy Sector

5.4 Re- establish BERC's institutional power as part of moving towards a transparent and accountable power and energy sector

- Amendment of the BERC Act 2003 in 2023 has further weakened the institutional capability of BERC
  - It has created scope for the government to take arbitrary decisions on raising retail and bulk power and energy prices
- 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
- Hence, **re-establishing BERC's institutional power** is highly needed as part of moving towards a transparent and accountable power and energy sector

5.5 No further power tariff revision for withdrawal of subsidy

- The previous government had drawn up a **plan to increase the price of electricity** four times a year for the next three years to **withdraw all subsidies** in the power sector, which the IMF recommends
- The Ministry of Power Energy and Mineral Resources (MoPEMR) has **last raised** the electricity tariff (February 27, 2024) which is increased to Taka 8.95/unit from Taka 8.25/unit
- Through such an adjustment, the **burden has fully passed through** the consumers of electricity – household, agriculture, industry, businesses, services, and other economic activities
- **No further tariff revision** in the upcoming years is required if the capacity payment is phased out from the power plants

5. Operational Reforms related with the Power and Energy Sector

5.6 Revision of IMF Conditionalities and Review of the Market-based Pricing Formula

- To **align with the IMF's conditions** linked to a $4.7 billion loan, the former government has revised the electricity and energy tariff several times
    - Under the IMF conditionality Bangladesh is bound to **rationalise subsidy by FY 2026**
    - This Includes implementation of **an automated pricing formula** for petroleum and **raising electricity and gas prices** to reduce subsidies in the power sector
- As discussed, **upward tariff revision** of electricity and energy is indeed **a faulty and inefficient measure** to rationalise subsidy under IMF conditionality - the **burden is fully passed** on to the consumers which is supported to be adjusted from 'capacity payment'.
    - Hence, measures to be taken by the new interim government **to phase out capacity payment** for IPPs power generation
- The **price calculation mechanism of petroleum is unclear** and there are a few hidden charges without any proper justifications
    - BPC claims to add a 3-5% margin on the imported fuels on the consumers. However, the logic behind this per centage and its variability is not clearly defined. BPC claims to add a "buffer" price of BDT 10/litre. There is also a 15% VAT on top of it
    - These pricing mechanisms **raises questions on the BPC's methodology** and **BERC is also not aware** of the logic behind this mechanism

5. Operational Reforms related with the Power and Energy Sector

5.7 Promoting Renewable Energy

- The former government had the agenda to **achieve 40% renewable energy** by 2041
  - However, the initiatives and progress towards attaining that goal was negligible
- As a result, currently the share of renewable energy is **only 4.38%** (on-grid and off-grid) of the power generation
- Several reasons have fueled the less priority of the renewable energy in Bangladesh
  - **Over ambitious power demand estimation**, absence of smart grid, unjust policy and fiscal incentives for RE, slow implementation of the RE projects are few of them
- According to CPD estimates, 40% of RE by 2041 **indicates 14,000 MW of electricity**
- Considering the current capacity of 1,374MW, **an additional 12,626MW** worth of renewable energy investment will be required
  - As per BPDB, a total **of 4,850 MW will be generated** from renewable energy-based power generation by 2027
- To achieve 40% renewable energy by 2041, an additional 7,776 MW worth of renewable energy-based power generation capacity **needs to be installed between** 2028-2041
- As renewable energy is variable energy, the **existing grid of Bangladesh can not integrate** renewable energy
  - **Modernising the grid to smart grid** will support the integration of large-scale renewable energy projects.

5. Operational Reforms related with the Power and Energy Sector

5.8 Revising the ADP Allocation for the Power and Energy Sector for FY2024-25

- As the national budget for FY2025 has just passed on June 2024, and power and energy was on the list of priority sector as always
- However, it **failed to give attention to the issues** such as renewable energy expansion, demphasise on domestic coal exploration and reduced emphasis on LNG use in power generation
- There are only **5 renewable energy related projects** to be implemented in FY2025 same as of FY2024
  - Of these five projects, **three are generation related and two are distribution related**
- In FY2025, a total of **16 gas related pro**jects is currently under implementation, 7 less than FY24
  - Of these, 5 are carry-over projects, 8 are concluding, 2 are continuing projects and 1 new project
- In FY2025, there **are 2 LNG related projects**
  - Conducting study on the LNG terminal at Matarbari has already become a carry-over project. The project **should not be advanced** since it contradicts with the commitment of achieving energy security
- There is a need to review the ADP projects related to fossil-fuel based generation and LNG import
  - **More allocation and more projects** to be implemented on renewable energy-based power generation

5. Operational Reforms related with the Power and Energy Sector

5.9 Faulty pre-paid meter causing troubles for consumer

- Prepaid electricity meters have emerged as a significant concern among Dhaka City residents due to overcharging and inconsistencies in daily charges, even when the same appliances are used consistently
- Despite the inclusion of meter rent (which does not apply to customers who have purchased their meters), demand charges, service charges, and VAT, discrepancies persist in calculating electricity costs
  - A resident from Tolarbag, Mirpur (household size is two) reported regularly monitoring his electricity meter and discovered 233% raise in his electricity bill, **between March 2023 and March 2024**
  - His bill has been increased from **Tk.1200 to Tk.4000 in just** one month despite the same amount of power consumption.
  - In line with his experiences, there **has been a continuous stream of complaints** voiced on social media platforms
- Moreover, there have been indications from responsible officials in the power sector that **additional charges may have been levied** to boost the revenue of the power sector
- The **major news headlines** on this issue are as follows:
  - High Court orders probe into complaints against prepaid electricity meters by New Age (12 June 2024)
  - Prepaid meter troubles persist despite years of complaints by Dhaka Tribune (28 Jun 2024)
- An **independent probe body** to be formed to investigate the concerns on pre-paid meters

6. Transparency and Accountability related with Power and Energy Sector

6. Transparency and Accountability related with Power and Energy Sector

Table 25: Transparency and Accountability: Major Reforms Required

Issues	Reform measures
Ensuring transparency in procurement process	Disclosing the procurement and bidding process of the power plants
Addressing the anomalies in financial accounts of government entities	Financial Accounts Disclosure of Public Authorities

6. Transparency and Accountability related with Power and Energy Sector

6.1 Disclosing the procurement and bidding process of the power plants

- The **non-transparency in the procurement and bidding process** of the power plants have questioned the approval process of the power plant projects
- As the **procurement process was non-competitive** and confidential, issues such as determination of power purchase rate, capacity payment and extensions of the inefficient powerplants could not ensure fairness
- The **faulty procurement and bidding pro**cess of the major power projects such as procurement of Adani power plant, Payra Power Plant and Rampal power plant has costed us additional **BDT 35,000 crore.**
  - Whereas the public procurement should be **open and disclosed** for everyone for ensuring people's involvement
- It is expected that all power plants currently being operated **under 'capacity payment' facility** as per their contracts with the BPDB **should be called for revision of the contract** with 'no electricity no pay' facility given the emergency economic situation of the country
- In line with that, the **data on the generation cost, power purchase tariff**, efficiency level, plant factor, fuel cost, capacity payment, date of contract expiration, **oil import cost, LNG import cost** and ither related costs must be updated **regularly on the respective websites**

6. Transparency and Accountability related with Power and Energy Sector

6.2 Financial Accounts Disclosure of Public Authorities

- The disclosure of the financial accounts of the government bodies specially BPDB, BPC and PetroBangla are **not transparent**
- The financial reports are **published in always lagged period** of at least 6 months
- A mismatch in the financial data within the different sources of public authorities have been found several times
    - The publication of the financial report is not only delayed as well as non- transparent in nature
- **Faulty estimation of the average power generation cost** from BPDB power plants have been observed in the BPDB annual report of FY2022
    - The mentioned average power generation cost in the BPDB report is **shown Tk 5.02**. However, doing the calculation based on the plant wise power generation cost given in the **BPDB report**, the **cost stands at Tk.38.5**
- Many government authorities specially BPC has been **projecting loss since last few years**. The reality says otherwise. The **net loss has to be managed** through **subsidy or debt, or both**.
    - On the contrary, BPC while the financial report published later the year shows profit
    - However, it remains a concern **whether the institution has enough financial depth** to facilitate such a huge net loss through debt
    - Review of its expenditure on non-revenue generating activities and **prioritise initiatives that either reduce these costs** or convert them into revenue-generating operations

6. Transparency and Accountability related with Power and Energy Sector

Table 26: Financial Accounts Disclosure of Public Authorities (in Lacs taka)

BPC			
	FY2024-25	**RFY2023-24**	**BFY2023-24**
Net Profit/Loss	-556398.8	384151.36	-1001900.48
Dividends payable to Government Exchequer	30000	30000	10000
Total Contribution Payable to Government Exchequer	1360731.09	1139846.82	1426308.33
Long Term Loan Repayment	0	0	1400000
Investment in Fixed Asset	240780	217955	392391
BPDB			
	FY2024-25	**RFY2023-24**	**BFY2023-24**
Net Profit/Loss	-5401154.61	-3977839.36	-5034169.78
Dividends payable to Government Exchequer	0	0	0
Total Contribution Payable to Government Exchequer	201246.51	197989.71	210192
Long Term Loan Repayment	165935	201978.39	180935
Investment in Fixed Asset	60048.3	662612.72	557022.09
Petrobangla			
	FY2024-25	**RFY2023-24**	**BFY2023-24**
Net Profit/Loss	27778.3	41461.15	44882.95
Dividends payable to Government Exchequer	30000	40000	46000
Total Contribution Payable to Government Exchequer	30000	40000	46000
Long Term Loan Repayment	37000	37000	28000
Investment in Fixed Asset	2166	1023	1870

6. Transparency and Accountability related with Power and Energy Sector

6.3 Eradicating Corruption

- Long-standing poor governance, corruption, irregularities, and mismanagement has plagued the power and energy sector
- **CPGCBL imported tools for the Matarbari Power Plant** at significantly inflated prices, including two pipe cutters at Tk. 93 lakh (642 times inflated) and two German hammers at Tk 1.82 lakh (**55 times inflated**), with a customs report revealing that all 19 items in the shipment **were priced 5 to 18,545 times higher than** the recorded value (The Daily Star, April 2, 2024)
  - CPGCBL claimed the **inflated prices** were "normal" due to **"special orders"**
  - Import documents show that the **tools would not be directly used** in the power plant, and are **freely importable** as they are used in all types of construction and routine maintenance work
- It is expected that more such incidents of corruption will come to light in the upcoming future

7: Regional Partnership and Co-operation

7. Regional Partnership and Co-operation

7.1 Bilateral and multilateral partnership and cooperation at regional and global levels

- Bilateral and multilateral partnership and cooperation at regional and global levels **may experience major shifts** with regard to development of the power and energy sector
- The **partnership with the USA** in the power and energy sector would get new momentum which would have multiple dimensions on energy transition point of view
  - Energy transition would be **promoted through energy efficiency** related issues
  - Exploration of domestic **off-shore gas** would be expedited through the participation of US companies
  - At the same time, **ongoing US investment** would be continued or even further expedited in case of **further extension of LNG related contracts** with US companies, land-based LNG refueling plants etc.
- The **partnership with the EU** particularly focusing on promoting clean/renewable energy is likely to continue
  - The **postponed negotiation on new cooperation** agreement between Bangladesh and European Union is expected to start under the new Interim government
  - In October 2023, an agreement was signed for **€477 million as loan and grant** as part of an agreement signed with European Investment Bank (EIB), the European Commission (EC)to support the renewable energy sector of Bangladesh

7. Regional Partnership and Co-operation

7.1 Bilateral and multilateral partnership and cooperation at regional and global levels (continued)

- **Partnership with Russia** particularly in implementation of **Rooppur Nuclear power plants is** likely to continue.
  - However, new contracts for exploring gas from onshore blocs may face difficulties
- **Bilateral partnership with India** or regional partnership with other South Asian countries (including Nepal and Bhutan) through Indian territories, may **face some uncertainties**
- **Partnership with China** in case of coal and renewable energy-based power plants are not likely to face major difficulties during this period
  - The **partnership with Japan** would continue with some changes in focus with regard to energy transition
- **Partnership with MDBs** including World Bank, IMF, AFB, AIIB etc, would **get momentum**
- However, **given the severe pressure** in the balance of payment (BoP) when government needs increased flow of foreign exchange **taking strong stance against ongoing bilateral partnership** would not be so easy
- A major focus for **future partnership and collaboration** with development partners should be to support energy transition through **renewable energy-based infrastructure** development in the country

7. Regional Partnership and Co-operation

7.2 Regional Partnership and Co-operation with India, Nepal and Bhutan

- Bangladesh is now importing 2656MW of electricity from India which is **10% of Bangladesh's installed power** generation capacity
- Out of which **1600 MW is supplied from Adani Power's** Godda plant in Jharkhand state is the only one in India under contract to export 100% of its power to Bangladesh
- According to a recent development (12 August 2024) of the amendment of the Indian law, Adani decided to allow a domestic grid connection in case of a consistent drop in offtake or payment defaults
    - The **Adani will only supply the excessive power** after meeting Bangladesh's demand to India
- The **BPDB needs to review the level of importance of importing electricity** from the Indian power plant (1600MW) **considering the excess capacity** available domestically.
    - Review the contract under 'no electricity no pay'
    - Given the fiscal pressure the government **needs to reduce import-based electricity** and put focus on renewable energy-based electricity
- On June 11, the **former Cabinet Committee** on Government Purchase approved a proposal to **import 40 megawatts of hydropower** from Nepal at a per unit rate of Tk8.17, including transmission charges.
    - Since electricity will be transmitted to Bangladesh through the Indian grid, **India will be paid a trading margin** of 0.059 rupees per unit
    - Additionally, Bangladesh will have **to give transmission costs to India,** however, that has not been determined yet
- The plan to **import 500 MW from Nepal through Indian corridor needs further discussion** with India to get their position of cooperating new interim government

7. Regional Partnership and Co-operation

7.3 Partnership for Import of LNG Import

- On July 3, 2024, the then **Cabinet Committee on Procurement accepted** the proposal of the Excelarate Energy of USA at $12.9697 per MMBtu
  - This one cargo of LNG is worth Tk 609.27 crore. Since this procurement was done through asking for quotations, **this import should be made after reviewing the price**
- The procurement committee also **gave an approval to acquire one cargo ship of LNG from Singapore's** Vital Asia Pvt.
  - The cost for this acquisition is set at USD 17.55 per unit. **The price of this deal should be reviewed**
- During October 2023, the **government was planning to enter into an agreement with Excelerate** Energy for 15 years from 2026
  - 1-1.5 million ton of LNG per year would be supplied through this deal
  - The pricing for **LNG per unit will be set at 13.35 per cent of the price of crude oil, in** addition to USD 0.35
  - **This deal should be revised** since it is a **very long-term deal** with a variable pricing mechanism
- **Two additional agreements** have been inked with Oman and Qatar for LNG import as well to be initiated from 2026
  - These **agreements should be reviewed** and competitive price should be ensured
- An agreement was approved between Sylhet Gas Fields Limited and Sinopec International Petroleum Service Corporation, China, for well drilling activities of the project titled "Drilling of Sylhet-11 (Development Well) and Rashidpur-13 No. Well (Exploratory Well)"
  - Tk. 445 crore will be spent on this mining operation
  - These kinds of **local gas drilling exploration activities are welcomed**
- Petrobangla should **expedite the bidding process of off-shore gas blocs** besides using its ‘gas development fund’ mainly to explore on-shore power plants

8. Pathway for Energy Transition under the Interim Government

8. Pathway for Energy Transition under the Interim Government

8.1 Framework for Energy Transition in Bangladesh

- To gradually transit towards **energy transition to achieve 40% renewable energy target by 2041**, the new interim government have to take immediate action
- The chronology of the energy transition can be segregated into **5 stages demonstrated** in table 27
- The CPD Power and Energy Study is **laying out activities and initiatives** that needs to be taken by the new government in the short to medium terms
- These reforms and formulation activities can be divided under **first three phases of energy transition**
- It is expected that the interim government will **place its 100 days programme for the power and energy sector** taking into account of the **energy transition in mind** where proposed measures will be reflected

Table 27: Stages of energy transition chronology

Phase 1: Assessment and Planning	Phase 2: Research, Development, and Demonstration	Phase 3: Infrastructure Development	Phase 4: Market Integration	Phase 5: Monitoring, Evaluation, and Adjustment
Energy Resource Assessment	Research and Development	Grid Modernization	Market Design and Regulation	Performance Monitoring
Policy Framework Development	Pilot Projects	Scaling up Projects	Private Sector Engagement	Policy Review and Adjustment
Stakeholder Engagement	Capacity Building	Energy Storage Solutions	Distributed Generation	Public Awareness Campaigns

No/marginal progress has been made Limited progress has been made Moderate progress has been made

8. Pathway for Energy Transition under the Interim Government

8.2 Recommendations for Phase 1 (within 6 months): Assessment and Planning

Necessary revision, amendment and formulation of acts, laws, rules should be the first and foremost step of the interim government

- **Current policies**, such as the National Energy Policy of 2004, are outdated and should be revised to incorporate modern renewable energy technologies and practices
- Policies should include a fixed goal for reducing greenhouse gas emissions, detailed plans for electrifying rural areas, and guidelines for feed-in tariffs (FiT) and sector-wise renewable energy diversification
- The revised policies should include clear definitions and objectives, prioritize renewable energy, and establish a framework for phase-out plans for fossil fuels
- Harmful Acts like **Quick Enhancement of Electricity and Energy Supply Act** should also be abolished
    - However, **MCPP should be kept intact**

BERC Act 2023 need to be amended for strengthening its institutional capacity

- The **amendment of BERC** act is the need of time so that the institution can stay true to its role
- BERC's role is much-needed when the period of market-based pricing system which is difficult to ensure in its current legal stature
- The **electricity tariff determination** should also be under the jurisdiction of BERC along with LPG

8. Pathway for Energy Transition under the Interim Government

8.2 Recommendations for Phase 1(within 6 months): Assessment and Planning

IEPMP needs to revised

- Given the weaknesses, **IEPMP needs to be revised**
- The current OLS method used in the IEPMP should be replaced with VECM for more accurate and reliable energy demand forecasting

Competitive bidding processes should be implemented and ensure all procurement plans and proposals are publicly available

- **Public Procurement Act (PPA) 2006 and Public Procurement Rules (PPR) 2008** should be immediately enforced replacing the quick enhancement act which will increase transparency, reduce the risk of favoritism, and foster public trust in energy transition projects

Ensuring stakeholders participation to make the decision making more inclusive

- Engage with a **broad range of stakeholders**, including government bodies, private sector participants, civil society, and international partners, to ensure a comprehensive approach to energy transition
  - This engagement should **include regular consultations and feedback loops** to refine strategies and policies continually

Prioritize the identification and assessment of renewable energy resources such as solar, wind, and hydro across different regions of Bangladesh

- This should include **feasibility studies, potential site identification**, and resource mapping
- **Transparency in these assessments** is critical to attract both local and international investments
- **A thorough satellite mapping** should be carried out by the government to help the country understand the best locations for installing solar panels
- In fact, this could **facilitate private consumers and government offices** in realizing the extent to which they should consider solar panel installation

8. Pathway for Energy Transition under the Interim Government

8.2 Recommendations for Phase 1(within 6 months): Assessment and Planning

Reviewing the procurement and bidding process of the power plants

- Given the allegation of the non- transparent procurement process of the power plants it is important to **review the contract of the existing power plants**
- If needed the **clause of the contract should be revised withdrawing the capacity payment clause**

Phasing out inefficient rental and quick rental power plants

- The rentals and quick rentals that have already finished their lifetime and **exhausted the potentials should be stopped immediately**
- The **inefficient power plants** with very low annual plant factor should be phased out earliest possible
- The **efficiency assessment of** the power plants that have completed half of their lifetime should be **conducted**

Revising the ADP allocation for FY2024-25 to expedite renewable energy

- Necessary review and revision of the budgetary allocation and ADP allocation needs to done focusing on **building Smart Grid, renewable energy promotion, domestic gas exploration**
- The two projects on LNG import and building FSRUs **should be stopped immediately**

8. Pathway for Energy Transition under the Interim Government

8.2 Recommendations for Phase 1(within 6 months): Assessment and Planning

Faulty pre-paid meter causing troubles for consumer

- In line with troublesome experiences of the high power tariff bills there has been a continuous stream of complaints voiced on social media platforms
- In response to these grievances, a **formal legal complaint was submitted to the High Court**, leading to the **establishment of an investigative committee**
- Despite this, during the tenure of the previous government, the incumbent Secretary of the Power Division emphatically asserted that **there was no possibility of tampering** with electricity bills in the pre-paid meter system
    - However, the **findings of the investigation were not made public**
- Consequently, a **new investigation must** be undertaken by the interim government to uncover the truth behind these persistent complaints

Ensuring transparency and accountability of financial accounts of the public authorities

- The actual financial state of the public authorities **need to be transparently revealed** to the public to ensure accountability
- The **financial data of BPDB, BPC, RPGCL and PetroBangla should regularly be updated** in the respective website with audit reports
- An **independent review of the financial reports** of BPDB, BPC, RPGCL and Petrobangla needs to be carried out by **international audit firms**

Disclosure of procurement contract and data of the power plants

- All the documents and **reports related to the public procurement** especially power plants **should be openly accessible** as these are not **confidential documents by law**
- The data must be **updated and published** on the website regularly

8. Pathway for Energy Transition under the Interim Government

8.3 Recommendations for Phase 2 (between 6-12 months): Research, Development, and Demonstration

SREDA needs to be Overhauled as the lead authority for RE

- Institutional structure of SREDA needs **major overhaul which better suit** to take it as a lead role in energy transition in the power sector
- SREDA should be under the operated of the Prime Minister/Chief Advisor's Office
- The capacity of institutions like SREDA to **provide training programs** for personnel, focusing on renewable energy technologies and project management as well as prioritization of project completion should be strengthened
    - **Public awareness campaigns** should be conducted to educate the community about the benefits and importance of transitioning to renewable energy
- SREDA needs to play a major role of coordination for **green energy transition by better coordinating with other relevant ministries** responsible for the green energy transition (such as the Ministry of Finance, Ministry of Agriculture, and Ministry of Industry)

Formation of necessary renewable energy related government facilities

- **Dedicated research institutions** such as the Renewable Energy Laboratory and Office of Energy Efficiency and Renewable Energy to focus on innovation in renewable energy technologies should be established
    - These **institutions should work on developing solutions** tailored to Bangladesh's specific geographic and economic conditions

Enhancing the Research and Development for energy transition

- An Office of Scientific and Technical Information on Energy to serve as a **central repository for energy research and data should be set up**
    - This office should **facilitate collaboration among research institutions and industry players**

8. Pathway for Energy Transition under the Interim Government

8.3 Recommendations for Phase 2 (between 6-12 months): Research, Development, and Demonstration

Pilot projects and feasibility studies in selected regions to test and demonstrate the viability of various renewable energy technologies should be launched

- These **projects should be closely monitored, and** the results should be made publicly available to inform future large-scale implementations
- In a number of **state in India (such as in Delhi) it is made mandatory** for all government buildings with an area of 500 square meters or more must install rooftop solar panels within the next three years.
- Upon conducting, the **satellite mapping, Bangladesh** government could consider a similar policy.

Initiative to attract more foreign direct investment needs to be adopted

- A number of bilateral, regional, & global financing sources (**approximately $39.74 billion) are available for** Bangladeshi and global investors to invest in renewable energy in Bangladesh.
- However, the **priority for now should be attracting the investors** by restoring peace and order, and improving economic situation including the reserve scenario

8. Pathway for Energy Transition under the Interim Government

8.4 Recommendations for Phase 3 (between 12-36 months): Infrastructure Development

Upgrading the existing grid to Smart Grid by 2041

- **Prioritise and invest in advanced grid technologies**, including smart grids and automated systems, while strengthening the capacity of transmission and distribution networks
- A significant portion of power outages are caused by inefficiencies in the current grid, rather than generation shortages
- **Modernising the grid** will support the integration of large-scale renewable energy projects
- Additionally, upgrading the grid will enable the implementation of smart metering systems, improving energy management and reducing billing inaccuracies

Priority should be shifted from LNG import to domestic gas exploration

- The **target set of drilling 48 wells by 2025** will not be possible unless the priority is shifted from LNG import to domestic gas exploration
- More **well workover projects should be undertaken** to ensure the daily gas requirement (2,000mmcf/d) is mostly met with the local gas

Immediate prioratisation of scaling up of renewable energy projects

- To scale up renewable energy projects the **govt. must ensure speedy and on-time completion** of the domestic renewable energy projects
- The **tax and incentive structure needs to be revised** for an **equitable and just business environment** for renewable energy-based power generation

A decentralized renewable energy-based power sector

- It needs to be developed putting emphasis on utility-scale, mini-grid and micro-grid level of power generation
- The centralized **institutional structure** for regulating, overseeing and monitoring the system needs to more **decentralized in the future**
- **'Social business'** could be used as a model which could be thought of sustainable renewable energy investment

Thank you.