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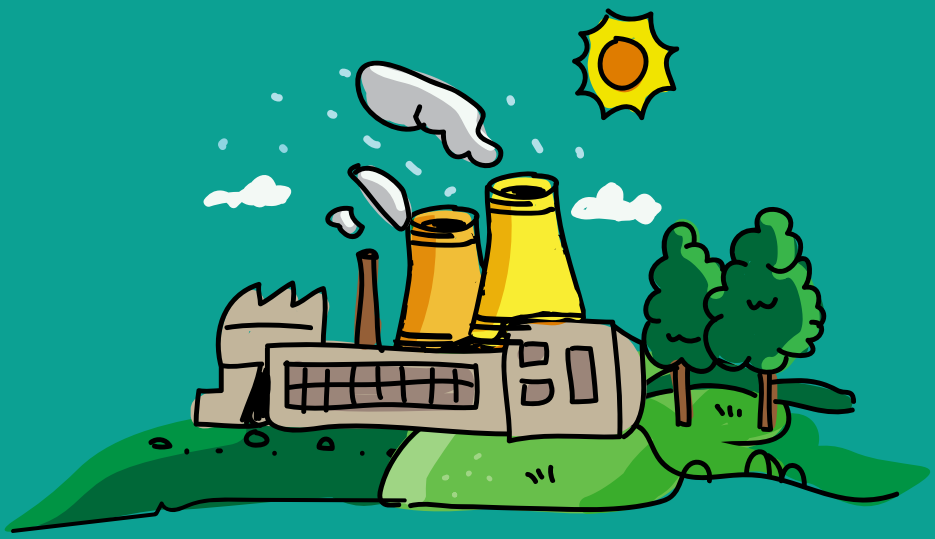
Coal and LNG-based Power Projects in BANGLADESH

Governance Challenges and the Way Ahead

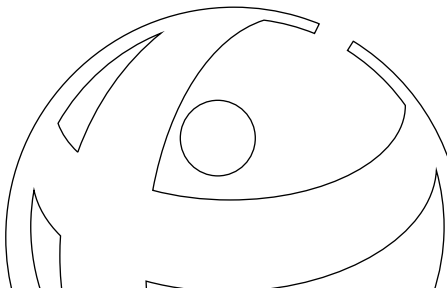


Coal and LNG-based Power Projects in BANGLADESH

Governance Challenges and the Way Ahead

Executive Summary

(English version, based on the Study Report in Bangla)



Coal and LNG-based Power Projects in Bangladesh : Governance Challenges and the Way Ahead

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All the information and analyses presented in this publication reflect TIB's position, responsibility of which lies with the researchers concerned and TIB.

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Executive Summary*

Background and rationale of the research

Power and energy is a nationally important sector of Bangladesh. Given the urgency of the demand, power generation and supply is a top priority of the government. Conservation and improvement of the environment and biodiversity are among the fundamental principles of the state policy as delineated in the Constitution of Bangladesh (Article 18-A). However, in reality, coal and LNG-based (Liquefied Natural Gas) power projects are implemented in ecologically critical and endangered areas. As a signatory of the Paris Agreement, Bangladesh has pledged to reduce Greenhouse Gas (GHG) emissions and promote renewable energy, which are denoted as the pre-requisites of Sustainable Development Goals (SDG 7 and 13). But the relevant official policies and practices of the government and relevant projects undertaken in the sector do not fully comply with these commitments.

Despite national and international commitments to provide accessible, affordable, and eco-friendly electricity to the citizens, investments in power generation continue to emphasize coal and LNG, which endangers protection of the environment and contributes to climate change. Even after scrapping ten coal-fired power plants in 2021, the government has set a target to generate 10,000-12,000 Megawatts of electricity using the fossil fuel technology by 2030, accounting to one-fourth of the overall targeted output. The decision to transform some of the scrapped coal-based power plants into LNG-based power plants indicates the policy shift toward costly and import-dependent fossil fuel. Moreover, fossil fuel- based power projects are implemented by taking foreign debt risk on one hand while the government is paying heavily on account of capacity charges for unutilized excess electricity on the other.

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* This is a summary of the study report titled, "Coal and LNG-based Power Projects in Bangladesh: Governance Challenges and the Way Ahed" which was released on 11 May 2022 through an online press conference.

The Perspective Plan (2021-2041) and the 8th Five Year Plan have emphasized generating renewable energy acknowledging the deficits in growth in energy generation from renewable sources. However, still there are deficits in the implementation of the related plans. There are also allegations by the concerned stakeholders that there is conflict of interest among Japan International Cooperation Agency (JICA), Tokyo Electric Power Company (TEPCO), and its affiliated organizations in the formulation of the Power System Masterplan (PSMP) and the forthcoming Integrated Energy and Power Master Plan (IEPMP) of Bangladesh. Besides, the power projects are approved under The Quick Enhancement of Electricity and Energy Supply (Special Provisions) Act, 2010. Notably, the implementation cost of coal-based power plants in Bangladesh is much higher than the global average. However, there are deficits of information in the public sphere, and media reports have revealed several irregularities in different phases of implementation of power projects. An earlier study conducted by TIB identified deficits of good governance in land acquisition and Environmental Impact Assessment (EIA) in coal-based power projects. However, there is a dearth of in-depth research on governance issues in the planning, approval, and implementation process of coal and LNG-based power projects. Therefore, this study is conducted to assess and analyze the planning, approval, and implementation process of the coal and LNG-based power projects from the governance perspective.

Objectives of the study

Overall objective : The overall objective of this study is to identify and analyze the governance challenges of the planning, approval, and implementation of laws and policies for coal and LNG-based power projects.

Specific objectives : The specific objectives of this study are to :

- identify the challenges of implementation of coal and LNG-based power projects to comply with national and international commitments and related laws, policies, and regulations;
- analyze the reasons and factors behind approving the coal and LNG-based power projects;
- identify irregularities and corruption, including their patterns, extents, causes, and actors in the planning, approval and implementation stages of selected coal and LNG-based power projects; and
- suggest recommendations to overcome the challenges.

Methodology of the research

This is basically a qualitative research. However, limited quantitative analysis has also been made where applicable. Collection, verification, and analysis of primary data are performed using qualitative tools and techniques. The study was conducted during February 2021 to April 2022.

Project selection

Consistent with the objectives of the study, three projects (two coal-based and one LNG-based) were selected. The selected projects were approved (see the flowchart on Annex 1 for more details on the process of approval) as a part of the implementation of the PSMP. However, the following issues were also considered while selecting the projects–

- Location of the projects- ecologically critical areas and climate risks;
- Size and budget of the projects;
- Progress of project implementation; and
- Impacts of the projects on natural resources, biodiversity, ecosystem and livelihood of the local people living in the surrounding areas.

Table-1 : Projects Selected for the Study

Serial No.	Project Name	Type of Project	Financier	Capacity (in Megawatts)	Contract signing Year	Location
1	**Barisal Coal-based Power Plant**	Coal	DFC Holding; Hong Kong Holding; Iso Tech, Powerchina Consortium, Government of Bangladesh	350	2017	Nishanbaria, Taltali, Barguna
2	**Banshkhali SS Power Plant**	Coal	S. Alam Group; SEPCO; HTG Development Group; Chinese loan (7 banks); Government of Bangladesh	1320	2013	Gondamara, Banshkhali, Chattogram
3	**Matarbari LNG Power Plant**	LNG	Coal Power Generation Company Bangladesh limited; Mitsui Company Limited	600	2015	Matarbari, Moheshkhali, Cox's Bazar

Types and sources of data, and data collection method

Both primary and secondary data has been collected from different sources using different data collection methods.

Table-2 : Types and sources and data collection method

Data type	Data collection method	Data source
Primary data	Key Informant Interview	Officials of concerned departments and ministries; energy and EIA experts; economists; lawyers; local community people; human rights workers; public representatives; journalists
	Focused Group Discussion (FGD)	local community people
Secondary data	Analysis and review	Relevant laws rules, and policies; published research reports; published media reports; EIA reports; relevant public-private reports and websites

Analytical framework

The data for this study has been collected, verified, and analyzed based on six indicators.

Table-3 : Analytical framework based on governance indicators

Governance Indicators	Specific area of analysis
Compliance of laws and policies	• International pledges, national laws, policies, and regulations
Capacity	• Technological capacity; Energy sector infrastructure; • Financial management of the power projects
Transparency	• Information disclosure- proactive and on demand • Website and updating information and information management
Accountability	• Monitoring and audit; grievance redresses system • Agreements on approval of projects
Participation	• Site selection, Environmental and Social Impact Assessment, and determining compensation • Rehabilitation, livelihood, training, and employment of the affected local people
Irregularities and Corruption	• Project approval and implementation • Conducting environmental impact assessment and providing environmental clearance • Land acquisition, fixing compensation and disbursement • Interests of various stakeholders

Key findings

Challenges in formulation and ensuring compliance of laws and policies

Preparation of Power System Master Plan (PSMP)

The Government of Bangladesh (GoB) could not prepare the PSMP on its own. Instead, the GoB has repeatedly taken financial assistance from JICA, and JICA has repeatedly appointed Tokyo Electric Power Company (TEPCO) as a consultant to prepare the PSMP. As a result, the PSMP has prioritized coal and LNG-based energy sources for power generation, allegedly to serve Japan's business interests. In addition, Bangladeshi energy sector experts were not involved in preparing the PSMP. The Power Division has not ensured effective coordination with the concerned stakeholders and has not played its due role in upholding national interests. As TEPCO formulated PSMP, engaging its sister organization in implementing energy projects is a clear indication of conflict of interest. Notably, the Tokyo Electric Power Services Co. (TEPSCO) Ltd, the sister concern of Tokyo Electric Power Company (TEPCO), and JERA and Marubeni have been employed as EIA and engineering consultants for energy generation, transportation, and distribution projects in Bangladesh.

Revisiting the Power System Master Plan 2016

Determining future energy demand : The PSMP-2016 estimated a 82,000 MW electricity demand by 2041 in a flawed manner, which had supply and demand inconsistency. Experts suggested that the PSMP took economic growth as the most determinant factor for estimating future electricity demand without considering the practical scenario and 70% of electricity production was estimated from coal and gas. To achieve this target, the government approved 18 coal and LNG projects which are environmentally damaging. Electricity is also generated as per the questionable estimate while only half of it is being used due to over-capacity. Moreover, the government pays 'capacity charges' for electricity generation that remain unutilized. In the FY 2020-21, the total subsidy paid to the Bangladesh Power Development Board (BPDB) was BDT 117 billion. Besides, during 2010 to 2020, the total accumulated loss of BPDB was BDT 627.02 billion.

Determining energy mix : Importance is given to import-dependent coal and LNG in the energy mix in the PSMP 2016. However, due to not giving proper

consideration to the fuel price in the international market and continual changes in the energy system, frequent changes were needed to be adopted in the energy mix.

For instance, once the emphasis given to domestic coal and gas was later shifted to imported coal and LNG due to not having proper plan. There are also deficits in initiatives to explore domestic gas and coal and ensure their efficient and effective use. As a result, such change in energy policy forces to bring change in the construction of relevant infrastructure. It increased wastage of public money and the Government incurred financial loss. In addition, electricity prices have increased nine times and the price has increased 91 percent on average in the last decade.

Considering the transformation of energy system and renewable energy : In the PSMP (2016), the transformation of the energy system has not been recognized with due importance. Despite the reduction of renewable energy production costs in the global market by 89%, there is a lack of emphasis on this source in the PSMP. For example, the renewable energy production goal is set at 2,800 MW by 2021 and 9,400 MW by 2041 despite having the viability to generate 30,000 MW. According to SDG-7, a lower-middle-income country is supposed to produce at least 17% of its electricity using renewable sources. However, the target was set at only 10% in Bangladesh and, against that goal Bangladesh could generate only 779 MW which is 2.3% of total generation capacity. Notably, only four out of 42 renewable energy projects have been implemented till 2021. Moreover, there is no effective model for transmitting renewable energy on the grid for selling by the private sector. As a result, the electricity generated from renewable sources remains unused in some cases.

Emphasis on transmission line preparation : In PSMP (2016), although the emphasis has been placed on energy production, there are deficits in the construction and preparation of transmission lines. Due to the lack of transmission lines, in some cases, the electricity cannot be supplied to the national grid despite production. Though electricity remained unused, the government pays subsidies to provide capacity charges for idle power plants and bears the financial loss.

The Quick Enhancement of Electricity and Energy Supply (Special Provisions) Act, 2010

The Quick Enhancement of Electricity and Energy Supply (Special Provisions) Act, was passed in 2010 for a temporary period of four years for quick enhancement of electricity. The act has been extended three times to keep it in force till 2026 despite producing surplus electricity. Section (9) of this act has revoked the court's jurisdiction if a project is approved under the act.

There is no scope to take legal action against violations of other relevant laws including public procurement act, abuse of power, and breach of transparency and accountability if activities are conducted sanctioned by this act. Long-term projects are approved for implementation using this act, and experts suggest that the projects are not eco-friendly and economically viable. Allegedly, irregularities have also taken place during the execution of the unplanned rental/quick rental and oil-fired power plants taken up under the act.

Precedence is given to this act under Section (3) to bypass the Public Procurement Act 2006. Experts of this sector suggest that despite there being qualified companies, instead of following an open tender process, allegedly, contracts are given to some pre-selected companies. As a result, the risk of irregularities in procurement, hiring contractors, and awarding contracts has increased. Besides, contracts are signed to purchase electricity at higher prices from unqualified and incompetent companies, some of which were unable to come to production within the contract period. As a result, state money is being wasted alongside increasing in expenditure in the energy sector. Some independent power producers (IPP) received capacity payments despite not generating electricity in the last ten years, and the government was unfairly forced to pay 431.7 billions of Taka.

Bangladesh Environment Conservation Act, 1995

Section 5 (1 and 2) of The Bangladesh Environment Conservation Act, 1995 describes demarcating and declaring ecologically critical areas, including its management. However, it does not provide instruction or guidelines to demarcate such critical areas. Some areas remain non-demarcated as 'ecologically critical areas' despite having significant risks of environmental degradation. Section 6 (E) of the act provides the opportunity to fill water bodies and change their class in the name of 'Essential National Interest', which, however, is not defined and elaborated explicitly. Misusing the clause,

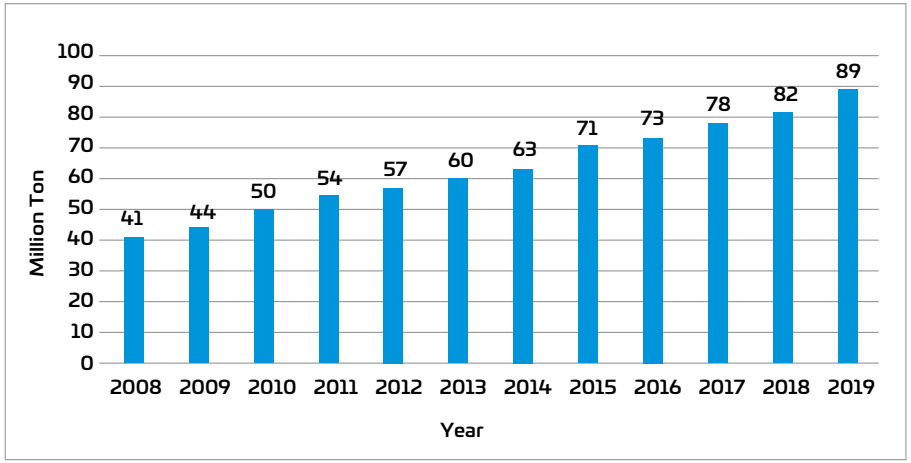
construction of project infrastructure continues by occupying water bodies and altering their class. For instance, 62.25 acres of river and khas land is occupied by the project authority to construct a 7.35 km road-cum-embankment along the banks of the Kuhelia River. The project authorities recommended altering land class for the construction of roads and embankment. Notably, road-cum-embankment is constructed 8-10 meters inside, encroaching the river. An island has developed through landfilling to store construction materials for the ongoing construction of a bridge in Matarbari.

Section 12 of the act discusses the provision for the Environment Clearance Certificate. There is scope to start project activities with the 'Location Clearance Certificate' and get Environmental Clearance Certificate using the so-called 'Extension EIA' without conducting the complete Environmental Impact Assessment (EIA). Exploiting the opportunity, heavy industries, including coal and LNG-based power plants are being planned, approved, and constructed in ecologically fragile and vulnerable areas. Written objections against the project given by statutory organizations, such as the National River Conservation Commission (NRCC), are being ignored in some cases. There are instances that the Department of Environment (DoE) found filling up of water bodies and encroachment of rivers on the spot during inspection. However, the DoE has failed to exercise its legal authority to stop such construction work. There are also the allegations that clearance is given on the faulty EIA reports, and reports are changed several times in the name of the amendment.

Challenges of Implementing the Intended Nationally Determined Contribution (INDC) Commitment

Bangladesh committed to reduce carbon emissions by 5% unconditionally and 15% subject to receipt of funds in the INDC under the Paris Agreement, but no significant progress has been made in its implementation. There is no action plan for raising funds for renewable energy generation along with a roadmap to implement the activities for the reduction of carbon emissions. Implementation of several coal projects in the name of supercritical and ultra-supercritical technology continues. By 2030, coal- based energy production will increase 63 fold with an estimated emission of 110 thousand tons of carbon per year from the 18 proposed projects. Notably, the energy sector emission of carbon dioxide (CO2) was 41 million tons in 2008, and it increased to 89 million tons in 2019, increasing by 118% compared to 2008.

Figure-1 : Carbon dioxide emission from energy sector (2008-2019)



Challenges related to capacity

Lack of technical capacity

Bangladesh lacks the technical capability to implement coal and LNG-based projects. Due to this, the projects are being implemented with imported technology. Relevant experts suggest that old and brownfield boilers of China and Japan have been claimed as greenfield and sent to Bangladesh, and thus the country is used as a 'dumping ground' for surplus and outdated coal technology discarded by developed countries.

Due to the failure to ensure domestic coal and gas use, the BPDB plans to generate electricity using imported fuel. Petrobangla does not have the capacity to supply more than 52.3% of the current gas demand. It planned to construct 11 import-oriented LNG power plants, including the Matarbari LNG power plant, without formulating a clear plan about energy source. Although Bangladesh has the potential to generate 30,000 MW of renewable energy, there are deficits in developing relevant infrastructure. Besides, the authorities failed to supply the electricity to the national grids due to not giving enough importance to setting up transmission lines.

Financial management in power projects

The lack of negotiation capacity: Unsolicited projects are taken up by the government because of agreeing to the direct investment proposals by the influential IPPs. Due to this the BPDB could not follow the open tendering process, resulting in the inability to negotiate foreign loans and financing agreements by considering the country's economic interests. The project implementation, fundraising, and financing are done and coordinated by the same entities, and it thwarts to make a negotiated deal for setting the interest rate and loan conditions.

Due to the lack of bargaining power in setting conditions, the foreign loan is taken at high-interest rates. Power producers are lending non-concessional loans from various foreign sources, including Chinese banks to implement projects where the government provides loan guarantees. According to the terms and conditions, the lender will also receive interest on the loan and equity profits in some cases. The loan interest rate is around 5-6 percent, and authorities need to pay the interest before the project completion and comes into operation. Two or more sovereign guarantees are also provided for the power producers. For example, guaranteeing the purchase of electricity with three to five times higher than the set price; condition of regular purchase of electricity; payment of capacity charge if electricity is not purchased; provision of duty-free import of spare parts equivalent to 10% of total investment per year; waiver of the government registration fee for land purchase etc. There are also conditions, such as collecting a nominal/token compensation if any producer fails to come to operation and production on time.

Challenges related to transparency

It has been observed that none of the selected projects has disclosed various project related information, either pro-actively or on demand (see Table 4).

Table-4 : Transparency-related challenges in the selected projects

Project information	Barisal Coal-based Power Plant	Banshkhali SS Power Plant	Matarbari LNG Power Plant[1]
Publish the Project DPP and EIA report proactively or on-demand	X	X	Not applicable
Disclosure of information on loan rates, conditions, profit distribution and income tax on the profits	X	X	Not applicable
Public disclosure of budget, financial report and audit reports	X	X	Not applicable
Provide accurate and complete information to the local people about land acquisition	X	X	Not applicable
Proactive or on-demand disclosure of contracts and procurement-related information	X	X	Not applicable
Providing information and regularly updating the Websites	X	X	X

X=Not done; √=Done

Challenges related to accountability

Lack of supervision

Pollutant emissions, waste management, and environmental damages are not monitored by the DoE at the field level. There are cases of land grabbing, both public and private properties, by the implementing entities. However, the responsible offices, including the local forest and land offices, do not monitor and oversee the project activities. The objections of the DoE and the Forest Department are ignored by the project authorities. However, compliance of the issues is crucial for the overseeing and maintenance of environmentally sensitive areas.

[1] It is to be noted that, although there is a non-binding agreement between Coal Power Generation Company Bangladesh Limited (CPGCBL) and Mitsui Co. for Matarbari LNG Power Plant, it has not registered as a joint venture yet. Therefore, some activities related to project implementation, including the preparation of the complete DPP, have not started.

There is no proper plan of supervision of DoE for monitoring the possible damages caused by the construction works during the implementation of the power projects. Notably, construction waste is dumped and discharged into the rivers and canals and no action is taken against the project authorities.

Deficits in auditing

The same organization is appointed every year for the annual audit of the power plants, and the audit reports are not updated regularly on the website. Besides, no explanation has been sought from the concerned authorities by auditors about how the allocated money has been spent in different sectors.

Deficits in redressing complaints

The local departments are reluctant to accept and settle the complaints of the affected people. There have also been cases of harassment of complainants, including non-cooperation and intentional delay. Affected people said that the local administration intimidates, exerts pressure, and harasses the complainants. There are allegations of patronizing corruption and irregularities of the project authorities by the local representatives and administration. Besides, affected people alleged undue interference in the judicial process by influential people. For acquiring land, landowners were harassed by filing false cases and lawsuits. However, no action has been taken against such alleged irregularities. The Anti- Corruption Commission (ACC) has filed a case for forgery and faking land documents. On the contrary, the main accused, involved in preparing the forged document, has been allowed to be acquitted by filing cases against the witnesses of the forged documents. The accused officials involved in the corruption have not been brought to justice.

Table-5 : Challenges of ensuring accountability in selected projects

Project information	Barisal Coal-based Power Plant	Banshkhali SS Power Plant[2]	Matarbari LNG Power Plant
Conducting Environmental and Social Impact Assessment	X	√	X
Approval of harmful fossil fuel-based power plants under The Quick Enhancement of Electricity and Energy Supply (Special Provisions) Act 2010	√	√	Not applicable
Project approval though signing contracts and following the standard agreement process	X	X	Not applicable
Approving projects by fully preparing DPP	X	X	Not applicable
Providing contracts and execute purchases based on Public Procurement Act 2008 and following an open competition process.	X	X	Not applicable
Follow open tender process	X	X	Not applicable
Tax exemption by National Board of Revenue in the case of importing capital equipment for the project	√	√	Not applicable
Tax and VAT exemption (income tax, consultation tax) and production and VAT rebates to EPC contractors	√	√	Not applicable
5-15% VAT exemption by NBR on fuel imports	√	√	Not applicable
Procuring transformers, capacitors, protection equipment following PPR	X	X	Not applicable
Providing guarantee of loan for the project by the Government	√	√	Not applicable

X=Not done; √=Done

Challenges in ensuring participation

While selecting the project sites, no opinion was sought from the local people or local government representatives. During the meeting with the visiting policymakers at the project site, only hand-picked beneficiaries who receive undue benefits from the project authority are permitted to attend instead of actual victims, and the selected participants only repeat what the authority

[2] The Banshkhali SS Power Plant failed to come to production in time, and the time has been extended. During the construction phase of this power plant, SS Power Plant has received BDT 31,890 million from the government as tax and VAT rebates.

trains them to tell. Deficits in ensuring public participation in environmental and social impact assessments (IEE, EIA, and SIA) are also reported by local people and their views on the environmental risks and damages are not reflected in the EIA reports.

While determining the compensation amount, the participation of local people and representatives of local governments was not ensured. There are shortfalls in ensuring the rehabilitation, livelihood training, and employment of the locally affected population.

Irregularities and corruption

Corruption in project approval

According to relevant stakeholders the coal and LNG projects were approved without proper scrutiny and analysis, basically to serve the interests of influential groups. They also alleged collusion of influential groups with the policymakers and the concerned officials of the ministry. Foreign lobbyists are also considered to play an influential role in recruiting and transferring officials, including secretaries of relevant ministries to approve projects of their interest. Government bureaucrats are also reported to be part of the collusion. Projects are reportedly approved through signing contracts without following the standard agreement process. Notably, the price per unit of electricity generated at coal power plants in neighboring countries (India, China, Pakistan, and Australia) ranges from BDT 3.46 to 5.15. However, the selected projects have been approved, with the provision to purchase electricity at much higher prices (Table 6).

Table-6 : Opportunity to purchase electricity at a higher price in the selected projects compared to neighboring countries

Power Plant	Price of electricity per unit (BDT)	Extra price compared to neighboring countries (BDT)	Extra price compared to neighboring countries (percentage)
Barisal Coal-based Power Plant	6.61	1.46-3.15	22-48
Banshkhali SS Power Plant	6.77	1.62-3.31	24-49

Although the price of electricity is determined by considering the initial price of coal as USD 120 per ton, flexibility remains to increase the price of electricity depending on the project operation and maintenance cost and fuel price. As the coal price may increase along with transportation costs after the beginning of electricity production, concerned stakeholders suggested that the actual price will be two to three times higher than the initial price. Undue pressure was exerted by the influential IPPs to authorize their import of fuel. Therefore, the sole importing power of the state fuel importing company, Bangladesh Petroleum Corporation, has been revoked through changing the law, allegedly due to undue pressure from influential private power companies.

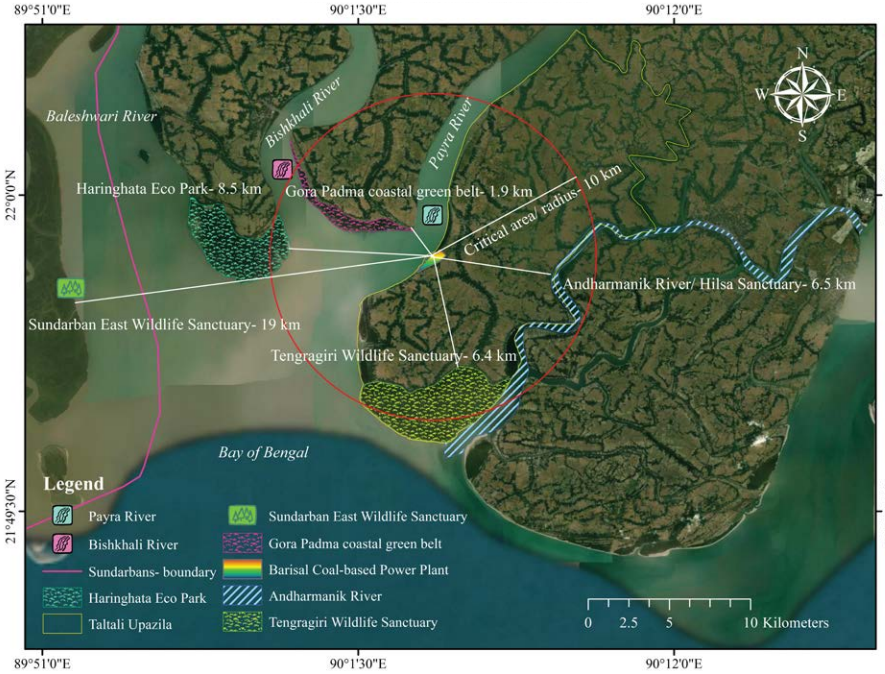
Experts in the power sector expressed concern noting that there are risks of money laundering by power-producing companies in importing the fuel through over-invoicing colluding with the exporting companies. Not limiting or target setting for power generation from the private sector is also a challenge. Besides, relevant experts suggest that the construction cost per megawatt of a coal-based power plant in Bangladesh is estimated at BDT 70 to 80 million. However, the estimated construction cost per megawatt of BDT is 137.5 million for the Barisal Power Plant and BDT 165 million for Banshkali SS Power Plant. Relevant stakeholders alleged that the excess amount is taken as a commission by vested quarters in the project approval process.

Environmental Impact Assessment (EIA) related corruption

Barisal Coal-based Power Plant : Initially, project activities started without an EIA and continued without any Environmental Clearance Certificate (ECC). Although the EIA was later approved, the environmental concerns of the Tengragiri Forest, also known as the second Sundarbans of the country, were not duly considered. In particular, the risk of damage and environmental loss to Andharamanik Hilsa Sanctuary and Gorapadma green belt was not taken into consideration. Besides, the condition of EIA approval has been violated during project implementation. For instance, the sluice gate has been blocked, and several canals adjacent to the project area have been filled up. The process of growing natural forest land has been obstructed through the filling. Sand has been extracted from the Shuvo Sondha sea beach, violating the environmental restrictions of withdrawing sand within one kilometer from the sea beach. Besides, the power plant chimney has been constructed despite the suspension order of the construction work and illegal filling of the river, issued in favor of

the complaint lodged by the National River Conservation Commission (NRCC) through the District Commissioner's office.

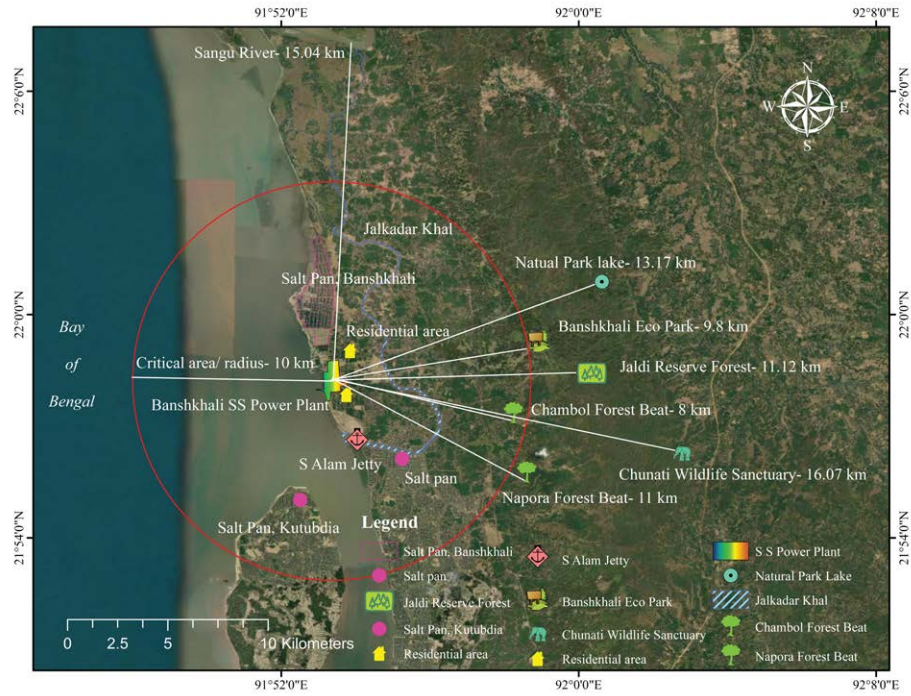
Figure-2 : Barisal coal-based power plant and nearby ecologically critical areas



Banshkhali SS Power Plant : Despite the faulty EIA report, the ECC has been issued by the DoE, allegedly influenced by some influential people. Concerned stakeholders said that the EIA report has been changed repeatedly. Notably, the EIA report did not outline the mitigation measures to address the loss of aquatic biodiversity as hot water will be released from the power plant into the sea. Internationally recognized air quality measuring and testing methods have not been followed. In addition, the EIA report did not provide accurate information on the effects of air, water, ash, and noise- related pollution despite the project being located in a densely populated area. The sea beach and coastal land have been encroached and filled up for the construction of the project facilities. Local people said that the filling up of the Jalkadar canal causes waterlogging

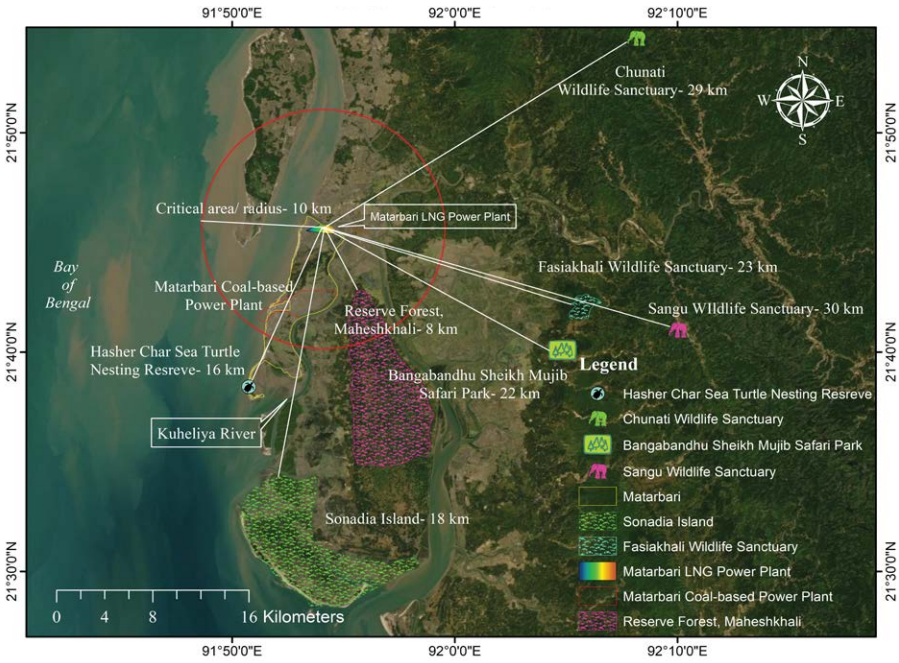
in the surrounding area. In addition, there is a risk of long-term damage to the environment as the project is implemented using the land of the Forest Department and Bangladesh Water Development Board.

Figure-3 : Banshkhali SS Power plant and nearby ecologically critical areas



Matarbari LNG Power Plant : The land development activities of the project are going on without any EIA report. Due to the construction of roads by filling up the water bodies, waterlogging is prevalent in the settlement. Despite filling up the canals and natural water bodies for constructing approach roads for the power plant, no action has been taken by the DoE. It is to be noted that the implementation of eight large power projects in an area of 10 square km in Matarbari has brought drastic changes in landforms and land use. However, no integrated EIA has been done for Matarbari. Besides, sand extraction from the sea, near the acquired land for its development, has caused erosion along the one kilometer embankment area of western part of Matarbari.

Figure-4 : Matarbari LNG power plant and nearby ecologically critical areas



Purchase/Acquisition of excess land

An average of 0.23 acres of land is required for generating per megawatt of electricity for coal-based power plants, and 0.053 acres of land is required for LNG-based power plants built in neighboring countries. Taking this into consideration, it is estimated, as below, a total of 942 acres of additional land has been purchased/acquired for the projects selected under this study. In other words, an average of 0.69 acres of land has been purchased/acquired for selected coal-based power plants and 0.65 acres for the LNG- based power plant for electricity production.

Table-7 : Purchase/acquisition of excess land for selected projects

Power station	Production capacity (MW)	Required Land (Acres)	Acquired Land (Acres)	Additional Acquired Land (Acres)
Barisal Coal-based Power Plant	350	81	310	230
Banshkhali SS Power Plant	1320	304	660	357
Matarbari LNG Power Plant	630	33	388	355
Total	**2270**	**418**	**1358**	**942**

Besides, the total corruption of BDT 3,900.49 million has been estimated for the land acquisition and compensation payment phases in three power plants. A partial estimate of the corruption in amount is presented in Table 8.

Table-8 : Estimated amount of corruption in land acquisition and the process of providing compensation in the selected projects

Corruption in land acquisition and providing compensation	Amount in BDT			Money receivers
	Barisal Coal-based Power Plant	Banshkhali SS Power Plant	Matarbari LNG Power Plant	
Embezzlement of compensation allocated for leased landowners	22.9 million	--	--	Some of the Power Plant officials, Local public representative, officials of a national NGO, several officials related to land acquisition section and middlemen.
Collection of commission from compensation allocated for leased landowners	4.59 million	550 million	--	
Collection of commission from payment for the purchase/ acquisition of private land	--	2,000 million	820.5 million	
Embezzlement of compensation provided as lump grant for private land acquisition	--	--	330 million	
Collection of commission from compensation provided as lump grant for private land acquisition	--	--	44 million	
Grabbing private land and non-payment to landowners	24.1 million	--	--	
Making fake documents of *khas* land and receiving money through selling it	107.5 million	--	--	
Total	**155.99 Million**	**2,550 million**	**1,194.5 million**	

Corruption in land acquisition

Barisal Coal-based Power Plant : Private land has been forcibly seized in the name of the government priority project by Iso Tech in collusion with some officials of the local administration. Affected people alleged that apart from purchasing, private lands have been occupied and in some cases and forcibly seized. The fishermen communities living on the leased land have been intimidated, threatened, attacked, and forcibly evicted with the support of a section of officials of the local administration and influential people. In collusion with Iso Tech and some government officials, khas and private lands have been occupied by forging documents and creating fake landownerships. According to local people, the river, canal, coastal forest land, and 70 acres of agricultural land of 20 Rakhine families have been seized.

Banshkhali SS Power Plant : Salt farmers have been evicted by occupying 2 km of the sea beach. More than 100 acres of land from local people, including khas land, have been seized forcibly. Registry of land has been done by giving a nominal price to the landowners. In some cases, technically the land registry is taken from local people at a lower price in collusion with some local representatives and handed over to the power plant owners at a higher price.

Matarbari LNG Power Plant : Some land has been forcibly acquired from the local people to construct the power plant. Some employees of the concerned land acquisition branch of the District Commissioner's Office forced landowners to pay up to 20-30 percent as commission to receive compensation for their land. There are also allegations of buying land at a lower price by showing the salt pan as null land.

Irregularities in disbursing compensation

Barisal Coal-based Power Plant : A number of irregularities were allegedly carried out during the payment of compensation. The real owners of the land have been barred from getting compensation by filing lawsuits and false objections in the local land acquisition branch. In addition, with the help of a section of officials of the local administration. The landowners have been forced to sell the land to Iso Tech at a price lower than the market price and there has been a deliberate delay and procrastination in paying the price. Employees in charge of Iso Tech collected commissions for paying for the purchased land.

Banshkhali SS Power Plant : The project implementing authorities exerted undue pressure and intimidated the people to sell land. Under undue pressure, they were forced to sell land at a minimal price.

Matarbari LNG Power Plant : An NGO appointed to provide lump grants to the affected people on behalf of the project authority, allegedly collected 10-20 percent commission illegally to pay the compensation for land acquisition. Assigned employees of the NGO embezzled the compensation money by forcing landowners and affected day laborers to sign false indentures. Affected people also complained about delay and non-payment of compensation without going through a middleman.

Irregularities in rehabilitation and employment of the affected people

Barisal Coal-based Power Plant : The job opportunities at the project site are controlled by a local syndicate. There are also allegations of recruitment trade against the company employees involved in recruiting workers. Those who get recruited from nearby villages also face wage discrimination.

Banshkhali SS Power Plant : The local representatives control the labor recruitment and job opportunities in the project area, and collect BDT 30-50 per hour as commission from the laborers. Local people said that no training was provided to them, and employment arrangements were not made as promised to the locally affected people. There have been allegations of paying low wages to local workers and dismissing them from the jobs without providing them their due wages.

Matarbari LNG Power Plant : Local people were evicted from their land (e.g., salt farmers and landowners) and they were not provided with jobs and employment as promised by the authorities.

Violations of human rights and harassment

Barisal Coal-based Power Plant : Several harassment cases have been filed against landowners, favoring Iso Tech in purchasing land, allegedly with the support of some officials the local administration. And with the support of police, the Deputy Commissioner's Office allegedly intimidated the fishermen's community living on the land taking lease from the BWDB. Their houses have been vandalized, and later they were evicted from their homes.

Banshkhali SS Power Plant : Twelve people were killed in a series of movements against the coal- based power plant, along with demands for employment of the affected people at the project site as promised earlier, better work environment, and to stop unfair job dismissal. There are also cases of arresting local leaders involved in the movements, threatening them with crossfire, filing lawsuits, and arresting them to stop the movement against coal-based power project.

Matarbari LNG Power Plant : Any movement for upholding the rights of the local people is suppressed by threats and intimidation by the influential local people.

Interests of influential politicians and bureaucrats

Barisal Coal-based Power Plant : Local politicians were reportedly involved in labour recruitment and supplying raw materials for construction works. They received the work orders allegedly using undue political influence. Besides, some government officials and bureaucrats were allegedly involved in preparing forged documents and selling government khas land to the company.

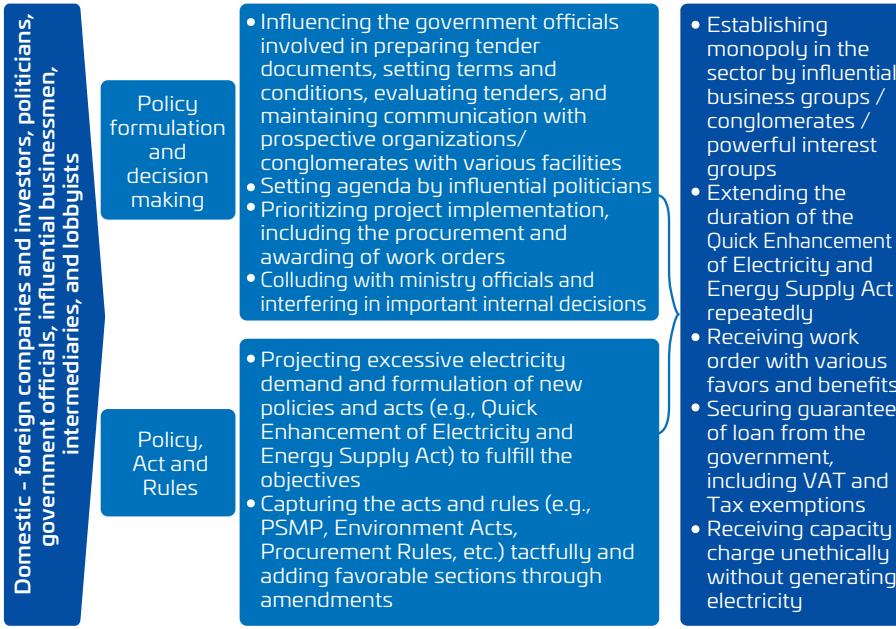
Banshkhali SS Power Plant : The project authority provided various undue benefits, for example, contracts to supply daily labour and canteen operation on the project site and supply work of construction materials (oil, brick, sand, cement, rod) to an influential local politician to control the movement against coal-based power plant.

Matarbari LNG Power Plant : Some government officers and bureaucrats were allegedly involved in preparing forged documents of public properties such as khas land and documenting fake landowners. Allegedly in collusion with the fake landowners, they sold the lands to the company showing the land as fisheries projects and shrimp farms instead of empty land.

Overall observations

Policies and plans driven by donors' priorities and conflict of interest have been formulated for the energy sector of Bangladesh. Powerful foreign and domestic companies have taken advantage of various limitations and challenges facing the country, and exercised decisive control over Bangladesh's energy sector policy formulation. On the other hand some countries are exporting their surplus and outdated coal-based power technology to Bangladesh. The policy capture process is described in the figure below :

Table-9 : Policy Capture in the Energy Sector



The government has made no significant efforts to promote renewable energy on the one hand, and coal and LNG-based power projects continue to approved on the other. Despite having electricity demand lower than already existing production capacity, unnecessary fossil fuel projects have been taken to exploit opportunities for abuse of investors' power and extract quick profits. Procurement for the projects has been made using the Quick Enhancement of Electricity and Energy Supply (Special Provisions) Act, 2010 rather than following the public procurement act. As a result, the competitive procurement process was not followed.

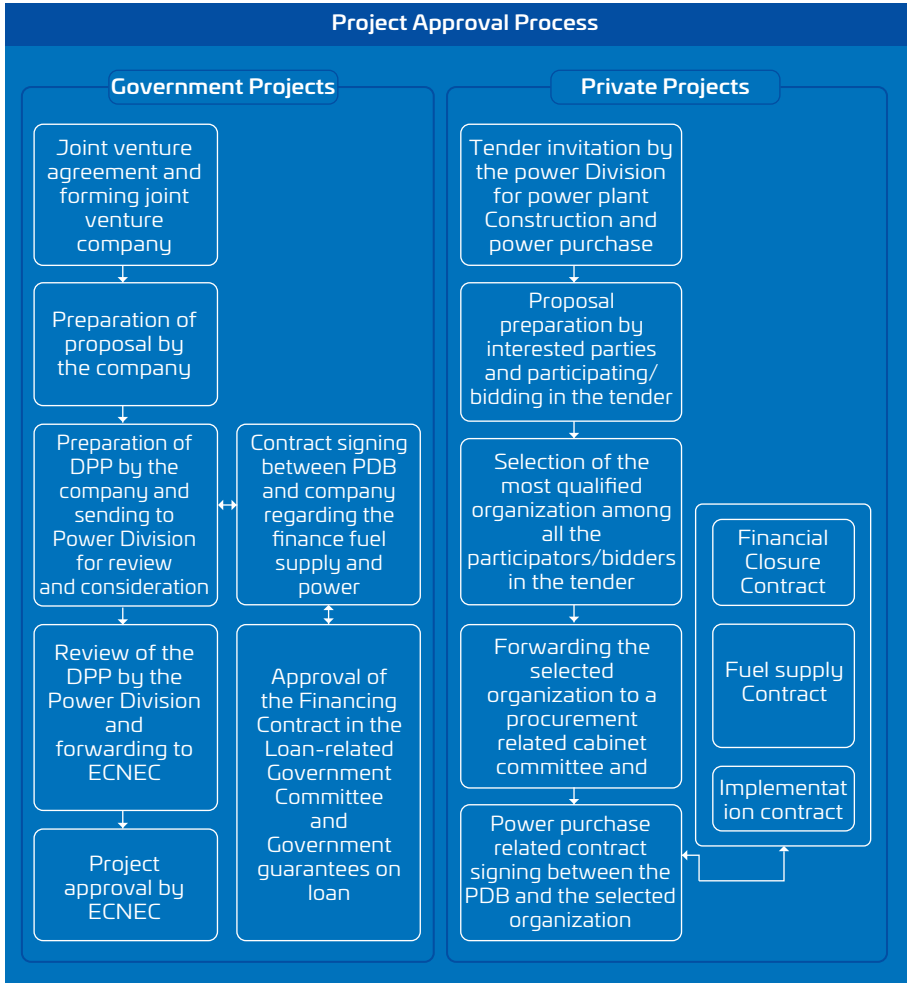
It provided undue benefits to the influential groups during project approval, contract signing, hiring, and awarding of EPC contracts as well as in fixing electricity prices. The construction of coal and LNG-based power plants has given little attention to the aspects of environmental protection, pollution risks, and climate change impacts. Projects are being implemented based on faulty and biased Environmental and Social Impact Assessments. As such, the implementation of the projects has increased the risk of pollution and hugely

increased threats to ecologically critical areas. The DoE has failed to effectively exercise its power and implement the relevant laws and regulations that contributed to long-term damage to natural resources such as forests, rivers, and khas lands. Several irregularities, corruption, and human rights violations occurred, including deaths of the protesting activists during the implementation of the projects. Accountability for the irregularities has not been ensured, thus encouraging the influential groups to commit even more irregularities and corruption with impunity.

Recommendations

1. The proposed IEPMP should be formulated in an inclusive and participatory manner, excluding those with conflicts of interest in the power sector; and strategically prioritize renewable energy in the proposed IEPMP with a clear time-bound roadmap.
2. The Quick Enhancement of Electricity and Energy Supply (Special Provisions) Act, 2010 should be revoked. A declaration must be made not to approve and finance any new fossil fuel-based power projects after 2022.
3. Transparency, accountability and integrity must be ensured in project approval process, determination of conditions for loan and signing of contracts; and all relevant documents should be disclosed for public information.
4. The construction of ongoing coal and LNG-based power plants must be suspended, and resumed only after conducting impartial and internationally acceptable strategic, social, and environmental impact assessments to reduce the climate change impact, mitigate environmental damage and to protect natural resources and livelihoods.
5. Solar and other renewable energy projects must be implemented on the land acquired for the coal and LNG-based power plants to fulfill the government pledge made under the INDC.
6. Integrity and accountability in land purchase, land acquisition and providing compensation to affected people must be ensured.
7. Strict legal action and punishment against the people involved in corruption at various phases of project implementation must be ensured through due process without fear or favour.

Annex-1


Project Approval Process
Government Projects
Joint venture agreement and forming joint venture company
Preparation of proposal by the company
Preparation of DPP by the company and sending to Power Division for review and consideration
Review of the DPP by the Power Division and forwarding to ECNEC
Project approval by ECNEC
Contract signing between PDB and company regarding the finance fuel supply and power
Approval of the Financing Contract in the Loan-related Government Committee and Government guarantees on loan
Private Projects
Tender invitation by the power Division for power plant Construction and power purchase
Proposal preparation by interested parties and participating/ bidding in the tender
Selection of the most qualified organization among all the participators/bidders in the tender
Forwarding the selected organization to a procurement related cabinet committee and
Power purchase related contract signing between the PDB and the selected organization
Financial Closure Contract
Fuel supply Contract
Implementation contract

Coal and LNG-based Power Projects in

BANGLADESH

Governance Challenges and the Way Ahead

Power and energy is a nationally important sector of Bangladesh. Given the urgency of the demand, power generation and supply is a top priority of the government. Conservation and improvement of the environment and biodiversity are among the fundamental principles of the state policy as delineated in the Constitution of Bangladesh (Article 18-A). However, in reality, coal and LNG-based (Liquefied Natural Gas) power projects are implemented in ecologically critical and endangered areas. As a signatory of the Paris Agreement, Bangladesh has pledged to reduce Greenhouse Gas (GHG) emissions and promote renewable energy, which are denoted as the pre-requisites of Sustainable Development Goals (SDG 7 and 13). But the relevant official policies and practices of the government and relevant projects undertaken in the sector do not fully comply with these commitments.

Transparency International Bangladesh (TIB), the national chapter in Bangladesh of the Berlin-based global coalition against corruption Transparency International, works with a vision of Bangladesh where government, politics, business, civil society and daily lives of the common people would be free from corruption. TIB's mission is to catalyze and strengthen a participatory social movement against corruption. Through a robust series of research and knowledge-based stakeholder engagement and advocacy initiatives, TIB contributes to legal, policy and institutional reforms and practices to prevent corruption and improve governance, and thereby reduce poverty, exclusion and injustice, and promote sustainable development.

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