Currents of Change

Quarterly Brief of Power & Energy Sector of Bangladesh

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July-September 2024

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Key Highlights

- During the quarter of July-September 2024, Bangladesh experienced a major political shift. The Awami League government was ousted by a student-people led movement on 5 August 2024. An interim government has taken over the responsibility on 8 August 2024
- The interim government has halted all negotiations, selections, and purchasing processes of all power-and energy projects as the much-talked-about quick-solution law gets under the axe as part of reforms kick-started by the interim government
- The interim government has issued a gazette to abolish the Section 34(a) of 'Bangladesh Energy Regulatory Commission (Amendment) Ordinance-2024'. As this clause has been abolished, the government will no longer be able to determine the price of electricity and gas without a public hearing
- The Interim Government has bestowed the BERC with the authority to determine electricity price
- A very high volatility has been observed in case of daily power generation cost
- The share of RLNG usage of the total gas supply was lowest (25%) compared to previous fiscal years
- Germany has committed to provide Bangladesh with 1 billion euro over the next decade to support renewable energy projects, including an initial 15 million euro this year

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1. Background

The first quarter of FY2024-25 was more significant as there has been notable transformation followed by the change of the political regime. After a mass movement led by students, a new interim government has taken over the responsibility on 8 August 2024. Immediately after talking the responsibility, some major operational and policy shifts have already been initiated by the interim government. These include- (a) suspension of the Quick Enhancement of Power and Energy Supply Act 2010, (b) discontinuation of BERC Ordinance 2024, (c) emphasising the domestic gas exploration, (d) resuming the LNG import, and (e) cancellation of 73 LoI of power plants including solar power plants. The initiatives so far taken by the interim government are in favour of the energy transition; however, more transition prone reform agendas are needed.

Former government's last decisions: In the last few months of its tenure, the former Awami League-led government of Bangladesh made several decisions, particularly in the energy sector. One of the initiatives involved integrated efforts to exploit the resources of the country's Blue Economy, with the introduction of the Offshore Model PSC-2023 to promote offshore energy projects. The government aimed to generate 15,000 MW of power from solar and offshore wind energy by 2050, with a 500 MW offshore wind project already in the pipeline.

In August 2024, the government approved the procurement of refined fuel oil for BDT 16,484.45 crore and 30,000 metric tonnes of diesel for the second half of 2024. It also approved the purchase of one cargo of LNG for BDT 583.56 crore, with each MMBtu priced at USD 12.58. Finally, the government sought USD 1 billion in aid from China to implement seven major power and energy projects, including the Moheshkhali-Bakhrabad gas transmission pipeline and six power transmission line projects. Bangladesh also planned to import 40 MW of electricity from Nepal and 1,000 MW of renewable energy from India, for further expanding its regional energy partnerships.

The quarterly is segregated into six broad sections, including a brief snapshot of the major policy and operational decisions, power and energy sector performance, renewable energy deployment status, the reflection of the last quarterly brief's (Q4 of FY2024) recommendations in the policy decisions of this quarter, and remarks on the overall health of the power and energy sector during the first quarter of FY2025.

2. Major Decisions Taken During July-September 2024

a) Policy Decisions: During Q1 of FY25 (July to September 2024), the focus of government policy decisions in the energy sector has contracted in number compared to the activity seen in the 4th quarter of FY24 (figure 1 & 2). The latter period was marked by robust policymaking, particularly towards supply and quality of energy and fuel.

Figure 1 **Government and Government Relevant Authorities' Action Focus Point During July and September 2024**

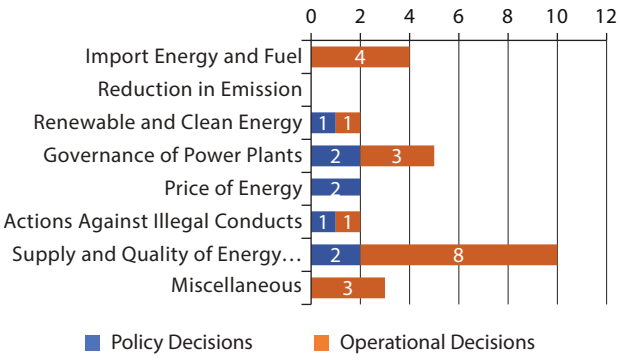
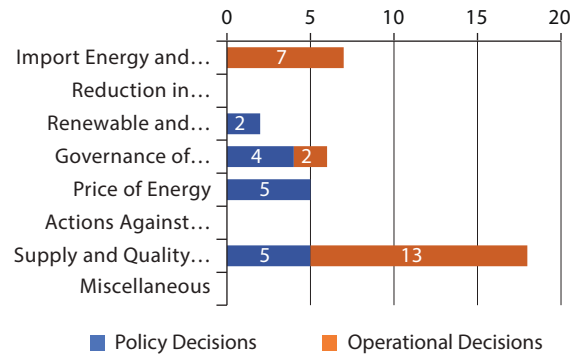


Figure 2 **Government and Government Relevant Authorities' Action Focus Point During April and June 2024**

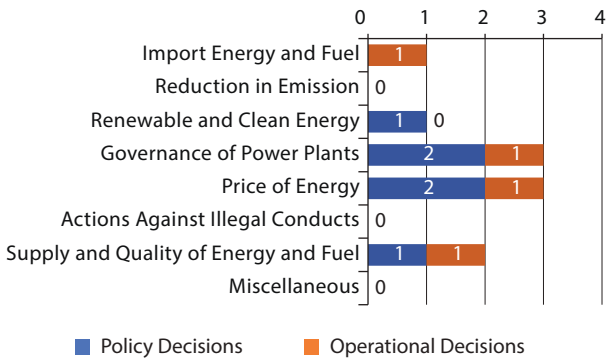


Source: Authors' Compilation of Various Newspapers and Relevant Government Websites.

During this quarter, Bangladesh's energy sector undertook a number of policy measures, especially in addressing supply and operational challenges. Policy decisions during this period also included the government's request for a USD 1.38 billion loan from China to build a 295km gas pipeline in Cox's Bazar's Maheshkhali area, aimed at improving LNG transportation capacity. A key policy incident during this quarter is assocaited with the interim government reinstating the Bangladesh Energy Regulatory Commission (BERC) to set the fuel-oil retail price instead of the Bangladesh Petroleum Corporation (BPC) (figure 3), where the latter cast aside a certain margin for them that falls on the consumers.

The interim government authorities refrained from amending key legislation in the late August, including the BERC Act 2003 and the Quick Enhancement of Power and Energy Supply Act 2010, signalling a cautious approach towards regulatory changes within the energy sector and this is a fresh start for the interim government. They also reinstated the BERC to determine price of power and energy, in addition to seal a negotiation deal of renewable energy grant from Germany.

Figure 3 **Government and Government Relevant Authorities' Action Focus Point During Q1 of FY25, after the Interim Government Took Over**



Source: Authors' Compilation of Various Newspapers and Relevant Government Websites.

b) Operational Decisions: In the first quarter of FY25, there was a noticeable dip in the volume of operational decisions within Bangladesh's energy and power sector compared to the subsequent quarter, with a concentrated effort on addressing importation challenges, fuel supply stabilisation, and maintenance of quality. This trend has been consistently observed since the first four quarters. These included settling overdue import bills, overdue electricity tariff payments to the power plants, securing long-term LNG agreements, and receiving vital coal shipments for power production.

Throughout July 2024, multiple disruptions in gas supply were reported, affecting key areas in Dhaka. These outages, which lasted up to 10 hours, were attributed to emergency works on gas pipelines, underscoring the sector's ongoing operational challenges. The government, however, normalised supply by repairing critical LNG pipelines in Chattogram, demonstrating a commitment to maintaining steady operations amid infrastructure upgrades. Additionally, the government announced plans to import 18 lakh tonnes of refined fuel oil under government-to-government (G2G) contracts between July and December 2024, with a view to maintaining supply at a moderate level despite global price volatility. The former government also extended contracts with power supplier during this quarter. The quarter also saw steps towards improving power generation capacity. The 1,200 MW Matarbari coal-fired power plant resumed full operations in August after overcoming technical difficulties that had caused a complete shutdown earlier in the month. On the renewable energy front, despite the government's claim of 10,000 MW in renewable energy projects being in various stages of implementation, a Power Cell report indicated that only 4,000 MW of these projects are fully planned by 2030. This discrepancy highlights the ongoing challenges in scaling up renewable energy production in line with national goals. In terms of governance of power plant, the Bangladesh Power Development Board (BPDB) extended its agreement with Shahjibazar Power Company for an additional five years, securing a continued contribution to the national grid.

The interim government also started reviewing the contract terms of around 100 power plants, two Floating Storage Regasification Units (FSRUs), and six long-term LNG import agreements signed over the past 14 years under the special law, as of 3rd September 2024. Additionally, the BERC has reintroduced public hearings for determining power and energy prices under the interim government.

Initiatives of interim government: The interim government of Bangladesh has introduced a series of reforms aimed at ensuring transparency, managing financial liabilities, and promoting renewable energy, while enhancing bilateral cooperation with international partners. One of the government's early efforts focused on increasing transparency in energy procurement. Muhammad Fouzul Kabir Khan, the energy adviser, emphasised the importance of open tender processes as per the Public Procurement Act of 2006 and suspended the Quick Enhancement of Electricity and Energy Supply Act (2010). A key part of this reform involved establishing an independent committee to reassess controversial quick rental power deals.

The role of the BERC was also restored to ensure transparent pricing of gas and electricity, ending the use of executive orders for tariff adjustments. BERC will additionally take over jet fuel pricing from the BPC, enhancing its regulatory oversight.

The government also announced plans for 10 new grid-connected solar power plants, each with a 50 MW capacity, contributing a total of 500 MW of renewable energy. These projects are to be developed through open tenders, signaling a commitment to expanding Bangladesh's reliance on renewable energy. As part of broader renewable energy goals, the government has also called on China to relocate some of its solar panel manufacturing to Bangladesh.

Finally, the interim government has introduced a shift towards performance-based metrics in the evaluation of energy projects. Rather than relying on output statistics, the government now emphasises customer service and satisfaction as key performance indicators. In addition, austerity measures have been encouraged, aiming for more efficient spending while maintaining productivity. The energy adviser urged a reduction in unnecessary expenses, ensuring that value for money remains a top priority.

3. Power Sector During July-September 2024

Generation: During the July-September 2024 quarter, power generation in Bangladesh encountered numerous obstacles, leading to reduced output. Due to technical issues at Summit's LNG terminal,

Figure 4 Per Day Energy Generation by Different Fuel (MKWh)

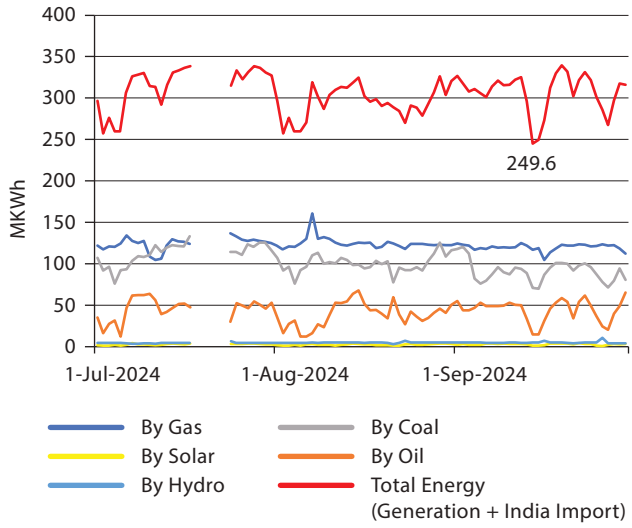
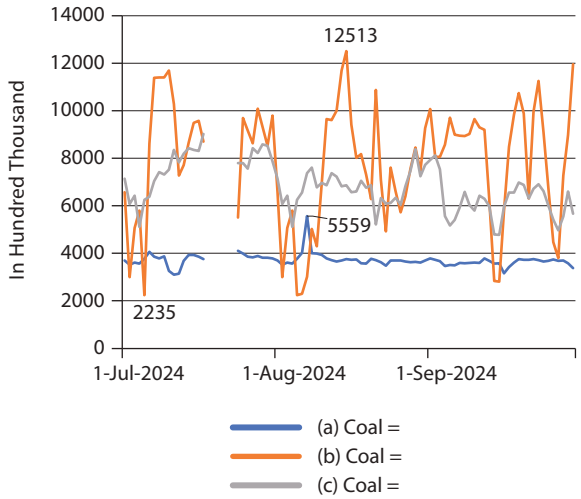


Figure 5 Per-day Fuel Cost of Powerplants (BDT)



Source: BPDB Daily Generation Report.

which has not been in operation for three months following a natural disaster, daily electricity production dropped to between 14,000 MW and 15,000 MW, causing an average daily shortfall of 1,500 MW. This situation was further aggravated by a coal shortage, stemming from an unpaid bill of BDT 9,500 crore, which restricted Adani Group's supply to 1,000 MW. Additionally, electricity supply from Tripura, India, decreased to 60-90 MW per hour, significantly below the expected 160 MW. While 1,000 MW was anticipated via the Bheramara link from India, only 880 MW was received. Corruption allegations have also disrupted coal imports for the 1,200 MW Matarbari power plant, reducing its output by 600 MW. Moreover, technical problems at the 525 MW Barapukuria power plant caused an additional shortfall of 280-285 MW, worsening the power crisis. Unlike previous quarters, where a substitution effect was observed between gas, coal, and oil, this quarter displayed a more complementary relationship as illustrated in Figure 4 & 5. There is an overall reduction in the use of gas, coal, and oil all together during this quarter, however the reduction maintained a fixed proportions.

Additionally, a significant number of daily generation reports were missing during this period, likely due to the then ongoing political instability. This gap in reporting exposes security vulnerabilities in the sector's data recording systems, which may pose a risk to the sector's long-term reliability and transparency.

Transmission and Distribution: As of September 2024, at the end of the quarter, the transmission lines extended to 15,656 circuit kilometers, and the distribution lines reached 648,724 kilometers, with a grid substation capacity of 71,519 Mega Volt Amp. Remarkably, for the first time since last year, the grid-network system shows progress in all dimensions (table 1). It is to be noted that a lot of development projects were targeted towards the grid-network system in the earlier year. Completion of those projects may have resulted in the aforementioned progress.

Load Shedding: During the first quarter of 2025, an ongoing heatwave has severely worsened load-shedding, especially in rural areas, where residents are enduring power outages lasting 10 to 12 hours daily according to the BPDB daily load shedding data, significantly disrupting both everyday life and industrial operations. Although the country requires around

Table 1 **Progress in Transmission-Distribution System**

Indicators	Start of Q1 (Jul'24)	End of Q1 (Sep'24)
Transmission Line (Circuit Km)	15,624	15,656
Distribution Line (Km)	643,000	648,724
Grid Sub-station Capacity (MVA)	68,564	71,519

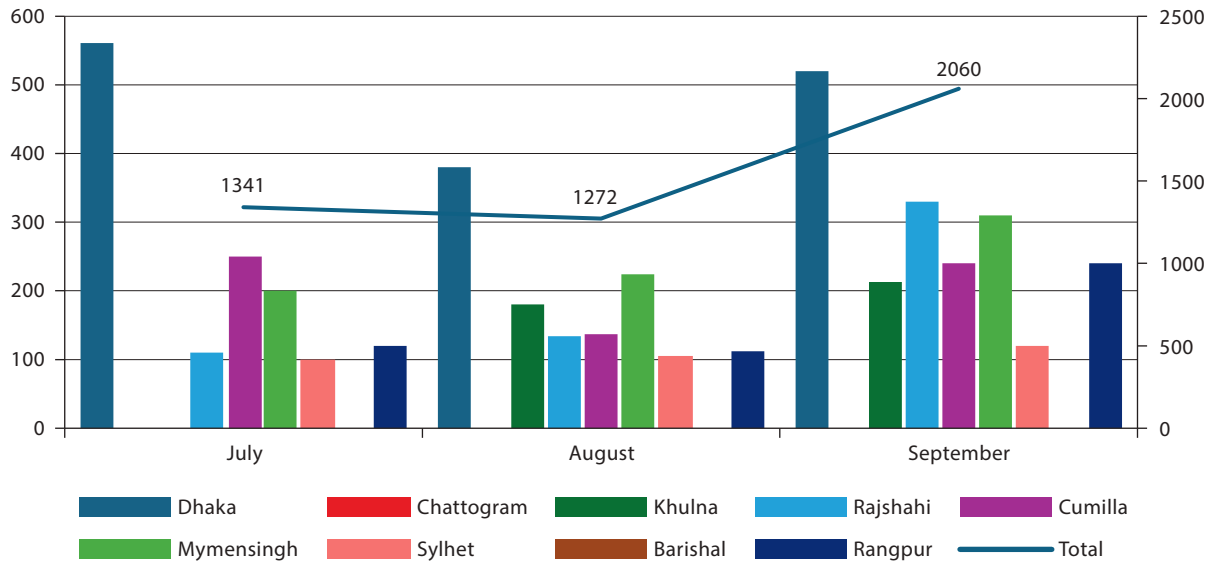
Source: BPDB Monthly Report.

16,500 MW of electricity per day, only 12,444 MW was generated on the evening of September 10, despite a total installed capacity of approximately 27,791 MW. This shortfall of 2,000 MW resulted in 2,060 MW of load-shedding (Figure 6).

Gas supply issues have further exacerbated the load-shedding crisis throughout the quarter. The prolonged shutdown of Summit's LNG terminal has reduced daily gas supply to 2,600 million cubic feet per day (mmcfd), down from the required 3,800 mmcfd. This has led to a drop in electricity generation from gas from 6,500 MW to just 5,000 MW. While Petrobangla indicated that the load-shedding situation might improve once the Summit terminal resumed operations and LNG imports from the spot market were secured, the terminal became operational again on September 11, but the extended power outages have yet to subside significantly.

The progress of grid substations, transmission and distribution exceeding over the period has decreased the number of interruptions due to system issues, from approximately 3844 hours of interruptions in June to 1596 hours of interruptions in August (Figure 7).

Figure 6 **Zone-wise Load-shed at Evening Peak (Generation end) in MW**

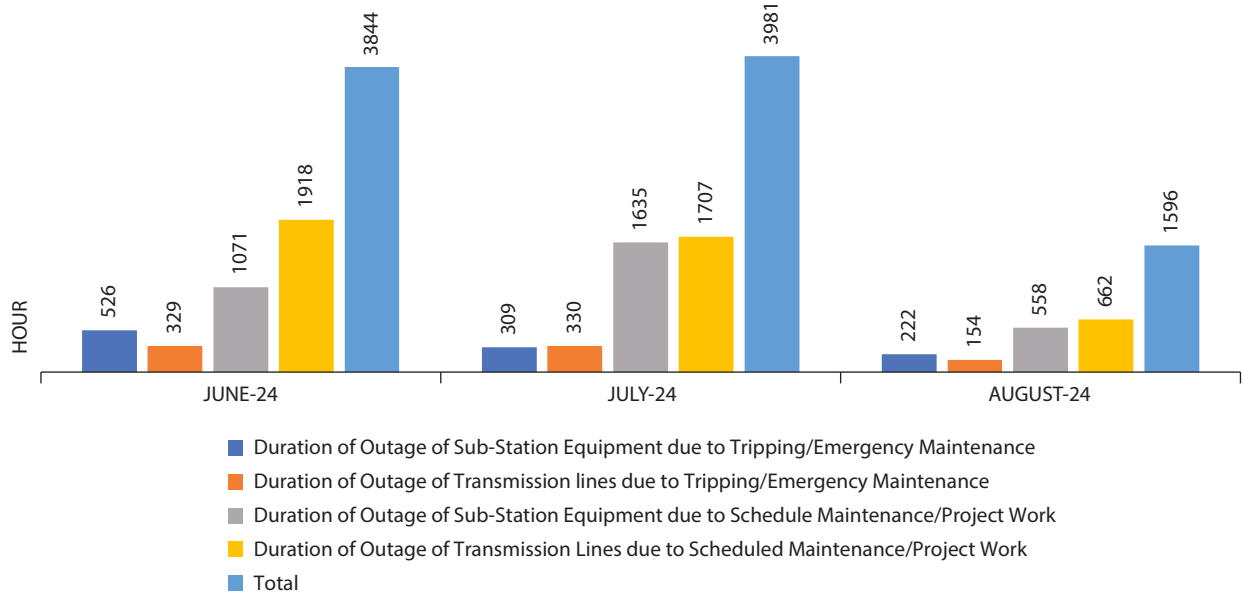


Source: PGCB Monthly report.

In addition, the outage occurred due to emergency maintenance has significantly reduced and the outages are happening mainly due to the planned maintenance. This event signals an increase of efficiency in the system.

Fossil Fuel Phaseout and New IPPs: During this quarter, neither any new IPPs have started operating nor any phased out (Table 2). Due to a lack of non- disclosure mode of BPDB regarding the expiration dates of the contract and renewal of contracts, tracking the timely phaseout of these IPPs has become troublesome. This brief urges BPDB to provide an updated database mentioning the commissioning and expiration date of IPPs.

Figure 7 Summary of Monthly Tipping and Outage (Emergency & Scheduled)



Source: PGCB Monthly report.

Table 2 Status of Fossil Fuel Phase-out

Fuel		Gas		Coal		Oil		Renewables	
		Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity
Contract Expired IPP	July	–	–	–	–	–	–	–	–
	August	–	–	–	–	–	–	–	–
	September	–	–	–	–	–	–	–	–
New IPP	July	–	–	–	–	–	–	1	68
	August	–	–	–	–	–	–	–	–
	September	–	–	–	–	–	–	–	–

Source: BPDB.

Cancellation of LoI of powerplants: In a significant move, Bangladesh's interim government decided to scrap 31 Letters of Intent (LoIs) for green energy projects. The projects were set to involve a total investment of about USD 5 billion, with USD 200 million already spent on land acquisition and project-related preparations. These projects included 25 solar, 3 wind, and 3 waste-to-energy power plants, which, if implemented, would have contributed 2,678 MW of renewable energy to the national grid. The cancellation also coincides with the government's broader initiative to review all energy agreements signed under the Quick Enhancement of Electricity and Energy Supply Act of 2010. This review aims to assess the sustainability and financial viability of unsolicited projects in the energy sector. Countries such as China, France, Malaysia, Singapore, South Korea, Germany, Japan, the USA, and the UAE had expressed interest in investing in Bangladesh's renewable energy sector, highlighting the global nature of the investments involved. Investors of these countries now need to renegotiate with the government under the Power Purchase Agreement 2006.

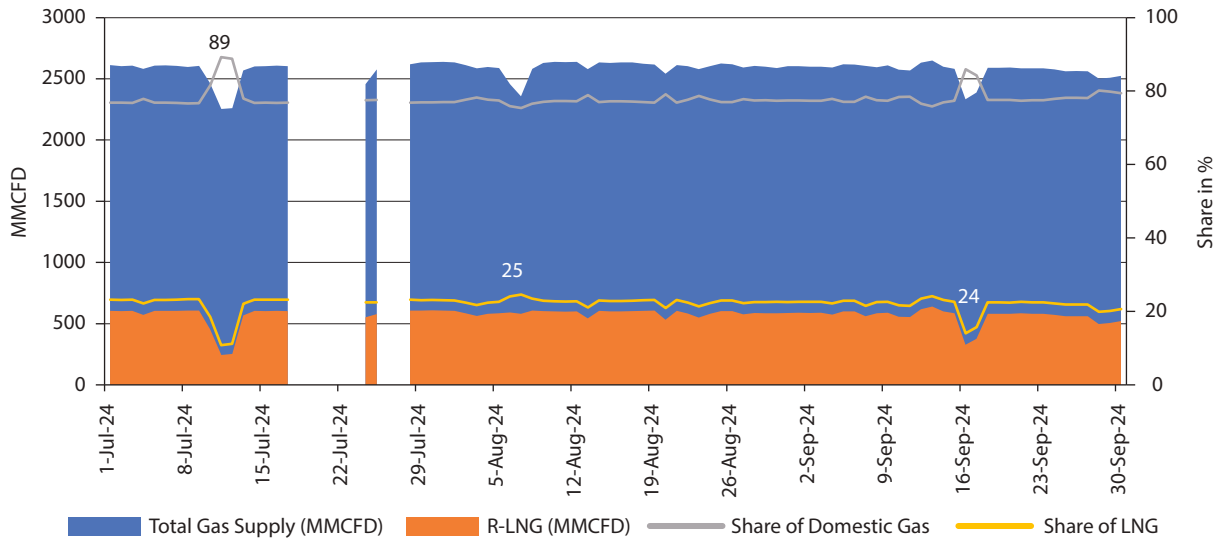
On a positive note, a renewable based powerplant named 'Sirajgonj 68 MW Solar Power Plant' with a capacity of 68 MW has started its operation on July 2024.

4. Energy Sector During July-September 2024

Gas Demand and Supply during Q1 of FY2025: During the first quarter of FY2025, the gas supply, including LNG decelerated. The gas supply dipped several times during the last quarter of the year mainly due to the unavailability of the LNG. However, the share of LNG of the total gas supply was as high as 25 per cent on 7 August 2024 (figure 8), which is much lower than the LNG supply of the previous quarters. The total gas supply including both domestic gas and LNG was also much lower than in previous quarters.

Gas Exploration: The sector has been experiencing a significant shift regarding the activities related to domestic gas exploration in Bangladesh after the interim government has taken over the responsibility. The Bangladesh Petroleum Exploration and Production Company Limited (BAPEX) has officially drilled a new gas field in the Wasekpur village of Sonaimuri upazila in Noakhali. BAPEX sources said the well in the Sonaimuri upazila is being excavated under the Begumganj-4 (West) Evaluation and Development Well Excavation Project. More than 200 people, including BAPEX engineers and workers have been involved in drilling the well. Before that, the authorities planted drilling rigs on 22 April to drill the well. The drilling rigs were planted beforehand to officially inaugurate the drilling. The initial target is to drill up to 3,200 metres below the ground with the expectation of finding natural gas reserves in four zones of the well assuming to extract 10 million cubic feet of natural gas from each of these zones which will be added to the national grid.

Figure 8 **Total Gas Supply (including LNG)**



Source: PetroBangla daily gas data.

Note: Data from 18-25 July 2024 and 26-29 July is not recorded because of the internet shut down.

A joint study on probable gas reserve, which began in 2020 and concluded in June 2024, have been submitted to the Ministry of Power, Energy and Mineral Resources, the Bangladesh Oil, Gas and Mineral Corporation (PetroBangla), and BAPEX. A potential gas reserves, which can go up to 5.109 trillion cubic feet (tcf), has been identified in Bhola, a southern island district of Bangladesh, according to a joint study by Russian energy giant Gazprom and BAPEX. The research included a 600 square kilometre 3D seismic survey from Shahbazpur to Elisha, which found a recoverable resource of 2.423tcf. An additional 152.6-line-km 2D seismic survey in Charfesson found another 2.686tcf, according to BAPEX. The research report indicates a 10 per cent chance of finding 2.423tcf of gas in Shahbazpur and Elisha, and 2.686tcf in Char Fasson, totaling 5.109tcf. At the current LNG spot market price of USD 10.46 per million British thermal unit (MMBtu), this gas resource is valued at approximately BDT 6.5 lakh crore.

LNG Import: Bangladesh will resume purchasing LNG from the spot market as the country's newly formed interim government has decided to import the fuel after a two-month hiatus. The interim government is set to follow the Public Procurement Rules 2008 to ensure competitiveness of the bidding process instead of the previous regime's Quick Enhancement of Electricity and Energy Supply (Special Provision) Act 2010 (Amended 2021), also known as the Speedy Act. However, the offline Summit LNG Terminal was a major setback to the resumption of spot LNG imports.

Financial crisis of the sector: The government is up against a USD 607 million debt for imported liquefied natural gas (LNG), including gas purchased from the US energy company Chevron. Data from the Energy Division indicate that, beyond the payments owed for LNG imported from Qatar and Oman under long-term contracts, there are also overdue bills for LNG purchased from the spot market for July and August. As of 9 September 2024, the outstanding bill for LNG imports was USD 633 million. On 10 September 2024, the government paid off USD 25.61 million to QatarEnergy, the state-owned petroleum company of Qatar.

5. Renewable Energy During July-September 2024

a) Renewable Energy Progress during July-September 2024: The renewable energy sector's trajectory in the April-June 2024 quarter showed less improvement compared to the previous quarter. While delays remained a prevalent issue, one new power plant became fully operational, albeit they were delayed from the previous schedule. However, the continuation of seven projects remaining in the delayed status underscores the persistent obstacles that hinder the sector's pace (Table 3). Consequently, these setbacks resulted in a significant shortfall in renewable energy production, with an estimated 277.8 MW of clean electricity generation missed due to the delays. The beginning of three renewable energy projects during this quarter have been observed. Furthermore, within this quarter, the government has sanctioned the development of no new power plant, like the previous quarter.

Table 3 **Progress Status of Renewable Based Power Plants Scheduled to Operate Commercially in 2024 (During July and September 2024)**

Progress Status	Number of Power Plants in Q4 of FY24	Number of Power Plants in Q1 of FY25
Fully Operational on Time	0	0
Fully Operational but Delayed	1	2
Partially Operational but on Time	0	0
Partially Operational but Delayed	0	1
Delayed	7	9
Construction Started	2	3
Projects Approved	0	0

Source: Authors' Calculation from BPDB Monthly Reports of 2024 and SREDA.

b) Renewable Energy Financing July-September 2024: During the first quarter of FY2025, Bangladesh did not obtain any foreign financial assistance or investment for renewable energy projects compared to the third or fourth quarters of the previous fiscal year, albeit a significant improvement in the second and third quarter of FY2024. The BPDB has just prepared to float a tender for a 50 MW grid-connected solar power plant during this quarter.

6. Follow-up of previous quarter

The new quarter of the FY2024-25 has started on a better note in terms of energy transition compared to the previous fiscal year. The indicator where the sector suffered most is the increasing load shedding and decrease in the national gas supply. The increased load shedding is mainly due to the inability to import energy for the foreign exchange reserve crisis. However, there has been improvement in the transmission and distribution system, only a few scheduled maintenances have been observed during this quarter. In terms of renewable energy, the progress is still stagnant. On the bright side, the new reform by the interim government initiatives may bring significant changes in the power and energy sector in the upcoming quarters.