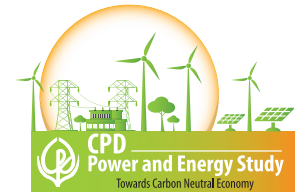


# Currents of Change

Quarterly Brief of the Power & Energy Sector of Bangladesh

Volume 2, Brief No. 3

January-March 2025



## Key Highlights

- The third quarter of FY2025 (January-March 2025) could be termed as 'better' in terms of supplying electricity, especially in the month of Ramadan through the use of oil and LNG in the power generation
- During this quarter, the peak power generation of 14,918 MW (333.48 MKWh) was recorded on March 16th, while the lowest power generation of 9,353 MW (200.37 MKWh) occurred on 10 January 2025
- Very high variation in the fuel cost of oil-based power generation have been observed during this quarter due to the price fluctuation in global energy market
- Unlike government's political commitment for moving towards zero carbon emission, continuous emphasis on LNG import instead of exploration of domestic gas have been observed
- Despite high hopes of the interim government for promoting renewable energy, no new renewable energy-based power plants have been added to the grid as the progress in renewable energy is very slow compared to the previous quarters

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## 1. BACKGROUND

The third quarter of FY2025 (January – March 2025) was as usual quarter for the power and energy sector without any extraordinary events. The interim government was successful to keep the power outage on check and to provide uninterrupted electricity. However, there were still fuel shortage; and the government is focusing on finding solution through imported Liquefied Natural Gas (LNG) and renewable energy. A number of major initiatives have been undertaken during this quarter. These include: (a) introduction of a separate tariff structure for battery swapping stations, aiming to foster investments in electric vehicle infrastructure; (b) Initiating the LNG import from international markets; (c) Bangladesh Energy Regulatory Commission (BERC) has made multiple price adjustments for liquefied natural gas (LPG) cylinders; and (d) construction and progress of multiple solar power projects.

This quarterly is segregated into six broad sections. These are as follows: (i) A brief snapshot of the major policy and operational decisions; (ii) Generation, Transmission & Distribution of the Power Sector; (iii) Demand, Supply & Exploration in the Energy Sector; (iv) Status of Renewable Energy; (v) Remarks on the overall health of the power and energy sector during this quarter; and (vi) a short interview of Mr Fazlee Shamim Ehsan, Executive President, Bangladesh Knitwear Manufacturers and Exporters Association (BKMEA).



## 2. FEATURED INTERVIEW OF MR FAZLEE SHAMIM EHSAN, EXECUTIVE PRESIDENT, BKMEA, ON ACCELERATING ENERGY TRANSITION

**1. What is the objective of BKMEA to move towards the energy transition in Bangladesh? And how BKMEA plans to do so?**

**Mr Ehsan:** The sole objective of the BKMEA is to

help the government to increase the share of renewable energy in the national energy mix through increasing the renewable energy use in the factories of BKMEA members and RMG sector as a whole. We try to do so by advocating at the policy level to make funding easily accessible for businessmen and making the businessmen aware of the need of green transition in RMG sector.

**2. Does BKMEA have any medium to long-term plan regarding the renewable energy expansion? Is there any operative plan to execute the target? What is the workplan of BKMEA to achieve this goal?**

**Mr Ehsan:** The BKMEA aims to ensure greening the factories by 2029 and add that to the electricity into the grid through net metering system. For the Just Transition and Environmental Sustainability in Bangladesh's RMG Industry, BKMEA has launched Green Industry Development Cell (GID Cell) for the first time in the corporate sector. A just transition ensures that workers and communities are not left behind during this transformative process. The BKMEA has been always trying the best to achieve SDGs in 2030. Whereas Bangladesh government looks forward to greening its energy and manufacturing to sustain its economic growth and climate change.

**3. What are the limitations that were faced in order to set up the solar PV infrastructure in the RMG industries?**

**Mr Ehsan:** The first and foremost challenge is access to funding. There are so many scopes of funding currently available by banks, financial institutions, international development partners such as (JICA, World Bank). However, the issue is these funds mostly requires unreasonable and unrealistic conditions to be met by the factories to avail the loans or grants. Such as, it has to be a limited company for 10 years and so on. Bangladesh Bank also offers refinancing schemes for sustainable financing. As a result, mostly the entrepreneur needs to install solar PVs on their own, which is comfortable for the large factories, but a huge challenge for the small and medium ones. The second challenge is the discriminatory fiscal and financial structures of renewable energy and fossil fuel. The government is still paying subsidy for fossil fuel along with tax and import duty waiver. However, the renewable energy is neither subsidised nor exempted from tax and import duty. It does not motivate the businesses to go for renewable and sustainable energy. Lastly, the operational process of setting up PVs in the factories is lengthy and time consuming, which is a major constraint for businesses.



Fatullah apprels



Rooftop solar PVs.

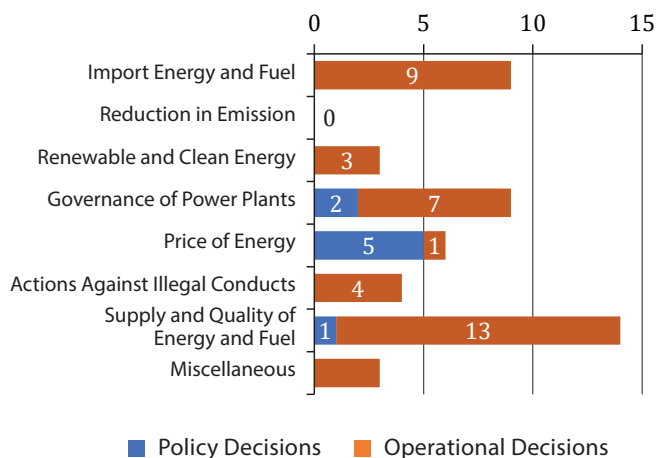
**4. From the industrial electricity demand perspective, to what percentage share renewable energy can meet? Not only from solar PVs but also from grid, cost wise is it possible to fully meet the factory operation from renewable energy?**

**Mr Ehsan:** From the BKMEA, we are not considering renewable as the only source of energy. Instead, we consider renewables as a back-up or secondary source as grid electricity will be the key power source. In mathematical terms, for a two-storied factory building, 60 per cent of the electricity could be generated from rooftop solar panels installed on that building. The electricity can be added to the grid through net metering system. However, if we promote energy efficiency throughout the production system nearly 92 per cent of the electricity can be saved.

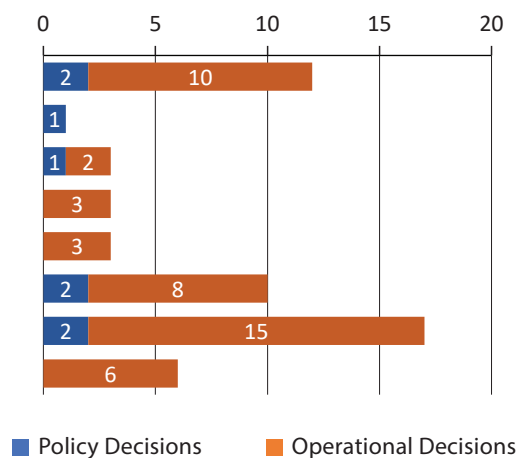
**5. Do you think that other major businesses may consider renewable energy as a suitable option for the energy source and initiative similar energy transition goals?**

**Mr Ehsan:** Energy transition could mean different for each industry. A leather factory, for instance, easily can meet its electricity demand from renewable energy sources installed within the factory, along with energy efficiency it will be easy to move towards energy transition. However, for a steel factory—with a power demand equivalent to almost 200 RMG

**Figure 1** Government and Government Relevant Authorities' Action Focus Point During January-March 2025



**Figure 2** Government and Government Relevant Authorities' Action Focus Point During October-December 2024



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

factories—needs to focus on energy efficiency for greening rather than sourcing from renewables.

### 3. MAJOR DECISIONS TAKEN DURING JANUARY-MARCH 2025

**a) Policy Decisions:** During Q3 of FY2025 (January to March 2025), the focus of government policy decisions in the energy sector has remained active, mirroring the engagement seen in the previous quarter. This period was particularly marked by policymaking in the areas of actions against illegal conduct, and import of energy and fuel, in addition to governance of power plants, and price of energy from the previous quarter (figure 1 & 2).

During this quarter, one notable development in this quarter is the government's move to introduce a separate tariff structure for battery swapping stations, aiming to foster investments in electric vehicle infrastructure. Additionally, the Bangladesh Energy Regulatory Commission (BERC) has made multiple

price adjustments for liquefied natural gas (LPG) cylinders and jet fuel, highlighting a dynamic pricing policy in response to market demands. In terms of governance of power plants, Russia agreed to extend the loan disbursement period for the Rooppur Nuclear Power Plant, reflecting strong international cooperation in long-term energy security. The government also announced its intent to revisit the tariff structure of independent power producers (IPPs) to ensure fair pricing and effective policy oversight. In parallel, authorities reiterated the requirement for obtaining regulatory approval before implementing any new power or energy project, marking a decisive step in improving governance and reducing unauthorised operations.

**b) Operational Decisions:** In the third quarter of FY2025, there was a decrease in the volume of operational decisions within Bangladesh's energy and power sector compared to the subsequent quarter, with an increasing effort on addressing important challenges, fuel supply stabilisation, and maintenance of quality.

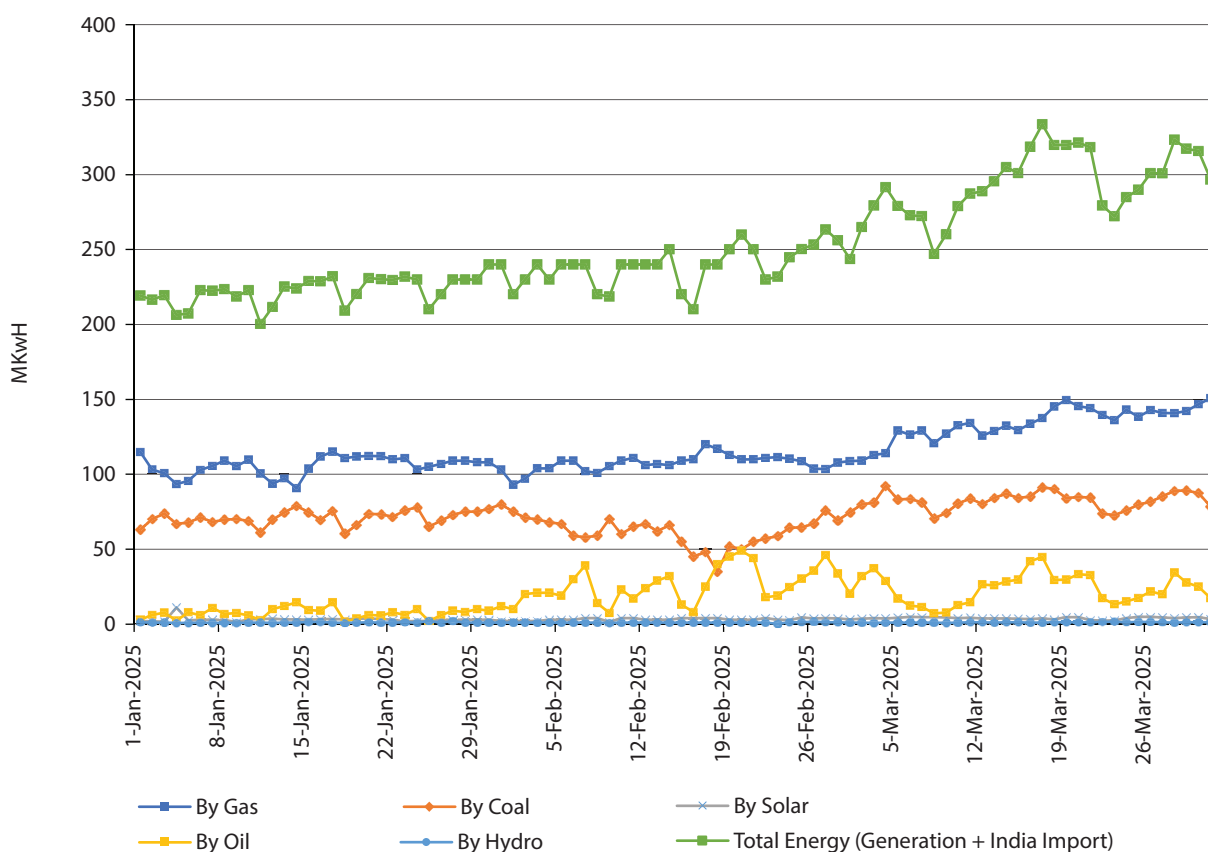
During this quarter, the government had to pay the electricity deals with India's Adani Group. This included resuming full power supply from Adani's Indian plant after a prolonged gap, while also continuing payments to Adani and other suppliers. Additionally, overdue payments and operational dues with dues were actively addressed. The Ministry of Finance reallocated unused ADP funds to settle gas and power sector arrears, and foreign exchange reserves were also tapped to pay outstanding bills before Ramadan. These moves ensured continued power and fuel supply during a season of heightened demand. Operational oversight was heightened with the formation of regulatory approval requirements

before implementing any new project in the energy sector, and several illegal gas connections were removed by Titas Gas. The shutdown and subsequent restart of major power plants like Barapukuria and Payra due to mechanical failures or maintenance illustrate the ongoing focus on infrastructure health. To address future supply needs, the government secured spot market LNG deals and received multiple LNG cargo approvals, while a second offshore oil and gas exploration tender was prepared. Meanwhile, key infrastructure projects like the Chattogram-Dhaka oil pipeline and MRT-related gas line relocations advanced the country's energy logistics. The government was also proactive in boosting renewable energy, with construction progressing on multiple solar power projects, and foreign investment interest increasing in the sector. In tandem, fuel prices were regularly adjusted, including for LPG and jet fuel, reflecting routine responses to global market trends. However, the study conducted by CPD revealed that the fuel pricing method is problematic and it needs major revisions.

#### 4. GENERATION, TRANSMISSION & DISTRIBUTION OF THE POWER SECTOR DURING JANUARY-MARCH 2025

**Generation:** During January-March 2025, the installed generation capacity reached 30,889 MW (on grid and off-grid). The peak power generation of 14,918 MW (333.48 MKWh) was recorded on March 16th, while the lowest power generation of 9,353 MW (200.37 MKWh) occurred on January 10th (Figure 3). Gas-based electricity generation was a somewhat consistent source as the cost of electricity generation from domestic gas is still the lowest. It shows a relatively stable output throughout the period, fluctuating between 150.76 million KWh and 90.60 million KWh. Coal-based electricity generation also contributes significantly, though slightly lower. It ranges between 35 million KWh and 92 million KWh.

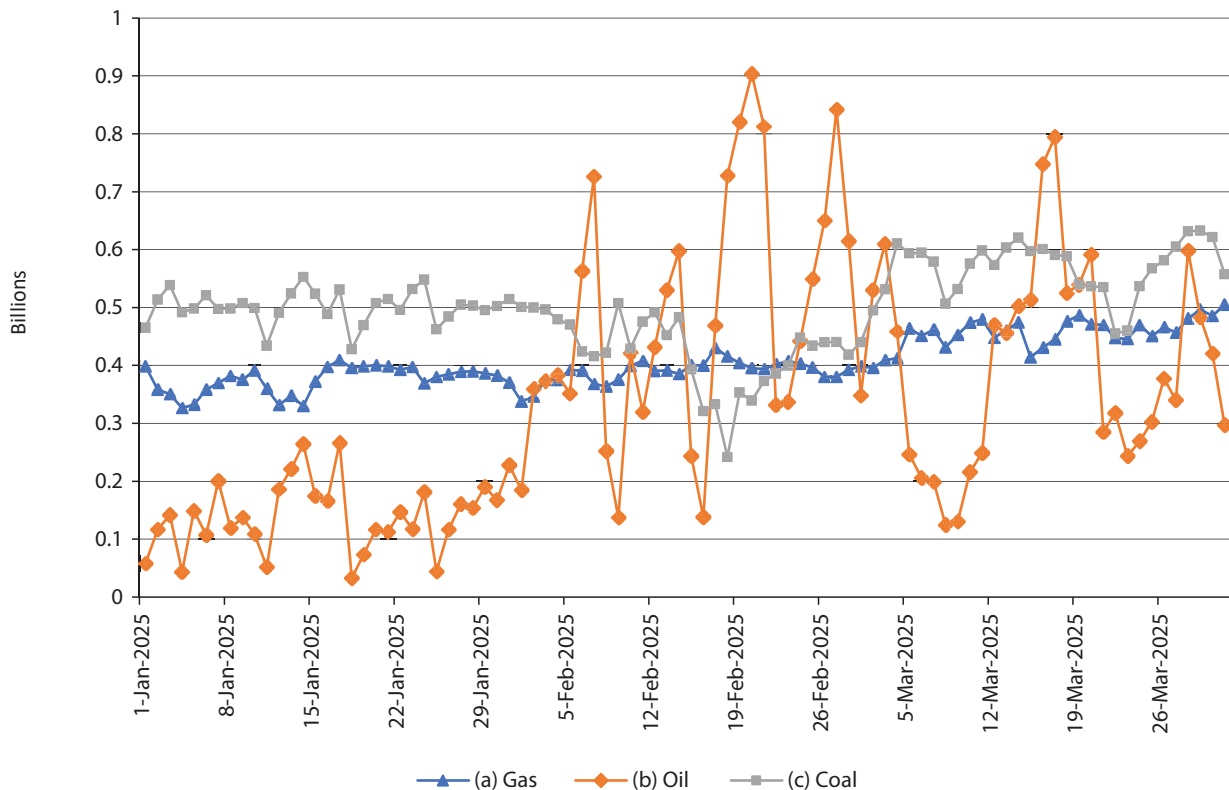
**Figure 3** Per Day Energy Generation by Different Fuel (MKWh)



Source: BPDB Daily Generation Report.

**Figure 4 Fuel Cost**

(Billions BDT)



Source: BPDB Daily Generation Report.

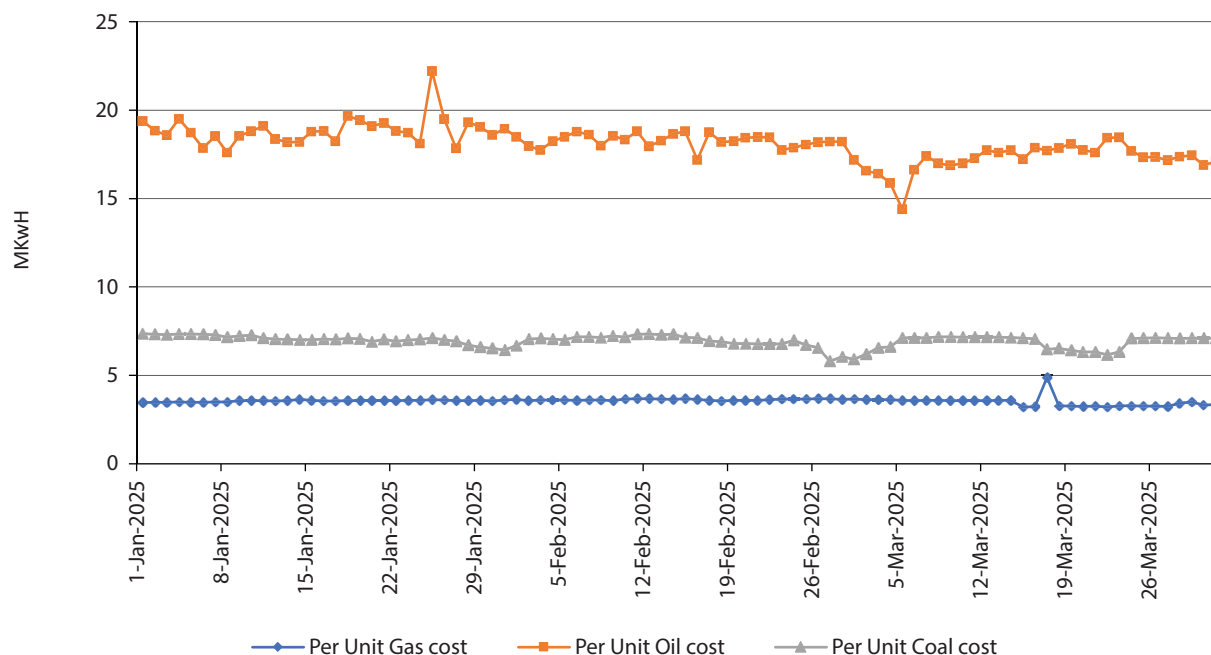
Oil-based electricity generation is relatively low, fluctuating between 49 and 1.6 million KWh per day, which happened due to the high price of oil and low energy demand during the winter season. Solar and hydropower-based electricity generation are minimal compared to other sources and are considered the least contributing sources of electricity generation. Currently, Bangladesh’s installed power generation capacity is over 27,536 MW, about half of which remains idle mainly because of three reasons—fuel crisis, poor power supply infrastructure and lack of electricity demand.

As depicted in Figure 4, the cost of fuel for power generation remained highly volatile, specifically, in case of using fuel oil in the fuel mix. An inconsistent trend has been observed with daily power generation costs ranging from a high of BDT 219.31 crores to a low of BDT 105.92 crores. The oil cost for electricity shows the most significant fluctuations. Oil costs show extreme volatility, with frequent sharp spikes and drops, ranging from as low as BDT 3.24 crores to as high as BDT 90.34 crores. Notably, both the peak and lowest costs recorded this quarter are higher than those observed during the same period in FY2023–24. This instability likely reflects the oil price’s sensitivity to global market fluctuations and the depreciation of the Bangladeshi Taka (BDT), which has increased the cost of oil imports overtime. Gas expenditure remains relatively stable throughout the period, fluctuating mildly between 32.66 and 50.50 crores BDT, suggesting consistent usage and pricing—possibly due to long-term contracts or regulated supply. Coal costs are comparatively stable but display a gradual upward trend, especially toward late March, ranging mostly between 45.5 and 55.5 crores BDT and peaking near 64 crores.

Figure 5 illustrates the daily per-unit cost for electricity generation for this quarter. The cost of electricity generation spiked on 25 January 2025 and sharply declined on 21 March 2025. Despite natural gas maintaining the lowest per-unit

**Figure 5 Per Unit Fuel Cost**

(Taka/Unit)



Source: Author’s calculation from BPDB Daily Generation Report.

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

Indicators	Start of Q3 2025 (Jan'25)	End of Q3 (Feb'25)	Change in %
Transmission lines (Circuit Km)	16,092	16,788	4.32
Distribution lines (Km)	648,725	648,725	0
Grid sub-station capacity (MVA)	75,072	75,639	0.75

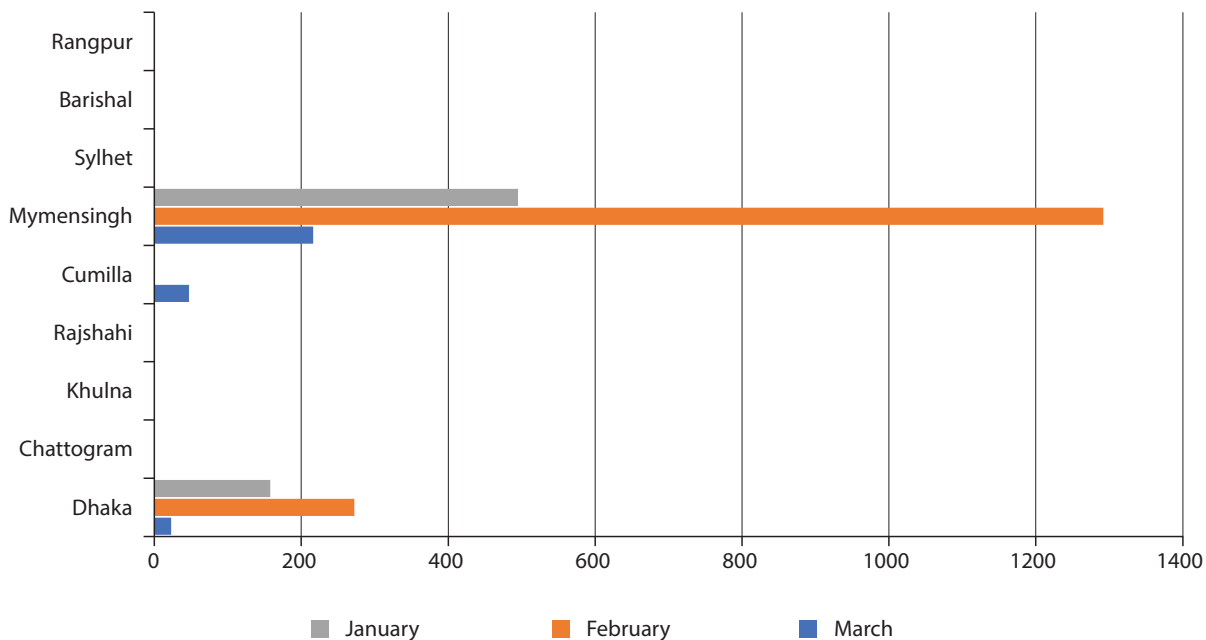
Source: BPDB.

cost among all fuels, its utilisation in power generation has been suboptimal. In the fiscal year 2023–24, less than 45 per cent of Bangladesh's gas-based power generation capacity was utilised. Projections indicated that this utilisation rate may decline further in 2024–25. The current quarter’s scenario supports this projection.

**b) Transmission and Distribution:** During the current quarter, Bangladesh’s transmission network had expanded to 16,092 circuit kilometers, while distribution lines covered 648,725 kilometers. The grid substation capacity stood at 75,072 Mega Volt Ampere (MVA). By the end of this quarter, transmission lines had further extended to 16,788 circuit kilometers, with distribution line coverage remaining unchanged. During the same period, grid substation capacity increased to 75,639 MVA. Transmission lines expanded by 4.32 per cent in circuit kilometers, marking an improvement over the previous quarter’s growth rate. In contrast, there was no change in the length of distribution lines. Additionally, grid sub-station capacity increased by 0.75 per cent, which is lower than the percentage change recorded in the previous quarter.

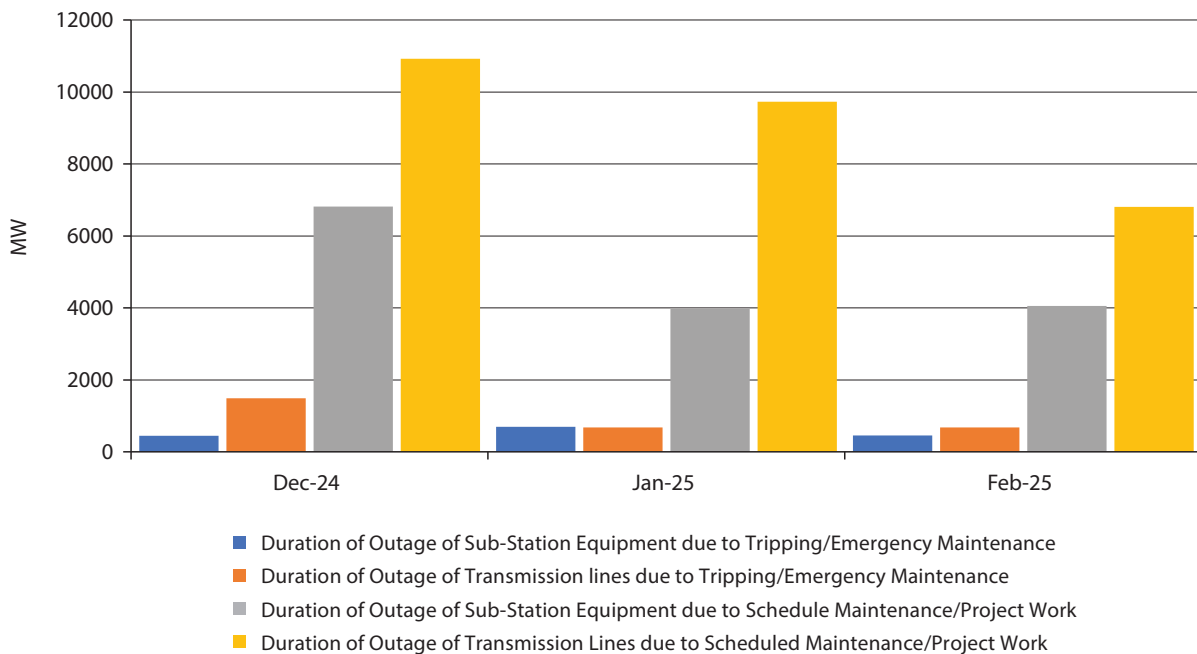
**Load Shedding:** During this quarter, the monthly total demand and supply gap of power generation increased during February 2025 and then decreased again in March 2025. In January 2025, the shortfall surged sharply from 0 MW in December to 526 MW, further escalating to 1,564 MW in February. But the gap came down to 286 MW in March 2025,

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



Source: BPBD Daily Generation Archive.

**Figure 7 Summary of Monthly Tripping and Outage (EMERGENCY & SCHEDULED)**



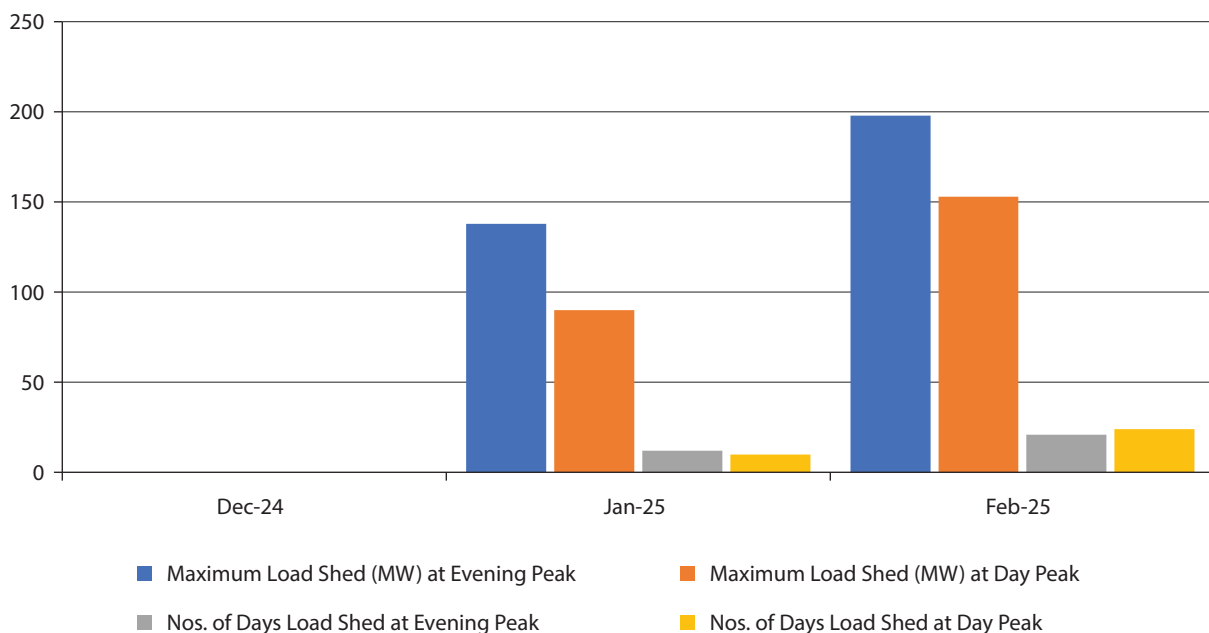
Source: PGCB Operation Monthly Reports.

which might be due to the government's efforts to ensure zero load shedding during Ramadan. Figure 6 reflects the load shedding scenario in various regions of Bangladesh during January-March 2025 season. Notably, outside of Dhaka, Mymensingh, and Khulna, most regions experienced zero load-shedding during this period, reflecting both a seasonal decline in electricity demand during winter and targeted government interventions. Even in the FY2023-24's this quarter, Mymensingh experienced more frequent load-shedding compared to other regions.

According to Bangladesh Power Development Board (BPDB) data, there were more load-shedding in February 2025 than in January from the generation's end. However, some areas experienced load-shedding for the transmission and distribution's end. Figure 7 summarises the monthly outage durations due to emergency and scheduled maintenance during December 2024 to January 2025, categorised by sub-station equipment and transmission lines. In January, outages caused by sub-station equipment tripping/emergency maintenance totaled 697 hours, while transmission line outages were 682 hours. Scheduled maintenance caused the longest outages, with 3973 hours for sub-station equipment and 9727 hours for transmission lines. In February 2025, emergency outages dropped to 458 hours for sub-station equipment but emergency outages for transmission lines stayed the same at 682 hours. However, outages from scheduled maintenance increased sharply, reaching 4059 hours for sub-station equipment and 6806 hours for transmission lines. Notably, a technical malfunction in a transformer triggered a national grid collapse that deprived parts of Dhaka of electricity supply for at least two hours on March 11, 2025. Malfunction in Aminbazar power sub-station, a critical point in the national grid, handling about 1,000MW with inputs from the Rampal and Payra power plants, triggered this power outage. What stands out is that monthly outages due to tripping and emergency maintenance have gradually decreased since December. However, the overall situation remains largely similar to the same period in the previous fiscal year.

Figure 8 represents the monthly load-shedding pattern at the sub-station end for December-February 2025. It includes: the maximum load shed, and the number of days load shedding occurred at both the evening and day peaks. In December 2025, In January 2025, the number of days with load shedding was only 12 days at the evening peak and 10 days at the

**Figure 8 Monthly Load Shedding Pattern (Sub-station end)**



**Source:** PGCB Operation Monthly Reports.

**Note:** March Data has yet to be updated.



day peak. However, in February 2025, the number of days with load shedding nearly doubled, the maximum load shed increased to about 198 MW at the evening peak and a significant increase of 153 MW at the day peak. This trend highlights the higher demand for electricity as winter comes to an end.

### Fossil Fuel Phaseout and New IPPs

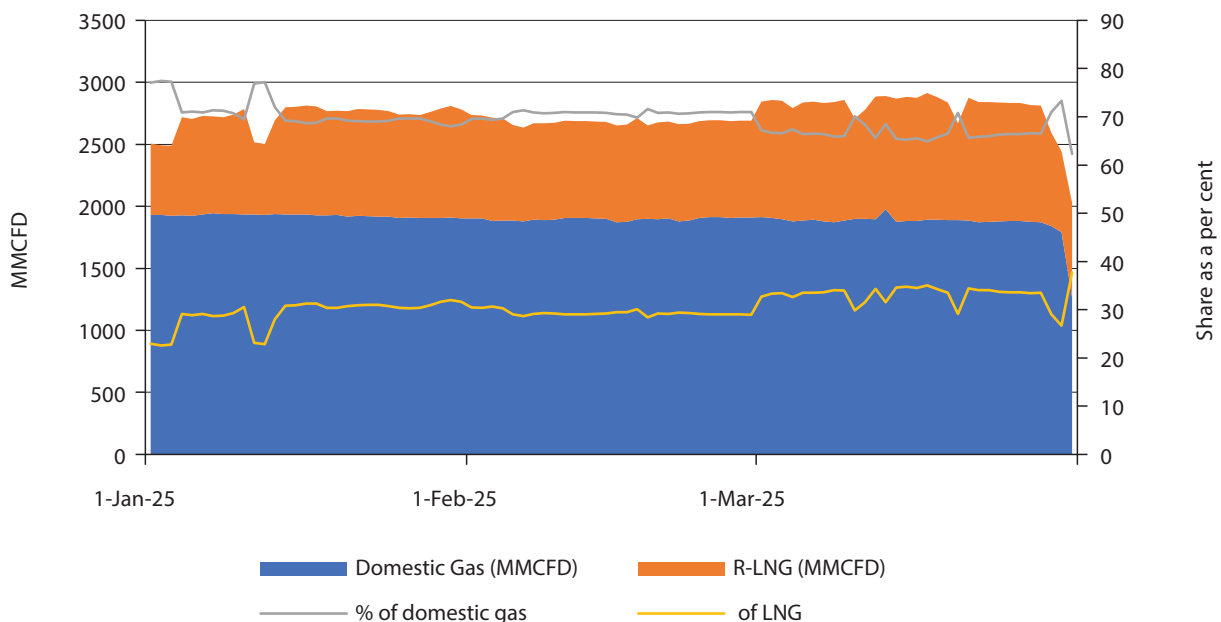
During the quarter, neither any new IPPs started operating nor any phased out .

## 5. DEMAND, SUPPLY & EXPLORATION IN THE ENERGY SECTOR DURING JANUARY-MARCH 2025

**Gas Demand and Supply:** During January- March 2025, the gas supply, including LNG, was mostly high compared to the previous quarter. It reached it’s peak at the end of the quarter on 17 March 2025 (2914.5 mmcf). The LNG supply was as low as 562.9 MMCFD (22 per cent of the total gas supply) (figure 9) and to as high as 1022 MMCFD (35-36 per cent of the total gas supply). Both the high and low supply of LNG was higher compared to the previous quarter. (low: 550.9 MMCFD, high: 904.6 MMCFD). Compared to the same quarter of last fiscal year FY2023-24, the LNG supply is significantly higher this year as the highest share of LNG was 25 per cent. The highest amount of domestic gas supply was 1943.6 MMCFD which is also much lower compared to previous quarter (2003.8 MMCFD) and same quarter of last year (2064 MMCFD). The decreasing share of domestic gas and increasing share of imported LNG demonstrates Bangladesh’s increasing dependency on imported LNG.

**Gas Exploration:** After the failed attempt of attracting any bidders through international tenders since the interim government took power nine months ago. Bangladesh is preparing to launch a second international tender for petroleum and natural gas exploration in 24 offshore blocks in the Bay of Bengal out of the total of 26 gas blocks. The re-tender will also include separate calls for 2-D and 3-D seismic surveys. Hence, no significant improvement in the domestic gas exploration has been observed during this quarter.

**Figure 9** Domestic gas and LNG supply



Source: PetroBangla daily gas data.

**Fiscal and Budgetary Measures for National Budget FY2025-26:** The power and energy sector has faced prolonged financial losses, rising public debt, and increasing fiscal burdens due to faulty policies, lack of transparency, and weak governance from the previous regime. Key challenges include: (a) defaults on import bill payments, (b) repayment of international loans and dues to the international companies, (c) disrupted gas and electricity supply, (d) a lack of domestic gas exploration, and (e) a growing subsidy burden passed onto consumers via higher tariffs. The FY2025-26 national budget should focus on paying off outstanding dues, reducing subsidies, prioritizing domestic gas exploration over LNG imports, lowering tariff barriers for renewable energy components, and eliminating discriminatory fiscal benefits for fossil-fuel-based power generation. To address the huge financial burden caused by the usage of imported fossil fuel, the finance ministry plans to clear all arrears within the current fiscal year by reallocating unspent ADP funds and raising the power sector subsidy to Tk. 62,000 crore. However, this approach highlights a troubling "vicious cycle" of overdue loans, unpaid bills, and ongoing financial liabilities in the power and energy sector. To break the cycle, MoPEMR, particularly BPDB and PetroBangla, should design a five-year financial plan to gradually reduce overdue payments. This plan should phase out fossil-fuel-based power plants after current contracts end, removing the 'capacity payment' clause from renewed PPAs and new contracts.

**LNG Import:** After declaring that LNG and coal will be the main two sources of primary energy for power generation, the Ministry of Power, Energy and Mineral Resources (MoPEMR) has taken initiative to import LNG from Saudi Arabia's state-owned oil giant Aramco, UK and Singapore. Proposals regarding the import of two cargoes of LNG from the UK and Singapore and separate proposals for procuring one cargo LNG from Saudi Arabia was approved during this quarter.

## 6. RENEWABLE ENERGY DEVELOPMENT DURING JANUARY-MARCH 2025

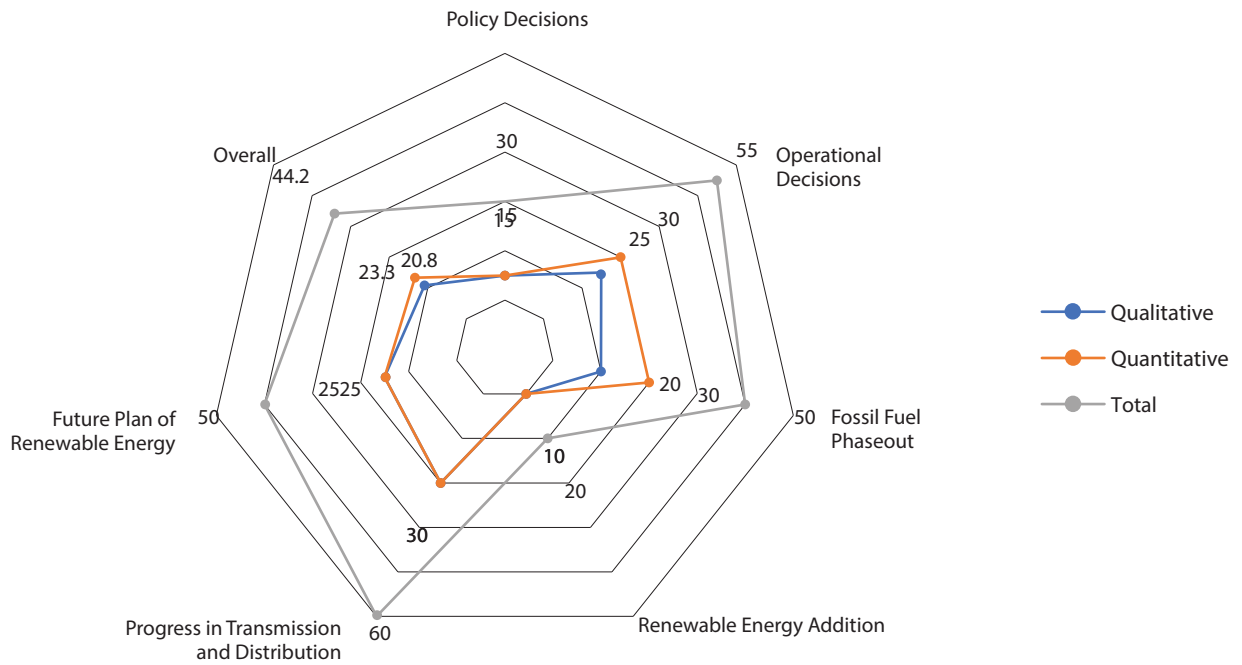
**a) Renewable Energy Progress during January-March 2025:** The renewable energy sector's trajectory in the January-March 2025 quarter showed less improvement compared to the previous quarter. While delays remained a prevalent issue, one new power plant became partially operational against the scheduled operational time, albeit they were delayed from previous schedules and one new power plant is highly likely to be in full operation on time in the next quarter based on their progression in this quarter. However, the continuation of eight projects remaining in the delayed status underscores the persistent obstacles that hinder the sector's pace. Consequently, these setbacks resulted in a significant shortfall in renewable energy production, with an estimated 394.5 MW of clean electricity generation missing due to the delays. Compared to the beginning of no construction of renewable power plants during the last quarter, this quarter observed the start of three renewable energy power plants. Furthermore, within this quarter, the government has sanctioned the development of no new power plant, like the previous quarter (table 2).

**Table 2** Progress Status of Renewable Based Power Plants Scheduled to Operate Commercially in 2025 (During January-March 2025)

Progress Status	Number of Power Plants in Q2 of FY24	Number of Power Plants in Q3 of FY24
Fully Operational on Time	2	1
Fully Operational but Delayed	1	0
Partially Operational but on Time	0	0
Partially Operational but Delayed	2	1
Delayed	7	8
Construction Starts	0	8
Projects Approved	0	0

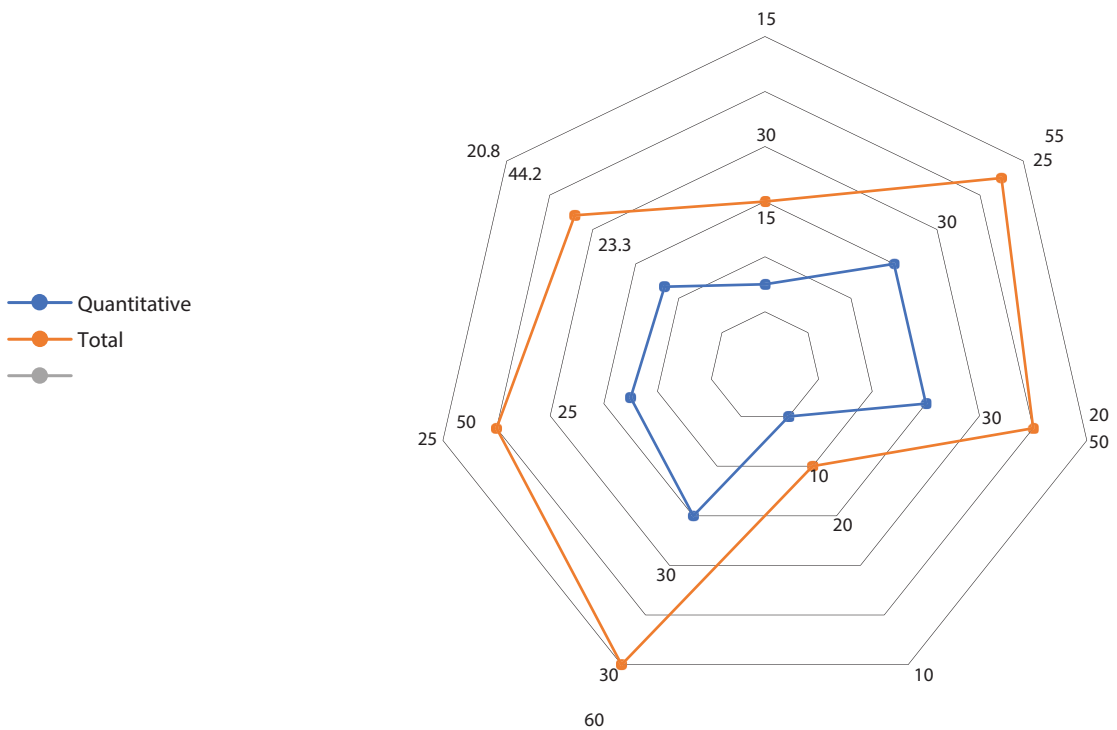
**Source:** Authors' calculation from BPDB Monthly Reports of 2024, 2025 and SREDA.

**Figure 10** Energy transition readiness assessment during Q3, FY2025



Source: Authors' findings.

**Figure 11** Energy transition readiness assessment during Q2 FY2025



Source: Authors' findings.

**b) Renewable Energy Financing during January-March 2025:** During the third quarter of FY25, Bangladesh did not obtain much of any foreign financial assistance or investment for renewable energy projects compared to the third quarters of the previous fiscal year. One significant follow-up is that the largest solar investor of China, LONGI, showed its interest to invest in and set up solar projects in Bangladesh during this quarter.

## 7. FOLLOW-UP OF PREVIOUS QUARTER

The third quarter of FY2024-25 was stable, with a disappointing progress rate in case of renewable energy. The major crisis of this quarter was the shortage of gas supply fulfilling with expensive imported LNG. However, there has been slight improvement in the transmission and distribution system, only a few scheduled maintenances have been observed during this quarter. Figure 10 demonstrates overall progress in the power and energy sector from the energy transition point of view. In a nutshell, it can be concluded that the overall progress during this quarter was much slower than the previous quarter (figure 11).

**Market-based Fuel Pricing Using Artificial Neural Network:** The transition from an administered to a market-based fuel pricing system in Bangladesh, initiated in March 2024, marks a significant step towards reducing fiscal burdens and aligning domestic fuel prices with international markets. However, the existing pricing mechanisms formulated by the Bangladesh Petroleum Corporation (BPC) and the Bangladesh Energy Regulatory Commission (BERC) exhibit critical shortcomings.

Findings from CPD's empirical analysis indicate that current fuel oil retail prices in Bangladesh could be reduced while still maintaining a BPC margin of 3–5 per cent. For instance, the estimated effective import price of crude oil for 2024 was found to be BDT 47.60 per litre from our proposition, significantly lower than the face-value import price used in existing formulas. This results in an adjusted retail price of diesel at BDT 99 per litre, compared to BDT 130 per litre under the current pricing formula, demonstrating substantial overpricing within the existing system. The ANN model also reveals that a market-based pricing approach leads to greater price stability, mitigating economic shocks caused by abrupt and discretionary tariff adjustments. Moreover, this study also evaluates BERC's pricing formula, proposed in 2022, and finds that using the BERC's proportional cost alongside our proposed model yields a lower per-unit fuel oil price compared to the price calculated by the BERC.

In conclusion, the findings underscore the necessity of reforming the fuel pricing model using advanced predictive techniques rather than relying on rigid, automatic yet administrative formulas. Additionally, to maintain the momentum of Bangladesh's energy transition, complementary carbon pricing policies, targeted renewable energy incentives, and gradual subsidy reallocation should accompany the implementation of a competitive fuel pricing regime.

### CPD Power and Energy Publication during January-March 2025

1. Overseas Investment in Bangladesh's Renewable Energy Sector: Case of Chinese Investment
2. How Bangladesh's Renewable Energy Sector Can Attract Chinese Overseas Investment Addressing the Challenges
3. The Future Unplugged: Forecasting a Comprehensive Energy Demand of Bangladesh - a Long Run Error Correction Model