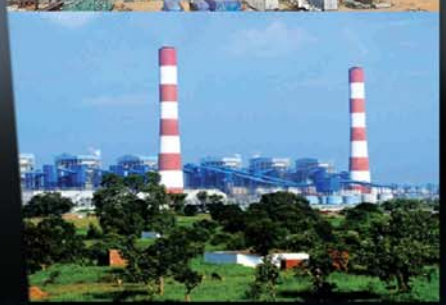
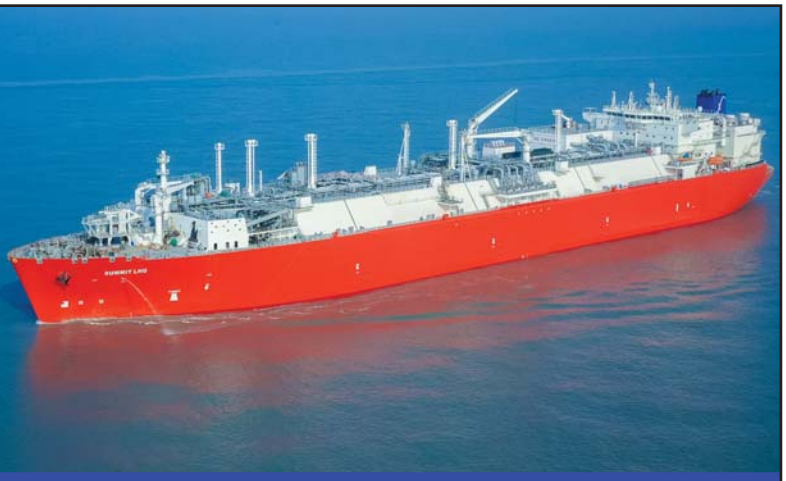
Summer Sets In Amid Load-Shedding Scare

Mollah Amzad Hossain



The ensuing summer is likely to witness severe power load-shedding as indicated by the load management during the outgoing winter when various towns and villages experienced power outages to some extent. It has also uncovered the government's weakness in confronting the peak power demand of the intensive irrigation period that coincides with the month of Ramadan, followed by high summer when the highest demand for power may reach 16,500 MW. The sorry state of the power supply situation may aggravate further during the summer unless fuel supply to the power plants can be ensured timely.

ENERGY



EFFICIENCY

EXCELLENCE

Headquartered in Singapore, **Summit** is a symbol of Bangladesh's success and growth story, built on the foundation of private sector-led power generation and infrastructure.

Consistently delivering high performance, quality and reliability, Summit has provided 26 years of uninterrupted power generation, an unparalleled achievement in the industry.

We are proud to continue serving you with the highest standards.

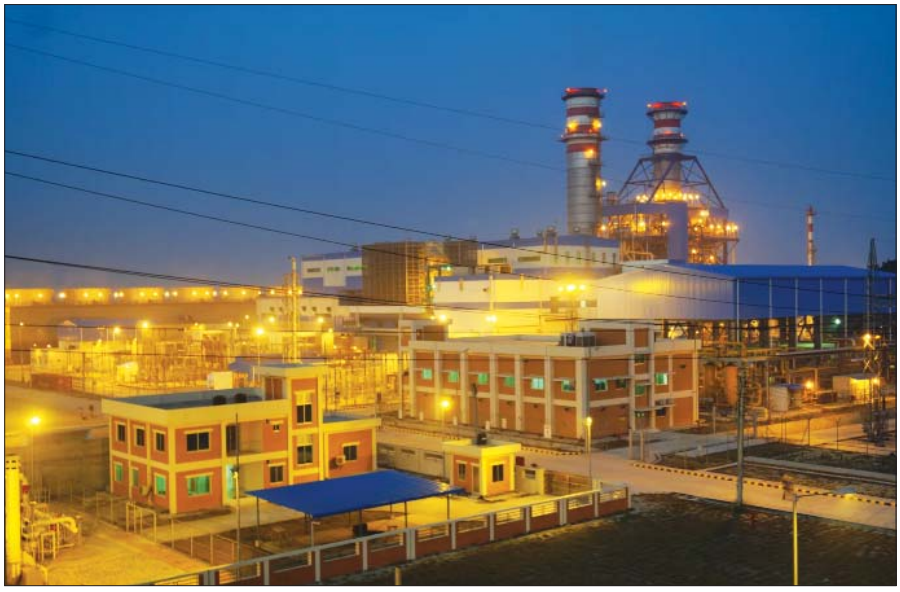
SUMMIT

www.summitpowerinternational.com

summitpowerintl | summitpowerintl | Summit Power International | Summit Power International

The year 2023 passed away amidst criticisms over power supply management for primary fuel and the dollar crisis. If not in major cities, load-shedding has been experienced in various towns and villages during the winter of the end of 2023 and early 2024. This early system has rung alarm about the government's ability to confront the peak power demand of the intensive irrigation period coinciding with the month of Ramadan and followed by high summer. State Minister Power, Energy and Mineral Resources Nasrul Hamid MP stated that the highest demand may reach 16,500 MW. State Minister assured of taking necessary preparation for meeting even the peak demand. However, sources of BPDB informed EP that issues will be created in realizing outstanding payments of fuel and electricity unless the finance ministry releases the due subsidy on time. The challenges of generating and supplying power as per demand may remain a huge challenge.

The distribution utilities claim they are well-prepared to ensure an uninterrupted supply of power in their respective franchises in the ensuing summer subject to getting adequate supply from the upstream.



Bangladesh Rural Electrification Board (BREB), the largest power distribution utility, says completed the required maintenance and upgrade works of its network in December 2023. It carried out a joint evaluation of all feeder points with the PGCB. The maintenance of the DPDC, DESCO, NESCO, WZPDCL, and BPDB distribution networks has also been completed. Excepting a few substations, most of the networks are not overloaded. The DPDC and DESCO have confirmed that their systems can supply power to all load centers from more than one source. DESCO can provide better customer services this year as they have commissioned SCADA. However, the BREB would not guarantee providing uninterrupted supply in their franchise through their PBSs.

A senior executive of BREB, on condition of anonymity, informed the EP that some of the BREB franchise areas faced 30-40% load-shedding in 2023. He said that the BREB areas had to suffer about 145 MW or 20-25% of load-shedding even in January 2024. During the month, the load-shedding in Dhaka was 45 MW.

According to the BREB sources, the demand in April 2023 was 1,304 MW. This year during the same time the demand may increase by 10%. There are 776 source lines (33/11 KV) and substations across 80 PBSs. The maintenance works of all these have been completed in December 2023. The BREB does not have any impediment to receiving power supply from the PGCB in areas other than greater Mymensingh. There should not be any problem if RPCL, Summit, and United power plants in the region operate at full capacity. However, due to the increased demand, it would not be possible to meet the demand in some areas in the vicinity of Dhaka. Around 300 MW of load remains pending in Sonargaon Circle of Narayanganj. Some 50-80 MW is pending at

Kabirpur of Dhaka. These cannot be met till the generation increases.

On overall assessment, BREB anticipates a load-shedding would prevail in its command area in the ensuing summer. It is anticipated that the power system will experience greater load-shedding over the summer if the required money is not made available on time.

The DPDC is responsible for power distribution over a wide area of Dhaka and Narayanganj. In 2023 the highest power demand was 2135 MW. Frequent load-shedding in Dhaka was required. According to their forecast, the demand during Ramadan and summer may exceed 2300 MW. Engr. Abdullah Noman, Managing Director of DPDC, said they have already completed the required maintenance works of all substations. They can meet the summer demand using even 60% of their present capacity. Around 80% of their transformers do not have issues with overloading but 20% of the transformers had some problems. Some works are going on to replace 200 KVA transformers with 250 KVA. DPDC is now able to monitor and control its entire system from the control room. Works on setting up the SCADA system are in progress. They will achieve more assured system operation after the commissioning of SCADA.

Engr. Noman thought the DPDC system had no issues as such in managing summer demand. But it will largely depend on getting supply from the BPDB. In a meeting at the Power Division, DPDC has been assured of getting the supply.

Northern Electricity Supply Company (NESCO) is responsible for power supply in the Northern region – greater Rajshahi, Rangpur, and Dinajpur. NESCO officials informed the EP that their system has no issues now. All required preparations have been taken for a smooth supply of power for irrigation. Moreover, there

has been no issue of low voltage since the commencement of import of Adnani power. Zakiul Islam, Managing Director of NESCO, informed necessary adjustments will be made after further reviewing the situation in March 2024. But he said, getting supply as per demand remains challenging. Subject to getting the required supply there should not be any issue.

On scrutiny of all data and information, it appears that there exists no major constraint in the national power transmission grid of Power Grid Company of Bangladesh (PGCB) now. There are some limitations in Chattogram and Mymensingh. PGCB considers its 230 KV networks to be the strongest ones. Compared to that 400 KV networks are not so as it has not been completed nationwide as yet. The large, imported coal-fired power plants and three large fuel-efficient gas-based power plants waiting to come into operation at Meghnaghat are connected to a 400 KV network. There is a talk now about relocating the power supply to large gas-based power plants at Meghnaghat from some plants connected with a 230 KV network. This may create some issues in the smooth operation of the power grid if the gas swapping is done soon. PGCB could evacuate up to 1450 MW of power from the Adani power plant in India. There is no problem with that. This has improved the quality of power in the Northern region. The construction of a second 400 KV transmission line from Payra to Dhaka is in progress. Even using the existing 400 KV line there is no issue of transporting 2,640 MW power from Payra and Rampal after meeting up to 2,000 MW power in the southern region. But till now PGCB is not in a position to transport 1,320 MW from the S S Power Plant at Bashkhali and 1,200 MW from the Matarbari power plant. The present substation at Madunaghat can evacuate up to around 1400 MW. There should not be any problem in evacuating power from the region when the GIS upgrade of the Madunaghat substation is completed by September 2024. Apart from the above, there exist some problems in the Mymensingh area. The problems can be managed if all power stations in the region can operate at full capacity. However, it appears that it will not be possible this year due to gas and oil supply constraints.

The installed capacity now inclusive of 2,800 MW of off-grid captive generation is 29,000 MW. 14,000 MW is gas-based. Coal power generation capacity

including import is 6,760MW. Solar and wind power is 500 MW, hydro 230 MW, imports 1,160 MW and the remaining is liquid fuel-based. The estimated highest demand this year is 16,500MW. BPDB confirmed their effective generation capacity at 20,000MW. But the impediment is the required fuel supply. That is the major challenge. State Minister for Power, Energy and Mineral Resources Nasrul Hamid in a recent meeting mentioned that for full effective capacity gas based generation, BPDB requires a 2,000 MMCFD supply of natural gas. But Petrobangla is not able to supply that for power generation. Energy and Mineral Resources Division Secretary Md. Nurul Alam informed the EP that Bangladesh's infrastructure now can import 112 cargoes of LNG. Arrangements have already been made for importing 80 cargoes. 20 more cargoes can be imported provided the required dollars can be arranged. As such throughout the ensuing summer, it may be possible to supply 1,150-1,300 MMCFD gas for power generation. The present total supply of gas is 2,600 MMCFD. From March 2024, it is expected to increase to 3,000-3,100 MMCFD.

The private sector power generation capacity is now 10,000MW. In the recent past, a Tk 12,000 crore payment was made against outstanding power bills through issuing bonds. However, the bills up to September 2023 could be cleared. But Bangladesh Independent Power Producers Association (BIPPA) claimed that it will not be possible to keep their plants in operation by importing fuel unless their overdue payment for another three months is paid soon. Faisal Khan, President of BIPPA, said: "We must open LC with 100% margin. Bank loans are also not available now. We paid installments of bank loans with the money paid through the bonds.

Again, over the last two years, companies are accruing losses for the higher rate of dollars during opening LC." He thought that the private sector companies would be required to generate at least 5,000MW of power consistently if Bangladesh needed to generate 16,000MW during the ensuing summer. BPDB may not be able to pay them unless the Ministry of Finance provides them with a subsidy equivalent to three months. This will create a huge challenge in power generation.

Talking about coal, Adani Group has continued to supply despite huge outstanding payments. They may be getting a portion next month. That may keep them going. Money in installments is being paid for the import of coal for the Payra and Rampal power plants. S S power plant at Bashkhali has continued to supply power. But they did not get any payment yet. Matarbari power plant is also in operation. The BPDB thinks that there should not be any issue with coal supply for power generation. Hence the full capacity of coal power is expected to be available during the summer. However, due to transmission constraints, power at full capacity cannot be evacuated from the Matarbari and S S power plants. These plants together can generate 2,200MW. But up to 1,500MW can be evacuated using the substation at Madunaghat now. While asked about the overall situation, Engr. A. M. Khurshedul Alam, Managing Director of Bangladesh China Power Company Limited (BCPCL), told the EP that, coal supply will not be an issue. However, dependence on liquid fuel will increase if the gas supply shortage continues.

The issue of subsidy is being widely discussed. There was about a Tk 7,000 crore loss even after getting Tk 40,000 crore in subsidy. The generation cost will increase to Tk 14.01 /unit if the subsidy is taken out. With the subsidy, it is Tk 11.53/unit. Hence reducing subsidies is essential. Mr. Nasrul Hamid said the subsidy could be reduced by 70% if the required gas supply for power generation could be provided. But it is not certain till now how much gas would be available.

In the overall analysis, power generation to meet the demand in the ensuing summer is a huge challenge. Unless the outstanding payments are made and the required dollar is supplied, the country is likely to experience severe load-shedding in the summer. EP