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August 1, 2022

ENERGY & POWER

Today's Crisis

Consequence of Bypassing Bangabandhu's Strategy

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শেখ হাসিনার উদ্যোগ ঘরে ঘরে বিদ্যুৎ

মুজিব শতবর্ষ MUJIB 100

নর্থ-ওয়েস্ট পাওয়ার জেনারেশন কোম্পানি লিমিটেড

দেশের উন্নয়ন অগ্রযাত্রায় গর্বিত অংশীদার

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এক নজরে কোম্পানির সার্বিক চিত্র

- মোট বিদ্যুৎ কেন্দ্র - ৯ টি
- বিদ্যুৎ উৎপাদন ক্ষমতা - ৩০৬৩ মেঃ ওঃ
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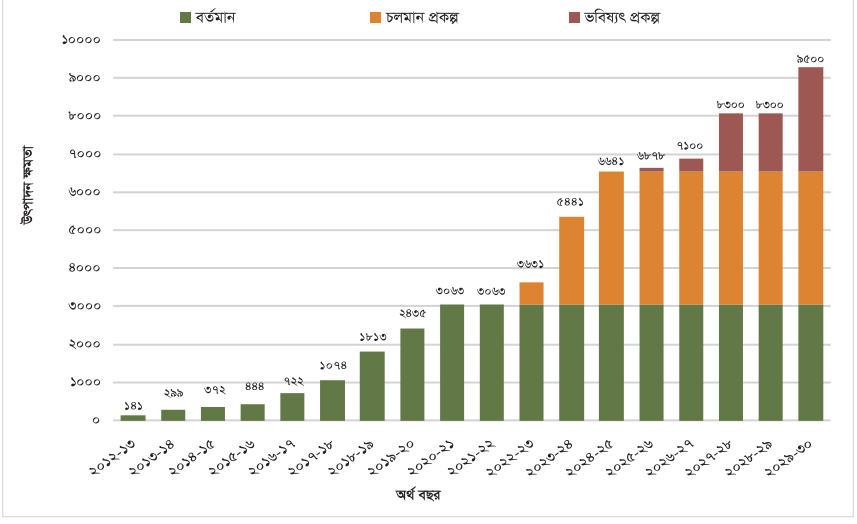

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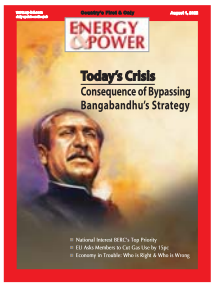
We have received a request for considering dollar devaluation in the price determination. BERC will discuss the matter with the operators. But there is no scope for considering the curb market rate of dollars at all. If felt necessary, BERC will make adjustments upon conducting a fresh public hearing based on operators' submissions... Md. Abdul Jalil Tells EP

Fortnightly Magazine, Vol 20, Issue 4, August 1-15



ENERGY & POWER

EDITORIAL

Bangladesh is going to observe the National Energy Security Day on August 9. The day comes at a time when the country's weaknesses in the sector were exposed in a manner that unless remedial measures are immediately taken, the consequences will only aggravate the insecurities in the long run. Consumers have been enjoying an almost uninterrupted supply of electricity for the last few years and the comfort continued until mid-July. But to the surprise of the consumers, who are aware of the fact that the country has more power generation capacity than the demand, the government had to start rationing electricity from July 19 last. Regretting the inconvenience, State Minister for Power, Energy and Mineral Resources Nasrul Hamid explained why the government decided to go for an area-wise scheduled power outage for one or two hours across the country. And, that has exposed the weak point of the energy sector development mainly in the last 13 years when the generation capacity has increased substantially and the distribution network coverage reached 100%. Sector experts blame the inept development policy that is mostly dependent on imported fuel. The global fuel market volatility has brought the downside risks of such development to light.

Thanks to the volatility that has rather offered Bangladesh an opportunity to give a fresh look to its energy sector development plan before it is too late.

highlights

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Currently, renewable energy is gaining momentum in the global energy mix, which is seen as a low-risk option in comparison to fossil fuels. This is mainly attributed to the expected cost decline of the main renewable energy technologies, such as PV, wind, etc. Additionally, the levelized cost of electricity from renewable resources has become cost competitive than that of fossil fuel-based electricity generation. ... More in Article

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Bangladesh will observe the National Energy Security Day on August 9, a time when Bangladesh, like the rest of the world, is passing through challenges of energy security. The government has taken contingency measures to face the situation. It is expected that the war in Ukraine will be over soon and the global energy market would become stable. And, the demand for power will ease gradually in winter.

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Green page

Encouraged by the readers and patrons, the EP would continue bringing out Green Pages to contribute to the country's efforts in its journey towards environment-friendly energy.


PM's Directive for Solar in Schools Goes Unheeded for 7 Years

JS Body for Energy Audit of Govt Buildings

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Russia's Oil Earnings Continue to Soar: IEA

Russia's oil export revenue surged above $20 billion in June thanks to rising energy prices and despite lower shipments abroad, the International Energy Agency (IEA) said in its monthly oil market report recently.

The agency's statistics showed an increase of $700 million in June from the previous month, even as Russia's daily exports of crude oil and products fell by 250,000 barrels to 7.4 million barrels, the lowest since August.

The country's drop in exports last month was led by crude oil, which fell to just above 5 million barrels per day, according to the IEA. Daily flows to the EU fell below 3 million barrels, which is the lowest since November.

Meanwhile, global oil prices have been surging on strong demand and tight supply. The Brent benchmark averaged more than $117 a barrel last month, while Russia's Urals rose 10.7% from May to average $87.25 a barrel.

Oil and gas revenue accounted for nearly half of Russia's federal budget in 2021, according to IEA estimates.

Gazprom, NIOC Sign $40b MoU for Hydrocarbon Investments

Gazprom and National Iranian Oil Co. (NIOC) have signed a memorandum of understanding.

NIOC CEO Mohsen Khojastehmehr said the MoU, covering investments of about $40 billion, represents one of the biggest foreign direct investment deals in the history of Iran's oil and gas industry.

He added that Iran and Russia were both eager to strengthen their strategic ties, with Iranian President Ebrahim Raisi and Minister of Petroleum supporting the promotion of economic relations and investment in oil and gas fields.

Highlights of the MoU include development of the Kish and North Pars gas fields in the Persian Gulf, pressure enhancement at the South Pars Field, development of six oil fields, a gas and product swap, completion of LNG projects, and construction of gas export pipelines.

It comes at a time when the US and EU have been looking to improve relations with Iran, while at the same time stepping up sanctions on Russia.

France Urges Holidaymakers to Cut Wifi to Save Power

The French government recently urged citizens to make the effort to save energy in the face of record high oil and gas prices, including by cutting wifi routers when heading off on holiday.

"Every bit of energy that we are able to collectively save now is energy that we will be sure of being able to use in autumn or winter," government spokesman Olivier Veran told reporters after a weekly cabinet meeting.

"When you go away for the weekend or on holiday, unplug as many plugs as possible because if not they (appliances) continue to consume energy. You should unplug your wifi in particular," he said.

The call reflects growing anxiety in France and across Europe about energy shortfalls later in the year due to Russia reducing its gas deliveries, or cutting them completely, following the Kremlin's invasion of Ukraine.

Hungary to Buy More Russia Gas

Hungarian Foreign Minister Peter Szijjarto traveled to Moscow recently to discuss purchasing more Russian gas on behalf of his country, the ruling Fidesz party said.

"In order to ensure the security of Hungary's energy supply, the government has decided to purchase an additional 700 million cubic meters of natural gas in addition to the quantities stipulated in the long-term contracts," Fidesz said in a statement on Facebook.

TotalEnergies Completes Withdrawal from Myanmar

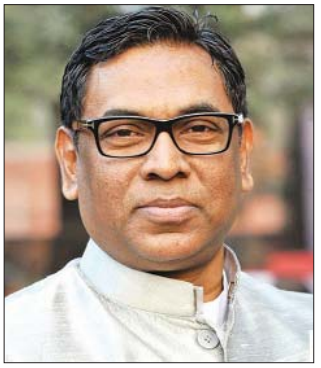
TotalEnergies has confirmed it has withdrawn from the producing Yadana gas field offshore Myanmar and from gas transportation company MGTC, both as shareholder and operator.

The company announced in January that it would exit Myanmar in response to the continuing deterioration of the human rights situation in the country, following a contractual six-month notice period.

Its withdrawal, the company added, was in compliance with the European sanctions implemented against Myanmar this February.

Since its initial announcement, TotalEnergies said it has continued to act as a responsible operator and has been working with PTTEP, its designated replacement, to ensure continued, safe production at the Yadana gas field while ensuring an orderly transfer of operations.

Electricity Use at Religious Establishments to be Reduced: Nasrul



State minister for power, energy and mineral resources Nasrul Hamid on July 18 said the religious establishments can use air conditioners during prayers, but requested to maintain austerity by keeping those off rest of the time.

He said this at a press conference at the Secretariat.

"We need to reduce electricity use in all religious establishments, including mosques. We urge all to keep the ACs off before and after the prayers," he said.

His remarks came following netizens on social media commenting after Prime Minister's Energy Adviser Tawfiq-e-Elahi Chowdhury requested devotees to reduce AC use in mosques.

Bangladesh Wants to Invest in Nepal's Sunkoshi-3 Hydropower Project

The Bangladesh Ambassador to Nepal Salahuddin Noman Chowdhury has said that the government is "positive" about investing in Nepal's Sunkoshi-3 Hydropower Project.

He made the remarks during a field observation of the proposed reservoir-based 683MW project site in Khadadevi Rural Municipality of Ramechhap, Nepal, reports a Nepalese newspaper.

The Bangladesh envoy was accompanied by the Nepal Electricity Authority (NEA) Executive Director Kulman Ghising and officials of the Nepalese Energy Ministry.

Meanwhile, NEA Executive Director Ghising told the media that there had been frequent talks with the Bangladesh government from the Nepalese side to start work on the hydropower project.

"We've had talks with the Bangladesh government to start the project and we will soon have a team of technicians from the country here," he said.

"There were also talks to include India in the project. As big projects like Sunkoshi III have double benefits of tourism as well as hydropower, it's desirable that we complete such projects as soon as possible," Ghising added.

Union Bank, Titas Gas Sign Deal

Union Bank Ltd has signed an agreement with Titas Gas Transmission and Distribution Company Ltd enabling clients of the gas company to pay bills through all branches, sub-branches and iBanking of the bank.

Md Nazrul Islam, deputy managing director of Union Bank, and Md Eaqub Khan, company secretary of Titas Gas Transmission and Distribution Company, signed the agreement at the latter's head office at Karwan Bazar, Dhaka recently, a press release said.

ABM Mokammel Hoque Chowdhury, managing director of the bank, and Md Harunur Rashid Mollah, managing director of the gas company, were present.

CUFL Suspends Production Due to Gas Shortage

The state-owned urea fertilizer company Chittagong Urea Fertilizer Ltd has suspended production due to shortage of gas.

"We'll resume production after starting of gas supply," said an official.

CUFL produces 1,000 tonnes of ammonia and 1,200 tonnes of urea per day. It needs an uninterrupted gas supply for continuing production.

A total of 47 million cubic feet of gas is required per day for the production.

Pipeline to be Set Up to Supply Gas to 420MW Mymensingh Power Plant

The government has taken an initiative to supply gas to Mymensingh combined cycle power plant in pipeline. To this end, a project titled construction of gas pipeline from Dhunua to Mymensingh power plant has been proposed at a cost of Tk 553.16 crore.

The project aims at ensuring uninterrupted power generation at affordable price. Planning Minister MA Mannan said it will ensure smooth power supply by the plant at a cost of Tk 1957.28 crore.

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Rooppur NPP: Hydro-Accumulators' Testing Begins in Russia

Hydraulic testing of half bodies of Passive Core Flooding System (PCFS) Hydro-accumulators begins at Petrozavodsk Branch of AEM-Technologies, Russia.

These are intended for Power Unit - 2 of Rooppur Nuclear Power Plant. Eight PCFS Hydro-accumulators will be installed in each unit.

According to Rosatom, the Russian contractor of the Rooppur NPP, hydraulic test is one of the most important final inspections of the equipment.

PCFS Hydro-accumulator is filled with specially treated thermally enriched water and the pressure in the vessel is raised up to 4.4 MPa and held for 10 min minimum.

After the pressure is released, the outer surface is inspected visually for any leaks and permanent deformations.

Hydro-accumulators each having a capacity of 120 cubic meters are manufactured from stainless steel.

Gatco Graft Case: Prosecution Completes Charge Framing Hearing against Khaleda

The prosecution recently completed the hearing on charge framing against BNP Chairperson Khaleda Zia and 14 others in Gatco corruption case.

ACC Public Prosecutor Mosharraf Hossain Kajol told the court that the charges brought against Khaleda and other accused of misappropriating around Tk 1,000 crore while dealing with Global Agro Trade (Pvt) Company Ltd (Gatco) were primarily proven.

He also appealed to the court to frame charges against all the accused in the case.

Judge Muhammad Ali Hussain of Special Judge Court-3 of Dhaka set July 24 for holding hearing from the defense lawyers on behalf of Khaleda and others.

Meanwhile, an application on behalf of Khaleda was submitted to the court, seeking an adjournment of the hearing, Zaynul Abedin Mesbah, one of her lawyers, confirmed.

Ministry Asks WDB to Keep AC Temperature Below 26°C

The Ministry of Water Resources directed Water Development Board to keep the minimum temperature of the air conditioner at 26 degrees Celsius to save power for future.

Apart from this, the ministry also asked staffers of the WDB to avoid using the office vehicle for personal work, said a notification issued on July 20 by the Ministry of Water Resources. It also asked the staffers to join office at 9am and leave by 5:00pm, stated the notification.

These urgent decisions have been taken to save 50 percent electricity in all the offices of WDB and other offices under the Ministry of Water Resources.

Jet Fuel Price Goes Up by Tk 19 a Liter

The government has hiked the price of jet fuel by Tk 19 to Tk 130 a liter with effect from July 9 on domestic flights.

Bangladesh Petroleum Corporation (BPC) has announced the new price on its website. The jet fuel price, from Tk 61, was hiked multiple times since April 2021 with a rise in August and another in December that year.

The price went up by Tk 7 in February and then in March this year to Tk 80 and Tk 87 a liter respectively. The price touched three digits in April at Tk 100 a liter.

The jet fuel got costlier by Tk 5 to Tk 111 a liter on June 10 after seeing a Tk 6 rise to Tk 106 a liter on May 17.

Govt to Extend Tenure of 4 Costly Rental Power Plants Again

The government is likely to extend tenure of four costly oil-based rental power projects having combined capacity to generate 300MW of electricity amid BPDB's non-payment of $1.7 billion electricity bills.

The power plants already had a second time extension to continue for 10 years and the government now proposed another two-year extension.

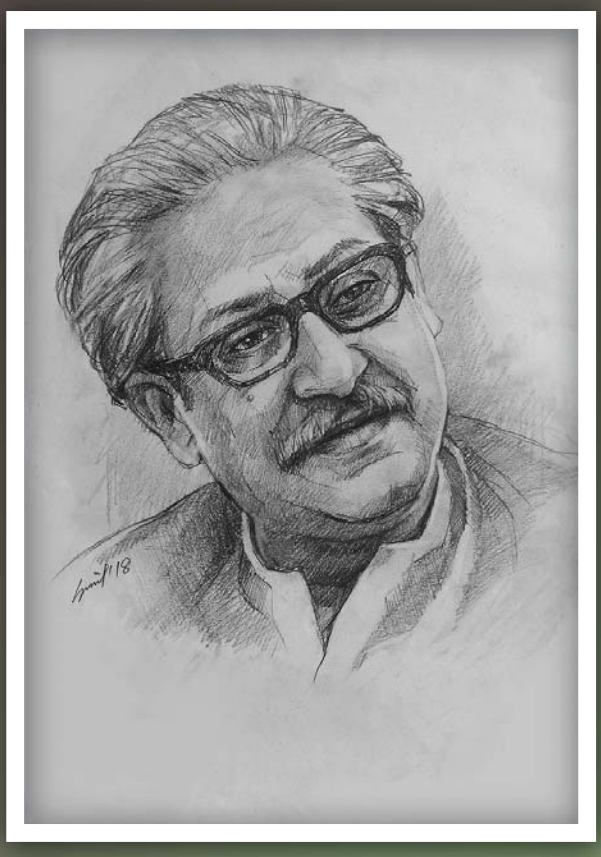
The plants are: Katakhali 50MW in Rajshahi, Julda 100MW in Chattogram, Keraniganj 100MW in Dhaka and Anmura 50MW in Chapainababganj.

The state-owned Bangladesh Power Development Board (BPDB) operate these gas-based power plants. These plants can currently produce only 5250MW of electricity against the capacity of 10,995MW due to the energy crisis.

Today's Crisis

Consequence of Bypassing Bangabandhu's Strategy

Mollah Amzad Hossain



Bangladesh has been celebrating the National Energy Security Day on August 9 for the last 10 years, remembering the contribution of Bangabandhu Sheikh Mujibur Rahman to the country's energy sector development. Though late, the day has been recognized as per the government's decision. Earlier, the Energy & Power magazine had launched a movement for recognizing the day by highlighting various milestone-setting actions initiated by Bangabandhu. This year, the nation will observe the day when Bangladesh, like the rest of the world, is passing through serious challenges of economic and energy security.

The government is endeavoring to contain the situation through the adoption of various instant and contingency actions. It is now expected that the war in Ukraine will be over soon and the present uneasy situation in the energy and power sector will successfully tide over. The government policymakers think that once the hot, humid ambient condition gradually goes, the demand for power will ease. Bangladesh will have the flexibility in catering to power demand. But the sector experts contradict the views of the policymakers. According to them, the flawed policy and strategy of the government have caused an unpleasant situation in the energy sector, and It will not be possible for the government to overcome the situation so easily. Short-term contingency actions may not be enough. Rather, a well-coordinated and comprehensive energy and power policy as well as launching a strategic implementation plan might help overcome the situation gradually. A section of civil society, activists, and left-leaning political parties believe that persistent and unhindered corruption over the last 13 years has led to the present unpalatable situation in the energy and power sectors. These mischief mongers must be identified and brought under the ambit of laws. This write-up marking the energy security day will focus on the reasons leading to the present situation and will explore remedies.

Present Situation of the Power Sector

Generation

Not even a year into the past, Bangladesh emerged as the first country in South Asia to achieve the distinction of bringing the entire country under the coverage of grid power supply to all. Prime Minister Sheikh Hasina ceremoniously announced this achievement. But where actually are we now in the power supply situation as an essential backbone of economic development? Can the prevailing situation leverage achieve the national economic vision of reaching the status of a developed economy?

Let us give a deeper look into the power sector. Till 31 July 2022, the installed generation capacity was 22,348MW. Besides, the capacity of non-grid captive power generation was 2,800MW. According to Engr. Mohammad Hossain, Director General of Power Cell, the country has a total installed capacity of 25,148MW. But the government sources agreed that the actual present capacity of grid-connected power is a little more than 17,000MW. It is possible to meet up to 16,000MW of demand in the present situation.

Energy experts observed that it cannot be predicted confidently when LNG prices in the global market will become normal even if the war in Ukraine stops immediately. The entire world has planned to use gas and for that matter LNG as the interim fuel of choice. Western Europe is developing LNG import infrastructure for using LNG as an alternative to Russian pipeline gas. The price of coal and oil may gradually drop but the price of LNG may stay high for an indefinite period

It merits mentioning here that the power generation was almost exclusively dependent on indigenous natural gas 20 years into the past. About 96% of the power used to be generated by burning own gas. But for issues related to gas supply to some plants in 2005, initiatives were launched in 2006-07 for generation from imported petroleum products. The initiative got momentum in 2009. Consequently, now Bangladesh relies over 33% on imported liquid fuel - furnace oil and diesel - for power generation. At the initial stage, it was conceived that coal-based baseload power plants would come into commercial production from 2014 and liquid fuel-based contingency plants would be gradually phased out. Unfortunately, Bangladesh grew more and more dependent on liquid fuel, adding more such generation units. That trend still continues.

According to BPDB, natural gas-based power generation capacity is above 11,000MW. According to them, a 2,252 MMCFD gas supply is required for generating this power. But at present Petrobangla companies' supply varies between 900 and 1000 MMCFD. None can even guess when it may be possible for Petrobangla to meet the complete demand of the power sector. Despite this scenario, the initiative has been launched for adding 11,282MW of new gas-based power plants by 2030 with the expectation of RLNG supply. Some gas-based plants will retire by then. Yet by 2030, gas-based power generation capacity may reach 20,000-22,000MW. Gas demand for this will exceed 4,500 MMCFD. The source of gas supply cannot be guaranteed yet. By 2030, coal power generation capacity will grow more than 8,000MW. One such plant having a capacity of 1,320MW is ready to deliver. But the total capacity cannot be evacuated yet. The government expects that by December 2022, a 1,320MW Rampal power plant and another 1,248MW coal power plant will start commercial operation. 1,600MW coal-based power from Indian Company Adani Group may also start flowing into the Bangladesh power grid by then. But neither Adani group nor Bangladesh is ready for meeting the target yet.

Transmission

It is known to all that transmission and segments of the power supply chain lag way behind generation in matters of developing the backbone for integrated power supply security. The government has almost completed its third consecutive term in the office. Yet it

could not develop transmission grids and distribution networks matching the growth of generation for the non-availability of required finance. Officials related to power transmission informed the EP that power transmission infrastructure development also suffers from changing and chopping plans of a generation too often. Transmission system development cannot be advanced consistently as the generation plan did not follow Power System Master Plans (PSMPs). Consequently, in some areas, the power supply could not start even after completing evacuation facilities. In some other areas, the situation is just reversed. Evacuation facilities were not ready and generation capacity remained stranded. The COVID-19 pandemic was the worst period for the Power Grid Company of Bangladesh (PGCB) in completing its assigned projects per the revised plan. Consequently, the transmission segment development lagged way behind other segments of the power supply chain. Land acquisition and river crossings are two other major deterrents for power transmission infrastructure development. A major challenge was laying the foundation of 7 power poles parallel to the Padma Bridge in the turbulent Padma River.

Installed Capacity of BPDB Power Plants as on July 2022

Fuel	Generation Capacity (MW)	% of Total
Natural Gas /LNG	11,476	51.05
Furnace Oil	6,278	27.92
Coal	1,768	7.86
Diesel	1,341	5.96
Electricity Import	1,160	5.16
Hydro	230	1.02
Solar PV	229	1.02
Total	**22,482**	**100**

Source: BPDB

Construction of a power transmission line from Matarbari power hub to Modunaghat has been completed. Modunaghat to Meghnaghat 214 KM 400 KV transmission line is expected to be completed by December 2022. Construction of a substation at Matarbari is also advancing smoothly. Power evacuation facilities will be ready by the time the first unit of Matarbari 1,200MW gets ready for commercial operation. But due to the challenges of the Padma River crossing, the transmission line from Payra to Aminbazar could not be completed on time. Sources at the PGCB informed the EP that contingent upon Padma River remaining calm, the leftover works from Gopalganj to Aminbazar may be completed by December 2022. This will assist in evacuating the entire power generated in Payra power plant. Work on the section from Payra to Gopalganj is complete. Construction of a 400 KV substation at Gopalganj is in progress. Work on the Gopalganj-Rampal line plant is also complete. The Payra-Gopalganj section of the transmission line is ready for operation. Until all the leftover work of the entire transmission line is completed, the Payra power plant cannot be operated at design capacity. Power from Payra is currently being supplied to Khulna region by stepping down the voltage at the 400KV substation at Rampal. For this alternate arrangement, the first unit of Rampal cannot be brought into operation until Payra power plant ceases operation. BIFPCL has set a targeted completion date in November 2022 as 5th revision. BPDB organized facilities for supplying back feed power from April 2022. The Adani Group could not complete the 104 km transmission pipeline inside Indian territories. Adani Group can start receiving back feed power in august 2022. Construction of a 400KV transmission pipeline to import this power to Bangladesh at Bogura point is complete now. Construction of the substation was due to be completed by August 2022. But the COVID-19 pandemic affected imports of substation equipment on time. As such it cannot be guaranteed whether power import can start even in December 2022. It may be possible to receive power from the first unit if Adani Group can implement an alternative plan for commissioning and delivering power from unit 1.

According to the information received from the Atomic Energy Commission, the first unit of the 2X1,200MW Rooppur nuclear power plant will be ready for operation at the end of 2023 and the second unit in early 2024. But the minus 2 redundancy power evacuation and transmission facilities will not be ready for operation before 2025. A huge volume of work of 7 different power transmission lines (230KV and 400KV) is required to be completed in entirety for transmission of power to all areas of Bangladesh power grid. Padma and Jamuna rivers would require to be crossed twice each as part of this work. Prospective bidders responding to tender announced under Indian government finance quoted US$1 billion for the river crossing work. Bangladesh government moved out of Indian LOC and announced bidding under alternate finance. The lowest bidder now quoted US$500 (half of the previous lowest bid). According to PGCB, the contract for the river crossing segments can be completed by October 2022. In case of a successful agreement, the completion of the work may take two years. The other components of works of 7 transmission lines may be completed by the end of 2023. For the complex and critical river crossing works of the power transmission line (N minus 2 redundancy) protocol, the power generated from the nuclear power plant cannot be evacuated before October 2025 at this point.

Distribution System

BREB

Bangladesh Rural Electricity Board supplies power to about 80% of the 42.23 million end users through its 80 Polly Bidyut Samity (PBS). BREB among the distribution utilities is lagging way behind supplying quality power on an uninterrupted basis. To come out of the present situation, the challenges of BREB are far greater than utilities supplying power in urban areas. A

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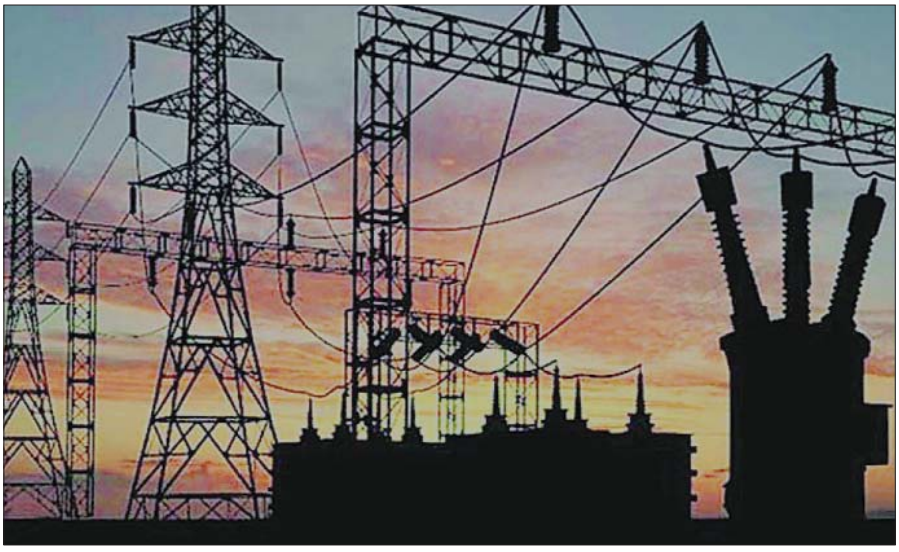
highly placed official of BREB informed the EP that it may take up to 10-15 years for ensuring a quality supply of modern power on an interruptible basis to all users under the BREB franchise. However, an implementation plan has been finalized for implementing a US$2.5 billion scheme for smooth and uninterrupted power in rural areas by 2027. BREB sources informed that they have 1,228 substations across the country. Many of these are in far-flung remote areas. These need to be brought under AIS and GIS monitoring coverage and taken indoors. The regional SCADA system needs to be set up and automatic fault detectors installed. At the same time, all substations need to be connected with a dual supply source. At the same time, long feeders spread across Bangladesh need to be made shorter. PGCB has launched projects for 30 grid lines and substations by 2030 for strengthening the power supply to BREB franchise areas. By 2041, another 41 grid lines and substations will be added. Providing all the information, the BREB executive also informed the EP that all its facilities will be transformed from manual to automatic in phases. That is why it may take up to 10-15 years.

DESCO

Dhaka Electric Supply Company (DESCO) is responsible for supplying power in Mirpur, Gulshan, Baridhara, Uttara, Purbachol and Tongi areas. Formed under the unbundling process of the vertically integrated BPDB operation in 1998, DESCO now has 1.1 million end users. Half of these have been brought under the prepaid metering system. The peak demand in 2009 was 545MW and now in 2022, it has grown to 1,076MW. System loss over this period has been reduced to 5.58% from a staggering 9.79%. However, to make the system completely free of interruption, all feeder lines need to be buried underground and substations need to connect with dual sources. Above all, it needs complete automation. Engr. Md. Kausar Ameer Ali, Managing Director of DESCO, thought that all these may not be achieved by 2025. According to him, these may take up to 2030 to achieve.



Power Transmasion Grid

He mentioned that interruptions over a significant portion of the total area have been reduced by now. Two feeder lines in the Tongi area, are now completely free of interruptions.

DESCO sources informed the EP that an initiative has been launched for taking all the feeder lines underground in Gulshan, Banani and Baridhara areas under JICA finance. The physical work will start this year. The initiative has been taken in association with a Korean company for taking the power supply system of Purbachol underground. The SCADA system has started operation already in DESCO. It is expected that by 2030 the DESCO system can become fully automated. The present system can cater to the demand till 2025. The system will be upgraded to cater to needs up to 2030 and beyond.

DPDC

Dhaka Power Distribution Company (DPDC) is the first distribution utility starting operation in the unbundling process. Starting as DESA and ultimately renamed as DPDC, it is serving wide areas of Dhaka and Narayanganj. The highest demand so far served was 1,766 MW. In 2009, the system loss was as high as 18.18%. The company through various effective actions could reduce the system loss to 6.69%. Even during the crisis period, the DPDC could manage to restrict impacts to a manageable limit. They are implementing projects for connecting substations to dual sources and in some cases to triple sources. Engr. Bikash Dewan, Managing Director of DPDC, informed the EP that the work will be completed by 2025. He admitted that the system cannot be made completely reliable till the entire system is made automated. Engr. Dewan further informed that the DPDC was to adopt a smart grid in phases. It may take up to 2030.

DPDC sources confirmed that the industrial zones are now supplied from dual sources. The company has started implementing projects for taking distribution lines underground from Dhanmondi to Bangabhaban via Jahangir Gate, Azimpur to Gabtoli along the roadside. They expect to complete the work by 2023. Work has started under an EU loan for making the entire distribution system in the Dhanmondi area entirely automated by adopting a smart grid. A US consultant has started working.

Engr. Bikash spoke about the challenges of making the distribution system interruption-free with overhead networks. Again the cost of underground lines is 3-5 times higher than overhead lines. Hence before making investments, it is essential assessing the capacity of the company. We take projects for implementation but the time frame is contingent upon getting city corporation permissions on time. It is also essential to coordinate

with other organizations for managing the operations of underground lines. Felling trees around our distribution lines is a great challenge now. DPDC utilizing modern technology is trying to serve its customers with the least interruptions. We are also quickly responding to situations as and when these appear.

BPDB Distribution Unit

BPDB serves the second largest group of end users after BREB. They serve about 13-14% of total power users in Chattogram, Sylhet, Cumilla and Mymensingh areas. Several projects are under implementation in Sylhet and Cumilla for system expansion and improvement. The distribution in Mymensingh is handicapped by the constraints of the power transmission grid. Different projects are also under implementation for upgrading and modernizing the distribution system in Chattogram. BPDB engineers are of the opinion that the system is not yet ready for 100% reliable supply of quality, uninterrupted power. Work may not be completed by 2025. However, by 2030, the BPDB distribution system will grow 100% reliable and dependable.

WZPDCL

Western Zone Power Distribution Company (WZPDCL) is entrusted with the task of power distribution and supply to the urban areas of 21 districts of the greater Dhaka, Khulna, Barishal regions. It started operation in 2005. The company now serves about 1.5 million customers. The company was formed by transferring employees from BPDB. It has the second lowest system loss (7.88%) among the BPDB companies. It is not in a good position among power distribution utilities as far as customer services are concerned. The area of operation is disaster prone and there have been regular events of natural calamities. The opening of Padma Bridge has ushered in great possibilities of expedited expansion of power distribution. Keeping that as a focus, the company has planned required expansion programs and started implementation.

Southern Bangladesh is a priority area preferred for future industrial growth. On that consideration, the IIFC has been engaged as a consultant for planning and prescribing guidelines for developing WZPDCL as a smart distribution company. On their prescribed guidelines, plans for 2025, 2030, 2035 and 2041 will be worked out. However, he said WZPDCO is not keeping fingers crossed as far as making the system interruption free. 75% of the substations have already been brought under double sources of supply. Within the next two years, all substations would have at least two sources of supply. But the system is still being managed manually. Work on making the system automated through burying the lines underground, installing SCADA and monitoring substations under GIS monitoring are ongoing.

View of Titas gas field

NESCO

Northeast Supply Company (NESCO) is the latest distribution utility to join the BPDB. It started operation in 2016. The company is serving 1.7 million customers in 17 districts of Rajshahi and Rangpur divisions. Among the distribution utilities, it has the highest (10.48%) system loss. The greatest challenge is supplying quality power to the irrigation pumps during the intensive irrigation period. Zakiul Islam, Managing Director of NESCO, told the EP that all must bear in mind the reasons for power interruptions. Trees around our lines, frequent events of cyclones, adverse climate, and overhead lines are major reasons. Of our 100 substations, we could set up GIS monitoring for 34. We have undertaken projects for SCADA and shortening long feeders. The entire system will be made automated in phases. We are working towards achieving that. We cannot wait with fingers crossed for the entire work to be completed. Our present priority is quickly bringing back into operation a disrupted system from weather impacts or others.

Power Generation Perspective Plan

We have mentioned that the installed capacity of grid-connected power is a little more than 22,000MW. There is a plan in place to retire about 7,000-8,000MW power plants, including oil-based ones, by 2030. BPDB intends to reach 32,000 MW generation capacity by this time. The present plans, if implemented, will bring into operation 19,000 MW capacity inclusive of 11,000 MW coal power plants. Besides, there is a plan for importing solar power from India and hydropower from Nepal and Bhutan. 2,400MW nuclear power will also be added during the period. Work on a second nuclear power plant will start following the successful commissioning of the first one.

Source of Fuel

In 2021, imported fuel (coal, LPG, LNG, liquid petroleum products) and power from India contributed 48% to the fuel

mix. From the present strategy of policymakers, it appears that gas is the preferred fuel for the foreseeable future. BPDB estimates 2,252 MMCFD gas demand for 11,000 MW power generation (world standard is 1 MMCFD gas generates 6 MW power). Petrobangla companies can supply 900-1,000 MMCFD. Petrobangla for enhancing its own capacity has launched a program for drilling 46 new exploration, development and workover wells by 2025. Petrobangla expects to add about 618 MMCFD new gas from this program. Dean of Engineering faculty, BUET Dr. M Tamim thought that successful implementation of the Petrobangla program may lead to maintaining the production at the present level of 2,200-2,300 MMCFD. Bangladesh has to wait for 7-8 years from signing a new offshore PSC for any success. Bangladesh will have no other option but to go for additional imports if gas-based power generation capacity expands to 22,000 MW by that time. Coal for 8,000 MW of power will also be required to import. The oil-based generation will be reduced from 33% to 5% by this time.

Coal import under long-term contract has started for Payra power plant. Rampal and Bashkhali plants could not ink a deal for coal import yet. Tenders for purchasing coal for the Matarbari project have just been floated. Petrobangla has contracts with Qatar and Oman for supplying LNG. 500 MMCFD equivalent LNG is currently being imported under the above contracts. Two FSRUs together have double capacity. No new source for purchasing LNG under longer terms could be confirmed yet.

Energy experts observed that it cannot be predicted confidently when LNG prices in the global market will become normal even if the war in Ukraine stops immediately. The entire world has planned to use gas and for that matter LNG as the interim fuel of choice. Western Europe is developing LNG import infrastructure for using LNG as an alternative to Russian pipeline gas. The price of coal and oil may gradually drop but the price of LNG may stay high for an indefinite period. Bangladesh may need to encounter a severe fuel crisis from 2025 if in the meantime it cannot work with far more positive intent on exploring and exploiting the domestic coal and petroleum resources.

Summit Meghnaghat Power Plant

As per the gas sector master plan, the demand for gas by 2030 would grow to 4,500 MMCFD. We are not sure whether it will be possible to meet the expenses of 2,500 MMCFD LNG imports even if the price in the spot market decreases by then. The government has received no positive response for purchasing LNG under long-term contracts. On the other hand, the government has not yet given a green signal to a proposal of a joint venture between Saudi Arabia and a local company for importing LNG under the private sector LNG policy.

Challenges of Fuel Import Infrastructure
The coastal areas of the Bengal delta are very shallow. There is also no deep sea port. The government has moved out of the plan for setting up a coal terminal beside a deep sea port at Payra, Patuakhali. Coal for the power plant at Payra is now transported by shallow draft negotiating smaller vessels. Consequently, the added expenditure on coal transportation has increased the cost of power generation. The cost of coal transportation for Rampal and Bashkhali power plants will be far more challenging. In appreciation of coal import and transportation challenges, the government had a plan for setting up a coal transshipment terminal at Matarbari under a public-private partnership (PPP) initiative for catering to the demand for 19 coal-based power plants at Matarbari, Maheshkhali and other locations. But now Japanese partner Sumitomo has lost interest in investment. Some areas have been earmarked for CTT at Matarbari. But following the government's decision to scrap proposals for 10 coal power plants, it has now become uncertain whether the investment for CTT will be feasible at all. Without CTT, the cost of coal transportation and for that matter, the cost of generation of power from plants at Maheshkhali and other places will be dearer. This will make the concept of cheaper power from coal questionable. A coal port is being developed at Matarbari to cater to the demand of (2X1,200) 2,400MW coal power plants. The first of the two plants are set to come into operation by January 2024. The Japanese government has recently withdrawn from its commitment to finance the second plant. Consequently, the cost of coal transportation and the cost of power from a single plant will increase.

The import of LNG has become a pain in the neck for Bangladesh. The capacity of two FSRUs set up at Maheshkhali shallow offshore is 1,000 MMCFD. Initiative launched for a third

FSRU there could not gather the required momentum. Negotiation was ongoing with Summit Group for it. Project proponents cannot get any FSRU for the huge demand for LNG in Western Europe. Talks have ensued for a deep-water FSRU at Payra also. It is also uncertain at this stage when this proposal will gather moss. A proposal for an EPCM mode of project implementation has been sought from the shortlisted bidders for the land-based LNG terminal at Matarbari. EMRD officials expressed optimism about making it operational by 2027. But the present and emerging realities do not give positive indications for its timely completion.

FSRU of Excelerate Energy

Conclusion

The energy challenge of the then war-ravaged Bangladesh was unleashed by the Arab-Israel war in 1973. Without wasting any time, Bangabandhu initiated a process for offshore exploration of oil in the Bay of Bengal. At the same time, he took an initiative for increasing the use of domestic gas, which was not a preferred fuel at that time. His initiative facilitated taking over five major discovered gas fields from the ownership of oil giant Shell BV for a mere 4.5 million Pound Sterling. These fields still account for about 30% of the national gas production capacity. Bangabandhu also launched an initiative of exploring local coal resources. His farsighted vision also included a mission for developing the capacity of energy companies and human capital. But his unfortunate demise in August 1975 created a drought in the nation's endeavor for energy sector development. His political party Awami League followed his footprint during its term in state power from 1996 to 2001. But it lost momentum, and the governments derailed from the Bangabandhu-showed path over the past 13 years since 2009. Policymakers started believing that Bangladesh can achieve the national vision of developing its economy by 2041 with imported fuel instead of developing local energy resources to the full prospect. But geopolitics destabilizing the global fuel market has rocked the sustainability of fuel supply in Bangladesh. Skyrocketing fuel price in the global market has grown beyond the capacity of Bangladesh. The government has taken various initiatives for managing energy demand. They have also launched initiatives for curbing fuel use. A decision has been taken for suspending the purchase of LNG from the volatile spot market.

Western Europe, the major proponent of making a transition from fossil fuel to renewables, has started resuming the generation of coal power. The green party and the government in Germany which over the past 40 years were against nuclear power have now decided not to shut down two nuclear power plants in December 2022 for managing the winter peak. Energy experts of Bangladesh believe that imported fuel contribution grew to 48% in 2021. If the present trend continues unabated, it will stress Bangladesh's economy. The right option, they suggested, will be reassessing and reviewing the decision of scrapping coal power generation. The political decision for mining own coal and setting up mine-mouth power plants must not be delayed at all. Open pit mining from Phulbari only can support the generation of 6,600MW mine-mouth power for around 30 years. On the other hand, making a wild guess about our petroleum resources without carrying out required exploration is not proper at all. Former BUET Professor Dr Ijaz Hossain suggested setting up a special fund for investing US$1.0 billion each year over the next 10 years on exploring own petroleum resources. 10 exploration rigs must work in the quest for new petroleum resources every year onshore and offshore like an all-out war mission. Prof Ijaz also suggested giving required incentives to developing solar, wind and other renewables.

Experts observed that the energy crisis this time offers an opportunity for Bangladesh to completely redesign its energy vision and mission. That can be done by following the footprints left behind by Bangabandhu. Of course, Bangladesh has no option but to import fuel from the global market. But the country can no longer delay ensuring optimum use of its own primary fuel for the booming economy. Taking the essential political decision for exploring and exploiting its own primary fuel would be the main vision for getting bailed out of the present situation. That would be a major achievement on energy security day.

EP

Facing Crisis Powered by Bangabandhu's Strategy

Saleque Sufi

A country, which is in a deep crisis, desperately needs a charismatic leader like a beacon. Bangabandhu, the dreamer and architect of Bangladesh, followed the right path by laying the foundation to make the country self-reliant in terms of sustainable energy security. He was brutally murdered by a group of traitors on 15 August 1975. His charismatic leadership had just started showing the war-ravaged economy the lights at the end of the tunnel. In 2022, when his daughter Sheikh Hasina, Prime Minister of Bangladesh, is endeavoring to reconstruct the economy from the fallouts of the COVID-19 pandemic, Bangladesh is missing the courage, wisdom and farsightedness of Bangabandhu, who also had to stabilize the rocking boat of energy security that had become vulnerable due to the oil price shock triggered by the Arab-Israel war. The essence of his creation of Bangladesh Oil and Gas Corporation (BOGC) and Bangladesh Mineral Development Corporation (BMDC) was ensuring sustainable energy security through exploring and exploiting own primary fuel and mineral resources. That was the sole purpose of taking over 5 major gas fields (Titas, Habiganj, Rashidpur, Bakhrabad and Koilashtila) for a nominal price of 4.5 million Pound Sterling. It was possible for his government to engage 6 leading IOCs for exploiting oil exploration in the Bay of Bengal as the first country in the region in offshore resources. It was his well thought and timely response to the impending oil price shock. He could manage to send Bangladeshi professionals and students to Algeria and the former USSR for developing competent human capital for the energy and power sector. Unfortunately, his martyrdom in only three and a half years of liberation put paid to Bangladesh's endeavor for self-reliant and vibrant energy security. In 2022, when Bangladesh is encountering yet another global energy crisis, the huge prospect of offshore fuel resources remains to be exploited, substantial superior quality coal reserves remain buried at shallow mineable depth, and Bangladesh lacks competent manpower in stewarding the war against the looming energy crunch. Bangladesh is set to remember Bangabandhu on 9th August as the national energy security day. There will be seminars, discussions and rallies, marking the day. But observers believe that Bangladesh has been derailed from the energy dream of its founding father.

A view of Habiganj gas field

Present Energy and Power Scenario

The policymakers claimed that the power loadshedding had been kept in the museum for their policy implementation in the sector. Yes, bringing the entire country under the coverage of the national power grid is one of the dreams of Bangabandhu that came true. There is no denying that the installed capacity of power generation, including the imports from India and off-grid captive power, has more than quadrupled since 2009. But for ensuring effective and sustainable energy security, a country essentially needs a balanced growth and development of all segments of the power and energy value chain. For not achieving it over the last 50 years since independence, the government has to go for the so-called planned power loadshedding in 2022 when the power demand is about 15,000MW.

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Bangladesh has installed capacity, including captive generation, of over 25000MW. The energy sector suffers from the chronic fuel supply. Proven gas resources are alarmingly depleting, mining coal is in suspended animation. Bangladesh has moved unwisely towards exclusive imported fuel dependency (coal, LNG, LPG, Liquid fuel). The SDG vision of ensuring a sustainable supply of quality modern power to all citizens at an affordable price by 2030 has started growing as a mission impossible. The achievement of the national vision of developing the economy by 2041 is also looking extremely difficult if not impossible.

The information based on installed generation capacity may give a confusing signal. We have to deal with dynamic information based on actual generation on a day-to-day basis. Supply constraints of gas and coal restrict an effective generation capacity of grid power below 15,000MW. The highest generation so far served was 14,792MW on April 16, 2022. The contribution of liquid fuel often reaches beyond 40%. It has gone well beyond its capacity for importing liquid fuel and LNG at the present sky-high price of the global market. War in Ukraine has added fuel to the fire triggered since starting the economic recovery process after the Covid-19 pandemic.

The above scenario speaks of the situation itself. Two IOCs from 43 gas wells from 4 gas fields produced 1477 MMCFD while Petrobangla companies from 70 wells of 17 gas fields produced 851.60 MMCFD. Is there a huge difference in geology and productivity of the wells? Has there been any professional investigation and analysis?

Bangladesh imports LNG from Qatar and Oman through two long-term contracts and also purchases LNG from the spot market. The present market price in the spot market varies from US$ 38-40/MMBTU. For understandable reasons, the Prime Minister has advised not to purchase LNG from the spot market for the time being. That has reduced gas availability in the national gas grid by about 300-320 MMCFD. It is also not possible to import sky-high-priced liquid fuel as per demand. Hence the government had no other option than demand side management through several austerity measures.

Power Generation

Sector	Power Plants	Installed Capacity (30 June 2022) MW
Public	57	10,130
Private	94	9,948
Joint Venture	01	1,244
Import	02 Connectivity	1,150
Total Grid Connected		22,482

Grand total: 22,482 + 2800 (captive power)+ 418 MW off-grid solar) = 25,700 MW

Austerity Measures and Impacts

Finding no other alternatives, the government initiated a few austerity measures like pulling down shutters of shopping malls and markets by 8 PM, limiting the use of air conditioners in offices, and places of prayer, reviewing rescheduling working hours in offices, reintroducing working from home for a while, closing down diesel-based power generation. An hour per day planned power loadshedding has also been launched. People across the country can only judge whether or not the above actions in isolation or putting together are benefitting. Whatever may be the case, this is the fallout of a global crisis. Most countries (developed, developing and LDC) have introduced some measures to contain the impacts of the global energy crisis. We are in a national crisis and there is no scope for politicizing this crisis. But the policymakers instead of behaving like panicked navigators could impose austerity in a much more professional manner. They must implement the ban on battery-driven modes of traffic that are responsible for destabilizing the power demand.

Installed Capacity of BPDB Power Plants as on July 2022

Fuel	Generation Capacity (MW)	% of Total
Natural Gas /LNG	11,476	51.05
Furnace Oil	6,278	27.92
Coal	1,768	7.86
Diesel	1,341	5.96
Electricity Import	1,160	5.16
Hydro	230	1.02
Solar PV	229	1.02
Total	**22,482**	**100**

Source: BPDB

How Bangabandhu's Energy Vision Can Inspire?

Exploration of Coal; Bangabandhu had his plan for it and was pursuing his vision. Bangabandhu was no less a patriot than any Bangladeshi ever born. His vision was Bangladesh where everything was to be distributed among all citizens in an equitable manner. His energy doctrine was exploring and exploiting the country's own fuel and mineral resources. Deep down in his heart, he believed that the riverine delta like Bangladesh must be having substantial petroleum and mineral resources. We all are aware that in creating BOGC and BMDC he engaged two of his trusted advisors in charge of the two entities. BMDC has ceased to exist. Even the separate mining directorate has also been abolished. Petrobangla did nothing to mention over the years for mining coal except a trouble-prone Barapukuria mine. A highly potential Phulbari mine with all feasibility studies done remains unexplored since 2005. If Barapukuria and Phulbari could be mined to their potential by applying off-the-shelf and well-proven mining methods there could be up to 10,000MW coal-based power generation available by now. Instead, Bangladesh struggles to feed a single unit of three mine-mouth power plants at

Barapukuria. All say the Prime Minister is not yet convinced about the environmental management of coal mining. If one only hops across the border, several open-cut coal mines are in operation in West Bengal, Jharkhand and Bihar. Mine rehabilitation zones have been developed in green forests. The mining community has been rehabilitated and farming lands have also been restored. There are no signs of desertification. Bangladesh grappling with coal mining is walking in the reverse direction of Bangabandhu.

Getting woken up from the Arab-Israel war, he could inspire the formulation of Production Sharing Contracts and engage 6 companies in 8 offshore blocks for exploration of oil in the Bay of Bengal. Under the leadership of Bangabandhu's daughter, Bangladesh could successfully resolve maritime boundary disputes with Myanmar and India. But due to a lack of professionalism and courage, Bangladesh failed to take the required actions in years

Gas Supply Scenario: 26-27 July 2022

Company	Gas Fields	Wells	Capacity MMCFD	Produced MMCFD
BGFCL	05	44	851.00	617.10
SGFL	04	11	149.00	91.80
BAPEX	08	15	145.00	142.70
IOCs	04	43	1615.00	1477.90
RLNG	02 FSRUs		1000.00	503.50
Total	21 GF + 2 FSRUs	113	3760	2887.10

to go for offshore exploration. Even onshore, nothing mentionable could be done in years for adding significant new resources. Proven gas resources are depleting very fast. Water drive wells may get completely depleted from the present state of most wells anytime between now and 2025. Bangladesh cannot add much to LNG import for both technical and commercial reasons. Failure here also is for walking away from Bangabandhu's vision. The energy sector needs one champion for rocking and rolling. Bangabandhu used to say: "I need golden sons of the soil for reaching my dream of sonar Bangla." Bangabandhu's daughter must track where Bangabandhu's golden sons have gone.

Remembering the peerless contributions of Bangabandhu is not enough. Trotting back to his energy vision is a must not for getting bailed out from the back-to-the-wall situation.

EP

Saleque Sufi,
Contributing Editor, EP

Renewable: Sustainable Solution for Ensuring Energy Security

Engr. Md. Mozammel Hossain

Bangladesh is one of the fastest developing countries in South Asia. It is also one of the most densely populated countries with around 1079 people per square kilometer. The average annual GDP growth rate was 6.4% between 2017 to 2021, with a peak of 7.88% observed in 2019. According to the Government of Bangladesh (GoB), GDP is expected to grow at an average annual growth rate of 6.1% from 2016 to 2041. According to Revised PSMP 2016, the installed power capacity in Bangladesh will reach over 70GW by 2041 in a low case scenario which includes about 25GW coal-fired power projects. Given the recent situation and international trend surrounding fossil fuel-based power plants coupled with the growing uncertainty over fuel prices, the government has set a roadmap to add more renewable energy-based generation units in order to ensure the country's long-term energy security & sustainability.

Bangladesh has been dependent on fossil fuels for its electricity generation and the continued reliance will require an increase in fossil fuel imports to meet the growing electricity demand due to limited domestic reserves. A high contingency on imported gas, coal and oil will not only add to the economic pressure, but also raise serious questions on its long-term energy security with the ongoing volatile nature of the international market as conventional energy prices continue to soar. Moreover, as one of the world's most vulnerable countries to be impacted by the threats of rising sea levels in its low-lying areas attributed to global warming, dependence on fossil fuels may put Bangladesh in a precarious position in terms of erosion of trust in its government's commitment towards addressing global warming challenges. Specifically, studies show that about 1 meter of sea level rise will submerge one-fifth of the country's land mass, which might dramatically increase climate change refugees in the coming decades, displacing millions of individuals and communities from their homes. In addition, the concentration of the human population has risen steeply since 2010 and about 100 thousand people die each year due to the increase in air pollution. The above facts obligate countries such as Bangladesh to take more of a proactive approach towards transitioning to renewable energy.

Currently, renewable energy is gaining momentum in the global energy mix, which is seen as a low-risk option in comparison to fossil fuels. This is mainly attributed to the expected cost decline of the main renewable energy technologies, such as PV, wind, etc. Additionally, the levelized cost of electricity from renewable resources has become cost competitive than that of fossil fuel-based electricity generation. These factors have triggered a positive outlook toward renewable energy technologies all around the world. Several studies have reported that the technical feasibility and economic viability of 100% renewable energy systems for various parts of the world, e.g. Finland, Denmark, Australia, Israel, India, Pakistan, Southeast Asia, Nigeria, Sub-Saharan Africa, etc. are possible with the decreasing costs every year.

For Bangladesh, renewable energy sources could provide a viable alternative in tackling energy shortages, energy security and long-term energy planning with reduced GHG emissions, whilst complying with climate change targets. Bangladesh is a developing country that is highly dependent on fossil fuels for its electricity generation and its future energy policy is inclined towards the imports of fossil fuels. It also lies in a region with high solar potential, hence its future energy supply could have a large share of solar PV and wind.

Bangladesh has good renewable energy potential, especially solar energy. Bangladesh receives average solar irradiation of around 1095-1460 kWh/(w/m2) and has the potential to generate 380 TWh of electricity, which shall require about 10% of the total land area of Bangladesh (excluding area under agricultural and forest cover). This potential is significantly higher than the present annual electricity demand and could satisfy the projected electricity needs. Bangladesh can follow its neighboring country India, where the cost of electricity generated from solar PV is currently amongst the lowest in the world, at about 3.5 US cents per KWh. To realize the solar PV potential and cost competitiveness against fossil fuel power plants, India has set up a target to install 100 GW by 2022 and 227 GW by 2027. Similarly, the GoB has initiated a number of programs to take advantage of its renewable energy potential. The renewable energy policy was adopted

in 2008 with the aim to boost renewable power generation. In 2015, Bangladesh joined the International Solar Alliance to collaborate towards increased adoption of solar energy. The installation of solar home systems in off-grid areas has been booming since the last decade. So far, 263.47 MW of solar home systems have been installed. There were about 5 million solar home system (SHS) installations in 2017, for the benefit of 30 million people and has created 140,000 new jobs. Rooftop solar installations for commercial and residential buildings has been gaining popularity in recent years. For utility-scale solar PV, non-agricultural land owned by the government is being used, mainly to develop solar parks. Wind energy potential is around 340,000 MW in Bangladesh with its nearly 740 km long coastline and many small islands, where strong winds are present during the monsoon season (May-October). Municipal waste has the potential to become a good energy resource for Bangladesh. In 2021, 9,125,000 tonnes of municipal solid waste was produced in different municipalities. Bangladesh also has a large potential of biomass due to its agricultural economy. Agricultural and forest residues form a major component in its biomass potential. Moreover, agricultural, municipal waste, industries, animals and other sources of waste can generate >950 TWh of energy considering that all waste is recovered. In addition, 315 MW of small scale and large-scale hydropower plants can be installed in Bangladesh. To ensure long-term energy security without burdening the economy or the environment, Bangladesh will need to stress on policies that will exploit these RE potentials.

Solar Mini Grid for Char Area

Bangladesh, being a riverine country, currently has about 405 rivers. Several small and large river islands (chars) have formed alongside areas that are bordered by rivers, lakes, seas, or oceans. Char or small river island is the generic name for the topography created by adsorption along a river's course or in its waterway. Chars are regarded in Bangladesh as a by-product of rivers' hydro-morphological motility. An international organization Irrigation Support Project for Asia and the Near East (ISPAN) discovered through a survey that chars which are not eroded or degraded in the first four years of their existence are more durable. Agriculture or habitation can begin in all the chars at the conclusion of these four years. The soil of these chars generated in the downstream regions is, in comparison, more productive and has a grain density of 150 to 185, which is near to the average grain density of the nation, according to a 1996 report by the Bangladesh Bureau of Statistics (BBS). A recent analysis of a series of satellite images shows that more than 99 percent of the land on the banks of the river Jamuna is made up of chars. In the last 26 years, between 1983 and 2000, the same analysis further showed that about 75% of these chars had disappeared within one to nine years. According to a 1993 census, the total population of

the chars was about 631,000. Most of them (about 75%) live in different chars of Jamuna. The population of chars has increased by 47% in 1993 as compared to 1984. During the same period, the population growth of the country was about 26 percent. As per these calculations, chars play a significant role in influencing human settlement.

It is now clear that this country, which has a larger population than its limited resources, will have to rely on pastures to cope with the food crisis in the near future. To cultivate in these char lands, there will be a larger need for electricity, which is an integral part of the national development as well. Electricity has already reached the urban, suburban and rural areas of Bangladesh. Even the village areas have been brought under 100% electricity. However, electrification of these isolated char areas remains a challenging and daunting task due to the lack of sustainability and technical feasibility. Moreover, the frequent soil erosion near the banks damages the facilities and infrastructure often leading to disconnection and even accidents making the maintenance and repair further challenging and taxing.

According to the Ministry of Power, 72 lakh home solar panels have been installed so far to supply electricity to remote areas. 273 MW of electricity is being generated through these solar panels. 20 million people have come under the power facility through these solar panel systems. In 2020, 96.2% of the people in the country have gotten access to electricity.

If small isolated solar power plants could be set up in these char areas which would only supply electricity to these areas, the approach could be more sustainable. It is not possible for everyone to install solar home systems being relatively expensive and difficult to maintain. People in such regions could readily get access to electricity and won't have maintenance issues. Additionally, the cost would be rather minimal as there won't be the need to install a lot of transmission lines and it is much simpler to maintain such a short transmission line which also has a longer life. Even if the connections were disrupted due to any reason, it is a quick and easy fix as the coverage area is small. Such solar mini grid system can be dismantled and replaced from one place to another with minimal effort resulting as a sustainable alternative for char areas.

There would also be a lot of system loss with transmission line from power substation in the main lands to the chars which can be avoided with this alternative. Additionally, the char regions receive a lot of sunlight throughout the day, the residents there could have access to energy at night if the power could be stored in the plants by using batteries. Therefore, using electricity from a solar power plant rather than a household solar panel is more economic, sustainable and beneficial for them. The household solar panel can produce only a limited quantity of power and is difficult to upgrade should someone need extra energy in any case. With a solar mini-grid, this energy is not limited. Lastly, it could be argued that solar mini-grids are the best and most sustainable alternatives to bring these chars under full power coverage. Solar mini-grids could prove to be the safest, least expensive and most convenient way for the people of such areas.

As a developing nation, Bangladesh needs to transition from traditional or conventional energy sources in order to ensure its energy security & long-term sustainability in the near future. However, given the unique geography of Bangladesh and its landscape for achieving 100% electrification across all communities, the solar mini-grid should be considered as a great alternative which can also prove to be a more viable option.

EP

Engr. Md. Mozammel Hossain
Managing Director, Summit Gazipur II Power Limited & Summit Ace Alliance Power Limited

শেখ হাসিনার উদ্যোগ ঘরে ঘরে বিদ্যুৎ

পাওয়ার গ্রিড কোম্পানি অব বাংলাদেশ লিঃ

POWER GRID COMPANY OF BANGLADESH LTD.

(An Enterprise of Bangladesh Power Development Board)

মুজিব শতবর্ষ MUJIB 100

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মানসম্পন্ন বিদ্যুৎ নিরবচ্ছিন্নভাবে দেশের সকল মানুষের নিকট পৌঁছে দেয়াই আমাদের অঙ্গীকার

- গ্রিড উপকেন্দ্র, গ্রিড লাইন ও টাওয়ার জাতীয় সম্পদ, তা রক্ষা করা সকলের দায়িত্ব।
- গ্রিড উপকেন্দ্র, সঞ্চালন লাইন ও বৈদ্যুতিক টাওয়ারের গুরুত্বপূর্ণ যন্ত্রাংশ চুরি প্রতিরোধে সহায়তা করুন, বিদ্যুৎ বিপর্যয় থেকে দেশকে বাঁচান।
- উচ্চ ভোল্টেজের বৈদ্যুতিক টাওয়ার ও লাইন হতে নিরাপদ দূরত্ব বজায় রাখুন।
- বিদ্যুতের গ্রিড লাইন ও টাওয়ার হতে নিরাপদ দূরত্বে স্থাপনা নির্মাণ করুন।
- বৃক্ষ রোপনে গ্রিড লাইন ও টাওয়ার হতে নিরাপদ দূরত্বে স্থান নির্বাচন করুন।
- বিদ্যুৎ ব্যবহারে সাশ্রয়ী হোন। আপনি বিদ্যুৎ সাশ্রয় করলে তা অন্য একজন ব্যবহার করতে পারে। এমনকি সাশ্রয়কৃত বিদ্যুৎ গুরুতর অসুস্থ কারও জীবন বাঁচানোর কাজে লাগতে পারে।
- বিদ্যুৎ অপচয় রোধে সচেতনভাবে ফ্যান, বাতি ও অন্যান্য বৈদ্যুতিক যন্ত্রপাতি ব্যবহার করুন।
- বিদ্যুৎ সাশ্রয়ী (LED/CFL/T5) বাল্ব ব্যবহার করুন।
- যথাসম্ভব দিনের আলো ব্যবহার করুন।
- বিকাল ৫:০০ টা হতে রাত ১১:০০ টা পর্যন্ত সময়ে বিদ্যুতের চাহিদা বেশী থাকে। এ সময় দোকান, শপিংমল, বাসা-বাড়ীতে আলোকসজ্জা হতে বিরত থাকুন।

A K M Shamsuddin
A Man of Silent Warrior

Mortuza Ahmad Faruque

A K M Shamsuddin, a retired secretary to the government of Bangladesh, passed away on 26 July 2022. It was indeed quite sad and shocking for me to know of his sudden demise at the age of 72. He had been suffering from Covid-19. He was born in January 1950 in Sirajganj. I do wish and pray for eternal peace of his departed soul and express my deepest condolences to all of his family members, colleagues, friends and well-wishers. I saw how simple and modest life he used to live. I am really bemused and express my deepest sorrow on the demise of him who always liked honest, sincere, efficient, innovative and hard working professionals.He was a thorough professional and dedicated to his work. He was a man of unshakable integrity and honesty. He will remain in our heart as a good person. We know, no one will stay in this world forever. Some will leave ahead, leaving behind all his relatives and friends to mourn. We all are born to pass away but our good work will help us live eternally. Almighty Allah took him away from us. May Allah grant him Jannatul Ferdaus.

A K M Shamsuddin

Shamsuddin contributed a lot to the country by initiating and implementing many policy decisions while he was in the energy sector or as a Secretary, Ministry of Primary and Mass Education. He was actively involved in the implementation of the Primary Education Development Programme-2 which got the best Program award from ADB.

Shamsuddin with Honorable Minister of Envirnment, Forest and Climate Change

Shamsuddin was a simple, calm, soft spoken, kind and a man of high ethics. I had and have a great respect for him. I am very much impressed about his integrity and professionalism. I had the opportunity to be in close touch with him in the Hydrocarbon Unit. His cooperation and enormous support to the team helped us a lot for carrying out the assignments having high quality and international standards. He always showed a friendly attitude towards his fellow colleagues. Still, I am fond of his memories of what he was. I worked under the leadership of him as a colleague in the Hydrocarbon Unit during the period of mid-2000 to 2004. It was my great days to work together with him along with Abu Karim, Jalal Ahmed, Siddique Zubair, Shafiqur Rahman, Nasreen Afroz, Anwara Begum, Javed Chowdhury and late Mir Moinul Huq, a renowned geo-scientist.

Mr. Shamsuddin retired in 2008 as secretary from the Ministry of Primary and Mass Education. After retirement, he was appointed as High Commissioner of Bangladesh to Kenya with concurrent accreditation to Tanzania, Uganda, Ghana and Mauritius. Besides, he served as a Permanent Representative of Bangladesh in the United Nations Environment Program and during that time he was elected as Vice Chair from the Asian Group for two terms.

Mr. Shamsuddin worked as a founder Director of the Hydrocarbon Unit of the Ministry of Power, Energy and Mineral Resources from mid-1999 to August 2004. It was my pleasure and I had a great time working with him and getting to know about him. While he was working as a Head of HCU and had been carried out many challenging works which were gas resource and reserve estimation of Bangladesh with an institutional arrangement with Norwegian Petroleum Directorate, established a mini data bank and developed a cost database for gas sector, prepared reports on production and depletion management, recommended on regulatory issues, conducted optimal gas utilization study for Bangladesh which included Bangladesh gas market developments, investment requirements, impact on gas reserves, gas exploitation options, formulated regulation and identified organizational issues, reviewed PSCs and suggested necessary changes for the future contracts, conducted many technical seminars especially for making the next bid rounds for future PSCs more attractive.

During his service period, Mr. Shamsuddin was a Deputy Secretary, Ministry of Power, Energy and Mineral Resources, during 1992-96 and worked as a coordinator for preparing energy policy of the country. The energy policy was formulated in 1995 to provide energy for sustainable economic growth, meet the energy needs of the country, and ensure optimum development of all the indigenous energy sources, sustainable operation of the energy utilities, rational use of total energy sources and, public and private sector participation in the development and management of the energy sector. He also worked as an Electrical Advisor and Chief of Electrical Inspector from 1998 to 99.

Mr. Shamsuddin contributed a lot as a member of the Committee for Rationalization of Natural Gas and Power Tariff and as Chair of SAARC Technical Committee of Energy for consecutive two years. He was a Project Director for preparing various reports on the gas sector master plan, gas pricing, institutional analysis, etc. Apart from this, he also contributed as a Chair of the Board of Directors of Bangladesh Gas Fields Company Limited and Padma Oil Company Limited and as a Director of the Board of Directors of Agrani Bank Limited.

Mr. Shamsuddin delivered his services as an Expert of Institutional and Organizational Strengthening and was engaged by ADB during 2012-13. He also worked on the Medium Term Budget Framework to prepare medium-term budgets for several ministries where he was engaged by the Ministry of Finance and contributed as a Specialist of Energy to evaluate on implementation of Paris Declaration Phase II.

Mr. Shamsuddin graduated in Electrical Engineering from BUET (71 batch). He was a Life Fellow of the Institute of Engineers, Bangladesh. He held different positions in Bangladesh Railway from Assistant Electrical Engineer to Chief Electrical Engineer during the period from 1973 to 1992.

After his retirement in 2007, Mr. Shamsuddin delivered consultancy services to our major development partners including ADB, WB, DFID, CIDA, SIDA, JICA, USAID, DANIDA, NORAD, GIZ, UNESCO, UNDP, UNEP and UN Habitat.

Mr. Shamsuddin, coming from Railway service to the general cadre service and reached the highest position as Secretary of the government and then retired as an Ambassador. It was possible because of his knowledge, capability, honesty and integrity which is very rare nowadays. He was truly a government servant and served as a silent warrior during the period of all the governments. EP

Mortuza Ahmad Faruque;
Former Managing Director, BAPEX

Power Crisis Won't Last Long: Nasrul

State Minister for Power, Energy and Mineral Resources Nasrul Hamid has said the ongoing power cuts in the country will not last long.

"We're sorry to our consumers for the current crisis and seek their cooperation to overcome it," he wrote in his verified Facebook page recently.

Nasrul made similar statements while talking to reporters at his residence earlier on the day.

He said the government was forced to implement scheduled power cuts across the country to resolve the ongoing crisis. "However, a new plan for loadshedding will be undertaken within a week after taking stock of the situation."

"Within the next few months, the second unit of Payra power plant and Rampal power plant will come into operation. Also, 1,600MW electricity will be imported from India's Adani power plant soon. All these will add more than 4,000MW electricity to the national grid," Nasrul added. EP

Power Sector's External Debt Repayment May Pose Challenge

The repayment of foreign loans in the power sector may worsen the country's debt-servicing burden as the government will have to pay the lenders more than Tk 197,677 crore in 30 years from fiscal year 2024-25.

The loans, taken out for the construction of 27 power plants and a network expansion project, are equivalent to 4.44 percent of the country's current GDP.

The Rooppur Nuclear Power Plant alone has a debt of Tk 90,474 crore.

For the 26 other plants, Tk 94,174.79 crore will have to be repaid, according to the Power Division data submitted last week to the parliamentary standing committee on power, energy and mineral resources ministry.

The Dhaka Power Distribution Company's network strengthening initiative has a debt of over Tk 13,000 crore.

Foreign loans account for three-quarters of the costs of the 26 public power plants.

The data submitted to the parliamentary body was signed by a deputy secretary of the Power Division on July 17. EP

BPC Suffers Record Tk 25b Loss in June

- Only Tk 1.74bn loss registered in Feb
- PetroChina suspends fuel supply for delayed payment
- Govt plant to borrow $1.3bn from ITFC, Standard Chartered to pay fuel bills
- Costly imports may cause hikes in power, fuel prices

The loss incurred by state-owned Bangladesh Petroleum Corporation (BPC) jumped by 1349 percent to Tk 25.25 billion in June only due to soaring fuel prices in the international market.

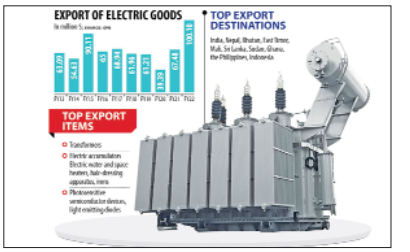
The amount of loss was only Tk 1.74 billion in February.

The recent spike in the loss caused by the sale of fuel at lower than the import cost has pushed BPC to delay the payment to its suppliers by 10-17 days.

Due to the delay in payment, Chinese supplier PetroChina has suspended its fuel supply to BPC for the next six months starting from July. Other suppliers have also expressed disappointment.

The Energy and Mineral Resources Division (EMRD) informed the Prime Minister's Office (PMO) about the losses at a recent review meeting on the power and energy supply situation. EP

Exports of Electric Goods Surge to $100m



Locally manufactured electric products, namely transformers and accumulators, are gaining popularity abroad as the industry's annual export earnings touched a record-high of $100 million in the just concluded fiscal year.

The last time export proceeds from electric goods even came close to the current level was back in fiscal 2014-15, when outbound shipments fetched a total of $90 million.

The industry's annual foreign earnings had fallen to around $65 million the following fiscal and despite a slight recovery in the year after, export receipts continued on a downward trend, hitting a low point of around $39 million in FY20.

Exports then ballooned by about 71 per cent in fiscal 2019-21 before going on to hit $67 million in fiscal 2020-21, according to the Export Promotion Bureau (EPB).

Industry insiders say the growth in exports was possible thanks to an increase in skilled manpower, production quality, branding, and acceptance in international markets.

Humayun Rashid, managing director and chief executive officer of Energypac Power Generation, said exports have risen as they are producing products of international standard. EP

Govt to Cut Power Use by 25% at Public Offices

The government has decided to reduce the use of electricity by 25 percent at all its offices to save power for the future.

The decision came at an emergency meeting of secretaries of all ministries and departments held at the Prime Minister's Office recently.

Dr Ahmad Kaikaus, principal secretary to the Prime Minister and senior secretary to the PMO Md Tofazzal Hossain Mia briefed reporters after the meeting.

Some other decisions were also taken at the meeting as part of the government's austerity measures. These are:

All ministries will take necessary steps to reduce power consumption by 25 percent at all government offices.

The Finance Division will publish a gazette to use 20 percent less fuel allocated for the concerned offices.

Online meetings will have to be organized and physical meetings should be avoided unless those are not urgent ones.

Foreign travels should be avoided unless those are for important reasons.

Strengthening measures against hoarders and ensure market monitoring to keep the prices of daily essentials including food stable.

Primary and Mass Education Ministry will take necessary actions to rationalize the use of private vehicles for transporting the students of educational institutions.

National Board of Revenue (NBR) will have to take initiatives to increase internal resources collection from the beginning of the fiscal year.

Every ministry will take initiative to reduce revenue expenditure by reviewing the purchase plans. EP

Gas Supply to Power Plants Falls to 4-Yr Low

Natural gas supply to power plants has dropped to four-year low as Bangladesh suspends import of around 250mmbtu Liquefied Natural Gas (LNG) from costly international market.

In 2019, the country's power sector received 1201mmcfd natural gas which comes down to 1064mmcfd in June, 2022. The situation became even worse this month as the supply slipped to around 1000mmcfd, officials said. It was 1082mmcfd in 2020 and 1079 mmcfd in 2021, they said.

The gas supply crunch to gas-feed power plants brought electricity generation down to 5,603megawatt while the capacity is with 11,162 megawatt. EP

DPDC's Network Strengthening Project Crawls

A project – undertaken to resolve frequent power cuts in the Dhaka South City Corporation and adjacent Narayanganj – saw only 30% progress in the past six years as its original deadline expired in December last year.

As a common practice, the "Expansion & Strengthening of Power System Network" project has received an extension for two and half years till June 2024.

But insiders at the Dhaka Power Distribution Company Limited (DPDC), which took the project in 2016 to ensure uninterrupted power supply in the areas, said that the work would not be completed even within the extended timeframe.

Electricity consumers in the areas often face power supply cuts following a failure at a substation and transformer in the distribution network, and in order to solve the problem, the DPDC took the project, which was scheduled to be completed in December last year. EP

EU Asks Members to Cut Gas Use by 15pc

The European Union told members states recently to cut gas usage by 15 percent until March as part of an emergency plan after President Vladimir Putin warned that Russian supplies sent via the biggest pipeline to Europe could be reduced further.

Deliveries via Nord Stream 1 pipeline, which accounts for more than a third of Russian gas exports to the EU, are due to resume after a 10-day halt for annual maintenance.

But supplies via that route had been reduced even before the maintenance outage in dispute over sanctioned parts, and may now be cut further, while flows via other routes, such as Ukraine, have also fallen since Russia invaded its neighbor in February.

The disruptions have hampered Europe's efforts to refill gas stores before winter, raising the risk of rationing and another hit to fragile economic growth if Moscow further restricts flows in retaliation for Western sanctions over the war in Ukraine. EP

Gas Supply from Russia to Europe Resumes after 10-day Shutdown

Natural gas started flowing through a major pipeline from Russia to Europe recently after a 10-day shutdown for maintenance, the operator said.

But the gas flow was expected to fall well short of full capacity and the outlook was uncertain — which leaves Europe still facing the prospect of a hard winter.

The Nord Stream 1 pipeline under the Baltic Sea to Germany had been closed since July 11 for annual maintenance work. Amid growing tensions over Russia's war in Ukraine, German officials had feared that the pipeline — the country's main source of Russian gas, which recently has accounted for around a third of Germany's gas supplies — might not reopen at all.

Operator Nord Stream AG said that gas started flowing again Thursday morning, and its network data showed gas beginning to arrive after the scheduled end of maintenance at 6 a.m.

Deliveries were expected to fall far below the pipeline's full capacity, as they did for weeks before the maintenance break. EP

NESCO to Install 1.2m More Prepaid Meters

A total of 12 lakh (1.2 million) more smart prepayment meters are going to be installed in the country's northwest region aimed at cent percent revenue collection besides reducing system loss to one percent.

Northern Electricity Supply Company (NESCO) Limited, headquarters in Rajshahi, will install the smart meters under its project styled "Installation of 12 lakh smart prepayment meters in NESCO areas" with an estimated cost of around Taka 712.63 crore.

Under the project, 11,13,608 single phase smart prepayment meters, 86,392 three-phase smart prepayment meters, 13,619 data concentrator units, 70 head held units and three head-end-systems will be installed.

Apart from this, license of the meter data management system for the 12 lakh meters will be installed.

The project will be implemented at 33 upazilas under some 14 districts of Rajshahi and Rangpur Divisions and in two city corporation areas. EP

German Investor Morale Slumps as Gas Crisis Looms

German investor confidence dropped in July, a closely watched survey showed recently, as industry fretted over the potential impact of a halt in Russian gas supplies on Europe's largest economy.

The ZEW institute's economic expectations index fell 25.8 points to minus 53.8 points, its lowest level since 2011.

For its survey, ZEW quizzes experts about the current economic situation and the outlook for the coming six months. A negative reading means that most experts are pessimistic.

The July reading was 'slightly lower' than the level seen in March 2020 at the start of the coronavirus pandemic, when shutdowns effectively halted large parts of the economy, ZEW said in a statement EP

Power Capacity Charge Tk 16,785cr Paid in 9 Months

The government paid Tk 16,785 crore in capacity charges to power plants in the first nine months of the last fiscal year for 22,118MW daily power generation capacity.

But the government had not been able to use more than 14,000MW a day during that period as the country's electricity demand was not higher than this.

As per the government's agreement with power plants, the government has to pay "capacity charges" based on the plant's capacity and establishment costs, regardless of whether the power is bought or produced.

The current demand for electricity ranges between 14,000MW and 14,500MW, but the government is producing 12,000-13,000MW, leading to ongoing power outages.

The government continues to pay for that unutilized power when austerity has been prescribed across all spheres to cope with rising inflation at home and abroad.

The Bangladesh Power Development Board (BPDB), the country's sole electricity buyer, paid Tk 18,977 crore to 101 power plants in 2020-21 and Tk 18,123 crore to 102 plants in 2019-20.

The BPDB submitted this data to the parliamentary standing committee on power, energy and mineral resources ministry in a meeting recently. EP

Trial of Corrupt People in Power Sector Demanded

The national committee to protect oil, gas, mineral resources, power and ports has said that wrong policies of the government were responsible for the current power generation crisis in the country.

The people of the country should not bear the liabilities of it, committee leaders said at a protest rally held recently in the capital.

Former member secretary of the committee Dhaka University economics professor MM Akash said that the wrong policies taken by the government were responsible for current shortage of power and a huge amount of money were misused in the sector.

Corruptions have engulfed the whole power sector and the government should take immediate steps to bring the corrupt people to justice, MM Akash said. EP

World Bank for Ending Energy Subsidy, Imposing Carbon Tax

The World Bank, in a report, has suggested ending energy subsidies and imposing carbon tax on all kinds of production activities in Bangladesh for the country's transition to green growth.

The Washington-based development partner recently forwarded the study report to different government agencies, including the Finance Division, Planning Commission, and the Economic Relations Divisions (ERD), for their review, feedback and further analysis.

The Bangladesh government has also started talks with the World Bank recently over a budget support amounting to at least $250 million with green growth in view, according to sources at the ERD and the Department of Environment.

The global lender may set withdrawal of gas and electricity subsidies and imposition of carbon tax as prerequisites for availing its budget support for green growth, officials assume.

Subsidy proceeds can be redistributed to poor households, which will lead to a rise in their real income, the Washington-based development partner says in the report.

The World Bank also proposes introducing a cap-and-trade system to reduce carbon emissions. EP

Private Power Producers Urge Govt to Pay $1.5b in Arrears

Despite an improvement in payment the government still owes $1.5 billion to the private power plant operators for purchase of electricity, according to official sources.

The sources confirmed this week that the state-owned Bangladesh Power Development Board (BPDB), the single buyer on behalf of the government, partially cleared the payment until February last.

"We have not received any payment against the electricity purchase bills of March till the current month", said Imran Karim, president of the Bangladesh Independent Power Producers Association (Bippa).

Normally, the BPDB purchases electricity worth Tk 4,000 crore per month.

Now, the payments against the bills of four months— March, April, May and June— are pending to be cleared. In addition, some partial bills of February have also not been cleared.

By this calculation, the total amount of the pending bills will be over $1.5 billion, said Imran, also the director of the Confidence Group, which owns a number of private plants. EP

Aug Spot LNG Import Halts

Bangladesh looks set to cease liquefied natural gas (LNG) import from the spot market in August too as in July despite a crippling energy crisis with resultant power outages.

A twin-shock from the Ukraine war-energy blockade and dollar dearth for high commodity prices-forces Bangladesh, as also other countries, to adopt austerity and save foreign exchange.

"State-run Rupantarita Praktritik Gas Company Ltd (RPGCL) has not yet floated tender to import LNG from spot market for August deliveries," a senior RPGCL official said.

The company had not floated tender for July deliveries, too, as the government trimmed down the import of expensive LNG from volatile spot market with the implementation of austerity measures shutting all shops and shopping malls after 8 pm every day. EP

China's LNG Imports to Decline

China's LNG imports are set to fall over 14% year-on-year to 69 million t in 2022, the largest decline since it began LNG imports, reports Wood Mackenzie, a Verisk business.

After a solid growth in 2021, China's gas and LNG demand is expected to slow down in 2022. China's gas demand (sum of production and net imports) in Q2 decreased 5% year-on-year.

The weakening gas demand was due to a confluence of factors including economic slowdown, rising gas import prices, policy support for clean coal and a warmer-than-usual winter.

Wood Mackenzie Research Director Miaoru Huang said: "Gas-fired power was a major contributor to the absolute decline in volumes. In addition to the factors mentioned earlier, the sector was pressured by growth in use of renewables." EP

Fukushima Nuclear Disaster: Former Bosses Ordered to Pay $97b

A Tokyo court recently ordered former executives from the operator of the devastated Fukushima nuclear plant to pay 13.32 trillion yen ($97 billion) for failing to prevent the disaster, plaintiffs said.

Four ex-bosses from the Tokyo Electric Power Company (TEPCO) were ordered to pay the damages in a suit brought by shareholders over the nuclear disaster triggered by a massive tsunami in 2011.

Plaintiffs emerged from the Tokyo court holding banners reading "shareholders win" and "responsibility recognized".

Lawyers for the plaintiffs hailed the ruling, and said they believed it to be the largest amount of compensation ever awarded in a civil lawsuit in Japan.

"Nuclear power plants can cause irreparable damage to human lives and the environment," the plaintiffs said in a separate statement after the ruling.

"Executives for firms that operate such nuclear plants bear enormous responsibility, which cannot compare with that of other companies."

The shareholders argued that the disaster could have been prevented if TEPCO bosses had listened to research and carried out preventative measures like placing an emergency power source on higher ground. EP

Single Point Mooring: Work Unfinished Even in 7yrs as Cost Escalates 44%

The deadline of the Installation of Single Point Mooring (SPM) with the Double Line Project has been extended for the third time to June 2023, as the project cost escalates 44% of the initial estimation, according to officials.

One of this country's top priority infrastructure programs, the SPM project is aimed at offloading imported crude oil from coastal Moheshkhali at reduced cost and time.

"The project lodged 83% progress till June," SPM Project officials said.

"Installation of more than 214 km of the 220 km pipeline has been completed. I hope the rest of the work will be completed within the extended time of June 2023."

State-owned Eastern Refinery Limited is implementing the project with the funding of Exim Bank of China. The refinery currently meets 20% of the country's fuel demand, while the remaining 80% is met through imports. EP

Subsidy Policy Coming for LNG Import

Work gets underway to formulate LNG subsidy policy to make a stable funding arrangement for import of this expensive fuel to feed growing demand in Bangladesh amid a global crunch.

Sources say the government believes that providing subsidy on LNG imports in a structured way would pay off in multiple ways – it would help meet the mounting natural gas demand in the country and augment production in industries and factories and thus continue generating employment opportunities.

The Energy and Mineral Resources Division (EMRD) under the Ministry of Power, Energy and Mineral Resources (MPEMR) has already drafted the LNG subsidy policy and hopes to implement it within several months, a senior official of the ministry said.

The MPEMR took the initiative following a directive from the Prime Minister's Office (PMO) as imported LNG prices are showing unorthodox volatility for supply disruptions due to the ongoing Russia-Ukraine war while domestic gas production remains limited. EP

Germany Advances FSRU Projects to Ensure Gas Supply

Four floating storage and regasification units are planned for deployment offshore Germany along with two permanent onshore sites, with an emphasis upon the FSRUs to help secure near-term and medium-term gas supplies.

The German government has earmarked 2.94 billion euros ($3.07 billion) for the projects, set to be developed by utilities RWE and Uniper, respectively.

The government has acted quickly in recent weeks to charter four FSRUs, two via Uniper and two via RWE.

Germany's economy ministry says that it hopes to begin operations at two FSRUs – one at Wilhelmshaven and one at Brunsbuttel – before the end of 2022.

The port city of Hamburg, as well as Rostock on the Baltic Sea, have also been suggested as possible locations for an FSRU.

The plan is a key part of Germany's efforts to ensure the continuity of gas supply in the wake of Russia's suspension of gas deliveries to European markets. EP

G20 Finance Chiefs Meet as Indonesia Warns of Energy, Food Catastrophe

Group of 20 finance ministers and central bank chiefs from top economies met in Indonesia recently for talks on the fallout from Russia's invasion of Ukraine, with the host warning them failure to tackle energy and food crises would be catastrophic.

The two-day meeting on the resort island of Bali started under the shadow of a war that has roiled markets, spiked food prices and stoked breakneck inflation, a week after Moscow's top diplomat walked out of talks with the forum's foreign ministers.

In her opening remarks, Indonesian Finance Minister Sri Mulyani Indrawati called on ministers to work together with a spirit of "cooperation, collaboration and consensus" because "the world is watching" for solutions.

"The cost of our failure is more than we can afford," she told delegates. "The humanitarian consequences for the world and for many low-income countries would be catastrophic." EP

EIB Provides €400m to Support Energy Link Connecting Germany and UK

The European Investment Bank (EIB) — as part of a consortium of more than 20 international banks — has agreed on the financing structure of the first ever energy link connecting Germany and the United Kingdom.

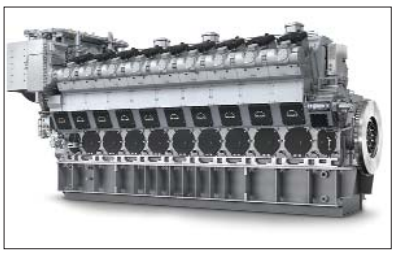
The investment to build this interconnector will amount to €2.8 billion, with the EIB set to contribute up to €400 million for the financing of the European part.

The investor consortium is led by French investor Meridiam, Allianz Capital Partners, and Japanese company Kansai Electric Power. Alongside the EIB, other promotional banks include the UK Infrastructure Bank and the Japan Bank for International Cooperation (JBIC).

The project will be the first interconnector between Germany and the United Kingdom, facilitating electricity trade between the European Union and the United Kingdom and contributing to the integration of high shares of intermittent renewables across the North Sea.

The expected start date of commercial operations is in 2028. EP

Lifecycle Upgrade Prepares Engines for Climate-Neutral Operation



MAN PrimeServ, MAN Energy Solutions' after-sales brand, has announced that it is now offering its customers the opportunity to retrofit older MAN 48/60 marine and power-plant engines to state-of-the-art MAN 51/60 types as part of its new 'lifecycle upgrade' offering.

The upgrade enables customers to prepare older engines already in service for future, climate-neutral operation.

Converted engines will effectively be equivalent technically to newly built MAN 51/60 units and, as a result, achieve significant savings in fuel consumption, CO2 and pollutant emissions, and increase reliability. As a further option, newly converted engines can be upgraded for operation on synthetic fuels for a low premium.

Stefan Eefting, Senior Vice President and Head of MAN PrimeServ Germany, said: "With this lifecycle upgrade, we offer customers the opportunity not only to completely overhaul their old engines but also to upgrade them to the latest engine technology at the same time. The upgrade simultaneously prepares the engines for future operation with climate-neutral fuels without having to change the fuel type they use at this stage. This is because the 51/60 engine type enables further conversion to alternative fuels, making it a future-proof investment." EP

JPL
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Green page

PM's Directive for Solar in Schools Goes Unheeded for 7 Years

It has been more than seven years since the prime minister directed the authorities concerned to install rooftop solar power systems in all schools across the country. The order is yet to see the light.

An official document shows that Prime Minister Sheikh Hasina issued an order on April 9 in 2015 to the power authorities to bring country's all schools under solar power system.

Following the order, the Power Division of the Ministry of Power, Energy and Mineral Resources asked all the 6 power distribution companies to take initiative to implement the order.

As per the order, Bangladesh Power Development Board (BPDB), Bangladesh Rural Electrification Board (BREB), Dhaka Power Distribution Company Limited (DPDC), Dhaka Electric Supply Company (Desco), West Zone Power Distribution Company Limited (WZPDCL), and Northern Electric Supply Company (Nesco) conducted their own surveys under a certain category and selected 92,513 schools across the country to install the rooftop solar power system.

According to the surveys, the total rooftop solar power plants' length was calculated to be 20.031 million square meters which would generate 1,185 MW of electricity.

Sources said though the surveys were conducted by the distribution companies, there was no follow-up from the ministry, or from the distribution companies to implement the highest official directive.

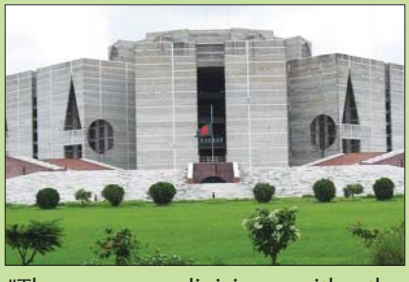
About five years later, the Sustainable and Renewable Energy Development Authority (Sreda) and Power Cell, the technical wing of the Power Division, prepared a report fixing some criteria and also the process to be applied for implementing the project. EP

JS Body for Energy Audit of Govt Buildings

A parliamentary body recently recommended conducting energy audits on different government buildings to identify the energy efficiency of those structures.

The parliamentary standing committee on the Power, Energy and Mineral Resources Ministry came up with the recommendations at its meeting at the Jatiya Sangsad Bhaban, presided over by AL Lawmaker Waseqa Ayesha Khan.

Emerging from the meeting, Waseqa said that initially the parliamentary watchdog has recommended conducting energy audits on government buildings that consume a significant amount of power due to the presence of air conditioning.



"The power division with the assistance of Sustainable and Renewable Energy Development Authority was asked to conduct the audit. After getting the audit report, we will determine the next course of action in this regard," she said.

Waseqa also said the parliamentary committee held their meeting without using air conditioning and electric lights, keeping in mind the energy crisis around the globe. EP

JOULES POWER LIMITED (JPL)

Joules Power Limited (JPL) is A Privately Owned Renewable Energy Company Operating in The Power Sector of Bangladesh. JPL Has Been Formed With A Fundamental Core Value Towards Sustainability and is Committed to The Country's Nationally Determined Sustainability Targets. Through Our Presence in The Power Sector We Not Only Stive to Achieve A Greener and More Sustainable Future for Bangladesh, But We Also Hope That JPL's Contribution Towards The Country's Green Infrastructure Will Lead to A Brighter, More Prosperous and Sustainable Future.

Joules Power Limited - Future Enabled

Current Portfolio

- 20MW Solar Ground Mounted Project IPP Basis
- 3.23MWp Rooftop Solar project in OPEX Model
- 1.7MWP Rooftop Solar Project in OPEX Model
- 0.325MWp Rooftop Solar Project in OPEX Model
- 2.00MWp Rooftop Solar Project in OPEX Mode

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IDCOL Wins IJGlobal Awards 2021

Infrastructure Development Company Limited (IDCOL) has been conferred the prestigious "IJGlobal Awards 2021" in the "Public Sector Institution" category.

The award was announced by IJGlobal, a part of the Euromoney Institutional Investor business, which provides access to data, news, insights and analysis on project finance and infrastructure.

Held annually, the IJGlobal Awards recognize outstanding transactions and institutions from around the world of energy and infrastructure.

IDCOL was selected based on its innovation, resilience to the pandemic and tangible achievements in its initiatives in 2021.

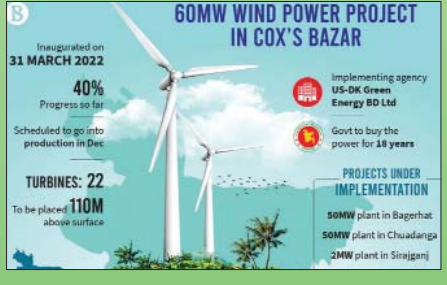
The judging panel highlighted IDCOL's prominent role in supporting Bangladesh's agenda of achieving a low-carbon and climate-resilient economy, and in expanding PPP coverage to the infrastructure sector with its financing and advisory services.

IDCOL was specifically highlighted for its contributions towards the "Mujib Climate Prosperity Plan: Decade 2030", a strategy paper named after the Father of the Nation Bangabandhu Sheikh Mujibur Rahman, which is expected to catalyze a paradigm shift in Bangladesh's energy planning by boosting renewable energy share into the overall electricity generation mix.

Another milestone achievement highlighted by the judging panel was IDCOL's receipt of US$ 256 million from the Green Climate Fund (GCF), the first private sector financing from the GCF in Bangladesh and to the date of approval, the largest funding proposal sanctioned for any Direct Access Entity of the GCF accredited globally.

EP

Maiden 60MW Wind Power Plant Goes into Operation in Dec



The country's first wind power project is being implemented in Khurushkul of Cox's Bazar Sadar upazila.

A Chinese vessel arrived in Chattogram Port recently with huge quantity of wind power plant articles.

Meanwhile, the State Minister for Energy and Mineral Resources Nasrul Hamid laid the foundation stone of the project in March last.

The wind power plant would generate 60MW of electricity. Besides, there will be another wind park in Inani capable of generating 50MW of electricity, said State Minister Nasrul.

The director of the project in Khurushkul, Mukit Alam Khan, said the government is constructing the plant at a cost of Tk 900 crore.

The project will be completed by December, the electricity generated by this plant will be connected to the national grid after meeting local demand.

It is being implemented by US-DK Green Energy (BD) Ltd. Under the project, a total of 22 wind turbines would be installed to generate 60 MW of power.

EP

Green page

Green Development, Building Energy-efficient ICT Infrastructure

Huawei's Carrier Business Group Chief Marketing Officer Philip Song has launched a new suite of green development solution in an ongoing online program named Win-Win· Huawei Innovation Week arranged by Huawei.

This solution is aimed at helping operators systematically improve network energy efficiency as ICT infrastructure continues to evolve from 5G and F5G to 5.5G and F5.5G, green networks, evaluated against the

network carbon intensity (NCIe) index and it will become a critical part of future target networks.

And it will help operators systematically build green networks that simultaneously address traffic growth and carbon emission reduction.

According to Song, technological innovation is required at three levels. Firstly, to move sites fully outdoors, and increase equipment energy efficiency and the efficiency of using renewable energy; secondly, to maximize energy efficiency and make networks all-optical, simplified, and intelligent; and thirdly to achieve green O&M, new O&M and energy-saving policies more easily.

EP

IDCOL Signs Deal with GCF to Receive $256.5m Fund

IDCOL as the Direct Access Entity (DAE) of GCF, signed a Funded Activity Agreement (FAA) with GCF to receive USD 256.5 million in concessional financing to promote energy efficiency in the textile and RMG sectors of Bangladesh. The signing ceremony was held online.

This is the first concessional GCF credit line for Bangladesh, as well as the first private sector financing of GCF in the country. This fund will catalyze climate finance in the low-emission and climate-resilient development of the industrial sector.

Sharifa Khan, Secretary, Economic Relations Division and Focal Point of NDA to GCF as well as Chairman of IDCOL, mentioned that the Program rightfully chose the two main industrial sectors of Bangladesh that have the potential to pursue sustainable energy management to contribute to the global carbon emission reduction.

She also emphasized strengthening the relationship between GCF and Bangladesh to achieve the country's ambitious agenda to support green, clean and resilient development.

Alamgir Morshed, Executive Director & CEO, IDCOL also expressed his hope and optimism in enhancing access to climate finance for the country. He thanked NDA and GCF for their continuous support in accessing the fund. EP

Argentina Advances to Achieve Carbon Neutrality with Biogas

According to preliminary results of a study carried out by the National Institute of Agricultural Technology (INTA) together with private consultants, the generation of biogas achieved an average reduction of 98.5% of greenhouse gases, compared to power generation as standard (from fossil fuels).

The calculation of energy emissions was made based on the methodology of the European Renewable Energy Directive RED II, according to INTA.

The study, carried out by Jorge Hilbert, Jonatan Manosalva and Karen Poniemann from INTA's Institute of Rural Engineering, together with private consultants Ariana Camardelli and Patricio Geretto, focused on an analysis of emissions in the production of bioelectricity and heat, from biogas, in the Bio 4 Bioelectric complex (BG1, BG2 and CGY), which form a complex with a total power of 6 megawatts. EP

Green page

Renewable Power Cost-Competitive amid Fossil Fuel Crisis

Costs for renewables continued to fall in 2021 as supply chain challenges and rising commodity prices are yet to show their full impact on project costs.

The cost of electricity from onshore wind fell by 15%, offshore wind by 13% and solar PV by 13% compared to 2020.

Renewable Power Generation Costs in 2021, published by the International Renewable Energy Agency (IRENA) recently, showed that almost two-thirds or 163 gigawatts (GW) of newly installed renewable power in 2021 had lower costs than the world's cheapest coal-fired option in the G20.

IRENA estimates that, given the current high fossil fuel prices, the renewable power added in 2021 saves around USD 55 billion from global energy generation costs in 2022.

Solar and wind energy, with their relatively short project lead times, represent vital planks in countries' efforts to swiftly reduce, and eventually phase out, fossil fuels and limit the macroeconomic damages they cause in pursuit of net zero.

"Renewables are by far the cheapest form of power today," Francesco La Camera, Director-General of IRENA said. "2022 is a stark example of just how economically viable new renewable power generation has become. Renewable power frees economies from volatile fossil fuel prices and imports, curbs energy costs and enhances market resilience – even more so if today's energy crunch continues."

As to supply chains, IRENA's data suggests that not all materials cost increases have been passed through into equipment prices and project costs yet. If material costs remain elevated, the price pressures in 2022 will be more pronounced. Increases might however be dwarfed by the overall gains of cost-competitive renewables in comparison to higher fossil fuel prices. EP

Saleemul Huq Awarded Honorary Degree by UK's Northumbria University

Saleemul Huq OBE, director of International Center for Climate Change and Development of Independent University, Bangladesh has been awarded an honorary degree by the Northumbria University, Newcastle, UK for his contribution to the fight against climate change.

Saleemul Huq was awarded the degree of Doctor of Science in recognition of his global leadership in fighting the impact of climate change on our society, and for his work to help developing countries and vulnerable communities adapt to the impacts of climate change.

He received the degree during the university's summer graduation ceremonies, said a news release on the website of Northumbria University.

Speaking about his honorary degree, Huq said, 'I am incredibly honored to receive the honorary degree from Northumbria University in recognition of my work on tackling climate change. I am pleased that I will continue to collaborate with colleagues at Northumbria University on research to tackle climate change going forward.'

One of the most important climate change influencers in the world, Huq holds key positions with major international organizations including the United Nations Framework Convention on Climate Change and the Global Centre on Adaptation. EP

TES Announces Successful Fundraising of €65m to Accelerate European Energy Transition

Tree Energy Solutions ("TES"), a world-scale green hydrogen company with a mission to deliver on a net-zero future by decarbonizing the energy chain, recently announced it has successfully concluded its second fundraising round at €65m.

This new capital will enable TES to accelerate the clean energy transition by building the world's largest hydrogen projects by 2030.

The fundraising attracted a global investors' base comprising leading financial institutions and international energy corporations including E.ON, HSBC, UniCredit and Zodiac Maritime.

TES is developing a green energy hub in the German port of Wilhelmshaven, with the goal of supplying 250TWh of green gas annually. EP

bp, thyssenkrupp Steel Work to Advance Decarbonization of Steel Production

bp and thyssenkrupp Steel recently announced they have signed a memorandum of understanding (MoU) focused on the development of long-term supply of low carbon hydrogen and renewable power in steel production, helping accelerate the steel industry's wider energy transition.

thyssenkrupp Steel accounts for 2.5% of CO2 emissions in Germany, mainly at the Duisburg site where the main emitters, the blast furnaces, are operated.

By replacing the coal-fired blast furnaces with direct reduction plants where iron ore is reduced with low carbon hydrogen, thyssenkrupp Steel intends to make steel production climate-neutral in the long term.

The companies will explore supply options for both blue and green hydrogen, as well as power from wind and solar generation through the use of power purchase agreements.

William Lin, bp's executive vice president, regions, cities & solutions, said: "The steel and energy industries have of course long been closely linked. We provide fuel and feedstock for steel production while our platforms, pipelines, and turbine towers are made from steel." EP

Panasonic to Build $4b Electric Vehicle Battery Plant in US

Japanese electronics giant Panasonic said recently it will spend $4 billion to build a new battery factory in the United States for electric vehicles.

The lithium-ion battery plant in Kansas could create up to 4,000 new jobs, Panasonic said, as the Tesla supplier drives to expand its presence.

'With the increased electrification of the automotive market, expanding battery production in the US is critical to help meet demand,' Kazuo Tadanobu, president and CEO of Panasonic Energy, said in a statement.

The factory will be Panasonic's second electric car battery operation in the United States, joining its facility in Nevada.

The announcement comes with Tesla struggling to boost production, after unveiling two new factories in Germany and the US state of Texas earlier this year. EP

Shahab Uddin for Not Felling Forest Trees Till 2030

Environment, Forest and Climate Change Minister Md Shahab Uddin recently called upon the people of all strata not to cut down trees in the forests till 2030.

Observing that the country's international targets will not be achieved unless illegal cutting of forest trees is stopped, he directed the concerned officials of the Forest Department and the forest guards to work to stop free felling.

The minister was speaking at the closing and prize distribution ceremony of the National Tree Fair 2012. The function was held at the Forest Department.

Speaking as the chief guest, Shahab Uddin said once there was a vast area of forest coverage in the country but now the scenario has changed.

"Currently, our forest is 14.2 percent. We need 25 percent forest coverage. In order to achieve the goal of forestry in achieving the SDG targets, the mountains and forest trees cannot be cut until 2030," he said, seeking everyone's cooperation in checking hill cutting and river grabbing and planting trees at a higher rate. EP

SEED Webinar on Heat Wave: Bangladesh Perspectives

Society of Experts on Environment Development (SEED) on 21 July 2022 hosted its sixth webinar on Heatwave: Bangladesh Perspectives.

Moderated by Dr. Nurul Quadir, General Secretary of SEED, the webinar was graced by Dr. Qazi Kholiquzzaman Ahmad, Chairman, PKSF and the Chief Advisor, of SEED who welcomed participants with his welcome remarks. He referred to the IPCC's 6th Assessment Report and welcomed discussion to steer through its implications for Bangladesh.

The Keynote Presentation of the webinar was on "Recent Scenario of Extreme Heat Events over Bangladesh Due to Climate Change", presented by Dr. Md. Shameem Hassan Bhuiyan, Head of the International and Agrometeorology Division.

He discussed about the recent scenario of extreme heat events over Bangladesh due to climate change. He emphasized that from the previous study it shows temperature rising across the globe and breaking records everywhere.

He stated that in the South-West region of Bangladesh heat wave is affecting more than any other part of the country. EP

Climate Crisis: Pacific Nations Eye to Move Int'l Court

Climate-threatened Pacific islands are pushing for the International Court of Justice to throw its weight behind efforts to arrest climate change, with the initiative gaining support at a key regional summit in Fiji recently.

The Pacific nation of Vanuatu is spearheading a campaign to ask the Hague-based tribunal "to protect the rights of present and future generations against the effects of climate change".

Vanuatu's Foreign Minister Marc Ati recently said that he was confident leaders from neighboring islands, including Australia and New Zealand, would endorse the push at the Pacific Islands Forum in the Fijian capital Suva.

The plan will need the backing of a majority of

countries at the United Nations General Assembly in September to be put to the world's highest court.

Support from the countries meeting at this week's Fiji summit could be crucial to get the UN vote across the line.

Ati said he had "met with all my counterparts, they confirmed their support". EP

JS Body for Cutting Power Lines of Tanners Causing Pollution

A parliamentary watchdog recently asked the environment ministry to snap power connections of industries under the Savar Tannery Estate for causing excessive pollution.

The Parliamentary Standing Committee on Environment, Forest and Climate Change had earlier asked for closing such industries.

The meeting was held at the Jatiya Sangsad Bhaban with ruling Awami League MP Saber Hossain Chowdhury in the chair.

The Department of Environment placed grim statistics before the watchdog on the sorry state of the Dhaleswari River. It mentioned that aquatic life and biodiversity of the river have been destroyed by unbridled pollution caused by the Savar Tannery Industrial Estate.

In the meeting, DoE said that the minimum level of oxygen of the Dhaleswari River should remain 200mg/per liter. But the oxygen level in this river's water is two to three times less than the permissible limit.

Saber told reporters after the meeting that not only oxygen level, the amount of metal chromium in the Dhaleswari River was also much higher than the permissible level.

The parliamentary body chief said that DoE came up with the statistics following its research on the water of the Dhaleswari River in July.

He said that the industries ministry promised to increase the level of oxygen in the next three to six months and try to reduce it. EP

India Likely to Fall Short of 2030 RE Target: GlobalData

India announced new renewable energy goals last year to increase non-fossil power capacity to 500 GW and meet 50% of the country's electricity needs through renewables by 2030.

However, after including large hydro under the definition of renewables, the country is likely to achieve its 2022 target but may miss out on the solar-specific target, and subsequently fall short of the 2030 target, says GlobalData, a leading data and analytics company.

GlobalData's latest report, 'India Power Market Size, Trends, Regulations, Competitive Landscape and Forecast, 2022-2035', reveals that the target also includes achieving net zero emissions by 2070.

India mainly plans to achieve these long-term climate goals through capacity additions in solar and exploring its offshore wind potential.

Attaurrahman Ojindaram Saibasan, Power Analyst at GlobalData, comments: "India is already focusing on rooftop solar installations along with large ground-mounted solar PV projects.

As part of the plan, India approved 45 solar parks with a total capacity of 37 GW under its solar park scheme in September 2021. EP

Iberdrola Introduces World's First Commercial-Scale Battery Storage System in Ireland

Iberdrola launched its first commercial-scale battery plant in Ireland. The Gorman facility, which has a 50-megawatt (MW), power output of 25MWh, was also built by Iberdrola in Ireland. It is the first renewable project the company has constructed in Ireland for more than 25 years.

The system, located in County Meath in the east of Ireland is composed of over 4,000 modules and 16 containers. It occupies an area roughly the same size as a football field. This project was the first in Ireland and required a 28 million euro in investment.

The Gorman battery's commissioning is the culmination the main initiative of the DS3 program, which was developed by EirGrid (the Irish transmission grid operator) and SONI (the Irish electricity grid operator). EP

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National Interest BERC's Top Priority

Bangladesh Energy Regulatory Commission (BERC) determines the gas price, prioritizing consumers' interests. Still, there is a scope for any stakeholder - individuals, consumers' rights protection organizations, and licensees to appeal for reviewing the BERC-fixed price. The appeal must be substantiated with relevant information and documents.

Md. Abdul Jalil, Chairman of BERC, said the above in an exclusive interview with ***Mollah Amzad Hossain***, Editor of Energy & Power magazine.

BERC has almost completed two decades of its journey. How much has it achieved in matters of earning confidence as well as protecting the consumers' and relevant stakeholders' interests?

A straightforward response to your question is a bit difficult. BERC, created by an act in 2003, launched its operations in the following year. We are discharging our responsibilities as the 6th commission. We have to demonstrate through our work to see whether BERC has achieved confidence. Of course, achieving confidence is always a relative term. The works of forming the commission, engaging manpower, formulation of codes and practices, performing quasi-judicial activities, and discharging the responsibilities of appeals and arbitration are continuing at the same time. During its tenure, the commission could conduct as many as 80 meetings. We had to do these considering the exigencies. We were aware that the very important export and import activities were contingent upon these. Determining the market price of LPG is a milestone success. On overall assessment, there is no scope for considering BERC activities as failures. There are a lot of successes. But then there is always room for improvement on the journey to success.

The price of liquid fuel is being fixed and announced through executive orders without any public hearing in the BERC. Consumers Association of Bangladesh (CAB) has claimed this is illegal. What is your opinion?

BERC is mandated as per clause 22 of the BERC Act 2003 to determine the tariff and price applicable for power generation, transmission, distribution, sales, and ensuring efficient use of the fuel. The fuel as defined in sub-clause 2 Kha includes electricity, gas and petroleum products. Provision of the act entrusts the above responsibilities upon the BERC. CAB has filed a writ petition to the High Court. It is under the process of disposal. The government and BERC are parties to it. It will not be fair to give any opinion on it now.

But it must be borne in mind that two strategies of exercising power are Dejure and Defacto. The legal right of BERC is Dejure. The government has determined the price of petroleum products by applying the Defacto strategy. Formulating regulations for determining the petroleum price, the BERC has submitted it to the EMRD for review and approval. But this has not been approved in the last 12 years.

In the recent past, BERC has determined gas price at the consumer level increasing it by 23% though the companies submitted proposals for a 117% hike. Petrobangla companies have claimed to become financially stressed from this determination. CAB representative argues that your determination had no justification. According to them, there was a scope for reducing the price. How do you see the allegation?

Please note that the commission, upon receipt of a request for price revision from the utilities, first sends it to the relevant technical committee for examining all aspects of the proposals as per provisions of BERC acts and procedures. The public hearing is then held on the report of the BERC technical committee. The opinions of any interested individual are also taken on board. On careful review and thorough scrutiny of all these, the BERC determines and announces cost-based prices or tariffs.

Of course, any stakeholder can appeal against the determined tariffs or prices providing relevant information. There is a scope for legally challenging the BERC pricing as well. The BERC has rightly exercised its rights and obligations in determining the gas price.

The public hearing for determining the bulk price of electricity has already been concluded. The BERC technical committee suggested a 58% increase in tariff. When will the BERC determination be announced?

The BERC as per act and regulation has an obligation for announcing the tariff within 90 days of conducting the hearing. We are exchanging opinions with relevant stakeholders after concluding the hearing. The announcement of a determined tariff will be made in due time after the

Md. Abdul Jalil

Bangladesh Energy Regulatory Commission (BERC) determines the gas price, prioritizing consumers' interests. Still, there is a scope for any stakeholder - individuals, consumers' rights protection organizations, and licensees to appeal for reviewing the BERC-fixed price. The appeal must be substantiated with relevant information and documents.

conclusion of the discussion. As per the provision, we have time till October 2022 for announcing the tariff.

The mandatory provisions of cogeneration and trigeneration were included as a precondition for renewing the license for captive power generation. It was being followed. Later, the commission recommended some tax relief as incentives to those introducing generation efficiency. Where does that stand now?

You are correct. In the tariff determination of power in 2018, the BERC suggested a 0.25% exemption on the bill for the captive generators that introduced cogeneration or trigeneration. Before considering the tariff review for 2019, the distribution utilities were advised to oblige to the conditions of the 2018 tariff determination. No such advice has been issued in tariff determination for 2022. In fact, no conditions for energy conservation through the introduction of cogeneration or trigeneration were given during the renewal of licenses. Rather the BERC always encourages efficient use of energy through updating and modernizing infrastructure.

The Commission is aware that the Sustainable and Renewable Energy Development Authority (SREDA) under a policy is working on energy efficiency and conservation. As such the BERC considers it prudent not to give any instruction.

In the previous and the last gas price determination announcement, BERC has advised reducing system loss across the gas supply chain. Has BERC taken any initiative for monitoring this?

It is a great challenge for BERC to balance its regulatory and administrative functions. BERC has no scope for interfering with the administrative work of the energy sector. 2% system loss has been considered in the determination of gas tariff. Gas companies have been advised to provide BERC periodical updates on system loss in the respective system. These will be reflected in future tariff determinations. Advice for system loss reduction has been included in the Tariff Order. Informally, BERC continues advising utilities on loss reduction.

A year almost has passed in the month-wise price determination of LPG. Do you think the consumers are getting LPG at the right price now? Operators claim that the commission is not taking into consideration the higher cost of transpiration and dollar devaluation. What is your opinion?

BERC formulated regulations for determining the price of petroleum products and sent them to EMRD a long time ago but it has not been approved yet. Consequently, for a long time, the LPG price remained market-based. 98% of LPG used in Bangladesh relies on imports. For judiciary directives as disposal of a writ by CAB, BERC has determined the price of LPG. The determination is made after conducting a public hearing. Saudi CP is followed as the basis for LPG price determination. Except for a few stray incidents, consumers across the country are getting LPG at a fairly determined price. The administration and government agencies across the country are assisting in enforcing the BERC-determined price.

We have received a request for considering dollar devaluation in the price determination. BERC will discuss the matter with the operators. But there is no scope for considering the curb market rate of dollars at all. If felt necessary, BERC will make adjustments upon conducting a fresh public hearing based on operators' submissions.

The Commission has opportunities to recommend the government for protecting the rights and interests of the consumers and licensees. But that culture has not been established yet. Is BERC considering it necessary to advise Power Division and EMRD to increase contributions of their own primary fuel in energy generation?

I do not completely agree with this. Clause 22 Jha of BERC has provisions for advising and assisting the government from time to time on issues related to the energy sector. Through tariff orders as well as through formal letters the commission assists the government. The gas price adjustment order of BERC includes specific suggestions for increasing contributions of domestic fuel. All licensees are advised from time to time as well.

The commission is working relentlessly in ensuring and protecting the consumers' rights through developing and updating regulations, codes and standards. BERC is leaving nothing unturned.

It is often alleged that BERC is not acting independently and it is just executing the government orders. How would you react?

Civil service across the world follows the Armstrong Memorandum from 1945. The civil service as such has no constitutional personality or responsibility separated from the duly constituted government of the day. The people elect a government. As such the government has a mandate for working for people. It can be explained by quoting Mark Twain as saying, 'Independence is loyalty to one's best self and principles, and this is often disloyalty to the general idols and fetishes' explains this scenario.' The essence is that none can ever achieve absolute independence. It is a challenge for every regulator. Understanding the limits of independence is important for all regulators. The interests of citizens require safeguarding. Preserving and protecting that is the main objective of the regulator. The commission is endeavoring to do so.

What do you think BERC should do to upgrade it to the international level?

BERC is not lagging that much behind the international level. BERC has improved its performance and standing which are considered in rating a regulatory commission from an international perspective.

It is well known to everyone that BERC has constraints on competent human resources. What are your plans for recruiting qualified manpower and enhancing the competencies of human capital?

Except for one position, all posts of BERC as per the organogram are saturated. The establishment and finance ministry, and also the secretaries' committee have approved a new organogram. The final approval of grade three positions is now being expected. We will start our actions as soon as we get approval.

The regulatory body has to perform three types of work - half administrative, half legislative, and half judiciary. First is the technical nature of work. The next one is regulation, formulation of codes and standards, and the third is working as mediators (legal). But BERC officials after acquiring expertise and experience do not get the opportunity to deliver. Regulatory activism is another impediment. A few act beyond their limits.

The main challenge of the commission are the excess pressure to act in an administrative capacity and the lack of active independence. EP

Reverse Swing

Farid Hossain

ECONOMY IN TROUBLE
WHO IS RIGHT & WHO IS WRONG

We are now in a half-full, half-empty glass situation. To the government and its supporters the country's economy is still going well despite some hits on its body. According to the prime minister the country's current foreign exchange reserves are enough to pay the import bills of food and other essentials for six to nine months. There is nothing to be panicked about the dwindling reserves, she said adding it's normal to happen. There has always been a rise and fall in the reserves. Backed by her close aides the prime minister further assured that there is nothing to worry about even if the country holds dollars enough to meet three months' imports. The prime minister, who we believe has access to all reliable information, should be right.

But others who include noted economists have differing views. Some of them have even estimated that the existing reserves are good only for up to three months of imports payment. This, they fear, places the country at great risk, especially at a time when the Ukraine-Russia war has pushed the prices of food, fuel and fertilizer to go up at an abnormal rate. This group of experts warns that with the deficit in country's current account balance (the gap between receipts from exports and expenditures on imports) getting wider the government has some real concern at hands. They note that the country's foreign exchange reserves have declined to $39.67 billion as of July 20 from $45.5 billion a year earlier. Though it is considered safe for more than 5 months' imports, some disagree to the view. To this group of experts Bangladesh is now passing through a critical situation which is more than just a pressure on the economy. They point out that with remittances from the Bangladeshi expatriates falling and the export income from RMG – the two main pillars of country's foreign exchange incomes – the policy makers face a tough situation in dealing with the gnawing gap between export earnings and import bills. This has led to a shortfall in the greenback which is badly needed to fill the balance of payments deficit. This again has led to a run-away increase in the rate of US dollars as against the local currency. While taka is depreciating, the US currency is appreciating. Last week, the rate of dollars even increased to a record Tk 112 in the unofficial kerb market. Amid the volatile situation the government has finally sought a loan from the IMF. Though the exact figure is yet to be disclosed the amount being speculated varies from $2 billion to $4.5 billion. This is one aspect of the rough and tough situation the country's economy is facing.

The energy crisis that has hit the country is even more threatening. The Russia-Ukraine conflict has pushed the global energy markets into a deep hole which is hitting hard every country of the world from the poor to the rich. None, not even the developed European countries and the US are going unscathed. Bangladesh too is getting the punches right on the nose. The country's dependence on energy imports _ experts call it a wrong policy _ has meant that it is not only buying oil and LNG, but also bringing in inflation along with it. The problem has arrived when Bangladesh is already struggling over its dwindling forex reserves. One crisis is leading to another in a snowball effect. The situation has forced the government to go for limited power cuts (locally known as load shedding) across the country in a bid reduce the use of electricity-producing fuel. The current production of domestic natural gas has long not been enough to meet the demand of the power plants, many of them run by imported oil or liquefied natural gas (LNG). The government's decision to stop purchase of LNG from the spot market and closure of some diesel-run power is unlikely to solve the problem though.

It looks like that the war between Russia and Ukraine is not ending soon. The fall-out caused by it seems to be deepening. With the government clashing with experts on the running difficulties and risks ahead, the commoners are at a fix. They keep pondering who is right and who is wrong. EP

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আবাসিক জ্বালানির আধুনিক সল্যুশন

নতুন বাড়ি করছেন, কিন্তু গ্যাস নিয়ে চিন্তিত?
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