

ENERGY & POWER

Matarbari Hub On Course May Turn Into White Elephant

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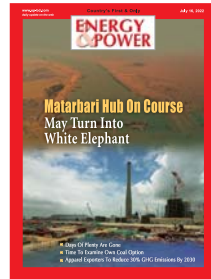
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EDITORIAL

Bangladesh is developing its Matarbari and Maheshkhali islands in Cox's Bazar to turn those into an energy hub of the country. According to the plan, the mega project, involving an investment of around Tk 52,000 crore, was supposed to accommodate several coal- and LNG-based power plants. A coal transfer terminal is being developed under the project which will be linked with a deep seaport off Matarbari through a channel (14.3-Km long, 350-meter wide and 18.5-meter draft) that is almost completed. The channel would facilitate large coal-carrying ships reaching the coal terminal. The government had to revise upward the project cost to that extent for widening the width of the canal to 350-meter from the initial plan of 250 meters. In the meantime, the government has dropped seven coal-based power plants from the initially planned 10. Moreover, The Japanese government has announced not to finance a second 1200MW coal-based power plant there. Under the circumstances, experts were considering that the huge investment in the coal terminal and other associated facilities would not be economically feasible and that the facilities would remain idle.

It would be better to review afresh the whole plan for the area and develop it accordingly so that the investment yields a return as much as possible.

Cover Photo: CPGCBL

h i g h l i g h t s

COVER



15



9



41

The importance of energy independence was never felt more important than under the current situation. Bangladesh's gas resource is dwindling, and the only other indigenous energy resource is coal. In 2012, the honorable Prime Minister declared that indigenous coal would not be developed for the time being. But time has changed..Tells EP

Major Asian importers – China, Japan, Korea, Taiwan and India – will be the favored destination of LNG. For Bangladesh accessing LNG from the spot market will remain extremely challenging from both price perspective and availability. Bangladesh must expedite the exploration of gas onshore and offshore by engaging IOCs to PSC without any further delay... More in Special Article

Matarbari Energy Hub has started getting visible on the coast of the Bay of Bengal. The multipurpose project involving an estimated cost of Tk 51,855 crore, including an imported coal-based 1,200MW power project, is being implemented with loans from JICA, and the country's investment. The project is progressing well. Another similar plant was supposed to be set up there but became uncertain with the Japanese government's decision not to finance coal projects anymore.



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Greenpage

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.



Contents

- 31 Apparel Exporters to Reduce 30% GHG Emissions by 2030
- 33 ADB-Funded Solar Pump Project Set to Overrun Cost, Time
- 34 World Bank Provides \$165m to Support RE in India
- 34 Clean Energy Spending Rises: IEA

Contents

- 5 **WORLD WATCH**
Latest Development in World
- 6 **SNAPSHOT**
Latest Development
- 9 **COVER**
Matarbari Hub On Course May Turn Into White Elephant
- 15 **SPECIAL ARTICLE**
An Evaluation of Power and Energy Sector
- 21 **ARTICLE**
Managing the Energy Crunch
- 23 **BOOK REVIEW**
Oil, Gas & Power in Bangladesh
- 25 **REPORT**
Nasrul Asks Power Officials to Improve Service
- 27 **More Steps Planned to Cut Power Demand**
- 28 **BTMA Worried over Gas Supply Halt in N'ganj**
- 29 **Sylhet Gas Well Lies Idle as Govt Buys Costly LNG**
- 35 **CLIMATE**
BD Produces 192m kg Plastic Sachet Waste Annually: Report
- 36 **World Needs More Diverse Solar Panel Supply Chains**
- 37 **Dire State of Ocean's Health Met with Tide of Pledges at UN Ocean Conference**
- 38 **UN Calls US Emissions Ruling a 'Setback' in Climate Fight**
- 39 **COLUMN**
Days Of Plenty Are Gone; Get Ready For Bumps Ahead
- 41 **INTERVIEW**
Dr. M Tamim
Dean of Chemical and Material Engineering Faculty of BUET

Russian Court Orders Halt to Caspian Oil Pipeline



Caspian Pipeline Consortium (CPC), which takes oil from Kazakhstan to the Black Sea via one of the world's largest pipelines, has been told by a Russian court to suspend

activity for 30 days although sources said exports were still flowing.

CPC, which handles about 1 percent of global oil, said the ruling to suspend operations related to paperwork on oil spills and said the consortium, which includes US firms Chevron and Exxon, had to abide by the ruling which was issued recently.

Woodside Books Geo Coral for Scarborough 4D Survey



Woodside Energy has contracted Shearwater GeoServices for a 4D baseline survey over gas fields in the Carnarvon Basin offshore Western Australia.

Shearwater will deploy the

Geo Coral vessel for the two- to three-month survey, due to start in the third quarter over the Jupiter and Scarborough gas fields. The vessel will be equipped with multi-component sensor streamers.

The results will assist development planning, also serving as the baseline for time-lapse data for acquisition of future monitoring seismic surveys.

Shell to Participate in Qatar's LNG Expansion



QatarEnergy has partnered with Shell plc to further develop Qatar's North Field East project, which will expand Qatar's annual LNG capacity to 110 million tpy from 77 million tpy by 2026.

Shell will hold a 25% share in

a joint venture company, which will own 25% of the North Field East expansion project, including the four mega LNG trains with a combined nameplate LNG capacity of 32 million tonnes/year.

The deal is the fifth and final in a series of partnerships in the \$28.75-billion project, QatarEnergy said in a separate release.

Previous deals were signed with TotalEnergies, Eni, ConocoPhillips, and ExxonMobil.

Petrol Price in Pakistan Jumps to Rs 250



As committed to the International Monetary Fund (IMF), the Pakistan government recently revived the petroleum levy and increased prices of all petroleum products by about Rs14-19 per liter with immediate effect.

According to a notification issued by the country's finance ministry, the government imposed a Rs10 per liter petroleum levy on petrol and Rs5 each on high-speed diesel (HSD), kerosene and light diesel oil (LDO), reports Dawn.

As a result, the per-liter price of petrol has been increased by Rs14.85, HSD by

Rs13.23, kerosene by Rs18.83 and LDO by Rs18.68.

Addressing a press conference in Islamabad soon after the price hike notification was issued, Finance Minister Miftah Ismail said the petroleum levy had been imposed to revive the IMF program suspended four months ago after the PTI government reneged from signed agreements.

European Gas Prices Highest Since March

European natural gas prices surged to a three-month high recently amid lingering concerns over Russian supplies and EU efforts to fill storage facilities before the start of the heating season.



August futures on the TTF trading hub in the Netherlands jumped by 6.4%, reaching \$1,630 per thousand cubic meters or €149.15 (\$155.05) per megawatt-hour in household terms, data from London's Intercontinental Exchange shows. It was the first time the natural gas price exceeded that level since March 10.

On June 14, Russian gas exporter Gazprom slashed

supplies to Germany via the Nord Stream pipeline by 60% citing technical issues due to Ukraine-related Western sanctions.

Following the decision, German Vice-Chancellor Robert Habeck called for a reduction in gas consumption in the country, while several other EU nations announced measures to help them use less gas, including reviving coal power plants.

Power Gen Disrupted Due to Gas Shortage: Nasrul Hamid



State Minister for Power, Energy and Mineral Resources, Nasrul Hamid, recently said power generation is facing disruption due to a shortage in gas supply.

As a result, electricity supply to several areas is facing difficulties and disruption, he said in a Facebook post from his verified account.

Power generation will return to full normalcy once gas supply is restored, the state minister also said.

Due to rise in price of fuel in international market as a consequence of the ongoing war between Ukraine and Russia, the country is facing a supply crunch of fuel like the rest of the world, he said.

"We sincerely regret the temporary inconveniences caused due to this situation," Nasrul added.

Energypac Family Steps Up Support to Flood Victims



In an effort to help the distressed, flood-struck families of Sylhet, employees of Energypac Power Generation Ltd. (EPGL) has extended a hand of support by distributing relief among victims recently.

The recent flood has affected many families, leaving them in dire need of help and support. Hence, Energypac family distributed relief among 400 families residing in Sunamganj, Sylhet, says a press release.

The distribution event was attended by Energypac officials, including Mohammad Masum Parvez, CBO, Power & Energy Division; Md. Faisal Perveg, Sr. Manager, HRAD; and Md. Imran Azim, Sr. Manager, Human Capital Management. Company management along with employees contributed to help the flood affected people.

As a responsible company Energypac Power Generation always stands beside people when they are in need of support. EPGL hopes for a quick and effective rehabilitation in Sylhet and nearby districts.

Chevron Provides Support to Flood Affected People in Sylhet

In response to the recent devastating flood in Sylhet, as a responsible corporate citizen, Chevron Bangladesh, the largest producer of



natural gas in the country, extended its hand to support flood-affected communities in three districts of the Sylhet division to help fight the ordeal through relief.

As part of the initiative to support the flood-affected people of Habiganj, Sylhet & Sunamganj districts, Chevron Bangladesh recently provided one week's emergency supplies to around 14000 families and additional 240,000 oral saline & water purification tablets.

Chevron Bangladesh provided support to the affected families currently staying in the flood shelters in the 3 districts of Sylhet, in collaboration with local administrators and relief committees of the flood affected areas.

Muhammad Imrul Kabir, Director of Corporate Affairs in Chevron Bangladesh, said, "As a socially responsible organization, we must stand by the flood-affected families at this critical time. If we all work together, we can alleviate the suffering of the affected community."

Ration Power to Ensure Stable Supply to Industries: FBCCI

The Federation of Bangladesh Chambers of Commerce and Industry (FBCCI) recently urged the government to go for rationing of electricity to ensure its stable supply to the industrial units to help them continue production.

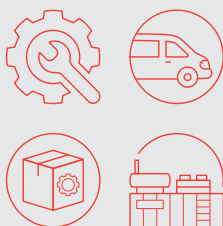


Loadshedding has been affecting production in the industrial units, said Md Jashim Uddin, president of the FBCCI.

He spoke after a meeting with the FBCCI's standing committee on power and energy at its office in Dhaka.

The government should now prepare a short-, medium- and long-term roadmap on power and energy so that production in industrial units does not get affected for load shedding, the committee suggested.

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Italian Ambassador Calls on Nasrul



Ambassador of Italy to Bangladesh Enrico Nunziata paid a courtesy call on State Minister for Power, Energy

and Mineral Resources Nasrul Hamid at the latter's office at the secretariat recently.

During the meeting, they discussed several bilateral issues related to Italy-Bangladesh, a press release said.

They expressed their desire to work on exploration, Liquefied natural gas (LNG), bio and traditional refining activities, wind, climate conservation, hydrogen and new technologies to contribute to Bangladesh's sustainable energy system.

At the meeting, Ambassador informed that Italian state-owned integrated energy company Eni SPA has expressed interest in supplying LNG to Bangladesh.

During the talks, the state minister said European companies would be welcomed to work in Bangladesh.

IDCOL Contributes Tk1.0Cr to PM's Relief Fund



To support the people from recent flood affected areas of Bangladesh,

Infrastructure Development Company Limited (IDCOL) donated BDT 1 crore to Prime Minister's Relief and Welfare Fund under its Corporate Social Responsibility (CSR) activities.

On behalf of Prime Minister Sheikh Hasina, Dr. Ahmad Kaikaus, Shareholder, IDCOL and Principal Secretary to the Prime Minister received the cheque from Abdul Baki, Additional Secretary (WB Wing), Economic Relations Division & Director, IDCOL, Alamgir Morshed, Executive Director & CEO, IDCOL at Prime Minister's Office on 27 June.

Prime Minister Sheikh Hasina attended the ceremony virtually.

S. M. Monirul Islam, Deputy CEO & CFO, IDCOL was also present on the occasion.

Hearing on Charges in Niko Graft Case against Khaleda Aug 2

The Dhaka Special Judge's Court-9 fixed August 2 to hold hearing on charge framing in Niko graft case against Bangladesh Nationalist Party chairperson Begum Khaleda Zia.

Judge Sheikh Hafizur Rahman passed the order at a temporary courtroom of the Dhaka Special Judge's Court-9 at Dhaka Central Jail in Keraniganj.

The previous hearing on charge framing against Khaleda Zia was set on July 5, 2022, but she could not appear in court because of illness. Subsequently, her lawyer requested the court to adjourn the hearing.



Worker Injured in Blast at Power Plant Project

A worker was injured in an explosion at the under-construction SS Power I Plant in Gandamara of Chattogram's Banshkhali upazila recently.



The injured, Shahdat Hossain, 22, was admitted to Chattogram Medical College Hospital (CMCH), said the plant authorities.

Faruq Ahmed, chief coordinator of the power plant, said, "Shahdat was working with a grinder machine inside the plant when a big tin can of thinner exploded nearby, leaving him badly injured."

Liton Kumar Nath, an assistant registrar at the CMCH burn unit, said the injured suffered about 70 percent burns.

BNP Blames Govt Failure for Power Cuts

Main opposition Bangladesh Nationalist Party recently blamed what it said the government's failure and corruption for the ongoing power cuts across the country, proving the 'fragility' of the government.

Party secretary general Mirza Fakhrul Islam Alamgir said this at a press conference at the party chair's office in Gulshan in the city. He said that the real goal of the current government is to indulge in corruption, lining their pockets and building houses abroad.

'The present situation proves that everything related to the government is fragile,' he said.



Matarbari Hub On Course May Turn Into White Elephant

Mollah Amzad Hossain



Matarbari Energy Hub, the second largest investment project of Bangladesh after Rooppur Nuclear Power Plant, has started getting visible on the coast of the Bay of Bengal. The multipurpose project involving an estimated cost of Tk 51,855 crore, including an imported coal-based power project, is being implemented with loans from Japan International Cooperation Agency (JICA) and the country's own investment.

25 YEARS

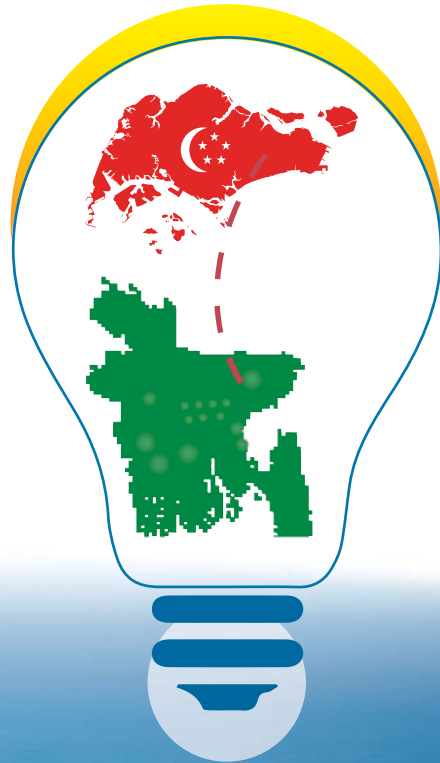
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The entire project is scheduled to be completed by 2026. It is expected that the first 600MW unit of the 1,200MW ultra-supercritical power plant will come into commercial operation in January 2024, followed by the second 600MW unit in July of the same year. The work of another 1,200MW coal-based power plant was originally planned to start before that. The work on this plant's infrastructure was being developed along with the first unit. But its implementation became uncertain with the Japanese government's recent announcement not to finance coal projects anymore.

Dr. Tawfiq-E-Elahi Chowdhury BB, Energy Advisor to the Prime Minister, has criticized the decision of the Japanese government at this matured stage of the project. Bangladesh has not yet announced targets toward the net-zero global goal. Bangladesh has no obligation to limit the use of coal power. Hence there was no reason why Japan withdrew from its financing commitment. The advisor made the observation at a recent stakeholders' consultation on a comprehensive energy and power master plan.

Matarbari island is considered the most suitable location to develop a deep seaport. The original plan was to build

Draft 3D Model of Matarbari Power Project, Matarbari Commercial Port and Other Development Projects in Matarbari Area



Photo: CPGCBL

10,800-12,000MW coal-based power plants and 2,500-4,000MW LNG-based power plants at the two nearby Bay of Bengal islands of Matarbari and Maheshkhali. Primarily, developing a 14.3-Km long, 250-meter wide and 18.5-meter deep canal was planned to link the islands with the deep seaport. A coal jetty and a general merchandise jetty were also planned to be developed. A land-based LNG terminal (LBT), bulk LPG terminal, coal transshipment terminal (CTT) and a few special economic zones (SEZs) were also included in the plan. The estimated cost of the Matarbari project was Tk

35,984 crore. But later in consideration of developing a deep-sea terminal, the width of the channel was increased to 350 meters. The estimated project cost increased to Tk 51,855 crore as a result. Coal Power Generation Company Bangladesh Limited (CPGCBL) has recently signed an agreement with the Chittagong Port Authority (CPA) and other stakeholders to share investment in the channel. But suddenly in mid-2021, the government decided not to develop 7 out of 9 planned coal power projects at Maheshkhali and Matarbari. Five of these were planned at Maheshkhali and 2 at Matarbari. The

two in Matarbari were CPGCBL-Sembcorp JV 1,200MW plant and CPGCL-Sumitomo JV 1,200-1,320 MW plant. Changing the Sembcorp plant to LNG, the work has started progressing. A decision has been finalized for transferring the land allocated to Sumitomo to Orion Group Bangladesh on lease for setting up their contracted coal power plant that was supposed to be constructed near Dhaka.

No analysis has been carried out yet about the generation cost of the 1,200MW coal power plant, following the



A view of under construction Matarbari Coal Power Plant

Photo: EP

decision that all the stakeholders would share the cost of developing the port channel. Experts believe that the cost of generation for the 1,200MW coal plant there will be higher than the estimate. This will put stress on the single buyer BPDB. Much before dropping the 10 proposed coal power projects from the plan, the decision to set up a Coal Transfer Terminal (CTT) was taken to cater to the needs of 19 coal power plants. Japanese company Sumitomo expressed interest in jointly developing this with Bangladesh. The 28 million tonnes annual capacity CTT was planned. It was supposed to be constructed by 2030. Coal is planned to be transferred in Matarbari by conveyor belts to all plants from the coal jetty now being constructed. Only three such projects are alive there at present. The first phase of the 1,200MW power plant is nearing completion. The government has not yet started thinking about alternate sources of financing for the second 1,200MW power plant. The EP came to know that Orion Group has expressed interest in using the Matarbari jetty if they implement their contracted coal power project at Matarbari.

The arguments in favor of the CTT at Matarbari were that it could facilitate coal supply to feed the 4,000MW capacity plants at Payra, 1,320MW at Rampal and 1,248MW at Bashkhali as the locations of the plants are not suitable for setting up coal terminals. The idea was that the transportation costs could be saved by transferring coal

from the planned CTT at Matarbari. But there is doubt about the future of the CTT due to the government's decision to cancel 10 planned coal power projects. Bangladesh Petroleum Corporation (BPC) is working on a bulk LPG terminal at Matarbari so that it can use the port channel. Petrobangla company RPGCL is also working on a Land-Based LNG Terminal. Companies have been short-listed for EPCM-based

Experts strongly believe that given the present global context, the policymakers should get back to the original plan for Matarbari-Maheshkhali comprehensive development. These two islands still have all potential for developing into a major coal hub for the sustainable energy security of Bangladesh

implementation. RPGCL is optimistic about selecting an evaluated bidder, concluding an agreement by the end of 2022 and launching the project in 2023. EMRD has a target to bring the first 1,000 MMCFD capacity units into commercial use by 2027. The CPA has finalized a plan for a deep seaport along the sides of the port-connecting channel. A feasibility study has also

been completed, but some complexities have surfaced about LNG and LPG terminal construction. The CPA is interested in constructing terminals for BPC and Petrobangla. If this is not resolved urgently, the construction of the LNG terminal may be further delayed. This may delay the commissioning of LNG-based power plants at Matarbari and Maheshkhali.

Matarbari power plant and associated infrastructure are being constructed on 1,608 acres of land acquired in Matarbari and Dholaghata Union of Maheshkhali Upazila in Cox's Bazar. The project was launched after the completion of a feasibility study in 2013. The actual construction started after the acquisition of land, rehabilitation of affected communities and land development. Sumitomo-Toshiba-IHI JV is working as an EPC contractor of CPGCL. 37 companies from Japan, Korea and China are working as subcontractors of the EPC company. A joint venture of Japan's Tokyo Electric Power Services Company Ltd (TEPSCO) and Nippon Koei Company Ltd, Germany's Fichtner GmbH & Company KG and Australia's SMEC International is working as Engineer for CPGCBL. The works of the project could continue during COVID-19 with a view to stick to the project completion target. Engr. Md. Abdul Mottalib, Managing Director, CPGCBL informed the EP that they are optimistic about completing the project on time.

Executive Engineer Rafique informed the EP during a recent visit to Matarbari that 77% of physical infrastructure construction is now complete. Work on clearance of equipment for coal jetty, diesel and other machinery has also been completed. 93 mother vessels have so far come to the jetty for disposing of equipment and machinery. Chimney construction is complete, other works are proceeding smoothly. Covered coal storage will require two months of capacity for the plant. Engr. Rafique and his colleagues with all confidence told the EP editor that by July 2023, it will be possible to make the first 600MW unit ready for testing. A

Draft Layout Plan of Various Development Projects in Matarbari-Maheshkhali Area



Photo: CPGCBL

contractor will supply the coal required for the test run.

It was found during the visit that the entire work of the 100-meter widening of the channel has been completed. Two jetties are also ready in all respects. The infrastructure required for coal delivery at the coal terminal and conveyor belt installation should be completed on time. Pipeline construction for water intake and discharge is also complete. Turbine and boiler house construction are also completed. Engr. Rafique mentioned that the plantation of trees for greening the area will start next year. He informed that 10,300 skilled and unskilled people are working on the project now – 8,000 of them are Bangladeshis. They are getting more experienced and more skilled. They can make greater contributions to similar projects in the future.

The entire capacity of Payra 1,320MW power plant cannot be utilized even now for delays in the construction of evacuation facilities by PGCBL. There is reasonable doubt whether PGCBL can complete evacuation facilities when the Rooppur Nuclear Power Plant will come into operation as well. But that facility for Matarbari power plant is now ready. Work at the substation is also

Matarbari Power Plant at A Glance

Activities	Period
Project Cost	Tk. 35,984 CR
Revised Project Cost	Tk. 51,855 CR
Feasibility Study Completed	September 2013
EIA Report Approved	October 2013
Loan Agreement Signed (1 st Tranche)	June 2014
DPP Approved	August 2014
Land Acquisition Completed	August 2014
Engagement of Consultants	February 2015
Commencement of EPC Work	22 August 2017
Expected COD of 1 st Unit	January 2024
Expected COD of 2 nd Unit	July 2024

Source: CPGCBL

advancing smoothly. Hence the power evacuation facilities will be ready when Matarbari Power plant starts generation.

Engr. Abul Kalam Azad, Project Director of Matarbari, while talking about the power plant informed that they are following strictly all international standards and norms at every stage of power plant construction. By the end of 2022, their plant will be more visible. Managing Director Engr. Md. Abdul Mottalib is also happy with the overall progress. The Project Engineer said the joint venture of Japan's Tokyo Electric Power Services Company Ltd (TEPSCO) and Nippon Koei Company Ltd, Germany's Fichtner GmbH & Company

KG and Australia's SMEC International is working on coal sourcing and supply. The MD informed that by December a report may be available from them. Initiative for coal purchase will be taken on the basis of the report. He said that a decision about CTT will be taken upon receipt of the JICA-financed study report. But a definite timeline cannot be given now.

Many companies will use the channel. So, for channel operation, the formation of a separate unit under CPGCBL is being contemplated. None of the companies could give an opinion

on whether the government will have to bear any financial burden if the second 1,200MW coal plant is not eventually constructed. But a responsible office of the Power Division informed the EP that many associated infrastructures for the second phase will be completed along with the works of the first plant. Hence the government can invest money from its sources. Prof Dr. M. Tamim also agreed that the government has the capacity. But to avoid the present stress on foreign currency reserves the decision must not be taken straight away now.

We can flash back to memory stating that 3 years from now the EP carried a cover story titled Dream Island Matarbari-Maheshkhali. In the context of present reality, Maheshkhali remains a dream while the dream is coming true for Matarbari. It is no longer a vision now. Matarbari is opening windows for Bangladesh to the world. With successful implementation, Matarbari will grow like the Port of Kashima, Japan as a deep seaport with an energy hub. Industrial zones will be developed in the adjoining areas. Experts strongly believe that given the present global context, the policymakers should get back to the original plan for Matarbari-Maheshkhali comprehensive development. These two islands still have all potential for developing into a major coal hub for the sustainable energy security of Bangladesh.

EP

Matarbari Port Area

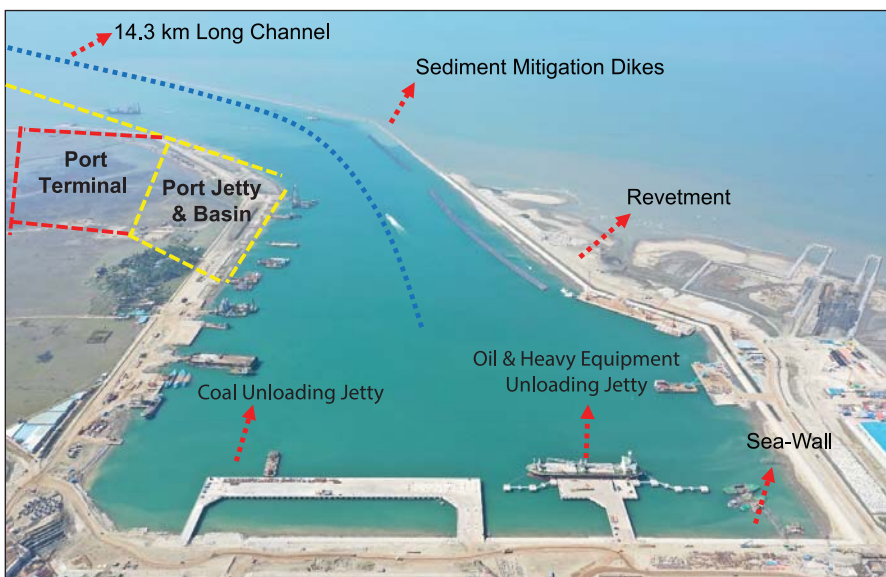


Photo: CPGCBL



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An Evaluation of Power and Energy Sector

Engr. Khondkar Abdus Saleque

Another financial year of the Awami League government's third consecutive term has come to an end. From 2009 to 2022, Bangladesh and the world kept changing. The situation and circumstances that prevailed before 2009 cannot be compared apple to apple with the present situation. But Bangladesh has made major strides to be recognized as a developing nation from a least developed country status. Consistent economic growth at an impressive rate for over a decade has helped Bangladesh to successfully make such a transition that it could manage the global impacts of COVID-19 much better than many other countries. Making the economy almost immune to the global recession was possible due to a much better state of power supply than many others (regional and global). There are, however, issues and challenges. There are also areas of poor governance, lack of transparency and incidents of corruption. But the overall power supply situation is much better now than before and continuously improving. Bangladesh is the first country in the region to achieve power supply to all its citizens. Even India and Pakistan could not achieve such successes. The Bangladesh Power Development Board (BPDB) and the Power Division are optimistic that by 2025, a quality power supply on an uninterruptible basis can be ensured for all. But a lot needs to be done to make

supply affordable to all. There are issues with primary fuel supply, harnessing own primary fuel, setting up infrastructure for fuel import, absorbing price shock of imported fuel, growing green in energy use and ensuring energy efficiency. The infrequent power disruptions are not for capacity constraints, but operational glitches and weather interruptions. Emergency response and customer services of power distribution utilities have significantly improved and are improving. But the same cannot be said about the gas sector and energy sector.

Present State of Power and Energy Supply

The installed capacity of power (grid-connected generation, import from India, captive generation and off-grid renewable) is 25,556 MW. The maximum demand served from the power grid so far was 14,792 MW on 16/04/2022. If about 3,000 MW of captive generation is added, the demand in the summer peak is not less than 17,500 MW. Even the system sustains a high reserve margin for primary fuel deficit, constraints of power transmission and distribution networks.

Power Generation Capacity (BPDB Website)

Sector	Number of Plants	Installed Capacity MW
Public Sector	57	9996 (45%)
Joint Venture (NWPGL & CMC)	01	1244 (6%)
Private Sector (IPP, SIPP, Rental)	94	9948 (44%)
Power Import from India (Bheramara and Tripura Connectivity)		1160 (5%)
Total		22,348 MW

BPDB, the sole buyer of electricity, accounts for a significant capacity charge for carrying many liquid fuel-based expensive rental and quick rental plants for peak shaving. The system has about 7000 MW of liquid fuel-based (HSFO and diesel) generation. It is hardly possible to generate more than 8,500-9,000 MW of 11,342 MW gas-based generation for gas supply shortage. For coal supply shortage, it is only possible to run one of the three units of the mine-mouth power plants at Barapukuria. But things are changing as the 1320 MW Payra imported coal-based power plants now generate at times 1000 MW. By December 2022, it can utilize its full capacity after completion of the remaining work of a 400 KV transmission line across the Padma river. The situation would further improve after the commissioning of the 1320 MW Rampal power plant by June 2023. The situation will further improve by 2026 as Matarbari 1200 MW coal power plant and 2X1200 MW Rooppur Nuclear Power plants come into commercial operation. These will not only provide significant base loads but also will facilitate BPDB from planning

and moving out of liquid fuel dependency. PGCB and distribution utilities are implementing various projects for upgrading and modernizing the power transmission system. Distribution utilities are optimistic that by 2025, it will be possible to ensure quality power supply on an uninterruptible basis to all.

However, primary fuel supply will remain a contentious issue, which requires top priority national attention. The laudable success of power generation has been overshadowed by the poor performance of the energy sector (Petrobangla and EMRD). This write-up assessed why the energy sector failed to match the success of the power sector?

**Captive Generation and Off Grid Renewables included
(22,348 + 2800 + 418) 25,556 MW
Present Fuel Mix: Installed Capacity Basis**

Fuel	Installed Capacity MW	%
Natural Gas and LNG	11,342	50.74%
Furnace Oil	6,529	28.32%
Diesel	1,280	05.77%
Coal (Own, Imported)	1,788	07.91%
Renewable	229	01.02%
Hydro	230	01.03%
Import from India	1,160	05.19%
Total Grid Connected	22,348	100%

There are deficits in gas supply and challenges in coal imports. Liquid fuel-based generation cannot be done away with until gas and coal supply issues are addressed and resolved.

Present Fuel Supply Situation

Bangladesh's energy generation is still dominated by fossil fuels, natural gas, coal and liquid fuel. The government has failed to implement the fuel mix prescribed in PSMP 2010 and PSMP 2016. Now it is formulating a comprehensive Power and Energy Sector Master Plan. It is expected that the bitter lessons learned from the failure due to flawed actions and the prevailing global situation will be factored into an implementable plan. Experts observed that lack of coordination, bureaucratic dominance and lack of an appropriate mindset of a section of policymakers about the exploitation of own resources – coal and gas – are among the main reasons for the present fuel supply issues.

Some less informed self-styled experts often argue about Production Sharing Contracts and their utilities. What would have happened to the gas supply situation had not there been IOCs' investment attracted in the exploration and development of natural gas in Bangladesh. Bibiyana, operated by Chevron, alone supplies 1200-1250 MMCFD to the national grid. Five gas fields, the ones that Bangabandhu had acquired in 1975 from Shell BV, still supply 30-35% of the total supply. It looks unprofessional that for 149 MMCFD and 145 MMCFD gas supply

management, Petrobangla needs two production companies. BGFCL, BAPEX and SGFL should be merged into a single integrated exploration and production entity for better planning, execution and operation of the upstream sector of the gas supply chain.

Very often we are told that the gas resources of Bangladesh are depleting fast. Yes, of course, the proven reserves of discovered gas fields are exhausting. However, these fields have potential resources at a deeper high-pressure horizon. Many gas wells, if worked over, can still keep producing at the present rate for another three to four years. If explored properly, there is a possibility of finding new resources in Chattogram Hill Tracts and Western and Southern regions of Bangladesh. But capacity handicapped BAPEX alone under bureaucratic control on a stand-alone basis may not do that. The present programs of BAPEX may add 200 MMCFD at best by 2030. But the crisis will deepen between now and 2025. That crisis cannot be met by BAPEX alone and importing LNG.

The present capacity of LNG import is 1000 MMCFD. Maximum 850 MMCFD LNG is being imported now. The LNG market is extremely volatile and will remain so for a few years for geopolitical reasons. The western embargo on Russian fuel imports will continue diverting LNG to Western Europe. Major Asian importers – China, Japan, Korea, Taiwan and India – will be the favored destination of LNG. For Bangladesh accessing LNG from the

spot market will remain extremely challenging from both price perspective and availability. Bangladesh must expedite the exploration of gas onshore and offshore by engaging IOCs to PSC without any further delay.

Coal Resource Exploitation

If asked, we will say the dilemma of policymakers regarding the exploration of coal is the most frustrating

failure of Bangladesh. Resource-constrained Bangladesh has done it very wrong leaving about 65 Tcf of superior quality coal buried in 5 discovered coal mines. At least the coal of 4 out of the 5 mines is lying at mineable depth and can be exploited by applying off-the-shelf appropriate technology addressing all perceived environmental and social impacts. It is ridiculous that a nation achieving multi-million-dollar mega projects implementation (Padma Bridge, Rooppur Nuclear Power Plant) acts like a novice as far as coal resource exploitation. Mining at Barapukuria applying Long Wall Top Caving (LWTC) underground mining method (not appropriate) proved value destroying. The government continues to sit on the Scheme of Development of Phulbari mine. Even the approach to mining at Khalaspir and Dighipara appears unprofessional. Right across the border in West Bengal, Bihar and Jharkhand, coal mining created only minor footprints while making huge impacts on energy generation. For the greater interest of Bangladesh, mining its own coal must get top national priority. Local experts' committee recommendations for open pit mining from Barapukuria have even been kept wrapped up. Barapukuria mine cannot support capacity generation of the 3 units of power plants. It is not possible now to import and transport coal to Barapukuria as well. Even for the interest of 3 mine-mouth power plants, mining decisions should be revisited. Phulbari is ready for mining. Open pit mining of Barapukuria and Phulbari can support the generation

of 10,000 MW of power for 30 years. Bangladesh will require continuously paying through the nose for fuel import unless coal resources are exploited.

There cannot be a greater patriot in Bangladesh than the father of the nation Bangabandhu Sheikh Mujibur Rahman. He created BMDC with the purpose of mining minerals.

After his demise, BMDC merged with BOGC to form Petrobangla. There was a directorate of mines to spearhead mining operations. Now that position has also been merged with another Petrobangla directorate. Should EMRD and Petrobangla claim that they are following Bangabandhu's footprint in the energy sector?

Coal Power Program of Bangladesh

Bangladesh, without assessing its facilities for importing coal, went for a massive imported coal-based power generation program not only in shallow coastal areas but also deep inside. The global reality of challenges of GHG emission and global warming was not also assessed. The challenges of accessing loans were also not properly evaluated. In 2020 suddenly many large under consideration power projects were shelved. Projects at Payra, Patuakhali, Rampal and some in Matarabari continue. So far 1320 MW first unit is under generation. Others are under implementation. Plans for a deep-sea port at Matarabari is also shelved. Port development at Matarabari is progressing. In such a situation, the transportation of coal to Payra and Rampal already created a new headache. Recently Japan backed out from the second unit of coal project at Matarabari. The planned Coal Transfer Terminal at Matarabari appears to be in limbo. Bangladesh may not be able to sustain more than 7,000-8,000 imported coal-based generations even by 2040. The most feasible option is mining own coal and setting up 5,000-6,000 MW mine-mouth coal power. Own coal can be even transported to

Gas and LNG Supply
(Petrobangla Website 28-29 June 2022)

Company	Gas Fields	Capacity (MMCFD)	Actual Production
BGFCL	4	851	625.50
SGFL	4	149	96.70
BAPEX	8	145	140.00
IOCs (Chevron+Tullow)	4	1,615	1458.00
LNG Import	2 FSRUs	1,000	854.20
Total		3,760	3176 .00

Payra and Rampal when rail communication is extended and the rail system is improved with dedicated tracks for a coal train.

LNG Import Facilities Development

In the short and medium term, natural gas will remain the preferred interim /transition fuel. But Bangladesh cannot expand its own production base even by expediting the exploration campaign before 2030. We are not sure how much more LNG can be imported and whether Bangladesh's economy can absorb the prohibitive cost of LNG. Two FSRUs are supplying a maximum 850 MMCFD now. If negotiation with Summit Energy leads to a contract by 2022, another 500 MMCFD RLNG may be injected into the GTCL gas transmission grid by early 2025. Beyond that, the Land Based LNG Terminal (LBT) may be operational by end 2027 adding 2000 MMCFD RLNG by 2028. Hence by 2028, there is a possibility for Bangladesh to reach LNG supply capacity of 3500 MMCFD. In the meantime, long-term term LNG supply contracts with other countries like Australia, and Russia should be concluded or the private sector allowed to import LNG. We are not optimistic about the Excellerate Energy proposal of supplying LNG through a 90 KM subsea pipeline from a deep water LNG facility. Neither are we hopeful about an Indian company proposal for pipeline supply of LNG from a LNG terminal in West Bengal. In this situation, relying on LNG too much may not be a very smart option. Few small scale LNG terminals may be a solution but again will depend where to locate.

Energy Power System Going Green

Bangladesh has great potential for solar and wind energy. But for lack of policy and strategy, not much has been achieved so far. Solar Home System, mini and micro grid were making impacts. But the government program for bringing the entire country under grid coverage has

almost stalled the SHS program. We think there is a huge scope for rooftop solar, solar irrigation, floating solar, wind energy (both coastal areas and offshore) in the southern region of Bangladesh. SREDA should be also strengthened for expediting Energy Efficiency enhancement. EE is now considered the first fuel for Net Zero 2050. Bangladesh for achieving the vision of 2041, the Renewable Energy Roadmap (40% RE) needs to do an awful lot.

Demand Side Management for Both Power and Gas will be the Key

Payra, Patuakhali, Rampal, Matarabari, Bashkhali coal power plants and Rooppur nuclear plants and imported power from Adani Group by 2027 will add 12,000-15,000 MW. This should facilitate retiring about 6,000 MW of liquid fuel-based generation and some fuel-inefficient gas power plants. From 2027, the gas must not be supplied to any simple cycle gas-using power plants. Gas to only those captive generators will be supplied which will use cogeneration and Combined Heat and Power technology. It suggests limiting gas supply to only modern fuel-efficient fertilizer plants only. About 200 MMCFD fugitive emissions (theft, pilferage and wastage) of gas use can be done away with by conducting combing operations on unauthorized gas use. Gas supply to CNG and domestic use can also be gradually phased out and replaced with LPG and autogas. Similarly, on the power side, they must plan how they would retire liquid fuel-based power plants and retire/ replace fuel-inefficient gas-based power plants. Under implementation



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projects of power transmission and distribution utilities will make the power system more efficient progressively. Smart metering, smart grid, distributed generation, SCADA, automation, Artificial Intelligence, cyber security, GIS monitoring of power and energy infrastructure are the future. Hope smart generation professionals will leave up to the challenges. But all will need lots and lots of skilled manpower development and proactive thinking of policymakers.

In conclusion, it is recommended that:

AA. Taking final decision on exploiting its own coal resource. This must be taken now and work should commence in 2024. But preparatory work must be done by the end of 2023. We understand that the government in the present term may not risk-taking decisions.

BB. Improving rail tracks for coal train movement

CC. Launching offshore bidding by

Coal Production from Barapukuria (2010 -2020)

Financial Year	Coal Production Tonnes
2019-20	811,137,119
2018-19	805,695,621
2017-18	923,276,080
2016-17	1,160,657,810
2015-16	1,021,138,010
2014-15	675,775,500
2013-14	947,124,566
2012-13	854,803,850
2011-12	835,000,000
2010-11	666,635,390

2022 leaving gas price as the bidding option.

DD. Opening onshore areas outside BAPLEX assigned blocks for PSC bidding.
EE: Merging production companies and BAPLEX into a single dynamic Upstream Exploration and Production Company.

FF: Allocating funds as a grant to BAPLEX from Gas Development Fund and

through policy, encouraging the local private sector to form Joint Venture with BAPLEX.

GG: Adopting strategy for value-added rational use of gas.

HH: Planning green and clean energy supply development of Southern, South Western and Northern regions of Bangladesh.

II: Planning and implementing smart grid, smart metering, SCADA and automation at all segments across the power supply chain and gas system management.

JJ: Continuing with massive human resource up-skilling for improved management of power and energy supply chain and infrastructure management.

KK: Introducing incentive-based salary and benefits similar to the power sector for all companies of Petrobangla.

EP

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রঙ ঝিরঙ

বিজ্ঞাপন হার	টাকা
শেষ প্রচ্ছদ (রঙিন)	৫০,০০০.০০
দ্বিতীয় প্রচ্ছদ (রঙিন)	৪০,০০০.০০
তৃতীয় প্রচ্ছদ (রঙিন)	৪০,০০০.০০
ভেতরে পুরো পাতা (রঙিন)	৩০,০০০.০০
ভেতরে অর্ধেক পাতা (রঙিন)	২০,০০০.০০
ভেতরে ১ কলাম (রঙিন)	১০,০০০.০০
ওয়েব সাইট প্যানেল প্রতিমাসে	২০,০০০.০০
ওয়েব সাইট স্পট প্রতিমাসে	১০,০০০.০০

যোগাযোগ

আরিফুল ইসলাম ০১৭২৫ ৫৮৩০৮৫
মোফাজ্জল হোসেন জয় ০১৭১২ ৬৭৭৬০১
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রুম ৫০৯, ৫১০, ৫১১ ও ৫১২, ইস্টার্ন ট্রেড সেন্টার, ৫৬ ইনার সার্কুলার রোড, পুরানা পল্টন লাইন, ভিআইপি রোড, ঢাকা-১০০০
জিপিও বক্স ৬৭৭, ফোন +৮৮০২৫৮৩১৪৫৩২

নর্থ-ওয়েস্ট পাওয়ার জেনারেশন কোম্পানি লিমিটেড

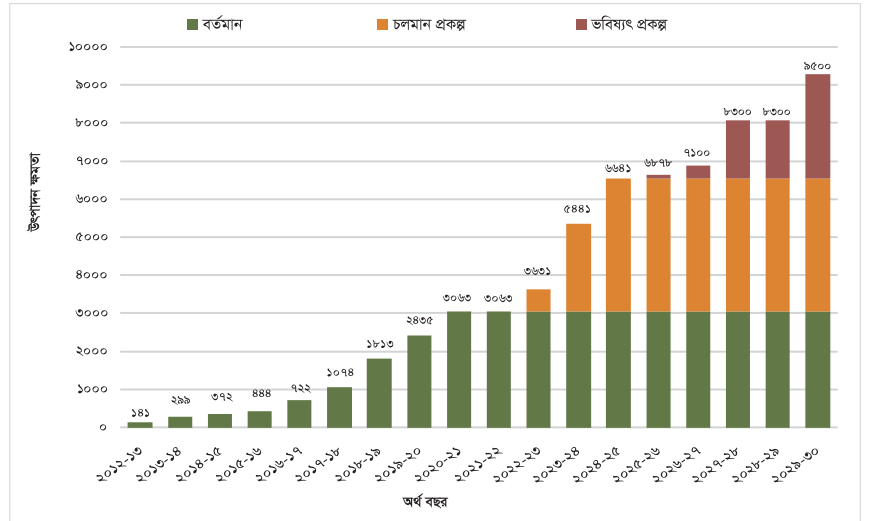
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দ্রুত বিদ্যুৎ উৎপাদন
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মাননীয় প্রধানমন্ত্রী
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গ্রহণ করছেন
নর্থ - ওয়েস্ট
পাওয়ার জেনারেশন
কোম্পানি লিমিটেড
এর প্রধান নির্বাহী
কর্মকর্তা প্রকৌঃ
এ.এম. খোরশেদুল আলম

এক নজরে কোম্পানির সার্বিক চিত্র

- মোট বিদ্যুৎ কেন্দ্র - ৯ টি
- বিদ্যুৎ উৎপাদন ক্ষমতা - ৩০৬৩ মেঃ ওঃ
- বাস্তবায়নধীন প্রকল্প - ৩৫৮২ মেঃ ওঃ
- পরিকল্পনাধীন প্রকল্প - ২৮৫৫ মেঃ ওঃ
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নর্থ-ওয়েস্ট পাওয়ার জেনারেশন কোম্পানি লিঃ

আইএসও ৯০০১:২০১৫, আইএসও ১৪০০১:২০১৫ এবং আইএসও ৪৫০০১:২০১৮ সনদপ্রাপ্ত

(বাংলাদেশ বিদ্যুৎ উন্নয়ন বোর্ডের একটি প্রতিষ্ঠান)

ইউটিসি ভবন (৪র্থ তলা), ৮ পাছপথ, কাওরান বাজার, ঢাকা-১২১৫

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Managing the Energy Crunch

Saleque Sufi

The euphoria of launching road communication through the Padma Bridge has not died down. Following the Prime Minister's advice to maintain austerity in the use of power and energy, panic appears to have been set across the power and energy value chain. All blame is directed toward Petrobangla companies' inability to meet the gas demand for grid-connected power plants. The government has decided to suspend LNG purchases from the spot market due to very high prices. The GTCL-operated national gas grid is getting 500 MMCFD RLNG instead of 850 MMCFD which it was getting a couple of days back. The consequent reduction of gas supply has created a gas draught over the entire gas franchise. But power generation has liquid fuel and coal, besides import options. Petrobangla needs to supply gas to fertilizer factories, industries (process, captive generation), CNG, domestic and commercial use. Hence it is not only gas supply reduction, but also the management of the power system as well, leading to the present dismal situation. The policy and strategy of the government growing in imported primary fuel dependency and ignoring opportunities for exploiting its own discovered coal resources and potential petroleum resources have also contributed to the present situation. COVID-19 rocked the economy of most countries. The commencement of recovery, following the easing of the pandemic, stressed the global fuel market. The war in Ukraine and western embargo on Russian oil added fuel to the fire. Prices of coal, liquid fuel and

LNG sky-rocketed. Bangladesh imports almost all its liquid fuel and coal from the global market. It also started meeting 22% of the gas requirement with imported LNG. 17% of this is from long-term contracts with Qatar and Oman, and merely 5% from the spot market. Experts and analysts have been advising policymakers for a long time to expand the domestic fuel base. The Ukraine war or not the economy of Bangladesh had

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never been in a position to absorb the price shock of the global fuel market or leave its energy security to the risks of fuel supply chain disruptions. The war started in February 2022. Many countries like China and India have been able to address their energy supply situation by importing cheaper fuel from Russia. Bangladesh cared less over the past 3-4 months until the PM advised the energy ministry not to import LNG from the spot market unless it is

extremely urgent. This write-up will review the power and energy value chain. The objective is to work out a rational strategy for austerity in use or the demand-side management. It is not only LNG import but also import of liquid fuel and coal that have created challenges. Inefficient use of gas in some grid-connected power plants and Petrobangla's obligation to supply gas to the captive power plants are reasons for failure in the power sector.

What is being Contemplated?

The policymakers are talking about reducing power demand during evening peak hours. The present summer peak demand is about 15,000MW. If the sudden decision to suspend purchasing LNG from the spot market was not taken, BPDB could manage the peak demand by operating most of the liquid fuel-based plants like peak shavers. The government decided to shut down businesses, and shopping malls at 8 PM. But later considering the Eid season, the decision was deferred. Now after Eid, this may be implemented with strong monitoring. Even in developed countries, shops and mega malls except a few dealing with life-saving drugs shut down after 6 pm. Only a single day of a week, these are allowed to remain open till 9 pm. Still, the main demand for electricity comes from the lighting load. As such, the closed-down shops and businesses during peak hours from 6 pm to 10 PM will save at least 1,000MW power. Another decision for rescheduling the government office hours from 9 am to 5 pm, and reintroducing working from home like

that of the COVID time may save up to 500MW. In addition to this, industries not requiring 24/7 operation may work in two shifts – 7 am to 3 pm and 11 am to 7 pm – over the next three months.

Another area is the liquid fuel consumption of government vehicles. Now the mid to senior officials are provided with SUVs, which consume huge liquid fuel. Many government officials use more than one vehicle, taking these from different projects under the ministry. For austerity, these must be looked into. Where possible, the fuel allocation must be made limited. Also, the government can cancel all the in-person meetings with the departments concerned under a ministry and organize meetings online to save a large amount of fuel oil. It will also help save time and working hours. The impact of imported fuel can be minimized if the government can rationally review the tax and VAT on fuel imports. Prices of gas and LPG, and tariff of power should also be rationally adjusted. Bangladesh, instead of relying only on Qatar and Oman for LNG supply, should proactively engage with Russia, Australia and other countries for LNG import.

Petrobangla Actions for Increasing Gas Production

The major concern is that the gas production is depleting according to its natural course with very little possibility of replenishment under the present program of Petrobangla. It does not matter whether 4 exploration rigs of BAPLEX are kept in operation 24/7/365. It may not yield more than 300 MMCFD of new gas by 2030 though Petrobangla is planning 46 exploration, production and workover wells by 2025 to add 618 MMCFD of gas to the grid. But by that time, the present production may deplete to almost nothing. The negotiation on the 3rd FSRU with Summit Group has also not concluded due to the reluctance of Summit. The

Ukraine War Impact on Fuel Price in Global Market

Fuel	Price before War	Price Now	Increase	% Increase
Furnace Oil US\$ /tonne	708	1080	372	52%
LNG US\$/MMBTU	10	38	28	180%
Coal US\$/ tonne	64	178	114	61%

work on the Land Based Terminal at Matarabari in all likelihood may be delayed beyond 2030. How will Bangladesh meet the gas demand from 2025?

One of the two other options under consideration is the import of RLNG from an Indian LNG terminal in West Bengal. It may not happen at all. India may not let any primary energy be exported from India. The other option of importing RLNG through a 90 KM subsea pipeline from a deep offshore facility will also fall flat.

Petrobangla must immediately go for onshore and offshore PSC block bidding leaving gas prices as a bidding option.

Bangladesh can access cheaper fuel from Russia if necessary through Indian and Chinese windows. Petroleum Products of India must be cheaper now as most of its refineries are running to capacity by importing cheaper crude from Russia.

Time for Thinking Out of the Box

It is a war-time. Everything is fair in love and war. Bangladesh must give a fresh look to its coal resource. If a political decision is taken now, mining can start in 2024 and, by 2030, at least two mines of Phulbari and Barapukuria can feed up to 10,000MW mine-mouth power. By improving the railway system in the meantime, coal can also be transported from the mine to Rampal and Payra power plants. Technological and technical studies have evidenced that open pit mining will cause no harm to the aquifer, the affected communities can be rehabilitated like that of the Padma Bridge and 80% of the farming land can be restored.

The other option as pointed out above is opening the land frontier area outside the BAPLEX ring fence for PSC bidding and going for offshore bidding without delay.

Side by side, all options for renewable energy must be explored. SREDA must be empowered with the authority and required technical experts for owning RE and EE development. Energy efficiency is now considered the first fuel.

Conclusion

Power loadshedding is inevitable now, even gas supply priorities should be set. Can BPDB and its companies practically introduce a planned loadshedding across Bangladesh? Can Petrobangla successfully introduce gas rationing on an equitable basis? Perhaps not. The government boasts a 25,000MW power generation capacity. It is a pity that it cannot ensure the fuel supply for meeting 15,000MW of grid power demand. It is not difficult finding out where the failures are. The ministers talk about the power supply situation in Europe and Australia without having any knowledge. Living in Australia since 2005, I have not experienced power loadshedding even for a minute. I talked and checked in some European countries. They have similar experiences. Nowadays, the new generation cannot be fooled.

Austerity must not be for a limited period. None knows how long the Ukraine war will last. Even if it comes to an end soon, the impacts will continue for years. We have seen some less informed persons talk about coal power plants at Rampal, Bashkhali will comfort the situation towards the end of 2022. What about coal? What about sky-rocketing coal prices in the global market? What about coal transportation? With the start of each mega project, power demand will increase. In the present state of power and fuel supply, none will risk big investment in Bangladesh. Policymakers, acting at the behest of an evil syndicate, have taken Bangladesh for a ride.

EP

Saleque Sufi;
Contributing Editor, EP

Oil, Gas & Power in Bangladesh

Mohammed Humayun Kabir

In Bangladesh, Sabuj Yunus is a well-known journalist and author. While a student at Dhaka University in the late 1990s of the last century, he began his journalism career. He has worked as a journalist for several renowned newspapers for about three decades, covering Bangladesh's electricity, gas, and oil industries.

He has written hundreds of special and general reports on the oil, gas, and power industries for The Daily Banglar Bani, The Daily Muktakantha, The Daily Jugantor, and The Daily Samakal over a

long period. His writings have a unique impact on the growth of Bangladesh's energy industry. In appreciation of his unique contribution to Bangladesh's energy sector, the government of Bangladesh named him the Best Reporter in 2012.

Sabuj Yunus is Associate Editor and Online In-charge of the well-known Bengali national newspaper The Daily Samakal. He writes on a variety of significant subjects in addition to journalism.

Sabuj Yunus wrote a fundamental work titled Oil, Gas, and Power in Bangladesh. Based on his experience, noteworthy writer Sabuj Yunus wrote and edited the book to pique readers' interest in Bangladesh's oil, gas, and power industries. It can be argued that he has clear and profound expertise in these subjects given that he has about 30 years of experience covering oil, gas, and power in Bangladesh.

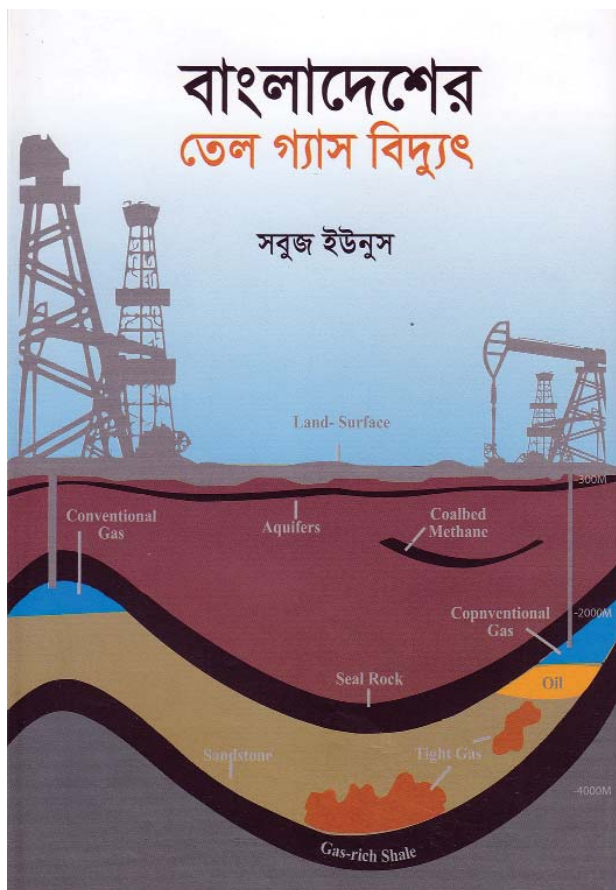
It is impossible to fathom modern living without electricity, gas, and oil. In other words, without the energy sector, the way of life as we know it is pointless. The book was written by journalist Sabuj Yunus at his request to give journalists,



students, professors, researchers, and general readers a brief introduction to this significant energy sector. There is no doubt that readers of all ages will gain a comprehensive understanding of Bangladesh's oil, gas, power, coal, etc. by reading the book.

The history and current state of Bangladesh's natural resources, including power, gas, oil, and coal, have been adequately explained in this book. Journalist Sabuj Yunus has made an effort to use terminology that is as basic as possible to offer reliable data regarding the energy sector from various government and non-government sources. It is hoped that readers who are interested in the book won't have any difficulty understanding the energy industry.

This book can be described as an introduction to the oil, gas, power, and coal industries. The reader would be able to quickly learn the brief history of



various areas in Bangladesh by studying the book.

Most of the time during the 1990s, the country's electricity generation was very limited - between 2,000 and 3,000 megawatts. Day and night, loadshedding was a common picture of life. Many people struggled to create an accurate report because they lacked a strong understanding of the industry. The senior government authorities eventually became aware of the issue. On the initiative of the Ministry of Power, Energy and Mineral Resources, the training session for the young journalists covering this beat began in this case.

Then they had a deeper understanding of this industry. The reader also learned a variety of technical phrases related to these topics. The energy and power industries have grown in popularity as a journalistic beat over time. This topic is covered in reports in a variety of media every day. The importance of the energy sector then gradually increased, and reporters' respect for it has only grown.

In 1994, Sabuj Yunus began writing about energy, minerals, and electricity. There was no good book on this topic at the time. Through contacts with government officials, gatherings, seminars, and workshops, he began familiarizing himself with the industry. Later, he attended many training sessions in this area both domestically and overseas. Then he understood how important it is to write a book on this industry that the average person can understand.

Sabuj Yunus is not a geology or science student. He graduated from Dhaka University with honors and a master's degree in Bengali literature. Based on his experience as a journalist, he wrote the book.

The book uses extremely lovely, lively, and cheerful language to explain the history of electricity use in Bangladesh and how every house in Bangladesh is lit by electricity. Both the public and commercial energy sectors are covered in the book.

The book provides information on Bangladesh's thermal power plants, natural gas, renewable energy sources, solar energy, hydropower, and wind power.

The book also includes crucial data on the utilization of nuclear energy globally, nuclear energy in Bangladesh, and the Rooppur Nuclear Power Plant.

In Bangladesh, solar energy usage is growing daily. In light of this, the book analyzes solar power plants, the most recent development in Bangladesh's use of solar energy. The state of wind energy in the nation as a whole is also extensively described in the book.

The daily conversation in Bangladesh revolves around natural gas, including Petrobangla, gas fields, Bangladesh Petroleum Exploration and Production Company Limited (Bapex), Bapex gas fields, LNG, and LPG, among other things. All of these elements are covered in the book in lucid language.

Without a doubt, reading the book will provide readers with a thorough understanding of Bangladesh's history of coal mining, the use of its coal resources, and the current condition of its coal mines.

A list of the nations that Bangladesh Petroleum Corporation (BPC) purchases oil from is included in the book. The book includes discussions of businesses under BPC such as Eastern Refinery Limited, Padma Oil Company Limited, Jamuna Oil Company Limited, Meghna Petroleum Limited, LP Gas Limited, and East Lubricant Bleeding Limited.

Besides Oil, Gas, and Power in Bangladesh, Sabuj Yunus has written three other works. March and December of 1971, Kobitay Bhalobashay Bangabandhu, and Desher Pakhi (Birds of Bangladesh) are widely cited.



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Nasrul Asks Power Officials to Improve Service



State Minister for Power and Energy Nasrul Hamid has urged the officials concerned to ensure quality supply of electricity to consumers' level.

He made the call to power sector officials during annual performance agreements (APA) between Power Division and its offices, agencies and companies recently.

The state minister said the APA is a responsibility profile

of the government officers and discharging of their duties.

He urged the officials to work sincerely, which will take the Power Division to the top position again.

Power Division's additional secretary Md. Mohsin Chowdhury, Northern Electricity Supply Company Ltd managing director Md Zakiul Islam, administrative officer Md Anisul Huq and office assistant Afroza Akter secured integrity award for the fiscal year 2021-22.

Power secretary Md Habibur Rahman presided over the function attended by BPDB chairman Md Mahbubur Rahman and Power Cell Director General Mohammed Hossain. **EP**

Complete Cutoff of Russian Gas Dangerous

European Commission chief Ursula von der Leyen said recently that the 27-nation European Union needs to make emergency plans to prepare for a complete cut-off of Russian gas in the wake of the Kremlin's war in Ukraine.

The EU has already imposed sanctions on Russia, including on some energy supplies, and is gearing away from Kremlin-controlled deliveries. But the head of the EU's executive branch said the bloc needed to be ready

for shock disruptions coming from Moscow, reports AP.

"We also need to prepare now for further disruption of gas supply and even a complete cut-off of Russian gas supply," von der Leyen told the EU legislature in Strasbourg, France.

She said a dozen members have already been hit by reductions or full cuts in gas supplies as the political standoff with Moscow over the Ukraine invasion intensifies. **EP**

Corrigendum

We printed a photo of an LNG ship of Excelerate Energy instead of Bhola Gas Field in our article titled 'Gazprom EP International Contributing to Bangladesh's Energy Security' published in our Vol 20 Issue 2. We regret the inadvertent mistake. EP

Rampal Plant to Go into Power Production in Oct



The Bangladesh-India Friendship Power Plant (PP) at Rampal in Bagerhat, a mega project of Tk 160 billion, will start electricity production by October 31, a top official has said.

"We have already completed financial progress by 78 percent and physical progress of 83 per cent. We expect to begin electricity generation from unit-1 of the Rampal power plant on October, 2022 and unit two by February, 2023," Bangladesh-India Friendship Power Company (Pvt) Ltd (BIPCL) managing director Engr. Sayeed Akram Ullah told a local newspaper.

A workforce of 6250 people including 1625 experts are

presently deployed at the site to put final touches to the unit-1 of the power plant that faced delays to commission several times due to Covid-19 outbreak.

Power transmission system through Payra-Gopalganj-Rampal 400kV to 230kV Khulna line through Rampal has already completed from April 7, 2022 to June 16, 2022. The power flow is on shutdown from June 16, 2022 for completing balance works of unit-1 and 400kV switchyard, sources said. **EP**

Govt Won't Implement Matarbari Plant Phase-2 as Japan Cancels Funding



The government has decided not to implement the second phase of the Matarbari coal-fired power plant, a cabinet member confirmed recently, hours after Japan announced the cancellation of funding for the project.

At a press conference in Japan, Hikariko Ono, foreign press secretary of Japan, said support for coal-fired power projects by Official Development Assistance (ODA) for Bangladesh and Indonesia will be suspended.

The announcement came following Japan's commitment at the G7 summit in June last year. It agreed to end new support for coal-fired power generation facilities that did

not take measures to reduce greenhouse gas emissions by the end of 2021.

Japan International Cooperation Agency was supposed to finance phase-2. It was ready to fund it even after its commitment at the G7 summit, saying it's an "ongoing" project.

But 120 organizations from 25 countries and green campaigners working against fossil fuel urged all stakeholders to stop the expansion of Matarbari project. **EP**



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More Steps Planned to Cut Power Demand



already been banned.

The decision to close all malls, shops and kitchen markets by 8:00pm every day will be enforced strictly after Eid.

The power outages the people are enduring nationwide could go on until September, and the government may change office and school hours and reintroduce home office to reduce electricity demand.

A meeting of high officials of the energy and power divisions came up with such recommendations for the government recently.

According to the officials, the government forecast of 14,500MW of daily power demand for September could be reduced to at least 12,500MW if the recommendations were implemented properly.

Use of decorative lights for social events and at shopping malls, shops, and homes has

The meeting also recommended setting the thermostats at 25 degrees Celsius at every government office, reducing the use of air conditioners at religious establishments, and wrapping up social events like weddings by 7:00pm.

Tawfiq-e-Elahi Chowdhury, prime minister's energy adviser, said, "The decision on school hours will be made by the education ministry."

Briefing journalists after the meeting, held at the Prime Minister's Office, he said they failed to find alternatives and that the load shedding would continue at least until September.

After September, three coal-based power plants will come into service, he added. **EP**

Low Gas Pressure Hits Textile Mills in Savar, Manikganj

Low gas pressure hit the production of several textile mills in the industrial hubs of Savar, Manikganj and Ashulia, causing loss to the factory owners.

Sources at the Titas Gas Transmission and Distribution Company Limited said gas distribution has fallen as LNG import to the country has dropped.

Authorities of some of the

factories told media that the gas pressure dropped significantly since June 26 night in several areas of Savar and Ashulia.

The gas pressure, which was supposed to be 10 psi (pound per square inch), dropped to 2 psi recently.

Due to lower gas pressure, factories are forced to close all their units, causing huge losses. **EP**

Explore Alternative Power Sources: Speakers

Capacity charges for idle power plants, theft in the name of system loss, wastage and dependency on imported gas and fuel without exploring alternatives are the main causes behind high energy costs, said speakers at a recent dialogue.

Centre for Policy Dialogue (CPD) organized the event titled "Energy and Power Sector in the National Budget for FY2022-23" at a city hotel.

CPD urged the government to allocate more in the budget for the power transmission and distribution, rather than for its generation.

Though the country has achieved the milestone of 100 percent electrification, people are far from getting affordable

and uninterrupted power. The government should focus on exploring alternatives due to the hike in prices of gas and fuel in the international market, said CPD.

CPD Research Director Dr Khondaker Golam Moazzem, during his keynote presentation, said the capacity payment to private sector power plants, including rental and quick rentals, has gone up to Tk 26,505 crore in FY2022 from Tk 5,600 crore in FY2018.

"It would be Tk 31,600 crore in FY2023. This capacity payment obligation has forced the government to move for increasing power tariff," he said. **EP**



Netherlands asks Germany to Keep Nuclear Plants Open

Dutch Climate and Energy Minister Rob Jetten told reporters recently that he has asked German Economy Minister Robert Habeck if Germany's last three nuclear power plants could be kept open.

However, Jetten said that this likely won't be possible. Germany shut down three of its last six nuclear power plants last year, and is currently set to close the remaining three by the end of this year.

The closures will take place even after Germany voluntarily shut down the Nord Stream 2 gas pipeline from Russia and re-

duced Russian energy imports through other connections, and as renewable energy delivers lackluster results for Europe's predominant industrial power.

The Netherlands plans to stop importing Russian gas this year, and with its government hesitant to drill in the gas-rich province of Groningen, officials are looking to their neighbor for help. **EP**



BTMA Worried over Gas Supply Halt in N'ganj



Bangladesh Textile Mills Association (BTMA) recently expressed grave concern over the huge financial losses following the halt in production in textile mills due to the disruption to gas supply in Narayanganj.

Production in hundreds of Narayanganj-based factories, including 40 export-oriented spinning mills, knit and woven fabric manufacturing and processing mills, has remained halted for the last seven days because of suspension of gas supply, it said in a statement.

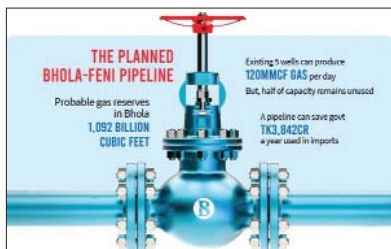
Gas supply has been suspended since June 17 as a gas pipeline got damaged because of pilling work in Adamjee Export Processing Zone.

As a result, factories could not supply required yarn and fabric to readymade garment exporters, said the trade body.

"Export-oriented textile mills have already incurred financial losses worth Tk 25 billion," it claimed. The losses would increase further as millers are forced to make air-shipments to meet lead time, the BTMA feared.

It also feared of losing work orders, saying that it is uncertain when the repair work would be complete. **EP**

Plan to Supply Bhola's Gas to National Grid



The government is planning to supply gas from Bhola to national grid using the advantage of Padma Bridge, said State Minister for Power and Energy Nasrul Hamid.

Now, the Shahbazpur gas field, known as Bhola gas field, produces 63.5mmcf of natural gas daily. The gas is used by public and private power plants due to the absence of a national grid connection with Bhola.

The Padma Bridge has created new opportunities to supply the gas into national grid as the government has a plan to explore new wells at Bhola North and South.

Nasrul Hamid said any organization in energy sector would be able to go ahead with it if the company could take the project timely.

"We are facing different problems and incurring losses due to delay in taking projects," he said.

He was addressing at the Annual Performance Agreement (APA) between the energy and mineral resources division (EMRD) and its agencies and organizations at the Secretariat in Dhaka recently. **EP**

Petrobangla to Scrap Compensation Clause in Future Gas Pacts



After failing to enhance local gas production, state-owned Petrobangla has now initiated a move to modify the current structure of the gas supply agreement (GSA) with future power plants in Bangladesh.

A draft of the revised GSA was recently sent to the Bangladesh Power Development Board (BPDB) seeking its opinion on the proposed move.

And on their part, a top BPDB official said, the file has been forwarded to the Power Division with notings.

"We'll soon hold a meeting with all power companies -- public and private -- to discuss in detail the merits and demerits of the revised GSA, before taking a final call on the proposal," said a senior official of the Power Division, who didn't wish to be named.

He, however, said that the Power Cell, a technical wing of the Power Division, had been asked to analyse the proposal and prepare a detailed report, which would help the Power Division to take a "right decision" on the file. **EP**

He, however, said that the Power Cell, a technical wing of the Power Division, had been asked to analyse the proposal and prepare a detailed report, which would help the Power Division to take a "right decision" on the file. **EP**

Food Supplies to RNPP Come under Quality Check

The government is going to bring all kinds of food and drink supplied from the outside to the Rooppur Nuclear Power Plant (RNPP) under its close quality check, officials say.



To this effect, it is considering setting up offices of the Department of Narcotics, and the Bangladesh Standards and Testing Institution at the RNPP project.

The state offices will examine the standard of all food and beverage supplies to the RNPP.

The prime minister's office

has suggested the ministry concerned to work on the issue so that no adulterated food and drinks enter the project area without checks.

Commerce and industries ministries, and public security division are working closely to execute the order, says a high official with good knowledge of the issue. **EP**

Sylhet Gas Well Lies Idle as Govt Buys Costly LNG



liquefied natural gas (LNG) from the spot market.

Around 10 million cubic feet per day (mmcf) could be produced from the well but the government has to spend Tk 3 crore daily and Tk 90 crore monthly to buy the amount from the spot market.

However, the field operator – Sylhet Gas Fields Limited – has stayed away from reducing the government expenditure amid a period of crisis.

Instead, the company has tended toward an increase in government expenditure as it has opted for a new gas pipeline despite the fact that a pipeline already exists. **EP**

The Rashidpur Gas Field authorities in Sylhet are going ahead with setting a 17km new supply line for its well no 9, while Petrobangla and energy division officials think only a 3km line would be enough to supply gas from the well.

The state-run company's alleged craving for the new project has led to no production from the well for years, causing the government to spend an extra amount on purchase of

Energy Division Meets Stakeholders as Govt Mulls Increasing Fuel Oil Price Yet Again

The Energy and Mineral Resource Division recently sat with owners of buses, trucks and filling stations and other stakeholders as the government is mulling to increase fuel oil price yet again.

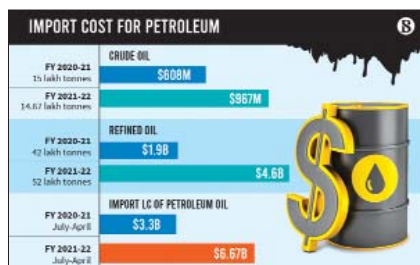
State Minister for power, energy and mineral resources Nasrul Hamid and officials of the division, Petrobangla and the Bangladesh Petroleum Corporation (BPC) took part in the discussion at the Bidyut Bhaban in the capital, several participants said.

The stakeholders said they were in favor of keeping the oil price unchanged amid the ongoing economic realities and the critical time of essential commodity price hikes.

Earlier in November last year, the government adjusted the price of diesel and kerosene, with a 23.08% increase to Tk80 per liter.

In the meeting, the Energy and Mineral Resources Division gave a presentation on the global energy situation, the BPC's daily accounts, and the subsidies on fuel oil. **EP**

BPC Looks for \$2b as Fuel Stock Depletes Fast



The import costs of the BPC doubled year-on-year in FY22 – when the import volume was even comparatively lower amid rising oil prices in the global market.

The high import costs aggravated the dollar crisis in the local market, discouraging state-owned banks to open letters of credit (LCs) against petroleum imports.

The BPC is still supplying oil to power producers as per their demand, but it is now in fear of running out of its stock soon if the delay in opening LC prolongs. **EP**

The Bangladesh Petroleum Corporation (BPC) has sought around \$2 billion in foreign currency loan from the International Islamic Trade Finance Corporation (ITFC) amid a prolonged dollar crisis that is delaying its petroleum oil import, eventually fueling the energy crisis in the country.

The requested loan amount is more than double the \$850 million taken last fiscal year, according to the BPC.

China to Boost Bangladesh's Energy Security

A multi-functional modular seabed trencher developed by a Chinese firm has recently completed 100 kilometers of pipeline construction in Bangladesh's first marine pipeline project under Belt and Road Initiative, setting two world records in directional drilling and deep trenching.

Bangladesh initiated "Single-point Mooring with Double Pipelines"- project under Flagship Belt and Road Initiative during the visit of Chinese President Xi Jinping to Bangladesh in 2016 as part of development cooperation.

It was one of the top priority projects of the Energy Division as the project will substantially save fuel transportation cost along with time.



A "Single-point Mooring with Double Pipelines"- is a loading buoy anchored offshore, that serves as a mooring point and interconnect for tankers loading or offloading gas or liquid products.

The project was undertaken by the Bangladesh Petroleum Corporation (BPC) to transport imported raw petroleum to state-owned Eastern Refinery Limited (ERL) at Moheshkhali, Cox's Bazar, Chattogram. **EP**



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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।





Greenpage

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Apparel Exporters To Reduce 30% GHG Emissions By 2030



will create six million jobs by the targeted year, ensuring 100% institutionalization of skill development, good health and wellbeing employment.

They also set a \$100-billion apparel shipment target by 2030, which is more

The readymade garment (RMG) manufacturers and exporters of the country set a target to reduce 30% GHG emissions by 2030.

They will use at least 50% of sustainable materials mix and will reduce 50% of blue water footprint by this time. The sector will be able to reduce energy consumption by 30% and will use at least 20% of renewable energy by 2030.

Apparel manufacturers will invest \$1 billion in sustainable communities and

than double the country fetched in the just-concluded financial year. Bangladesh fetched \$42.62 billion from RMG exports in the last fiscal year with a YoY growth of 37.45%

Bangladesh Garment Manufacturers and Exporters Association (BGMEA) organized a program to unveil its new vision of sustainability on 05 July in the capital where they announced their different targets to attain sustainability in terms of the planet, people and profit. **EP**

ADB-Funded Solar Pump Project Set to Overrun Cost, Time

The Asian Development Bank-funded solar pump project is set to overrun cost and time as its overall progress accounts for 30 per cent only until March starting from July 2018 due to lack of capacity of the implementing agency.

The main component of the project – installation of 2,000 solar pumps at a cost of Tk 307 crore – saw only 3.75 per cent progress so far.

The Solar Pump Photovoltaic Agriculture Irrigation Project worth Tk 407.20 crore



is scheduled to be completed by the Bangladesh Rural Electrification Board by December 2022.

A report released on June 30 by the Implementation, Monitoring and Evaluation Division termed the project one of the slowest ones getting implemented.

The division noted that three more years till December 2025 would be needed to finish the project work.

The monitoring and evaluation division also noted that the project cost was set to rise due to price hikes of imported materials and labor costs.

The ADB is providing Tk 324.16 crore as loan for the project that aims at adding 19.3-megawatt clean energy to the national grid and reducing emission of 13,624 tonnes of carbon dioxide by replacing many diesel-fired pumps. **EP**

BRAC Bank Takes Energy-Saving Initiative



In a move to save electricity, BRAC Bank has decided to switch off the signage lights of its branches and offices across the country after 0800pm, says a press release.

The bank has also implemented the government's call to set the air

conditioner thermostats at 25 degrees Celsius across its property and establishments.

The bank will also encourage its customers to use a range of digital channels, saving electricity.

The frugality initiatives came following the government's call for power rationing to minimize the power outage during the summer when demand for power runs to its peak.

BRAC Bank is committed to sustainable banking through its operations as a values-based organization. **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 Strive 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

IDCOL Earns Tk 3.98b Net Profit in FY21



Infrastucture Development Company Limited (IDCOL) has earned Tk 3.98 billion (Tk 397.67 crore) profit in fiscal year 2021.

The company also declared dividends for a total amount of Tk 100 crore from the profit made by the company during FY 2021, said a press release.

The announcement came at its twenty-fifth annual general meeting

(AGM) held in the capital recently.

Fatima Yasmin, chairman of IDCOL and Secretary of the Economic Relations Division, presided over the meeting.

During the FY 2021 company's profit before tax and provision was Tk 397.67 crore. The

AGM declared the dividends for a total amount of Tk 100 crore from the profit made by the company during FY 2021.

The dividends are as follows: An amount of Tk 50 crore to be paid to the government as cash and an amount of Tk 50 crore be used for increasing the company's paid-up capital to Tk 788 crore from the existing Tk 738 crore by way of issuing bonus shares.

EP

Wärtsilä Provides 100 MWh Energy Storage System



Wartsila, a technology company, will work with SSE, a low-carbon energy company, to build a 50 MW/100 MWh energy storage facility in Salisbury (Wiltshire). SSE's new battery and solar division will connect the battery directly to the transmission network.

This will allow for reliable, clean energy and balance the intermittent nature of renewables. Wartsila received the order in April 2022. The system is expected to be operational in September 2023.

This partnership is a significant step on

the UK's journey to net zero. It is not only the first grid-scale battery installation by SSE. However, it will allow the UK to increase energy storage in order to reach its ambitious renewable energy goals.

The UK's energy storage system will provide reliable services, such as wholesale market trading to support its national grid. This is crucial in order to balance renewable energy generation throughout the day.

The UK has seen its energy storage capacity double in the last year. This shows the importance of energy flexibility, as the UK increases its renewable energy generation.

Wartsila supports SSE in its ambitions for energy storage systems and thus enables more British energy consumers access to secure renewable energy. This will reduce costs and lower carbon emissions.

EP



Jordan Aims to Have 50% RE by 2030

Jordan's Energy Minister said that the country has plans to increase its renewable energy sources by 50% of its total energy mix by 2030.

Saleh Al-Kharabsheh stated that the Arab Kingdom will soon enforce new laws governing solar- and wind-energy projects. This is part of a strategy for encouraging investment in this sector



and increasing reliance on renewable energy.

According to Petra, the law will increase renewable energy projects that have a minimum of one megawatt (MW) and that sales to local markets must not exceed 50%.

"We are currently working to enforce this law which was issued by the cabinet...we aim to expand the use of renewable energy in Jordan and increase its share of the total energy mix from around 26% at present to nearly 50% in 2030," he said.

Officials stated in 2021 that plans are being made to increase renewable energy production by nearly 3200 MW by 2030. This is an increase of approximately 40% over current output.

According to the Energy Ministry, Jordan produces approximately 1,645 MW of energy from solar power and 625 from wind farms.

EP

World Bank Provides \$165m to Support RE in India



The World Bank Board of Executive Directors approved \$165 million in additional financing to support India's residential sector to adopt rooftop solar systems and make solar energy more affordable.

These solar photovoltaic (PV) installations will provide clean, renewable energy, and reduce greenhouse gas emissions by displacing generation based on fossil fuels. The project is projected to reduce greenhouse gas (GHG) emissions by 13.9 million tons.

"India's power sector is a key

contributor to air pollution and carbon emissions and represents about half of the country's total energy-related CO₂ emissions. It is imperative to decarbonize the power sector by significantly increasing the use of renewable energy," said Hideki Mori, the World Bank's Acting Country Director for India.

"This additional financing will increase India's installed capacity of grid-connected rooftop solar and help India towards its goal of sourcing 50 percent of its energy needs from renewable sources by 2030."

India currently ranks fifth globally in terms of annual solar power generation. However, significant land area is required to set up renewable energy plants, particularly the large-scale ground-mounted solar power projects. The government therefore is looking to increase the country's rooftop solar capacity.

EP

HPCL Tenders Consultancy for 100-150MW Hybrid Wind-Solar Project with BESS



A feasibility assessment for the construction of a 100-150 MW wind-solar hybrid project with a battery energy storage system (BESS) on undeveloped land at the Anantpuram Solar Park in Andhra Pradesh has been requested by Hindustan Petroleum Corporation (HPCL).

For this tender, only "Class-I" and "Class-II local suppliers" will be permitted to submit proposals. However, "Class-I local suppliers" will be given preference.

The proposals must be submitted by July 13, 2022, which will be opened on the same day.

The earnest money deposit required to submit by bidders is Rs 200,000. The winning bidder additionally has to submit a composite performance bank guarantee equal to 3% of the project's cost.

For the three years ending March 31, 2022, the participating bidder shall have shown an average yearly financial turnover of at least Rs 1.8 million.

The bidders must have successfully completed comparable projects in India with a minimum capacity of 50 MW during the preceding 7 years, which must have ended on the last day of the month before the applications' invitation date.

EP

Greenpage

Clean Energy Spending Rises: IEA

Investment in clean energy will hit a record this year but fall short of what is needed to tackle the climate crisis, with coal spending rising, the International Energy Agency said recently.

Global energy investment will rise by eight percent to \$2.4 trillion in 2022, mainly thanks to renewables, although soaring inflation and



Russia's invasion of Ukraine are weighing on costs, the IEA said in an annual report.

Investment in all sectors will increase but the fastest growth will come from electricity, mainly in renewables and grids, and energy efficiency.

Clean energy investment is "finally" starting to pick up and is expected to reach \$1.4 trillion this year, accounting for almost three-quarters of the growth in overall spending in energy, the IEA said.

Since 2020, investment in clean energy has grown at an annual rate of 12 percent, "well short of what is required to hit international climate goals, but nonetheless an important step in the right direction," according to the report.

EP

BD Produces 192m kg Plastic Sachet Waste Annually: Report



According to the study, the country produces in total 1.06 million tonnes of single-use plastic waste annually.

The study report was prepared based on a survey conducted from

June 2021 to May 2022 in Dhaka, Rangpur and Chittagong divisions. 2,375 consumers participated in the survey.

According to the study, sachets from food items make up 40 per cent of total plastic sachets generate in the country, followed by cosmetic products (24 per cent), medicine (8 per cent), beverages, house cleaning products, cooking ingredients, and others. **EP**

Bangladesh annually produces 1,92,104 tonnes of plastic sachet waste, popularly known as mini packs, a recent study has shown.

Environment and Social Development Organization (ESDO) disclosed the information in a study report titled "Plastic sachet: Small packet with huge environmental destruction" at its headquarters in the capital recently.

EU Plans Hydrogen Deal with Namibia



transportation, high costs and a lack of infrastructure have limited consumption, and the fuel covers just 2 percent of the bloc's energy needs.

The European Union is planning a deal with Namibia to support the country's nascent green hydrogen sector and boost its own imports of the fuel, EU and Namibian officials said, as the bloc works to reduce its dependence on Russian energy.

Hydrogen has long been touted as a less emissions-heavy alternative to fossil fuels, but while it has seen some uptake in the EU, chiefly in heavy industry and

Most EU consumption is of so-called "grey" or "blue" hydrogen produced using gas, which drives up costs and related emissions. That has made easier access to green hydrogen, made using renewable energy, a priority.

The EU's energy strategy in May set a goal of importing at least 10 tonnes of green hydrogen by 2030, with another 10 million tonnes to be produced within the bloc. **EP**

G7 Leaders Highlight IEA's Role in Energy Security



IEA Executive Director Fatih Birol took part in the G7 Summit in Elmau, Germany, where he briefed world leaders on the IEA's recommendations for responding to the global energy crisis.

At the invitation of Chancellor Olaf Scholz of Germany, the current holder of the G7 Presidency, Dr Birol addressed G7 leaders, as well as those of five partner countries invited to the Summit – Argentina, India, Indonesia, Senegal and South Africa – on major energy and climate issues.

Speaking in a session recently under the theme "Investing in a better future: Climate, Energy, Health", Dr Birol underscored that in addition to making the most of existing energy supply, the best answer to the current energy crisis is a huge and rapid scaling up of investment in

energy efficiency, renewables and other clean energy technologies.

"The world does not need to choose between solving the energy security crisis and the climate crisis – we have the technologies and the policies to solve both at once," Dr Birol said during the discussions with the G7 and partner country leaders alongside those of the European Union and several international organizations.

The G7 leaders highlighted the IEA's key role in safeguarding energy security in their communiqué from the Summit. **EP**

Tata Motors Aims to Sell 50,000 EVs This FY



Tata Motors aims to sell about 50,000 electric vehicles (EVs) in the fiscal year to March 31, and double that in the 2023/24 period, Chairman N Chandrasekaran told a shareholders' meeting recently.

In 2021/22, Tata Motors sold 19,105 EVs, a growth of 353 per cent from the previous fiscal year.

Chandrasekaran also said that the company's performance is expected to improve in this fiscal year as the overall supply situation, including that of semiconductors, is gradually

improving and commodity prices are stabilizing.

"We continue to work closely with our customers and ecosystem partners to mitigate risks and manage uncertainties. Accordingly, we expect performance to progressively improve through the year with the second half of FY23 being notably better than the first half," he said. **EP**

World Needs More Diverse Solar Panel Supply Chains



However, this has also led to imbalances in solar PV supply chains, according to the IEA Special Report on Solar PV Global Supply Chains, the first study of its kind by the Agency.

Ensuring a secure transition to net zero emissions will require increased efforts to expand and diversify global production of solar panels whose global supply chains are currently heavily concentrated in China, the IEA said in a new special report released recently.

Chinese industrial and innovation policies focused on expanding solar panel production and markets have helped solar PV become the most affordable electricity generation technology in many parts of the world.

Global manufacturing capacity for solar panels has increasingly moved out of Europe, Japan and the United States over the last decade and into China, which has taken the lead on investment and innovation.

China's share in all the key manufacturing stages of solar panels exceeds 80% today, according to the report, and for key elements including polysilicon and wafers, this is set to rise to more than 95% in the coming years, based on current manufacturing capacity under construction.

EP

Climate Risks and Energy Costs Concerning Europe Firms

Being able to do more with less is essential for the battery industry as pressure grows on the supply of key minerals" said Echion Technologies Ltd CEO, Jean de la Verpillière, during a panel discussion on Assembling Anodes hosted at Benchmark Gigafactories USA 2022, held in Washington on 23 – 24 June.

Electric vehicles are currently manufactured with large and heavy battery packs, which are designed to provide power for a long time on a single slow charge. De La Verpillière countered: "If you can fast charge a battery, say under 6 min, then you can

charge more often and reduce the need for the large battery pack. This will make battery cell technology more cost effective, reduce carbon emissions and decrease the pressure on the battery materials supply chain."

The Department of Energy (DoE), which aims to ensure the America's prosperity by addressing its energy challenges through innovative science and technology solutions, has recently announced its new program to fund the development of electric vehicles domestically, as the country races to achieve its electrification goals.

EP

Maruti Suzuki to Phase Out Petrol Cars

Automaker Maruti Suzuki India Ltd will phase out vehicles that run completely on petrol in seven to 10 years, the Economic Times newspaper reported recently, citing a senior executive.

The move comes as Maruti, India's biggest car manufacturer, looks to update its product offerings in line with green targets set by the Indian government, the report said.



"In the next decade, we will convert all vehicles. There will be no pure petrol vehicles. They will either be electrified, or driven by CNG or bio-fuels," CV Raman, Maruti's chief technology officer said.

EP

Time Running Out for UN Biodiversity Draft

Delegates at UN biodiversity talks in Nairobi were told recently that time was running out to draw up a draft text for a much-delayed global pact to protect nature from the damage wrought by human activity.

Representatives from almost 200 countries in the UN's Convention of Biological Diversity (CBD) have been meeting since Tuesday for a final session before the COP15 summit in Montreal in December.

They are tasked with hammering out details of a draft text outlining a global framework to "live in harmony with nature" by 2050, with key targets to be met by 2030.

International efforts to protect the natural world -- including the air we breathe, the food we eat and the water we drink -- have been hampered by the Covid-19 pandemic,

while the destruction continues at a frantic pace.

Despite some progress in Nairobi, "it is clear that more needs to be done, we have only two days left", Zhou Guomei, who represents COP15 chair China, told the delegates.

She called on them to draft a "concise, inspirational and communicable document" to make clear to ministers at COP15 what "critical" issues needed to be resolved to enable them to reach a final agreement.

"At the current pace it will not be possible to have a text for COP15," warned Francis Ogwal of Uganda, one of the two co-chairs of the Kenya negotiations.

EP



Dire State of Ocean's Health Met with Tide of Pledges at UN Ocean Conference

The five-day UN Ocean Conference ended recently with more than 150 countries collectively agreeing to scale up science-based and innovative actions to address the ocean emergency.

This agreement, together with bold commitments from all sectors of society — youth, civil society, businesses and the scientific community — clearly demonstrates the centrality of a safe, healthy and productive ocean to food security, livelihoods and a safe planet.

"The Conference has been an enormous success," stated Under-Secretary-General for Legal Affairs and United

Nations Legal Counsel Miguel de Serpa Soares in his closing remarks.

"It has given us the opportunity to highlight critical issues and generate new ideas and commitments. But it has also shed light on the work that remains, and the need to scale this up and raise ambition for the recovery of our ocean."

More than 6,000 participants, including 24 Heads of State and Government, and over 2,000 representatives of civil society attended the Conference, advocating for urgent and concrete actions to tackle the ocean crisis. **EP**

Norway has Key Opportunities on Clean Energy Technologies



manner. Norway is a significant and reliable international supplier, exporting close to 90% of its energy production.

"I commend Norway's efforts to boost its near-term oil and gas production in response to

Russia's invasion of Ukraine, helping to stabilize global supplies, especially to its European neighbors," said IEA Executive Director Fatih Birol.

"At the same time, Norway is leading efforts to reduce greenhouse gas emissions from oil and gas production, especially through the electrification of offshore platforms."

Norway has updated its already ambitious climate targets with plans to reduce greenhouse gas emissions by 90-95% from 1990 levels by 2050, excluding carbon sinks. **EP**

India Bans Single-Use Plastic to Combat Pollution

India recently imposed a ban on single-use plastics on items ranging from straws to cigarette packets to combat worsening pollution in country whose streets are strewn with waste.



Announcing the ban, the government dismissed the demands of food, beverage and consumer goods companies to hold off the restriction to avoid disruptions.

Plastic waste has become a significant source of pollution in India, the world's second most populous country.

Rapid economic growth has fueled demand for goods that come with single-use plastic products, such as straws and disposable cutlery.

But India, which uses about 14 million tonnes of plastic

annually, lacks an organized system for managing plastic waste, leading to widespread littering.

Streets across towns are littered with used plastic goods that eventually choke drains, rivers and oceans and also kill animals.

India's ban on single-use plastic items includes straws, cutlery, ear buds, packaging films, plastic sticks for balloons, candy and ice-cream, and cigarette packets, among other products, Prime Minister Narendra Modi's government said in a statement. **EP**

High-level Council Charts China's Path to Inclusive, Low-Carbon Economy

Speakers recognized CCI-CED for its 30 years of efforts directed at seeking to "enable the international community to understand China, and support China's engagement in the world".

They acknowledged the Council's role as "the unique mechanism that provides a direct channel to Chinese leadership and decision makers" and noted that since its inception, more than 1,000 Chinese and foreign experts have contributed to over 100 research projects, which have

yielded over 300 policy recommendations.

The China Council for International Cooperation on Environment and Development (CCICED) convened its Annual General Meeting (AGM) on the theme, 'Building an Inclusive, Green and Low-carbon Economy.'

The meeting brought together leading sustainability experts from around the world to formulate recommendations for China's environment and development policies and its contributions to global environmental governance processes. **EP**

UN Calls US Emissions Ruling a 'Setback' in Climate Fight



The United Nations said the recent US Supreme Court ruling that curbs regulators' power to limit greenhouse gas emissions had dealt a blow to the fight against global warming.

"This is a setback in our fight against climate change," said Stephane Dujarric, spokesman for Secretary General Antonio Guterres.

By a majority of 6-3, the US high court said the Environmental Protection Agency did not have the power to set broad caps on emissions from coal-fired power plants.

The decision sets back President Joe Biden's hopes of using the EPA to bring down emissions to meet global climate goals, set in 2015 under the Paris Agreement on climate change.

Dujarric said the world is far off course to meet the goals of that accord.

EP

Global Energy Investment to Reach \$2.4tn



the power sector – mainly in renewables and grids – and from energy efficiency, according to the IEA's World Energy Investment 2022 report.

Global energy investment is set to increase by eight percent in 2022 to reach USD\$2.4 trillion, with the anticipated rise coming mainly in clean energy, according to a new report by the International Energy Agency.

Although encouraging, the growth investment is still far from enough to tackle the multiple dimensions of today's energy crisis and pave the way towards a cleaner and more secure energy future.

The fastest growth in energy investment is coming from

The rise in clean energy spending is not evenly spread, however, with most of it taking place in advanced economies and China. And in some markets, energy security concerns and high prices are prompting higher investment in fossil fuel supplies, most notably on coal.

"We cannot afford to ignore either today's global energy crisis or the climate crisis, but the good news is that we do not need to choose between them – we can tackle both at the same time," said IEA Executive Director Fatih Birol.

EP

G7 Endorses Initiative Financing Climate Projects in Emerging Economies



During its summit in Elmau (Germany), the Group of Seven (G7) endorsed the Emerging Market Climate Action Fund (EMCAF) as an example of a concrete innovative and market-led approach to mobilize private investments for climate relevant infrastructure and to enhance multilateral finance and collaboration.

In addition, Germany announced to increase their investment in the fund.

EMCAF is an innovative blended finance fund initiated jointly by the European Investment Bank (EIB) and Allianz Global Investors (AllianzGI) to finance climate mitigation and adaptation as well as environmental projects in Africa, Asia, Latin America, and the Middle East.

EMCAF aligns with the G7's ambitious agenda to Build Back Better for the World and urgently narrow the infrastructure investment gap in developing countries, that was adopted at the last meeting in Cornwall, England in June 2021.

G7 members are committed to finance high quality and sustainable infrastructure that ensures a strong recovery from the pandemic and rapid progress towards the Sustainable Development Goals as well as international climate and environment commitments.

EP

Sand Battery Can Store Green Power for Months

Finnish researchers have installed the world's first fully working "sand battery" which can store green power for months at a time.

The developers say this could solve the problem of year-round supply, a major issue for green energy.

Using low-grade sand, the device is charged up with heat made from cheap electricity from solar or wind.

The sand stores the heat at around 500C, which can



then warm homes in winter when energy is more expensive.

Finland gets most of its gas from Russia, so the war in Ukraine has drawn the issue of green power into sharp focus.

EP



Farid Hossain

DAYS OF PLENTY ARE GONE GET READY FOR BUMPS AHEAD

Not long ago Bangladesh attained the status of a middle income country. This meant the country's graduation from a least developed country to become a developing country. When the UN approved the graduation Bangladeshis cheered. They cheered when Bangladesh foreign exchange reserve topped \$46 billion even during the hard days of the pandemic. Jubilation was all around when on June 25 Prime Minister Sheikh Hasina officially declared the opening of the iconic Padma Bridge to vehicular traffic. The bridge, considered more than a structure of concrete, cement, iron and steel, has opened the windows of development of the less developed southern region. The opening of the bridge came weeks after Bangladesh earned another milestone in its journey towards prosperity: the 100% electrification of the country. Let there be light in every house of the country. Hasina's dream of achieving this feat has been achieved with a bang.

A grateful Bangladesh cheered Bravo to her. Under her leadership Bangladesh has well been on the highway of development. The world took notice of it. But just when the nation prepares for the next party there come the bad tidings: the declining foreign exchange reserves drop below \$40 billion amid falling value of Bangladesh currency against the greenback, which has recently been going robust; shortage of electricity-generating fuel as Bangladesh halts spot purchase of liquid natural gas or LNG because of abnormally high price; the Russia-Ukraine war further compounding the global energy crisis and the US-led

sanctions on Moscow in punishment for starting the war and in doing so punishing the whole world, especially the pandemic-hit economies of the country like ours.

It is at this stage when Bangladeshis are once again jerked back to a different reality. The soaring prices of the essentials are still going high, the import income of the nation falling far behind the export earnings increasing the current account deficit and

The bell of alarm (if not panic) has been set off by no other than the policy makers. Listen guys, don't take as guaranteed an uninterrupted supply of electricity and gas; don't think the prices of some of the essentials will stay stable even if we try our best; and don't think we have plenty in everything.

causing concern among the policy makers, businesspeople and economists. An unannounced return of load-shedding exposing the ills of the energy sector has been greeted with critical remarks about the government's wrong policies. Bangladeshis, who have been given the idea that they are living amid plenty, are suddenly told that they need to tighten the belt of spending as more hard days are coming. At a time

when the monsoon is thirsting for rains, Bangladeshis are already confronted with rainy days as they are earning far less than their spending on the essentials to survive. The situation has brought back the old urgings from the policy makers: it's time to be austere in everything we buy, use and consume. The time of plain living and high thinking has arrived at our doorsteps. Save more and consume less. Buy less and save more. What you save today, that will be your means of survival for tomorrow. The bell of alarm (if not panic) has been set off by no other than the policy makers. Listen guys, don't take as guaranteed an uninterrupted supply of electricity and gas; don't think the prices of some of the essentials will stay stable even if we try our best; and don't think we have plenty in everything. From high-level emergency meetings that discussed the volatility of the situation came a slew of measures that can be taken to cut down on the consumption of electricity and gas. Limited area-wise shutdown has been suggested; rescheduling the office hours to save electricity is on the table and what is frightening to consumers is that they may again see a hike in the prices of the fuel. The domestic users have to suffer. But more damaging to the economy would be the blow to the country's industries struggling to recover from the pandemic shocks.

After the celebration of Eid-ul-Azha, the festival of sacrificing animals in the name of Allah, Bangladesh is back in business. This time the road to business will be as bumpy as never before in recent times. Let's tighten our belts to make more sacrifices.

EP

**PRIDE IN
BANGLADESHI
INFRASTRUCTURE**



**LARGEST
GALVANIZING PLANT
IN BANGLADESH**



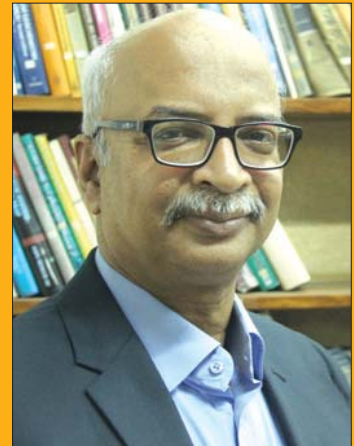
Time to Examine Own Coal Option

The importance of energy independence was never felt more important than under the current situation. Energy independence is a national security issue. Bangladesh's gas resource is dwindling, and the only other indigenous energy resource is coal. In 2012, the honorable Prime Minister declared that indigenous coal would not be developed for the time being. But time has changed. Despite serious energy transition efforts by advanced countries, the role of fossil fuels is not going to go away. Many countries will take much longer for the transition or may not even be able to move away from it unless some new technology evolves. Bangladesh never explored or examined the possibility to develop its own coal through an independent study. The two proposals on which much debate took place were proposed by Asia Energy and Hosaf Consortium. The entire issues of environment, crop losses, and rehabilitation must be studied by a noninvolved third party neutrally and see if these can be minimized below acceptable limits. The political decision must come at the end of a detailed financial, social and economic analysis. Now is the time to put behind all doubts so that we don't regret our decision.

Dr. M Tamim, Dean of Chemical and Material Engineering Faculty of BUET, made the observation in an exclusive interview with Energy & Power Editor **Mollah Amzad Hossain**.

The world economy is now facing an energy crisis. Bangladesh is also in a deep crisis. We are hearing about multi-faceted initiatives. Can Bangladesh manage the impacts?

Please note that the major challenge of Bangladesh is the acquisition and supply of primary fuel. The major impediment is arranging additional funds now required for imported primary fuel. Nothing much is being told about it. If we had a huge foreign currency reserve and steady earnings, we would have no problem. That would increase the price of electricity at the consumers' level from Tk 6.0-6.5/unit to Tk 8.5-9.0/unit. A huge amount of foreign currency is being spent to import nine million tonnes of liquid fuel. Add to that importing of coal and LNG. Though the price of coal has reduced from US\$ 237/tonne to US\$ 150/tonne, the price of LNG at the spot market remains sky high. Bangladesh needed an additional US\$ 1.6 billion every year for just importing 150 MMBTU LNG per



Dr. M Tamim

The huge investment at Matarbari cannot be justified with a lone 1200MW power plant. Bangladesh cannot also build the second unit investing from its own source. Bangladesh has to be extremely careful in utilizing its foreign currency reserves. On the other hand, developing Matarbari as a deep sea port is very important in terms of future LNG and coal imports. The strategy should be to wait, assess and go.

day from the spot market at US\$ 30/MMBTU. This in a way justifies power load management and a regulated loadshedding action plan for minimizing stress on fuel import. Similar actions need to be taken for austerity in liquid fuel use. In the present situation, austerity is the main contingency management action for Bangladesh. Reduced working hours, promoting public transport, controlled use of air conditioners, shutting down of shopping malls after evening and other similar

measures can be taken for the time being, hoping that the energy price will ease out sooner.

Bangabandhu's strategy for managing the impacts of the 1974 oil shock was to explore and exploit own fuel resources. His strategy has led Bangladesh to go for offshore exploration of oil in the Bay of Bengal. His government also successfully acquired major discovered gas fields from Shell BV at a nominal cost. Program was initiated for exploring coal. Do you think that the present global situation will push Bangladesh to exploit its own fuel resources?

Bangabandhu clearly understood and felt the need for energy independence. For the country's own sake, he did not hesitate to bring in foreign investment, technology and expertise. But since 2000, nothing much has been done in gas exploration. Model PSC was updated for offshore exploration in 2008. But till now no bidding round could be done for deep water prospects. We could attract IOCs if we had sufficient data and information. It is being said that the IOCs are not interested in purchasing the data and information we have about offshore petroleum resources. That is why a multi-client survey is not being done. But we could not award the contract to the evaluated lowest bidder on time twice. I have a reasonable doubt whether bidders will respond if we cannot provide the required information. There is no guarantee that the IOCs will respond to invest in onshore frontier areas as well.

We have fallen way behind in coal mining. There have been lots of talks about the scheme of Development of Asia Energy Corporation. We should have

reviewed it professionally. But we have not done that. If the decision of coal mining was taken on time, companies could agree to work relaxing some conditions. But if we take decisions now, we have to provide additional incentives for global reality. But once the honorable Prime Minister declared preserving coal resources for posterity, those who favored mining changed their tone. Actually that posterity could be now. If we cannot take decisions on coal mining now, we will lose ground on the negotiation or lose the opportunity completely.

Government estimates indicate that import dependency (electricity, coal, LNG, LPG, liquid fuel) in 5 years from 2017 to 2021 rose from 22% to 48%. Global situation may continue to increase further. It would cause more bleeding of the Bangladesh economy. How can Bangladesh manage the situation?

The plan of increasing import dependency was done on two factors – our economic growth and future energy price models. No price model before the Ukraine war predicted this high energy cost for so long. Any import dependency is inherently subject to supply and price risk. Unfortunately, we stumbled on that risk very early in our planning. If the current situation prevails, our crisis will further intensify. We are seeing oil prices fall due to demand destruction and the threat of recession in many countries. But Europe is going for LNG to replace Russian gas. That will be going on even if the war ends today. As a result, gas prices will remain relatively high for a while until a new equilibrium is reached in a few years. That puts us in a very precarious position. Our entire economic backbone is gas based. Apart from a land-based LNG with

assured oil-indexed long-term contract (may be very difficult for now), we must start extensive exploration and enhancement of gas production from our own fields. Within the next 3 years, about 7,000-8,000MW imported coal-based and nuclear power will be added to the national grid. We must make our evacuation and transmission facilities ready on time. This would reduce pressure on gas and oil for power production. We must reevaluate our demand forecast and the projects on hand to ensure that we don't end up with expensive over capacity.

I have been warning since PSMP 2010 that if we fail to utilize our coal resources and expedite exploration of petroleum resources by 2030, our import dependency may reach 90%. But policymakers banked on high economic growth and steady energy price. If required all-out initiatives for exploiting local resources are not taken right now, the vulnerability will increase further although we will not be able to avoid import altogether.

You are aware that Petrobangla has started working on a plan for drilling some 46 exploration, development and workover wells by 2025. It is being said that this will add 618 MMCFD gas to the grid. How optimistic are you about it?

I am extremely frustrated that they came up with such an ambitious plan in a hurry which they should have taken at least seven years back to maintain the peak production of 2016-17 maintaining a plateau. They have been assuring gas supply to several power plants on the imaginary future LNG supply which they will fail now. I am not at all optimistic about the Petrobangla program. BAPEX earlier completely failed in its 105 wells drilling program. Some

success can be achieved now that they are under the lens. They are planning 46 wells operation (drilling and workover) in three years. If foreign drilling companies are not engaged in some areas, that would not be possible. Chevron gave a proposal to carry out some exploration outside their assigned blocks. They offered a gas price of US\$ 5 per unit. The government should review and accept it.

PSC document has been further updated for offshore exploration. This is under the approval process of the government. Do you think IOCs would respond positively now?

I am not aware of what has been done actually with Model PSC. I am not sure our bidding round will get a good response though petroleum price is high in the international market. We need seismic data for deep offshore. We should definitely try and under PSC the exploration will be financially risk-free. Even if we get a response, the entire process will take a long time to bear fruit. In the meantime, Bangladesh must give priority to purchasing LNG under long-term contracts. The crude-linked LNG price now is not over US\$17/MMBTU and will go down with the oil price.

We cannot benefit from LNG even if the price gets back to the normal level as we do not have the required infrastructure. Negotiation on 3rd FSRU is stalled now. Land Based Terminal (LBT) is said to come into operation in 2027. But no sign of physical activities is visible yet. What will you say?

Bangladesh must implement FSRUs and LBT on time. But I have reasonable doubts about the timely implementation. Most European countries are aggressively going for LNG facilities development now as Russian gas supply to EU countries

has become uncertain. Bangladesh may not be an attractive destination for it and may suffer issues with procurement and investment. It is going to be a major challenge with our history of slow project implementation.

Matarbari Coal Hub is the second largest mega project. The amended project cost is over Tk 51,000 crore. A coal port, port-connecting canal and a 1200MW imported coal-based power plant are being set up there. All preparations are there for a second 1200MW coal power plant there. But now the Japanese government has informed us not to finance the second one. What can Bangladesh do now?

The huge investment at Matarbari cannot be justified with a lone 1200MW power plant. Bangladesh cannot also build the second unit investing from its own source. Given the present global situation, Bangladesh has to be extremely careful in utilizing its foreign currency reserves. On the other hand, developing Matarbari as a deep sea port is very important in terms of future LNG and coal imports. The strategy should be to wait, assess and go.

Some observers believe that a lack of coordination between BPDB and Petrobangla and inefficiencies also contributed to the present dismal state of power and energy. What do you think about it?

Definitely. Petrobangla must not commit gas supply to any new gas-based power plants without a confirmed gas supply source over the design life of the plant. On the other hand, before cross-checking Petrobangla's ability for gas supply, BPDB must not also go for any gas-based power plant project. All fuel inefficient gas-based power plants

must be gradually retired. How could Petrobangla agree to supply gas to some medium-capacity gas-based power plants? Reliance was supposed to import their own gas as a condition of the permission for setting up their plant at Meghnaghat. Why did Petrobangla take that responsibility?

The implementation of the plants will be slowed down now. The implementation of the projects that have not started yet should be stalled.

What strategy should be taken in the energy sector for achieving the 2041 national vision?

Bangladesh must adopt an appropriate strategy to optimize the utilization of its own fuel resources. A 10-year comprehensive plan must be taken for exploring and exploiting primary fuel. A 5-year implementation strategy must be devised before launching the program. The power sector plan should be a 5-10 year moving plan reviewed and updated every year.

How much the Renewable Energy (RE), Energy Efficiency (EE) and Energy Conservation would contribute to overcoming the present crisis?

Solar is the only source so far in RE. There has been no major achievement yet. About 300MW solar power is on the grid now. Another 600 MW is in the pipeline. Hence it is not yet a major alternative. With policy and financial support solar should be promoted for rooftop, irrigation, street light and other areas wherever it can be applied. We have to give the highest priority now to EE and energy conservation. One MW saved is much cheaper than one MW added.

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