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- Database of NRB Energy Experts on Cards
- Equitable Energy Supply to Western Region
- Local Resources Key to Sustainable Development



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There is no option but to import fuel if a nation does not possess own primary energy or cannot economically utilize own resources. But Bangladesh has not gone to that stage yet. I believe, for limiting import dependency, the government should finalize 5-year and 10-year plans for exploration, development and utilization of own coal and petroleum resources till 2030, 2040 and up to 2050...Humayun Rashid Tells EP

Individual's opinion does not necessarily reflect editorial policy of Energy & Power



EDITORIAL

Bangladesh is witnessing a faster economic growth over the past decades and is approaching fast to achieve the middle-income country status by next few years. The country is also implementing a number of mega projects at present. However, experts are skeptical about the sustainability of the development. They feared that over-dependency on the imported inputs – be it materials and expertise or other resources, including natural resources – may emerge as detrimental to sustainability of the development at some point. It is being alleged that the ongoing development projects are using even unskilled people from foreign countries which are abundant locally. The local companies are claiming that the projects are also hiring foreign subcontractors despite having the required competencies to do the jobs by a number of local companies. They also claimed to have been suffering from tax disparities.

In this ongoing development regime, it would be wise to properly assess the local strength of resources and expertise, and fit in where required. It is high time to restrict imported inputs and expertise, if those are available locally. The tax anomalies should also be removed to ensure a level playing field for the local companies and help expedite the economic development of the country.

Cover Photo: India-Bangladesh Friendship Oil Pipeline Project Work by Dipon Group

h i g h l i g h t s

COVER



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The dependence on foreign consultants can be minimized if non-resident experts and specialists are given the opportunities to contribute to the energy, power and other sectors. If proper incentives can be offered under the government policy framework, public and private sector companies and institutions would be capable for engaging NRB experts with attractive remuneration packages...More in Webinar Report



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There are high downside risks of development due to the country's exclusive dependence on foreign sources in many areas. Bangladesh is lagging behind utilizing local resources, expertise and services for its infrastructure development including energy and power. Despite being on the verge of graduating to the mid-income country status, the country has so far failed to chart out plans and strategies for utilizing such resources.



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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.

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Summit to Hold Public Meetings About Proposed Midwest CCS Pipeline



Summit Carbon Solutions, a division of Summit Agricultural Group, plans to hold meetings with landowners in Iowa over the next 2 months regarding its proposed 710-

mile Midwest Carbon Express carbon dioxide pipeline.

The pipeline, part of a planned carbon capture and sequestration (CCS) system, would cross 30 Iowa counties, as well as parts of Nebraska, Minnesota, and South Dakota, gathering CO₂ captured at ethanol plants and other industrial agricultural sources for shipment to sequestration sites in North Dakota.

Summit expects the system to be operational in 2024, capturing and storing more than 12 million tonnes/year (tpy) of carbon dioxide. It has contracted with at least 31 ethanol plants for long-term underground sequestration.

Navigator CO₂ Ventures Ltd. plans to build its own 12-million tpy Midwest pipeline, running 1,200 miles from ethanol plants in Iowa, South Dakota, Nebraska, and Minnesota to a sequestration site in Illinois.

Navigator completed a non-binding open season earlier this year and expects to begin phased startup of its CCS system in late 2024 (OGJ Online, June 7, 2021).

PetroChina Posts Interim Profit of \$8.2b

PetroChina reported an interim profit of 53.04 billion yuan (\$8.18 billion) recently, thanks to rising oil and gas prices and a recovery in Chinese fuel demand from the coronavirus pandemic slump.

The figure compared to a net loss of 29.98 billion yuan in the same period a year earlier. PetroChina's first-half revenue was up 29 per cent at 1.197 trillion yuan, it said in a filing to the Hong Kong Stock Exchange.

Oil and gas output dipped 1.7 per cent on-year to 819.6 million barrels of oil equivalent, with crude oil production down 6.8 per cent but gas output up 5.1 per cent.

Refinery throughput rose 6.7 per cent to about 606 million barrels and sales of gasoline, diesel and kerosene combined were up 4.9 per cent at 80.34 million tonnes.

Its domestic gas sales climbed 17.6 per cent to a record 96.25 billion cubic metres amid robust demand growth from industries and power plants under a consistent government push for less-polluting fuels.

Govt Names Suman Sharma as Next MD of SECI

SECI, a PSU under the Ministry of New & Renewable Energy. She has been appointed to the post at the Joint Secretary level.



The official statement said that the

Appointments Committee of the Cabinet has approved the appointment of the new MD of SECI, a central public sector undertaking under the Ministry of New and Renewable Energy.

Sharma is an Indian Revenue Service (IRS) officer of 1990-batch and currently posted as Additional DGFT in the Directorate General of Foreign Trade under the Department of Commerce.

As MD of SECI, Sharma will be the chief executive of the corporation. She will be accountable to its board of directors and government and shareholders.

She will also be responsible for the efficient functioning of the corporation, and for achieving its corporate objectives and performance parameters.

Mubadala Petroleum Plans South-East Asia Expansion

Abu Dhabi-based Mubadala Petroleum is planning to expand its operations in South-East Asia as it seeks to tap into growing demand for electricity in the region.



"For the moment, ... most of the demand post-Covid-19 or growth rather will happen in the Asean region. You are talking about double-digit growth in demand for electricity," Mubadala Petroleum's chief operating officer Mazin Al Lamki told the Future Energy Asia conference that was held online recently.

The Association of South-East Asian Nations is a 10-member economic bloc comprising Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Vietnam.

Mubadala Petroleum, a unit of Abu Dhabi's strategic investment firm Mubadala Investment Company, is actively exploring and developing hydrocarbon assets in South-East Asia.

LPG Prices Go Up



The energy regulator recently announced the new price of liquefied petroleum gas (LPG) in line with the international market.

As per the new price, consumers will have to pay Tk 1,033 for a 12 kg LPG from September 1 instead of Tk 993, up by Tk 40.

Last month, the price was raised by Tk 102 for the same quantity of LPG and the prices of other quantities raised at the same ratio.

The Bangladesh Energy Regulatory Commission (BERC) announced the new price of LPG adjusting it with Saudi Contract Price (CP) as the local LPG operators import the bulk petroleum gas from the Middle East.

However, the price of LPG of the state-owned LP Gas Company Ltd will remain the same at Tk 591 for 12.5 kg LPG as it sells products from condensates produced in local gas fields and has no relation with Saudi CP.

City Bank Signs Interest Rate Swap Deal with Bangla Trac



City Bank Limited has signed Interest Rate Swap (IRS) deal of USD 21.43 million with Bangla Trac Power Unit-1 Ltd for the first time recently at City Bank head office in capital, said a press release.

IRS is an OTC derivative contract in which two parties periodically exchange interest payments of different types (Fixed and Floating interest rate), on a specified notional principal, during a set period of time.

Through this deal City Bank steps into the OTC derivative products like Interest Rate Swap in this market.

City Bank is actively participating in the Foreign Exchange market in Bangladesh and has been providing customized solutions to its valued customers, the statement added.

Sheikh Mohammad Maroof, additional managing director of City Bank, and M Jahangir Alam, group CEO, Banglatrac, signed the agreement on behalf of their respective organizations. Senior officials from both organizations were also present in the signing ceremony.

Mahbub Elected Chairman of British Business Group

Md Mahbub ur Rahman, CEO of HSBC Bangladesh, has been elected Chairman of the British Business Group (BBG).



The appointment follows the election of a new BBG Board who will guide the Group for the next three years.

Rahman said he is honored to have been elected Chairman of the BBG.

"I believe it is important that British businesses operating in Bangladesh are well represented in relevant strategic forums in the country. The BBG Board will continue its constructive engagement with stakeholders in Government and the wider business community in the private sector to promote members' interests and be a partner in the progress and development of Bangladesh".

Rahman was appointed as the CEO of HSBC Bangladesh in April 2020.

He joined HSBC in 2002 and was previously Deputy CEO as well as Head of Wholesale Banking in Bangladesh. Prior to this, he led HSBC's Commercial Banking business in Malaysia.

Gas Line 'Explosion' in Mirpur Burns Seven

Seven people, including a child, have been hospitalized for burns after being caught in a gas line 'explosion' at a house in Dhaka's Mirpur.



The incident occurred recently on the ground floor of the four-storied building at Mirpur-11, said a Fire Service Control Room Official.

The victims have been identified as Raushon Ara Begum, 70, Shafiqul Islam, 35, Rina Begum, 50, Nazneen Akhtar, 25, Naoshin, 5, Renu Begum 35, and Sajjad Hossain Sumon, 30. Raushon is the mother of building owner Rafiqul Islam, while Shafiqul and Rina are his siblings. Nazneen and her daughter Naoshin and Renu rented rooms in the building, while Sumon was a passerby.

The victims were rescued by locals and were taken to the Sheikh Hasina National Burn and Plastic Surgery Institute for treatment.

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Beximco LPG, Jamuna Oil Company Sign Deal on Autogas Market



Beximco LPG Unit – 1 Ltd, has entered into an agreement with Jamuna Oil Company Ltd. (a subsidiary of Bangladesh Petroleum Corporation) enabling Beximco LPG to setup

LPG Pumps and commence sales of Autogas through the registered filling stations of Jamuna Oil Ltd.

The signing ceremony took place at the Chattogram office of Jamuna Oil Company Ltd at Agrabad, said a press release.

As per the agreement, Jamuna Oil and Bangladesh Petroleum Corporation will receive a royalty of Taka 0.50 per liter of LPG that is sold by Beximco LPG through their established AutoLPG pumps.

Currently, Jamuna Oil has a network of 750 filling stations while Beximco LPG was granted 500 franchise licenses for AutoLPG stations and 25 licenses for Conversion Workshops by the Ministry of Energy & Mineral Resources earlier in 2016.

The agreement was signed by Md Gias Uddin Ansary (Managing Director, Jamuna Oil) and Mrinal Roy (Chief Executive Officer, Beximco LPG) on behalf of their respective organisations with the presence high officials of both sides.

Titas Setting Up Gas Lines from BSCIC Industrial City to Keraniganj

Titas Gas Transmission and Distribution Company Ltd (TGTDC) is implementing a project to install gas pipelines from the Bangladesh Small and Cottage Industries Corporation (BSCIC) Industrial City to Keraniganj taking future industrial interests into account.



In a press release, Titas stated that at least 1,000 industries will be established in the BSCIC Industrial City in future, which will extensively increase the demand for natural gas there.

Besides, different washing plants, dyeing factories, and many other industrial units built in Zinjira of Keraniganj will be shifted to the BSCIC Industrial City to build an environment-friendly planned city.

Titas will need Tk 50 crore to implement the project, which will provide uninterrupted gas supply in Zinjira and other industrial areas of Keraniganj, the BSCIC Industrial Park, and other sectors for the next 20 years.

ACC Quizzes 11 Customs, Titas Officials Over Corruption



The Anti-Corruption Commission (ACC) recently interrogated 11 people, including eight officials of Chattogram customs and three officials of Titas Gas Distribution Company Ltd over their alleged involvement in corruption and accumulation of illegal wealth.

The eight officials of Chattogram customs are revenue officer Md Saiful Islam, and assistant revenue officers Saifun Nahar Jony, Mirza Sayed Hasan Garman, Md Mahmudul Hasan Munshi, Md Mahbubur Rahman, Md Omar Farique, Md Saiful Islam and Mahmuda Akter Lipi.

According to the ACC, the customs officials are allegedly involved with misuse of power, irregularities and misappropriation of money.

The officials were helping evasion of Tk 850 crore tax by using former two officials' identities with the aid of seven Customs and Forwarding agents.

The three other officials quizzed by the ACC are Md Ayub Khan Chowdhury, Director (planning) of Petrobangla, Hasan Ahmed, deputy manager of Titas Sonargaon branch in Narayanganj, and Md Ahammad Ullah, deputy manager of ECC department of Titas.

The anti-graft agency has been reviewing the wealth statements submitted by Hasan Ahmed and Md Ahammad Ullah.

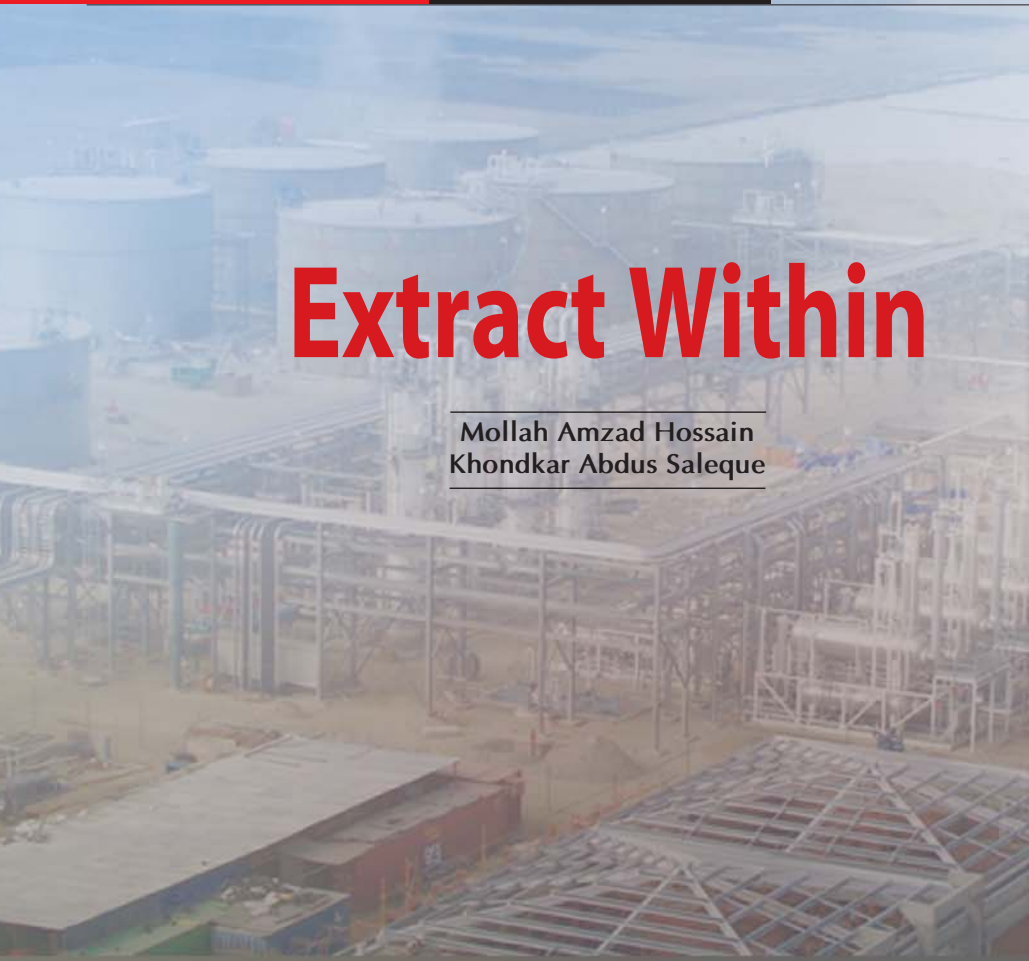
The ACC is also investigating wealth information of Ayub Khan Chowdhury.

Earlier, on August 23, the ACC summoned 20 officials and employees of Titas Gas to appear at its Segunbagicha headquarters from September 5 to 8 for interrogating over the allegations of amassing illegal wealth.

A total of 30 officials and employees of Titas were on the scanner of the ACC.

Extract Within

Mollah Amzad Hossain
Khondkar Abdus Saleque



Bangladesh is observing the birth centenary of Bangabandhu Sheikh Mujibur Rahman alongside the celebration of the golden jubilee of its independence. The country is being widely acclaimed in the world for its exceptional model of development. It is often acclaimed as the Asian Tiger for its higher average rate of economic development over the past decade. Bangladesh stays on its development path despite the severe impact of COVID-19 pandemic across the world. However, there are



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high downside risks due to the country's exclusive dependence on foreign sources in many areas. For lack of proper perspective planning and policies, and proper structuring of tax and revenue, Bangladesh is lagging behind utilizing local resources, expertise and services for its infrastructure development including energy and power infrastructure despite having opportunities. In contrast, the developed countries have all very effectively utilized their own institutions, human capital, resources and services in planned and organized manners. Despite being on the verge of graduating to the mid-income country status, Bangladesh has so far failed to chart out plans and strategies for utilizing such resources. Policymakers believe that they are on the right track as the local institutions so far could not prove their competence and capability. Local companies do not also have the competence for doing all the works of infrastructure development.

Since October 2020, the EP has organized some webinars regarding the issues, gathering observations, opinions and suggestions put forward by the experts, researchers, academics and politicians from both public and private sectors. What policy and strategy Bangladesh is pursuing? Why cannot increase the contributions of local institutions and materials? At the outset, the Father of the Nation while launching the development mission of Bangladesh had envisioned transiting through agro-based economy to industrial revolution by strengthening own institutions, utilizing own resources and enhancing capacity of own manpower. The core of his philosophy was establishing rights of the people on the domestic natural resources, creating core competence of local human capital and institutions and doing away with middle-organizations for the sake of national interest. The greatest success can be seen when, under his leadership, Bangladesh had launched offshore exploration in the

Bay of Bengal as the first country in the region. The companies working there did not have any local agents. He stressed upon that each foreign company must have a local partner – the objective was to develop local expertise through technology transfer. Availing that window, a local company of Islam Group participated in the bidding round partnering with a foreign company. But in the final assessment, Petrobangla could not conclude a contract with that joint venture. This initiative evidenced Bangabandhu's desire for facilitating local companies to expose their competence in the international market.

China and South Korea have grown big through effectively utilizing their own manpower, companies and resources. They ventured to develop the expertise of their own manpower through creating opportunities for local companies by reforming policies and adopting appropriate development strategies. They provided priorities to their own companies, manpower and resources. Now the EPC companies of China and Korea are working across the world in mega infrastructure development projects. China again is providing special financial incentives for involving their own companies in development works while working abroad. India is now following the footprints of the two countries. Indian government and private sector companies are now working aggressively as EPC contractors in Bangladesh and other countries. On condition of financing, they are now trying to use their local materials and manpower. But through a strategy, they are using the contractors of their own country as subcontractors despite having competent subcontractors in the host countries. The countries are bringing in unskilled laborers from their own countries for the projects here through misusing the visa provisions. Local unskilled laborers are being greatly deprived of the opportunities too.

Projects Being Executed from Own Money

Many countries, including India and Nepal, utilize only the local companies for projects being implemented with their own financing. But Bangladesh is not following that. PGCB and REB are giving priorities to local companies but other companies of Bangladesh's power and energy sector are not giving any special incentives for local companies in the bids for infrastructure development at all. Local construction contractors and EPC contractors for some time now are demanding for stopping the provisions of participation of foreign companies under the Bangladesh government-funded projects. Engr. Golem Mohammad Alomgir, Chairman Max Group, reiterated that their legitimate demand must be accepted now. Engr. Rezwanul Kabir, Director of Energypac, questioned that if other countries can practice it, why Bangladesh cannot? At the same time, if the quality of local materials matches the specifications of imported materials, imports must be stopped. Abdul Mannan, Minister of Planning, also opined that these should be done.

Engr. Rabiul Alam, Chairman of Energypac Power Generation, while talking to the EP observed that Bangladesh policies do not match at all with the neighboring countries. Different organizations follow different policies. Bangladesh has made its own offshore companies. Uniform policies are essential. Energypac is working in Nepal where a local partner is mandatory. Why Bangladesh cannot do that. For protecting the local companies and facilitating its growth, Bangladesh must also make mandatory provision of engaging local companies as partners in every bid. Unless such policies can be formulated, value additions using local labor cannot be made.

Making Local Partnership Mandatory

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are exclusively under the domain of foreign contractors. Unless there is any covenant in the loan, mandatory provisions for foreign contractors in engaging local partners must be made. If there is no legal barrier, local bidders must be given domestic preference. For any contractor working in any organization, mandatory provision must be created for engaging local subcontractors. But we found in Rampal and Payra projects, the foreign contractors engaged subcontractors from India and China. Even by misusing the provisions of the A3 visa, they brought in unskilled laborers from their countries and deprived the local laborers. There are allegations that tenders for engaging subcontractors for the Rampal power project were invited from the Kolkata office of the EPC contractor. Some contractors were deliberately included in such a way that Bangladeshi companies could not participate. Like Bangladeshi subcontractors were asked to submit guarantees from Indian banks. Some Bangladeshi companies through qualifying as the lowest bidder using their Indian office were not awarded the works. On flimsy grounds, their offers were not entertained and works were awarded to Indian companies. Barriers were also created in using quality Bangladeshi cements and rods.

Rooppur Nuclear Power Project is a flagship project of Bangladesh. Only Russian companies are working as subcontractors there. Despite having all credentials for working as associate companies, Bangladeshi companies cannot work directly there. They have to work as associates of German and Indian companies.

Local contractors used to have priority treatments in the past in the works of Water Development Board and Roads. But this is being restricted now. Chinese companies are dominating there as well. There are allegations that they are getting work following a hidden strategy. They initially quote very low and



Catalytic reforming unit of SGFL, EPC done by Energypac

Photo: Energypac

get the work. But eventually costs get abnormally higher when the works get completed. This way the project costs are increasing. For these works, Chinese companies are getting favor from some officials at the local authorities, donor agencies, World Bank and Asian Development Bank. Mir Nasir Hossain, former President of the Federation of Bangladesh Chambers of Commerce and Industry (FBCCI), raised the allegations in a recent EP Talks.

Ahshan H Mansur, Executive Director of Policy Research Institute (PRI) of Bangladesh, told a webinar that for all the works, there must be a local partner. If not possible for the entire work of a large project, there should be local partner(s) for certain components. The Chinese are winning the works by proposing low prices, but within a one-year period they are making it double or triple. We must not let them play like this. Opportunities of major variations in price must stop.

Govt Claims Local Contractors Get Tax Advantage

Different government organizations claim that the local contractors are getting special tax benefits for participating in infrastructure development projects. For local contractors, the tax is 7% while for foreign contractors it is 7.5%. But in reality, in most projects the cost of foreign component is 70% and the local component is 30%. The 70% for-

eign component is tax-free. The foreign companies through subsidiary LC are importing the 70% goods from abroad tax-free. They do not have to account for any tax. Moreover, the Chinese companies are getting 13% incentives for repatriating the profits to their own country. But local EPCs have to pay 10% income tax for the 70% investment as being a local company. As such local companies have to take into account the 10% tax on 70% while preparing the bid. Consequently, the offers fail to compete with foreign companies. Local companies are disadvantaged by the irrational tax policy. These estimates were presented at a webinar by Humayun Rashid, CEO of Energypac.

Engr. Golam Mohammad Alomgir, Chairman of Max Group, said that it is being told that the government is giving 15% benefits to local contractors in international tenders. But the 35% duty that we are providing for importing 60% materials is not being considered. Foreign contractors are enjoying duty free benefits. The government is being deprived of the tax here and we are also suffering from the disadvantage. For creating a level playing field, the duties must be returned to us after taking in the first place. Otherwise, the local companies cannot survive.

Engr. Rezwatul Kabir, Director of Energypac, told the EP that around six crore people are directly or indirectly in-

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volved in the industry of Tk 200,000 crore. The local companies are not given the desired preferences in many international tenders. Local companies must be given 7.5% bid preference meaning that a Tk 107.70 bid by a local company must be treated equivalent to Tk 100 bid by a foreign company. This is just because local companies add more value to the domestic economy.



Piling activities Rampal 1320 MW Maitree super thermal power plant of BHEL by Dipon

The power sector companies like PGCB and BREB have started letting out tenders in Bangladeshi currency. As a result, the local companies are getting priorities. Projects worth up to BDT 500 crore should be exclusively kept preserved for the local companies. The BREB is tendering in local currency only and not in other currencies.

Some 15% benefit is given on local materials. In the case of generators, 60% of the materials are imported in general. For this, 35% duty needs to be paid. A 15% benefit makes little sense here. Payments in many cases need to be made as soon as the shipment is made. The payment is not made in local currency. The bill for the work is paid after inspection of completed works. Some 10% is kept as a security deposit. The cash flow cycle affects all the local companies as a result.

Priority to Using Local Goods and Materials

Many goods and materials used in power and energy infrastructure are now manufactured in Bangladesh. These materials of international quality are also being exported. Transformers and substations manufactured in Bangladesh can meet the entire local demand. But under G2G projects, transformers and substations of China and

other countries are being increasingly used for power transmission and distribution projects. These are getting tax free benefits under different projects. But the raw materials required for manufacturing these locally have to be imported paying duties and taxes. Again the duties paid for using these in local projects are not refunded on time.

It is easier to replace the local materials if required so within the warranty period. But in the case of foreign materials, it takes much longer in similar circumstances. This creates an issue in emergency power supply.

If Available Locally, Foreign Manpower Must Be Restricted

Enabling policies should be formulated and enacted for engaging local competent manpower if deemed suitable instead of hiring foreign resource persons. The provision for bringing unskilled manpower under special consideration, under A3 visa for projects including power and energy sector, must be prorogued by now. Foreign manpower must be engaged under work visa in the event such expertise is not available at home. A comprehensive data bank of human resources available in Bangladesh must be prepared for enabling both private and public sector companies to access the bank as and when required.

To keep up the pace of mega infrastructure projects' development, Bangladesh desperately needs efficient qualified human resources. The program and process for developing efficient human resources remained a neglected area for so long. A comprehensive plan and implementation strategy is essential now.

Talking about this, Engr. Rashed Mahmud, CEO of Dipon Group, said the local companies should get similar facilities and incentives that are

being provided to the foreign companies. India and Malaysia are providing various incentives for promoting local companies. It is alright thinking that Bangladesh needs modern technologies for system development and operation. Given the opportunities similar to that of foreign companies, the local companies can also deliver.

He said that foreign companies bring manpower under A3 visa from their countries. They do not pay income tax and other taxes. Thousands of them are coming. No regulation is being followed. No regulatory monitoring is there.

Domestic Preference Policy Essential

Six crore people in Bangladesh are directly or indirectly involved now in infrastructure development projects. Of them, two crore highly skilled, semi-skilled and unskilled manpower are directly involved. They are contributing 20% to the GDP. South Korea, China and India are major contributors to the construction industries and EPCs which are now the major source of their earning foreign currency. About 600 Bangladeshi companies are now engaged in the construction sector. Of them, more than 100 companies have already attained competency like that of international companies. Some of these are working with reputation in foreign

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countries as well. But in Bangladesh, there is no policy for giving domestic preference for local companies. Even the local materials do not enjoy the benefits applicable for capital machineries. Local EPC companies have to import materials and equipment paying high taxes and duties. Although the foreign EPC companies and their foreign sub-contractors enjoy tax-free benefits, they also use equipment imported for one project for different other projects.

Dr. Muhammad Abdul Mazid, former Chairman of NBR, while discussing about this has observed that the tax system must have transparency. Local contractors have to pay taxes and duties, but these are not equally applicable for foreign consultants and contractors. These must be equally applicable irrespective of foreign and local companies.

The policymakers are well aware of these disparities. But why are they not taking initiative to address this? When the opinion of Abul Kalam Azad, special envoy to the Presidency of Climate Vulnerable Forum, was sought during a recent EP Talks, he said there has been a paradigm shift – rules and regulations have not been updated. Locals, even given equal opportunities, can deliver better than foreign companies. Tax issues can be reviewed and evaluated through forming a task force, which would identify where the changes are essential. Development partners dictate when recipients are weak, but they behave differently with accomplished recipients. This is something which I learned from my own experience. We can be in a good position if we can negotiate strongly.

The documents the foreign consultants prepare deliberately to restrict opportunities of local companies and manpower. There are talks about foreign consultants. Let us assume that they do not have bad intentions, but they do such work using their experience that does not suit our purpose. The avenues

for local entrepreneurs are blocked.

Local power generation companies are the glaring examples of what the local companies can do given the appropriate policy support. Locals have replaced foreign companies.

Muhammad Aziz Khan, Chairman of Summit Group, mentioned that the private sector has invested over Tk 80,000 crore over the past 12 years. It is a huge achievement. He mentioned that the local EPC contractors are subject to account for 30% tax. This is not applicable for the foreign EPC contractors. In case of awarding work to a local contractor, a company like Summit has to bear at least 35% more cost. Such disparity must be done away with. We wanted to launch an O&M and EPC company. But these do not enjoy tax relief. Local EPC contractors could add more values through making far greater contributions if parity could be established.

Additional Chief Engineer of Roads & Highways Division Engr. Riaz Ahmed Jaber questioned how the long term Operation and Maintenance would be done if local manpower is not used at the planning and construction stages. Malaysia has Bumiputra Policy. No work can be done without having local partners. Bangladesh should also make such mandatory provisions.

Why is it not possible to formulate policy for ensuring provision of local companies working on stand-alone basis or in joint ventures as EPC contractors for construction works? Prof Dr. M Tamim, former Special Assistant to Chief Advisor of the caretaker government, said policy is a major impediment to the growth of local companies. Policies must be formulated protecting the national interest. Conditions are incorporated for foreign companies. But in actual practice, these are not complied with. Implementing agencies often do not care about it. Both sides have the responsibilities for developing skills of local manpower. If joint ventures can be formed in the right

manners during engaging foreign companies, the number of skilled manpower would increase and our manpower working side by side would then develop their skills. This would later assist them in operating the facilities. We would also earn higher remittance even if these skilled people go abroad.

Conclusion

Bangladesh has climbed to the crescendo of road, rail, power and energy infrastructure development. Construction bonanza is progressing at Matarbari and Maheshkhali and Payra. Besides two major power hubs, Padma Multi-Purpose Bridge, Rampal Power Plant, Rooppur Nuclear Power Plant like mega projects are being implemented by foreign EPC contractors. In the absence of appropriate government policies, even the subcontracts are going to foreign contractors. During the tenure of this government, unskilled labor force is also being brought from the countries of the subcontractors. Even after all these, local contractors using local manpower are accomplishing the bulk of the works originally awarded to others. The competence and capability of local EPC contractors for energy and power, roads and bridges infrastructure development is well proven. But for a country which is about to emerge as a developing country, enabling government policy support is essential for creating opportunities for local organizations, manpower and resources. If created within a few years, local contractors would achieve great EPC competence. They would be efficient enough not only for completing all local projects but can also work with full reputation in foreign countries. Job opportunities would be expanded for the local skilled manpower. It would help grow huge financial assets of the country. Employment opportunities would be created to a great extent.

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Equitable Energy Supply to Western Region

Saleque Sufi

Natural gas supply to vast areas of the country's western region still remains a dream. Most of the gas fields are located in the eastern region, excepting Shahbajpur Gas Field (eastern side of the Jamuna and Padma rivers). The gas transmission grid has crossed the Jamuna river in 1998 along the Bangabandhu Jamuna Multi Purpose Bridge. The grid has been extended to Bogura, Rajshahi and all the way to Khulna from Ishwardi via Bheramara, Kushtia and Jessore. GTCL is now working on a project to extend the grid to Rangpur from Bogura. But except for only some lucky ones, a vast majority of the population are not getting the benefit out of the pipeline supply of gas. Industries and businesses are also suffering from the high cost of fuel. Recently, the government has started planning to import LNG for meeting the gas demand of the western region. Experts and researchers have, however, different ideas. Given the volatile nature of the global fuel market and in view of the supply chain disruptions, experts have suggested significantly expediting the exploration of own petroleum resources at onshore and offshore for increasing contribution of the local gas to the fuel mix and revisiting the issue of exploiting the discovered coal resources. Bangladesh does not have any obligation for putting a ban on coal mining and utilization. It is not fair that some section of the privileged population would spend BDT 850-975 per month using pipeline gas while others have to account for BDT 1800-2000 for using the LPG. That does not even go with the energy vision of Bangabandhu.

Access to quality power and energy supply is the constitutional right of all Bangladeshis. Thanks to the great efforts

made by the present government over the past 12 years, all the citizens have now access to power grid. Most parts of the country are now covered by the power grid while a few islands and isolated char areas are being supplied with solar power and submarine cable. Some constraints in power transmission and distribution are affecting the quality supply, but these are all identified and by 2025 all citizens are expected to get quality power supply. The issues of supplying energy at affordable cost needed to be addressed through a smart choice of fuel mix and ensuring efficiency in use. Several large power plant construction projects are at different stages of implementation in the western region which would mostly use imported primary fuel. The gas grid is also being extended to the western region along the Padma multi-purpose bridge. It is being told that the gas transmission pipeline may be built all the way to Payra in Patuakhali.

Present Status and Perspective Plan of Gas Sector

Interactions with EMRD and Petrobangla sources suggest:

- The present recoverable reserve of discovered under-operation fields at the present rate of use would be completely depleted by 2031. Petrobangla is optimistic for adding up to 3 Tcf of new gas within 5 years through discoveries.
- EMRD is hopeful about commencing offshore exploration by 2030.
- BAPLEX under Joint Venture with its partners would be able to start exploration in the Chittagong Hill Tracts prospects and deeper horizon by end 2022. By 2023, an exhaustive informa-

tion database would also be developed through carrying out seismic surveys.

- Gas Sector Master Plan stated of only 500 MMCFD maximum supply from local source in 2041 despite of various initiatives being taken for exploring and developing new gas resources. The plan projects gas demand of 6500 MMCFD. Up to 5500-6000 MMCFD LNG import would be essential for meeting the deficit.
- The capacity of the two operating FSRUs at Maheshkhali have total capacity of re-gasifying 1000 MMCFD LNG. Both of them have stand by units which, if brought into operation, can increase capacity marginally to 1100 MMCFD. The maximum available supply now is 800 MMCFD. The total annual present LNG purchase from Qatar and Oman under long-term contract is 4 million tonnes. This constraints utilization of 7 million tonnes capacity utilization.
- Government responding to global LNG market volatility has suspended purchasing LNG from spot market.

- Work on setting up of a land-based LNG terminal at Matarbari is progressing. It is expected that the tender seeking EPC contract for engaging contractor of the terminal on BOOT basis can be let out among the 8 short-listed bidders by end September 2021. EMRD expects that by end 2025, the first train of LNG terminal of 1000 MMCFD capacity can start operation.

Observations

Present Gas Production and Plan

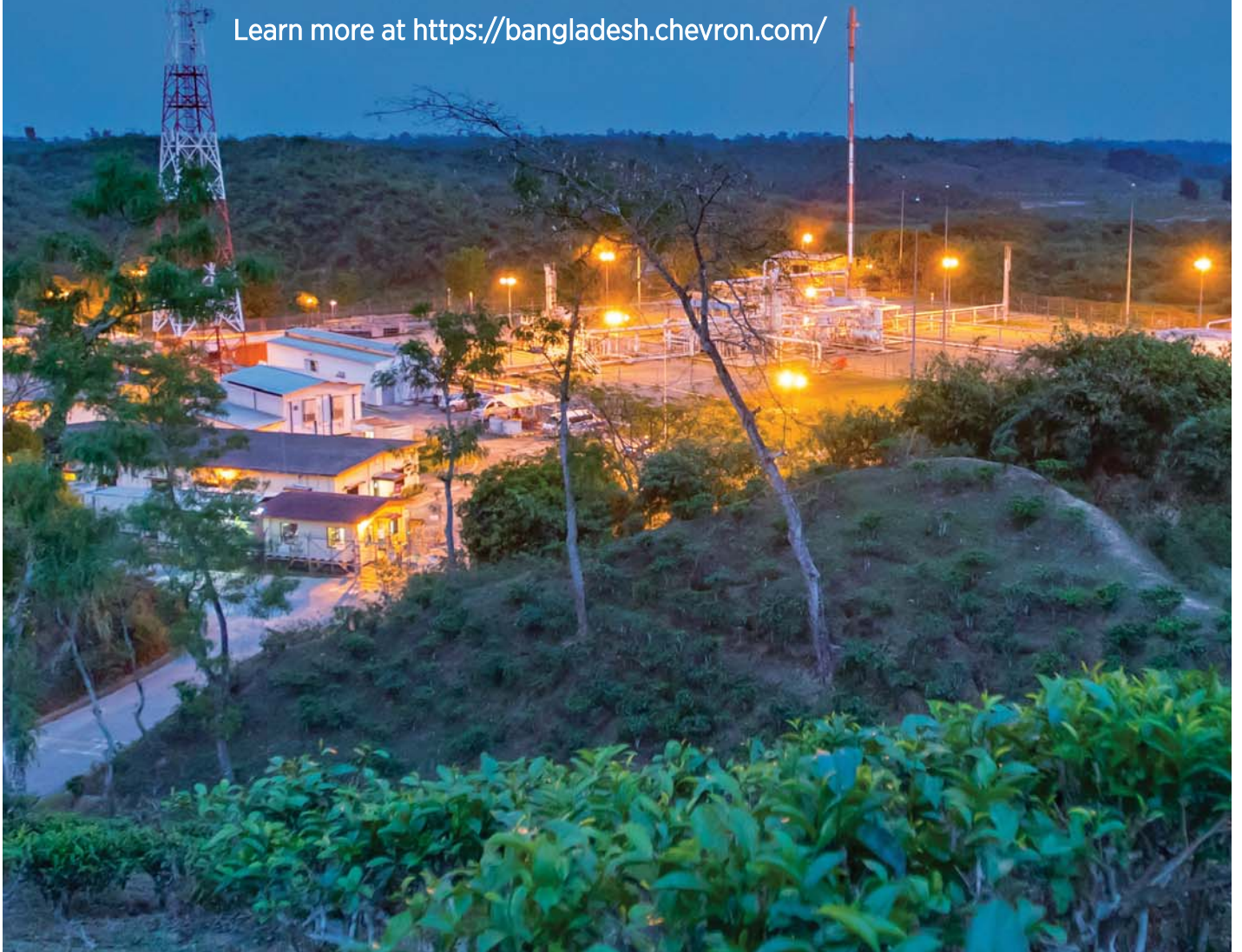
It has been observed with serious concern that exploration for new resources remained grossly neglected since 2000 despite exponential growth of the de-



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mand for energy. Over a period from 2000 to 2021, a little over 3TCF gas could be added against consumption of 14 TCF. Most of the discovered gas fields have well past production plateau. The wellhead pressure continues to deplete fast. Past proven experience suggests that by 2023 faster depletions may set in. The present production (7-8 September 2021) shows 2450 MMCFD against Petrobangla stated capacity of 2750 MMCFD. There have been no reservoir studies done over the past several years.

All concerned stakeholders know it for over a decade now that discovered gas reserve has been depleting alarmingly. State Minister for Power, Energy and Mineral Resources Nasrul Hamid stated this in the national parliament. Relevant experts and researchers time and again issued wake up call. Still, the exploration campaign for discovering new resources both at onshore and offshore remained well below the required level. There has been no major gas discovery since 2000. The BAPEX-alone policy for onshore exploration fell flat. Without making required techno-economic feasibility studies, a highly ambitious 108 wells drilling program in 5 years was entrusted to capacity-constrained BAPEX. Under the present exclusive government control, it is not possible for an exploration company functioning effectively and efficiently. Even then BAPEX did its best and managed discovering few marginal gas fields. But their contributions to national production are like trickles in the ocean. For reasons better known to government, Russian oil giant GAZPROM was engaged for drilling development wells in Petrobangla-owned gas fields. That poorly executed contract did not bring expected dividends. The GAZPROM-engaged Uzbek contractor reportedly did a poor job. BAPEX is still doing its best. But experts observed that it is well beyond the BAPEX's capacity for carrying out the exclusive responsibility of onshore drilling. From experience, it is extremely doubtful that Petrobangla can manage to add 3 TCF of new gas in 5 years.

Offshore Exploration

The benefits of remarkable success in resolving maritime boundary disputes with neighbors could not be achieved



Under construction 800 MW gas fired power plant of NWPGL in Khulna

File Photo

for failures of EMRD and Petrobangla in taking smart actions on time. We cannot accept the EMRD excuse now that the outbreak of COVID in end 2019 impeded the actions for the deep water exploration.

The scenario in offshore exploration is extremely frustrating. Santos, ConocoPhillips and Daewoo Posco left one by one after failing to negotiate gas price with Petrobangla. Australian energy giant Woodside had submitted unsolicited offer for exploration in 5 deep water blocks in 2017. It could be negotiated, but not done. It is not understood why the offshore exploration cannot be started before 2030? The EMRD and Petrobangla have made extraordinary delays in letting out offshore explorations. Petrobangla signed agreement with the same company after sitting on the decision for about 4 years. The good sense has prevailed that Petrobangla database is now being opened to the interested explorers.

It is encouraging that BAPEX has let out Expression of Interest for finding Joint Venture partners for CHT prospects and deep horizon exploration. Hope the decision making process would not be affected by regional geopolitics.

We have great doubt that gas demand in 2041 would grow to 6500 MMCFD given that the present and emerging energy supply situation would not encourage major investors to set up

energy-intensive industries. Even if that happens, those should be much more energy efficient. Bangladesh economy would not grow to absorb price shock of importing 6000 MMCFD LNG. The detailed techno-economic feasibility studies needed to be doing before launching any large LNG import initiatives through Matarbari window.

Petrobangla should let the existing FSRUs to expand their capacity through utilizing the standby re-gasification units. All out endeavors must be made for bringing the land-based terminal at Matarbari at the earliest. We also question as to why the present LNG purchase situation of existing long-term contracts with Qatar and Oman could not be anticipated earlier? In the present situation, RPGCL cannot extract benefits from the volatile LNG spot market. PPR is a major impediment.

Gas Supply Augmentation

Information from relevant sources suggests that there are considerations and action plans for gas supply augmentation, targeting more specifically the present and emerging market of the Western region of the country.

- The anticipated recoverable reserve of gas fields in Bhola Island is 1TCF. This is not considered enough to justify the investment required for bringing it to the main land. RPGCL is tasked to explore its alternative use. Having worked as Petrobangla representative with UNO-

CAL proposed WRIP, this writer cannot agree with this view. Connecting gas fields of Bhola through construction of Shahbajpur to Digholia following surveyed pipeline route and connecting with gas transmission pipeline already constructed at pressurized zone would definitely be a feasible option.

- Two Indian companies concluded MOU with Petrobangla for supplying 1000 MMCFD RLNG through pipelines. From deep insight, this writer has genuine doubt about the feasibility of this prospect.

- NWPGCL and Exceleerate Energy JV submitted a proposal to EMRD for supplying LNG to Payra region and Khulna through setting up a tailor-made FSRU at 60-70 Kilometer into deep sea off Kuakata and constructing subsea pipeline and gas transmission pipeline to Khulna. We do not think that the turbulent nature of the Bay of Bengal through the extended Monsoon is not at all ideal for sustainable operation of FSRUs. Bangladesh offshore cannot be considered similar to the Gulf of Mexico, North Sea or US coasts. What would be the size of actual investment? Exceleerate has submitted a proposal to EMRD after conducting route survey of the pipeline. The storage capacity of the facility would be 210,000 cubic meter and re-gasification capacity would be 1000 MMCFD. The government would not have the take or pay option.

- It would not be wise to make an observation without having a first hand view. But considering the huge investment required, the detailed techno-economic study must be done by a third party of real experts before giving go ahead. However, the experience of direct involvement in gas supply from Shangu offshore pipeline to the national gas grid would not suggest Bangladesh going for such an ambitious proposition when there are other feasible options of gas supply to the region.

It would be a huge risk if, based on such proposal, the proposed 3X1200 MMCFD LNG based power



View of a under construction gas pipeline

File Photo

plants are allowed to go ahead.

Conclusions

Bangladesh is heading towards an uncertain fuel supply situation, more specifically gas crunch. The present situation indicates that by 2025 gas production from own fields may deplete well below 2000 MMCFD. It is highly unlikely that even the land-based terminal can come into operation by 2025. One can wonder about how the government would supply gas to three medium-to-large gas based power plants at Meghnaghat in 2022.

It is essential that the government changes its mindset towards exploitation of discovered coal resource. Unless the government can manage to start coal mining soon, it may remain buried forever. The government must also change conservative strategy for staying away from engaging IOCs in onshore exploration. For Western regions and high-pressure zones, fresh bidding rounds should be let out providing required incentives in the Model PSC. The EMRD and Petrobangla must not delay in concluding JV with intending IOCs for exploring Chittagong Hill Tracts and deeper horizon exploration. Multi-client survey should start without delays and Petrobangla should be ready in all respects for launching offshore

PSC as and when the opportunity emerges. But does Petrobangla and EMRD possess required numbers of experienced technical resources for negotiating PSCs and managing PSC operation of IOCs in the offshore?

Considering the land-based LNG terminal at Matarbari a national top priority project, RPGCL must be given required authority essential for speedy approvals for expediting project implementation. The two pipelines of GTCL from Maheshkhali to Anowara can transport 2000 MMCFD. The meters installed at different intake and offtake stations adds up to 4000 MMCFD. The stalemate with 1200 MMCFD capacity metering system at Anowara must be resolved as soon as possible. If required a new pipeline from Maheshkhali to gas grid must be built as Matarbari would remain the only feasible entry point of LNG import.

It can be suggested to start the gas supply to Western region for small industries in greater Rajshahi, greater Khulna region as soon as possible using the existing infrastructure. Pipeline gas supply may grow as an election agenda for the upcoming general election as it remains a disparity.



Saleque Sufi;

Contributing Editor, EP

Database of NRB Energy Experts on Cards

Rezaul Ahsan

A properly structured permanent institution is essential for meaningful utilization of NRB expertise. The dependence on foreign consultants can be minimized if non-resident experts and specialists are given the opportunities to contribute to the energy, power and other sectors. If proper incentives can be offered under the government policy framework, public and private sector companies and institutions would be capable for engaging NRB experts with attractive remuneration packages. All has to bear in mind that the time of brain drain has to be reversed to brain gain now. Hence proper policy adjustment is essential for accessing the brain of NRB communities.

Local and NRB experts made the observation at a recent virtual discussion titled “Local and NRB Experts Bridging for Development”, organized by Energy & Power magazine as part of a series titled “EP Talks”.

Moderated by EP Editor Mollah Amzad Hossain, the panelists of the event was former Secretary of Power Division Dr. Sultan Ahmed, Pro Vice Chancellor of Islamic University Prof Dr. Mahbubur Rahman, Additional Secretary of Power Division A. T. M. Mostafa Kamal, Dr. Prof Jamil A Khan of University of South Carolina, USA, Engr. Shabbir Parvez, CEO of AstroComm Technologies, UAS, Engr. Rezwanul Kabeer, Managing Director of Energypac Infrastructure Development Company Ltd. and Engr. Khondkar A Saleque Sufi, International Energy Consultant, Australia.

Dr. Habib Siddiqi, Dr. Shamim Siddiqi, Dr. Alamgir Chowdhury and Dr. Arun Dev also participated in the open discussion.

Dr. Sultan Ahmed mentioned that the local experts could not often assess the

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issues and difficulties of the systems, but those working abroad can easily understand due to their having exposure to the modern technologies. If the NRBs can meaningfully assist in resolving systems' limitation and tune this to make

this discussion would extremely benefit Bangladesh.

Bangladesh is having leapfrog development. There would be a massive jump in 2030. The Five-Year Plans would no longer be required. Managing projects other than mega projects would become easier. Private sector companies have been given generous incentives for works. Consequently, investments have increased. Generation capacity has significantly increased because of private sector power plants. The installed capacity is much higher than demand now. The NRBs have opportunities to work in EPC here.

There has been discussion about curriculum. There has been training facilities in Bangladesh after acquiring university degrees. But internships are



time-tested by utilizing their expertise, the nation would be extremely benefited. The spontaneous response of the NRB experts like their participation in



Sultan Ahmed

not being properly done. The curriculum needs updating for addressing this.

There has been a lot of talks about beach sand of Cox's Bazar. Few companies came and wanted to sign agreements for extraction of minerals. We did not agree. There exist valuable minerals. The NRBs can come up with specific project proposals.

A.T.M Mostafa Kamal observed that bridging the NRBs and private companies is very much possible. The government has started facilitating this. Many directors of power companies have recently engaged some of them who returned home after working abroad. Salary and benefits are attractive now which should encourage NRBs. Oppor-

tunity is there in the Private Public Partnerships (PPPs) for the NRBs. The EPC is another avenue. Transmission and distribution sectors are there where NRBs can make contributions. Many large power plants are being built under joint venture where NRBs have the opportunities.

Dr. Mahbubur Rahman mentioned that our meritorious students after graduating from universities are leaving the country. University teachers are also leaving the country for working abroad. Now NRB experts can assist our development initiatives. Education system has been seriously impacted by COVID. Some efforts were made for distance learning digitally. But significant problems were encountered. There have been problems with devices, problems with networks. In remote areas and some other places, uninterrupted power supply has been a major issue. We know we may have to live with COVID for a while. The NRB IT experts can assist here in developing new distance learning programs based on their experience.

We have to bear in mind that during project formulation, we not only have to think about infrastructure only, we will also have to think about trained expert human resources for operation and maintenance of the facilities. To train our manpower, NRB experts can make meaningful contributions.

Mr. Shabbir Parvez informed that the satellite images could assist in identifying petroleum resources and minerals. A lot of such works are being done in developed countries. Bangladesh can be extremely benefitted if they add satellite imagery in their resources identification.

We can use it in water reserve assessments and identifying geological locations of coastal areas for predicting climate change impacts. It can also assist in locating right areas along the coastal region for developing major infrastructure. Bangladesh can be extremely benefitted if information is gathered from satellites and use it in making plans and sustainable operation.

Bangladesh has many expert human re-



Mahbubur Rhaman



A. T. M. Mostafa Kamal



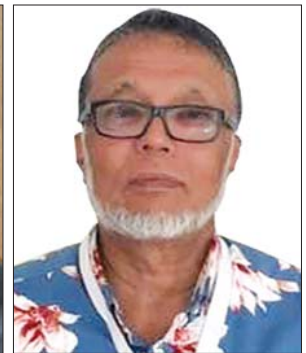
Jamil A. Khan



Sabbir Ahmed Parvez



Rezwanul Kabeer



Khondkar Abdus Saleque

sources. But for lack of proper systems and processes, they cannot make significant contributions.

In foreign countries, cost management is regularly done every month. Parvez does not think that these are being done in Bangladesh. It is essential to do it progressively every month. We have seen that NRB experts are not valued in many cases.

Procurement process is very complex in Bangladesh. It makes situation extremely difficult for NRBs to work here. Procurement process is so cumbersome that it is extremely difficult for NRB experts to contribute despite having all sincere intentions and desires. He mentioned his personal bitter experience with Bangladesh Energy Research Council. If the processes and policies are changed as pointed out by Engr. Kabeer, the situation might change.

Prof Dr. Jamil A Khan said there would not be any value addition unless the right kind of experts are identified and engaged. Proper evaluation is essential for continuously developing education curriculum. In the Western World, the curriculum is reviewed and updated

every year. Relevant stakeholders – academics, students, parents and representatives from industries get together in the evaluation process. These help universities in making tailor made curriculum for making graduates ready for industries. Bangladeshi universities and other institutions must do that. Universities must develop students job-ready for starting works right from the day one they start working in industries.

But there would be resistance always while changing the curriculum. Because when you add some, you have also to do away with some others. Otherwise, undergraduate study may take 5, 6 or 7 years instead of 4 years. The academics are in fear about losing jobs, which may also create some barriers. In such cases, the academic council takes decision. Dr Jamil said senior academics like him get full freedom for taking independent decisions.

Dr Jamil also acknowledged that Bangladeshi students are extremely talented. Many of them returned to Bangladesh after acquiring higher degrees. They could earn 6-7 times higher if they stayed back.

It is not always fair pushing the ball to

the government for changing the curriculum. Academicians and faculty members can do that. It is very much possible if all relevant stakeholders including industry (ultimate employer) are integrated in the evaluation and review process.

Engr. Rezwanaul Kabeeb informed that the private sector companies are contributing almost 50% of the total daily generation now. The successful bridge of private and public sector developed for power generation can be modeled for NRBs – local experts' integration for sustainable development of Bangladesh.

But in other segments like power transmission and distribution, not much could be achieved. Necessary capacity achievement is being delayed. For this, government policy support and legal framework development is essential. Tax issues would come if we talk about EPC. We have to pay 25% tax for engaging foreign experts for engineering. There are issues in procuring engineering documents. We have to pay tax here

also. These act as barriers to engaging foreign experts and NRB experts.

NRBs cannot deliver their services voluntarily and they should be provided with due remuneration. Our new generation is better equipped with technology. It is relatively easy for making them more skilled.

Almost 10 million Bangladeshis are now living abroad. All of them are not skilled resources. If we could even up skill 10% of them, Bangladesh could double the remittance earning.

Engr. Khondkar Saleque Sufi mentioned that creating enabling environment is a prerequisite for effectively using NRB experts and resources in the development process of Bangladesh. There has been some isolated utilization. This has to be institutionalized and brought under a framework through a government policy. Satellite acquired information are essential for various infrastructure development in the coastal areas for longer-term sustainability. This information is also essential for

resources identification in the offshore for developing Blue Economy. Even for geo thermal location of Sundarban mangrove forest and monitoring its bio diversity, satellite can be used.

Most NRBs cannot return permanently to Bangladesh. But can make major contribution through value addition in policy updating, capacity developing through training, research and development, curriculum refreshing and major contracts negotiation with international companies. But for all these changes of mind of the policymakers and creation of a platform are essential. In the past, few initiatives were taken for NRBs–local integration. But nothing much could be achieved. That is why Energy & Power has launched an initiative for developing a database of truly competent and willing NRB experts. In 3-6 months of time, the details of at least 50 NRB experts would be available on the EP website for government and private companies to access them when required.

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Post-COVID-19 Recovery of LNG Market: What's Next?



Galia Fazeliyanova

The global economy is cautiously walking away from the shadow of the unprecedented challenge of the COVID-19 pandemic. The GECF is observing a reset of the world energy outlook for the longer term and is finding it imperative to take part in the imminent and accelerated energy transition towards a less carbon-intensive energy mix, which envisions a cleaner, environmentally more friendly future.

LNG might be the last great opportunity in the oil and gas industry. LNG trade has been historically showing remarkable development over the past two decades with over 3.5 times growth, ramping up from 103 million tonnes (mt) in 2000 to 356 mt by the end of 2020 [1][2]. The GECF Members were following the trend, having exported 130 mt in 2010 to 190 mt by 2019, according to the GECF Annual Statistical Bulletin 2020.

COVID-19 impact on LNG trade was severe, especially in the Q2 and Q3 2020, due to massive lockdowns and multiple various disruptions across the globe. However, by year-end, LNG trade grew to its record number, mostly driven by Asia's steady demand and underlying global economic recovery. Expanded ex-

ports from Australia and the U.S. contributed to the supply side of the equation, with the latter's 33% growth in LNG exports compared to 2019. In essence, LNG trade has proven resilient, increasingly diverse, and global [1].

Though the overall LNG market was much more robust compared with the oil market through the course of the pandemic, there was significantly increased volatility in traded volumes and extreme turbulence in spot prices. Late 2020 and early 2021 recorded six-year highs in spot prices in Atlantic and Asia Pacific basins, replacing the record lows of early 2020 in a blink of an eye.

The structure of the LNG trade was evolving over the past few decades and 2020 just amplified that transformation. There is a clear and consistent trend towards gaining higher flexibility, agility, current and forward-looking liquidity of the LNG markets.

Complex LNG investment environment and buyers' appetite for low-carbon LNG are among the key challenges to be faced by the LNG industry in the foreseeable future. Market extreme volatility is, as a result, translated into uncertainty in the investments.

Natural gas price turbulence of 2020-2021

Though historically, crude oil and natural gas are inherently volatile commodities, 2020 was an extremely volatile year for global crude oil and spot natural gas prices [3]. Although being at initially low levels on average through 2019, the natural gas spot market witnessed plummeting prices, resulting from fallen demand in the first half of 2020 due to economic, social, and humanitarian impacts of COVID-19 as well as warmer than expected 2019-2020 winter in the northern hemisphere.

Shortly after that world saw a 'magic' turnaround. Natural gas spot prices have increased 18-fold from lows seen just six months ago. Natural gas benchmarks demonstrated substantial gains with the start of the heating season in the third quarter of 2020. On top of post-COVID-19 recovery, a general rebound in prices was explained by market fundamentals as well as temporary dynamics, primarily driven by the supply side: colder than expected winter, LNG supply disruptions, and limited shipping capacity.

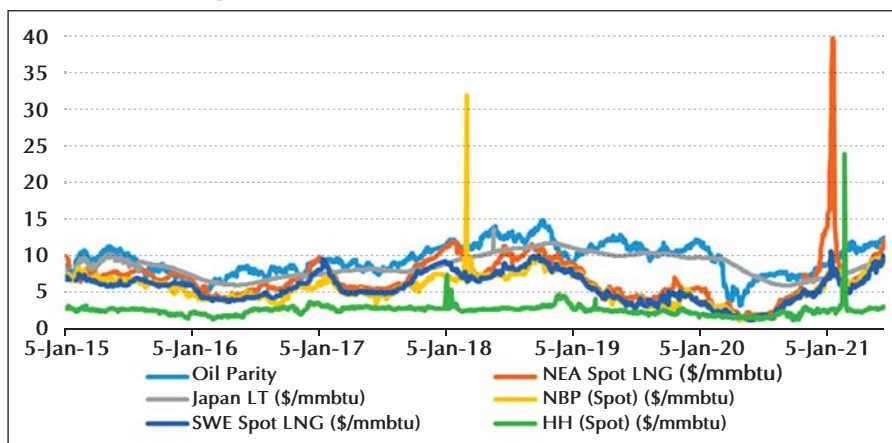
Natural gas spot price volatility has affected a broad array of industry stakeholders. It impacted the short-term

targets of the suppliers and portfolio players to optimise their trading strategies in 2020. LNG suppliers and buyers were reconsidering old and signing new long-term agreements at lower levels of oil indexation, between 10 and 11% record low levels, compared to the earlier 14% slope contracts. The oil and gas majors have been seriously challenged by severe losses in earnings, negative cash flows leading to massive asset write-downs amid high leverage of 30% across the industry. The world's top energy companies have slashed the value of their oil and gas assets by around US\$80 billion by the end of 2020 [4].

Higher flexibility and liquidity of the LNG markets on a roll

The emergence of U.S. natural gas and LNG on the global marketplace, on the supply side, and Japan's post-Fukushima reliance on LNG on the demand side were leading to the transformation of LNG market mechanics and enhanced commoditisation of LNG. Further liberalisation of the power and gas markets together with market regulations providing for third-party access to the existing gas and LNG infrastructure have been contributing to this trend as well. LNG trade pattern now is backing the growing commoditisation, liquidity, and flexibility trend with (i) higher share of spot and short-term LNG trades in overall trading, (ii) the rise of the LNG portfolio players and increase of flexibility in destination

Figure 1. Natural Gas Prices, 2015 - 2021



Source: GECF Secretariat, based on data from Refinitiv, Argus, OANDA

clause contracts, (iii) growth in gas-on-gas indexation pricing, (iv) smaller-scale volumes of the contracts and (v) increased forward-looking liquidity, etc.

LNG was traditionally delivered under long-term arrangements between buyers and sellers, and was only marginally traded on a spot or short-term basis. But since the last few decades, spot and short-term LNG trading has grown steadily, accounting for only 25% in 2012 out of total LNG traded, but since growing to record 40% in 2020 [5][1]. In a more tight LNG market, especially for the rising Asian LNG demand, the 'sellers' market will keep the LNG spot prices relatively high. At the same time, LNG longer-term contracts might accommodate buyers with lower prices

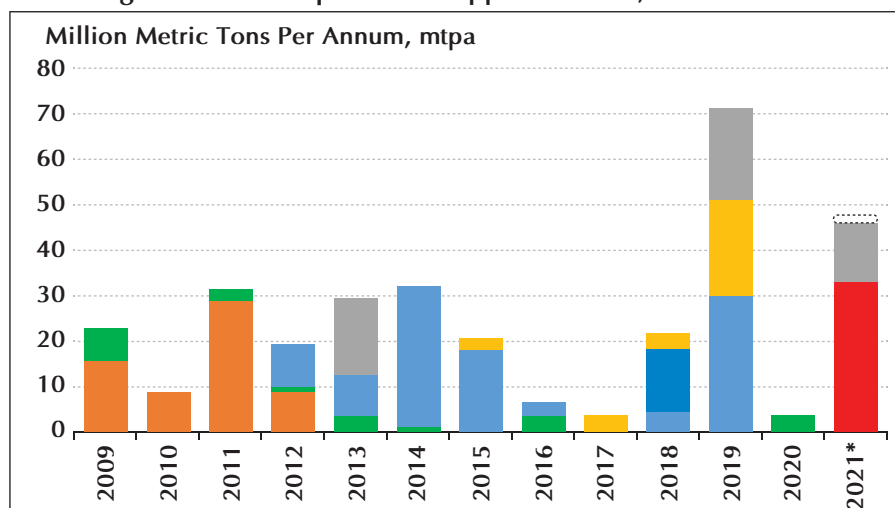
and secure sellers by protecting their investment plans in upstream and LNG infrastructure development. Though some LNG legacy buyers in Asia, such as Japan, might focus on increased flexibility and reluctance to commit longer-term due to energy transition uncertainties, there are buyers from China and developing Asia, such as, Pakistan and Bangladesh, who will continue to look at term contracts [6].

From the perspective of LNG suppliers, the GECF Member Countries maintain adherence to the main principles of the 2019 Malabo Declaration, adopted at the 5th GECF Summit of Heads of State and Government. The underlying Declaration fully supports the fundamental role of long-term gas contracts as well as the gas pricing based on oil/oil products indexation, to ensure stable investments in the development of natural gas resources [7]. Such principle provides a solid base for the LNG buyers to gain long-term visibility of their cash flows and on LNG supplies protection against price volatility. Qatar's long-term contracts represented around 60% of the exports as of 2019 [8]. Algeria, Russia, and other GECF Member Countries have also favoured and will continue to rely on long-term contracts with pricing indexed to oil.

LNG investment resilience in the loop

LNG liquefaction investment decreased by more than a third in 2020 but is anticipated to go up by more than two-

Figure 2. LNG Liquefaction Approved FIDs, 2009 - 2021



Source: GECF Secretariat, based on data from GECF Global Gas Model, GIIGNL, Bloomberg NEF; * - FIDs taken as of August 2021, ** - Fast LNG FID of 1.4mt taken in March 2021.

thirds in 2021 to over US\$23 billion [9]. Qatar, Russia, and the U.S. are leading the trend, whilst Mozambique's LNG future remains uncertain due to security issues. Qatar's project, with a final investment decision (FID) of US\$29 billion taken in February 2021 on North East Field expansion, which will add 33 mtpa to the currently existing 77 mtpa, is a game-changer.

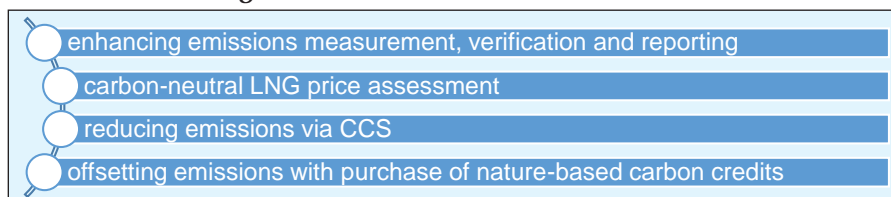
Existing and new LNG projects will be facing two major issues: one relating, obviously, to the profitability with project stakeholders realising the agreeable profit margins, and second, being of increased concern, the acceptability issue due to more environmentally stringent 'greener' boundary conditions implying on the newly evolving standards for LNG properties.

'Greener' LNG to capture the minds of the industry stakeholders

LNG buyers are increasingly considering LNG's low-carbon properties on top of price competitiveness. The market witnessed a spike in carbon-neutral LNG deals in late 2020 and early 2021 as increasing pressure came from governments' changing policies and tighter regulations. Furthermore, the corporate sector's shareholders and investors are increasingly becoming more conscious about LNG's carbon footprint. Asian buyers' interest in 'green' LNG continued to ramp up last year, crystallising a new sustainable trend of future LNG trading.

When carbon emissions couldn't be avoided, they can be either (i) reduced or/and (ii) offset with the purchase of nature-based carbon credits and verified carbon standard certificates. Both carbon emissions reduction strategies should imply more rigorous emissions measuring, verification, and reporting with enhanced and clear guidelines together with emissions transparency along the LNG value chain (Figure 3.). Carbon-neutral LNG price assessment activity (Figure 3) is also underway. S&P Global Platts, in mid-June 2021, announced the

Figure 3. Carbon-Neutral LNG Trends



launch of the world's first daily carbon-neutral LNG price assessment (CNL). It tracks the cost of carbon credits purchased and retired to offset the carbon emissions for an LNG cargo on the world's most active trade route - from Australia to JKTC (Japan, Korea, Taiwan, China)[10]. The LNG industry is anticipated to further address the implementation of improved greenhouse gas (GHG) emissions quantification and reporting methodologies. A carbon-neutral LNG price assessment tool might be applicable to the broader universe of LNG trades. The industry will also continue walking along the 'lower emissions' pathway, optimising the reduction of GHG emissions, related to the production and consumption of LNG.

The GECF Member Countries are aligned with the mentioned trend. From the emergence of LNG carbon-neutral deals in mid-2019, JERA delivered the first carbon-neutral LNG into India sourced from a liquefaction facility in Das Island by UAE's ADNOC LNG, where JERA only partially offset emissions from the regas terminal downstream. In March 2020, Taiwan's CPC received from Shell its first carbon-neutral LNG at the Yung-An LNG, sourced at Russia's Sakhalin 2 LNG facility, and in November 2020 its second carbon-neutral LNG - sourced from Nigeria. The mentioned Shell cargoes offset all emissions from extraction to regasification. Russia's Gazprom also delivered its first carbon-neutral LNG cargo - sourced from the Novatek-led 16.5mn t/yr Yamal LNG project - to Shell at the UK's 4mn t/yr Dragon in March 2021.

Conclusion

The transformation of the LNG contractual structure vis-à-vis the growing share of spot and short-term trading, multilateral trading schemes, gas-on-gas indexation is leading to increased volatility in the LNG market. Such volatility is an impediment to the development of the gas infrastructure. Also, it creates a need for new patterns for financing the LNG industry as overall investment risks to be distributed in a manner to secure required financing for the upcoming LNG infrastructure projects. Hence, move to a more open and liquid LNG market will lead the key LNG stakeholders and players to search for optimal and lucrative trading strategies. A spot gas-on-gas indexation with destination-free contracts up to the traditionally established long-term oil-indexed destination-bound trades - all that represents a range of possibilities. The latter is historically known for reinforcing market resilience and mitigating risks of increased volume and price volatility and supply disruption risks as well as allowing to secure long-term investment into LNG infrastructure. 'Green' LNG with a reduced carbon footprint is rapidly gaining momentum and will be vital for LNG industry development in the decades to come to match the environmental sustainability of the energy transition.



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Energy Economics and Forecasting Department

নর্থ-ওয়েস্ট পাওয়ার জেনারেশন কোম্পানি লিমিটেড

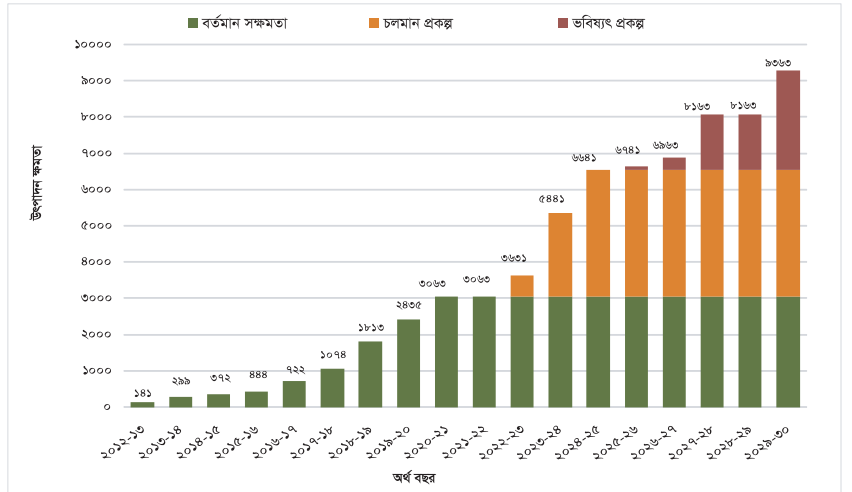
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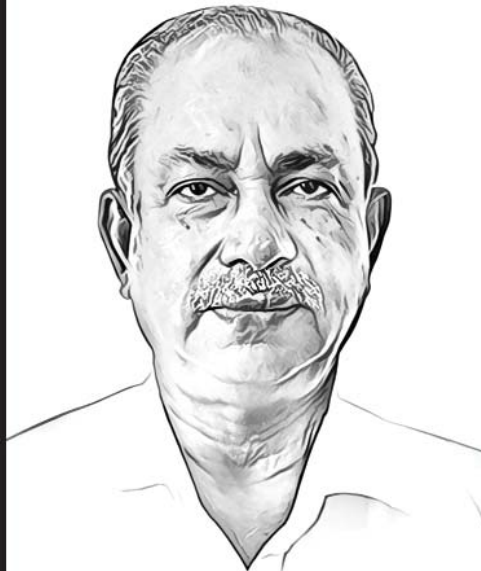
Muqtadir Ali: A Great Soul

Mortuza Ahmad Faruque

We have lost a great soul, Md. Muqtadir Ali (Retd. Major), who was a brave freedom fighter and a very well-known professional in the energy sector. Like most of his colleagues and admirers, the news of his sudden demise at the age of 68 years on 20th August was really shocking to me. I pray for the eternal peace of his departed soul and express my deepest condolences to all of his family members, colleagues, friends and well-wishers.

Muqtadir Ali was a very energetic, efficient and highly knowledgeable person of great integrity with full of commitment. He was involved in the entire spectrum of exploration and development activities of Petrobangla, BPC, BAPEX, SGFL and Titas Gas. He earned love and respect from all of his colleagues, sub-ordinates and the energy experts. He had a lot of contribution to formulate different policy issues related to ensure energy security of Bangladesh. During his career in Petrobangla, he planned, reviewed and oversaw various studies for the development of the sector. He dealt with the several international oil companies operating in Bangladesh under Petrobangla.

During his tenure as Chairman, Petrobangla as well as Director Production Sharing Contract and Director Planning, I had the opportunity to interact with him as a sub-ordinate of-



ficer. I never felt any unease working environment with him, rather it was a most remarkable time. I found him as a modest and outright person, who had a clear vision of his role. I used to meet him in his chamber for discussion on PSC-related issues and in the capacity as a convenor of different committees for his guidance and decision. He always appreciated, discussed on the issues in short and gave quick decision. He never imposed any decision upon me and never acted as a boss but always found him like a senior friend and brotherly behavior from him. His working data base, managerial skill and unique dynamic charisma were simply superb which I never found with any other high officials during my 33 years of service period in the energy sector.

Muqtadir Ali also worked as the Man-

aging Director of BAPEX, SGFL, Titas Gas Transmission & Distribution Company Ltd., and Chairman of BPC where he made a lot of remarkable contributions for expediting and enhancing company activities by taking and implementing important projects in the field of oil and gas exploration, development, production, transmission, distribution, importing & marketing of liquid fuel, including LNG.

In 1982, Muqtadir Ali started his career in the energy sector as Secretary of Bangladesh Petroleum Corporation and was responsible for overall administration, recruitment, legal and policy matters. At the end of 1984, he was transferred to Titas Gas as Company Secretary and within a year, he became Head of Planning and Logistics. His responsibilities included strategic planning and procurement of all kinds of materials to ensure overall development activities and other projects. In 1992, he was assigned with the responsibilities of General Manager (Administration) and was promoted as the Managing Director of Titas Gas at the end of the same year. He served as MD, Titas for a period of almost six years and contributed a lot. He initiated installation of regulating and metering stations and construction of transmission pipeline.

Muqtadir Ali was transferred to BAPEX as Managing Director at the end of 1998. He worked there for

about two and half years. He initiated procurement of drilling rigs project for BAPEX and drilling projects at Fenchuganj, Salda Nadi and Shahbazpur Gas Fields and coordinating exploration and development work with IOCs. He tried his best and put relentless effort to strengthen the BAPEX.

In 2001, he was promoted as Director Planning of Petrobangla and served for about four years. He was responsible for preparation of strategic plan for development activities in the field of exploration, production, transmission and distribution of gas, monitoring and supervision of implementation of the projects and overall development activities of the subsidiary companies including projects financed by various donor agencies and reported to the government as well as other agencies on regular basis. Apart from this, monitoring the implementation of gas transmission and development projects financed by ADB and a technical assistance project for preparing Gas Sector Master Plan which was funded by the World Bank. Unfortunately, he became OSD for few months, followed by his posting as MD, SGFL – a lower rank – which was a tragic part in his career in Petrobangla. But he never been disappointed or disheartened rather took it as challenge and rendered his best effort to SGFL. During his tenure, SGFL achieved optimum gas and liquid production from their gas fields and supplied to national gas grid and became one of the profitable company within a year by his dynamic leadership and farsightedness.

During the end of 2006, he returned to Petrobangla as Director, Production Sharing Contract (PSC) where he was responsible for coordinating overall activities of the IOCs operation in Bangladesh in respect to exploration and development of



hydrocarbon under PSC where he made commendable efforts for ensuring timely and maximum supply of gas from the IOCs to the national grid to meet our daily gas demand. He initiated compressor project of Chevron and expansion activities of Jalalabad Gas Fields.

In April 2009, he was assigned as Chairman, Petrobangla and got scope to work for only six months. As a Chairman of the Corporation, he contributed in the areas of policy issues, technical and financial matters relating to optimum hydrocarbon production from the different gas fields and tried to ensure energy security. He also looked into the issues for timely completion of development projects and how to get maximum benefit from it.

During the period from October 2009 to February 2011, he was responsible for coordinating activities related to import of LNG as the In-Charge, LNG Cell of Petrobangla being an Officer on Special Duty. At that time, it was a dream project of energy sector and by putting his enormous effort it became realistic. Since August 2018, we have been getting benefit of it and able to minimize our gas crisis.

From mid-February to October 2011, Muqtadir Ali has been entrusted with the responsibility of

Chairman, Bangladesh Petroleum Corporation and contributed in the areas of policy issues, technical and financial matters relating to importing liquid fuel and to ensure energy security of the country. He initiated installations of more than 500,000 tonnes of storage capacity of liquid fuel and installation of 100,000 tonnes capacity of LPG plant for BPC.

Muqtadir Ali visited USA, Canada, China, Singapore, Thailand, India, Nepal and China to participate in the programmes like trainings, conferences, seminars, workshops and bilateral discussions.

After his retirement, he worked as advisor of different companies of private sector and was finally involved with Dipon Gas. Besides, he wrote many useful articles on energy sector with providing important suggestions for the betterment of the sector. The articles were published in Energy & Power magazine. Apart from these, he participated in many virtual zoom meetings organized by the magazine on different policy and sectoral issues, where he always solicited with very useful guidelines and spelled out what to do for the betterment of the sector as well as for the energy users.

EP

Mortuza Ahmad Faruque;
Former Managing Director, BAPEX

Mujib Climate Prosperity Plan for Bangladesh and CVF

AKM Monowar Hossain Akhand

Bangladesh is honored to be chosen the presidency of the 48-nation Climate Vulnerable Forum (CVF) for the second time (2020-2021), and the Vulnerable Twenty (V20) Group of Finance Ministers. The CVF represents over one billion people of the world's most climate vulnerable countries. Honorable Prime Minister of Bangladesh H.E. Sheikh Hasina is serving as Chair of the CVF since June 2020. As a chair, she has launched a draft plan after the Father of the Nation Bangabandhu Sheikh Mujibur Rahman, to develop as the "Mujib Climate Prosperity Plan 2021-2030" for Bangladesh, while delivering the chair speech at the CVF Leaders' event on 07 October 2020, in presence of the UN Secretary-General H.E. Mr. António Guterres, Chair of the Global Center on Adaptation H.E. Ban Ki-Moon, Head of Member-States and government representatives of the CVF. The Mujib climate plan was formulated marking the "birth centenary" of the Father of Nation who recognized the threats of natural calamities and took several initiatives to protect people during his tenure (1972-1975).

The Mujib climate plan did not replace any existing plan, but aims to supplement and accelerate their implementation. The plan needs not to create any operational institution to ensure its implementation, but will expedite the Bangladesh NDC of Paris climate goals to cut emissions. The Mujib plan is a strategy of 5 themes that explores the possibilities and potential of socio-economic development, climate resilience and green opportunities. It will find-out the funding needs from international, regional and private sources, to contribute

to the domestic economy.

Bangladesh is the 7th most affected country in the world due to the adverse impacts of climate change, according to the Climate Change Vulnerability Index. Bangladesh is contributing only 0.3 tonne of annual carbon emission (0.36% of the global carbon emissions), while developed nations about 20 tonnes. Bangladesh ranks 152nd out of 188 countries of world GHG emission, 7th on Global Climate Risk Index, 33rd most vulnerable country and 25th least ready country, meaning that while it is highly vulnerable, it is not ready to prevent or reduce climate change effects.

Bangladesh had prepared its Nationally Determined Contributions (NDC), and already submitted the NDC interim-report on 31 December 2020, and updated final report on 26 August 2021 to the UNFCCC head office. In the NDC, Bangladesh committed to reduce GHG emissions in the power, industry and transport sectors of 12 MTCO_{2e} or 5% below 'business-as-usual' with domestic resources by 2030 as unconditional and 36 MTCO_{2e} or 15% below 'business-as-usual' with foreign technology support within 2030 as conditional contribution.

Mujib First Vision

"No plan, however well-formulated, can be implemented unless there is a total commitment on the part of the people of the country to work hard and make necessary sacrifices" - a Forward Message taken from the First Five Year Plan 1973-1978 by Father of the Nation Bangabandhu Sheikh Mujibur Rahman, as Prime Minister and Chairman, Planning Commission. He was dedicated for

the development of Bangladesh, and included the important sectors: power, industry, natural resources, agriculture, communication, transport, education, health, social-welfare, and technological development in the plan.

Mujib Climate Plan - 'Resilient' to 'Prosperity'

Bangladesh Prime Minister Sheikh Hasina being the Chair of CVF is expected to speak at the COP-26 to be held in Glasgow, UK in November 2021 on behalf of the CVF. In her earlier first term in 2020 as the CVF Chair, she had initiated a discussion amongst member countries to shift their "climate vulnerability" to make more "climate resilient".

In her second term as the CVF President (2021), she initiated a new discussion amongst the CVF members to shift the "climate resilient" to "climate prosperity". The difference between them is that "resilient" focuses on self-managing the adverse risks of climate change, while "prosperity" implies overcoming those risks and becoming prosperous despite those prevailing risks. The 48 CVF countries are now co-opting this concept and many of them are preparing their own Climate Prosperity Plans, following Bangladesh's Mujib climate plan.

Main Themes of Mujib Climate Plan

Theme-1:

Mujib climate plan will make a bridge to implement the existing plans and programs in the quicker strategies as to supplement and accelerate them. The plans are: National Adaptation Plan (underway); National Adaptation Program of Action-2009; Bangladesh Climate Change Strategy and Action Plan-2009;

Climate Change Trust Fund Act-2010; Climate Change Trust Fund-2010; Bangladesh Delta Plan-2100; Climate Fiscal Framework, for Climate Fiscal Policy-making; 8th Five Year Plan (Country Investment Plan for Environment, Forestry and Climate Change 2020-2025; Perspective Plan 2021-2041; Forest Investment Plan 2017-2022; Coastal Embankment Improvement Project; Climate Resilience Program; and Climate Investment Funds.

Theme-2:

The plan aims to achieve transformative change by enabling Bangladesh to an advancement of technological and economic heads. This will be done on a five-plus-five year (2021-2025, + 2026-2030) format, where the first five years (2021-2025) will be to lay the foundations for doing something new and different, and the second five years (2026-2030) will be to put in investments and afford them.

It is based on the new generation of bigger and more stable of renewable energy (like wind turbines) being deployed, which can resist the cyclonic wind speeds in the Bay. The first five years will be used to explore the off-shore wind energy profile and develop the feasibility of the range, while the second five years will be for bringing the millions of dollars of investment, looking from global private-sector investors.

Theme-3:

The Mujib climate plan refers to the construction of strategic Mujib Energy Hubs, which will ensure the reconversion sources of “unclean-energy” such as coal, oil and diesel thermal power plants to high-tech green hydrogen production facilities. This will reinforce power grid stability, providing clean burning fuels, ensuring the up-skills of workers, and allowing energy sector to capitalize on high-valued exporting products in the form of green hydrogen. This is in the line of IREA’s new 1.5 degree pathways report stating solar and wind power generation, which will provide 68% global electricity demand.



Another report of the Institute for Sustainable Futures at the Sydney University of Technology, taking into consideration of land constraints, the renewable energy production in Bangladesh can reach 33% by 2030.

Theme-4:

Bangladesh to gear up to access the required millions of dollars of global green investment funds for domestic green energy development programs. As Bangladesh is hopeful about graduating out of the LDC status over the next few years to reach middle-income status faster, and may no longer be eligible for donors’ grants, it needs to access global investments. The plan is also to enhance the capabilities of public-private financial sector, depending on own finances; and also the intellectual inputs and technical support – a way towards the prosperity by 2030.

Theme-5:

To enhance the quality of education and capacity building of the youths, in order to transform them into technical and managerial professionals, not for job seekers. This particular investment does not really need extra funding, but it does

require a major shift in the existing narrow type education system, from primary to university and even higher professional levels of education. The paradigm-shift will focus on quality instead of quantity.

Bangladesh and Climate Vulnerable Forum (CVF)

As a CVF Chair, the Bangladesh PM pointed out that with the current trend of sea-level rise, most of the island and coastal countries including Bangladesh will go under water making millions of people climate refugees. Realizing this, Bangladesh already declared a “Global Emergency” and called on the world to work “on a war-footing” to stop climate change. The CVF Chair urged for effective reduction of carbon emission from the G20 countries which account for 75% of global emissions, and proposed for an international day to be named “Climate Resilience Day” with a view to think for the time to take actions to save the planet is not tomorrow, but today.

Bangladesh proposed the following recommendations in the CVF:

- To ensure at least 100 billion US dollars a year are available for developing countries for mitigation, adaptation, and disaster response and recovery purposes;
- Strict implementation of the Paris Agreement is the only way to slow down the current rate of damage caused by climate change;
- The governments should not only honor their national contributions under the Paris Agreement, they also need to substantially increase their ambitions. The idea of climate justice must be established for the sake of climate and the planet;
- More vigorous provision of finance must be ensured by the major economies, along with access to technology; and
- Take bold actions to address and mainstream the issue of loss and damage.

Bangladesh Initiatives for Climate Adaptation

Bangladesh has already launched the South Asian regional office for Global Center of Adaptation in Dhaka in September 2020, act as the Secretariat for CVF Bangladesh presidency and facilitate, support and develop appropriate actions to enhance climate resiliency in the region. Bangladesh has already allocated US\$ 430 million from its own resources under Bangladesh Climate Change Trust Fund since 2009, millions of tree-plantlets are being planted every year across the country, developed saline, flood and drought-resistant crops and floating agriculture technology.

Bangladesh has given emphasis on the “mitigation” and “adaptation” programs for NDC, which are co-exist, for the long-term vision. Bangladesh currently spends US\$ 2 billion per year, around 6-7% of its annual budget on climate change adaptation, of which 75% money comes from the government, while the rest comes from international development partners including bilateral, multi-lateral and private funding. It is estimates that the country would need US\$ 5.7 billion as adaptation finance by 2050.

Bangladesh is currently implementing the Sustainable Forests and Livelihoods Project (SUFAL) supported by the World Bank, to improve forest management of coastal green belt across 147 Upazilas (sub-districts), while completed projects are: Climate Resilient Ecosystem and Livelihoods; Integrating Community-based Adaptation into Afforestation and Reforestation Program; Climate Resilient Participatory Afforestation and Reforestation Project. These projects helped reduce forest degradation and build the long-term resilience to climate change, and enhancing capacity on planning and implementation of regional DRR, information management system for DRM, enhancing the capacity of CPP volun-

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DEVELOPMENT OF RENEWABLE ENERGY IN BANGLADESH

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MOHAMMAD ALAUDDIN



Author

Mohammad Alauddin assumed the role of Chairman of the Sustainable and Renewable Energy Development Authority (SREDA), the national nodal agency for the promotion of renewable energy and energy efficiency, in June 2020. Prior to his current position, he spent more than a decade working in the ministry of Power, Energy and Mineral Resources.



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teers and coastal fisherman to cope with climate change, construction of multi-purpose cyclone-shelters and flood-shelter for a comprehensive disaster management program.

Conclusions

The Mujib Climate Plan will be the first of CVF plans, with a strategic investment framework to mobilize financing, especially through international cooperation for implementing renewable energy and climate resilience initiatives. The draft plan identifies several key initiatives, which focus on renewable energy, energy storage infrastructures, power grid modernization, established carbon market regime, Bangladesh

Delta Plan 2100 resilience promises, training and skills development for future, future-proof Bangladesh's industries, locally-led adaptation outcomes, micro, small and medium enterprise financial protection and productivity enhancement, climate-resilient and nature-based agricultural and fisheries development, environment friendly transport, climate resilient well-being programs and accelerated digital revolution.

The Mujib Climate Plan would also inter-link with the CVF actions to focus on the goal to keep the global temperature increase up to 1.5 degrees, accelerating financing mechanisms and highlighting the narratives of climate resilience, 'loss and damage' issue, and creating a CVF and V20 Joint Multi-Donor Fund. The plan is a blessing for Bangladesh in the birth centenary of the Father of the nation, a new supplementary guideline for its multi-sectoral and sustainable development of the country, and would be a great contribution to the national economy. Bangladesh is expected to accelerate implementation of the existing development plans and programs by the new strategies and themes of Mujib plan. As a result,

the plan would help expedite the actions towards achieving the Paris climate goals, explore the possibilities of new pathways for socio-economic development, achieve climate resilience to minimize human casualties and damages from natural disasters; and create more green opportunities to achieve national targets by 2030 and vision 2041.

(Sources: Bangladesh NDC-2021, UN-FCCC Report-2021, Saleemul Huq-2021)

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CONTRACT SIGNING BETWEEN FOOD MINISTRY AND
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CONSTRUCTION OF STEEL SILO AT NARAYANGANJ



Net-Zero Emissions

Pathway Narrow, But Brings Huge Benefits

IEA Report

The world has a viable pathway to building a global energy sector with net-zero emissions in 2050, but it is narrow and requires an unprecedented transformation of how energy is produced, transported and used globally, the International Energy Agency said in a landmark special report released recently.

Climate pledges by governments to date – even if fully achieved – would fall well short of what is required to bring global energy-related carbon dioxide (CO₂) emissions to net zero by 2050 and give the world an even chance of limiting the global temperature rise to 1.5 °C, according to the new report titled “Net Zero by 2050: A Roadmap for the Global Energy Sector”.

The report is the world’s first comprehensive study of how to transition to a net zero energy system by 2050 while ensuring stable and affordable energy supplies, providing universal energy access, and enabling robust economic growth.

It sets out a cost-effective and economically productive pathway, resulting in a clean, dynamic and resilient energy economy dominated by renewables like solar and wind instead of fossil fuels.

The report also examines key uncertainties, such as the roles of bioenergy, carbon capture and behavioral changes in reaching net zero.

“Our Roadmap shows the priority actions that are needed today to ensure the opportunity of net-zero emissions by 2050 – narrow but still achievable – is not lost. The scale and speed of the ef-

forts demanded by this critical and formidable goal – our best chance of tackling climate change and limiting global warming to 1.5 °C – make this perhaps the greatest challenge humankind has ever faced,” said Fatih Birol, the IEA Executive Director.

“The IEA’s pathway to this brighter future brings a historic surge in clean energy investment that creates millions of new jobs and lifts global economic growth. Moving the world onto that pathway requires strong and credible policy actions from governments, underpinned by much greater international cooperation.”

Building on the IEA’s unrivalled energy modelling tools and expertise, the Roadmap sets out more than 400 milestones to guide the global journey to net zero by 2050. These include, from today, no investment in new fossil fuel supply projects, and no further final investment decisions for new unabated coal plants.

By 2035, there are no sales of new internal combustion engine passenger cars, and by 2040, the global electricity sector has already reached net-zero emissions.

In the near term, the report describes a net zero pathway that requires the immediate and massive deployment of all available clean and efficient energy technologies, combined with a major global push to accelerate innovation.

The pathway calls for annual additions of solar PV to reach 630 gigawatts by 2030, and those of wind power to reach

390 gigawatts. Together, this is four times the record level set in 2020.

For solar PV, it is equivalent to installing the world’s current largest solar park roughly every day. A major worldwide push to increase energy efficiency is also an essential part of these efforts, resulting in the global rate of energy efficiency improvements averaging 4% a year through 2030 – about three times the average over the last two decades.

Most of the global reductions in CO₂ emissions between now and 2030 in the net zero pathway come from technologies readily available today. But in 2050, almost half the reductions come from technologies that are currently only at the demonstration or prototype phase.

This demands that governments quickly increase and reprioritise their spending on research and development – as well as on demonstrating and deploying clean energy technologies – putting them at the core of energy and climate policy.

Progress in the areas of advanced batteries, electrolysers for hydrogen, and direct air capture and storage can be particularly impactful.

A transition of such scale and speed cannot be achieved without sustained support and participation from citizens, whose lives will be affected in multiple ways.

“The clean energy transition is for and about people,” said Dr Birol. “Our Roadmap shows that the enormous challenge of rapidly transitioning to a

net zero energy system is also a huge opportunity for our economies. The transition must be fair and inclusive, leaving nobody behind. We have to ensure that developing economies receive the financing and technological know-how they need to build out their energy systems to meet the needs of their expanding populations and economies in a sustainable way."

Providing electricity to around 785 million people who have no access to it and clean cooking solutions to 2.6 billion people who lack them is an integral part of the Roadmap's net zero pathway.

This costs around \$40 billion a year, equal to around 1% of average annual energy sector investment. It also brings major health benefits through reductions in indoor air pollution, cutting the number of premature deaths by 2.5 million a year.

Total annual energy investment surges to USD 5 trillion by 2030 in the net zero pathway, adding an extra 0.4 percentage points a year to global GDP growth, based on a joint analysis with the International Monetary Fund.

The jump in private and government spending creates millions of jobs in clean energy, including energy efficiency, as well as in the engineering, manufacturing and construction industries. All of this puts global GDP 4% higher in 2030 than it would reach based on current trends.

By 2050, the energy world looks completely different. Global energy demand is around 8% smaller than today, but it serves an economy more than twice as big and a population with 2 billion more people.

Almost 90% of electricity generation comes from renewable sources, with wind and solar PV together accounting for almost 70%. Most of the remainder comes from nuclear power. Solar is the world's single largest source of total energy supply.

Fossil fuels fall from almost four-fifths of total energy supply today to slightly over one-fifth. Fossil fuels that remain are used in goods where the carbon is embodied in the product such as plastics, in facilities fitted with carbon capture, and in sectors where low-emissions technology options are scarce.

"The pathway laid out in our Roadmap is global in scope, but each country will need to design its own strategy, taking into account its own specific circumstances," said Dr Birol.

"Plans need to reflect countries' differing stages of economic development: in our pathway, advanced economies reach net zero before developing economies. The IEA stands ready to support governments in preparing their own national and regional roadmaps, to provide guidance and assistance in implementing them, and to promote international cooperation on accelerating the energy transition worldwide."

The special report is designed to inform the high-level negotiations that will take place at the 26th Conference of the Parties (COP26) of the United Nations Climate Change Framework Convention in Glasgow in November.

It was requested as input to the negotiations by the UK government's COP26 Presidency.

"I welcome this report, which sets out a clear roadmap to net-zero emissions and shares many of the priorities we have set as the incoming COP Presidency – that we must act now to scale up clean technologies in all sectors and phase out both coal power and polluting vehicles in the coming decade," said COP26 President-Designate Alok Sharma.

"I am encouraged that it underlines the great value of international collaboration, without which the transition to global net zero could be delayed by decades. Our first goal

for the UK as COP26 Presidency is to put the world on a path to driving down emissions, until they reach net zero by the middle of this century."

New energy security challenges will emerge on the way to net zero by 2050 while longstanding ones will remain, even as the role of oil and gas diminishes.

The contraction of oil and natural gas production will have far-reaching implications for all the countries and companies that produce these fuels.

No new oil and natural gas fields are needed in the net zero pathway, and supplies become increasingly concentrated in a small number of low-cost producers.

OPEC's share of a much-reduced global oil supply grows from around 37% in recent years to 52% in 2050, a level higher than at any point in the history of oil markets.

Growing energy security challenges that result from the increasing importance of electricity include the variability of supply from some renewables and cybersecurity risks.

In addition, the rising dependence on critical minerals required for key clean energy technologies and infrastructure brings risks of price volatility and supply disruptions that could hinder the transition.

"Since the IEA's founding in 1974, one of its core missions has been to promote secure and affordable energy supplies to foster economic growth. This has remained a key concern of our Net Zero Roadmap," Dr Birol said.

"Governments need to create markets for investments in batteries, digital solutions and electricity grids that reward flexibility and enable adequate and reliable supplies of electricity. The rapidly growing role of critical minerals calls for new international mechanisms to ensure both the timely availability of supplies and sustainable production."

EP

Matarbari Power Plant Cost to Surge by Tk 158.7b



The implementation cost of 1200-megawatt Matarbari coal-fired ultra-super critical plant may soar to around Tk 518.54 billion due to inclusion of some components at the project.

The government has undertaken the project at a cost of Tk 359.84 billion to supply quality and reliable power at affordable prices.

“We have included Sedimentation and Mitigation Dyke at a cost of Tk 50 billion. Besides, we also included Dhalghata-Matarbari electrification, dredging and land development under the mega project. For these, the cost will soar,” an official concerned said.

He said the Coal Power Generation Company Bangladesh (CPGCB) already proposed to raise the cost of the country’s one top priority mega project before Executive Committee of the National Economic Council

(ECNEC) for approval.

Of the total project cost, the government will provide Tk49.27billion while Tk289.39 billion will come from Japan International Cooperation Agency (JICA) support and Tk 21.19billion will be provided by the state-owned Coal Power Generation Company Bangladesh Ltd.

“Most of the mega projects have been delayed due to the second wave of COVID-19. But we didn’t stop for a single day. We are following all health guidelines and there is PCR test facility in the project site,” Md, Monowar Hossain Majumder, superintendent engineer (operation) of the Coal Power Generation Company Bangladesh Ltd, said during a visit to the site recently.

He said a total of 37 projects in Moheshkhali and Matarbari were being implemented depending on the infrastructure facilities of the Matarbari coal-fired power project. **EP**

PDB to Install 1m Pre-Paid Meters in 13 Districts

Bangladesh Power Development Board (BPDB) will install 1 million more smart pre-paid electricity meters in 13 districts to cut non-technical system

loss by 1 per cent and ensure full revenue collection in advance.

Chattogram, Cox’s Bazar, Bandarban, Rangamati, Khagrachhari, Cumilla, Brahmanbaria, Feni and Noakhali, Kishoreganj, Tangail, Mymensingh, and Sylhet are the districts to come under the project.

BPDB has sent a Tk 7.09 billion project proposal to “Smart Pre-Payment Meter-



ing Project in Distribution Zones of BPDB” to the Planning Commission to secure approval from the Executive Committee of the National Economic Council (ECNEC) approval.

The move comes as part of the power division’s target to install some 8.8 million smart pre-paid meters across the country through different state-run power distribution companies. **EP**

Govt May Import Condensate for Private Refineries



The government is likely to import condensate, a byproduct of natural gas, to feed 12 private refineries for producing 1.3 million tonnes of petroleum fuel annually.

The ministry of power, energy and mineral resources has discussed the matter with private condensate refineries recently.

“Bangladesh Petroleum Corporation (BPC) will import condensate for private refineries subject to the ap-

proval of the prime minister,” State Minister for Power and Energy Nasrul Hamid said recently.

He said the ministry will send a summary to Prime Minister

Sheikh Hasina in this regard. The private refineries must supply the petroleum products as per the guideline of BPC, he added.

The private refinery plants have remained closed due to a supply shortage of condensate from local gas fields. Besides, there is a High Court verdict issued to ensure the production and use of environment-friendly petroleum products. **EP**

Bashundhara LPG Bags Int'l Award in Alternative Energy



Bashundhara LPG has won an international award for its contribution in alternative energy supporting sustainable development goals in the country.

United Kingdom-based economy journal 'Business Tabloid' announced the award title 'Best LP Gas Company' to the brand recently, said a handout of Bashundhara LPG.

Officials informed the London-based online magazine recognized individuals and organizations for their outstanding contributions in respective fields in indicators of potentiality and skills.

For supporting behind the international achievement, Bashundhara Group vice

chairman Shafiat Sobhan expressed gratitude to consumers, sellers and distributions of the market leading brand.

He also urged all to work together in more efforts to keep the strong stability of Bashundhara LPG in market.

Bashundhara LPG head of sales Jakaria Jalal said Bashundhara LPG has been contributing for strengthening the local markets leveraging the decades long experience in the field.

The awards from Business Tabloid is another feather of success to the Bashundhara LPG brand which bagged 'best brand' and 'super brand' titles from international agencies in last two decades. **EP**

Sion Corporation, Versatech Energy, and AC Biode Sign MOU

GCM Resources plc (LON: GCM), an AIM quoted mining and energy company, is pleased to advise that it has agreed a memorandum of understanding (MOU) with Sion Corporation of Japan (SION), Versatech Energy Innovation Limited (VERSATECH), and AC Biode Co. Ltd (AC BIODE) for providing a suit-

able and effective environmental solution for the management of the fly-ash waste product that will be produced by the Phulbari Coal and Power Project.

This will include, inter alia, investigations into the production of the composite material CircuLite from fly-ash produced by the Project and

GECF Joins OPEC Ministerial Roundtable on Energy

The Gas Exporting Countries Forum (GECF), the global platform of the leading gas producing countries, recently joined OPEC, non-OPEC, and a plethora of other international energy organizations to present a unified front on the advancement of natural gas as part of a balanced energy solution to achieve sustainable development goals.

The OPEC-hosted Ministerial Roundtable on Energy, Climate and Sustainable Development, where more than a dozen ministers were flanked by intergovernmental organizations such as GECF, APPO, AEC, AFREC, ARDA, IEF, and OAPEC, termed the gathering as coming at a "profound

time in the momentum of the global climate effort".

Addressing more than 100 delegates, Yury Sentyurin, Secretary General of the GECF, said that the 18-member consortium is fully committed to develop actions towards clean energy transitions in a balanced manner.

"As the largest energy organizations in the world, the onus is on us to address climate change in a balanced manner – an approach that enables us to deal with the climate threats whilst at the same time considers the immense requirement of nations to ensure their economic development and social progress," said Sentyurin. **EP**



the application of CircuLite to various environmental and agricultural improvements within Bangladesh.

The primary objective of this MOU is to establish a cooperative relationship between the Parties, and to pursue an agreed objective to improve the environmental performance of the Project and extend the Project's benefits for Bangladesh through the application of CircuLite.

Parties may be in a position to prepare a draft business structure and business plan for managing the fly-ash production and utilization and, maximizing the benefits.

The MOU has a term of 12-months, with the intention that it will be superseded, in due course, by a more detailed working arrangement between the parties, but may be terminated earlier under certain prescribed conditions. **EP**

Creating Skilled Workforce for Bangladesh



With the vision to create a skilled workforce and provide easy access to vocational training for youths of Sylhet City Corporation (SCC), Swisscontact Bangladesh's Uttoron project, funded by Chevron's Bangladesh Partnership Initiative, recently signed an agreement to establish a training institute in Sylhet.

This Public-Private Partnership (PPP) offers an impetus to achieve the Bangladesh government's Sustainable

Development Goals per the Skills Development Policy 2011.

The Uttoron project will be working with SCC to convert existing infrastructure into a training facility.

The training facility will have an initial capacity to provide training to 1,200 youths annually on four industry-demanded trades (electrical installation & maintenance, welding, plumbing pipe fitting, and housekeeping). **EP**

Major Oil Producers Set to Uphold Small Output Increase



The world's leading oil producers are expected to uphold a July deal to slowly boost output at a meeting recently, despite US pressure to go further.

OPEC members led by Saudi Arabia along with allies including Russia, known collectively as OPEC+, decided in July to raise output by 400,000 barrels per day (bpd) each month from August, in a deal thrashed out after

weeks of wrangling.

The move is aimed at supporting a global economic recovery, which has been battered by the coronavirus pandemic -- a crisis that sent oil demand plummeting last year.

But US national security adviser Jake Sullivan said last month that the production boost agreed in July was "simply not enough" to fuel a global recovery. **EP**

Thermal Power to Dominate Power Generation in Russia to 2030, says GlobalData

Slow growth of renewable technology in Russia will mean the country will have to continue to significantly depend on thermal sources for power generation, according to GlobalData.

The leading data and analytics company notes that thermal power is expected to have the largest share in Russia's power generation mix by 2030, with a 57.8% share.

According to GlobalData's report, 'Russia Power Market Outlook to 2030, Update 2021 – Market Trends, Regulations, and Competitive

Landscape', Russia's large reserves of natural gas and coal have kept the country away from embracing renewable sources for power generation.

Rohit Ravetkar, Power Analyst at GlobalData, says: "In 2030, power generation from renewables will contribute a share of only 1.2%. The availability of cheap conventional energy sources has meant renewable just hasn't been a priority. In fact, Russia has the world's largest proven natural gas reserves and the second-largest coal reserves." **EP**

bp Delivers First Carbon Offset LNG Cargo

BP Singapore Pte. Limited ("bp Singapore") recently announced that it has delivered its first carbon offset liquefied natural gas (LNG) cargo to CPC Corporation, Taiwan ("CPC"), to the Yung An terminal in Taiwan in September 2021 and was sourced from bp's LNG portfolio.

This is bp's first delivery of carbon offset LNG in the Asia-Pacific region, following its first delivery globally to Semptra LNG at the Energia Costa Azul terminal in

Mexico in July 2021.

This new carbon offset LNG offer strengthens bp's natural gas offering in the region.

Carbon dioxide (CO₂) and methane (CH₄) emissions associated with the LNG cargo, from wellhead to discharge terminal for the specific source and voyage, were estimated using bp's GHG quantification methodology for LNG.

The methodology has been developed having regard to relevant international standards and incorporating input from third party experts including the Wood Mackenzie LNG Carbon Emissions Tool, and may be updated from time to time. **EP**



Cabinet Nods 5 Years Extension Proposal of SPL Provision for Quick Energy Supply



The Cabinet recently approved a proposal on extension of the Quick Enhancement of Electricity and Energy Supply (Special Provision) Act-2010 for five more years till 2026.

The approval came from a weekly meeting held virtually with Prime Minister Sheikh Hasina in the chair.

The Premier joined the meeting from her official residence Ganabhaban while her cabinet colleagues got connected from the cabinet division of the Bangladesh Secretariat.

In a briefing following the meeting, Cabinet Secretary Khandker Anwarul Islam said, "The proposed law was brought to extend five more years the tenure of the existing law which is going to expire

this year while its effectiveness is quite satisfactory."

He said that the cabinet gave final consent to the draft of Quick Enhancement of Electricity and Energy Supply (Special Provision) (Amendment) Bill, 2021.

The bill was brought to make sure uninterrupted supply of electricity and energy to support the government move to turn Bangladesh into a higher middle-income country by 2030 and a developed one by 2041.

He added that the tenure of the special provision enacted in 2010 and was extended several times earlier.

The cabinet secretary said no change except time extension has been made to the proposed law. **EP**

LNG Import: Foreign Companies Seek Long-Term Deals

International suppliers are offering long-term deals with Bangladesh to meet its soaring demand for liquefied natural gas (LNG), while energy experts and consumer right groups want the government to go through a competitive bidding process to ensure transparency.

Currently, the government is importing around five to six LNG cargoes, having the quantity of around 138,000 cubic meters every month.

But the forecast is that the import will go up gradually as the country's focus is now being shifted to LNG from coal as primary fuel for power generation.

According to sources, Bangladesh now imports LNG from two companies—Qatar-based QatarGas and Oman-based Oman Trading International—on long term basis while short-term supply is coming from international spot market where 17 more companies are enlisted. **EP**

Union Power Secretary Reviews Coal Stock Position

Union Power Secretary Alok Kumar recently reviewed coal stock position at thermal power plants and production of captive coal mines and decided on three interventions towards ensuring uninterrupted power supply.

According to a statement released by the Ministry of Power, Kumar held a meeting as per the directions of the Union Minister of Power and New and Renewable Energy RK Singh.

Captive coal mine companies have been given a notice of one week to increase their production to more than 85 per cent of their targets and if

they fail, the supply of linkage coal to such states or Gencos would be regulated, as per information by the ministry.

"Those states or DISCOMS who procure power from imported coal-based power plants have been given a notice of two weeks to meet their power demand from these power plants. In case of failure, the supply of domestic coal to these states would be regulated," said the ministry.

It further stated that the coal supply of the power plants having coal stock of more than 10 days but the plant load factor less than 40 per cent would be regulated to the extent of 100 per cent. **EP**

Wärtsilä Supply System for New LNG Bunkering Vessel



continues to be increasingly adopted as an important contributor to lowering global exhaust emis-

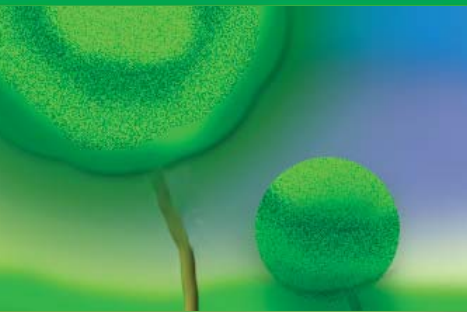
The technology group Wärtsilä has been awarded a contract to supply a complete cargo handling system for a new LNG bunkering vessel.

The ship is being built at the Nantong CIMC Sinopacific Offshore and Engineering shipyard in China for Fratelli Cosulich S.p.A, the Italy based shipping group. The contract with Wärtsilä Gas Solutions was booked in August.

LNG is well established as a viable marine fuel, and it

sion levels.

The Wärtsilä system selected for this 8200 m3 capacity bunkering vessel includes a complete engineering, design, and equipment supply package for the cargo handling system, including a loading and discharge system, a boil-off gas (BOG) management control and integrated fuel supply system, as well as the custody transfer and bunkering transfer systems. **EP**



Green page

Stimulus Package Introduced for Expansion of RE: Nasrul



State Minister for Power, Energy and Mineral Resources Nasrul Hamid has recently said that the government has offered various stimulus packages for expansion of Renewable Energy (RE) in the country.

"Rooftop solar and net metering system is getting popularity day by day as a business model," he told British High Commissioner Robert Chatterton Dickson as the envoy met him virtually.

Nasul Hamid said solar home system has been providing electricity to around 2.0 crore people at off-grid areas across the country due to incentives.

He said that the initial cost and storage of renewable energy system is a huge challenge. "Huge land is needed for solar power. We have completed wind mapping but more researches on wind power and ocean power are required. In this case technical, economic and experience exchange is essential," the state minister added.

He said that initiatives have been taken to import hydropower from Nepal and Bhutan.

During the meeting, Nasrul discussed Bangladesh's Energy Transition, its possibilities and power system master plan review with the envoy.

Besides, Bangladesh's Planning, climate and environmental protection with the Energy Transition Council were also discussed in the virtual meeting.

The High Commissioner highlighted about Net Zero emission by 2050.

During the meeting, team leader on climate change and environment of British High Commission John Warburton and Director (Development) Judith Herbertson joined.

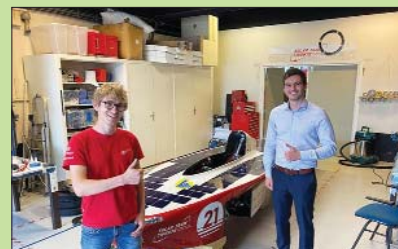
The state minister greeted the High Commissioner and said that Bangladesh is conducting all development activities in coordination with the environment.

EP

Leybold Sponsors Dutch University Team at "Solar Challenge Morocco" Desert rally

After the Australian "Bridgestone World Solar Challenge" was canceled, an adequate alternative route to the flat outback was quickly found with the "Solar Challenge Morocco".

Despite the changed route through the desert and along the Atlas Mountains, the dutch racing team of Solar Team Twente is still optimistic that they will



be able to win the World Championship for Solar Cars – also thanks to the sponsorship of Leybold.

On 23 October, the starting signal for the international student teams will be given in the port city of Agadir. The 2500-kilometre route will be ridden in five daily stages.

In addition to the sporting competition, the event serves not least the worldwide networking of young scientists as well as the sustainable promotion of innovation and research.

"In times of climate change, we see a responsibility in concretely promoting the efficient use of renewable energy potentials and thus contributing to the reduction of air pollution," says Ian Dorman, General Manager of Leybold EMEA North East, explaining the sponsorship of the vacuum specialist.

EP



পাওয়ার গ্রিড কোম্পানি অফ বাংলাদেশ লিঃ
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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।



'Bikiron' Invites Innovative Ideas on Sustainable Energy



Sustainable and Renewable Energy Development Authority (SREDA) in cooperation with Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) is organizing a competition titled 'Bikiron' to create awareness among university students about energy efficiency and conservation, and encourage them to conceive innovative ideas.

The opening ceremony of the competition was held virtually on September 9, according to a press release.

SREDA has been taking various timely initiatives to spread awareness on energy efficiency and conservation.

As part of Mujib Borsho celebrations, SREDA launched a nationwide awareness campaign titled "Shasroye Jalani, shomridho agami (conserve energy, brighten your future)". Bikiron is being organized as part of this campaign.

Innovative solutions are being invited from university students on three categories: increasing energy efficiency in residential and commercial buildings, improving quality of life using sustainable energy technology in rural areas, and making children and adolescents aware of energy conservation.

Students from any university in Bangladesh will be able to form a team of 2-4 people and register for the competition through www.bikiron.org

within September 19.

The most promising innovative ideas registered will pass to the next stage of the competition. At this stage, they will have the opportunity to further strengthen their ideas with the help of

renowned experts from the sustainable energy sector.

At the same time, webinars will be organized for their capacity development. At the end of the process, the winning teams will get attractive rewards, and technical support for implementing their ideas.

The event was presided over by Mohammad Alauddin, Chairman, SREDA. Md. Habibur Rahman, Secretary, Power Division addressed the launching ceremony as a Special Guest.

The Chief Guest was Nasrul Hamid MP, State Minister for Power, Energy and Mineral Resources. He congratulated SREDA on organizing such an event on sustainable energy for the youth during the Mujib Borsho.

"I believe our talented youth will think deeply about these issues and participate strongly in the development of the country through their innovative talent and hard work," he said.

Farzana Mamtaz, Member (Joint Secretary), Energy Efficiency and Conservation, SREDA and Al Mudabbir Bin Anam, Program Coordinator, Renewable Energy and Energy Efficiency Program, GIZ, Dr. Md. Ziaur Rahman Khan, Professor, Department of Electrical and Electronic Engineering, Bangladesh University of Engineering and Technology and Dr. Subrata Kumar Aditya, Professor, Department of Electrical and Electronic Engineering, Dhaka University also spoke at the event.

EP

Greenpage

Toyota to Spend \$13.5b for Battery Tech by 2030

Toyota Motor Corp mentioned recently it expects to spend more than \$13.5 billion by 2030 to develop batteries and its battery provide system – a bid to steer in the important thing automotive expertise over the following decade.

The world's largest automaker by quantity, which pioneered hybrid gasoline-electric autos with the favored Prius, is now shifting quickly to ship its first all-electric line-up subsequent 12 months.

Thought of a pacesetter in creating batteries for electrical autos, Toyota mentioned it goals to slash the price of its batteries by



30 per cent or extra by engaged on the supplies used and the way in which the cells are structured.

"Then, for the automobile, we goal to enhance energy consumption, which is an indicator of the quantity of electrical energy used per kilometer, by 30 per cent, beginning with the Toyota bZ4X," Chief Know-how Officer Masahiko Maeda informed a briefing, referring to an upcoming compact SUV mannequin.

The corporate can be the entrance runner to mass produce solid-state batteries – a possible sport changer for automakers as a result of their extra vitality dense, cost quicker and are much less vulnerable to catching fireplace. If developed efficiently, they might substitute liquid lithium-ion batteries.

EP

T&T, Ørsted to Invest US\$30B in Offshore Wind Power Development in Vietnam



T&T Group, a multi-industry group of Vietnam and Ørsted, a leading group in offshore wind power signed a Memorandum of Understanding (MoU) on strategic cooperation in offshore wind power in Vietnam, promises to bring a large supply of renewable energy through new investment on offshore wind power projects in Binh Thuan and Ninh Thuan provinces of Vietnam.

Mrs. Nguyen Thi Thanh Binh, Deputy General Director of T&T Group and Mr. Martin Neubert, COO & Deputy Group CEO of Ørsted, signed the Memorandum of Understanding (MoU) on strategic collaboration on offshore wind in Vietnam, according to a press release.

Accordingly, the two groups will use and

promote the experience, strengths and capabilities to bring high efficiency for the projects. Both sides cooperate in developing three projects in Binh Thuan and Ninh Thuan provinces with a total estimated installed capacity of nearly 10 GW and total expected investment of about 30 billion U.S. dollars in 20 years.

Do Quang Hien, Chairman of T&T Group, said: "T&T Group has planned a strategy to develop renewable energy and gas to power projects by 2030 with a vision to 2045, in line with the national strategy and planning of energy. This cooperation will help T&T Group accelerate the implementation of this strategy, bring valuable international experience and financial resources in the implementation of projects in Vietnam."

Matthias Bausenwein, President of Ørsted Asia-Pacific, said: "Ørsted aims to reach 30 GW of offshore wind power by 2030. To support this ambitious goal, we need to work closely with a partner like T&T Group, who bring a deep understanding of the market and have an impressive track record in developing large scale energy projects in Vietnam." **EP**

Toshiba Claims 15.1% Efficiency for Polymer Solar Module

The result is claimed to be the highest efficiency ever reached for a large-area, polymer film-based perovskite photovoltaic module. The device has an area of 703 square centimeters and was fabricated through a new coating method.

Japanese electronics manufacturer Toshiba has announced a 15.1% power conversion efficiency for a 703cm² polymer film-based perovskite solar module.

The result is claimed to be, by the company, the highest efficiency ever reported for any large, polymer film-based perovskite photovoltaic module to date.

The device was fabricated through a one-step coating method that uses improved ink, film drying processes, and production equipment to form a uniform perovskite layer.

The process is said to halve the steps for deposition of the MAPbI₃ perovskite layer. The coating speed is said to reach six meters per minute on a 5×5 cm² module, which the company defined as a rate that meets requirements for mass production.

Toshiba had previously developed a two-step coating process that first applied a layer of lead iodide (PbI₂) ink to a substrate, followed by a layer of methylammonium iodide (MAI) which formed the MAPbI₃ layer. **EP**



Adani Green Energy Raises \$750m from Green Bond Sale

Adani Green Energy Ltd (AGEL) recently said it has raised \$750 million in a sale of green bonds to finance its under-construction projects.

"Under the structure, AGEL can draw up to \$1,700 million (including the present issuance) over the course of time subject to the covenants of the structure. The notes were rated Ba3 (Stable) by Moody's," AGEL said in a statement.

The fundraising follows AGEL buying Japan's SoftBank Group Corp. and Bharti Enterprises Ltd-owned solar power producer SB Energy India for an enterprise value of \$3.5 billion.

SB Energy India has a total renewable portfolio of 4.954 gigawatts (GW) spread across four states in India.

"The joint lead managers (JLMs) to the issuance were Axis Bank, Barclays, BNP Paribas, DBS Bank Ltd, Emirates NBD Capital, IMI-Intesa Sanpaolo, MUFG, Mizuho Securities, SMBC Nikko and Standard Chartered Bank," the statement added.

"In line with the Adani Group's energy mix transition, AGEL has grown rapidly and has consistently demonstrated the strength of the company's clean energy business model and its commitment to global benchmarks of ESG. It follows the guiding principles of United Nation Sustainable Development Goals, United Nation Global Compact and the Science Based Targets Initiative," the statement said.

This comes in the backdrop of market regulator Securities and Exchange Board of India (Sebi) making Business Responsibility and Sustainability Reporting (BRSR) mandatory from 2022-23 for the top 1,000 listed firms. These disclosures are voluntary this year. **EP**

Momen Proposes Hosting Joint Event at COP26



Foreign Minister Dr AK Abdul Momen has proposed to host a CVF-COP26 joint event on the sideline of upcoming COP26 to strengthen climate cooperation between the President of COP-26 and the most climate-vulnerable countries including Bangladesh.

Dr Momen made the proposal while holding a bilateral talk with COP26 President-Designate Alok Sharma in London recently, according to a press release received here.

During the meeting, foreign minister highlighted Bangladesh's important role in the Climate Vulnerable Forum (CVF) under the chairmanship of visionary leader Prime Minister Sheikh Hasina while discussing about the joint event targeting the COP26 to be held in Glasgow in early November.

Dr Momen also proposed to expand bilateral climate relations between the UK and Bangladesh especially in transferring green technology, promoting green investment, and supporting climate mitigation projects such as building embankments to protect people from sea-level rise and river erosion.

The foreign minister briefed Sharma on the COP26 agenda for Bangladesh focusing particularly on loss and damage and the proposed CVF-COP26 Leaders' Summit under Bangladesh Presidency.

Sharma assured Bangladesh of the UK's continued support for its climate initiatives covering different areas, including collaboration to promote green financing and investment, and technology transfer to build a clean and green future.

Bangladesh High Commissioner to the UK and Ireland Saida Muna Tasneem accompanied Dr Momen to the talk along with other senior members of the Minister's delegation. **EP**

BMW Unveils CE 02 Electric Mini-Bike

Leading German luxury car-maker BMW Group has unveiled its CE 02 concept electric mini-bike.

According to The Verge, the CE 02 has an 11kW belt-drive motor, which can help the bike reach a top speed of around 90 kilometers per hour (about 56 miles per hour).

BMW isn't sharing the battery capacity, but claims the CE

02 can go about 90 kilometers on a full charge.

The vehicle comes with a futuristic design and is available with an LED headlight and LCD instrument console. Wheel size is 15 inches and the weight of the bike is 120 kg.

The BMW CE 02 is a concept electric scooter and it is unclear whether the vehicle would head to production. **EP**

Bangladesh, UK Decide to Build Bilateral Climate Partnership

Bangladesh and the United Kingdom (UK) have decided to build bilateral climate partnership to help mobilizing finances and technologies in support of Dhaka's efforts in pursuing a low-carbon development pathway.

The two countries decided the partnership, agreed earlier in the year, at the 4th Strategic Dialogue held in London recently when Bangladesh and Britain reaffirmed their historic and multi-dimensional ties.

Foreign Secretary Masud Bin Momen led the Bangladesh delegation at the day-long talks.

During the meeting, both the



sides renewed their commitment to climate action, including combining forces of the UK's COP26 Presidency and Bangladesh's leadership of the Climate Vulnerable Forum (CVF).

The British side recognized Bangladesh's role as a critical stability provider in the region, and its particular relevance in the context of the UK's integrated foreign, trade, development and security policy review with focus on the Indo-Pacific. **EP**

COP26 Should Ensure Balanced Outcome: Indian Minister



The upcoming COP 26 on climate change should ensure a balanced outcome with equal treatment to all agenda items such as finance and response measures, Union Environment Minister Bhupender Yadav said recently.

His remarks came in a meeting with Denmark's Minister of Climate, Energy and Utilities Dan Joergensen. The 26th conference of parties (COP 26) of the UN Framework Convention on Climate Change (UNFCCC) is sched-

uled to be held in Glasgow, Scotland in November.

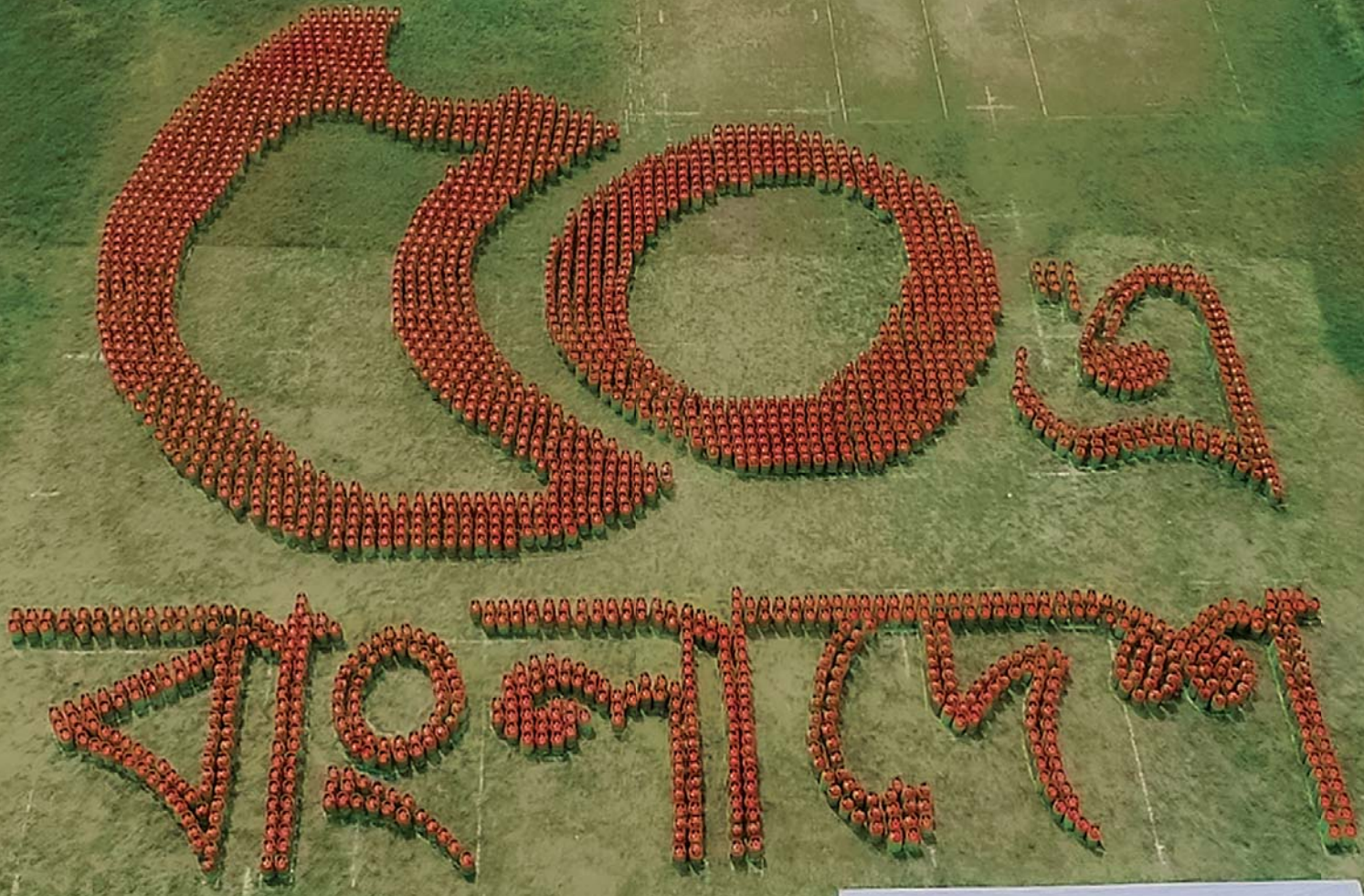
After the meeting, Yadav tweeted that he had an engaging and fruitful discussion with his Danish counterpart.

"I thanked him for the efforts of the Kingdom of Denmark in the renewable energy sector, especially for the cooperation in setting up the Offshore Clean and Wind Energy Hub in Tamil Nadu," he tweeted.

The two ministers discussed general bilateral cooperation between India and Denmark in the areas of environment and climate change, the environment ministry said.

Minister Dan Jorgensen is on five-day visit to India with a business delegation. **EP**

* সতর্কতা অবলম্বনে ১২.৫ কেজি ওজনের খালি গ্যাস সিলিন্ডার ব্যবহৃত হয়েছে।



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সিলিন্ডার দিয়ে আসরা ঐকেছি প্রিয় বাংলাদেশের নাম।



UNFCCC Greet Bangladesh



the UNFCCC congratulated Bangladesh on its timely submission of an updated NDC with its commitment to cut greenhouse gas emissions in accordance with the

Patricia Espionosa, the Executive Secretary of United Nations Framework Convention on Climate Change (UNFCCC), has congratulated Bangladesh due to its timely submission of an updated Nationally Determined Contribution (NDC).

She also greeted Environment, Forest and Climate Change Minister Md Shahab Uddin for his contribution to addressing climate change impacts in Bangladesh.

In a letter dated August 30,

Paris Climate Agreement on Climate Change, a ministry press release said.

The UNFCCC executive secretary said the timely submission of NDCs during the ongoing global crisis like the COVID-19 pandemic is undoubtedly commendable.

She lauded Bangladesh for its significant commitment to reduce greenhouse gas emissions by 2030 and for increasing targets in various fields.

EP

Green Groups Call for COP26 Postponement



The COP26 conference, which was put back from last year due to the Covid-19 crisis, is scheduled to take place from 31 October to 12 November in Glasgow, Scotland.

"Our concern is that the countries deeply affected by the climate crisis and suffering from the lack of support by rich nations in providing vaccines will be left out of the talks," CAN Executive Director Tasneem Essop said.

Farhan Haq, a spokesperson for UN Secretary-General Antonio Guterres, said the scientifically established urgency of combating climate change meant a further delay of COP26 'is no longer feasible'.

EP

A coalition of more than 1,500 environmental groups recently called for postponement of COP26 scheduled to begin next month, saying access to them would be unequal.

Delegates from more than 190 countries attend the annual talks, yet with many countries grappling with Covid-19 and poorer nations struggling to access vaccines, they should be postponed, the Climate Action Network (CAN) said.

World's Largest Plant Capturing Carbon from Air Starts in Iceland

The world's largest plant that sucks carbon dioxide directly from the air and deposits it underground started its operation recently.

Swiss start-up Climeworks AG, which specializes in capturing carbon dioxide directly from the air, has partnered with Icelandic carbon storage firm Carbfix to develop a plant that sucks out up to 4,000 tons of CO₂ per year.

That's the equivalent of the annual emissions from about 790 cars. Last year, global CO₂-emissions totaled 31.5 billion tonnes, according to the International Energy Agency.

Direct air capture is one of the few technologies extracting carbon dioxide from the atmosphere and is viewed by scientists as vital to limit global warming, blamed for causing more heatwaves, wildfires, floods and rising sea levels.

The Orca plant, a reference to the Icelandic word for energy, consists of eight large containers similar in looks to those used in the shipping industry, which employ high-tech filters and fans to extract carbon dioxide.

The isolated carbon is then mixed with water and pumped deep underground, where it slowly turns into rock. Both technologies are powered by renewable energy sourced from a nearby geothermal power plant.

Direct air capture is still a fledgling and costly technology, but developers hope to drive down prices by scaling up as more companies and consumers look to reduce their carbon footprint.

There are currently 15 direct air capture plants operating worldwide, capturing more than 9,000 tonnes of CO₂ per year, according to the IEA.

EP

Climate Action Cannot Wait for Pandemic to End, Medical Journals Warn

Global warming is already affecting people's health so much that emergency action on climate change cannot be put on hold while the world deals with the Covid-19 pandemic, medical journals across the globe warned recently.

"Health is already being harmed by global temperature increases and the destruction of the natural world," read an editorial published in more than 220 leading journals ahead of the COP26 climate summit in November.

Since the pre-industrial era, temperatures have risen around 1.1 degrees Celsius (34 degrees Fahrenheit).

The editorial, written by the editors-in-chief of over a dozen journals including the Lancet, the East African Medical Journal, Brazil's Revista de Saude Publica and the International Nursing Review, said this had caused a plethora of health problems.

"In the past 20 years, heat-related mortality among people older than 65 years has increased by more than 50 percent," it read.

EP

Cost of Air Pollution: Takes 7.7 Years off Dhaka Residents' Lives

Dhaka residents could live 7.7 years longer if air pollution subsides, found a recent global study.

Air pollution shortens the average Bangladeshi's life expectancy by 5.4 years, said the latest edition of the Energy Policy Institute at Chicago's Air Quality Life Index (AQLI), which has been released recently.

At present, the average life expectancy of Bangladeshis is 72.6 years, according to the Bangladesh Bureau of Statis-

tics. Most of the particulate matter, also known as PM 2.5, comes from fossil fuels such as from vehicle engines and power plants, said the study by the University of Chicago institute.

Microscopic particles that are just 3 percent the diameter of a human hair are deadly when they enter the respiratory system along with the oxygen.

The average annual PM 2.5 concentrations in Bangladesh was 77.1 micrograms per



cubic metre (mcg/m3) of air, which is seven times the WHO exposure recommendation, according to the World Air Quality Report 2020 that was published in March.

In each of the 64 districts, the levels of particulate matter -- which are solid and liquid particles like soot, smoke, dust that remain suspended in the air -- were found to be at least three times higher than the World Health Organization guideline.

In 2020, Bangladesh's air quality was the worst in the world, while its capital Dhaka was the second most air polluted city, it said

EP

PPP Projects Should Involve Cost of Climate Loss, Says Principal Secretary to PMO

Public Private Partnership Authority (PPPA) should internalize the cost of climate change induced Loss and Damage, said Dr Ahmad

Kaikaus, Principal Secretary to the Prime Minister recently.

"If we could internalize the costs, we could externalize

Momen Calls Carbon Emitting Countries to Rehabilitate Climate Migrants

Foreign Minister Dr AK Abdul Momen has called upon major carbon emitting countries to rehabilitate the climate migrants displaced from their homes and traditional jobs due to climate change.

"It was the responsibility of the international community, particularly the major carbon emitting countries to rehabilitate the climate migrants," he said.

The foreign minister made the remark while addressing the meeting of the Global Center on Adaptation (GCA) in Rotterdam of the Netherlands recently, a press release said here.

The GCA is Dutch initiative

the impacts of climate change induced Loss and Damage" he said, suggesting that the cost of loss and damage can be internalized from this private financing.

He said this while speaking at a seminar styled: 'Addressing Climate Change Induced Loss and Damage in Bangladesh in Partnership with Private Sector' at a city hotel.

Dr Ahmad Kaikaus emphasized more on mitigation and suggested to integrate the issues of climate change induced Loss and Damage in every project implemented by the government.



to develop and share knowledge and best practices for climate change adaptation.

During the meeting, Dr Momen stressed the need of ambitious nationally determined contributions (NDCs) in the area of climate change by the major polluting countries.

Bangladesh foreign minister also highlighted the importance of ensuring the climate finance of at least 100 billion dollars every year, with equal importance given to mitigation and adaptation. EP

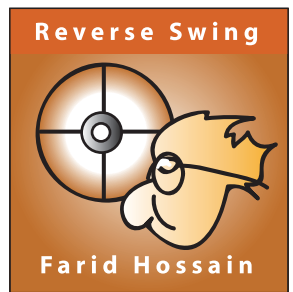
He also stressed to engage private sector more to pursue activities to make a better future for next generation.

The seminar was co-organized by the Public Private Partnership (PPP) Authority, Prime Minister's Office, ActionAid Bangladesh and the International Centre for Climate Change and Development (ICCCAD).

"There is a natural limit to adaptation. After some point, we will not be able to adapt. We must understand, adaptation is not going to give solution. Mitigation has to be done," said lawmaker Saber Hossain Chowdhury

EP

JOURNALISTS UNDER ATTACK, ONCE AGAIN



The journalist community in Bangladesh has once again come under an attack. This time the unexpected shot has been fired by Bangladesh Financial Intelligence Unit, better known as BFIU. It has recently asked the scheduled banks of the country to send all details about the accounts of 11 elected leaders of the country's top journalist unions and organisations, the current and past transactions and all other related issues. The leaders whose accounts have been summoned are from both Awami League and BNP-aligned Bangladesh Federal Union of Journalists, both groups of Dhaka Union of Journalists, Jatiya Press Club and Dhaka Reporters Unity. The organisations these leaders represent have fired back. Both pro-AL and pro-BNP unions as well as the JPC and DRU have condemned the BFIU move and questioned its rationality. They also observed that though the move has been targeted against the elected leaders of these organisations, the real objective seems to be an attack on free and fair journalism as well as freedom of press. It has also been seen as an attempt to tarnish the image of journalist community as a whole and by doing so to spread a sense of fear that may silence free voices.

What is this BFIU? It was born as Anti Money Laundering Department of Bangladesh Bank in 2002. In 2012 it was transformed as BFIU with the "main objective of the BFIU is to establish an effective system for prevention of money laundering, combating financing of terrorism and proliferation of weapons of mass destruction." So, it is crystal clear that this special agency of the government will go after money launderers and the finan-

cers of terrorism and those who are involved with weapons of mass destruction. None of these objectives apparently fit in the summoning of bank accounts of the targeted journalist leaders and their transactions.

Well, we may not be fully aware of what the BFIU suspects about these bank accounts. So, since the summons have been "purposely" made public, it will not be unfair on our

They also observed that though the move has been targeted against the elected leaders of these organisations, the real objective seems to be an attack on free and fair journalism as well as freedom of press. It has also been seen as an attempt to tarnish the image of journalist community as a whole and by doing so to spread a sense of fear that may silence free voices.

part to ask the BFIU to publish their findings. We believe that an organisation as important as the BFIU has not made the move just to make headlines. There must be a serious intention in its summons and the agency must prove us wrong in our strong impression that it has been done to in-

timidate the journalists who still want to investigate the wrong-doings of the power to be and expose those, if any, publicly through their media outlets.

Our memory is still fresh about what some health ministry officials did with well-known investigative journalist Rozina Islam in the Secretariat, the seat of the government, illegally confining her for about six hours before handing her to Shahbagh police in April. Now freed on bail she has also a case hanging over her. According to a recent media report, BFIU has summoned her bank account details and transactions too. We are yet to know whether Rozina's accounts had any suspicious transactions. We will wait to see. Rozina's has been an individual case. Hers has not been the only instance of attracting attention of BFIU. Not long ago a few other journalists were also brought under the agency's probe. Those have been treated as individual cases and a problem of an individual journalist to be resolved by his/her own way. But this time the target has been a cluster of media people.

The move has raised many eyebrows. Why have a group of leaders been targeted? Why is it only against journalist community? Why not leaders of other professional groups? Why the names have been purposely published? It could have been done through secret letters. Isn't it? Why did the letters identify the leaders also by their political affiliation?

While we strive to get the answers, it looks clear to me that there is something really fishy about it. The ball is now within the BFIU court and it has to answer the questions and clear the fog it has created.

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Local Resources Key to Sustainable Development

Sustainable development cannot be achieved unless local resources, materials and services are best utilized for infrastructure development, including energy and power. But appropriate policies for this could not be formulated in the last 50 years since our liberation. For fiscal policies, especially on tax and vat, imported materials and foreign EPC are getting priority in the infrastructure development sector. Local companies and manpower are accomplishing 90 percent of the work, yet the foreign companies are taking away lions share of the profit.

Energy pac CEO Humayun Rashid made the observation in an exclusive interview with Energy & Power Editor **Mollah Amzad Hossain**.

Bangladesh has ensured access to power for all its citizens. What is your observation? How it would contribute to achieve developed country status?

Access to power for all would usher in a new era of development through changing life and living of the people and facilitating rapid development especially in health, education and other social services sectors. Industrial development would get an impetus. Source areas of raw materials and adjacent areas of labors' habitations would now be centers of industrialization rather than some concentrated areas thanks to 100% electrification. This process would create huge job opportunities in upazillas and villages. Highest possible development needs ensuring through utilization of region-based resources. For these, apart from 100% coverage, the supply of quality power on uninterrupted basis at affordable prices needs to be ensured.

I believe the government is committed to do this.

The government, according to plan, is going to be imported primary fuel dependent from 2025. For this, the gas price may increase from US\$ 3.0 to US\$ 6.0 per MMSCF. This would also push up the price of power generation. Do you think industrial development can be expedited with the higher price of energy and power?

The energy and power are essential for pleasant living as much as for industrial development. But optimum utilization of local primary fuel resources must be ensured for keeping the price of power within affordable limits keeping pace with the economic development. The government can serve the nation if it can do this for making energy available to all. The economic development is entirely dependent on energy security.

There is no option but to import fuel if a nation does not possess own primary energy or cannot economically utilize own resources. But Bangladesh has not gone to that stage yet. I believe, for limiting import dependency, the government should finalize 5-year and 10-year plans for exploration, development and utilization of own coal and petroleum resources till 2030, 2040 and up to 2050. Necessary budgetary allocations must be made for achieving this.

Bangladesh like the rest of the world would enter into new era of energy from 2050. Perhaps hydrogen energy would take the lead. But the price would depend on the global energy market if import reliance becomes essential. Consequently, the cost of power generation would shoot upwards. Energy efficiency must be made mandatory in industrial, commercial and domestic sectors for managing such situation. Subsidies cannot be provided for the imported fuel dependent energy sector for a long time, I believe. Questions would be raised about legitimacy of paying the subsidy from people's money.



Humayun Rashid

Sustainable development cannot be achieved unless local resources, materials and services are best utilized for infrastructure development, including energy and power. But due to fiscal policies, especially on tax and vat, imported materials and foreign EPC are getting priority in the sector. Local companies and manpower are accomplishing 90 percent of the work, yet the foreign companies are taking away the lion's share of the profit.

Enabling policies of the government have facilitated local private sector investment in IPPs. Local private sector now is dominating the power sector as compared to the foreign investors. What are your views? Do you think, for achieving reliable and uninterrupted power supply, the government should create similar opportunities for local entrepreneurs for investment in the transmission and distribution segments as well?

You have rightly pointed out. Yes, enabling government policies have encouraged the IPPs to contribute about 50% of the total generation capacity now. It can be said that the local private sector alongside the government can

make investment on stand alone basis for power generation. For this special act was introduced at the early stage for speedy power and energy supply. It was essential for crisis management at a time. But recently, the tenure of that act has been extended for 5 more years. I do not think it is essential now. Keeping this alive would rather encourage corruption and non-transparency.

Introduction of IPP has facilitated efficient use of fuel, effective operation, efficient maintenance and supplying reliable power. Now alongside generation, transmission and distribution segments must become safe and reliable. For these, there is no alternative to creating opportunities for private sector investments. Especially for security of safe supply, skilled human resources must be developed for ensuring cyber security. The public sector alone cannot do this. Policy formulation is essential for integrating private sector for this. If that happens, the private sector would be interested to invest in transmission and distribution segments like they did in generation.

What should be the government policy for encouraging local investment in oil and gas exploration on stand-alone basis or in joint venture?

The local private sector has now the capacity to invest in high-risk exploration of petroleum. Like the power sector, enabling policies should be formulated for facilitating private sector investment on stand-alone basis or in joint venture. Competent human resources for exploration is now available in Bangladesh. If given the opportunity, local private sector can also conduct oil and gas exploration through hiring technology, equipment and services like IOCs.

Subject to right kind of policy support, Energy pac would also be interested to invest in exploration.

In 50 years, Bangladesh has achieved commendable success in EPC mode development of infrastructure. Around 50 local companies are capable to work at international level. What kind of challenges you encountered? What kind of additional policy support you need? What kind of fiscal supports are required for developing local companies as competent EPC contractors?

There exists major disparity between

local and foreign contractors in the context of EPC contract. Over the past few years, the local contractors have accomplished about 90% of the EPC contracts as subcontractors. For example, the local contractors by engaging local manpower have executed electrical and mechanical works under the supervision of foreign experts. Quiet a few local companies are available now for executing these works complying with all international health, safety and environment (HSE) standards and procedures. We cannot execute the works directly as main contractor due to the flawed government policies. Apparently looking at the policies, one may think that the policies have opportunities for local contractors. For example, the tax for a local company is 7% and foreign company is 7.5%. One example would clarify. Let us say that a project is worth US\$ 100 million. Around 70% foreign component is tax-free and 30% is in local currency. For this 30%, a local company has to pay 7% tax and a foreign company accounts for 7.5% tax. Foreign companies taking away 70% of the foreign exchange component without paying any tax. Local companies are getting the entire amount or part of it paying 10% income tax at source. If it is a Chinese company, it gets 13% incentives in their country for bringing 70% money back home from other countries.

Consequently, the local companies have to add 10% tax on the 70% amount during the bidding. For this, the local companies are falling behind the foreign companies in competitive bidding. A balance can be made only if the government considers the foreign component as deemed export for the local EPC contractors.

If opportunity is created for local EPC companies, it would create catalytic effect in materials and services utilization. It would also create positive impact in human resources development and create huge new jobs. Above all, the money would stay in the country.

Other aspects are after sales service and warranty. Let us say that an electrical substation is procured from China or another country. During the warranty period, for some reasons it goes out of order. It would take long time to replace. This may cause power interruptions. If local materials are procured instant services can be provided.

The government must give priority to using local materials and services in all

sector including energy. That would facilitate sustainable development.

Bangladesh is working with in Nepal and Bhutan for investment in hydropower. Do you think the government would make a consortium taking private sector along with the governments?

It is a positive initiative of the government considering investment in regional countries for power generation. Private sector would definitely be interested if the governments consider forming consortium. Energy pac is keenly interested to work with the government for such development.

What is your evaluation about the future of LPG in Bangladesh? What should be done for the security of LPG supply?


All knows about the over investment in LPG sector. This is harmful. This has encouraged compromising with business ethics. The quality of the commodity would be affected. Safety at all stages of the value chain might be compromised. These would harm the people. LPG is still being imported, bottled and traded following the international standards.

In my opinion, the government has to launch special initiative for redressing the situation. Supply of pipeline gas must not be given to any new user. Otherwise, the investors' capital recovery would be at risk.

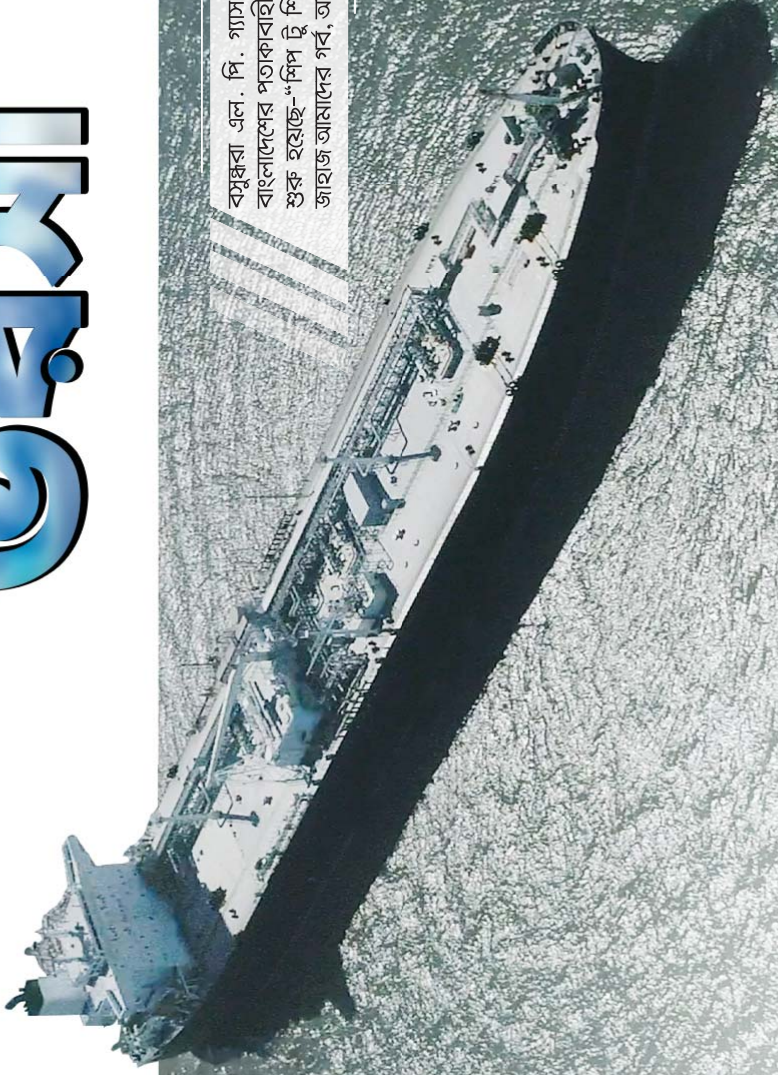
How relevant you consider is the LPG price fixing by the BERC?

The BERC has determined the price following a court's directive. Negative impact has been created in the market as the determined price was not correct. The BERC-followed formula could not create a right balance. They should review distributor, dealers' commission, transport cost etc. They must also check and review again. Minus 1 in consideration of CP (Contract Price) is not correct way to consider.

What is the policy of Energy pac for investment in renewable energy?

Land availability for grid solar power is an acute problem in Bangladesh. Farmlands cannot be affected for this at all. We have started working on large rooftop solar. Industrial entrepreneurs are now interested in this under net-metering policy of the government. Energy pac is now working on complete package of rooftop solar solution. 

মহাসেতুর বুক ভেঙে অমো ভরমা



বসুন্ধারা এল. পি. গ্যাস লিমিটেড-এ যুক্ত হয়েছে বিশ্বমানের প্রযুক্তি নিয়ে প্রথম বাংলাদেশের পতাকাবাহী এলপিগ্যাস ক্যারিয়ার “বসুন্ধারা এলপিগ্যাস চ্যালেন্জার”। শুরু হয়েছে-“শিপ টু শিপ ড্রাগফার”। ৪৪০০০ মেট্রিকটন সক্ষমতার বিশাল এ জাহাজ আমাদের গর্ব, আমাদের সকল গ্রাহকের অধিকার।



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