

# ENERGY & POWER

## Transition Loopholes

- WEC Urges Stakeholders To Humanize Dialogue
- Ruling Party and Its Pre-Election Pledge for Mining Domestic Coal
- Enabling Environment and Competitive Bidding May Help Cut Solar Power Cost



## Payra 1320 MW TPP

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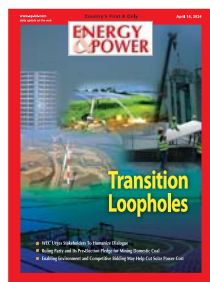
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## EDITORIAL

Bangladesh, as the signatory country of COP28, is working on tripling renewables capacity and doubling energy efficiency by 2030. The target is to achieve 3,600MW of renewable energy by then. The country has already embarked on green energy transition pathways as it has implemented a few utility-scale solar power projects and some small-scale ones. This progress has also created momentum in the public and private sectors. Industries are increasingly interested in rooftop solar systems mainly due to two considerations – getting green credit and saving on grid electricity, which has been gradually increasing. However, the development process in the renewable sector is not smooth at all – it is going through some rough patches, keeping generation costs much higher than those of a few neighboring countries. The selection of investors based on unsolicited offers is one of the main obstacles to bringing down the cost. There are also policy shortcomings and loopholes in the implementation strategies. The government has brought changes in the policies and implementation strategies. The mindset of policymakers has changed a bit over the past 20 years, but it is still not favorable for clean energy. Tariffs on renewables have been significantly reduced globally but not in Bangladesh. For grid stabilization, flexible base load, and storage planning must also be finalized.

However, the policies and implementation strategies deserve fine-tuning, as Bangladesh has no other alternative to increasing the contribution of clean and green energy to achieve the energy transition goal.

## highlights

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It is not possible to get solar power at lower prices like India. However, the tariff can be significantly reduced by adopting appropriate strategies like acquiring land and developing the land to become buildable, facilitating power evacuation infrastructure in the plant location, and ensuring long-term concessionary finance. Priority should be given to the selection of entrepreneurs through competitive bidding apart from awarding contracts based on unsolicited offers only ... Shahriar Ahmed Chowdhury tells EP

The 26th WEC is set to be held at the iconic Dutch city of Rotterdam from 22-25 April 2024 when thousands of energy sector stakeholders and political leaders are scheduled to attend to engage in conversations and connections to explore the role of connected energy societies in driving forward global energy transition in a less predictable, more turbulent, and faster-shifting world. ... More in Special Report

Bangladesh has started moving along the right kind of time-befitting pathways toward a green energy transition. However, it cannot be said that all impediments have been dealt with successfully. The government is taking up green energy projects but due to the selection of investors based on unsolicited offers, the tariff cannot be brought down to a comfortable level.



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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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## Aramco Awards \$7.7b in Contracts to Add Gas Processing Capacity



Saudi Aramco has let engineering, procurement, and construction (EPC) contracts worth \$7.7 billion for a major expansion of its Fadhili gas plant in the eastern province of Saudi Arabia, about 350 km northeast of Riyadh.

The project is expected to increase the plant's processing capacity to up to 4 bcf/d from 2.5 bcf/d.

This additional processing capacity is expected to contribute to the company's strategy to raise gas

production by more than 60% by 2030, compared with 2021 levels, the company said in a release Apr. 2.

The Fadhili gas plant expansion, which is expected to be completed by November 2027, is also expected to add an additional 2,300 metric tonnes/day to sulphur production.

Contracts were awarded to SAMSUNG E&A, GS Engineering & Construction Corp., and Nesma & Partners.

## First Line of Arctic LNG-2 Launched: Novak



The first line of the Arctic LNG-2 project has been launched, Russian Deputy Prime Minister Alexander Novak said, adding that it creates a basis for growth of the flow of cargo via the Northern Sea Route.

"In particular, the Arctic LNG-2 project, whose first line has already been

launched, creates a basis for growth of the flow of cargo via the Northern Sea Route," he said.

Novak said earlier that the first batch of LNG was produced at the Arctic LNG-2 project in December 2023 after the commissioning. However, the launch of the project has not been officially announced.

Novak said that the first batch of LNG would be shipped from the plant in February, while Novatek's CEO Leonid Mikhelson said it would be supplied in Q1 2024.

## India's Fuel Demand Hits New Record

India's fuel consumption fell 0.6 per cent year-on-year in March, but demand for the 2024 financial year was up about 5 per cent, primarily driven by higher automotive fuel and naphtha sales.



Total consumption, a proxy for oil demand, totaled 21.09 million metric tons (4.99 million barrels per day) in March, down from 21.22 million tons (5.02 mbpd) last year, preliminary data from the Petroleum Planning and Analysis Cell (PPAC) of the oil ministry showed recently.

However, fuel demand for the 2024 financial year, ending in March, hit a record high of 233.276 million tons (4.67 mbpd) compared to 223.021 million tons (4.48 mbpd) a year earlier.

Sales of diesel, mainly used by trucks and commercially run passenger vehicles, rose 3.1 per cent year-on-year to

8.04 million tons in March and was up 4.4 per cent for the previous fiscal year.

Sales of gasoline in March rose 6.9 per cent year-on-year to 3.32 million tons and were up 6.4 per cent for the fiscal year. Sales of bitumen, used for making roads, were largely steady in March, but were up 9.9 per cent for the fiscal year.

Sales of cooking gas, or liquefied petroleum gas, rose 8.6 per cent to 2.61 million tons, while naphtha sales jumped 5.5 per cent to about 1.19 million tons, compared with last March, the data showed.

The usage of fuel oil fell 9.7 per cent year-on-year in March and declined 6.3 per cent for the fiscal year.

## Petronas, JERA to Explore CCS Opportunities between Japan and Malaysia

Petroleum Nasional Berhad (Petronas), through its subsidiary Petronas CCS Solutions Sdn Bhd, has signed a joint study agreement with JERA Co. Inc. to evaluate carbon capture and storage (CCS) opportunities.

Under the JSA, the companies will jointly examine feasibility across the entire CCS value chain, including the separation and capture of CO<sub>2</sub> emitted by



JERA in Japan, transportation methods and shipping/receiving conditions for cross-border CO<sub>2</sub> transport, and storage of CO<sub>2</sub> in Malaysia gas fields, the companies said in separate releases on April 2.

## PM Orders Continuous Power Supply in Villages, Towns May Face Cuts



Prime Minister Sheikh Hasina has issued a directive to ensure uninterrupted power supply in rural areas to support agricultural irrigation.

The prime minister in a recent Cabinet meeting said there must be no load shedding in villages, and, if needed, towns would face power cuts, said a highly placed source.

Sheikh Hasina presided over the meeting held at the PMO

and attended by almost all ministers and state ministers.

In response to inquiries about the meeting, Nasrul Hamid, state minister for power, energy and mineral resources, said the prime minister had directed everyone concerned to ensure uninterrupted electricity in villages during this irrigation season.

She had also instructed the Finance Division to clear all outstanding payments related to this matter.

## Fire from Gas Cylinder Leak Burns 4 of a Family in Dhamrai



Four family members sustained critical burn injuries from fire caused by gas cylinder leak in their kitchen while cooking at Dhamrai upazila in Dhaka recently.

The victims, retired government officer Nannu Miah, 62, his wife Sufia Begum, 48, daughter Shathi Akter Mou, 23, and son Sohag, 19, are undergoing treatment at Sheikh Hasina National Institute of Burn and

Plastic Surgery.

The conditions of all the family members, residents of Uttarpara area, are critical, said Dhamrai Fire Service Station Officer Sohel Rana. All the injured were admitted to

Sheikh Hasina National Institute of Burn and Plastic Surgery, said the hospitals Resident Medical Officer Md Tariqul Islam.

Nurul Islam was hospitalized with 48 per cent burns while Sufia Begum had 80 per cent burns, the SI said quoting hospital sources. Sohag suffered 38 per cent burns and Nisrat Jahan Sathi sustained 16 per cent burns, the SI added.

## Summit Group's 3 Power Plants Receive Nod for 5 Years Extension

Three gas-fired power plants, each having 10 MW capacity, of Summit Group received the nod of the Cabinet Committee on Government Purchase (CCGP) for further extension of existing agreements for next 5 years.

Finance Minister Abul Hassan Mahmood Ali presided over the CCGP meeting.

Power Division moved the proposal to the CCGP meeting.

The power plants, located in Ashulia, Madhabdi and Candina, were set up as independent power plants (IPP) in 2003 under 15 years power purchase agreements (PPAs) with Dhaka Palli Biduyt Samity -1, Narshingdi Palli Biduyt Samity -1 and



Cumilla Palli Biduyt Samity - 1 of the Bangladesh Rural Electrification Board (BREB).

The PPAs were first expired in 2018 and the government expended their tenure for 5 years until August 2023.

The government will buy electricity worth Tk546.795 crore over the next 5 years from the three power plants of the Summit Group.

Currently Summit Group has been the largest owner of private power plants having 15 plants with about 975.96 MW from which the government has been purchasing electricity.

## Amin Ul Ahsan New BPC Chairman

Md Amin Ul Ahsan, additional secretary of the Cabinet Division, has been promoted to the post of Secretary and appointed as the new chairman of the Bangladesh Petroleum Corporation (BPC).

Ahsan's appointment will come into effect from April 13, said a gazette notification issued by the Ministry of Public Administration on March 31.

He will replace existing chairman ABM Azad, also a secretary of the



government, who will go on retirement on April 9, official sources said.

Azad has been serving as the BPC chairman since 2021.





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## Thailand Keen to Explore Oil, Gas in Deep Sea: Envoy



progress over exploration of oil and gas in deep sea and supplying LNG to Bangladesh during the Prime Minister's visit to Thailand.

Nasrul welcomed the Thai envoy's proposal and said Bangladesh will encourage all types of investment here.

"We welcome the interest of Thai PTT Global LNG Company Limited. We give preference to trading and production companies in LNG supply," he said, adding, the matter of signing a Memorandum of Understanding (MoU) with Thailand to increase energy cooperation between Bangladesh and Thailand has progressed well.

Thai Ambassador to Bangladesh Makawadee Sumitmor on April 9 said that her country is interested in exploring oil and gas in the deep sea in Bangladesh and supplying LNG to the country.

The Thai envoy expressed the interest when she paid a courtesy call on State Minister for Power, Energy and Mineral Resources Nasrul Hamid at his ministry office at Secretariat here, said an official release.

Sumitmor requested the state minister for visible

## ITFC to Provide \$1.4b to Bangladesh Petroleum



The Islamic Trade Finance Corporation (ITFC) signed an agreement recently to provide \$1.4 billion to the Bangladesh Petroleum Corporation.

The ITFC, part of Saudi

Arabia's Islamic Development Bank, said the financing was aimed at developing Bangladesh's energy infrastructure.

This agreement is a testament to the successful long-term partnership between the two parties and the financing plan will ensure energy security for one of the fastest-growing economies in South Asia.

## Govt Cuts Prices of Diesel, Kerosene by Tk 2.25 per Liter

The government recently set the automated retail prices of petroleum fuel for the month of April.

As per the new price, the diesel and kerosene will be sold at Tk 106 per liter instead of previous price at Tk 108.25, lowered by Tk 2.25 per liter.

The prices of octane and petrol have been kept unchanged at Tk 126 and Tk 122 per liter respectively.

Energy and Mineral Resources Division set the new automated price through a gazette notification as per the government decision.

The first automated price



came into effect on March 7. Issuing the gazette notification in this regard, the Ministry of Power, Energy and Mineral Resources in a clarification said that the new prices have been in line with the prices of the petroleum on the international market.

Earlier, the government on March 1 issued a "Fuel Pricing Guidelines" through a gazette notification to set an automated price for the petroleum fuel across the country.

## IEEE Women in Engineering Celebrates "Women History Month 2024"

Institute of Electrical and Electronics Engineers (IEEE) Bangladesh Section and Global IEEE Women in Engineering Affinity Group have jointly celebrated "Women



History Month 2024" to mark the International Women's Day. The event was organized at the Institute of Engineers, Bangladesh (IEB) on March 28, 2024.

At the outset of the event, Global chair of IEEE Women in Engineering and the past chair of IEEE Bangladesh Section Dr. Celia Shahnaz, professor at Department of EEE, Bangladesh University of Engineering and Technology (BUET) talked about the enormous number of impactful activities of IEEE

Women in Engineering in different universities, the journey and hard work of the group and the outstanding international achievements and recognitions the group has achieved, by working for women in the local and international community.

Government official and Deputy Secretary, Ministry of commerce, Sumoni Akter said that at the beginning of her career journey to till now being women she always tries to overcome stereotypes thoughts while serving her duty.

# Transition Loopholes

Mollah Amzad Hossain



Bangladesh as the signatory country of COP28 is working on meeting the pledge to triple renewables capacity and double energy efficiency by 2030. The target is to achieve 3,600MW of renewable energy by then. Different estimates and initiatives suggest that the actual generation may reach as high as 7,000MW or more by 2030. Changes have been made in the policies and implementation strategies of the green initiatives. Experts, however, think that the policies and implementation strategies require fine-tuning to facilitate undertaking more projects and expedite implementation.

# ENERGY



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**E**mbracing various controversies and challenges, Bangladesh is riding along the road of energy transition toward green energy. Civil society, environmentalist groups, and researchers have heaps of complaints against the government initiatives and implementation strategies. However, sector-relevant specialists observe that the government has started moving along the right kind of time-befitting pathways toward a green energy transition. However, it cannot be said that all impediments and challenges have been dealt with successfully. The government is taking up green energy projects one after another. However, the strategy to select investors based on unsolicited offers, instead of competitive bidding, the tariff of green energy, especially solar, cannot be brought down to a comfortable level. Authorities concerned say Bangladesh, as a signatory country of COP28, can meet the pledge to triple renewables capacity and double energy efficiency by 2030. Bangladesh's target is to achieve 3,600MW of renewable energy but actual generation may be as high as 7,000MW or more by 2030. To achieve the target, various initiatives have been launched for power generation – be it grid-connected solar plants, rooftop solar plants, solar irrigation, or wind power. Changes have been made in the policies and implementation strategies.

Various studies on different forms of renewables are in progress. The government has adopted an Integrated Energy and Power Master Plan 2023 (IEPMP-2023), aiming to increase power generation capacity in 2041 to 60,000MW, of which 40% or 24,000MW is estimated to come from clean energy. However, many consider the IEPMP target contradictory to the target announced by the Bangladesh Prime Minister at COP26, a target included in the Mujib Climate Perspective



A view of an under-construction solar rooftop project

Photo: Solaric

Plan and the Delta Plan. They also consider the plan not clear and transparent as the generation capacities against different options of clean energy have not been set clearly. Shahriar Ahmed Chowdhury, Director of the Center for Energy Research at the United International University (UIU), suggested immediately reviewing at its true perspective the IEPMP approved last year. There must be clear targets announced for each form of clean energy along with an implementation strategy. According to him, the inclusion of Hydrogen and Ammonia in the IEPMP is utopian for Bangladesh at this stage.

### **Present State of Renewables in Bangladesh**

According to the Sustainable and Renewable Energy Development Authority (SREDA), the installed power generation capacity from renewables in Bangladesh is now 1,224MW, including 230MW hydropower, grid- and non-grid solar, rooftop solar, solar irrigation, and solar mini-grid. The grid-connected solar capacity is 459MW. The Power Division reports about ongoing works of 130 projects which, if implemented, can supply up to 12,000MW. Letters of Intent (LOIs) have been issued to 51 entrepreneurs. The preparatory work of 79 other projects is at different stages. Most of

the entrepreneurs have been selected based on the unsolicited offers. Only 10% have come through a competitive bidding process. Apart from IPPs, some public sector projects are also included in the package. Besides, 33MW wind power of the 60 MW project at Kurushkul in Cox's Bazar has been added to the grid. The work on the 27MW portion of the project is affected by land issues. After the successful operation of this project expected by this year, the prospect of wind power in Bangladesh can be assessed. The present level of tariff is more than 10 cents. An LOI has been issued for 500MW wind power generation. Summit Group with Denmark has started working on the prospect of 500MW offshore wind generation. The Power Division is also working on a similar offshore wind capacity.

An initiative for setting up a 3,000MW capacity solar hub in the Char Areas of Jamalpur identified by a World Bank study is at the primary stage. The study stated that the capacity may be expanded to 10,000MW in phases. The Power Division informed that after developing the land, the area will be divided into two zones - one for the public sector and the other for the private sector. The Power Division will invite tenders for entrepreneurs after developing land and power evacuation infrastructure.

The Power Division is optimistic about achieving at least 6,000MW capacity by 2030. Besides, the government is also working on other forms of clean energy.

### **Net Metering and Rooftop Solar**

A mandatory provision for a certain percentage of rooftop solar was introduced but not much success has so far been achieved. SREDA announced a net-metering policy in 2018 for rooftop solar installations on industrial and commercial buildings. It was amended in 2019. The initiative for further amendment is in progress. A fresh enthusiasm has been created for solar rooftops due to the ongoing fuel supply crisis, increase in power tariff and fuel prices, and green compliance for the industries. Solar rooftop plants with a capacity of 120MW have already been added to the grid. Relevant experts observe that at the present trend of solar rooftops, it would be possible to reach 3,000MW by 2030. Experts suggest bringing some amendments to the net-metering policy. Shahriar Ahmed Chowdhury mentioned that as per the present policy, the provision allows setting up solar plants for 70% of the existing load. This should be increased to 100%. Only a three-phase facility can be connected to the grid. It needs to be opened to a single phase as well. There are many large rooftops of buildings that do not have enough power demand. Provision must be created for renting these roofs out for solar power generation to other entrepreneurs and selling the output to the utilities. Finally, high import duties and taxes imposed on solar panels and inverters should also be withdrawn.

Siddique Zobair, former member of SREDA, informed that the World Bank and ADB are working with the government to develop a business model for rooftop solar power. The main target is creating provisions for leasing or renting out rooftops of public- and privately-owned buildings for renewable power. Renewable energy services companies will set up rooftop solar facilities as third parties

## **Clean Energy**



**T**he world community has accepted nuclear electricity and large hydro projects as clean energy, aiming to achieve the net zero target. Bangladesh is not outside of it. The 2,400MW Rooppur Nuclear Power Plant is at its final stage of commercial operation. By the end of 2025, the entire power plant will come into operation. Prime Minister Sheikh Hasina has already announced her

and sell electricity to the utilities. Subject to the successful implementation of the policy, it will be possible to generate 4,000-5,000MW of electricity by 2030.

Alamgir Morshed, Executive Director and CEO of Infrastructure Development Company Limited (IDCOL), at a recent webinar, informed that industrial entrepreneurs are getting increasingly interested in rooftop solar systems. However, the IDCOL alone can't provide the required finance. Bangladesh Bank must take the initiative to invest in the expansion of green energy with their green fund. Sector-related experts observe that utilities appear not much interested in purchasing electricity from rooftops. If their mindset changes, it is possible to get more than 4,000MW of power from industrial rooftops.

### **Solar Irrigation**

Diesel pumps still dominate solar irrigation. There are about 1.34 million diesel-driven irrigation pumps. Besides,

government's plan to set up another plant of similar capacity at Rooppur. By 2041, Bangladesh will get 4,800MW of electricity from nuclear. The hydropower generation capacity is 230MW and there is no scope for increasing it in the country. However, Bangladesh is working on importing hydropower from Nepal

and Bhutan. An agreement for importing 40MW hydropower from Nepal may be concluded this month. The government's plan states importing up to 9,000MW of hydropower from regional sources by 2041. Two proposals for importing solar electricity from India are under consideration. These initiatives are expected to expedite the country's green energy transition toward achieving net zero goal. **EP**

there are also electric pumps. The government has taken an initiative for greening agriculture. The objective is to replace the diesel and power-driven pumps with solar in phases. ADB through conducting a study has prepared a roadmap for this and the government has adopted it. Presenting the government plan, State Minister for Power, Energy and Mineral Resources Nasrul Hamid MP at the COP28 summit in Dubai has sought investment from interested entrepreneurs, donor agencies, and development partners. IDCOL over the past 10 years is endeavoring to keep solar irrigation prospects moving. BREB and BADCO are also working on this. Based on a 50% grant, more than 2,900 such pumps have been installed and are working now. For a long time, efforts have been made to develop a business model for solar irrigation. It is being said that if a scope can be created for evacuating power to the power grid apart from irrigation works, it will be possible to set up solar irrigation facilities and

operate without any grant. Such a suggestion has been included in the solar irrigation roadmap. Under this initiative, a plan for setting up 45,000 solar irrigation pumps (SIPs) by 2031 has been adopted. Clustering these, it will be possible to connect these to the national power grid. The cost will be significantly reduced.

The Power Division informed that US\$800 million is required without equity for this plan to be implemented. They have initiated negotiations with donor agencies to get the loan. If successful, it will be possible to get 1,000 MW of power from here. Dr. Tawfiq E Elahi Chowdhury BB, Energy Advisor to the Bangladesh Prime Minister, reiterated the pledge of the government to green agriculture.

### **Debates over Wind Power Development**

Debates over wind power development prospects on a commercial basis continue in Bangladesh despite US Energy Laboratory and ADB studies, stating significant prospects of wind power generation in coastal areas and offshore. For the first time in Bangladesh, 33MW wind power out of a 60 MW capacity windmill at Kurushkul, Cox's Bazar has come into operation. However, land issues have impeded generation at the plant's full capacity. By 2024 after operating the plant at capacity, the actual prospect of wind power can be assessed and ascertained. LOI for another 500MW wind power has been issued. However, it is not sure whether entrepreneurs will conclude agreements before witnessing the performance of the Kurushkul windmill.

Besides, Summit Group together with Denmark has started working feasibility study for a 500MW offshore wind generation prospect. The Power Division is also working on a similar project. One official of the Power Division observed that wind power generation will not be commercially viable in Bangladesh. Not agreeing with the perception, Siddique Zobair

## **VRE and Power Grid**



**G**rid stabilization and increasing the contribution of variable renewable energy (VRE) are global challenges. For Bangladesh, the challenge is much more intensive. Different studies evidence that without storage facilities, the Bangladesh grid can absorb up to 19.5% variable renewable energy. The entire power grid must be revamped to absorb the full extent of VRE. All power plants must evacuate electricity through FGMO. Storage facilities for solar power must also be gradually incorporated. Bangladesh has taken a decision that for each 100MW solar power generation, at least 20% storage facility must be included in the future. A Singaporean company has already signed an agreement.

They mentioned that if they get approval for another 100MW solar power generation project, they will add storage facilities for 100MW of electricity for 4 hours and supply it at the same tariff. Experts observed that the government

should accept the proposal as a test case.

On the other hand, for grid stabilization, Bangladesh must consider a flexible baseload instead of remaining dependent on peaking plants. India is now running their coal power plants at 30-80% flexibility. Bangladesh could also follow it by setting up large baseload power plants in the public sector. Bangladesh should move forward with appropriate strategies to ensure proper VRE management. Otherwise, Bangladesh may not be able to utilize VRE effectively even after setting up the required facilities, and it would create a new problem like the so-called capacity charge. **EP**

informed that 1.2-1.3 times more wind power can be generated offshore than onshore. The shallow offshore of Bangladesh extends up to 50 KM from the coast. Spending 1.5 times more than onshore power can be generated from there. Bangladesh has a greater prospect of shallow water wind power than deep water, he mentioned.

### **Solar Tariff and Other Loopholes**

The first grid-connected solar power plant at Sharishabari had a tariff of 19.97 US cents per unit. The 200MW capacity BEXIMCO Teesta Solar Plant coming into operation after a few years had a tariff of 15 cents. The tariff of plants for which agreements have recently been

signed has a 9.83 cent tariff. Experts observe that solar radiation in Bangladesh is less than that in the Middle East and India. Hence it is not possible to generate solar electricity at 3.0 cents like in those countries. Shahriar Ahmed Chowdhury believes that the tariff can be reduced to 7.0 cents if three challenges can be successfully managed. These are letting developed land on lease to entrepreneurs, government constructing power evacuation facilities to the grid, and government ensuring long-term low-cost loans for the entrepreneurs. Tariffs can be significantly reduced if entrepreneurs are selected transparently on a competitive basis.

There is no denying the scarcity of land for utility-scale grid solar. But there is a huge opportunity for floating solar in Bangladesh. This opportunity needs to be availed. ADB carried out a feasibility study for a floating solar plant at waterways in the subsiding land of Barapukuria Coal Mine. They recommended engaging a contractor through competitive bidding. However, the government has selected a Japanese company based on its unsolicited offer. ADB did not like it as has been gathered from different sources.

### **Solar Roadmap and Renewable Resource Assessment**

A solar roadmap was prepared on behalf of SREDA. It was then examined and reviewed by an experts' committee. It was sent to the power division for approval. But the approval was not given. Rather a new initiative has been taken to prepare a solar roadmap. The International Solar Alliance is now doing that work for the government. In 2025, the final roadmap will be submitted to the power division. On the other hand, the International Renewable Energy Agency (IRENA) is assessing renewable resources. They are expected to submit a report to the government within 2024. Nirod Chandra Mondal, Joint Secretary of the Power Division, who is entrusted with the task of renewable energy, informed EP that the government will finalize the renewable



A view of the wind power project at Kurushkul in Cox's Bazar

development plan after receipt of the above two reports.

### **Finance Ministry for Fixing Tariff in Taka Instead of US Dollars**

Everyone is aware of the dollar crisis in the power and energy sector. Till now the dollar is the chosen currency in all contracts of solar and renewable energy. The Finance Ministry has now advised the Ministry of Power, Energy and Mineral Resources to set all tariffs for solar power in taka instead of US dollars. The Power Division has started working on it. Experts believe such a move will not work. If contracts are concluded in taka, the government must decide who will take the risk of taka devaluation. If the government takes the risk, it will then make no

difference whether the contract is concluded in dollars or taka. Tariffs will increase significantly if the government does not take the risk. Renewable projects will then not remain attractive for investment. Foreign investors will lose the interest to invest.

### **Conclusion**

Bangladesh has no other alternative to increasing the contribution of clean and green energy to achieve the energy transition goal. The mindset of policymakers has changed a bit over the past 20 years, but it is still not favorable for clean energy. Consequently, implementation strategies are still not appropriate though some policies have been formulated. The 2020 target set for renewables could not be achieved. Tariffs on renewables have been significantly reduced globally but not in Bangladesh. The impediments of land and power evacuation facilities for grid-connected solar must be taken care of urgently. At the same time, priority must be given to selecting entrepreneurs through competitive bidding. Tariff barriers must be done away with to get the benefits of rooftop solar systems. Finally, targets for solar, wind, nuclear, and hydropower must be achieved by 2041 and 2050 must be articulated and announced. Finally, for grid stabilization, flexible base load and storage planning must also be finalized.

EP



A view of a 200MW Teesta Solar Plant





# Ruling Party and Its Pre-Election Pledge for Mining Domestic Coal

Saleque Sufi

Staying in state power the governments of Bangladesh Awami League during its consecutive terms since 2009 experienced various challenges in creating sustainable energy security mainly emphasizing imported fuel. Despite spending billions of dollars in setting up enabling infrastructures for importing coal, LNG, and liquid fuel, long-term sustainable energy security relies more and more on fuel imports from the global market which is highly volatile due to various geopolitical developments. In addition, transportation challenges are affecting the smooth operation of the supply chain. Technical experts, economists, and analysts have long been suggesting the exploration and exploitation of superior-quality coal resources lying at mineable depths. Various studies have been conducted by local and international experts, justifying the proposals for mining coal and using it as the cheapest alternative to depleting natural gas. Even the present government in its past three terms pledged for mining coal. However, the required political decision in this regard has not been made. The present global situation

also does not favor international financing for developing fossil fuels. Mining now and mining in 2010 s have huge differences in matters of costs, and mobilizing resources. But this government through successfully implementing some major mega projects like Padma Multipurpose Bridge, Rooppur Nuclear Power Project, Karnaphuli River Tunnel, and Matarbari Energy and Power Hub has ideally demonstrated that any such mega project is possible to implement if the government has a proper mindset and honest desire for implementing the project. The technological and economic aspects heavily favor mining domestic coal. The required information is available in various study documents and analyses. But for negative mindset against mining coal influenced by various anti-mining lobbies and ill-motivated syndicates benefiting from the import of fuel have successfully managed to keep coal buried underground so far. The need now is for the government to take the decision of mining or not mining coal. Nothing but domestic coal can ensure sustainable energy security for Bangladesh in the prevailing and

emerging global geopolitical situation. Despite global movement for energy transition from fossil fuel to renewable energy coal is going to remain one of the major fuels over the next 30-40 years. Moreover, Bangladesh has no obligation to limit emissions as it has only a negligible carbon footprint of its own.

## *Chronological Development of Events in Coal Resource Exploitation*

Bangladesh has 5 discovered coal fields in the greater Rangpur and Dinajpur districts in the northern region. Father of the nation Bangabandhu Sheikh Mujibur Rahman for realizing his vision of self-reliant energy security towards economic emancipation pioneered the creation of Bangladesh Oil Gas and Mineral Corporation (BOGMC) later divided into Bangladesh Oil and Gas Corporation (BOGC) now Petrobangla and Bangladesh Mineral Development Corporation (BMDC). He engaged two trusted reputed geo-scientists as Chairman of the two Grade A Corporations with the status and authority of secretary. He took the initiative to

mine the granite of Madhyapara and the coal of Jamalganj. His unfortunate killing in 1975 made Bangladesh ride in the reverse direction. BMDC was merged with BOGC creating a Directorate of Mining. But later that directorate was also abolished as the government failed to make political decisions about mining coal. At present a Chinese company is mining coal using a long-wall top caving underground mining method. The coal produced is not even enough to meet the demand of all three mine-mouth power plants. The present government set up a committee headed by a reputed mining engineer and former chairman of Petrobangla and BERCL Md Mosharaf Hossain to review the pros and cons of coal mining. The committee, among others, recommended an open pit pilot project in the shallow northern flank of Barapukuria. The committee also recommended reviewing the Scheme of Development of the Phulbari and Khalashpir fields. Unfortunately, that report was not reviewed by policy maker and the government neither accepted nor rejected that report. UNDP also commissioned a study. Ajoy K Ghose, a celebrated mining expert in the world, made specific recommendations for coal mining in Bangladesh. The government engaging a consultant also carried out a feasibility study of the Dighipara field. Unfortunately, over the past 15 years, the present government has remained hesitant in taking the required political decision to mine coal.

The BNP-led government in the early 1990s engaged BHP Mineral Corporation, Australia for exploration of coal in the Northern region. The leading mining company discovered a large field at Phulbari. After long hesitation in deciding on mining, BHP later reassigned the contract to Asia Energy Corporation during the regime of the Awami League-led government of the 1996-2001 term. According to that contract, Asia Energy engaging the world's leading mining consult-



ants carried out a detailed feasibility study. On completion, it submitted a

***Technical experts, economists, and analysts have long been suggesting the exploration and exploitation of superior-quality coal resources lying at mineable depths. Various studies have been conducted by local and international experts, justifying the proposals for mining coal and using it as the cheapest alternative to depleting natural gas. Even the present government in its past three terms pledged for mining coal.***

comprehensive Scheme of Development recommending carrying out open-cut mining methods in 2005. Unfortunately, the government was dominated at that time by an unholy alliance of corrupt business syndicates that did not want to mine domestic coal. They set up a committee mostly comprised of non-miners to review the technical aspects of the Asia Energy proposal. In the meantime, vested interest groups carried out extensive propaganda against mining and convinced local people to stage demonstrations. Through pre-arranged plans, the law-enforcing agencies killed local people. At that time of agitation, the present Prime Minister, the then leader of the opposition, pledged not to carry out open pit mining. PM Hasina was seemingly ill-advised about potential environmental disasters arising out of open pit mining and irreparable loss of agriculture. None of the Energy Supply Chain explained to the PM about the advanced technologies that may address all her concerns. That is why her government, despite pledging to utilize coal resources, failed to do that since then. Now when global events created an unbearable energy crisis stemming out of chronic fuel supply, the government is left with no other option but to explore and exploiting own coal resources. In the meantime, for managing and mini-

mizing global GHG emissions all countries are implementing energy transition. Mining coal has become extremely challenging as donor agencies and investment banks have opted out from financing fossil fuel development.

The government paying through its nose realized that the increasing dependence on imported fuel through ignoring exploration and development was a major political mistake. Global events and geopolitical risks proved that the fragile economy of Bangladesh cannot absorb the price shock nor can manage the risk of disruptions in the supply chain. Exploration of coal and gas should be a top priority national agenda. The government should not only make an immediate political decision to mine coal it must also reorganize the mining directorate of Petrobangla to champion coal mining. Enough authentic study reports are ready at hand. Competent mining professionals can be tasked to manage mining. The authentic study



reports evidence that Bangladesh has enough discovered coal resources to cater to fuel demand for 10,000MW mine-mouth Power Generation for 40 years. The political decisions that the government made for other mega projects like Padma Multipurpose Bridge, Rooppur Nuclear Power Plant, Matarbari Power, and Energy Hub, should make coal mining decisions without hesitation and delays.

Bangabandhu conceived mining coal and exploring petroleum resources offshore and onshore. That was his energy philosophy behind the creation of BOGMC. By not making a mining decision, and delaying petroleum exploration even the government, led by her daughter, compromised with the energy philosophy of Bangladesh. It is now expected that the government will make a decision to mine and set up at least 5,000MW mine-mouth coal power plants soon, yielding fruits by the end of the present term of the government. A positive sig-

nal of the government will encourage investment. In the meantime, the government engaging competent mining experts can review all study reports for implementing mining strategy.

PSMP 2010 approved by the present government in the previous term provided for a 50% contribution from coal. Of this 50%, 29% contribution was supposed to come from local coal. The failure to make a political decision virtually led to the failure of the PSMP 2010. PSMP 2016 rather went for a 35% contribution of coal – including 34% imported coal. Sensing the mindset of the policymakers, coal mining was completely taken out of the context. Even the IPEMP 2023 does not have a clear directive about coal mining. However, the election agenda of the ruling party before the general election of 2024 included a government pledge to mine coal. Hope policymakers will produce convincing and authentic documents to the Prime Minister for her courageous decision. Local coal will delay the requirement for importing fuel from abroad. The government will have breathing space for exploring and developing offshore petroleum resources and logically expanding solar and wind power resources.



*Saleque Sufi,*  
*Energy Expert*





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# WORLD ENERGY COUNCIL



## World Energy Congress 2024

# WEC Urges Stakeholders To Humanize Dialogue

Engr. Khondkar Abdus Saleque

**T**he 26th World Energy Congress is set to be held at the iconic Dutch city of Rotterdam from 22-25 April 2024 when thousands of energy sector stakeholders and political leaders are scheduled to attend to engage in conversations and connections to explore the role of connected energy societies in driving forward global energy transition in a less predictable, more turbulent, and faster-shifting world.

The main objective of the four-day Congress, themed “Redesigning Energy and Planet”, is securing solutions for the present uncertain energy supply chain management and delivering impacts towards more reliable and sustainable energy security. It offers unparalleled opportunities for engaging in leadership dialogue and innovative thinking with peer groups. There will be 60 engaging sessions while 100 exhibitors will present their products and technologies across 30,000 sqm areas. The slogan of the conference is: “Together we will build on the energy lessons of the past, transform bold vision into action, and inspire the next 100 years of world energy.”

Angela Wilkinson, Secretary-General and CEO of the World Energy Council (WEC), invited all to join the Congress to continue humanizing energy dialogue and, learn to connect the dots and drive meaningful change for the

well-being of 10 billion lives and a sustainable planet.

***These 5Ds are connected and shaped by regional diversity and differences in demographic patterns, and energy needs. The survey results offer a rich and diverse set of views on global energy issues, shedding light on key trends and priorities, and their implications for the five global drivers of change.***

The Congress is the longest-established energy event, having shaped the global energy agenda for a century. In the prevailing unpredictable, turbulent, and

fast-shifting world, the ensuing event will be the most important energy convening of the next decade. IT bridges sectors, geographies, generations, and systems to make faster, fairer, and more far-reaching energy transitions happen. The impact-focused content program of 60-plus sessions is built on the collective insights and experience of the Council’s unique global network of over 3,000 member organizations and presence in more than 100 countries.

We all are aware that the global community is under severe stress due to global warming-induced climate change. Earthquakes, tidal surges, droughts, floods, bushfires, cyclones, and tsunamis are playing havoc. World communities are desperately searching for pathways to limit global warming below 1.5 degrees Celsius by the end of the current millennium that need more focused energy transition plans and implementation programs. Some natural causes like the outbreak of the COVID-19 pandemic and human-created wars and conflicts have made the situation more challenging. Till now there has been no meeting of minds or various issues related to actions leading to reducing and limiting emissions. This year’s Congress is expected to achieve its desired objectives. Leading nations must stand by the less fortunate poor and less affluent nations in the energy transition.

The 2024 World Energy Issues Monitor reaffirms the World Energy Council's 5Ds that are driving energy changes across the world.

**Decarbonization:** The act of decarbonization, energy supplies, services, and usage, with those offering lower carbon intensity.

**Diversification:** The desire to secure energy from more than one (or more) sources in pursuit of energy security.

**Disruption:** Massive demand-side changes in energy use.

**Decentralization:** The shift from centrally controlled energy systems to more decentralized systems often located closer to customers and users.

**Digitization:** Digital technology impacting the energy value chain, modifying

**Every country has unique challenges in combatting climate change. Developed economies achieved economic affluence through the uncontrolled use of dirty polluting fossil fuels. They are blessed with abundantly available fuels, technologies, and resources for exploiting fuels.**

industrial and domestic practices, behaviors, and processes.

On the 5Ds, the Energy Issues Monitor 2024 underlined the necessity for harmonization of all the factors. The imperative is to engage people and the community considering their diverse needs, perspectives, and global impacts. These 5Ds are connected and shaped by regional diversity and differences in demographic patterns, and energy needs. The survey results offer a rich

and diverse set of views on global energy issues, shedding light on key trends and priorities, and their implications for the five global drivers of change.

**Key insights include:**

- Old and new geopolitical agendas are vying for pole position,
- Energy security concerns have evolved beyond conventional supply-side security to demand-driven.
- Investors' confidence in de-risking clean energy investment has grown significantly,
- Key technologies are emerging as pivots in energy transitions, disrupting the energy landscape.
- Transmission grid strengthening and expansion, as well as flexible energy storage solutions, including demand management, are globally recognized areas of focus and action.
- Climate actions encompassing mitigation, adaptation, and compensation vary across regions.
- New mixes of policies and regulations are needed, to manage the multiple objectives in redesigning energy for people and the planet.
- Social transformation gains momentum demands for shared benefits, social inclusivity, and justice increasingly influence energy strategies.

According to the World Energy Issues Monitor 2024, central to the success of the energy system transition is the imperative to lead with diversity, leveraging and learning from differences, and fostering quality dialogues to reconcile divergent perspectives and enable collaboration tailored to each distinct contest.

Every country has unique challenges in combatting climate change. Developed economies achieved economic affluence through the uncontrolled use of dirty polluting fossil fuels. They are blessed with abundantly available fuels, technologies, and resources for exploiting fuels. Moreover, through creating war and conflicts they have taken control over global fuel trading. These countries can cut down emissions drastically through extensive use of renewable energy. They can also assist developing and underdeveloped countries in developing their green energy

portfolio. There is a second category of countries that are at different stages of economic development. These coun-

**There have been a lot of talks and debates over loss and damage issues, adaption and mitigations, and the Green Climate Fund. But there has not been much meaningful progress so far. It is expected that Congress 2024 can reach a meeting of minds among all relevant stakeholders for a smooth energy transition.**

tries like China, India, and South America are in such a state that they cannot immediately move out of fossil fuels. There is a third group of countries that are either least developed or just moved out of the category of the least developed countries. Many of these countries also do not have fuel resources of their own. Some of these are even among the most climate-vulnerable countries though they are the least polluters. Developed nations must assist these groups financially and through the transfer of technology in scientifically exploiting their resources or in developing green energy. There have been a lot of talks and debates over loss and damage issues, adaption and mitigations, and the Green Climate Fund. But there has not been much meaningful progress so far. It is expected that Congress 2024 can reach a meeting of minds among all relevant stakeholders for a smooth energy transition.

EP

**Engr. Khondkar Abdus Saleque**  
International Energy Consultant

## Huge Reserve Margin A Blessing or Curse?

Engr. Khondkar Abdus Saleque

In 2009, the electricity consumers in Bangladesh used to suffer 8-10 hours of load-shedding. The country has now in 2024 a huge reserve margin of power generation. According to the Bangladesh Power Development Board (BPDB), the total grid-connected generation capacity is 26,884 MW. The highest demand served so far was 15,688MW on 19 April 2023. During early to mid-2000, the reason behind the severe power outages was due to a generation capacity that lagged far short of the then demand. Now with the summer peak anticipated in April and May 2023, power sector analysts apprehend possible major load-shedding for inability to utilize the generation capacity due to a diabolic fuel supply shortage. BPDB forecasts 17,500-17,800MW of peak demand in 2024. Despite having a huge surplus capacity, it is highly unlikely that the deep summer demand can be met. There is a possibility of load-shedding. The proven reserve of natural gas continues to deplete with hardly any possibility of replenishing it over the short term. There can be only a marginal increase in RLNG supply. The government remains in a dilemma

over mining domestic coal resources. The other options are imported coal and liquid fuel-based generation. However, payment of fuel import bills is under severe stress due to an erosion in foreign exchange reserves, devaluation of BDT against the US dollar, and high inflation. The government has to pay huge subsidies for running the state-owned enterprises in the power sector. The government has to pay the capacity charge for the idle generation capacities. Under this circumstance, even frequent adjustments of bulk and retail power tariffs cannot ease the payment obligations. Experts have expressed deep concern over shifting the burden of maintaining the surplus capacity to the end users. One can conclude that the huge reserve margin has become a curse instead of giving comfort.

Reviewing information available from the BPDB documents, it appears that 11,890MW of the present grid-connected capacity (26,884MW) is natural gas based while 6,492MW furnace oil, 4,491MW coal, 2,656MW import from India, 626 MW diesel, 230MW hydropower, and 459MW solar. However, the generation of diesel has been

suspended due to the high cost of generation. Liquid fuel-based generation was given priority as a contingency measure in 2010 for confronting the diabolic power supply crisis. There was a plan to retire these plants within 3-5 years, matching the commercial operation of traditional fuel-based large power plants. The government also adopted the Speedy Power Supply Act as an interim measure. But neither quick rental power plants were phased out nor the speedy power supply act could be abandoned. Taking advantage of the situation, rental and quick rental power plants mushroomed. These have led to a huge surplus generation capacity. Many of the power plants both in private and public sectors remain idle for the fuel supply crisis.

The irony is that despite huge reserves, the system lacks reliable spinning reserves. For technical issues whenever major power plants are forced to shut down, gas-fired power plants or liquid-based power plants cannot quickly start generation due to fuel supply shortages. The above sums up the present situation of the power sector from the point of view of generation and supply as the system prepares to confront yet another summer.

As far as upgrading and expanding the power transmission segment and modernizing the power distribution network, a lot of work has been accomplished and is still ongoing. There is no major issue as far as power transmission and distribution are concerned for meeting the demand. PGCB can evacuate capacity generation from all power plants now ready for commercial operation. A work in progress at Madunaghat, Chattogram of PGCB will enable them to evacuate the total generation from the 1,200MW Matarbari power plant and 1,320MW S Alam Group power plant at Bashkhali. All distribution utilities – DPDC, DESCO, NESCO, WZPDCO, and BPDB distribution segments are ready to cater to demand subject to the availability of the required power supply. There are some minor issues in the BREB franchise which are being addressed.

The major issue is fuel supply and the provision of foreign and local currency for addressing that. Demand-side management is another matter requiring review. It is well known to all that of failure in carrying out the required exploration campaign for natural gas resources since 2000 the proven reserve continues to deplete alarmingly. Though the government has finally realized truly expediting exploration of petroleum at onshore and offshore off late it is highly unlikely that the situation will significantly improve in less than 3-4 years. The present production

now has depleted from once 2,750 MMCFD to 2,000 MMCFD. From 2018

***In the above situation, Petrobangla needs to supply gas to power, fertilizer, industrial, and domestic consumers from whatever gas is available. BPBD states that they need 2,300 MMCFD to keep all gas-based power plants in operation.***

***Petrobangla will require suspending the gas supply to most of its other end users to do that. On average, Petrobangla can supply 900-1,000 MMCFD to power but in special situations like irrigation requirements and summer, the highest supply can be 1,300 MMCFD which may let generation up to 6,000MW.***

Bangladesh started importing LNG using Floating Storage and Regasifica-

tion Unit (FSRU). The capacity of two FSRUs now is 1,100 MMCFD. The one operated by a US company, Excelerate Energy, is in operation now after returning from maintenance in Singapore. The other one operated by Summit Energy is due to return and resume operation from early to mid-April 2024. These will facilitate supplying 3,000-3,100 MMCFD gas to the national grid. But by conservative estimates present gas demand is 4,000-4,500 MMCFD. There is no possibility of any increase of RLNG supply before 2026 at this stage subject to Summit Energy installing the third FSRU on time and contracts signed with Qatar, Oman, Excelerate, and Summit for additional supply of LNG coming into operation. We are not very optimistic about the possibility of Excelerate executing the RLNG supply from their proposed deep water LNG infrastructure off the coast of Kuakata and transporting gas by long-distance subsea pipeline. We are also not sure when or whether all RLNG can be imported through the pipeline from India.

In the above situation, Petrobangla needs to supply gas to power, fertilizer, industrial, and domestic consumers from whatever gas is available. BPBD states that they need 2,300 MMCFD to keep all gas-based power plants in operation. Petrobangla will require suspending the gas supply to most of its other end users to do that. On average, Petrobangla can supply 900-1,000 MMCFD to power but in special situations like irrigation requirements and summer, the highest supply can be 1,300 MMCFD which may let generation up to 6,000MW. Now in that situation, the power system will require all coal-based power plants in operation at capacity, import the contracted maximum capacity of power from India, and let at least 3,500-4,000MW liquid fuel-based power plants in operation to cater to peak summer demand. Here are the challenges.

BPDB does not have enough money to pay for the power it purchases from IPPs or the gas it purchases from Petrobangla. Power generation



Night view of Payra 1320 MW Coal Power Plant



utilities can not pay for the coal it has to purchase. BPDB owes huge outstanding bills to IPPs. Through special arrangements payments till September 2023 have been cleared. It has been reported that IPPs can not open LCs in local banks because of their cash flow problems in paying security deposits. Hence it is highly unlikely that power from IPPs especially the liquid fuel-based IPPs will be available as per demand till IPPs are paid their outstanding bills. BPDB cannot do that unless the government pays a subsidy or makes other arrangements. A similar situation prevails in importing coal and power import from India. At the time when foreign currency reserve continues going down, repayment of loans with interests taken for the implementation of mega projects started government is not able to pay the required subsidy or provide any grant.

In such a situation, it may not be possible for the power system to manage peak summer load without planned load-shedding. For a relatively cool March 2024, the system could successfully manage power demand which did not peak beyond 13,000MW except on 28 March. While the situation remained comfortable in cities and towns people in rural areas in the BREB franchise

suffered load-shedding. It is anticipated that from mid-April demand

***Generation capacity is no longer a factor. We must address the system peak. In the Bangladesh system, the day peak happens from 9 AM – 3 PM and the evening peak prevails from 6 PM – 12 midnight. During the day peak, we must try to use as much as possible grid-connected solar and reserve capacity fossil fuel-based power generation capacity and fuel for the evening peak. Shops and malls should also remain open from 3 PM – 11 PM every day.***

may sharply increase. We are not sure that peak demand will grow as

high as 17,500-17,800MW as forecasted but even catering to 16,000MW peak demand may not be possible without major load-shedding.

The only other option is effective and pragmatic demand-side management. We must realize that the major load comes from lighting and cooling. Can the government implement restricted use of air conditioners in public and private sector offices? Can people all over the country observe austerity in using lights and air conditioners? Generation capacity is no longer a factor. We must address the system peak. In the Bangladesh system, the day peak happens from 9 AM – 3 PM and the evening peak prevails from 6 PM – 12 midnight. During the day peak, we must try to use as much as possible grid-connected solar and reserve capacity fossil fuel-based power generation capacity and fuel for the evening peak. Shops and malls should also remain open from 3 PM – 11 PM every day. In that case, the system will not be stressed at day peak. In such case, there is no point in rationing gas supply to CNG which creates a nuisance around CNG stations at congested city roads.

Anyway, going back to the topic that we started with, we believe Bangladesh must have learned the bitter lesson of going for a huge uncontrolled surplus reserve margin without carrying out extensive risk analysis. Contingency actions for rental and quick rental were all right. But at some point, Pandora's Box should not have continued. It has now turned into a curse. End users are bearing the burden of the mistakes of the policymakers. Liquid fuel-based power plants must be retired progressively. No power and no payment cannot be the solution. We must cut the coat according to the clothes.

**EP**

**Engr. Khondkar Abdus Saleque**  
Contributing Editor, EP



A view of Summit Meghnaghat II Power Plant



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## President Asks BERC to Explore New Energy Sources



President Mohammed Shahabuddin has asked the Bangladesh Energy Regulatory Commission (BERC) authorities to focus on research for exploring the new energy sources. Report BSS

"We need to find out new sources of energy and we should focus on strengthening energy related research," he said as a BERC delegation presented annual report to him at Bangabhaban on April 2.

The BERC regulates the gas, electricity and petroleum products in Bangladesh.

The president called the energy sector, including electricity, as one of the most important sectors in the country's overall development.

He said the demand for elec-

tricity is on the rise along with country's overall development.

The head of the state expressed his hope that the BERC authorities would provide time-befitting recommendations and advices to the government on stability and pricing of the energy sector.

BERC Chairman Md Nurul Amin led the delegation that included Dr Mohammad Yamin Chowdhury, Dr Md Helal Uddin, Abul Khair Md Aminur Rahman and Md Khalilur Rahman Khan.

During the meeting, the president was apprised by the commission chairman of the overall activities of the BERC.

The delegation sought the president's full cooperation and guidance in their activities. **EP**

## Capacity Payment Ballooning with LNG-Fired Plants also Claiming It

Euphemistically-coined financial penalty called capacity payment now branches out as LNG-fired power plants emerge as new claimants, with an almost laid-off one already billing against unused electricity, sources say.

The Meghnaghat Unique

584- megawatt one, which happens to be Bangladesh's first power plant fueled by liquefied natural gas (LNG), went into commercial operation a couple of months back. "But the plant has been kept idle for most of the days over the past two months since its commercial

## Petrobangla Plans to Invite Int'l Bidding for Onshore Blocks: Chairman

After floating bids for offshore oil and gas exploration, Petrobangla now plans to invite international bidding for onshore hydrocarbon exploration.

"We're now working on preparing the bidding documents for onshore oil and gas exploration," said Petrobangla Chairman Zanendra Nath Sarker while speaking at a workshop of the energy reporters at Petrocentre in the city recently.

He noted that Petrobangla will appoint a foreign consultant to assist it in attracting international oil companies (IOCs).

Petrobangla organized the workshop for the members of the Forum for Energy Reporters Bangladesh (FERB)



to inform them about the technical and financial issues of the "Oil and Natural Gas Exploration under Bangladesh Offshore Bidding Round 2024".

Earlier Petrobangla, the oil, gas and mineral corporation, floated the offshore bidding on March 10 this year inviting international oil and gas companies to explore Bangladesh's maritime area in the Bay of Bengal. **EP**

operation date (COD) was registered," says a senior power official.

Such state has surfaced as the state-run Bangladesh Power Development Board (BPDB) did not purchase electricity from this plant, the official said.

He could not figure out the amount of capacity payments the BPDB would owe to the private owner owing to its failure to purchase electricity from the newly built Meghnaghat Unique power plant.

Capacity payment is a sort of penalty for the lone buyer of electricity from power plants



- BPDB -- that is bound by deals to pay to plant owners in the event of failure to buy a certain portion of power readily available with them.

The government has long been paying capacity charge to independent power producers (IPPs), rental, and quick-rental oil-fired and coal-fired power plants, says the BPDB official, and now comes the new dimension to payoff for no use of power. **EP**

## PM Hasina Wants Rosatom to Build another Nuclear Power Plant at Rooppur



Prime Minister Sheikh Hasina on April 2 requested Russia's state-run atomic agency Rosatom to consider building a second nuclear power plant at Rooppur.

She made the request when Rosatom DG Alexey Likhachev called on her at her official residence Ganabhaban.

PM's speech writer M Nazrul Islam briefed reporters after the call on.

Hasina told Rosatom that her government seeks to build another nuclear power plant at Rooppur upon completion of the ongoing project.

She pointed out that a technical survey needs to be conducted at the initial stage for setting up two new units.

The prime minister directed the completion of all formalities of taking back Spent Nuclear Fuel of the first and second units of the Rooppur Nuclear Power Plant to Russia.

The DG of Rosatom gave assurance on behalf of the Russian government on taking back the Spent Nuclear Fuel produced by the first and second units to the Russian Federation and promised to complete all the necessary formalities on time as per the instructions of the Prime Minister.

Dhaka and Moscow have already signed an inter-state agreement regarding the return of the Spent Nuclear Fuel of Rooppur Nuclear Power Plant to Russia. **EP**

## Gas Shortage Leaves Compressor Stations Inoperative

The government built two compressor stations in 2016 to supply gas at adequate pressure to different districts, but the expensive machinery has been underutilized due to inadequate gas flow.

The compressor at Elenga in

Tangail has never been used because of inadequate gas supply.

The one in Ashuganj, Brahmanbaria, was used only 9.79 percent of the time in 2023.

The state-run Gas Transmission Company

## Power Ministry Seeks \$2.0b in Subsidies, Smooth Dollar Supply

To run the fuel-oil-based power plants and to import LNG for supplying gas to the power plants in a proper manner, the Ministry of Power, Energy and Mineral Resources has sought \$2.0 billion in subsidies and smooth dollar supply from the Finance Ministry.

Nasrul Hamid, the state minister for Power, Energy and Mineral Resources, met with Finance Minister Abul Hasan Mahmood Ali recently and sought the release of more dollars and the disbursement of subsidies on time.

However, the Finance Ministry agreed to disburse about Tk 1,500 crore as cash support immediately as a temporary solution and told the state minister that the Finance Ministry will issue another Tk 7,000 crore in bonds soon to pay the power

sector dues. The rest of the amount will be disbursed later as arrears, but it is not clear when.

"This amount is needed to clear the dues and as working capital for import purposes," a senior official of the Ministry has said.

Of the \$2 billion, \$1 billion will go towards clearing dues of India's Adani Power and Chevron, which is producing gas from Bibiyana, the major gas field in Bangladesh. PDB owes Adani \$700 million and Chevron \$300 million. The rest of the amount will be used to pay the bills of fuel oils, liquefied natural gas and coal for power generation.

Earlier, the Bangladesh Power Development Board sought a Tk 35,000 crore subsidy for power generation for the current fiscal year. **EP**

Limited (GTCL) built the facilities at a cost of Tk 1,331 crore. Most of the funds were borrowed from the Asian Development Bank.



South Korea's Hyundai Engineering Co Ltd set up the stations that, according to a recent Petrobangla report, have a "design life of 25 years". Almost a third of their life has elapsed.

From 2019-20 to 2022-23 fiscal years, GTCL paid Tk 309 crore to five foreign firms for operating, maintaining, and servicing the machinery, according to a report by a technical committee of Petrobangla.

The compressors were supposed to be supplied with imported LNG and gas from the fields in Sylhet and Brahmanbaria.

The one in Ashuganj was supposed to supply households and businesses in and around the capital with adequate pressure of gas. The one in Elenga was meant to supply gas to the southwestern districts across the Jamuna River. **EP**

## BD Expects to Sign Power Import Deal with Bhutan Soon: Hasan Mahmud



with Bhutan soon," Hasan Mahmud told reporters after the meeting with the Bhutanese King.

"We have been eager to sign the agreement with Bhutan for a long, we have signed an

**B**angladesh expects to sign a power import agreement with Bhutan soon, said Foreign Minister Hasan Mahmud recently, following a meeting with Bhutanese King Jigme Khesar Namgye Wangchuck.

Hasan Mahmud called on the Bhutanese King at Intercontinental Dhaka, his place of residence in the Bangladesh capital during his recent four-day visit.

"Bangladesh will sign a power import agreement

agreement with Nepal by this time to import hydropower from their country. India has cooperated with us in this regard and will also support us in signing the agreement with Bhutan to import hydroelectricity," he said.

Bangladesh and Bhutan have also agreed to enhance cooperation in the areas of trade and investment, regional connectivity, power, agriculture, education, culture, and people-to-people contact. **EP**

## Rosatom Plans to Supply Electricity from FPUs to Foreign Buyers



**R**ussia's state atomic energy corporation Rosatom and another energy giant of the country TSS Group have agreed to form a joint venture for the construction and operation of a series of floating power units (FPUs) with RITM-200M nuclear reactors.

Within the framework of the recently concluded ATOM-EXPO-2024 held in Sochi Russia, both parties signed an

agreement on the main terms and conditions of the joint venture.

The project involves the commencement of construction of a series of floating power units using RITM-200M reactor units with a capacity of at least 100 MW and a service life of 60 years, and the subsequent sale of electricity from the FPUs to consumers abroad.

"We see a great deal of interest in floating nuclear power both in Russia and abroad. Floating power units are capable of operating in the harsh conditions of the Arctic and countries with warm climates. **EP**

## Wärtsilä Introduces New, More Powerful Version of Wärtsilä 32 Engine

**W**ärtsilä, the marine industry's leading solutions provider, has introduced a more powerful version for marine applications of its popular Wärtsilä 32 engine.



First introduced in the 1980s, and with more than 4,000 units sold to the marine industry alone, the Wärtsilä 32 engine has proven to be a highly efficient and reliable solution for a wide range of vessel applications. The latest version is expected to expand that range even further.

The Wärtsilä 32 engine is a popular choice for both the marine and land-based power plants markets. In the marine industry the engine is used for both main engine and auxiliary engine applications.

It is typically selected to power different types of

tankers, container vessels, and offshore support and drilling vessels, while in the cruise and ferry sector, the Wärtsilä 32 is the most favored engine of its size. In auxiliary electric production, the Wärtsilä 32 is widely utilized in all vessel categories where high auxiliary load is needed.

The new and upgraded version is available with an increased power output of 580kW per cylinder at 750RPM (50Hz version). This represents a 15% increase in power output over the earlier 32 engine, despite having the same external dimensions. **EP**

## MoUs on Defense, Energy to be Signed during Qatar Emir's Visit

**Q**atar Emir Sheikh Tamim bin Hamad Al Thani is scheduled to visit Bangladesh this month as the two countries eye strengthening political, diplomatic, and economic relationship amid a shift in global geopolitics.

His visit is scheduled for April 22-23.

During his visit at the invitation of Prime Minister Sheikh Hasina, the two countries are likely to sign nearly a dozen memorandums of understanding (MoUs), including power and energy, defense,

manpower, maritime cooperation, and air service, said foreign ministry officials.

"We are working on the MoUs and will finalize soon in consultation with the Qatari authorities," said a foreign ministry official.

The ministry already held an inter-ministerial meeting to discuss the MoUs.

The PM visited Qatar on March 4-7 last year to join the conference on LDC at the invitation of UN Secretary-General Antonio Guterres and the emir. **EP**



# North-West Power Generation Company Limited

(An Enterprise of Bangladesh Power Development Board)



## Market Share

- ✓ 3063 MW generation capacity.
- ✓ Highest among all govt. companies.

09  
Power Plants,  
Total: 3063 MW

## Start of Electricity Sales

- ✓ COD of 1<sup>st</sup> Power Plant



## Commencement of Business

- ✓ Started with 02 development projects.

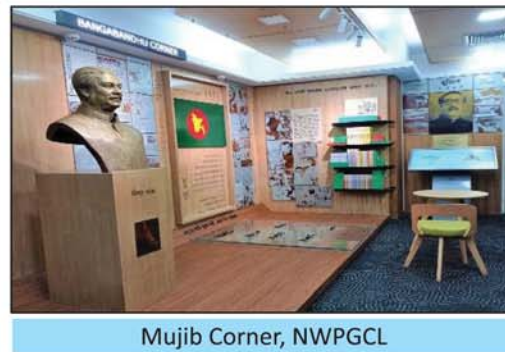
## Registration & Incorporation

**NWPGCL**  
Enlightening Life  
Enlightening Bangladesh



ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018 Certified

ISO



Mujib Corner, NWPGCL

Power Plants of NWPGCL & its JVC

## Trilateral Deal Essential to Increase Regional Cooperation in Power Sector: Nasrul Hamid



State Minister for Power, Energy and Mineral Resources Nasrul Hamid said that a Bangladesh-India-Nepal trilateral agreement is essential to increase regional cooperation in the power sector.

Negotiations are ongoing, he said adding that Bangladesh has sent a proposal to India and Nepal for signing a MoU (memorandum of understanding).

He made the remarks while addressing a seminar titled

"Pre-event Seminar on the 3rd Nepal Investment Summit - 2024" at the Nepal Embassy in Baridhara in the city recently.

The state minister said that if the transmission line is built between Nepal and Bangladesh, electricity can be imported as well as exported.

He said that it is possible to build profitable partnerships across borders through regional cooperation.

"Through joint efforts, the potential of our region can be quickly exploited. It is essential for neighboring countries to work together for sustainable development and economic prosperity," he observed. **EP**

## No Power, Gas Supply for New Factories Outside of EZs

The government will not provide electricity and gas supply to new factories if they are set up outside the government-designated economic zones or industrial enclaves.

The Cabinet Committee on Economic Affairs decided it at a meeting on March 21. The Bangladesh Bank issued a circular to this effect recently. The central bank also directed banks to ensure mandatory clearance certificates from utility service providers before approving loans.

In 2020, the energy and mineral resources ministry issued a circular to stop providing new gas connections to industries outside economic

zones and industrial parks from April 2021. However, the government did not implement the decision strictly in the last three years.

The BB said planned industrialization is important to ensure economic prosperity.

"Establishing industries at specific locations will ensure proper land and energy management as well as environmental development."

Mahbubul Alam, president of the Federation of Bangladesh Chambers of Commerce and Industry, said the decision was taken to encourage investors to set up new factories at economic zones and industrial estates. **EP**

## Chevron Shelves \$65m Project Amid Non-Payment of Overdue Bills

American oil-major Chevron has deferred its \$65-million Jalalabad compression project in northeastern Bangladesh following nonpayment of \$220 million in overdue gas bills, market sources said.

Chevron Bangladesh wrote to state-run Petrobangla recently about its decision not to execute its natural-gas-compression station near Jalalabad gas field in time.

This is for the first time that Chevron deferred any of its projects due to government default on



payment of gas bills.

The US oil-and-gas explorer, the largest natural-gas producer in Bangladesh, approved a budget worth \$65 million last year to build the compression station within 2025. It was doing the preliminary work to initiate the construction of the station this year to complete it by next year. **EP**

## Single Point Mooring: ERL to Sign another Deal with Chinese Company

Eastern Refinery Limited (ERL) is going to sign another supplementary contract with its contractor China Petroleum Pipeline Engineering Co. Ltd (CPPEC) to complete the testing and commissioning of the country's first Single Point Mooring (SPM) with Double Pipeline project.

Under "the fifth supplementary contract" the Chinese company will hire a tugboat with adequate capacity and provide associated services for completing the testing and commissioning of the newly installed SPM.

Cabinet Committee on Government Purchase (CCGP) in its last meeting on March 27 approved a proposal of the Bangladesh Petroleum Corporation (BPC) in this regard. The ERL is a subsidiary of the BPC and it has been implementing the SPM project.



According to official sources, the ERL will sign the Tk 62.83 crore deal with the Chinese company to facilitate the completion of the commission works.

Prime Minister Sheikh Hasina in November last year formally inaugurated the operation of the newly installed SMP to offload the imported petroleum fuel directly from vessels and transport it through the pipeline to the fuel tanker in the land. **EP**

## Govt Looks to Ramp-up LNG Imports in Next Two Years



early 2026, he said.

The cabinet committee on economic affairs last week approved in principle Petrobangla's LNG procurement proposal from Gunvor.

The prices of LNG to be procured from Gunvor will be determined based on Japan Korea Marker, or JKM, benchmark index.

Once both parties reach a consensus, the proposal will be sent to the cabinet committee on government purchase for approval, said the official, adding that Petrobangla will subsequently ink the SPA with Gunvor to initiate importing LNG.

It will be Bangladesh's first-ever LNG purchase deal under a short-term contract and first-ever buying of LNG under the JKM index, he added. **EP**

After inking around half a dozen long-term deals on the import of liquefied natural gas (LNG), the government now has moved to short-term contracts to ramp up imports of the fuel in the next two years.

State-run Petrobangla is now negotiating prices with Gunvor Singapore Pte Ltd to set the stage for signing a sales and purchase agreement (SPA), said a senior official at Petrobangla.

Bangladesh has set a target to import 24 LNG cargoes from Gunvor in the next two years before starting imports from new long-term suppliers in

## 2024 World Energy Issues Monitor Reveals Increasing Uncertainty and Extreme Polarization



The World Energy Council recently published its annual World Energy Issues Monitor. The report titled "Redesigning Energy in 5D" assesses the global energy agenda based on the collective expertise and views of nearly 1,800 energy leaders in over 100 countries.

Leaders were surveyed in early 2024, following the conclusion of the COP28 conference in Dubai. The report provides a unique snapshot of leaders' perceptions of what's driving energy and energy transitions worldwide.

Now in its 15th year, the 2024 edition shows that the risk of disorderly energy transitions, fuelled by a fragmented energy leadership landscape and with adverse societal consequences, is a key perception of uncertainty across almost all the issues leaders were asked to assess.

Competing global and regional geopolitical agendas, the evolution of energy security concerns to encompass critical minerals and demand driven energy shocks and disruptions, and the varying regional nature of climate action priorities have

converged to shape a distinctly uncertain path to achieving Net Zero and beyond.

The report reaffirms five critical global drivers of change – Decarbonization programs, Digitalization schemes, Disruption to the demand-side, Diversification of energy sources, and an increasingly Decentralized approach to energy systems – and how they shape energy transitions worldwide.

Dr Angela Wilkinson, Secretary General & CEO of the World Energy Council, said: "While the direction towards zero emissions energy systems is clear, the journey to a sustainable future is fraught with challenges. This year's World Energy Issues Monitor edition reflects global uncertainty about the collective ability to manage clean and inclusive energy transitions at speed and scale. The context of an increasingly fragmented energy leadership landscape and competitive geopolitics is exacerbating uncertainties." **EP**

Somen Das, the officer-in-charge of Rampal Police Station, confirmed that law enforcement is actively pursuing leads to identify and apprehend the culprits. As a precautionary measure, additional police

forces have been deployed to secure the power plant and its surrounding areas, aiming to prevent further incidents and ensure the safety of the plant's personnel and infrastructure. **EP**

## 'Attempted Robbery' at Rampal Power Plant: 5 Security Personnel Injured



Five security personnel, including two Ansar members, at the Rampal Coal-Fired Thermal Power Plant sustained injuries following a "robbery attempt" by a group of assailants recently.

The attack occurred in the No 5 yard near No 3 tower within the plant's premises.

Deputy General Manager Anwarul Azim reported that approximately 50-60 armed individuals attempted to infiltrate residential areas of the power plant around 11:30 pm. The guards faced aggression when they endeavored to thwart the attackers' entry, resulting in injuries.

Of the injured, two were urgently transported to Khulna Medical College and Hospital for medical attention, while the remaining three received treatment at the Rampal Upazila Health Complex.





# Green page

## Govt to Introduce Solar Irrigation: Nasrul Hamid



The state minister said the government has a roadmap to increase power from renewable energy sources up to 12,000 MW in the future.

"Plan has been taken to generate 40 percent power from the clean energy by 2041 and import about 9,000MW under the

regional and sub-regional cooperation from neighboring countries," he said.

Bangladesh is now enjoying 100% electrification due to the visionary and prudent leadership of Prime Minister Sheikh Hasina. Electricity has reached all houses from inaccessible hills to isolated char areas successfully, the experts said.

The state minister said in such a situation, the government has required a long-term plan to reduce coal-fired power plants and increase renewable energy in the country, adding, "Under the energy transition, solar power is being prioritized in agriculture instead of diesel irrigation pumps." **EP**

**W**ith sincere efforts, the government will introduce solar irrigation by reducing the number of diesel irrigation pumps in the agriculture sector.

"There are about 12 lakh diesel irrigation pumps in the agriculture sector across the country that will be transformed into solar irrigation," State Minister for Power and Energy and Mineral Resources Nasrul Hamid has said recently.

"To combat effects of climate change, the government's target is to produce 4,000 megawatts (MW) of electricity from renewable energy by 2030," he added.

## Rush for Green Power Plants amid Fuel Crisis

**A**rush for approving renewable energy-based power plants is evident as 350-megawatt projects have already been given the go-ahead in the last three months, auguring well for the green transition.

Moreover, some 506MW green power projects have been in the queue for tariff approvals from the cabinet committee on government purchase, officials said.

On what experts see as the cusp of a much-needed green-energy transition in Bangladesh, for that matter, the world over, many local and foreign companies are also showing interest in making solar and wind power plants in the country.

Last year alone, solar power plants with an aggregate capacity of 2.194 gigawatts received government approval to help lessen the shortage of electricity amid the US dollar crisis that forced many fossil fuel-based existing power plants to lie idle. **EP**

## IRENA Says Solar Capacity Rose by 345.5 GW in 2023

**T**he International Renewable Energy Agency (IRENA) says developers installed 345.5 GW of solar throughout the world in 2023.

China mainly drove the surge, accounting for nearly three-quarters of all new renewable energy, but IRENA says more equitable growth will be needed to hit 2030 deployment targets.

An additional 345.5 GW of solar was deployed throughout the world in 2023, according to official figures from IRENA, published in its Renewable Energy Capacity Statistics 2024 report.

These numbers differ substantially



from figures released in February by BloombergNEF, which said global newly installed PV capacity reached approximately 444 GW last year.

IRENA's figures represent a 32.2% increase on 2022 levels and are a record for a single calendar year. Solar represented roughly 73% of total renewable-energy deployments last year, at 473 GW overall. **EP**



**পাওয়ার গ্রিড কোম্পানি অফ বাংলাদেশ লি:**  
**POWER GRID COMPANY OF BANGLADESH LTD.**  
(An Enterprise of Bangladesh Power Development Board)



PGCB Bhaban, Avenue-3, Jahurul Islam City, Aftabnagar, Badda, Dhaka-1212 Web : [www.pgcb.gov.bd](http://www.pgcb.gov.bd)

## 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।



## Three More Solar Power Plants Await Govt Nod



**T**hree more solar power plants in the private sector are in the process of getting approval from the government.

According to official sources, the solar power plants are 100 MW power plant at Banskhali in Chattogram, 300 MW at Islampur in Jamalpur, and 100 MW at Sadar Upazila in Rajbari district.

The Consortium of Huiheng Wind Power Limited of Hong Kong and Jupiter Energy Ltd. of Bangladesh will develop the 100 MW Banskhali plant

while SAL-GTECH Consortium will set up the 300 MW Islampur plant and Consortium of Sungrow Renewable Energy Investment Pte. Ltd. and Theia Power (Singapore) Pte. Ltd. will set up the 100 MW Rajbari power plant.

Official sources said the Power Division has already moved three separate proposals to

the Cabinet Division to place the offer of the three consortiums to the meeting of the Cabinet Committee on Government Purchase (CCGP) for final approval of the government.

'If the CCGP approves the proposals, the Power Division will ask the Bangladesh Power Development Board (BPDB) to sign the power purchase agreements with them,' a top official of the Power Division said. **EP**

## France Issues New Rules for Agrivoltaics



**T**he French government has published the long-awaited decree in the country's official journal, defining the conditions for the installation of solar panels on agricultural, natural, or forest land.

It also contains a definition of agrivoltaics and places agricultural exploitation at the center of the debate. The new provisions state that an agrivoltaic facility should not negatively impact the potential of the soil and ensure an agricultural yield loss of less than 10%.

The rules also consider any installation that enables the return to agricultural or pastoral activity of unused agricultural land for over five years as improving the soil's agronomic potential.

Agrivoltaic installations, except for livestock farming, must ensure that agricultural production achieves at least a 90%

yield per hectare compared to a designated control zone. PV installations also cannot cover more than 40% of an agricultural plot surface.

The control zone, representing at least 5% of the installed agrivoltaic surface or up to one hectare, must be located nearby. However, this requirement may be waived for installations with a coverage rate below 40%, provided the operator shows the existence of a comparable agrivoltaic installation in the region. **EP**



## Tesla to Scout Sites in India for \$2-3b EV Plant

**T**esla will send a team to India this month to scout locations for a proposed \$2 billion to \$3 billion electric car plant, according to a recent report published in a newspaper.

Tesla's reported push into India comes when EV demand is slowing and competition heats up in its main markets of the US and China, causing the EV maker to report a drop in first-quarter deliveries and missing estimates.



The company will send a team from the United States by late April to study sites for the plant, with a focus on states that have automotive hubs such as Maharashtra, Gujarat, and Tamil Nadu, the report said, citing people familiar with the matter.

India last month lowered import taxes on certain electric vehicles produced by carmakers that commit to invest at least \$500 million and start domestic manufacturing within three years.

The EV maker's CEO Elon Musk has been trying to enter the Indian market for years but New Delhi wanted a commitment to local manufacturing.

Tesla officials have been in talks with government officials over the last year, with Musk meeting Prime Minister Narendra Modi in June. **EP**

## Indian Grid Operator Launches 500 MW Energy Storage Tender



evening peak support.

The selected bidder will supply power to GRIDCO for five years from technology-agnostic energy storage systems, starting from April 1, 2026. The charging power for the energy storage system will be supplied by the developer.

**G**RIDCO (formerly Grid Corp. of Odisha), an entity that handles the bulk power procurement of distribution companies, has started accepting bids from energy storage system developers to provide 500 MW of energy storage capacity, connected to India's central transmission utility or the Odisha state transmission utility, with five hours of

The selection of energy storage system developers for a total capacity of 2,500 MWh will be carried out through competitive tariff-based bidding, followed by an e-reverse auction process. The minimum bid size will be 250 MWh and the maximum bid size will be 1,250 MWh.

EP

## Chinese EV Giant BYD Announces Record Profit for 2023

**C**hinese battery and automotive giant BYD achieved a record profit in 2023, annual results showed recently, despite fierce competition in the country as demand for electric vehicles grows.

The Shenzhen-based company is now moving quickly overseas -- including into countries in Southeast Asia but also further afield in Latin America and Europe -- as a price war continues to



be waged in China, the world's largest automotive market.

BYD overtook Elon Musk's Tesla in the fourth quarter of 2023 to become the world's top seller of EVs.

The firm recorded a net profit of 30 billion yuan (\$4.16 billion) last year, according to a filing to the Shenzhen Stock Exchange, up 80.7 percent year-on-year from 16.6 billion yuan in 2022, reaching an all-time high.

The figure is in line with a forecast issued by the firm in late January of 29-31 billion yuan.

Originally specializing in the design and manufacture of batteries, the company began diversifying into the automotive sector in 2003.

In April 2022, BYD announced it had ceased the production of cars powered solely by gasoline, instead focusing exclusively on hybrid and electric models.

EP

## First Mode Announces Strategic Alliance to Scale Clean Energy Solutions for Heavy Industry



strategic alliance.

First Mode's considerable expertise in powertrain systems electrification and hydrogen technologies, coupled with Mitsui's global business network, will uniquely equip the alliance to explore new business opportunities

that catalyze the integration of First Mode's Path to Zero™ product line into previously hard-to-abate sectors like mining.

"We are honored to enter into a strategic alliance with Mitsui to support and help scale our solutions that are proven to reduce heavy industry's polluting outputs. The collaboration underscores our shared commitment to sustainability and the critical role of partnerships when addressing complex global challenges through innovation," said Julian Soles, CEO of First Mode.

EP

**F**irst Mode, the pioneering developer and manufacturer of decarbonization products for heavy industry, has announced a strategic alliance with Mitsui & Co., Ltd, ("Mitsui") the international trading company and investment group with extensive interests in the mining industry, to accelerate heavy industry's adoption of low-carbon and zero-emissions product solutions at scale.

Representatives from First Mode and Mitsui gathered at First Mode's recently opened factory in Seattle for an official signing ceremony to launch the

## Saber Urges MPs to Raise Commitments to Climate Actions



Environment, Forest and Climate Change Minister Saber Minister Hossain Chowdhury on April 1 urged members of parliament (MPs) to raise their expectations and commitments to implement climate actions.

He said climate change is not just an environmental issue but an existential crisis that demands urgent and unified action.

"The outcome of our response to climate change will determine the fate of our planet and future genera-

tions. There is no greater threat facing humanity today than climate change, and Bangladesh stands at the forefront as ground zero for its impacts," the environment minister said while speaking at a function on the occasion of announcement of the newly-formed committee of Climate Parliament, Bangladesh, held in Dhaka.

He said Bangladesh aspires to be champion in finding solutions to the challenges posed by climate change.

"Adopting a whole-of-society approach, we must bring together people from all sectors to confront these challenges head-on. Let us work together tirelessly to address the urgent needs of our planet," he added. **EP**

## Alberta Funds \$33.7m for Emissions Reduction

The government of Alberta is investing \$33.7 million in 13 projects through Emissions Reduction Alberta's (ERA) Reshaping Energy Systems funding competition.

These projects, valued at about \$88 million in public and private investment, focus on technologies that will reduce emissions and contribute to a more flexible and sustainable energy grid. All funding is sourced from the government of Alberta's Technology Innovation and Emissions Reduction (TIER) fund.

Included among these projects is one from Atlas Power Technologies Inc. that

involves combining a supercapacitor-based energy storage system (SC-ESS) with a hydroelectric generating facility in Alberta, to provide fast responding reliability services to Alberta's power grid. ERA funding is \$6,500,000, with a total project cost of \$14,102,261.

Atlas said this project is a collaboration with TransAlta Corporation. The grant will support a hybridized hydroelectric project using Atlas's supercapacitor energy storage system (Hybrid Hydro SC-ESS) and will demonstrate how supercapacitor technology can address the urgent reliability needs of Alberta's electricity grid. **EP**

## PTTEP Signs Further Carbon Capture MoU in Thailand

PTTEP and Kasetsart University's Faculty of Science have signed a memorandum of understanding (MoU) concerning the "PTTEP Subsurface University Energy Connect" project.

The parties aim to jointly conduct research into geoscience and petroleum engineering, develop professionals in petroleum exploration and production, and explore for carbon storage sites for future carbon capture and storage developments.



As part of the same scheme, PTTEP has previously signed MoUs with Chulalongkorn University, Chiang Mai University, Khon Kaen University and Mahidol University.

Earlier this year, PTTEP and INPEX agreed to jointly conduct a study on carbon storage potential in the northern Gulf of Thailand. **EP**

## New China Climate Chief Says Fossil Fuels Must Keep a Role

Cleaner power sources should eventually dominate the global power mix, though fossil fuels will continue to be required, according to China's top climate diplomat.



Governments globally need to massively scale up deployments of solar, wind and hydropower, and also be prepared to utilize dirtier fuels in a manner that limits their pollution, Liu Zhenmin, China's special envoy for climate change, said recently.

He also said it was important for China-US cooperation in the area to continue despite challenges.

"We will still keep our fair share of fossil fuels, but they must be used in a clean way," Liu — who

replaced veteran negotiator Xie Zhenhua this year — told the Boao Forum for Asia in Hainan, China. "I think that is critical."

China leads the world in installations of renewables, though it burned record amounts of coal, oil and gas last year. The nation is also continuing to add coal-fired power capacity, even if officials insist the fleet will eventually act mainly as a backup to its cleaner generation sources. **EP**

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## Women's Perspectives Vital in Climate Action: Saber



Chief guest a program titled "Empowering Women for Climate Justice", organized by The Asia Foundation and development organization Bahnishika, at a hotel in Dhaka.

Environment, Forest and Climate Change Minister Saber Hossain Chowdhury recently said women's perspectives are vital in climate action as they are the key agents of change in combating climate change.

He said women make invaluable contributions to environmental conservation, adaptation, and mitigation efforts, highlighting the imperative of recognizing and amplifying their voices in climate action strategies.

The environment minister was addressing as the chief

He said empowering women is urgent as they often understand needs better than others.

Saber said the government is committed to implementing climate action by measuring its impact and welcomes insights from development partners.

Noting that strategic spending is essential for maximum impact, he said water management stands as a critical challenge, with a commitment to inclusivity and acknowledging the limits of adaptation. **EP**

## Canada's Trudeau on Back Foot over Carbon Tax



Polluters should pay up, Canadian Prime Minister Justin Trudeau insists. But pressure is mounting to scrap his signature climate policy, a federal levy on CO2 emissions, as ordinary Canadians see the law increase their own cost of living.

The levy, applied to a myriad of fossil fuels used by both industry and con-

sumers, is scheduled to rise from Can\$64 to Can\$80 (US\$48 to US\$59) per metric ton of carbon on April 1, in a bid to see Canadians slash their total carbon emissions by 40-45

percent below 2005 levels by 2030. But it's adding to household costs at the same time that people are feeling the bite from inflation.

Seven provinces have asked the government to pause or cancel the increase, which would add about three cents per liter (quarter gallon) to the

## Climate Pledges of Big Firms 'Critically Insufficient': Report



From carmakers to fast fashion, dozens of major international companies are failing to reduce their greenhouse gas emissions at the pace required to slow climate change, a report said recently.

The nonprofit research groups NewClimate Institute and Carbon Market Watch looked at the climate pledges of 51 multinational firms and found many brands were inflating their sustainability claims.

Distinguishing real cuts to planet-heating greenhouse gas emissions from "unsubstantiated greenwashing" was a major challenge, particularly for consumers, they said.

Taken together, the brands scrutinized in this report -- mostly household names including H&M Group, Nestle and Toyota -- accounted for 16 percent of global emissions in 2022.

But their efforts were "critically insufficient" to limit global temperature rises to

price of gasoline.

Newfoundland Premier Andrew Furey -- a liberal from Trudeau's own party -- was the latest this month to join his conservative peers in seeking a reprieve "at least until inflation stabilizes."

Saskatchewan, meanwhile, is refusing to collect and remit the tax to Ottawa.

In some ways Trudeau has already caved to pressure, issuing in October a three-year

1.5 degrees Celsius -- the safer limit set under the 2015 Paris climate agreement.

While "the collective ambition of companies' 2030 climate pledges has gradually improved over the last two years... most companies continue to fall far short of the economy-wide emission reductions required", the report said.

Global emissions need to be reduced by 43 percent by 2030 to align with the Paris goals, according to United Nations climate scientists.

These companies, on average, would be reducing their emissions by 33 percent under their current commitments, the report said.

Some firms could even be backsliding on their promises. **EP**

exemption of the tax on home heating oil. The Atlantic region, where 24 Liberal House of Commons seats are at stake, benefits the most from the change.

In parliament recently, a mushroom farmer's hefty gas bill became the focal point of sparring match between Trudeau and his main rival, conservative leader Pierre Poilievre -- who vowed to "axe the tax" if he defeats the Liberals in elections next year. **EP**

## Bangabandhu was Visionary of Environment-Friendly Development: Saber



Sheikh Mujibur Rahman and the development of the country" marking Independence and National Day, read a press release.

"We have to express our gratitude to Bangabandhu by building Sonar Bangla, a happy, prosperous and serene environment of his dreams," the minister said.

Bangabandhu united all people irrespective of caste and religion, and envisioned a democratic system as an alternative to the regime of Pakistan, he said.

"Even though Bangladesh is politically independent, we must continue our struggle for economic, social and cultural liberation. There can be no division in the interest of the country. For the development of the country, we must work together regardless of party affiliation."

The discussion was presided over by Farhina Ahmed, secretary of the Ministry of Environment, Forest and Climate Change. **EP**

**E**nvironment, Forest and Climate Change Minister Saber Hossain Chowdhury recently said Father of the Nation Bangabandhu Sheikh Mujibur Rahman was the visionary of environment-friendly development in the country.

"Twenty years before the first Earth Summit held in Rio, Bangabandhu planned to protect the environment in newly independent Bangladesh. He promulgated ordinances to control water pollution. He also enacted laws to conserve wildlife and biodiversity in war-torn Bangladesh," Saber said.

He was addressing a discussion organized by the ministry at the Department of Environment on "The historical leadership of Father of the Nation Bangabandhu

## Carbon Markets to Play Crucial Role in Energy Transition: IEF

**C**arbon markets are set to play a pivotal role in achieving climate goals, with efforts from Saudi Arabia and the UAE, paving the way for a smooth energy transition.

According to a new report from the International Energy Forum, carbon markets are capable of effectively lowering the costs associated with greenhouse gas removal

by connecting local project owners with international buyers eager to offset their emissions.

"The promotion of cross-border trade in carbon credits between nations will bolster net-zero carbon balances, consequently boosting both supply and demand," stated the report.

## Govt is Spending \$3.5b per Year in Climate Adaptation: Saber

**E**nvironment, Forest and Climate Change Minister Saber Hossain Chowdhury recently said the government is sincerely working to implement climate adaptation actions by spending US\$ 3.5 billion every year.

"But, actually, US\$ 9 billion is needed for carrying out adaptation activities," he said while launching the UK Government's Foreign, Commonwealth and Development Office (FCDO)'s the Nature-Based Adaptation Towards Prosperous & Adept Lives & Livelihoods in Bangladesh (NABAPALLAB) project at a hotel in Dhaka.

Speaking as the chief guest, Saber Hossain said collaboration among government, NGOs and international development partners are important to this end.

He said the government will empower communities, particularly women, to overcome climate challenges and adapt to changing circumstances.

The environment minister said initiatives have been taken to protect two critically important ecological areas--the Sundarbans, the world's largest mangrove forest, and Hakaloki Haor, a vital breeding ground for birds and fish. **EP**

The IEF, comprising energy ministers from 73 countries, including both producers and consumers, represents the world's largest gathering of energy ministers and accounts for over 90 percent of global oil and gas supply and demand.

The forum lauded Saudi Arabia's transition efforts, highlighting the establishment of the Regional Voluntary Carbon Market Co. by the Kingdom's Public Investment Fund in collaboration with the Tadawul Group.

The primary objective of this company is to incentivize projects addressing climate issues, thus expediting efforts to achieve mitigation outcomes.

According to the IEF report, this firm has successfully conducted two auctions, selling 3.6 million tonnes of carbon



credits to domestic companies such as Saudi Aramco, NEOM, SABIC, and others.

Similarly, the UAE launched an entity named Carbon Alliance in mid-2023, with the initiative aiming to develop the carbon market ecosystem within the country.

This alliance in the Emirates comprises numerous domestic and international member entities, including the UAE Independent Climate Change Accelerator, AirCarbon Exchange, First Abu Dhabi Bank, and Mubadala Investment Co. **EP**



# ESCALATION OF MIDDLE EAST TENSIONS TIME FOR BANGLADESH TO BOOST ITS READINESS

Reverse Swing



Farid Hossain

Iran's retaliatory drone and missile attacks on Israel last week triggered a global call for restraint to prevent any further escalation in the conflict in the Middle East. Iran, which considers Israel an enemy state, has long been waging a proxy war against the Jewish state by providing support to Palestinian group like Hamas and the other radical organizations like Hezbollah based in Lebanon. But on April 14 Tehran could not help but launch a direct attack on Israel in which it fired at least 300 drones and missiles, 99% of those repulsed by the Israeli Defence Force (IDF). Even though Israel suffered negligible damage and no human casualties, Tehran called the attacks, made in self-defense, a success and an appropriate response to Israel's April 1 bombing of an Iranian consulate that killed at least seven people, including two commanders of Islamic Revolutionary Guard Corps. With this attack, seen as a violation of the Geneva Convention, Israeli Prime Minister Benjamin Netanyahu made a calculated move to shift the global attention from the genocide in Gaza to a different war theatre. Netanyahu, who has been facing protests and criticisms at home for his handling of the war on Hamas, has

briefly succeeded in his move. Calls for restraint from the UN, the US and the rest of the world can be cited as the proof. Iran is also taking pride in its attack of retaliation. No matter most of the missiles failed to achieve their mission, the attack nonetheless proved as a demonstration of Tehran's military prowess and the capacity it has achieved in long-range missile attack.

The hawks in Israel, especially those in the cabinet of Netanyahu, are calling for Tehran's blood. Tehran will be taught a hard lesson for its attack, Israeli military commanders have threatened without realizing that war-monger Netanyahu has been losing world's public sympathy for its mass killings in Gaza where it indiscriminately targeted civilians, mostly women and children, pursuing the innocent Palestinians in hospitals, refugee camps and aid convoys. For 1,200 Israelis killed in Hamas' October 7 gruesome murders inside Israel the Jewish state's military has already killed more than 33,000 Palestinians. In its killing spree Netanyahu's Israel has blatantly defied the UN and international protests, including those in his own country, and spared none in Gaza. Frequent calls for

ceasefire have fallen in deaf ears, while a brutal Netanyahu did not mind in making even his Western allies embarrassed and angry in some cases. In its response to Iran's attack, US President Joe Biden expressed his administration's iron-clad support for Tel Aviv, but at the same time made it adequately clear that Washington will not take its side should Netanyahu go for escalation.

The anti-escalation is understandable. The world leaders are already grappling with efforts to end Russia's war in Ukraine, the conflict in Gaza and pockets of conflicts here and there. International efforts to garner enough support to make Ukraine and Russia to sit across the table for a negotiated end to the war in which no clear winner seems to be emerging. Intransigent Netanyahu is behaving like a rogue and he has rightly been likened with Hitler, the fascist ruler of Germany responsible for six million deaths, mostly of Jews.

The developing countries like Bangladesh have been made victims of these conflicts. Consider the difficulties Bangladesh is faced with because of the conflicts. It is dependent on imports of fuel oil, gas, edible oil and fertilizer to mention a few. The sanctions and counter sanctions, disruptions in supply chain of goods because of almost regular attacks on foreign ships in the Cape of Good Hope and the strait of Hormuz and fears of further escalation have kept the prices soaring. It is feared that the latest escalation in the Middle East tensions is likely to adversely impact export of Bangladesh's RMG and import of fuel and fertilizer.

It's high time the Bangladesh government heightens its watch over the unfolding situation and takes necessary preparations to overcome the possible impacts of the crisis. **EP**



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# Enabling Environment And Competitive Bidding May Help Cut Solar Power Cost

It may not be possible to get solar electricity in Bangladesh at only 3.0-3.5 US cents per unit like in India, but it is possible to bring it below 7.0 US cents by adopting appropriate strategies. Solar energy resources in the desert areas of India are 7 kWh/m<sup>2</sup>/day as compared to only 4-5 kWh/m<sup>2</sup>/day in Bangladesh, and low-cost vast stretches of land for large-scale solar projects are also available in India but in Bangladesh, it is challenging to organize such land. In most cases, land development is not needed in India but in Bangladesh, most of the projects need land development and erosion protection measures. Among others, these are a few main reasons why it is not possible to get solar power at a price like India's. However, the tariff can be significantly reduced by acquiring and developing land for grid-tied solar, constructing infrastructure required for the evacuation of power to the grid, and ensuring long-term concessionary financing. Priority should be given to the selection of entrepreneurs through competitive bidding rather than awarding contracts based on unsolicited offers only.

Shahriar Ahmed Chowdhury, Director of the Centre for Energy Research (CER) of United International University, shared his thoughts in an exclusive interview with Energy & Power Editor **Mollah Amzad Hossain**.

**How do you evaluate the present state of renewable energy developments in Bangladesh? Bangladesh is lying way behind now. What are your thoughts?**

I will not say we are lying way behind. It is a positive indication that we have started giving priority to renewable energy development, though a bit late. There is no doubt that Bangladesh lags behind other countries in the region. The most important matter is whether we could create an enabling environment for renewable energy development. Till now, required incentives for this sector could not be provided. I think incentives similar to those provided to fossil fuel-based power generation can be provided now. Getting land for grid-connected solar is a major impediment. There are other issues like the Right of Way for power evacuation and associated required investment. The government should waive import duties and VAT on renewable energy equipment. Rooftop solar has huge potential but the 26% import duty on solar PV panels, 37% on inverters, 58.6% on solar mounting structure and service walkways, 58.6% on solar DC cables, and 89.32% on lithium batteries must be withdrawn.

The development of solar and wind power will progressively reduce the stress on fossil fuel-based electricity. That in turn will reduce the import of primary energy, benefiting the economy. I hope the government will address these issues in the upcoming annual budget.

**What are your views about the government's vision of achieving a 40% contribution of clean energy into the energy mix by 2041, as incorporated in the IEPMP? Do you**



**Shahriar Ahmed Chowdhury**

*As a land-scarce country, land use efficiency can be increased by the use of agro-photovoltaics or by creating multilayer uses of solar installations, like raising the height of the solar panels, and using the land below for low radiation agriculture or grazing pasture for livestock, or planting the land with flowering plants for apiaries or developing pisciculture. Thus, the debate of food security versus energy security can be eliminated and both food and energy security can go hand in hand.*

**think that Bangladesh is now riding on the right track for this?**

I think the plan in this regard is not clear and the technological aspects are not tested either. These require clarification. It is important to know how much of this 40% will come from renewables like solar, wind, regional hydropower, and nuclear. The targets set in the Delta Plan and Mujib Climate Prosperity Plan or the Perspective Plan of Bangladesh are not reflected here. Rather, technologies that have not been globally tested and proven, like carbon capture, ammonia, and hydrogen co-firing have been emphasized in the document significantly.

I believe before launching an initiative for implementation, the IEPMP would be reviewed and realistic targets for solar and wind power be ascertained.

***A research organization claimed that the average generation cost of power will be reduced if fossil fuel-based generation is replaced by renewables. Now the cost of grid-connected solar is 15 US cents/unit, wind power 12 cents/unit, and the cost under all new contracts is 11 cents/unit. Then how can the replacement of fossil fuel-based generation with renewable reduce the cost of generation?***

Note that in the discussion of this generation cost, the recent trend needs to be given attention. If we review the power tariff over the past decade, the cost of power generation from gas and coal has progressively increased, whereas the solar tariff has been reduced. The cost of grid electricity generation rises from BDT 5.73/Unit (2012-13) to BDT 11.03/unit (2022-23) and it is expected to rise further as we are gradually shifting from domestic fuel (dominantly own gas) to imported fossil fuel for power generation. On the other hand, the tariff from the first grid-connected utility-scale solar plant at Sharishabari was 18.97 US cents/unit (Lol issued in 2015). After that, the tariff of solar PV power started gradually declining and now stands at 9.83 US cents/unit.

The efficiency of commercial solar PV panels was 12-13% and within 10 years it has increased to around 22% to 23% and will increase further in the coming days as we achieve technological improvements. This has increased generation using the same area of land as before. The cost of solar PV panels per Watt-peak is also continuously declining. Tariffs are also reduced even without receiving any incentives. Tariffs will be reduced substantially if the investment is sought through acquiring and developing land, and constructing power evacuation infrastructure up to the project site by the government, as

done in India. The lead time of project implementation as well as the risk premium on investment will be significantly reduced. These will eventually reduce tariffs further.

I have no doubt, that if an appropriate strategic action plan is implemented, by 2030 solar energy will become cheaper than all types of imported fossil fuel-based electricity. The energy security and emission reduction potential of renewable power should also need to be considered.

***Tariffs will be reduced substantially if the investment is sought through acquiring and developing land, and constructing power evacuation infrastructure up to the project site by the government, as done in India. The lead time of project implementation as well as the risk premium on investment will be significantly reduced. These will eventually reduce tariffs further.***

***There are thoughts that renewable may not be as cheap as that of India or Middle Eastern countries, but it is possible to bring down the tariff to 6-7 cents per unit. Do you agree? If you agree what are your recommendations for achieving this?***

Of course, it is possible. To achieve these, some strategies need to be adopted. The country can provide developed/buildable land and construct power evacuation facilities up to the

project site. Low-cost concessionary financing can also be provided. Power can be supplied below 7 cents if entrepreneurs are encouraged by such initiatives of the government. It may take some time to organize all these but we should start it now. It is good news that the Power Division has already started working on developing a solar power generation hub.

Another important matter should be kept in mind. In India and other countries, it takes not more than one year to implement after awarding the project. But in Bangladesh, it requires years to arrange land, develop it to become buildable, and complete a slew of other formalities. This increases the risk of the investors and the investors expect a premium for these risks. In other countries, low-cost long-term concessionary financing is available. Owing to various risks, investors in Bangladesh also expect a higher return on investment. This is reflected in the tariff.

***How do you evaluate the energy transition- that is the transition from fossil fuel to clean energy- in Bangladesh? India and China have set 2060 and 2070 as targets for achieving Net Zero. What should be a realistic target for Bangladesh?***

It is challenging for Bangladesh to achieve the net zero target on a stand-alone basis, by relying only on its domestic variable renewable energy sources. We need to have regional grid connectivity and large-scale grid energy storage systems to increase the grid flexibility to accommodate more variable renewable energy generation. We also need to adopt a smart grid. With the combination of regional power connectivity/trading, local solar and wind (both off and onshore), green power import from neighboring countries (like hydro from Nepal and Bhutan and low-cost solar and wind energy from India), grid storage, other modern energy carriers, regional grid connectivity, smart grid, nuclear power, and carbon capture

techniques, it is possible to achieve the Net Zero target. After ensuring all these we may set up achieving Net Zero targets like India and China.

***Recently the State Minister for Power & Energy claimed that projects constituting 12,000 MW of solar power are at different stages of approval. How much of these projects can be realized by 2030 or beyond, and your thoughts?***

The process for applying for unsolicited solar projects is dynamic and ongoing, which means that some of the existing applications will result in completed projects, and some may not. On the other hand, new applications are also going to be submitted continuously in the coming days. Therefore, given the above-recommended support facilities, a comparable level of solar generation capacity may be achieved.

A national solar energy road map was prepared by SREDA with the support from UNDP, where I was involved in the drafting. The final report was submitted in 2020. In the roadmap, three different implementation scenarios were stated and the high-deployment scenario was recommended for adoption. In the high deployment case scenario, the target was to achieve 9,000 MW by 2030 and 30,000 MW by 2041. 13 solar power hubs were recommended to be developed to accommodate 12,000 MW of solar power capacity. Rooftop solar is another sector from where a significant portion of solar power can be achieved. As a low-lying delta with lots of rivers, lakes, Haor, and Baors (including the Kaptai Lake), Bangladesh has a lot of water bodies. It is recommended that Bangladesh should undertake a nationwide comprehensive study to find out the potential of floating solar PV projects. While conducting this study we should be careful to address the issues of the environment, bio-diversity, usage of water and its surfaces, etc. Cheaper renewables from neighboring countries can also be imported to include more RE in the future energy

mix. The roadmap also recommended making the qualification criteria easier for the developer for RE project development, so that more entrepreneurs can contribute to the sector and there can be a more competitive environment.

As a land-scarce country, land use efficiency can be increased by the use of agro-photovoltaics or by creating multilayer uses of solar installations, like raising the height of the solar panels, and using the land below for low radiation agriculture (like spices, mushrooms, orchids, vegetables, etc.) or grazing pasture for livestock, or planting the land with flowering plants for apiaries or developing pisciculture. Thus, the debate of food security versus energy security can be eliminated and both food and energy security can go hand in hand.

***What are your views about the present state of Solar Rooftop Power Generation? How much success can Bangladesh achieve from this?***


Some success has started emerging from the rooftop solar system sector with the Net Metering policy. It is high time to make some amendments to the net metering policy to provide the prosumers more flexibility and support. The policy has a provision that a consumer can only set up solar facilities for up to 70% of its sanctioned load. This should be changed to 100%. At present, only 3-phase consumers are allowed to avail of the NEM facilities. Single-phase consumers should also be allowed to avail of the NEM facility. Export-oriented industries have issues with Green Compliance. Some of the RMG/ Textiles industries have to achieve green compliance but they may not have sufficient space in their industry premises for installing required rooftop systems, though they may have space in other regions in the country. They should be allowed to install solar PV systems or other RE systems in remote available locations and should be allowed to obtain the energy generated as NEM prosumers from the remote installation by giving a wheeling charge to the utility/utilities. At present,

industries inside Economic Zones or Export Processing Zones are not encouraged to have NEM facilities, consumers inside EZs and EPZs should be allowed to have NEM facilities. Industries should be allowed to import rooftop solar equipment on a duty-free basis, just like IPP owners. If all the above can be done, a significant level of success can be achieved from solar rooftop systems.

***What percentage of variable renewable energy (VRE) in Bangladesh can be utilized without a storage facility? How can we increase the penetration of VRE into the grid?***

Grid flexibility analysis of Bangladesh shows that around 20% of the load can be supported by variable renewable energy without significant impact on the grid. Traditional fuel-based power plants need to be made ready gradually for catering to peak load. FGMO (free governor mode of operation) must be set up at every possible power generation plant. Finally, Bangladesh's power grid needs to be linked with regional grids to increase the grid flexibility to accept more variable renewable energy. Bangladesh has already decided that any solar energy generation plant having over 100MW capacity should be accompanied by a 20% storage facility to eliminate a sharp change in generation and to maintain a certain ramp, which will enable the conventional power plants to accommodate the change in generation from VRE plants. Base load power plants should be prepared to operate on a flexible basis.

***Bangladesh now cannot regularly pay the bills of private sector investors for the power it purchases due to the dollar and taka crisis. There are issues in the repayment of loans as well. Do you think such a situation may negatively influence investments in renewable projects?***

Such a situation will create a negative perception among potential investors. The government is assuring that they will soon get out of the situation. If not, this will create a challenge in getting FDI for renewable energy projects. 

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