

ENERGY & POWER

Exploration Failure Outshines 'Golden Decade'



- IOCs May Not Respond Without Database
- Climate Change to Displace 4 cr People in Bangladesh: PM
- Will Soleimani's Killing Be Reflected on Global Oil Diplomacy?



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National Power Week, 2014



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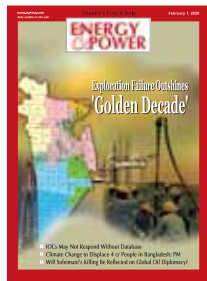
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EDITORIAL

The power sector of Bangladesh witnessed a substantial increase in generation capacity in last 10 years, but the cost of generation went up due to higher dependence on expensive imported fuel oil. The situation emerged with the less availability of own natural gas amid failure to discover new resources. There is hardly any success in exploration over the last 19 years. Only about 2 Tcf new gas reserve has been added over this period. The remaining recoverable reserve is only 11 Tcf against the present annual consumption of around 1 Tcf. The existing and potential resources of the country are not infinite.

It would be prudent to immediately go for fresh round of PSC bidding for both offshore and onshore with data available and engage contractor simultaneously for multi-client survey. The government should also immediately advise Petrobangla to update the model PSC for onshore exploration in the western region, high-pressure zones and deeper prospects with a target to invite bids as soon as possible. The resources to be discovered through this process will enhance the reserve base, which is essential for an emerging economy like Bangladesh.

h i g h l i g h t s

COVER



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International Oil Companies (IOCs) did not respond positively to few rounds of initiatives taken in the past for oil and gas exploration in the offshore, following resolution of maritime boundary disputes of the Bay of Bengal with Myanmar and India. Petrobangla is now taking initiative for a new bidding round. I do not think the IOCs will be encouraged for bidding unless we can...



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The killing of General Qassem Soleimani, Commander of Iran's Revolutionary Guard Quds Force, could have had a deep impact on the diplomacy of global economy. But after the passage of a handsome amount of time, the world now has a feeling of great relief that the two leaders - U.S. President Donald Trump and Iranian Supreme Leader Ayatullah Ali Khamenei - are limited to tough and hard ...



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The last 10 years can be termed without any hesitation as the 'golden decade' for development in the power sector - more specifically the increase in power generation capacity. But the fuel supply uncertainty due to shortage of own fuel supply, the contribution of imported liquid fuel to the fuel mix for power generation has increased with time. The cost of generation has also increased, as a result. There is no notable success in oil and gas exploration over the last 19 years. No large gas field has been discovered after Bibiyana...



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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.

Govt Plans to Install Floating Solar Panels

The government is planning to establish a demonstration coverage of floating solar plants in different parts of the country. It is targeted to provide 10 per cent of the total electricity demand from renewable energy sources.

The initiative is the first of its kind in Bangladesh. It is being implemented by the Bangladesh Development Authority (BDA) in association with the Bangladesh Sustainable Energy Research Institute (BSREI).

The government agency under the



will be used to generate power. The project is expected to be completed by the end of 2018. The cost of the project is estimated to be around \$10 million. The project is being implemented by the Bangladesh Sustainable Energy Research Institute (BSREI).

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ICCOL to Finance Rooftop Solar Project in Bogura

The Infrastructure Development Corporation Limited (IDCOL) has recently signed a memorandum of understanding (MoU) with the Bangladesh Sustainable Energy Research Institute (BSREI) to finance a rooftop solar project in Bogura. The project is expected to be completed by the end of 2018. The cost of the project is estimated to be around \$10 million. The project is being implemented by the Bangladesh Sustainable Energy Research Institute (BSREI).

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We Want Sustainable Oil Prices: Saudi Minister

Saudi Arabia, OPEC's de facto leader, will work for oil market

stability at a time of heightened US-Iranian tension and wants to see sustainable prices and demand growth, the kingdom's energy minister said recently.

Prince Abdulaziz bin Salman said it was too early to talk about whether the Organization of the Petroleum Exporting Countries (OPEC) and its allies, a group known as OPEC+, would continue with production curbs agreed under a deal that expires in March.

"As tension remains high in our region, Saudi Arabia will continue to do all it can do to ensure stable oil markets," the minister told an energy conference.



Prince Abdulaziz bin Salman

India's Oil Demand Growth Set to Overtake China by Mid-2020s: IEA

India's oil demand growth is set to overtake

China by mid-2020s, priming the country for more refinery investment but making it more vulnerable to supply disruption in the Middle East, the International Energy Agency (IEA) said recently.

India's oil demand is expected to reach 6 million barrels per day (bpd) by 2024 from 4.4 million bpd in 2017, but its domestic production is expected to rise only marginally, making it more reliant on crude imports and more vulnerable to supply disruption in the Middle East, the agency said.

"We see India definitely as a key driver for oil demand growth," IEA Executive Director Fatih Birol said, but added that the country's oil demand growth may slow down slightly, in line with slowing global economic growth.

China's demand growth is likely to be slightly lower than that of India by the mid-2020s, as per IEA's China estimates given in November, but the gap would slowly become bigger thereafter.

"Indian economy is and will become even more exposed to risks of supply disruptions, geopolitical uncertainties and the volatility of oil prices," the IEA said in a report on India's energy policies.

Siemens to Remain in Australia Mining Project: CEO

Siemens boss announced recently that the German conglomerate has decided to re-

main involved in a controversial coal mining project in Australia, despite massive environmental criticism as the country faces unprecedented bushfires.

The contract for some 18 million euros (\$27 million) calls for Siemens to supply rail infrastructure for the Carmichael mine in Queensland, near the Great Barrier Reef.

"We have just finished our special meeting.... We have evaluated all the options and have concluded that we must fulfil our contractual obligations," said Siemens CEO Joe Kaeser in a message on his Twitter account.



Siemens CEO Joe Kaeser

GE South Asia Gets Mahesh Palashikar as New President, CEO

US industrial conglomerate GE recently announced the appointment of Mahesh Palashikar as President & CEO of

GE South Asia effective February 1, 2020, with responsibility for India, Bangladesh and Sri Lanka markets.

Besides, the company announced the retirement of Vishal Wanchoo as President and CEO of GE South Asia from June 1, 2020, a press statement by GE said.

According to the statement, Vishal will be returning to the US after completion of the transition over to Mahesh. "Mahesh



Mahesh Palashikar

is a commercially savvy business leader with a global mindset and strong proven leadership. I am excited to continue strengthening our 100-year old presence in the region and driving robust growth for our customers and the company with Mahesh's appointment," Rachel Duan, Senior Vice President, GE, and President & CEO, GE Global Growth Organization, said.

100m to be Affected Due to Rooppur Project

plant project, said Prof Anu Muhammad at a programme in Natore recently.

People living in the area stretching around 100km will be at risk of being in danger, said Anu Muhammad, also member secretary of National Committee to Protect Oil, Gas, Power, Ports and Mineral Resources.

He was addressing a seminar titled “Will the Rampal and Rooppur power plant protect public interest?”, organized by Natore unit of the committee, at Victoria Public Library in the district.

These projects will serve foreign interests, said the noted economist. Although the national committee is repeatedly alerting the government of possible danger, they are not paying any heed, he said.

Lokman Hossain Badal, general secretary of Workers Party of Bangladesh; and Ansar Ali Dulal, district unit president of Revolutionary Workers Party, among others, spoke on the occasion.



About 100 million people will be affected due to Rooppur nuclear power

plant project, said Prof Anu Muhammad at a programme in Natore recently.

3km Illegal Gas Lines Snapped in Ashulia

from Ghosbagh area of Ashulia.

The mobile court team, lead by executive magistrate Tajwar Akram Sakapi Ibne Sazzad, assistant commissioner of Dhaka, conducted the day-long drive in association with Titas Gas Transmission and Distribution Company Ltd.

During the drive, the team disconnected gas lines of around 2000 households, shops, markets and factories of the area.

They also seized pipes and other materials used to set up the connections, Abu Sadat Mohammad Sayem, Managing Engineer of Savar Titas Gas said.

In addition, Purba Apparels Limited, an RMG company, was fined TK 1 lakh for running their factory with illegal gas connection.

Cases will be filed with respective police stations against those found with the illegal connections, Sayem said.

The team also arrested two people, technicians Manik alias Alal (40) and Feroz (24) for their direct involvement in setting up the illegal connections. They were given one month jail each, Sayem added.

A mobile court of Savar upazila recently evicted three kilometers of illegal gas lines

HC Issues Rule over MRP Mark on LPG Cylinder

The High Court recently issued a rule asking the government to explain in four weeks as to why it should not be directed to form a committee for ensuring maximum retail price (MRP) mark on the LPG (liquefied petroleum gas) cylinder.

The court also wanted to know as to why the government should not be directed to set up a price fixation committee for determining the retail price of LPG in line with the international market. The High Court bench of Justice M Enayetur Rahim and Justice Md Mostafizur Rahman passed the order after hearing a writ petition filed in this regard.

At the same time, the High Court wanted to know from the government what steps they have taken for ensuring the MRP mark on the LPG cylinder.

The energy secretary, chairman of Bangladesh Energy Regulatory Commission (BERC) and the director general of the Directorate of National Consumers Rights Protection have been asked to submit a report in the same court on March 01 next complying with the order.



Supreme Court lawyer Md Moniruzzaman on January 13, 2020 filed the petition as public interest litigation.

Padma Oil Announces 130pc Cash Dividend

holders for the 2018-2019 fiscal year (FY).

The announcement was made at the 50th Annual General Meeting (AGM) of the company held at Navy Convention Centre in Chattogram recently.

Bangladesh Petroleum Corporation (BPC) and Padma Oil Company Ltd Board of Directors Chairman Md Shamsur Rahman presided over the meeting.

The company Directors Mohammad Iqbal, Md Ekhlashur Rahman, Dr Muhammad Sher Ali, KM Eneyetul Karim, Md Arifuzzaman Miah Tutul, Nasiruddin Akhter Rashid, Managing Director Md Masudur Rahman, Company Secretary Sohel Abdullah and high officials of the BPC and company were present at the meeting.

The Chairman Md Shamsur Rahman and Managing Director Md Masudur Rahman answered different queries of them.



The shareholders later approved 130 per cent cash dividend for the 2018-2019 FY as recommended by the board of directors.

Padma Oil Company Limited announced 130 percent cash dividend for its share-

বিশ্বাস আর আস্থায়
ফ্রান্সের টোটাল
এলপি গ্যাস



Pertamina Lub Launched in Bangladesh Market

Pertamina Lubricant, an Indonesian state-owned Oil Company recently

kicked off its new market in Bangladesh.

State Minister for power Energy and Mineral Resources Nasrul Hamid as the chief guest and Indonesian envoy Ms. Rina P Soemarno as special were present at the inaugural event.

Nasrul said Bangladesh's lubricant business has exceeded half a billion. He remarked that Pertamina chose the right time to open its market in Bangladesh.

The state minister added that there are many power plants and industries. I hope the private sector will be benefited from using this world-class lubricant. And he offered them to establish blending and refinery in Bangladesh. As Pertamina is doing better in base oil business, it will do better in blending as well.

On the program Secretary of Power Division Sultan Ahmed, Sales and Marketing Director Mr. Andria Nusa, Mia Krishna Anggraini, Vice President Sales Overseas and Mr. Russina Alam-syah, Area Manager Asia Pacific of Pertamina Mr Zeehan Saif Chief Marketing officer were present at the ceremony.



Bashundhara LPG Hosts Annual Sales Confce

Bashundhara LPG has hosted annual sales conference to review the year-

end performance of the sales forces of leading liquefied petroleum gas (LPG) brand in the country.

A total of 150 staff from sales and marketing team of the company participated in the two-day business forum ended on Saturday at BaseCamp in Gazipur, an outskirts of capital.

Bashundhara LPG Head of Sales Jakaria Jalal inaugurated the business conference and shared the strategic planning among the staff of the company.

He also thanked all sales forces to deal 'good performance' in the outgoing year of 2019 and inspired all to do better in 2020.

Officials informed that the company selected BaseCamp for



business conference to increase interaction among team members alongside of experiencing touch of green.

Gas Reserve to be Exhausted in 11 Years

The existing stock of 10.63 trillion cubic feet gas will end within 11 years if the

current rate of production (2,570 million cubic feet per day) continues, State Minister for Power, Energy and Mineral Resources Nasrul Hamid told the parliament recently.

He was replying to a query from Awami League MP Mohammad Ebadul Karim.

In a written answer, Nasrul Hamid said the government has undertaken a plan to dig gas wells at different prospective places to meet the growing demand.

As per the plan, Bangladesh Petroleum Exploration and Production Company Limited (Bapex) has taken an initiative to dig two wells between 2019-2021, 13 wells between 2022-2030, and 20 between 2031-2041.

He added that activities are ongoing under the production sharing contract with different international oil companies to explore new gas fields at three blocks in shallow water areas and at one block in deep water area of the Bay of Bengal.

The work of digging well at block SS-04 of the shallow water area will start from the last week of this month.

In reply to a query from ruling AL MP Benajir Ahmed, Nasrul Hamid said system loss in electricity has been reduced to 9.35 percent in 2018-19 fiscal year from 14.33 percent in 2008-09, due to the government's various measures.

While replying to a query from AL MP M Abdul Latif, the state minister said there is no shortage of electricity in the country at present as the production capacity of electricity remains higher than the demand.

He also informed the House that the government will finalize the draft coal policy at the quickest possible time.

Nasrul told the parliament that 8,318 posts are vacant under different departments and companies of the power division.

He said a recruitment process is ongoing to fill the posts.

Three Workers Electrocuted

Three workers, including

two siblings, died from electrocution while carrying out piling work on the Buriganga in the city's Hazaribagh area recently.

Two other workers sustained injuries in the incident.

The dead were identified as Jhoru Sheikh, 45, and his brother Saiful Sheikh, 35, from Sirajganj, and Monjurul Haque, 40, from Bogura.

The workers were electrocuted when an iron pole used for piling work came into contact with a high-voltage electric wire, said Ekram Ali, officer-in-charge of Hazaribagh Police Station.

The victims were doing piling work for installing pillars to demarcate the river boundary. The three died on the spot, he added.

Exploration Failure Outshines 'Golden Decade'

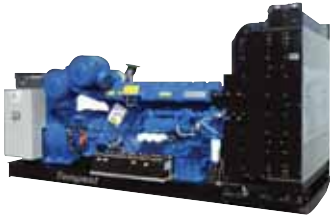
Mollah Amzad Hossain

The last 10 years can be termed without any hesitation as the 'golden decade' for development in the power sector – more specifically the increase in power generation capacity. But the fuel supply uncertainty due to shortage of own fuel supply, the contribution of imported liquid fuel to the fuel mix for power generation has increased with time. The cost of generation has also increased, as a result. There is no notable success in oil and gas exploration over the last 19 years. No large gas field has been discovered after Bibiyana. Only about 2 Tcf new gas



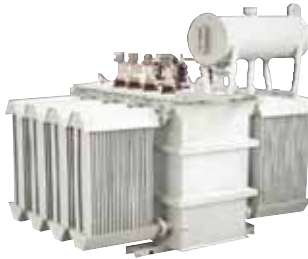
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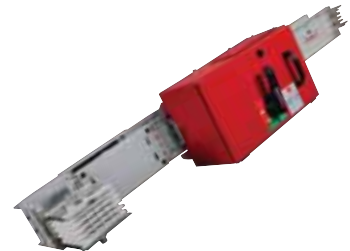
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reserve has been added over this period. About 12 Tcf gas has been consumed during this period. The leftover recoverable reserve is 11 Tcf. The annual consumption is around 1Tcf.

Oil and gas exploration in this region started from 1908 in Chittagong. The first gas field was discovered in the Sylhet region in 1955. The gas production and commercial use started in 1959. The period from 1960-1990 may be termed as golden period for discovery of large gas structures. Some very large gas fields were discovered in the eastern region of Bangladesh during this period. Some 88 exploration wells have been drilled so far. Of them, 21 were in the offshore and 67 in the onshore. After 1999, some exploration works were done in isolation by some IOCs under PSC without any success. Petrobangla also could not go for new round of PSC bidding in onshore area for a High Court ruling on not engaging any International Oil Company (IOC) in onshore exploration. The embargo has been lifted few years back. But till now no fresh PSC bidding has been announced for onshore exploration. Rather the EMRD, following the urge of left-leaning activists, adopted BAPEX only strategy

for onshore exploration activities. In 2016, the government adopted a five-year mega plan for exploration as the Gas Sector Development Project. This project was aimed at drilling 108 wells including 53 exploration wells. Experts right from the outset were expressing their concern about the capability of BAPEX for implementing the project. The government did not agree initially. But the government ultimately abandoned the project at the fourth year of the project duration. BAPEX is now working on a fresh short, medium and long term oil and gas exploration project in the onshore area.

Four marginal gas fields could be discovered from 17 exploration wells drilled over the past 10 years. One of the four gas fields has already been depleted. No success in offshore exploration has been achieved though the right initiative of the government could help resolve maritime boundary disputes of the Bay of Bengal with Myanmar and India. In 5 years, the 2D non-exclusive multi-client survey works in offshore could not be done. The contract could not be concluded for bureaucratic mishandling though Petrobangla selected the evaluated bid-

der in 2019. The last PSC was concluded in 2019. The government has finally approved the Petrobangla recommendation. Data and information gathered through multi-client survey may act as added attraction for IOCs for risking investment in offshore exploration. It is not sure about encouraging response from IOCs if offshore bidding is invited now without sufficient data and information. If Petrobangla has to wait for multi-client survey, new round of bidding may not be launched before 2022. IOCS are now working in four offshore blocks. Some 12,000 line Kilometer 2D seismic and 305 square kilometer 3D seismic surveys have been conducted. ONGC is drilling one exploration well.

Petrobangla has planned for conducting more 2D and 3D seismic surveys by 2023. Some 23 structures could be identified for exploration through conducting 24,436 line KM 2D and 5,000 square KM 3D seismic surveys over the past 10 years. Plan has been made for drilling 11 exploration wells, 14 development wells and 15 work overs by 2023. Some 13 wellhead compressors would be installed by this time to augment production.

Comparative Analysis of Three MPSCs

MPSC 2008	MPSC 2012	MPSC 2012 Amended	MPSC 2019
Price: High Sulphur Fuel Oil (HSFO) at Singapore US\$ 180 per tonne. Onshore 75%, shallow and western 93%, deep offshore 100% (\$4.5/mcf)	Price: HSFO at Singapore US\$ 200 per tonne. Onshore 75%, western 93%, Shallow offshore 100% deep Offshore 110% (\$5.5/mcf)	Price: HSFO at Singapore US\$ 200 per tonne. Onshore 75%, western 93%, Shallow offshore 100% deep Offshore 130% (\$6.5/mcf)	Ceiling price of gas would be US\$215 per tonne (US\$ 7.25 per 1,000 cubic feet) for offshore gas
No Annual price hike Corporate tax to be paid by contracting companies	No Annual price hike Corporate tax to be paid by contracting companies	2% hike in gas price every year after starting production Contracting companies exempted from corporate tax	1.5% hike in gas price every year after starting production Contracting companies exempted from corporate tax
Companies are not obliged to appoint manpower from Petrobangla	Companies are not obliged to appoint manpower from Petrobangla	At least one person for every stage from seismic to exploration should be appointed from Petrobangla to ensure technology transfer	Companies are obliged to appoint persons from Petrobangla as per provision of PSC at different phases of the contract
Provision for third party gas sales ensuring Petrobangla's first right of refusal	Provision for third party gas sales ensuring Petrobangla's first right of refusal	Provision for sales of 50% share gas in the country without first right of refusal	Provision for sales of 50% share gas in the country without first right of refusal. Provision for export of gas with first right of refusal of Petrobangla
At best 50% cost recovery per year	At best 50% cost recovery per year	At best 70% cost recovery per year	Maximum Of 55% from shallow water blocks and 70% from deep water blocks each year following commencement of production

When attention of BAPEx Managing Director Mir Md Abdul Hannan was drawn about the success of works of the company, he said BAPEx is fully competent for carrying out onshore exploration. Experts having of proven track records about different activities are being engaged for better coordination. The MD sounded optimistic about its exclusive capability of carrying out onshore exploration. But BAPEx is eager to find joint venture partner for exploration in the Chittagong Hill Tracts region. But former Managing Director of BAPEx Murtaza Ahmed Faruque observed that it is not possible for BAPEx to carry out exclusive responsibility of onshore exploration on stand alone basis.

The review of past records of BAPEx since its launching in 1989 to 2019 evidences that 15 exploration wells have been drilled and 6 gas fields have been discovered. Some 30 development wells and 31 work overs have been accomplished over this period. Around 20,000 line KM 2D and 3,870 square KM 3D seismic surveys have also been conducted. BAPEx has adopted a 22-year plan from 2019-41. The plan includes 37 exploration wells, 18 development wells and 3 work overs. Between 2021 and 2031 they plan to drill 20 exploration wells. Russian exploration giant GAZPROM has signed a MOU with BAPEx on 27 January for working as joint venture partner. A source at Petrobangla informed the EP that this JV can work for Bhola Gas Field Development, deep drilling and in the Chittagong Hill Tracts.

According to BAPEx, 9 blocks and some ring-fenced areas are assigned to them. They are now working at blocks 8 and 11. They are producing about 110-112 MMCFD gas from 15 wells of their gas fields. BGFCL is supplying 708 MMCFD, SGFL 112 MMCFD, Chevron 1,543 MMCFD and Kris Energy 105 MMCFD. It merits mentioning here that Bangabandhu inspired acquisition of 5 gas fields from Shell BV on 9 August 1975 at 9 million pound sterling. These gas fields still produce 708 MMCFD of the 932 MMCFD gas produced from fields operated by Petrobangla compa-

nies.

Along side BAPEx, a Japanese company MOECO is conducting 2D and 3D seismic surveys at block 8 and 11 under self finance. They are now evaluating data after collecting through field surveys. They started working from 2015. The contract has been extended by one year before they completed their works. BAPEx sources informed that the company subject to finding encouraging possibilities would discuss about exploration with BAPEx.

Former Petrobangla Director Maqbul E Elahi Chowdhury told the EP that BAPEx is not capable of discharging exclusive responsibility of onshore exploration. There is little possibility of finding new gas in simple structures. Now exploration is essential at high pressure deeper prospect and less prospective Western region. For this, the gas price prescribed for shallow offshore blocks must be offered by amending model PSC. Fresh bidding round should be launched for engaging IOCs. If bidding is done now, in 3-4 years it could be known how much more gas we may get from onshore. It is not possible for BAPEx alone to accomplish these works. Rather IOCs and BAPEx must work side by side. He advises Petrobangla to go for fresh bidding round without waiting for new data.

According to Petrobangla plan, 7-9 exploration wells may be drilled in BAPEx allotted blocks by 2024. BAPEx will complete 3 exploration wells in 2020. Chevron has expressed their intentions for carrying out surveys in areas of their assigned blocks they has relinquished. Subject to Petrobangla approval and on condition of finding structures, they will drill exploration wells.

Bangladesh is the first country of the region that went for offshore exploration for oil in 1974. Some 6 PSCs were signed for 8 blocks of the Bay of Bengal for oil exploration. From this, Union Oil Company of California discovered Kutubdia gas field. But for failure in discovering oil and for many complexities after unfortunate assassination of Bangabandhu, the IOCs left Bangladesh one after another in 1976. In 1991, Cairn

Energy discovered Shangu offshore gas field at one of their two assigned blocks. Production from that gas field was abandoned after 10 years of operation. Australian company Santos took over the ownership at some stage of the operation. Santos carried out some further exploration there without achieving notable success. Total Gaz signed PSC in one block after winning the bid in 1996 bidding round. They carried out some surveys but left after finding no encouraging structures to explore. Rexwood and Oakland also left for similar reasons after signing PSC for two offshore blocks.

US company ConocoPhillips signed PSC for two deep water blocks winning bid in 2008 bidding round. They carried out seismic surveys. But they left after failing to persuade Petrobangla for gas price increase. IOCs are currently working in four offshore blocks. Indian company ONGC is working at shallow blocks 4 and 9. Santos-Kris Energy is working at shallow block SS11. Daewoo-Posco is working on a deep water block. They are also planning to leave after failure in their efforts to increase the gas price. ONGC on their plan for drilling 3 exploration wells has started working on the first from 20 January 2020. Santos in their business strategy of leaving business operation in Asia tried to reassign their blocks Ophir Energy UK. Failing to get response on time, Ophir already left Bangladesh. Santos is now looking for a partner. Their other partner Kris Energy is also in financial problem.

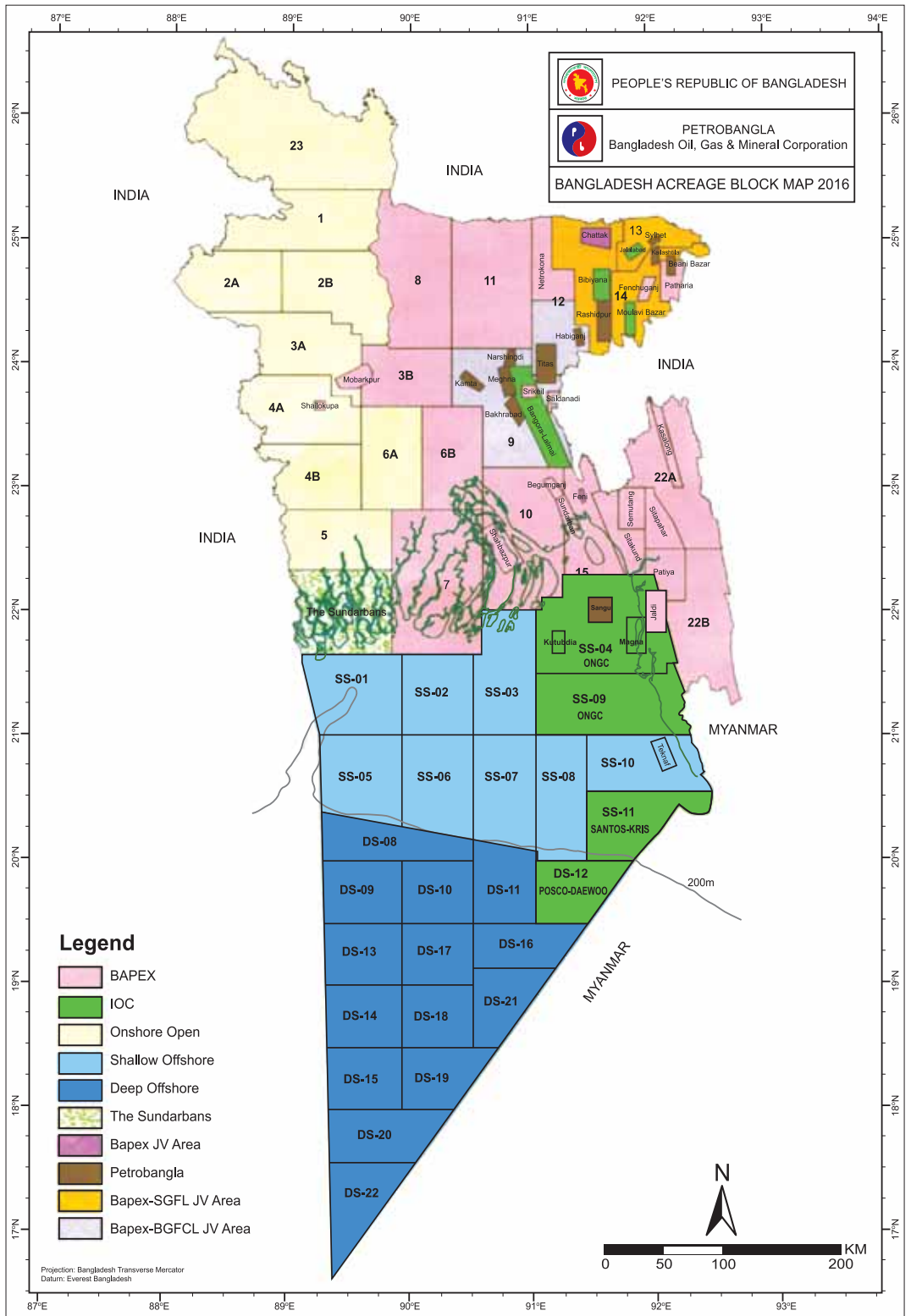
IOCs were reluctant about investment in Bangladesh offshore area prior to resolution of maritime boundary disputes with India and Myanmar. Petrobangla also failed to create any momentum at all in offshore exploration following resolution of disputes. Experts believe that lowering oil price in global market, less attractive gas price and other incentives in Bangladesh model PSC and insufficient data and information of Bangladesh offshore were major reasons for lukewarm response of IOCs in previous rounds of offshore bidding.

In the updated model PSC, the gas price increase and other fiscal and financial

incentives have been incorporated. Petrobangla is optimistic that the new model PSC would encourage IOCs in bidding. Last year, Petrobangla organized a conference on offshore investment. Representatives of BP, ConocoPhillips, Exxon-Mobil, Chevron, Midfee Japan, ONGC, Santos and PTTEP participated in that. Other than Chevron, all the IOCs expressed their willingness to participate in the bidding. But still, one of the major impediments to the bidding process is non-availability of required survey data and information. Petrobangla miserably failed in preparing a data package over the last 5 years.

Petrobangla even after selecting TGS-Schulmberger as contractor for the multi-client survey could not conclude the contract. Their plan was to start working during the winter after concluding the contract by December. The government has got no financial obligation here. Petrobangla finalized the draft agreement and sent to EMRD for concurrence. The EMRD has sent to the Ministry of Law for their opinion. Consequently, it was not possible to conclude the contract even in January 2020. Petrobangla has a plan to implanting the contract in two phases and prepare package of data and information as soon as possible.

Petrobangla has reached the final stage of fresh offshore bidding round. Providing 6-8 months time for submission of offers, the bidding round may be



launched in April 2020. Petrobangla has not received any bidding guideline as of now from the EMRD for onshore PSC. A relevant Petrobangla official observed that bidding for onshore and offshore at the same time would be beneficial. He also observed that despite having com-

petent manpower for bureaucratic bottleneck, BAPEX cannot investment intensive exploration works expeditiously. A highly placed BAPEX official informed the EP that it takes about 3 years for drilling a well by BAPEX from project formulation to commencement of

drilling. Too much dependency on Petrobangla and the EMRD creates such delays. The decision of the BAPEX board of directors must be the final as per the company act. Petrobangla and EMRD are not permitting that. This is the main reason for extraordinary delays in oil and gas exploration. Consequently, the energy sector and the country are suffering.

The recoverable gas reserve of Bangladesh is 27.9 Tcf. Some 16.9 Tcf has already been consumed so far and the rest 11 Tcf still remains as a reserve. Petrobangla informed that if no large new gas resource is discovered, the existing reserve would be completely used up by 2031. The present number of gas users is 4.2 million. Gas is now being produced from 112 gas wells of 20 gas fields out of 27 discovered fields so far. The coincident peak demand is 3,685 MMCFD. The capacity to supply, including imported RLNG, now is 3,300 MMCFD. RLNG supply capacity is 1,000 MMCFD. But constraints of gas grid limit the RLNG supply to 600 MMCFD. But over the last one year 300 MMCFD of RLNG has been supplied on average. Of the 2,700 MMCFD gas produced locally, 1,600 MMCFD comes from IOCs operated gas fields. Of the supplied gas, 42.99% goes to grid power, 15.64% to captive power, 15.76% to industries, 15.21% to domestic, 5.5% to fertilizer, 4.05% to CNG and the rest for commercial use. The annual gas use over the past four years remains static at 1 Tcf.

Experts observed that recoverable reserve of gas would deplete by at least 10% from 2021. It has become obligatory now to go all out for exploring and discovering new gas for expanding the resource base. Gas has been discovered from almost all relatively easier prospects of onshore. There are very limited potential for finding large structure in the onshore area. The high-pressure zone, deeper prospects and western region can be the new frontiers for new gas discovery. The PSC bidding round must be invited for

exploring these prospects. The blocks and ring-fenced areas of BAPEX, which are lying unattended, must also be brought under bidding. For exploration in CHT, BAPEX must find joint venture partner as soon as possible. Finally, without wasting any more time, the contractor for conducting multi-client survey must be engaged. The data and information must be acquired soon and packaged after evaluation. This will start emerging information about the prospect of offshore in a year or so. The IOCs would become increasingly interested to make risky investment. The IOCs must be selected for exploring offshore and onshore simultaneously through bidding process. This will enable getting competitive offers and contracts may be concluded with competent IOCs. Side by side, the BAPEX must be given all supports and cooperation for carrying forward its planned exploration and development activities.

There is no doubt about the capacity of Petrobangla in managing PSC bidding and management of PSC. Oil companies want to accomplish works on time. EMRD must come out of their go-slow strategy. British company Ophir Energy wanted to buy business of Santos (block 11) in Bangladesh. They set a target for two months. But for delayed actions of EMRD, Bangladesh lost the opportunity to having a leading company working in Bangladesh offshore. A Chinese-American company wanted to work with BAPEX as joint venture in CHT. But for lack of eagerness of the EMRD, it did not happen. Consequently, the exploration works in high potential CHT region did not happen in 5 years.

Nasrul Hamid, State Minister for Power, Energy and Mineral Resources, told the EP that the government has now attached top priority to expediting oil and gas exploration. But such intention will bear no fruit unless the implementation is done in well-coordinated and regimented manner. There is serious lack of competent

human resource for effectively monitoring the works of IOCs.

Reviewing all the information, the present and emerging fuel supply situation, Petrobangla initiative for oil and gas exploration, the experts considered it prudent going for fresh round of PSC bidding for offshore and onshore with data and information available with Petrobangla and simultaneously to engage contractor for multi-client survey. By the time the offshore bidding process matures to conclude contract, some data from multi-client surveys may be available. Successful IOCs would also conduct their own surveys to validate Petrobangla information. On the other hand, the government must immediately advise Petrobangla to update model PSC for onshore exploration in the western region, high-pressure zones and deeper prospects with a target for inviting bids by June 2020. The government must also create a pool of Petrobangla former officials having proven track record of monitoring works of IOCs to advise Petrobangla in bid evaluation and contract negotiation.

The present and potential petroleum resources of Bangladesh are not infinite. Bangladesh has to import primary fuel. For making realistic long term plan for fuel import, we must know the extent of own resource. Several surveys have created optimism for discovering gas and oil in offshore and onshore areas. We have no options but to drill exploration wells to confirm these prospects. By 2030, we have to create significant momentum in countrywide exploration for oil and gas. Many observers suggested drilling at least 10 exploration wells each year by BAPEX and IOCs for the next 10 years. The resources that will be discovered will enhance our reserve base. That will delay importing huge LNG for few years. The country would get sustainable supply of fuel at affordable price. This is essential for an emerging economy.

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Exploration Scorecard Looks Miserable

Saleque Sufi

The forward march of Bangladesh towards sustainable energy security for facilitating continuation of impressive economic growth is thwarted by abysmal performance of Petrobangla in exploring and developing petroleum resource. The country continues to suffer from gas deficit for over a decade and a half. Industries are not growing at the expected pace and the existing industries are suffering from poor quality of gas supply. Petrobangla spearheads exploration and exploitation of petroleum and coal resource of Bangladesh. A country almost exclusively relying on its own natural gas for energy generation since independence is now apprehending its proven reserve of natural gas may completely run out by 2031 even at the present rate of use unless substantially large gas reserve is discovered and developed soon. Over the last 19 years since 2000, about 12 Tcf of gas from proven recoverable reserve has been used. Petrobangla-owned national exploration company BAPLEX enjoying exclusive right for exploration in the onshore area could add only a little over 2 Tcf of new gas discovering some marginal gas fields – few of which have been already depleted. The failure of Bangladesh Petroleum Exploration & Production Company Limited (BAPLEX) has led to abandoning 108 wells (including 53 exploration wells) drilling mega project. Bangladesh got maritime boundary disputes with Myanmar and India resolved in 2012 and 2014 respectively. The country established the rights over a vast offshore area almost the size of the country. But Energy & Minerals Resources Division (EMRD) and Petrobangla failed to even invite fresh bidding round for engaging IOCs for shallow and deep water exploration. No new gas field has been discovered in the offshore since Shell - Cairn JV discovery of Shangu offshore gas field. Exploration in the onshore area also remained limited despite phe-

nominal growth of gas demand countrywide. Failures of Petrobangla and BAPLEX leveraged the government going for import of expensive LNG from global market. Several Floating Storage Regasification Units (FSRUs) and some land-based liquefied natural gas (LNG) terminals were planned. Some theoreticians even persuaded government for setting up small LNG terminals beside CUFL and KAFCO jetty in the congested approach of Chittagong Port. But apart from two FSRUs at Maheshkhali, all other earlier planned LNG terminals program has been abandoned. Petrobangla may be in a position to inject up to 1,000 million cubic feet per day (MMCFD) of regasified liquefied natural gas (RLNG) to national gas grid by March 2019. Plan is there for setting up land-based LNG terminal at Matarbari. Experts observe that even if construction starts now, the smartest developer may not be able to bring LNG terminal into operation before 2025. The present exploration program of capacity-constraint Petrobangla cannot give confidence to any relevant expert that it can expedite exploration campaign effectively to try and discover some large enough gas resource at onshore and offshore soon to comfort the situation. Gas supply security of Bangladesh is going from worse to worst every passing day.

Bangladesh Moved Away from Bangabandhu Vision

Bangladesh is observing the birth centenary of the Father of the Nation Bangabandhu Sheikh Mujibur Rahman. The dreamer, architect of Bangladesh not only championed liberation of Bangladesh, but also created Bangladesh Oil, Gas and Mineral Corporation (BOGMC) which later was divided into Bangladesh Oil and Gas Corporation (BOGC) and Bangladesh Mineral Development Corporation (BMDC). The great leader had realized

that new born Bangladesh must explore and exploit its natural resources (oil, gas, coal and minerals) through developing its own expertise. He inspired the then Minister of Energy Dr. Kamal Hossain to develop Petrobangla like PETRONAS, Malaysia and Pertamina, Indonesia. He sent many students to Russia and Algeria for studying petroleum and mining. He encouraged Petrobangla to acquire 5 discovered gas fields – Titas, Habiganj, Bakhrabad, Rashidpur and Koliiashtilla – from Shell BV at a nominal cost of 4.5 million Pound sterling. He also encouraged Petrobangla to engage 6 leading IOCs for 7 blocks in the Bay of Bengal for exploring oil. After his gruesome murder by a group of black sheep in August 1975, exploration of Petroleum and Mineral Resources started felling apart.

BOGC is now working at Petrobangla. BMDC has ceased to exist. Mining Directorate responsible for looking after mining activities of Petrobangla has also been abolished. Petrobangla could neither take appropriate actions for mining in Bangladesh nor could expedite petroleum resources exploration and development for meeting increasing domestic demand. In a recent workshop at Dhaka, State Minister for Energy Nasrul Hamid MP sounded very harsh about poor performance of Petrobangla and BAPLEX. Despite generous support from the government, BAPLEX could organize themselves effectively for discharging their assigned tasks. Petrobangla has reduced to a shadow of its glorious past. Government officers of admin cadre now treat Petrobangla as their transit destination. No perspective plan is there for exploiting discovered coal resources and no action is visible for expediting petroleum exploration campaign. Bangladesh has drifted away from the Energy Sector vision of Bangabandhu. The great leader made Petrobangla a top grade corporation and engaged his

advisor a visionary geologist Dr. Habibur Rahman as Energy Secretary as well as Chairman of Petrobangla, reporting directly to head of the government. 45 years after his sad demise, Petrobangla has been reduced to state-owned utility corporation failing to even exploit discovered coal resource and explore vast unexplored petroleum frontier.

Since the beginning of the exploration endeavor in this part of Bengal delta in 1908 at Sitakund, 88 exploration wells (67 at onshore and 21 in the offshore) has been drilled leading to discovery of 25 gas fields at onshore and two in the offshore. This, according to many, makes riverine delta Bangladesh one of the least explored country.

For gas supply deficit, the government was compelled to keep gas connection to all category of consumers suspended from 2014 excepting letting some new industries getting connection as exceptional cases. The country's gas supply remained constant and even reduced from 2015-16 to 2018-19. Sensing the situation, the government decided to go for import of LNG through setting up FSRU in 2014. Even in that effort,

Present Status of Gas Production & Use

Gas Fields & Wells	Numbers
Discovered Gas Fields	27
Fields Under Production	20
Producing Wells	113
Production Capacity From Own Fields	2760 MMCFD
Capacity of LNG Supply By FSRU	1000 MMCFD
Coincident Peak Demand	3658 MMCFD
Present Capacity of Supply	3164 MMCFD

Source: Petrobangla Gas Production Report, Jan 21-22, 2020

Petrobangla failed to manage implementation of the project smartly. The US company Excelerate Energy owned and operated 500 MMCFD capacity first FSRU came into operation in October 2018 at Maheshkhali. Local company Summit developed another FSRU of same capacity in April 2019. The two FSRUs have capacity to supply 1,000 MMCFD. But for delay in construction of RLNG evacuation pipelines, the RLNG supply is restricted to 600 MMCFD now.

Gas supply constraint has influenced the government decision of suspending gas supply to new domestic consumers, captive power and compressed natural gas (CNG). The reliance on liquid fuel based contingency power generation

continues.

Experts Warnings Were Ignored

Towards the end of 1990s when gas export to India, following UNOCAL discovery of Bibiyana, was hotly debated, the experts believed it to be a marketing signal for keeping international oil companies (IOCs) interested in exploration. Whether or not exports were required, exploration should have been continued at required pace. But it did not. Many say denial for gas export to India caused change of government among other reasons. The new government during 2001-2006 could not continue the required exploration. Huge deficit started emerging. By the time the government was voted out of power in 2008. A huge deficit of gas created huge crisis in power generation while industrial development came to stand still. During this time, the government also denied approving a program for a tri-nation (Myanmar-Bangladesh-India) gas pipeline project which could facilitate import of 500 MMCFD gas at affordable price for Bangladesh by 2009. The requirement for LNG import could be delayed. It was a great opportunity lost.



3D drilling works by BAPEX

UNOCAL Proposal of WRIP Required Deeper Scrutiny

In late 1990s UNOCAL submitted a proposal named Western Region Integrated Project (WRIP) for developing Shahabajpur Gas field in Bhola and constructing a 120 KM 20 inches outer diameter pipeline from Shahabajpur, Bhola to Digholia, Khulna. Three power plants at Bhola, Barishal and Khulna were also included. The detail engineering and design, route survey, negotiation of related draft contracts were also done. But the government decided for not going ahead at a matured stage. If implemented that project could have changed the energy scenario of Barisal Khulna region by now. It was possible constructing a spur line for a possible gas based power plant at Mongla and gas supply to industries in Mongla and Khulna region.

Chronological History of Exploration During British Rule of India

Exploration of petroleum started in the region which later became Bangladesh during British rule of India at the beginning of 19th century. The first serious attempt for oil and gas discovery was at Sitakunda in 1908 by the Indian Petroleum Prospecting Company, 18 years after first oil discovery at Digboi Assam. During 1923-31, Burmah Oil (BOC) drilled two shallow wells at Patharia. These wells had oil show but were abandoned. A total of six exploratory wells were drilled till second World War disrupted exploration campaign.

During Pakistan Days (1947-1971)

Promulgation of Petroleum Act 1948 encouraged IOCs for exploration of oil and gas in Bengal delta. The Standard Vacuum Oil Company (STANVAC) of USA, Pakistan Petroleum Ltd. (PPL), Burmah Oil Company affiliate and Pakistan Shell Oil Company (PSOC) carried out exploration till the end of the sixties. STANVAC drilled 3 wells at Hazipur, Bogra and Kuchma in the north-western part of the country without success. PPL drilled wells in Haripur, Patharia, Chhatak, Fenchuganj, Patiya and Lalmai and made the first gas discovery in Haripur in 1955, followed by Chattak in 1959. PSOC was the most successful com-

Proven & Remaining Reserve

Recoverable Reserve	27.9 Tcf
Cumulative Production	16.9 Tcf
Remaining Recoverable Reserve	11.0 Tcf
Total Number of Consumers	4.2 Million

Source : Petrobangla Presentation 9 August 2019

pany and discovered 5 gas fields named Titas, Habiganj, Rashidpur, Kailashtila and Bakhrabad. They also drilled the first offshore well Cox's Bazar-1, which was dry.

Oil and Gas Development Corporation (OGDC) was established in 1961 providing an institutional foundation for exploration of oil and gas in the country. OGDC carried out geological and geophysical surveys including gravity, magnetic and seismic types and drilled wells in Jaldi and Semutang, discovering gas in Semutang in 1970.

Bangabandhu Laid Foundation of Exploration Campaign in Independent Bangladesh

After the independence of Bangladesh, exploration activities by both national and international companies gathered pace. Bangladesh Oil, Gas and Mineral Corporation (Petrobangla) continued its exploration efforts while the Bangladesh Petroleum Act was passed in 1974 to facilitate international participation under Production Sharing Contract (PSC). The offshore area of Bangladesh was divided into 6 blocks, which were taken up by Ashland, ARCO, BODC (Japex), Union Oil, Canadian Superior Oil and Ina Naf-taplina under PSCs. These companies carried out gravity, magnetic and seismic surveys (about 32,000 km) and drilled 7 wells. Of them, only Union Oil Company discovered an offshore gas field Kutubdia in 1977. This phase of

Category Wise Gas Supply

Category	% of Supply
Grid Power	42.99
Captive Power	15.64
Industry	15.76
Domestic	15.21
Fertilizer	5.50
CNG	4.05
Commercial	0.77
Tea	0.09

Source: Petrobangla

PSC ended in relinquishment of the blocks by the PSC operators in 1978.

Exploration Gathered Momentum from 1980

Petrobangla, sensing gas demand increase, stepped up exploration campaign from 1980. Seven gas fields could be discovered at Begumganj, Beanibazar, Feni, Fenchuganj, Kamta, Marichakandi (Meghna) and Belabo through 12 exploration wells at Muladi, Begumganj, Singra, Beanibazar, Atgram, Feni, Fenchuganj, Sitakund, Bogra, Kamta, Marichakandi (Meghna) and Belabo (Narshindi). A new milestone was achieved when Petrobangla discovered the first commercial oil pool in Sylhet # 7 on December 23, 1986. Since 1989, after the formation of BAPEX as the national exploration company and thereafter exploration and production company, the company has continued exploration and production activities and drilled 4 exploratory wells discovering gas at Shahbazpur, Saldanadi, Srikail and Sundalpur.

In 1981 Shell Oil Company (Shell) was awarded the Chittagong Hill Tracts for petroleum exploration under PSC. Shell conducted geological and seismic survey and drilled the Sitapahar well which was dry. Subsequently Shell undertook exploration in the extreme North West of the country and drilled the first well in the area - the Salbanhat well was also dry. In 1988 Scimitar Exploration Limited was awarded another PSC of what is now block # 13 in the Surma basin. They failed to prove the extent of the oil discovery at Sylhet structure but discovered the Jalalabad gas field.

Formulation of National Energy Policy, 1996 and adoption of a model production sharing contract (MPSC) document together with redefining the whole of Bangladesh territory into 23 exploration blocks ushered in a new phase of exploration and development of oil and gas in the country, 8 blocks were awarded to 4 companies under PSC. A total of 11 exploration wells were drilled and 3 gas fields were discovered in these blocks. These fields are Moulavibazar, Sangu (offshore) and Bibiyana. These 3 fields

along with Jalalabad gas field discovered by Scimitar Exploration Ltd. were developed under PSC and are currently in production. The first 3D seismic survey of the country took place in Bibiyana during its appraisal. Bibiyana came under production in March, 2007. Another PSC bidding round during the late nineties culminated in awarding 4 more blocks. These were SHELL/CAIRN/BAPEX in blocks # 5 and 10, UNOCAL/BAPEX in block # 7 & TULLOW/CHEVRON/TAXACO/BAPEX in block # 9. Exploration activity was conducted in these blocks. Substantial activities were undertaken in block # 9 only, where 5 exploration wells were drilled on the basis of seismic survey including 3D seismic.

The Offshore Bidding Round 2008 being limited to newly-formed deep water blocks attracted some bids. However, the ensuing maritime boundary dispute in most of the blocks created a stalemate. In this backdrop, two blocks were negotiated with ConocoPhillips and a PSC for two blocks was signed in 2011. ConocoPhillips completed the initial seismic survey in the blocks. They relinquished these blocks in 2014 without drilling any exploratory well.

After the resolution of the Maritime boundary dispute with Myanmar by virtue of the judgment awarded on 14 March, 2012 by International Tribunal for the Law of the Sea (ITLOS), the deep water blocks on the eastern part were rearranged. The Bangladesh Offshore Bid Round 2012 was announced in December, 2012 and substantial initial response was received. Under this round, three shallow water PSCs have been signed with ONGC Videsh, Oil India & BAPEX for blocks SS-04 and SS-09 and Santos, Kris Energy and BAPEX for block SS-11. All of the onshore PSC's have matured from the exploration phase to the production phase and major areas of the blocks have been relinquished.

Exploration Campaign Got Blocked for Poor Decision Making

Petrobangla took an initiative for fast track exploration and development of gas resources in 2010. But the project got blocked for poor decision making. A potential contract with a Polish company fell flat at a matured stage. Following that GAZPROM was engaged for drilling 15

development wells and 3 more under negotiations in Petrobangla owned fields. Many considered this contract unfair. GAZPROM was reportedly favored with deployment of a relatively weak sub contractor. The quality of work accomplished also created some dissatisfaction. However, strong local lobby could manage getting more works for GAZPROM and the controversy dragged on.

In the meantime, exploration campaign in onshore hit snag as the government decided to restrict onshore exploration to BAPEX only. An unwise 108 wells (including 53 exploration wells) drilling project was bestowed upon BAPEX with an overambitious time line of 5 years. BAPEX carried out 2D and 3D seismic surveys. There was talk of locating substantial resources at disclosure of every 3D seismic survey reports. However, in the follow up drilling of exploration wells no successes were met. In such situation, the government abandoned 108 wells drilling project.

Petrobangla, in the meantime, tried to engage contractors for multi-client surveys in deep water for developing data and information package. But its efforts got stuck at decision making level for interference of a powerful lobby. The approval process for updated model PSC incorporating some added incentives for attracting major IOCs in multi billion dollars risk investment in deep water drilling also got delayed. Policy makers were in a dilemma whether the IOCs would be interested without extensive data package. Anyway, the contract with survey contractor has been finalized and updated model PSC is also approved. Petrobangla has also discussed informally with some IOCs about model PSC. All is set for a fresh round of offshore bidding. Multi-client survey is also expected to start soon.

BAPEX Capacity Must be Strengthened
The government must continue providing necessary support to BAPEX to develop its technical, managerial and financial capacity for carrying forward its exploration campaign in assigned blocks and ring-fenced areas in the offshore. BAPEX has proved its capability in carrying out 2D and 3D seismic surveys, drilling development wells, carrying out work over of wells and drilling shallow exploratory

wells. But it has to acquire experience in trouble shooting and drilling in tight structures. Even after all limitations, we found that BAPEX was in a position to accomplish drilling of development wells better and at lesser cost which were awarded to GAZPROM. However, for identified 4 structures in greater Chittagong, a strategic partner for BAPEX should have been selected perhaps four to five years from now. If that happened, Bangladesh could have added at least 1 Tcf new gas in gas-hungry Chittagong region by now.

Onshore Exploration

Vast western region of Bangladesh remains virtually unexplored. There is possibility of finding new gas in deeper prospects of some discovered fields as evidenced by seismic surveys. A fresh round of PSC can be let out for exploration in Western Region of Bangladesh and deeper prospects of discovered fields as soon as possible. BAPEX with capable drilling partners can also participate. Even local private sector partnering with reputed drilling company can also be allowed to participate in the bidding.

Need Professionals in Petrobangla & BAPEX Board

Exploration and drilling is highly technically-intensive works. Petrobangla for managing exploration campaign through engagement of world reputed IOCs and BAPEX for effectively carrying forward its assigned tasks needs experienced skilled professionals. The government must source and engage line professionals of proven track records in Petrobangla and BAPEX at senior position and in the board of directors. The exploration and development campaign for petroleum resources must be expedited for enhancing contribution of local gas and petroleum in the fuel mix for achieving sustainable energy security. It is suggested that Petrobangla goes for deep water PSC bidding alongside fresh round of bidding for blocks of Western Region and Deeper prospect by June 2020. For this, much smarter and competent Petrobangla management is the need of the hour.

EP

Saleque Sufi;
Contributing Editor, EP

Will Soleimani's Killing Be Reflected on Global Oil Diplomacy?

Serajul Islam Quadir

The killing of General Qassem Soleimani, Commander of Iran's Revolutionary Guard Quds Force, could have had a deep impact on the diplomacy of global economy. But after the passage of a handsome amount of time, the world now has a feeling of great relief that the two leaders - U.S. President Donald Trump and Iranian Supreme Leader Ayatullah Ali Khamenei – are limited to tough and hard words only instead of any escalation through military confrontation. Therefore, the world for now has apparently averted a possible military fight that could have involved two blocks of the world powers which would have directly affected the global oil market – meaning the world economy could have faced a blow and a tough time.

The heightened tension could have disrupted the movement of oil tankers through the Strait of Hormuz. One fifth of the world's oil production is shipped via this channel and any disruption there means a sharp rise of oil price across the world.

It is true that Iran has no legal right to stop the movement of oil-carrying vessels through this waterway unilaterally

as a part of this Strait is owned by Oman.

Last year, there was an attack on the oil ships near the Strait of Hormuz and the blame went to Iran by the United States and its close ally Saudi Arabia. Tehran as usual dismissed this claim though.

We witnessed the truth that Iran in the past preferred diplomacy, a perfect strategy for it, to gain its aims instead of military confrontation and thus tried to overcome its setbacks after the U.S. sanction as this was shrinking its economy.

The world felt relieved when U.S. Secretary of State Mike Pompeo committed to reduce the tension that was created after Soleimani's killing.

Another World War is not anticipated because from the last four decades' of experience it is apparent that Iran would not go to war for its own sake. The country is already dealing with troubles on its economic front. So, Iran would not be able to afford a full-blown war as it is also facing movements and disorder at home from their own masses.

Bangladesh is a peace loving country



General Qassem Soleimani

and always opposes any kind of clash or military interference. This is not a mere word or sentence, Bangladesh rather truly follows this principle. The vivid proof is the Rohingya issue. Despite limited ability, Bangladesh is hosting more than 1.1 million Rohingya refugees and the country never tends to get involved in any dispute with Myanmar. In fact, it has been trying in different fronts, both bilateral and multilateral ways, to solve this unbearable problem through amicable means, like negotiations.

Bangladesh, therefore, does not want the friction between the U.S.A. and Iran to escalate it to war, as it will have a direct impact on the global oil market. We spend several billions of dollars to import oil and if oil price rises, the cost of oil import will also increase several folds and that will have a negative impact on our development activities. So, we urge all the partners especially the global powers to have a close eye on this issue so that no country is provoked to fuel the unease any further. Both Iran and the U.S.A are allies of Bangladesh, and while the U.S.A is not only our development partner, it is also the largest export destination and the largest foreign direct investor as a single country.

EP

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Possible scenarios following the death of Iranian general Qassem Soleimani



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বিকশিত বিদ্যুৎ উৎপাদক

দেশের উত্তর-পশ্চিমাঞ্চলের ক্রমবর্ধমান বিদ্যুৎ চাহিদা পূরণ এবং লো-ভোল্টেজ সমস্যা নিরসনকল্পে বিদ্যুৎ খাত সংস্কারের আওতায় কোম্পানি আইন, ১৯৯৪ অনুসারে বিদ্যুৎ উৎপাদন ব্যবস্থায় গত ২৮-০৮-০৭ ইং তারিখে বাংলাদেশ বিদ্যুৎ উন্নয়ন বোর্ডের একটি প্রতিষ্ঠান হিসেবে নর্থ-ওয়েস্ট পাওয়ার জেনারেশন কোম্পানি লিমিটেড গঠিত হয়। সিরাজগঞ্জ ১৫০ মেঃওঃ পিকিং পাওয়ার প্লান্ট নির্মাণ প্রকল্প, খুলনা ১৫০ মেঃওঃ পিকিং পাওয়ার প্লান্ট নির্মাণ প্রকল্প এবং ভেড়ামারা ৩৬০ মেঃওঃ কম্বাইন্ড সাইকেল বিদ্যুৎ কেন্দ্র উন্নয়ন প্রকল্প নিয়ে কোম্পানির প্রাথমিক কার্যক্রম শুরু হয়। বর্তমানে সিরাজগঞ্জ ২২৫ মেঃওঃ কম্বাইন্ড সাইকেল পাওয়ার প্লান্ট (১ম ইউনিট), খুলনা ২২৫ মেঃওঃ কম্বাইন্ড সাইকেল পাওয়ার প্লান্ট, ভেড়ামারা ৪১০ মেঃওঃ কম্বাইন্ড সাইকেল বিদ্যুৎ কেন্দ্র, সিরাজগঞ্জ ২২৫ মেঃওঃ কম্বাইন্ড সাইকেল পাওয়ার প্লান্ট (২য় ইউনিট), সিরাজগঞ্জ ২২৫ মেঃওঃ কম্বাইন্ড সাইকেল বিদ্যুৎ কেন্দ্র (৩য় ইউনিট), সিরাজগঞ্জ ৪০০ মেঃওঃ কম্বাইন্ড সাইকেল বিদ্যুৎ কেন্দ্র (৪র্থ ইউনিট) এবং মধুমতি ১০০ মেঃওঃ এইচএফও চালিত বিদ্যুৎ কেন্দ্র জাতীয় গ্রীডে বিদ্যুৎ সরবরাহ করছে।

কোম্পানির চলমান প্রকল্পসমূহের মধ্যে রূপসা ৮০০ মেঃওঃ কম্বাইন্ড সাইকেল বিদ্যুৎ কেন্দ্র নির্মাণ প্রকল্প এবং সিরাজগঞ্জ ৭.৬ মেঃওঃ ছিড কানেক্টেড ফটোভোল্টায়িক সোলার বিদ্যুৎ কেন্দ্র প্রকল্পের কাজ এগিয়ে চলছে।

দেশের ক্রমবর্ধমান বিদ্যুৎ চাহিদা পূরণের লক্ষ্যে নর্থ-ওয়েস্ট পাওয়ার জেনারেশন কোং লিঃ এবং সিএমসি, চায়না-এর যৌথ উদ্যোগে গঠিত বাংলাদেশ-চায়না পাওয়ার কোম্পানি (প্রাঃ) লিমিটেড-এর আওতায় পটুয়াখালী জেলায় পরিবেশ-বান্ধব অত্যাধুনিক আন্ড্রা সুপারক্রিটিক্যাল প্রযুক্তি ব্যবহার করে আমদানি-নির্ভর কয়লা-ভিত্তিক পায়রা ১৩২০ (২× ৬৬০) মেঃওঃ তাপ বিদ্যুৎ কেন্দ্র (১ম পর্যায়) বাস্তবায়নের কাজ প্রায় শেষের দিকে। অত্র বিদ্যুৎ কেন্দ্রের ১ম ইউনিট থেকে গত ১৩ জানুয়ারি, ২০২০ তারিখে পরীক্ষামূলকভাবে জাতীয় গ্রীডে বিদ্যুৎ সরবরাহ আরম্ভ করে। ২৭ জানুয়ারি, ২০২০ তারিখে প্রায় ৫৩০ মেঃওঃ বিদ্যুৎ জাতীয় গ্রীডে সরবরাহ করা যায়। আশা করা যায়, অত্র ইউনিট থেকে ফেব্রুয়ারি মাসে প্রারম্ভিক বাণিজ্যিক উৎপাদন শুরু হবে এবং ২য় ইউনিট মে, ২০২০-এ বিদ্যুৎ উৎপাদনে সক্ষম হবে। এছাড়া, কোম্পানি কর্তৃক অধিগৃহীত একই স্থানে পায়রা ১৩২০ (২× ৬৬০) মেঃওঃ তাপ বিদ্যুৎ কেন্দ্র নির্মাণ প্রকল্প (২য় পর্যায়) বাস্তবায়নের লক্ষ্যে ইপিএস চুক্তি স্বাক্ষরিত হয়েছে ও প্রকল্পের ইপিএস কাজ চলমান; এবং অত্র কোম্পানি ও সিমেন্স, জার্মানি এর যৌথ উদ্যোগে পায়রা ৩৬০০ মেঃওঃ এলএনজি-টু-পাওয়ার প্রকল্প বাস্তবায়িত হবে। সম্প্রতি যৌথ উদ্যোগে ৫০০ মেঃওঃ নবায়নযোগ্য জ্বালানি ভিত্তিক বিদ্যুৎ উৎপাদনের জন্য এনডব্লিউপিজিসিএল ও সিএমসি, চায়না এর মধ্যে সমঝোতা স্মারক (এমওইউ) স্বাক্ষরিত হয়েছে। আশা করা যায়, অনতিবিলম্বে এ বিষয়ে এনডব্লিউপিজিসিএল ও সিএমসি এর মধ্যে একটি জয়েন্ট ভেঞ্চার এগ্রিমেন্ট স্বাক্ষরিত হবে। এছাড়া, ভবিষ্যৎ পরিকল্পনার অংশ হিসেবে কোম্পানি আগামীতে বেশ কিছু মেগা প্রকল্প বাস্তবায়ন করবে।

নর্থ-ওয়েস্ট পাওয়ার জেনারেশন কোম্পানি লিঃ বিদ্যুৎ কেন্দ্র নির্মাণ প্রকল্প বাস্তবায়নে এবং বিদ্যুৎ কেন্দ্র পরিচালনা ও সংরক্ষণে অনবদ্য ভূমিকা পালন করে আসছে। ‘বিদ্যুৎ ও জ্বালানি সপ্তাহ ২০১৮’-এর উদ্বোধনী অনুষ্ঠানে দ্রুত বিদ্যুৎ উৎপাদন বৃদ্ধির স্বীকৃতি স্বরূপ মাননীয় প্রধানমন্ত্রী পুরস্কার প্রদান করেন। কোম্পানির বর্তমান বিদ্যুৎ উৎপাদন ক্ষমতা ১৮১৩ মেঃওঃ। আশা করা যায়, ২০২৫ সালের মধ্যে কোম্পানি প্রায় ১০,০০০ মেঃওঃ এর উর্ধ্বে বিদ্যুৎ উৎপাদনে সক্ষম হবে। এছাড়া, কোম্পানিটি দ্রুততম সময়ে শক্তিশালী ব্র্যান্ড ইমেজসহ দেশের নেতৃত্বশীল বিদ্যুৎ উৎপাদনকারী সংস্থায় পরিগণিত হবে।



দ্রুত বিদ্যুৎ উৎপাদন বৃদ্ধির স্বীকৃতি স্বরূপ মাননীয় প্রধানমন্ত্রী শেখ হাসিনার হাত থেকে পুরস্কার গ্রহণ করছেন নর্থ-ওয়েস্ট পাওয়ার জেনারেশন কোম্পানির প্রধান নির্বাহী কর্মকর্তা প্রকৌঃ এ. এম. খোরশেদুল আলম



ভেড়ামারা ৪১০ মেঃওঃ কম্বাইন্ড সাইকেল বিদ্যুৎ কেন্দ্র

Gazprom Awarded Three New Wells in Bapex Field

The government has awarded three more gas wells of the Bangladesh Petroleum Exploration and Production Company Limited (Bapex) to the Russian gas exploration and production company Gazprom.

The gas wells are Tobgi-1, Illisha-1 and Bhola North-2 – all in Bhola.

Bapex had planned to explore the wells itself but it did not get the government's approval, and now the wells go to Gazprom.

As before, these wells have also been given to Gazprom under the Speedy Supply of

Power and Energy (special provision) Act 2010 – without any tender process.

Petrobangla and Gazprom officials have not disclosed the rate for drilling the new wells.

However, sources at Petrobangla said that Gazprom quoted \$17 million (Tk142 crore) for the drilling of each well.

On November 5, 2019, the Energy Division formed a nine-member technical committee to evaluate Gazprom's technical and financial proposals.

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FERB Holds Energy Night 2020

Energy Night 2020 - a biannual get-together function of Forum for Energy Reporters Bangladesh (FERB) was held at Hotel InterContinental

Dhaka recently.

Prime Minister's Energy Advisor Dr Tawfiq-e-Elahi Chowdhury, State Minister for Power,



Overhead Wire to be Removed from Dhaka's 5 Zones: Nasrul



State Minister for Power, Energy and Mineral Resources Nasrul Hamid has said overhead cables attached to the electricity poles would be removed from five zones of the capital city within May 30 next.

"Overhead risky cables attached to electricity poles are obstacles on the way to uninterrupted power supply and also hamper city's beauty," he said addressing an inter-ministerial meeting on removal of overhead wires from the city at Bidyut Bhaban conference room recently.

Mentioning government's plan to change all overhead power distribution lines to underground ones to reduce risk of electrocution and also enhance beauty of the city, the state minister said overhead wires will be removed from five zones – Mohakhali DOHS, Gulshan Society, Niketan Society, Motijheel

EP

and Banani-Karwan Bazar within May 30 next.

Nasrul, during the meeting, also instructed distribution organizations for making contact with offices concerned for taking necessary measures in this regard, adding, "To this end, the committees concerned will finalize five zones to remove hanging cables."

Seeking cooperating from all concerned for enhancing the city's beautification as early as possible, Nasrul said the power division will begin its work to place electric cables underground at the same time cable operators and other organizations will have to shift their overhead wire to the underground.

Nasrul said initiatives were taken to bring power distribution system of Dhaka city to underground management.

Energy and Mineral Resources Nasrul Hamid, former state minister Prof. Rafiqul Islam, eminent energy experts Dr M Tamim, Dr Ijaz Hossain, Dr Badrul Imam, senior officials of Ministry of Power, Energy and Mineral Resources, top executives of different public and private power and energy compa-

nies, senior journalists, energy reporters of different print, electronic and online media attended the function.

FERB Chairman Arun Karmaker welcomed everyone at the ceremony. The organization's Executive Director Sadrul Hasan conducted the function.

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NBR to Cut Duty Benefit on 21 Power Plant Items

The National Board of Revenue (NBR) is going to cut duty-free benefit on import of 21 types of power plant equipments, categorizing them 'locally available and consumable products.'

The decision has been taken in a bid to check duty evasion through abusing the benefit, offered for attracting power sector investment.

The NBR's Customs Wing has decided to scrap two existing Statutory Regulatory Orders (SROs) to frame a comprehensive order with a negative list for the duty benefit.

Officials said the NBR has sent a summary of the new SRO to the finance minister for his approval.

The products that might be included in the negative list

are - steel sheet and steel pipe below certain grade, steel rod, cement, boulder stone, pre-fabricated building, electric light-fittings, transmission tower, cable except control cable, communication cable, optical fibre cable and power cable below 132 kv, distribution transformer, all types of paint and varnish, household goods, all types of chemicals, lubricating oil, transformer oil, office equipments and furniture, air conditioner below 2,00,000 BTU, dredger, anchor boat, and motor vehicles.

Currently, power producers enjoy duty-free benefit on import of power equipments and spare parts as per two SROs, issued in 1997 and 2000.

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B-R Powergen Seeks New Project for Survival

Troubled state-owned B-R PowerGen has proposed to implement a 400MW LNG-based power project in Mirsharai to survive as a company.

The company is in trouble due to overburdened manpower, high maintenance cost of its only power plant and declining profit due to poor demand for costly oil-fired electricity from its only 150MW Kodda power plant, official sources



said.

B-R Powergen Ltd. was

established in 2010 as a public limited company by equal shares of Power Development Board (PDB) and Rural Power Company Limited (RPCL) under the Power Division.

B-R PowerGen managing director Md Fakhruzzaman said the company's profit come down significantly in FY 2018-19 due to poor demand of electricity by the National Load Dispatch Centre (NLDC) from its lone furnace oil-fired power plant. "Our profit has come down to Tk 760 million in FY 2018-19 from Tk 1.18 billion in FY 2016-17," he informed the meeting.

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Ctg-Feni-Bakhrabad Gas Pipeline



Gas supply through the 181-km-long Chattogram -Feni-Bakhrabad gas transmission parallel pipeline is expected to begin from next month of February.

One senior official of the Gas Transmission Company Limited (GTCL) said that the construction works of the project would be completed by the current month of January. He said more than 98 per cent works have already been completed.

The official said the GTCL had acquired nearly several acres of land at Sitakunda for construction of the 181-km-long Chattogram -Feni-Bakhrabad gas transmission

parallel pipeline.

The authority had paid an amount of Tk421 crore to compensate more than 819 local people.

After making payment of the compensation, a total of 805 owners of those residences had left their abode for construction of the pipelines.

Only 14 residences are now lying on the alignment of the project, he hoped that those residences would be evicted in the next week. With the construction of a mere 100 metres long pipeline, the construction of 181-km-long pipeline would be completed.

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Autogas Pump Price Shoots Up By 19pc

The pump price of autogas, the liquefied petroleum gas (LPG) used in vehicles, surged by around 19 per cent to Tk 50 per liter from Tk 42 recently.

Privately-owned LPG importers and marketers have increased the autogas price to cope with soaring LPG

price in the global market, a LPG trader said.

Vehicle owners, especially privately-owned ones, are bearing the brunt of the sudden hike of fuel.

Unlike other fuels, LPG price in the domestic market is fixed by private players.

The government has no control over setting the prices of LPG either used for cooking or vehicles.

The use of LPG as auto fuel is on the rise in Bangladesh due to its cost competitiveness compared to octane, petrol or diesel.



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16 More Power Plants to be Set Up

In a major boost to power sector, the government has undertaken a scheme for setting up 16 power plants having 19,100 megawatt (MW) electricity generation capacity in the country.

“Plan is underway to install 16 power plants having 19,100 MW generation capacity. Construction of the plants will start in phases,” State Minister for Power, Energy and Mineral Resources Nasrul Hamid said recently.

Currently, the country’s power generation capacity

reaches 22,787 MW while private sector installed power plants having 8,730MW electricity generation capacity, he said, adding, “We are working for sustainable and uninterrupted power supply with affordable price.”

Nasrul said since assuming to power in 2009, the Awami League led government has constructed 124 new power plants having capacity of 14,986 MW after taking time-befitting, realistic and sustainable steps.

“Currently about 95 per cent people of the country were brought under power coverage. And this has been possible due to bold and dynamic leadership of Prime Minister Sheikh Hasina,” Nasrul said.

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Govt to Scrap Power Deals With Malaysian, S Korean Firms

The government has decided to scarp deals with a Malaysian and a South Korean firm for two joint-venture (JV) power projects (1320 MW each) due to slow progress in project implementation.

The government is also planning to drop some more coal-fired power projects. The number of abandoned projects stood at 16 including two projects having a combined capacity to generate 15,752MW of electricity from imported coal.

State-owned Bangladesh

Power Development Board (BPDB) and Malaysian firms Powertrac and Tanega National Barhed (TNB) signed a Memorandum of Understanding (MoU) six years back for setting up a mega coal-fired power plant having the capacity to generate 1320MW of electricity at Moheshkhali in Cox’s Bazar.

In September 2016, Malaysian counterpart TNB placed a proposal for excluding the Tenega Barhead and signed a separate MoU with Powerpac Barhed of Malaysia for implementing

Govt Plans to Form Committee for Cyber Safety of Energy Div



The government is considering formation of a committee to curb cyber attack in power and energy sector in the country.

“We are under the threat of cyber attack due to digital operation of latest technologies in energy sector. Therefore, it is a peak time to form a committee in this regard,” Prime Minister’s Power and Energy Adviser Dr Tawfiq-e-Elahi Chowdhury said.

The adviser said this at a contract signing ceremony on “Advanced Metering Infrastructure (AMI)” between NESCO and JVC of Shenzhen Star Instrument Co. Ltd at Bidyut Bhaban recently.

The advisor also spoke raising awareness about cyber

attack among the officials of the power division. Cyber attack can destroy everything instantly, he said.

The distribution company must provide smooth services to the consumers, he said.

Under the deal, a joint venture company formed between state-owned Northern Electricity Supply Company (NESCO) and JVC Shenzhen Star Instrument Co. Ltd & Oculin Tech BD Ltd.

Under the deal, the company will implement Smart Pre-payment Metering Project at a cost of over Tk4.14 billion. The company will install 131,353 single phase meters, 8,095 three phase meters and 839 DCU.

EP

the plant with equal sharing with BPDB.

The government has already sent the revised MoU for signing the deal in the middle of last year. But the government of Malaysia is yet to respond to the MoU, an official said, adding, so we have decided to drop the project.

Regarding the joint venture project with Korean firm KEPCO, another official said the government had signed a MoU in August 2016 with

the South Korea for implementing another 1320W coal-fired power plant.

In March 2018, BPDB had discussed about the financing of the joint development agreement (JDA) and financing for implementing the mega power plant at Moheshkhali in Cox’s Bazar.

But the South Korean company has been delaying the implementation of the power project in last two years, official said.

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Private Power Generation Firms to Get Tax Exemption

Power generation companies in the private sector will receive tax exemption soon, according to a source in the Internal Resources Division (income tax) under the finance ministry.

Three major private power generation companies—Summit Meghnaghat II Power Plant, Unique Meghnaghat Power Limited (UMPL), and Chandpur Power Generations Limited, a subsidiary of Doreen Power Generations and Systems Limited—are expected to get the benefit.

The source said that as per a Statutory Regulatory Order

(SRO) issued on January 9, the government is to give income tax exemption to private power generation companies under Section 44 of the Income Tax Ordinance 1984. The initiative has been taken to attract investment in the power sector.

According to the SRO, if private power generation companies can meet the conditions laid down in the 'Private Sector Power Generation Policy of Bangladesh' and start commercial production from January 1, 2020 to December 31, 2022, they will receive the exemption facilities.

It also mentioned that based on power generation companies will not receive this facility.

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Underground Electricity Lines Wrap Sylhet in Elegance

Sylhet City Corporation (SCC) has gone one step further towards building a modern and smart digital city by doing away with the lumber of wires and overhead cables and introducing underground electricity transmission system.

The Hazrat Shahjalal shrine area of Ward number-1 of SCC has been completely brought under the system whereby all the electrical pillars and wiring of other services have been removed from

view. Local Power Development Board (PDB) has been installing the underground electric wiring system under



Establishment of New Lubricating Oil Standard Urgently Required

Bangladesh University of Engineering and Technology (BUET) has conducted a study on standard of lubricant oil that stressed the need for establishing a reliable standard urgently to protect engines and reduce pollution created from the automotive engines.

The study recommended setting up a proper monitoring cell to control adulteration and ensuring the quality of the lube oil.

It also suggested building up proper waste re-refining plants and policy so that the waste oil can be used in the re-refining plant to recover base oil, which can be used for producing blended lubricants after mixing with additives in appropriate proportion that will save environment as well as foreign currency.

Bangladesh Energy Regulatory Commission (BERC), which has involved the BUET to conduct the study, arranged a seminar on Sunday presided over by BERC Chairman Monowar Islam (NDC) while BERC Member Rahman Murshed was the welcome speaker.

The team head of the study Prof Dr. Ijaz Hossain has presented the summary of the study, followed by key note presentation by his fellows Assistant Professor Dr. Shahinur Islam and Prof Dr. Mominur Rahman of Chemical Engineering Department, BUET.

According to the study, 65-75 percent of used oil can be recovered by re-cycling, but unfortunately illegal companies are doing this randomly without maintain any standard.

EP



its "Power Distribution System Development Project, Sylhet Division", said a press

statement of PDB recently.

The statement signed by the project director MM Siddik said that the power supply under the new system commenced successfully on January 5 after moving all the overhead electric lines into underground in the Shahjalal shrine area. Sylhet City Corporation also provided assistance in the project, it said.

EP

Bangladesh Starts Exporting LPG to Indian State of Tripura

Bangladesh has started commercial export of liquefied petroleum gas (LPG) to neighboring India with initial shipment of around 1,000 tonnes per month.

Two privately owned firms -- Omera Petroleum and Beximco LPG -- are now exporting LPG to Tripura, a landlocked northeastern state of India, by road.

Presently, each of the firms is exporting around 500 tonnes a month, and the volume may climb to around 2,500 tonnes within several months.

The state-run Indian Oil Cor-

poration, or IOC, is importing the LPG under a deal signed between Bangladesh and India on October 5, 2019 in presence of Prime Minister Sheikh Hasina and her Indian counterpart Narendra Modi during her visit to India.

The LPG-carrying tankers are shipping the fuel to Bishalgarh of Tripura through Bibirbazar land border point in Cumilla district.

After bottling the gas at its Bishalgarh bottling plant, the IOC will supply the product to consumers, especially for cooking purpose.

EP

Germany Agrees 40b Euro Coal Exit Deal for States, Companies

Germany has agreed to compensation of about 40 billion euros (\$45 billion) for affected regions, workers and companies as part of plans to end its use of brown coal in power plants by 2038, Economy Minister Peter Altmaier said recently.

The plans are part of measures aimed at cutting greenhouse gas emissions in Europe's largest economy by 2030 to 55 percent of their 1990 levels. Brown coal, or lignite, is considered the most

polluting type of coal, partly because its low heat content means more must be burned.

In a deal reached in overnight talks which stretched into the early morning hours, the government agreed to pay up to 14 billion euros in aid to the affected states of Brandenburg, North-Rhine Westphalia, Saxony and Saxony-Anhalt until 2038, government spokesman Stefan Seibert said in a statement.

The federal government would take further measures worth up to 26 billion euros to help brown coal regions up to 2038.

EP



UNDP, CZM Ink Deal for Financing SDGs

ploring different financing tools with a focus on

The United Nations Development Program (UNDP) and the Center for Zakat Management (CZM) has signed a Memorandum of Understanding (MoU) for unlocking financing opportunities that would help to achieve the 2030 Agenda for Sustainable Development Goals (SDGs).

The MoU was signed by Dr Mohammad Ayub Miah, Chief Executive Officer of CZM, and Sudipto Mukerjee, Resident Representative of UNDP Bangladesh, on behalf of their respective organisations, at the latter's office in Dhaka recently.

Under the agreement, both the parties will work on ex-

ploring different financing tools with a focus on Zakat, best utilization of the Zakat fund that is aligned with the SDGs and evaluate the effectiveness, measure efficiency and impact of Zakat-based development programs.

Dialogues will be arranged to identify different instruments and to enhance understanding on SDGs for Zakat fund, said a UNDP press release.

Mohammad Ayub Miah, in his remarks said, "Zakat strongly aligns with a number of goals in the global 2030 agenda. CZM is looking forward to working with UNDP and thus further enhancing credibility in mobilizing and disbursing Zakat Funds"

EP



Argentina Plans 1,200km Gas Pipeline

The pipeline, which will be developed in two phases,

Argentina is progressing plans for a pipeline to balance the countries supply and demand.

The 1,200 km natural gas pipeline will transport product from Argentina's largest producing region, Vaca Muerta, to Buenos Aires, boosting the country's natural gas output.

In the 2018-19 financial period, Argentina's natural gas company – Transportadora de Gas del Sur – will invest an initial US\$250 million on gas transportation infrastructure.

will potentially move up to 40 million m3/d.

The pipeline construction contracts for the project are estimated to be worth up to US\$1.8 billion and could be awarded by September 2019.

The country is also planning to begin monthly auctions for domestic gas and in May will launch a separate four-year gas auction for winter supplies.

Making the most of growing domestic gas production, the Argentina has also resumed gas exports to neighbors Chile and Brazil.

EP

Rolls-Royce Plans Mini Nuclear Reactors By 2029



Manufacturer Rolls-Royce has told the news agency yesterday that it plans to install and operate factory-built power stations by 2029. Mini nuclear stations can be mass manufactured and delivered in chunks on the back of a lorry, which makes costs more predictable.

But opponents say the UK should quit nuclear power altogether. They say the country should concentrate on cheaper renewable energy instead. Environmentalists are divided over nuclear power, with some maintaining it is dangerous and expensive, while others say that to achieve net zero emissions by 2050 all technologies are needed.

However, the industry is con-

fident that mini reactors can compete on price with low-cost renewables such as offshore wind. Rolls-Royce is leading a consortium to build small modular reactors (SMRs) and install them in former nuclear sites in Cumbria or in Wales. Ultimately, the company thinks it will build between 10 and 15 of the stations in the UK.

They are about 1.5 acres in size - sitting in a 10-acre space. That is a 16th of the size of a major power station such as Hinkley Point. SMRs are so small that theoretically every town could have its own reactor - but using existing sites avoids the huge problem of how to secure them against terrorist attacks.

EP

UAE Investing to Ensure Energy Resources Well Secured

The United Arab Emirates energy said recently it was investing heavily to secure its energy resources.

"We are in a very good position to secure ourselves and keep securing our customers (needs)," Energy Minister

Suhail al-Mazrouei told an energy conference in the capital Abu Dhabi.

"We are

New LNG Bunkering Simulator Seeks to Optimize Training Levels

Wärtsilä is launching its new LNG Bunkering & Supply System simulator to promote greater safety onboard LNG-powered vessels by improving the level of training for operators of LNG systems.

The design is based on the well proven Wärtsilä LNG-Pac and Gas Valve Unit (GVU) technologies, and includes all auxiliary systems used in connection with the fuel supply. It is also in accordance with the STCW requirements for training seafarers onboard gas fueled ships to standards demanded by the IGF Code – the international code of safety.

The scope of simulation includes all operations related to the use of LNG fuel, from bunkering to gas fuel supply and engine operations, as

well as troubleshooting. It provides realistic representation of the user interface for remote and local operating posts, as well as animated 3D visualization to facilitate situational awareness training.

A ready prepared set of scenarios for tutorials and assessments is available as an additional option.

"As the move towards LNG fuel gathers pace in the marine industry, it is essential that crews are thoroughly and expertly trained on handling the related systems. This new simulator is designed to raise training levels on LNG bunkering and supply systems, and will therefore also raise onboard safety levels," said Sergey Tarasov, Solutions Manager, Wärtsilä Voyage Solutions.

Source: Wärtsilä

EP



committed that (our partners) have ample supply of hydrocarbons and we are investing heavily to ensure that energy security for... our partners are well secured," he added.

He said investments by foreign companies in the UAE energy sector reflected their confidence in the country's security.

The chief executive of Abu Dhabi National Oil Co (ADNOC) said earlier the state oil company was on schedule to increase its oil production capacity.

"We will continue to responsibly grow our hydrocarbon resources to ensure reliable flows of energy to global markets," Jaber said.

EP





লাফস গ্যাস

লাইফ হবে স্বচ্ছন্দ ও নিরাপদ

লাফস গ্যাস-এর মূল শক্তি আন্তর্জাতিক মান, স্বাস্থ্য ও নিরাপত্তার নিশ্চয়তা এবং পরিবেশ ও জীবন যাত্রার মান উন্নয়নের প্রতি দায়িত্ববোধ। সর্বাধুনিক প্রযুক্তি ও নিরাপদ সিলিন্ডার সরবরাহের মাধ্যমে বাংলাদেশসহ বিশ্বের লাখো মানুষের জ্বালানী চাহিদা পূরণে লাফস গ্যাস প্রতিজ্ঞাবদ্ধ।

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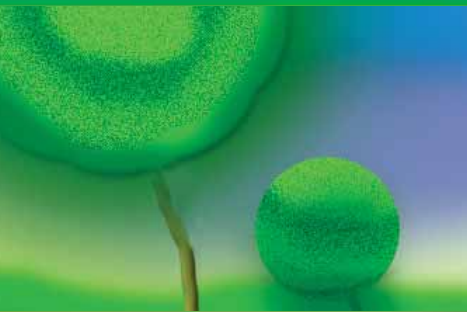
(An Enterprise of Bangladesh Power Development Board)

Head Office: Aftab Nagar (Beside NLDC Building), Badda, Dhaka-1212, Bangladesh

মানসম্পন্ন বিদ্যুৎ নিরবচ্ছিন্নভাবে দেশের সকল মানুষের নিকট পৌঁছে দেয়াই আমাদের অঙ্গীকার

- * গ্রীড উপকেন্দ্র, গ্রীড লাইন ও টাওয়ার জাতীয় সম্পদ, তা রক্ষা করা সকলের দায়িত্ব।
- * গ্রীড 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 গ্রীড লাইন ও টাওয়ার হতে নিরাপদ দূরত্বে স্থাপনা নির্মাণ করুন।
- * বৃক্ষ রোপনে গ্রীড 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।





Green page

Govt Plans to Install Floating Solar Panels

The government is planning to install floating solar panels at different water bodies in the country as it targets to generate 10 percent of the total electricity demand from renewable energy sources.

The initiative is the first of its kind in Bangladesh. Sustainable and Renewable Energy Development Authority (SREDA) is taking this initiative.

The government agency under the min-

istry of power and energy is working with the scheme due to scarcity of land in the country. established using maximum coverage of one percent and five percent of Kaptai and Mohamaya lake respectively," an ADB survey submitted to the SREDA in a recent inter ministerial meeting said.

Establishing MW scale floating solar power plants are also possible in other three water bodies, the report said.

It also presented the grid connectivity, environmental and social findings of the study on the sites.



SREDA, in association with the Asian Development Bank (ADB), has already selected five separate locations in this regard.

The sites are: Kaptai Lake, Mohamaya Lake, Joydia Baor, Bukbahara Baor and Khajura Baor.

"Around 20MW of (AC) and 5MW of AC floating solar power plants can be

So far in Bangladesh, a single floating solar power plant with a capacity of only 19-kilowatt of electricity has been established at Mongla of Bagerhat district.

SREDA will conduct environmental and social field surveys for setting up the floating power plant under ADB funding.

The decision was taken at a meeting chaired by SREDA chairman Md Helal Uddin

IDCOL to Finance Rooftop Solar Project in Bogura

The Infrastructure Development Company Limited (IDCOL) signed a facility agreement with Thengamara Mohila Sabuj Sangha (TMSS) recently to finance first rooftop solar project in Bogura at TMSS cold storage and TMSS Public School & College with accumulative capacity of 484.44kWp, says a statement.

Electricity produced from this project will not only reduce electricity bills of TMSS but also reduce the diesel consumption during load shedding.

In addition, the project owners can export unutilized electricity generated from the project to national grid through Net Metering Guideline 2018.

Currently, the unit cost of electricity from rooftop solar falls below Tk 8.00 and this makes the investment very lucrative.

The project will be implemented with a total project cost of Tk 33.9 million. Under this facility agreement, IDCOL will provide concessional loan of Tk 27.1 million. IDCOL plans to finance 300 MW of electricity from solar rooftop by 2022.

SM Monirul Islam, Deputy CEO & CFO, IDCOL, and Prof. Dr. Hosne Ara Begum, Founder & Executive EC Member, TMSS, signed the agreement.

Md Enamul Karim Pavel, Head of Renewable Energy, IDCOL, Javed Emran, Chief Risk Officer, IDCOL, and other officials of both the organizations were present

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People Willing to Set Up Bio-Gas Plants in Villages Lose Interest

Despite having the potential, people willing to set up bio-gas plants are losing interest due to alleged non-cooperation from the BCSIR and banks.

Sources said, as a result, many people willing to set up biogas plants at their houses are failing to reap benefit from this easy, pollution-free green technology.

It is learnt, Rajshahi district unit of Bangladesh Council for Industrial and Scientific Research (BCSIR) used to set up bio-gas plants under a subsidized project to make the use of biogas popular.



About a decade ago, many people set up such plants beside their households and were benefitted from using those.

But, due to alleged lack of supervision and non-cooperation from the officials of BCSIR, the project remained almost suspended in Rajshahi villages.

Even those who had set up the plants have lost their interest because of lack of supervision from the concerned authorities.

Those who are willing to set up such plant were frustrated because they could not find out ways to set up such a plant and the banks also do not grant them loan for such plants.

Those who are interested to set up bio-gas plants at their own initiatives are not disbursed loan from the bank on easy terms, which is why they are also losing interest.

EP

Metito Group-Led Consortium to Build Solar Power Plant in Ctg

The government has awarded the Rangunia 55 MWe ac grid-tied solar power plant project to the consortium led by Metito Group comprised of Metito, Al Jomaih and Jinko Power (the Consortium), said a statement.

This is one of the long waited projects of the government that contributed to a balanced energy-mix and a reduction in environmental pollution in the Bangladesh. The Project will be developed on a Build Own Operate

(BOO) basis under a 20 years concession agreement.

The Bangladesh Power Development Board (BPDB), pursuant to approval from the Power Division, Ministry of Power, Energy and Mineral Resources (MPEMR), awarded the project this week.

BPDB had earlier announced the Consortium as the 'lowest bidder' with the competitive tariff of \$0.0748/kWh - the lowest ever reported in Bangladesh.

EP



Solar Panel Installation Rising Sans Proper Disposal Policy



Bangladesh is set to see a rising volume of waste from solar photovoltaic panels in the coming years, which in the absence of proper disposal and management pose risks to the environment and humans.

By 2041, the country will produce more than 0.748 million tonnes of solar e-waste and by 2061 0.797 million tonnes, according to a paper of the electrical and electronic engineering department of the Bangladesh University of Engineering and Technology (BUET).

"Thus, it is critical to handle the disposal of PV waste that is generated at the end of life of PV solar modules," it said.

The challenge becomes apparent as the lifetime of a portion of solar panels will end within the next couple of years, and the government is yet to frame any policy or rule to ensure proper management and disposal of the panels.

Bangladesh started installing Solar Home Systems (SHS) two decades ago with the objective of lightening homes in off-grid areas by harnessing renewable sources for electricity. Since then, the coverage of SHS has expanded.

SHSs are now providing lights to about 60 lakh homes and until now panels with capacity to produce 370 megawatt of electricity have been installed, according to the Sustainable & Renewable Energy Development Authority (Sreda).

EP

Call to Promote Renewable Energy to Reduce Pressure on Fossil Fuel

Academics and researchers at an international symposium recently unequivocally called for promoting renewable energy and its storage for lessening gradually mounting pressure on fossil fuel.

The people of low-income group should have access to renewable energy for improving their standard, they told at the symposium in Rajshahi.



Institute of Energy and Environmental Studies (IEES) in Rajshahi University of Engineering and Technology (RUET) organized the symposium styled "Renewable energy, Energy storage and Power quality" at RUET's auditorium.

Professor Kashem Muttaqui from Australian Power Quality and Rehabilitation Centre addressed the program as chief guest while IEES Director Prof Rafiqul Islam presided over.

While RUET Vice-chancellor-in-Charge Prof Iqbal Matin, Additional Secretary to the Ministry of Power, Energy and Mineral Resources Muhammad Alauddin, RUET's Mechanical Engineering Faculty Dean Prof Mosharraf Hossain and Registrar Prof Selim Hossain also spoke.

EP

Govt Inks Deal to Set up 30MW Solar Plant

Bangladesh Power Development Board (BPDB) recently signed a Power Purchase Agreement (PPA) with Korotoa Solar Limited (KSL) for setting up a 30MW solar power plant at Tentulia in Panchagarh district.

Korotoa solar, a joint venture between Beximco Power Company Limited (80%) and Jiangsu Zhongtian Technology Co. Limited (20%), will implement the project on 130 acres of land under an implementation agreement (IA) inked on the same day with the Ministry of

Power, Energy and Mineral Resources.

BPDB Secretary Saiful Islam Azad and KSL Managing Director M Rafiqul Islam signed the PPA at Bidyut Bhaban in the capital.

Joint Secretary of the Ministry of Power, Energy and Mineral Resources Sheikh Faezul Amin, company secretary of Power Grid Company of Bangladesh Limited (PGCB) Jahangir Azad and the KSL MD signed the IA on behalf of their respective sides while Chairman of BPDB Engr. Sayeed Ahmed and senior officials of the ministry, BPDB, PGCB and Beximco were present.

According to the 20-year PPA terms, BPDB will buy the electricity to be generated from the plant at US cents 13.9 per unit (KWh).

Investing around US\$ 45 million, the joint venture is expected to implement the project within eight months from signing of the day's agreements.

EP



Greenpage

Bangladeshi Start-Up SOLshare Captures Place in 2020 Global Cleantech 100

SOLshare, a young Bangladeshi company dedicated to bring affordable solar power to everyone in Bangladesh and beyond, was just named a 2020 Global Cleantech 100 company by Cleantech Group for the second consecutive time as the first company from Bangladesh ever.

The 2020 Global Cleantech 100 is the 11th edition of the respected annual guide to the leading companies and themes in sustainable innovation. It features the private, independent and for-profit companies best positioned to contribute to a more digitized, de-carbonized and resource-efficient industrial future.



"Having been able to defend our listing as a global cleantech 100 company gives all of us at SOLshare immense pride and underlines our determination and potential to help deliver the transformation to a sustainable future we're all waiting for," says Dr. Sebastian Groh, the managing director of SOLshare.

The list combines Cleantech Group's research data with qualitative judgements from nominations and insight from a global 80-member expert panel of leading investors and executives from corporations and industrials active in technology and innovation scouting.

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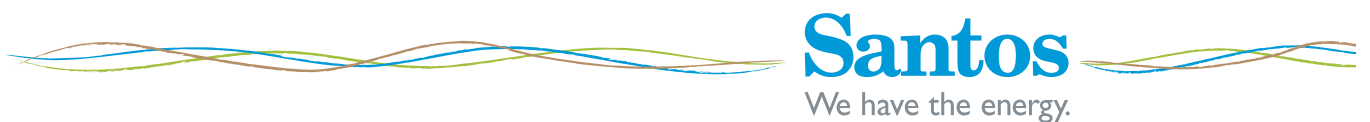
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HC Issues 9-Pt Directive to Cut Air Pollution in Dhaka

EP Report

Issuing a nine-point directive to bring down air pollution level in Dhaka, the High Court recently summoned the director general of the Department of Environment (DoE) to appear before it on February 2 to explain why this problem cannot be contained.

The HC bench of Justice FRM Nazmul Ahasan and Justice KM Kamrul Kader issued the order following a writ filed by Human Rights and Peace for Bangladesh (HRPB).

The bench also ordered the authorities concerned to submit a progress report on the compliance of the directives before it on March 1.

Advocate Manzill Murshid stood for the writ petitioner while deputy attorney general ABM Abdullah Al Mahmud Bashar represented the state and Sayeed Ahmed Reza for the two city corporations of Dhaka.

The nine-point directive includes ensuring the use of covers on trucks or other vehicles that transport sand or soil in capital Dhaka.

At places where construction work is going on, contractors should cover the work to prevent the spread of dust, it said.

As per its previous order, the HC ordered the authorities concerned to sprinkle water on streets that were left out.

The government has been instructed to ensure complete road construction or excavation work or carpeting complying with laws and rules.

The court also ordered the authorities to seize the vehicles emitting black smoke.

It asked the government to take steps to fix the economic life of different cars or vehicles as per section 36 of the Road Transport Act 2018 and restrict plying of those vehicles which have no economic life to run on roads in the capital.



The DoE was asked to shut down in next two months the rest of the illegal

brick fields which are operating without license.

EP

Climate Change to Displace 4cr People in Bangladesh: PM

Prime Minister Sheikh Hasina recently said there is a possibility that 4 crore people of 70 upazilas in the country's 19 districts might be displaced due to climate change.

"The average temperature of Bangladesh has increased by one degree in May and 0.5 degree in November in recent times due to the climate change," she said while replying to a query from Awami League MP Shahiduzzaman Sarker in Parliament during her question-answer session.

The Prime Minister said saline water of the sea is now entering 100 kms into rivers during the summer following the

impacts of climate change.

"The average rainfall has increased. Especially, excessive rainfall in a short time causes waterlogging in town areas. The trend of cyclone in the Bay of Bengal has also. The rough sea has caused adverse impacts on the livelihood of fishermen," she said.

Sheikh Hasina also said the environmental balance has also been affected due to climate change. "That's why we don't see any variation among different seasons as in the past.

"As a result, it has put an impact on our biodiversity and we see negative impacts on agriculture and livelihood of farmers. This has posed a threat to our farm production and food safety," she added.

The Prime Minister also said there is an outbreak of different diseases carried out by insects due to the climate change.

EP



Air France-KLM Chief Warns Carbon Taxes Could Backfire

Air France-KLM chief executive Ben Smith said recently that imposing carbon taxes on ticket prices could prove counterproductive, hindering efforts by airlines to buy more fuel-efficient planes that could significantly reduce emissions.

"Renewing our fleet is a very quick and effective way to reduce our footprint," Smith said, while acknowledging intense pressure -- including from his airline's 88,000 employees -- to clean up its act. "These taxes hamper our ability to make these investments," he told the Anglo-American Press Association in Paris.

He reiterated in particular his criticism of a French tax announced last year on airline tickets, intended to raise money for cleaner transport modes.

If anything, he said, the proceeds should be invested in research on how to manufacture new, less polluting aircraft. "If we're not making money, we can't buy new airplanes," he added.

Smith, a Canadian who is the first foreigner to lead France's former flag carrier, took the helm in 2018 with a mandate to get the group on sound financial footing.

He announced last November a plan to bolster the group's operating profit to seven to eight per cent within five years, up from five per cent last year. **EP**



Japan Views Hydrogen Batteries as Tools to Fight Climate Change

Hydrogen-fueled cars and rechargeable batteries are two of the ways Japan's State Minister for Foreign Affairs says his country is proposing in the fight against climate change.

Kenji Wakamiya said Japan was working on using hydrogen and improving rechargeable battery technology to create alternative sources of energy, with examples rolled out at this year's Tokyo Olympics.

"In Fukushima, a hydrogen production facility is scheduled to begin operations this

year," he said, adding that the hydrogen produced from this facility would be used as fuel for vehicles during the Tokyo Olympics and Paralympics this year.

Wakamiya, who was speaking at the 10th annual assembly of the International Renewable Energy Agency (IRENA) in Abu Dhabi, said Japan had "been actively" promoting the use of renewable energy as a major power source, while recognizing Japan as being prone to natural disasters.

"The proportion of variable renewable energy such as solar

Trust Fund Launched for Climate Vulnerable Areas



A trust fund titled 'Climate Bridge Fund' was launched recently to strengthen the resilience of climate vulnerable communities in the country.

The BRAC and the German Development Bank (KfW), on behalf of the German government, jointly started the trust fund with an initial amount of €11.735 million.

The fund was initiated in November last year and is now ready to start its activities.

The core activities of the fund will revolve around vulnerable people who are either displaced or at the risk of being displaced due to the impacts of climate change.

In the beginning, the Climate Bridge Fund will concentrate on vulnerable communities in Khulna, Barishal, Rajshahi, Satkhira and Sirajganj.

Individual projects will be undertaken by NGOs, which

can apply to the Climate Bridge Fund for funding, with expertise in urban slum areas.

Within a defined budget limit, BRAC will also implement projects with the funding of the bridge fund.

Asif Saleh, executive director of the BRAC, presided over the fund launching ceremony while Anirban Kundu, country director of KfW Development Bank, was also present.

"Climate change is a critical challenge globally and this will be the key focus of BRAC for the next five years," said Asif.

The launching event was held in the city's BRAC Centre Inn where several senior government officials as well as members from different national and international NGOs and donor communities were present. **EP**

and wind power has increased tenfold (in Japan) since 2010," he said, adding how they were able to "overcome the difficult energy circumstances of the Great East Japan Earthquake."

The Great East Japan Earthquake was a magnitude 9 earthquake off the coast of Japan, believed to have been

the fourth most powerful in the world.

"Japan is one of the countries severely affected by climate change, such as the recent devastating damage from storms and floods, and is taking measures against it as an urgent issue," Wakamiya explained. **EP**

'Govt Institutions Must Be Careful to Save Environment'



Information Minister Hasan Mahmud criticized Chattogram Development Authority for cutting hills in the name of development of communication sector.

"CDA cut down 300 feet high hills beside Asian Women University for creating a new road which gives me pains severely," he said.

Hasan, also joint general secretary of Awami League, made the remarks while addressing the reunion function of the Institute of Forestry and Environmental Science Alumni Association of Chattogram University (CU) recently.

The minister said government

organizations should be more careful to save the environment and some government agencies would not look after the environment cause properly.

Hasan said that the world is facing the challenges of climate change effects and facing the natural disaster.

"Savageness of climate changes if it goes up three to four degree Celsius," he said.

Vice-Chancellor of CU Prof Shirin Akhtar presided over the function while Netherlands Ambassador in Bangladesh Sheikh Belal inaugurated the function.



Asia's Great Rivers: Climate Crisis, Pollution Put Billions at Risk

The year is 2100. The glaciers of the Hindu Kush-Himalayan region -- the world's "Third Pole" -- are vanishing as the planet warms, the ice that once fed the great rivers of Asia is all but lost, and with it much of the water needed to nurture and grow a continent.

Further stressed by extreme heatwaves, erratic monsoons, and pollution, the waterways are in crisis and the lives of hundreds of millions hang in the balance.

Access to clean water, now more precious than oil, is a preserve of the rich and has become a resource so valuable that people -- and nations -- are willing to fight for it.

This apocalyptic vision is the continent's future if nothing is done to limit global warming, scientists and environmentalists warn.

"If urgent climate action is not taken rapidly, starting today, and current emission trends continue unabated, it is start-

Climate at Mercy of Politics in 2020, Experts Warn

2020 is the most crucial year yet for humanity's plan to dodge the bullet of catastrophic global warming, experts said recently, warning that the narrow path to safety was riddled with pitfalls, from the US election to Brexit.

When nations struck the 2015 Paris agreement, which aims to limit temperature rises under 2 degrees Celsius (3.6 Fahrenheit), they agreed on five-year periods in which climate action could be implemented, assessed and boosted.

2020 is the year the landmark deal goes into effect, yet almost three decades of diplomatic wrangling has fallen far short of what science says is needed to avert disastrous climate change.

A crucial UN summit at

which leaders will finalize their action plans to reduce greenhouse gas emissions is set to open in Glasgow on November 9 -- just six days after a US general election that could see President Donald Trump win a second term.

Trump shocked the world in 2017 when he said the United States -- history's largest emitter -- was withdrawing from the Paris agreement. It is due to leave the deal on November 4.

After a year of climate-related disasters, from cyclones and flooding in Africa and southeast Asia to devastating wildfires in Australia and California, nations in December failed to make progress during the annual UN Climate Change Conference COP 25.



ing to look conceivable that this will entail grave threats to all of humanity as we know it," says David Molden, director general of the International Centre for Integrated Mountain Development (ICIMOD).

The 2015 Paris agreement saw nations commit to limiting global warming to two degrees Celsius above pre-industrial levels as a way of curbing the worst impacts of global warming.

A lower cap of 1.5C was set, only as a goal for nations to work towards. But this year's Hindu Kush-Himalaya (HKH) Assessment Report says unless it is met -- two-thirds of the region's glaciers will be lost by the end of the century.

Running from Afghanistan to Myanmar, the HKH region takes in the Tibetan Plateau, and the Himalaya, Hindu Kush, and Karakoram mountain ranges.



Wartsila to Deliver 100MW Energy Storage Project in South East Asia

Finnish company Wartsila has secured an engineering, procurement and construction (EPC) contract from an undisclosed company in South East Asia to build a new 100MW / 100MWh energy storage project.

The energy storage system facility is expected to support regional grid stability.

The project will help to provide the reliability that is required to support South East Asia's shift to renewable energy sources.

Wartsila's new power storage system includes an advanced energy management software platform GEMS and GridSolv



solution that has been designed and developed to support the electric grid.

The company noted that its GEMS platform can facilitate smooth renewables integration, enabling the grid to become more stable and responsive.

To support the grid, the platform is equipped with voltage and frequency regulation, reactive power support, spinning reserve, ramp rate optimization, renewable energy output smoothing and energy arbitrage.

Wartsila has been developing a wide array of flexible systems that can be integrated with the traditional thermal assets and energy storage systems to support the transition towards 100% renewable energy across the world.

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Nigel Topping Appointed UK High Level Climate Action Champion

Nigel Topping has been appointed by the UK Government as its High Level Climate Action Champion ahead of UN climate talks, COP26.

Mr Topping will help drive action from businesses, investors, organizations, cities, and regions on climate change and coordinate this work with governments and parties to the United Nations Framework Convention on Climate Change (UNFCCC).

The Champion role was created in 2015 at the climate talks in Paris to help realize ambitions to lower carbon emissions and build resilience

to climate change.

It is held for two years and Mr Topping will work alongside the Chilean COP25 High Level Climate Action Champion, Gonzalo Muñoz.

Mr Topping was most recently CEO of We Mean Business, a coalition of businesses working to accelerate the transition to a zero carbon economy. Prior to that he was Executive Director of the Carbon Disclosure Project.

He brings valuable expertise from 18 years in the private sector, having worked across the world in emerging markets and manufacturing.

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Immediately Shift Investments from Fossil Fuels into Renewables



For the first time, the latest edition of the World Economic Forum's (WEF) Global Risk Report identifies failure to mitigate and adapt to climate change as the greatest long-term risk the world faces in the short and long term (10 years).

It took the destruction of forests, farmland, animals and peoples' livelihoods in Australia and the Amazon and a devastating year of extreme weather events including typhoons and cyclones that killed thousands and ravaged Africa and Southeast Asia for the Forum's network of business leaders, academics and NGOs to join the chorus in sounding the alarm on the climate emergency.

Yet, key speakers at the meeting came across completely out of tune with the WEF's main topic this year: 'Climate change and building a cohesive, inclusive and sustainable economy'.



Although the USA is the second largest global emitter of greenhouse gases, President Donald Trump delivered a reelection speech instead of focusing on what his government will do to tackle the climate crisis, the world's greatest threat.

Additionally, Greenpeace International highlighted in a new report that 24 banks, regularly represented at Davos, have provided US\$1.4 trillion to the fossil fuel industry since the adoption of the Paris Agreement in 2015 through to the end of 2018.

The report also looks at how pension funds and insurance companies, whose CEOs go to Davos, have been propping up fossil fuels. In response to President Trump's speech, Greenpeace International Executive Director Jennifer Morgan said, "It seems to escape the President that

no money can be made on a dead planet - there can be no jobs, no economic growth."

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'IOCs May Not Respond Without Database'

International Oil Companies (IOCs) did not respond positively to few rounds of initiatives taken in the past for oil and gas exploration in the offshore, following resolution of maritime boundary disputes of the Bay of Bengal with Myanmar and India. Petrobangla is now taking initiative for a new bidding round. I do not think the IOCs will be encouraged for bidding unless we can prepare and present an exclusive database of information with the bid package through conducting multi-client surveys. Major Md. Muqtadir Ali (Retd), former Chairman of Petrobangla, said this in an exclusive interview with Energy & Power Editor **Mollah Amzad Hossain**.

Bangladesh is now gradually becoming a net primary fuel importing country. Many observe that failure in adopting appropriate policy and strategy for own coal exploration and exploitation has created this situation. What are your views?

The prospect of finding major new gas structure in Bangladesh onshore area is not very bright. We have already availed low-hanging fruits in the eastern region. Not much encouraging lead or prospects could be found in intensive 2D and 3D seismic surveys conducted over the past few years. Exploration wells at Pabna and Kushtia also did not yield any positive dividend. It appears that the prospect for finding new gas resource in this region is bleak.

But there are possibilities in deeper zones and greater Chittagong Hill tracts area. However, for confirming that, more surveys must be conducted in the region. On the other hand, we must create an extensive database of geological, geo-physical and other related information of Bangladesh offshore area. The IOCs may be interested in making risks

investments in our country if they find this attractive on review and evaluation of the data packages.

Now let me talk about coal. It is now almost impossible to explore and exploit coal with own investment as availability of finance from development partners on coal is totally zero. We must review afresh the contracts already there with private companies for coal resource development and give them green signals for going ahead after necessary amendments protecting the national interests if agreed. Side by side we should also encourage fresh private sector investment. Discovered coal resource if effectively explored and utilize we can generate 10,000 MW of power for 40 years. The growing global consciousness about coal-related emissions would make extraction of our coal extremely challenging if decision for mining our coal is not taken immediately.

But the reserve and potential resource of our own primary fuel resource are not infinite. Proven reserve of our gas is depleting. As we need energy to keep the pace of development of the country and future development as well, Import of Liquefied Natural Gas (LNG) is a right decision.

What should be done for expediting our initiatives for petroleum exploration?

A reliable database of information is a pre-requisite for any kind of exploration activities. Therefore, intensive survey must be carried out to enhance the possibility of availability of hydrocarbon in the country. An IOC will only be interested if they find the data are perspective and have potential structures. Therefore, we must give priorities to deeper layers/zones and the region of greater Chittagong Hill Tracts alongside the offshore areas of the Bay of Bengal.



Md. Muqtadir Ali

All the activities of oil and gas sector are now in the realm of syndication. In the name of monitoring, the administrative ministry is taking all decisions. As a result, the corporation is losing its dynamism & momentum. It is definitely impeding oil and gas exploration.

Offshore bidding without any reliable data and information package acquired through required surveys may not attract major IOCs for risking huge investments.

The government is preparing for inviting fresh round of PSC bidding for offshore. Should they limit this invitation to offshore area only or include onshore frontier areas as well?

There is no other option left now but going for offshore bidding for oil and gas exploration. But all the required preparations have not been completed yet. Very essential contract for multi-client surveys could not be concluded in last

3 years. In my opinion, this has happened due to motivated intention of serving the cause of a particular bidder over national interest. Fresh PSC bidding should be invited for offshore and onshore at the same time after packaging reliable data and information through conducting extensive surveys.

Many allege now that the BAPEX only strategy in the offshore area is among the main reasons for not achieving notable success in exploration in the onshore area. Do you think BAPEX is competent enough for discharging exclusive responsibility for onshore exploration?

Oil and gas exploration are always a risky investment. Without the financial allocation from the Government of Bangladesh, BAPEX would not be in position to undertake any exploration activities and as such BAPEX does not have flexibility as well as freedom of work. Though BAPEX is a company under Companies Act-1994, but it has to rely on Petrobangla and Energy and Mineral Resources Division (EMRD) for almost all and every decision on investment. If we really mean BAPEX to undertake exploration activities, resource allocation and a policy must be framed for BAPEX so that it can undertake exploration activities and decision by BAPEX itself.

Now a days, crude oil price in global market is in the lower side. In such a situation, I have reasonable doubt that PSC bidding for engaging IOCs for exploration in our onshore areas would attract IOCs at the present level of gas price.

Some experts are of the opinion that for exploration in the deeper prospect/ high pressure zones and frontier areas in the Western region gas price applicable for shallow offshore blocks can be offered in the PSC documents. What are your views?

I have already mentioned about the potential for finding new gas in deeper prospects. The western region has not such possibilities. As the country has already started importing LNG at the international price or agreed price , I

would suggest offering equal price of LNG for the IOC or at least to offer the rates of gas price applicable for shallow offshore for attracting IOCs. Exploration is a must, otherwise, we will never know whether we have any potential of hydrocarbons yet to be discovered and how much is that.

Bangladesh is the first country in the region starting exploration for oil. But unfortunately Bangladesh is lagging way behind. Why it happened? What do you think Bangladesh should do now for expediting exploration activities?

Oil and gas exploration are always a risky investment. Without the financial allocation from the Government of Bangladesh, BAPEX would not be in position to undertake any exploration activities and as such BAPEX does not have flexibility as well as freedom of work. Though BAPEX is a company under Companies Act-1994, but it has to rely on Petrobangla & Energy and Mineral Resources Division (EMRD) for almost all and every decision on investment.

Please note that we do not have reliable packages of data and information acquired through extensive surveys for carrying out exploration activities. The data package available with Petrobangla is not that much enough for attracting IOCs. Petrobangla must acquire data and information through Seismic Survey for providing to the interested IOCs. For efficient performance you need to have efficient and knowledgeable working force. Unfortu-

nately, due to absence of regular recruitments, Petrobangla and its companies are not having professional expertise. Moreover, excessive bureaucratic control is also hindering the efficient running of the companies. Expected benefits from exploration activities cannot be achieved without enabling work environment in Petrobangla and its companies.

Gas price increase, restoration of gas export provision keeping first right of refusal preserved with Petrobangla and some other fiscal and financial incentives have been incorporated in the approved updated model PSC for offshore exploration. Do you think these would encourage IOCs for bidding?

Significant positive changes have been made in new approved model PSC. Of course it looks much more attractive now. But mere PSC document may not attract major IOCs. Smaller companies may come but whether they will stay at all and how long they would continue cannot be predicted. Expected success in offshore bidding would not be achieved without providing reliable data package of relevant information through multi-client surveys.

Bangladesh has long experience of working in PSC. But now, the entire energy sector is suffering from crisis of competent manpower. Do you think Petrobangla now can effectively monitor works of major IOCs?

Please note that experienced and competent manpower are retiring every year on completion of the service tenure, but continuous recruitment is not there. The process of enrollment of fresh qualified manpower and enhancing their skills through planned training could not be done in a planned manner. Petrobangla has huge crisis of skilled manpower. It will not be possible to redress the situation unless a comprehensive implementation plan is immediately launched for recruiting qualified manpower and enhancing their skills through very focused and effective training program.

There are allegations that Petrobangla and its companies are not being allowed to operate independently. Do

you think bureaucratic tangles are hindering oil and gas exploration?

All the activities of oil and gas sector are now in the realm of syndication. In the name of monitoring, the administrative ministry is taking all decisions. As a result, the corporation is losing its dynamism and momentum. It is definitely impeding oil and gas exploration. According to company act 1994, the company's board of directors reserves the rights and authorities for taking any and all decisions about the company's operation. Unfortunately, all the decisions are being taken either by Petrobangla or by the administrative ministry. Consequently, the entire sector has become stagnant in stalemate situation. The crisis would deepen further if this situation cannot be overcome soon. I would suggest forming the Board of Directors of the companies with Industry Expertise personnel.

What Bangladesh should do now for developing the coal resource?

I have mentioned already that investment of private sector must be facilitated. Decision for this must be taken as soon as possible based on purely technical and commercial consideration only after getting rid of political perspective. There is not much time left for pondering. Growing global consciousness against mining of coal would make it extremely challenging for Bangladesh to exploit the coal reserve if business as usual strategy continues.

We must bear in mind that domestic coal will considerably ease the stress of

imported coal obligations. The decision must be taken now without any further delay.

The capacity for LNG import is now 1000 MMCFD. It will progressively increase from 2023. What are your observations?

Bangladesh would require sustainable supply of energy for reaching the level of developed nations. There is no option but going for imported energy if there is not enough local fuel. Already gas crisis is there in the country. In the summer all the fertilizer plants are kept shutdown and again these are brought into stream in the winter. With the import of LNG, some relief is sighted. But gradual depletion of the own gas fields, in coming days country will have to import more LNG to keep the stream on. As the LNG price is relatively higher than own gas, therefore, we must set priority for usage of gas and new gas connection. Value addition must be the criteria. We must keep in mind that benefits of US\$ 8 billion can be derived from using US\$ 4 billion worth of LNG. On the other hand, the export basket must also be expanded for reducing stress of import bills. Otherwise, the energy sector would push Bangladesh economy towards crisis.

The priority of Bangabandhu-led Bangladesh government was optimum use of own energy resources for economic development. But Awami League now has taken policy of imported fuel dependency drifting away from Banga-

bandhu doctrine. What is the way out now?

"Human resource is the means and end of all development". There is no other option but developing capable and competent human resources. Developing human resources of energy sector must get top priority. Bangabandhu had the right realization and that is why he attached highest priority on it. It was not possible without going all out for exploring and exploiting own energy resources. But Petrobangla has moved miles away from it. Lot of training program is being executed every year. But these may be considered shopping expeditions rather than terming training programs. Merely 5-7 days of training cannot create expertise. Training programs for 3/6/12 months long must be planned and systematically executed for right persons at right time and the trained resources must be rightly placed for deriving maximum benefits.

We have entered the LNG era, but we have human resource crisis for this. We must send our officials to the facilities of LNG suppliers for exposure and training. In six months, our officials can develop required expertise. Such officials can make great contributions upon return.

I would suggest that government should follow the vision of Bangabandhu in self-reliant in the energy sector. Government must make a comprehensive plan for achieving Bangabandhu's self-reliant energy sector vision and execute it in a planned manner.

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