

Does Negative Price of Crude Oil Make Money for Traders?

Response to Offshore Bidding May Fall Short of Expectation















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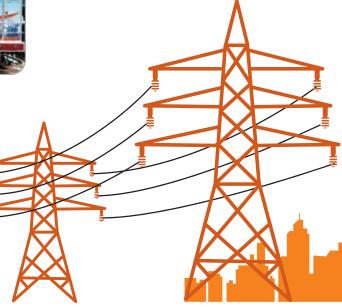
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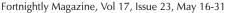
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There are concerns over getting expected response to the upcoming fresh bidding round for offshore exploration. The authorities are taking preparations for launching the bidding round after making the model PSC more attractive, including increasing the gas price. On the other hand, work on multiclient surveys could not be started even after concluding the contract due to the COVID-19 ...







EDITORIAL

Petrobangla has taken all preparations for announcing the PSC bidding from September 2020 after getting the Model PSC 2019 approved. It has planned to announce bid submission deadline in February 2021 giving 6 months for preparation. But the COVID-19 starting in China grew as a global pandemic and has become a major impediment. The pandemic has stalled almost every activity. The general holidays announced in March 26 has now been extended to May 30, 2020. There are considerable doubts that the situation would become business as usual condition even after that. Suspension of all economic activities caused oil price in global market depleting to all time low. Consequently, all IOCs started slashing their new investment plans and it continues. Many countries have suspended their bidding round. It is not yet sure whether Bangladesh would follow the trend. But Petrobangla says nothing could be said definitely till offices open after the holidays. But officials said even if the situation gets normal in July, announcements for PSC bidding cannot be made in September 2020.

highlights



There are complicated factors of the process of crude oil such as the geological complexity, or tax burden. The total cost of oil production varies considerably in different countries. In Saudi Arabia, the total cost of one barrel of oil is less than global other; the price of production including taxes, administrative and transportation costs is around \$8.98/ bbl. Countries with the lowest total cost of oil production are ...

COVER



Offshore exploration of oil and gas in the Bay of Bengal is again hamstrung by the COVID-19 pandemic. The global impacts of the pandemic have already made uncertain the announcement of the fresh round of Bangladesh PSC blocks bidding. Commencement of multi-client survey by the joint venture company (contract concluded in March 2020) has also been held back. Petrobangla has planned for announcing the PSC bidding in September 2020, setting February, 2021 as the scheduled deadline for submission of the offers. It was...



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INTERVIEW

Md. Mosharraf Hossain; Former Chairman of Petrobangla

Qatar Petroleum to Farm-in to Three Blocks Offshore Mexico

Qatar Petroleum has



signed three farm-in agreements to acquire about 30% of Total SA's participating interest in Blocks 15, 33, and 34 in Campeche basin, offshore Mexico.

The blocks lie within 30-90 km of Cantarell and KMZ oil fields in water depths of 10-1,100 m. The total area covered by the blocks

is about 2,300 sq km.

Each farm-in agreement is subject to customary regulatory and other approvals by Total's existing partners and the government of Mexico.

China's LNG Import Price Down

China's comprehensive import price index for liquefied natural gas (LNG) fell recently, ac-

cording to Shanghai Petroleum and Natural Gas Exchange (SHPGX).

The LNG index, not including tax, came in at 2,504 yuan (about 353 U.S. dollars) per tonne in the week ending May 3, down 13.5 percent from the previous week.

The index, jointly developed by a monitoring center under the General Administration of Customs and the SHPGX, was launched on Oct. 16, 2019 and is due on a weekly basis to offer a new pricing reference for importers.

General Electric to Cut 10,000 Aviation Jobs

General Electric announced recently it will cut an additional 10,000 jobs

from its aviation sector as the coronavirus pandemic decimates the industry, forcing companies to cancel orders.

The cuts will be a mix of voluntary departures and layoffs and come after an initial wave of 2,600 job cuts in March, GE said in a statement.

The company aims to reduce its aviation employment base by 25 percent, or some 13,000 employees.

The austerity program, which will affect all geographic zones, is reflective of the rough time the entire aviation sector is going

through.



Boeing announced recently that it was cutting 16,000 jobs, about 10 percent of its workforce, in civilian aircraft manufacturing.

German Energy Agency Asks to Widen Toll Exemption for LNG Trucks

In late April German ene r g y a g e n c y D E N A

(Deutsche Energie-Agentur) released a position paper from the country's LNG Taskforce calling for the extension of LNG and CNG trucks to be exempt from highway tolls beyond 2020, after the current program is due to end.

Since the start of 2019, natural gas trucks in Germany have been exempt from road toll charges to incentivize the growth of non-diesel vehicles.

The paper notes that for the development of diesel-alternative vehicles to continue there needs to be market reassurance. One confidence-boosting measure for future investors in LNG-fueled trucks would be to extend the current toll exemption. The paper proposed an extension for two more years after 2020.

In addition, it suggested a toll exemption of 24 months for LNG and CNG vehicles from the moment the vehicle is put into operation.

The toll exemption has so far had a positive impact on the



German LNG transport fuel market. During that time 17 LNG stations have been built in the country, with the total set to exceed 50 by the end of the year.

Wire & Cable Guangzhou 2020 Postponed

Following the guidance put forward by the Chinese government to pre-

vent and control the novel coronavirus (COVID-19) outbreak, the 12th Wire & Cable Guangzhou, originally scheduled to be held from 27 – 29 May 2020 at the China Import and Export Fair Complex, Guangzhou, China, will be postponed.

Earlier, the State Council issued a set of guidelines about prevention and control measures to combat the spread of COVID-19.

It clearly stated that large-scale events and gatherings should be



temporarily suspended. Adhering to government guidance, the organizers of Wire & Cable Guangzhou have regrettably decided to postpone the 12th edition of the fair. The new dates will be announced in due course.

Former State Minister Anwarul Kabir Dies of COVID-19

Major General (retd)



Anwarul Kabir

Anwarul Kabir, former state minister for Power, died of COVID-19 at Combined Military Hospital (CMH) in the capital on May 10.

Anwarul Kabir was undergoing treatment at intensive care unit of CMH after getting affected with coronavirus, his relative Habibullah Talukder, a physician, confirmed the matter.

Anwarul was a member of parliament from Jamalpur-4 constituency and served couple of

offices in the BNP-led cabinet in 2001 including Planning Ministry and Power Division.

24 Cases of COVID-19 Infection Confirmed in Power Sector, One Dead

Some 24 employees in the power sector have contracted Covid-19 while serving their

duty.

These confirmed coronavirus patients are mostly from three power distribution companies.

Of the total infected officials, 10 are from the Bangladesh Rural Electrification Board (BREB).

Staffers who are responsible for maintaining the distribution system, including line-men and meter reader, are at higher risk of getting infected.

Meanwhile, no infection has been reported from the energy sectors as yet.

Dhaka Power Distribution Company's (DPDC) 10 staff members have also contracted the virus.

"Among them, four are hospitalized and the rest were kept in isolation," said Engineer Bikash Dewan, Managing Director of DPDC.

"Our staff members are relentlessly working to keep the electricity supply uninterrupted. Most of the infected employees work on the field level," he said.

Bikash Dewan wondered why these dedicated power sector staffs are not counted as the frontline fighter of the pandemic.

Meanwhile, four staff members from Dhaka Electricity Supplying Company (DESCO) that supplies electricity in Dhaka North and Tongi city have also contracted the virus.

The company took all possible initiatives to keep its employees safe and protected by providing safety gear, according to DESCO authorities.

Nasrul Asks DE to be More People Friendly

State Minister for Power, Energy and Mineral Re-

sources Nasrul Hamid has directed the Department of Explosives (DE) to make it more public friendly by working with stakeholders.

"The DE should hold joint discussions, seminars, and symposiums with stakeholders who use explosive," he said at a meeting with officials of different subordinate bodies of the Energy and Mineral Division through videoconference from his home recently.

Chief Officials of the DE, Geological Survey of Bangladesh (GSB), Hydrocarbon Unit, and Mineral Resource Development Bureau took part in the virtual meeting.

The State Minister said the DE has to reach the users' manuals of explosives to their users as part of its campaign to make the people aware about deposit, use and transportations of the flammable chemicals.



Nasrul Stresses Expediting Gas Exploration Activities

State Minister for Power, Energy and

Mineral Resources Nasrul Hamid recently stressed the need for expediting oil and gas exploration activities.

"We want to see new gas field discovered within a span of six months to one year," he said while talking to the top officials of state-run Petrobangla and its subsidiary Bangladesh Petroleum Exploration and Production Company Ltd or Bapex during a virtual meeting to review their progress of works.

He also urged them to come up with proper planning to carry forward the hydrocarbon exploration job.

The country should go for unconventional way of drilling utilizing the latest drilling technology to explore new gas from old and dried up gas fields, he said.

Mr Hamid instructed Bapex officials in particular to come up to enhance its capacity.

He assured Bapex officials of extending all-out support in approving necessary projects.





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National Professor Dr Jamilur Reza Choudhury Passes Away

Dr Jamilur Reza Choudhury

noted educationist Dr Jamilur Reza Choudhury passed away recently at the age of 77.

Na-

tional

Profes-

sor and

Dr Choudhury had an apparent heart attack at his Dhanmondi residence in city and was taken to Square Hospitals where doctors declared him dead, according to family sources.

A former adviser to the Caretaker Government, Prof Choudhury, left behind wife, one son,

a daughter and a host of relatives and admirers to mourn his death.

His namaj-e-janaza was held at Dhanmondi Eidgah Masjid in city, family sources said. Later, he was buried in city's Banani graveyard.

BBS Cables Handover PPE

BBS Cables Ltd handed over personal

protective equipment (PPE), mask and gloves to health care providers, hospitals, health workers, administrative service providers, thana and other government office representatives in different districts and upazilas of the country recently.

Managing Director of BBS Cables Eng. Abu Noman Howlader,



Director Eng. Muhammad Badrul Hassan and Eng. Muhammad Rohul Majid were present on the occasion.

Oxy Cuts Additional \$1.2b from 2020 Capital Budget

Occidental Petroleum Corp. will cut an additional

\$1.2 billion from operating and corporate expenses, reducing its full-year capital budget to \$2.4-2.6 billion, down from two reductions in March, and down 50% from original 2020 guidance. The reductions were reported as part of the company's first quarter results.

The company reported a net loss attributable to common stockholders for this year's first quarter of \$2.2 billion, compared to net income attributable to common stockholders of \$631 million in the year prior period.

Omera Donates PPE to Dhaka Central Jail

Omera Gas and Omera Petroleum donated 1,000 personal protective equipment

(PPE) to Dhaka Central Jail authorities to ensure safety of their staff during this COVID-19 gripped situation.

On behalf of Omera, Azam J Chowdhury handed over the protective gears for the staff of Dhaka Central Jail, said a press release.

IG Prisons A K M Mustafa Kamal Pasha received the PPEs at his office.

Omera Gas One Limited and Omera Petroleum Limited have been working to ensure uninterrupted supply of LPG to residential, industrial and auto gas stations in this unwanted situation, the release said.



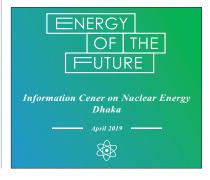
ICONE Dhaka Continues Its Online Educational Events in May

Inspired by the success and positive feedback from participants, the Information Center on Nuclear

Energy in Dhaka (ICONE Dhaka) with the support from Russia's state atomic energy corporation-Rosatom has added new educational activities to its online lineup in May.

These new events include discussion sessions with nuclear industry professionals on progress of works at Rooppur Nuclear Power Plant, careers in nuclear industry in Bangladesh, basic operational and safety systems of NPP and others.

A lecture session and quiz competition on NPP operation is also in the card. Participants will have the opportunity to have a virtual trip to the information center on nuclear energy itself.



During the virtual trip one will be able to know in details about ICONE- its features and exhibits, their functions, ICONE development plans etc. Suggestions for further development of the center will be received from the participants.

COVID to Frustrate Offshore Bidding

Mollah Amzad Hossain

ffshore exploration of oil and gas in the Bay of Bengal is again hamstrung by the COVID-19 pandemic. The global impacts of the pandemic have already made uncertain the announcement of the fresh round of Bangladesh PSC blocks bidding. Commencement of multi-client survey by the joint venture company (contract concluded in March 2020) has also been held back. Petrobangla has planned for announcing the PSC bidding in September 2020, setting February, 2021 as the scheduled deadline for submission of the offers. It was thought that the multi-client survey contractor TGS-Schlumberger would be able to submit a preliminary survey report by December 2020. But it has become highly uncertain whether the contractor can even start the work before December 2020 due to the pandemic.







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On the other hand, the oil price in the international market fell to its record low, prompting the IOCs, including oil majors, to reduce investment substantially. Consequently, the announcement of the PSC bidding in September 2020 has become uncertain. Experts observed that encouraging responses may not come as expected. However, a former senior executive of Petrobangla observed that attractive gas price offer in the model PSC and an assured market for discovered gas would encourage IOCs even though the price of oil and gas in world market remains at their historic lows. Petrobangla cannot guarantee whether it will be possible for them to announce the bidding round in September. It is being told that due to the ongoing shutdown of office activities, it would not be possible to take firm decision after discussions with relevant stakeholders. But sources close to the Energy Ministry informed the EP that it would not be possible to announce it in September even if the situation gets back to business as usual by July.

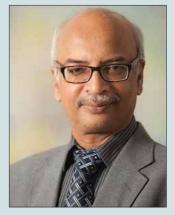
India and Myanmar could attract major investments in their maritime territories following the resolutions of the long standing maritime boundary disputes with Bangladesh. In such initiatives, Myanmar managed discovering some large oil and gas structure in the blocks adjacent to Bangladesh. But Bangladesh's endeavor for engaging IOCs through PSC did not receive en-

Investment in Oil, Gas Exploration May Not Be Available Now

Prof Dr. M Tamim,

Pro Vice Chancellor, BRAC University

The oil price in global market has dipped to rock bottom due to the COVID-19 pandemic. It seems that the price may not recover from the crash in near future. The International Oil Companies (IOCs) have drastically slashed their budgets for oil and gas exploration. Consequently, in my opinion, Bangladesh may not re-



Prof Dr. M Tamim

ceive expected responses if fresh PSC bidding round is invited in September 2020. Petrobangla should abandon such plan for now.

We have to see in which direction the economy of Bangladesh would head in the post-COVID-19 period. Some 1.4 trillion BDT worth of stimulus packages has been announced for keeping the economy going. Around Tk 20,000 crore worth of projects have been shelved from the development plan. Less priority projects may require to be dropped in the foreseeable future. I do not think Bangladesh has any opportunity right at this moment to seek investment in oil and gas exploration.

I strongly believe that Bangladesh must not go for fresh round of offshore bidding right at this moment. It will only be waste of time and money. Oil majors or even medium level IOCs may not respond at all. We have to wait and watch and go for PSC bidding at the most appropriate time.

couraging response. Experts observed that the Model PSC document did not have required fiscal and financial incentives to prepare and offer win-win propositions. Moreover, Bangladesh does not posses even barely enough data and information on petroleum re-

sources in the Bay of Bengal. This requires gathering and packaging data through multi-client survey. But Petrobangla got handicapped in advancing with their amended and updated PSC as approval process of the evaluated bidder of multi-client contrac-



Md. Maqbul-E-Elahi Chowdhury

Attractive Tariff, Assured Market May Attract IOCs

Md. Maqbul-E-Elahi Chowdhury, Member, Bangladesh Energy Regulatory Commission

It is not true that Bangladesh does not have any data and information about offshore petroleum resources. Bangladesh has 1300 Line KM seismic sur-

vey based data of shallow and deep water. IOCs would be attracted to submit offers if these data preserved with Petrobangla is opened for review now. Floor price in-

cluded in the updated model PSC is much higher than global market price of oil and gas at this moment following the oil market crash. The market inside Bangladesh is also assured on discovery of reserve. Consequently, though the IOCs have significantly slashed exploration budget for absorbing impacts of COVID, yet this may not deter the IOCs from submitting offers in Bangladesh offshore. In my opinion, Bangladesh must go ahead with PSC bidding in September 2020. I believe IOCs would respond.

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 0f 55% from shallow water blocks and 70% from deep water blocks each year following commencement of production

tor took ridiculously over 5 years of time. Finally, it has been possible to sign agreement with a joint venture company in March 2020. This chronological development of events led to a situation after taking all preparations to launch the multi-client survey. But the pandemic and its accelerated spread across the globe has now created a great uncertainty. At this moment it is even not clear how long it would have to wait.

Many observed that until sufficient data and information are acquired and packaged, the invitation of PSC bidding would not get expected response.

Over the last 19 years, there has been no mentionable success in oil and gas exploration. No large gas fields could be discovered after Bibiyana. From 2000-2019, only about 2 TCF new gas could be added to the reserve. But during this time, over 12 TCF gas has been con-

sumed. From the remaining recoverable 11 TCF gas reserve, 1 TCF is being consumed at present.

Exploration in our part of the world started in Chattogram region back in 1908. The first gas field was discovered in Sylhet in 1955. Utilization of gas first started in 1959. The period between 1960 and 1990 is the most important for Bangladesh. It is the golden period in the context of major gas field discover-



Dr. Badrul Imam

PSC Bidding Would Once Again Be Put Back

Dr. Badrul Imam,Supernumerary Professor,
Geology Department, Dhaka University

The month of September is knocking at the door. It appears very unlikely that the world would come out of COVID-19 pandemic by then. The dipping tendency of crude oil in global market would stay like this. This has

severely affected the exploration plans and budget allocations of the IOCs. Consequently, it is almost certain that there would not be encouraging response to fresh round of PSC bidding. On the other hand, data and information of

deep water prospects in the Bangladesh offshore areas in the Bay of Bengal could not be gathered through engagement of the multi-client survey contractor. Petrobangla does not have enough data. Without enough credible data, the PSC bidding may turn futile exercise.

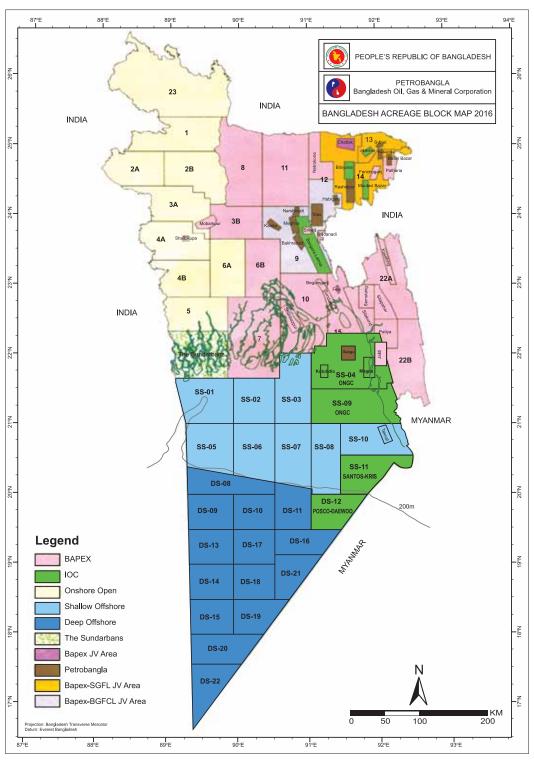
Bangladesh is passing through the darkest period in oil and gas exploration. Apart from marginal success in the Bay of Bengal, the overall achievement is frustrating. The COVID-19 has pushed us further backwards. But even in such situation, Petrobangla must leave no stones unturned to get as much out of the contracted multi-client survey JV company as possible.



ies of Bangladesh. Some prolific gas fields were discovered in the eastern region of Bangladesh over this period. Some 88 exploration wells were drilled - 21 of these were drilled in the offshore and 67 in the onshore. Since 1999, the IOCs carried out some exploration sporadically under PSC but mentionable success could not be discovered. PSC bidding in the onshore frontier areas could not be invited. Plans for offshore bidding could be made but exploration in the onshore areas remained in the exclusive domain of BAPEX.

Petrobangla was constrained for PSC bidding round for engaging IOCs in the onshore for a high court directive. Of course that directive has been withdrawn few years back. But successive governments did not take any initiative for onshore bidding. But going by the way of left leaning environmental extremists, governments pursued BAPEX alone policy for onshore exploration. Special mention can be made here of a 5 years' exploration mega plan from 2016 to 2021. The vision was to drill 108 wells including 53 exploration wells. Experts observed right at the outset that it was way beyond

BAPEX's capability on standalone basis to implement such over ambitious mega projects. Global policymakers did not pay heed. But the project ultimately died its normal death on the fourth year. Now BAPEX is now working under new short, medium and long term exploration programs.



Over past 10 years, four smaller gas fields could be discovered from 17 exploration wells. Of these, one has already watered out after producing for a while. On the other hand, exploration in offshore areas of the Bay of Bengal could not be started even a long time after successful resolution of maritime boundary disputes with India and

Myanmar through historic initiatives of the government. Finally, the government approved updated Model PSC 2019. Experts believed that this would encourage IOCs for submitting offers for exploration in the offshore areas. But the absence of sufficient data and information of possible petroleum resources in the offshore especially of the deep water



may work as disincentive. The COVID-19 pandemic has created issues for PSC bidding now. But former director of Petrobangla Md. Magbul-E-Elahi Chowdhury observed that updated Model PSC provided attractive gas price and the market for gas is also assured in the event of discovery. Hence, if the bidding round is announced in September, in all likelihood there would be encouraging responses. But Pro-Vice Chancellor of BRAC University Prof M Tamim insisted that there is no scope going for PSC bidding right now. Dr. Badrul Imam, Professor of Dhaka University, observed that record decline of oil price in the global market would act as disincentive for IOCs to participate in the bidding process. These two academicians advised waiting and watching and going for bidding at the right time. Reliable database of required geological information must be prepared through completing the multi-client survey as much as possible in the meantime. But Magbul-E-Elahi Md. Chowdhury thought it may not be possible to invite PSC bidding before 2022 if it had to wait until multi-client survey results. Now, three IOCs are working in four blocks of the offshore. They have completed about 1200-line kilometer 2D and 305 square kilometer 3D seismic surveys. ONGC is drilling an exploration well. On review of these data, it is very much possible going for fresh bidding.

Petrobangla informed the EP about their plans for carrying out more 2D and 3D

Rather Onshore Exploration May Be Done

Murtaza Ahmed Faruque,

Former Managing Director, BAPEX

A t long last Petrobangla signed an agreement with a joint venture international company to conduct multi-client survey in the Bay of Bengal. Petrobangla is expected to start getting data and information in a limited scale from December 2020 as an outcome of this contract. But the COVID-19 pandemic has created an



Murtaza Ahmed Faruque

uncertainty. On the other hand, the oil price in the global market has crashed to all time low. Consequently, expected response would not be achieved if the fresh round of PSC bidding is done as planned in September 2020. It is almost certain that oil majors would not respond. The most appropriate time cannot also be said before the COVID-19 contamination comes to under complete control.

Bangladesh rather should seek proposals from interested IOCs for limited exploration in the identified prospects in Chattogram region and deeper prospects of discovered gas fields. These works can be even done by BAPEX through forming joint venture with competent IOCs to be selected through transparent bidding process. Apart from above, opportunity has been created for exploration at Chattak and Tengratilla following the verdict against NIKO in ICSID. BAPEX can prepare plan after carrying out 3D seismic survey. But all will depend on the direction of Bangladesh economy during the post-COVID pandemic period.

seismic surveys by 2023. Over the past 10 years, 22 potential structures could be identified through carrying out 28,436-line kilometer 2D and 5000 square kilometer 3D seismic surveys. Plans have been made for completing 11 exploration wells, 14 development

wells and 15 work overs by 2023. Over this period, 13 wellhead compressor stations would be installed for ensuring secondary recovery from existing wells.

Since commencement of business operation in 1989, BAPEX drilled 15 explo-



ABM Abdul Fattah

ment. It cannot be said now when the contractor can start

Cannot Confirm Definitely When PSC Bidding Can Be Done

ABM Abdul Fattah, Chairman, Petrobangla

Ontract between Petrobangla and TGS Schlumberger joint venture was signed in March 2020 for the multi-client survey in the Bay of Bengal. Offices remained closed in Bangladesh since signing of the agree-

the survey work. But the prevailing situation would lead to delays in the commencement of work. Fresh round of offshore PSC bidding from September was supposed to be announced in March 2020. The COVID-19 pandemic has forced to suspend it. Petrobangla is ready with all required preparations for launching it from September 2020. But it is an intriguing question whether we can meet this target. But upon expiry of the virus-induced leave, the decision would be taken after discussions with all the stakeholders.



ration wells till 2019. From this, 6 gas fields have been discovered. 30 development wells and 31 work over wells could be completed. Around 20,000-line kilometer 2D and 3870 square kilometer 3D seismic surveys have been also accomplished. Besides, BAPEX has taken up a 22-year gas development program from 2019 to 2041. Under this project program, BAPEX will drill 37 exploration, 18 development and 3 work over wells. Of these, 20 exploration wells would be drilled between 2031 and 2041. Russian energy major GAZPROM has signed a MOU with BAPEX on 27 January 2020 for accomplishing these works in joint venture. Petrobangla sources informed that GAZPROM as partner of BAPEX may carry out exploration in the Chittagong Hill Tracts and drilling in the deeper prospects.

BAPEX information states that 9 blocks and some ring-fenced areas have been allocated to BAPEX. They are now working in blocks 8 and 11. On the other hand, according to Petrobangla, from 15 wells of BAPEX operated gas fields, 95.8 MMCFD gas is being supplied to national gas grid as on May 13, 2020. BGFCL is supplying 557.8 MMCFD, SGFL 111 MMCFD, Chevron 1473.5 MMCFD and Kris Energy 100.9 MMCFD. As per Petrobangla plan, 7-9 exploration wells may be drilled in the BAPEX assigned gas blocks. BAPEX would also drill 3 exploration wells in 2020.

Japanese Moeco Mutsui Oil Exploration Company Limited has conducted 2D and 3D seismic surveys in blocks 8 and 11 on their own financing. They are now preparing proposal for joint exploration with BAPEX. Besides, initiatives are being taken for further development of marginal and production suspended gas fields. Preparations are now at the final stages for inviting 4-5 companies for working with BAPEX.

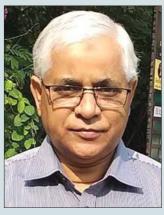
Initiative has also been taken to enhance gas reserve by taking appropriate actions after reviewing data and information of existing gas fields. Under this initiative, Petrobangla has signed a

BAPEX Would Complete Four Exploration Wells by 2022

Mir Mohammad Abdul Hannan,

Managing Director, BAPEX

BAPEX is going ahead with mega plan implementation for exploration and development of new gas resources. Under this plan, the work on drilling four exploration wells is at the final stage. We are expecting to deliver some achievements from these by 2022. Concurrently fixing the locations, we are going ahead with



Mir Mohammad Abdul Hannan

carrying out 2D and 3D seismic surveys with a view to identifying new prospects and structures. BAPEX is doing these works on its own or through engaging contractors.

Besides, a project has been taken for developing marginal and production suspended gas fields. All preparatory arrangements are being done to set up joint venture with 4-5 foreign companies. We are working with a Japanese company in blocks 8 and 11. After completing the required surveys, the Japanese company is getting ready for drilling exploration well. This will usher in opportunities for new gas and oil discovery.

Gazprom is working as contractor of BAPEX for exploration and development of gas wells. But there is not much development in joint venture investment. Even a definite proposal has not been received from them yet.

MOU with Chevron for taking appropriate actions on review of data and information of the entire Surma basin. Chevron would submit a report to Petrobangla in about two years after completing the review. For this, Petrobangla would provide all data to Chevron. Relevant experts believe that this may create opportunities for enhancing gas reserve of the existing under-operation gas fields.

Bangladesh is the first country of region to enter oil and gas exploration in the Bay of Bengal. Some 6 PSCs were signed for 6 blocks. From this, US company Union Oil Company discovered Kutubdia gas field. Failing to discover oil, the companies gradually left Bangladesh one by one from 1976 due to various complicacies created in Petrobangla. In 1991, Cairn Energy discovered Shangu gas field in one of the two blocks awarded to them. After producing gas for 10 years, Shangu gas field water out and abandoned. The PSC was assigned to Australian company

Santos at some stage of operation. They tried to further develop the field, but could not make notable success. In 1996 bidding, Total Gas won a block and signed PSC. But failing to make economic discovery, they relinquished the block. Similarly, Rexwood and Oakland also left after failing to achieve success following signing of agreement for two offshore blocks.

ConocoPhilips signing PSC with Petrobangla after 2008 block bidding carried out seismic surveys. But failing to renegotiate gas price increase, they also left abandoning the blocks. Three IOCs are now working in 4 blocks in the Bay of Bengal. Indian company ONGC is working shallow offshore blocks SS4 and SS9. Santos-Kris Energy JV is working at SS11. Posco-Daewoo is working in a deep water block. They are also planning to leave failing to pressurize Petrobangla agreeing to their proposal of gas price increase. In its plan for drilling 3 exploration wells, ONGC has started drilling at Kanchon from 20 Jan-





MoU signing ceremony between State-owned Petrobangla, Bapex and Russian state-owned oil major Gazprom on Tuesday, January 28, 2020

uary 2020. On the other hand, Ophir Energy UK left Bangladesh failing to get Petrobangla approval for reassigning Santos interest of the block to them. Santos is now seeking other partners. Their other partner Kris Energy is also in financial crisis.

The IOCs were not showing any interest to invest in Bangladesh offshore prior to resolution of maritime boundary disputes with neighbors - Myanmar and India. But Petrobangla failed to create any momentum in offshore exploration years after resolution of the disputes. Experts observed that in the past encouraging response from IOCs could not be attracted for lack of proper financial and fiscal incentives in Model PSC and absence of adequate data and information. In the latest updated model PSC 2019, additional incentives and higher gas price provisions have been included. Petrobangla expects that these will attract IOCs. Petrobangla organized a conference on investment for offshore exploration in 2019. BP, ConocoPhilips, Exxon-Mobil, Chevron, Midfee Japan, ONGC, Santos and PTTEP participated in the conference. Apart from Chevron, all other companies showed keen interest for participating in offshore bidding. But absence of enough data remains a stumbling block. Petrobangla has taken all required preparations for announcing the PSC bidding from September 2020 after getting the Model PSC 2019 approved. It has planned to announce bid submission deadline in February 2021 giving 6 months for preparation.

But the COVID-19 starting at Wuhan of Hubai province of China grew as a global pandemic and has become a major impediment. The pandemic has stalled almost every activity. The general holidays announced in March 26 has now been extended to May 30, 2020 in few steps. There are considerable doubts that the situation would become business as usual condition even after that. Suspension of all economic activities caused oil price in global market depleting to all time low. Consequently, all IOCs started slashing their

new investment plans and it continues. Many countries have suspended their PSC bidding round.

It is not yet sure whether Bangladesh would follow the trend. When the attention of Petrobangla Chairman A B M Abdul Fattah was drawn to this, he said that nothing could be said definitely till offices open after the holidays. State Minister for Power, Energy and Mineral Resources did not make any comment. But Petrobangla sources informed that even if the situation gets back to business as usual in July, announcements for PSC bidding cannot be made in September 2020.

Experts said that Bangladesh initiative for a fresh PSC bidding round entered the pandemic impacted crisis. Not only for Bangladesh, it's also a very difficult time for oil and gas exploration for others. No option is there for Bangladesh but waiting till the economic activities get back to normal after the COVID - 19.



বিশ্বাস আর আস্থায় ফ্রান্সের টোটাল এলপি গ্যাস TOTAL 12 kg LP GAS







দেশের উনুয়ন অগ্রযাত্রার গর্বিত অংশীদার-

নর্থ-ওয়েস্ট পাওয়ার জেনারেশন কোম্পানি লিমিটেড (এনডব্লিউপিজিসিএল)

গণপ্রজাতন্ত্রী বাংলাদেশ সরকারের মাননীয় প্রধানমন্ত্রী শেখ হাসিনার দূরদর্শী পদক্ষেপে সরকারের বিদ্যুৎ উৎপাদন লক্ষ্যমাত্রা পূরণে এনডব্লিউপিজিসিএল-এর প্রধান নির্বাহী কর্মকর্তা প্রকৌঃ এ. এম. খোরশেদুল আলম- এর সুযোগ্য ও গতিশীল নেতৃত্বে বিদ্যুৎ কেন্দ্র নির্মাণ প্রকল্প গ্রহণ ও বাস্তবায়নে এবং বিদ্যুৎ কেন্দ্র পরিচালন ও সংরক্ষণে অত্র কোম্পানি অনবদ্য ভূমিকা পালন করে আসছে। ফলশ্রুতিতে, 'বিদ্যুৎ ও জ্বালানি সপ্তাহ ২০১৮'-এর উদ্বোধনী অনুষ্ঠানে দ্রুত বিদ্যুৎ উৎপাদন বৃদ্ধির স্বীকৃতি স্বরূপ মাননীয় প্রধানমন্ত্রী এনডব্লিউসিএল-কে পুরস্কৃত করেন।

নর্থ-ওয়েস্ট পাওয়ার জেনারেশন কোম্পানি লিঃ দ্রুততম সময়ে শক্তিশালী ব্রান্ড ইমেজসহ দেশের নেতৃত্বশীল বিদ্যুৎ উৎপাদনকারী সংস্থা হিসেবে ইতোমধ্যে পরিচিতি লাভ করেছে।



দ্রুত বিদ্যুৎ উৎপাদন বৃদ্ধির স্বীকৃতি স্বরূপ মাননীয় প্রধানমন্ত্রী শেখ হাসিনার হাত থেকে পুরস্কার গ্রহণ করছেন কোম্পানির প্রধান নির্বাহী কর্মকতা

এক নজরে নর্থ-ওয়েস্ট পাওয়ার জেনারেশন কোম্পানি লিমিটেড

কোম্পানি গঠন ঃ আগস্ট ২৮, ২০০৭ বিদ্যুৎ উৎপাদন শুরু ঃ নভেম্বর ০৩, ২০১২ চলমান বিদ্যুৎ কেন্দ্র সমূহঃ

- সিরাজগঞ্জ ২২৫ মেঃওঃ কম্বাইন্ড সাইকেল পাওয়ার প্রান্ট (১ম ইউনিট)
- খুলনা ২২৫ মেঃওঃ কম্বাইন্ড সাইকেল পাওয়ার প্লান্ট
- ভেড়ামারা ৪১০ মেঃওঃ কম্বাইন্ড সাইকেল বিদ্যুৎ কেন্দ্র
- সিরাজগঞ্জ ২২৫ মেঃওঃ কম্বাইন্ড সাইকেল পাওয়ার প্রান্ট (২য় ইউনিট)
- সিরাজগঞ্জ ২২৫ মেঃওঃ কম্বাইন্ড সাইকেল বিদ্যুৎ কেন্দ্র (৩য় ইউনিট)
- সিরাজগঞ্জ ৪১৪ মেঃওঃ কম্বাইন্ড সাইকেল বিদ্যুৎ কেন্দ্র (৪র্থ ইউনিট) (যৌথ মালিকানা)
- মধুমতি ১০০ মেঃওঃ এইচএফও চালিত বিদ্যুৎ কেন্দ্র

মোট বিদ্যুৎ উৎপাদন ক্ষমতাঃ ১৮১৩ মেঃওঃ চলমান উনুয়ন প্রকল্পসমূহঃ

- পায়রা ১৩২০ (২ x ৬৬০) মেঃওঃ তাপ বিদ্যুৎ কেন্দ্র (১ম পর্যায়) (য়ৌথ মালিকানা)
- রূপসা ৮০০ মেঃওঃ কম্বাইন্ড সাইকেল বিদ্যুৎ কেন্দ্র নির্মাণ প্রকল্প
- সিরাজগঞ্জ ৭.৬ মেঃওঃ গ্রিড কানেক্টেড ফটোভোল্টায়িক সোলার বিদ্যুৎ কেন্দ্র প্রকল্প
- পায়রা ১৩২০ (২ x ৬৬০) মেঃওঃ তাপ বিদ্যুৎ কেন্দ্র (২য় পর্যায়) (য়ৌথ মালিকানা)
- পাবনা ৬০ মেঃওঃ গ্রীড কানেক্টেড ফটোভোল্টায়িক সোলার বিদ্যুৎ কেন্দ্র প্রকল্প
- পায়রা ৩৬০০ মেঃওঃ এলএনজি টু পাওয়ার প্রকল্প (যৌথ মালিকানা)

চলমান উনুয়ন প্রকল্পের মোট সক্ষমতাঃ ৭১৮৭.৬ মেঃওঃ

ভবিষ্যৎ প্রকল্পসমূহঃ

- সিরাজগঞ্জ ১০০ মেঃওঃ গ্রীড কানেক্টেড ফটোভোল্টাইক সোলার বিদ্যুৎ কেন্দ্র প্রকল্প (যৌথ মালিকানা)
- পায়রা ৫০ মেঃওঃ বায়ু বিদ্যুৎ কেন্দ্র প্রকল্প (যৌথ মালিকানা)
- দীঘিপারা ১০০০ মেঃওঃ আল্ট্রা সুপার ক্রিটিকাল তাপ বিদ্যুৎকেন্দ্র প্রকল্প (যৌথ মালিকানা)

ভবিষ্যৎ প্রকল্পের মোট সক্ষমতাঃ ১১৫০ মেঃওঃ এনডব্লিউপিজিসিএল-এর যৌথমালিকানাধীন কোম্পানিসমূহঃ

ক্র. নং	যৌথ মালিকানাধীন কোম্পানির নাম	অংশীদারী প্রতিষ্ঠান	এনডব্লিউপিজিসিএল- এর মালিকানা/শেয়ার
۵.	বাংলাদেশ-চায়না পাওয়ার কোম্পানি লিঃ	চায়না ন্যাশনাল মেশিনারি ইমপোর্ট এন্ড এক্সপোর্ট কর্পোরেশন (সিএমসি), চায়না	¢0%
২.	সেম্বকর্প নর্থ-ওয়েস্ট পাওয়ার কোম্পানি লিঃ	সেম্বকর্প ইউটিলিটিজ (প্রাঃ) লিঃ, সিঙ্গাপুর	২৯%

২০২৫ সাল নাগাদ এনডব্লিউপিজিসিএল-এর বিদ্যুৎ উৎপাদন লক্ষ্যমাত্রাঃ ১০,০০০ মেঃওঃ প্রায়



নর্থ-ওয়েস্ট পাওয়ার জেনারেশন কোম্পানি লিঃ

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

(বাংলাদেশ বিদ্যুৎ উন্নয়ন বোর্ডের একটি প্রতিষ্ঠান)

Gas Supply Getting Insecure

Saleque Sufi

he COVID-19 pandemic has severely affected the energy and many other sectors. The global oil market crash caused price fall to its historic low. The global market is over supplied with crude oil, petroleum products, LNG and LPG. Countries having greater storage capacity have purchased and filled their storage. Some countries have already entered into future purchase contracts. But Bangladesh for its limited storage capacity and restrictions in national procurement policy could not exploit the situation. Some observers are of the opinion that oil price may take years for reaching the level of even the pre-COVID period. It is believed that it would take six months to one year in the post-pandemic period for the oil price to shoot back to a level almost beyond the capacity of developing countries like Bangladesh. It is a million dollar question now, how Bangladesh with hamstrung economy for many other reasons will respond? Can Bangladesh continue buying crude oil and petroleum products at higher price? The limited reserve of own discovered gas resource is fast depleting. After protracted delays, LNG import started in late 2018 through Floating Storage and Regasification Units (FSRUs). The exploration campaign of Petrobangla with its own company BAPEX or IOCs are in a total mess. The highly ambitious and unrealistic 108 wells drilling program met its expected demise.

Hesitant Petrobangla could not even invite Production Sharing Contract (PSC) bidding in offshore in 5-7 years after resolving maritime boundary disputes with Myanmar and India. The pandemic further delayed the scheduled PSC bidding from

March 17, 2020 to September 2020. But given the COVID-19 seriously impacting petroleum business, it is very likely that the planned bidding in September 2020 may not attract encouraging response. Realizing the limitation of FSRU operation in turbulent Bangladesh offshore during monsoon, the government rightly decided to abandon plans for any more FSRU. In this situation, no additional gas can be expected from own gas fields in less than 5 years. No additional LNG import may be possible in less than 5 years. It too depends on when Petrobangla could be able to set up land based LNG terminal at Matarbari. No company responded to Petrobangla/RPGCL invitation of expression of interest. In such situation gas supply situation will approach to a crisis zone with no recovery in sight.

The government still remains in a great dilemma over mining own coal reserve, misguided by opportunist policymakers. By now, the government has realized how deep and diverse would be the challenges of coal import. There are apprehensions that if any imported coal based power plant apart from the three under-implementation ones would proceed. In this situation, the gas sector situation would also go from bad to worse. The energy security situation will continue to grow critical.

Bangladesh could manage remaining immune in the past from the economic recessions of South Asia and South East Asia for its own gas fuelled power gen-

and power for industries. Taking advantage of the cheaper energy and power and cheap labor force, many sunset industries from China, Korea and other countries relocated to Bangladesh. Gas franchise of TGDCL and BGSL got choked creating stress on the system. Keeping up with this, Petrobangla did not plan its exploration campaign. After the negation of UNOCAL proposal for gas export from Bibiyana gas field, leading IOCs did not show interest to invest in Bangladesh onshore frontier areas or offshore. The supply demand situation started getting unbalanced sine early 2000. Lack of exploration intensity either by BAPEX or by IOCs created huge stress on proven reserve. About 15.90 TCF gas was used up against which about 1.5 TCF of new gas could be added. The wellhead gas compressors in major gas fields could not set up on time for mismanagement and perceived corruption. The fuel supply crisis would adversely impact planned growth of industries if Bangladesh cannot make its own flagship company BAPEX competent enough for carrying out extensive exploration activities exclusively in onshore areas. BAPEX requires generous support from the government with allocations from the Gas Development Fund and recruiting experienced skilled manpower from home and abroad. At the same time, gas price of BAPEX

eration and availability of cheaper gas

Gas Reserve, Resource & Supply Situation in Bangladesh

IOC gas.

In the global context, a 0.338 TCM reserve is a pea nut. Many gas-producing countries' annual production is much higher than this. Even at pre-COVID rate

should be matched with the price of

of use, the remaining proven reserve would have completely depleted by 2031. Now the delay in installation of well compressor stations may make the optimum recovery of recoverable reserve extremely challenging. The IOCs dominate gas production in

Gas Reserve & Resource

Reserve Category	Trillion Cubic Feet (TCF)	Trillion Cubic Meter (TCM)
Gas Initial in Place (GIIP)	39.80	1.127
Proven + Probable + Possible: 3P	30.82	0.873
Proven+ Probable: 2P	27.81	0.788
Proven 1P	20.90	0.592
Remaining Reserve	11.92	0.338
Used (Consumed) Till 30 June 2019	15.90	0.470

Bangladesh for modern well drilling and completion technology. While stateowned companies from 16 gas fields produce 916

Natural Gas & Condensate Production, Including LNG Import (Till 29 December 2019)

Ownership	Daily Production	Daily LNG Import	Daily Condensate BBL/day	Installed Refining Capacity
State Owned (16)	919.30	548	1246	7000 BBL/day
IOCs (4)	1646.40		10,080	
	2565.70	548	11,326	7000 BBL/day

Petrobangla are almost exclusively dominated by officials of Petrobangla, having little or no clue of gas value chain.

MMCFD, IOCs from only four fields produce 1646 MMCFD. Bangladesh must consider possibilities for engaging few more IOCs for exploration in onshore as well. Offshore for that matter, Bangladesh will need a very smart and honest gas sector management.

Background of Gas Industry in Bangladesh

Bangladesh is a riverine delta, principally made of alluvial soil river. Many rivers prominently Padma, Brahmaputra and Jamuna originating from Nepal and India crisscrossing Bangladesh flow into the Bay of Bengal. This alluvial plain is still considered as a gas prone country. Despite 3:1 success ratio of finding new gas resource, Bangladesh remains one of the most under-explored riverine delta. Before liberation of Bangladesh, Shell BV, Burmah Shell, Pakistan Petroleum Ltd. STAVNAC carried out exploration. Shell BV discovered some really prolific fields like Titas, Habigani, Bakhrabad, Rashidpur and Koilashtilla. However, first gas fields in this part of the world were Chhatak and Haripur in Svlhet. After the liberation Bangladesh, farsighted Bangabandhu managed to take over 5 large gas fields from Shell at nominal cost. Bangabandhu also could manage taking Bangladesh to offshore exploration through formulating petroleum law and Production Sharing Contract, and engaged 6 IOCs for exploring oil in the Bay of Bengal. However, the unfortunate assassination of Bangabandhu on August 15, 1975 stalled the momentum of exploration for a while. Between 1975 and 1980, there was bare minimum exploration. However in 1980s and 1990s, Petrobangla owned company and IOCs carried out extensive exploration leading to discovery of some medium to large gas fields. Gas transmission and distribution networks were expanded across Jamuna River to the Northwest and Southern regions of Bangladesh. UNOCAL discovered the large Bibiyana Gas field in 1998 and started pressing for letting them export a part of the gas to India by pipeline. The government and people of the country strongly opposed and that plan was shelved. History would prove whether that was a mistake or not. Subsequently the IOCs lost interest and apart from discovery and development of Shangu offshore gas field and Bangura IOCs' limited activity discovered nothing. BAPEX discovered few marginal gas fields but some of these in strict consideration should not have been discovered commercial discovery. During 2000-2019, there has been very little or no effort to discover new gas resources.

Petrobangla Failures Created Demand-Supply Imbalance

It goes without saying that continued failures of Petrobangla and MPEMR over the past one and a half decade for exploring and developing own petroleum resources stressed natural gas sector of Bangladesh to its limit. Apart from poor governance and increasing bureaucratic dominance, other reasons of abysmal performance is massive brain drain of quality experienced engineers, geologists and managers migrating to North America, Western Europe, Australia and Middle Eastern countries. Most left the sector finding unhealthy environment from massive politicization and interference of nosey ministry officials even in day to day operation of Petrobangla and its companies.

Situation has gone so far that three out of six senior positions of Petrobangla have become transit destination of officers from EMRD on deputation. The boards of directors of 13 companies of

Consequently, Petrobangla is sitting on huge reserve of high quality coal and proven gas reserve is fast depleting for almost non-existent exploration endeavor. BAPEX given exclusive right for exploration in the onshore failed proving its excellence. They are handicapped with financial and technical resources. Gas Development Fund (GDF) created exclusively for exploration has been directed to several other activities. Some money from GDF instead of grant was given to BAPEX as loan. Keeping BAPEX rigs and manpower idle, GAZPROM, a Russian company, was engaged for development wells in Petrobangla-owned gas fields. GAZPROM engaged sub-contractor produced substandard works. Consequently, severe gas crisis hampered the growth of gas-based industries. Petrobangla even delayed for almost 5 years in setting up of FSRUs for the import of LNG. It also failed to exploit the opportunity of exploring in the high potential deep water prospects of the Bay of Bengal. The maritime boundary dispute with Myanmar was resolved almost 7 years from now and that with India about 5 years. Petrobangla failed to even engage a survey contractor for carrying out multi-client survey for acquiring data and information of offshore prospects.

How COVID-19 Affected Global Exploration Industry

The fast evolving and expanding COVID-19 crisis triggered profound challenges to global gas industry, as it did energy system as a whole and the economy at large. Prior to COVID-19 Pandemic, the gas industry was in the grip of four cycles or transformations. COVID would change the trajectory. The first was market cycle featured by short term over supply, low price and record level investment for the future



supply. COVID-19 led to demand collapse causing market over supplied and consequent price depletion. Producers are forced to cut production, review future investment and cut operational costs through retrenching staff.

The second cycle was a deep structural transformation. The industry was edging away from rigid long-term contracts and price indexed to oil towards a system where prices reflect real-time

fundamentals. The LNG in particular responds to short-term market signals. Every crisis catalyses reassessment of structure that is there to ensure stability – long term contracts with minimum purchase obligations, complex pricing mechanism to smoothen market volatility, restrictions on how much buyers and sellers can deviate from the plan. COVID-19 triggered oil market crash will accelerate the business as usual dynamics which will lead to paradigm shift.

Third cycle was that natural gas was struggle to find its right bearing in the energy transition. One school of thought it that COVID 19 has squeezed that a bit. Natural gas was being advocated for its environment benign nature in transition to low carbon future economy. In post COVID pandemic government may no longer opt for easier available fuel – coal being concerned about its carbon emissions. We may also see also see a cut down on investment in renewable. These may make gas as the preferred interim fuel of choice.

The fourth cycle was geopolitical transformation. This was affecting the trajectory of other three, designed by the emergence of four top players – the United States, Russia, Qatar and China. Their strategy preferences were due playing a disproportionate impact on the global gas market.

COVID-19 will impact a gas market that was experiencing severe pressure and



Sylhet gas field

was undergoing multiple deep transformations at the same time. Here are five specific ways in which COVID-19 might affect gas markets

These are, gas demand in unchartered territory, hho would cut production to offset market oversupply, challenge to operation and construction, slower investment wave and pressure on structure change.

How COVID -19 Would Impact Bangladesh Gas System?

As has been discussed above, Bangladesh is not in a position to take any advantage from COVID-19 affected oil market crash. But for cushioning its energy security from possible oil market surge in mid-term, Bangladesh will require extensive exploration campaign for own petroleum - gas and oil. It will need huge investment. But all five impacts of COVID-19 on global gas market would create huge challenges in Bangladesh endeavor. How many countries would opt for natural gas as preferred interim fuel? Whether any major producer would agree to cut production restoring demand supply balance? Whether Bangladesh can smarten its gas infrastructure development and operation adopting modern technology for enhancing efficiency? But one thing for sure, oil majors will be reluctant for a while in risking huge investment in Bangladesh offshore for Bangladesh does not possess much data and information. We would suggest Petrobangla to wait a little longer for inviting PSC bidding round. But it must expedite actions for multi-client surveys. BAPEX must be supported in all possible manners for expediting onshore explorations. Bangladesh must seek JV partner for BAPEX for further exploring in the identified structures of greater Chattogram and deeper plays of existing gas fields. Bangladesh must also go for extensive shopping for alluring major companies for investment in the land-

based LNG terminal at Matarbari. If a large international company can be awarded contract on EPCM basis, a 2000 MMCFD land-based LNG terminal can be set up by 2025 which can meet the mid-term requirement of gas. At the same time, Bangladesh must initiate actions for expanding storage capacity of crude, petroleum products, LNG and LPG for at least 4-6 months consumptions. We can not negate possibilities of future visits of another COVID-19 like virus. Bangladesh must also review procurement law providing for future purchase of crude and LNG. We must make hay while the sun

Bangladesh must also immediately engage competent contractor for wellhead compressor to enhance gas production under secondary recovery from existing gas wells. By 2025, Bangladesh must have land-based terminal ready for operation. Own production may deplete to 1500 MMCFD or below and 1550 MMCFD + 1000 MMCFD LNG=2500 MMCFD gas wont be enough for power generation, industrial operation not to speak of new industries in the pipeline in Special Economic Zones.

Finally, Bangladesh must review gas sector governance structure. Petrobangla and its companies must be operated and managed by skilled professionals.

Saleque Sufi; Contributing Editor, EP





50 MW Rental Basis Power Plant Katakhali Power House, Rajshahi.

NORTHERN Magurit POWER Aksham

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Tengratila Blowouts: Niko Liable, Must Pay Damages

EP Report

anadian company Niko Resources was negligent and thus liable for the blowout that took place at Chhatak gas field in Tengratila of Sunamganj in January 2005 while Niko's Bangladeshi subsidiary was carrying out drilling operations there, a World Bank tribunal found.

The tribunal formed under the Convention on the International Centre

for Settlement of Investment Disputes (ICSID) also concluded that Niko must compensate Bapex for direct loss and damage caused by the blowout.

The compensation owed by Niko to Bapex includes the gas that escaped from Chhatak 2 Well. Niko must also pay compensation for direct damages to environment and health of the people in the surrounding area.

The quantum of such compensation is to be determined at the next phase of the pending arbitration case.

Bangladesh, on the basis of reports from international experts, filed a claim for damages before ICSID in March 2016 seeking \$118 million for Bapex and \$896 million for Petrobangla and Bangladesh as compensation for the 2005 blowouts.

Although the tribunal gave the verdict on February 28, Nasrul Hamid Bipu, state minister for power, energy and mineral resources, disclosed it through a video conference with journalists yesterday.

The ministry had a plan to disclose the verdict in early March but the coronavirus outbreak delayed it, ministry sources said.



"After ten years of complex and prolonged proceedings, the tribunal has now concluded that the blowout was caused by Niko's breaches of its obligations as an operator under the Joint Venture Agreement (JVA) between Niko and Bapex," the ministry said citing the verdict.

"The tribunal found that Niko was liable because of its failure to conduct operations diligently and in conformity with the standards of the international petroleum industry," it mentioned in a press statement.

The ICSID's verdict came more than two

years after the High Court in August 2017 declared illegal and void the two deals Niko Resources Bangladesh Limited, a subsidiary of Canadian explorer, had signed with Bapex and Petrobangla, as those were procured through corruption.

The HC also directed the authorities to "revert back" to the state the assets Niko possessed through the Joint Venture

Agreement (JVA) and the Gas Purchase and Sales Agreement (GPSA) signed in 2003 and 2006.

Several other cases are now pending with national courts regarding the granting of the gas fields to Niko.

ΕP

Power Division Fears Tk 35,000cr Loss for Corona Pandemic

Power Division is facing a Tk 35,000 crore loss in generation, transmission and distribution sides caused by the coronavirus pandemic.

To offset the loss, Power Division plans to write a letter to the Prime Minister, the line Minister of the Power, Energy and Mineral Resources seeking directives and intervention to overcome the situation.

"We have prepared a draft report on



probable huge financial losses here. We have estimated that these are coming from multiple directions including generation, transmission and distribution sector," said a senior official at the Power Cell.

Nasrul Hamid, State Minister for Power, Energy and Mineral Resources, asked the Power Cell to make an assessment of the corona effect on power sector recently.

According to the sources in Power Division, it would face a loss of Tk 5,598 crore in power generation side, Tk 17,666 crore in distribution and TK 3,322 crore in transmission side. At the same time, it would have to incur a TK 8,821 crore as tariff loss.



प्रञ्जी विप्रूणगृत ताएं

BREB Seeks Tk 60bn Stimulus Package

Bangladesh Rural Electrification Board (BREB) has sought Tk60 billion as stimulus package from the government with an aim to ensure an uninterrupted supply of electricity to rural areas, a top official has said.

The BREB made a proposal before the Power Division in this regard.

BREB is in great trouble to operate 80 Palli Biddut Samities (PBSs) in the current pan-

demic as the entire country is under lockdown which has brought the economic activities to a standstill, BREB officials said.

"If these circumstances continue till June 2020, the rate of revenue will decrease drastically, and for conditions to return to normal state it might take October next. Under this state of affairs, the

sale of electricity will fall, and the revenue will be reduced to Tk14 billion per month

instead of Tk20 billion," he said.

He said BREB will require a support of Tk60 billion to ensure an uninterrupted power supply to rural economy.

BREB has 28.5 million consumers, which include 90 percent or 26 million domestic, 360,000 irrigation pumps and the rest are commercial and industrial consumers.

Now, the power requirement for PBSs is high, as it is summer along with the load of irrigation. Most of the people are now in lockdown at home causing continuous electricity need, the BREB boss said.

Presently, PBSs are taking about 60 percent of the national demand.

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Oil to Hit \$100 in Around 18 Months

The oil price has been predicted to hit \$100 per barable rel in around 18 months.

That's what Orascom Investment Holding Chairman and CEO Naguib Sawiris believes, according to a report published by Rigzone.

"I actually believe that in, let's say, 18 months from now the oil will hit \$100," Sawiris said in a phone interview.

"The shale industry will vanish for at least one year ... and the start-up is going to be difficult because banks are going to be very reluctant to finance they know that they're very vulnerable ... even [in] traditional oil many of the U.S. facilities have closed down," Sawiris added

"The world is growing anyhow, even with this recession, so suddenly when the demand is still there and is coming ... and they want oil, it will not be there because most of the people are shut down. So, the offering will be less than the need ... and then the price will go back very high," Sawiris continued.

13:

Govt Working to Import Spot LNG from H2 of '20

The energy ministry is now working on a mechanism to initiate importing liquefied natural gas (LNG) from international spot market to rip the benefit of 'price crash.'

Several committees are now involved in the initiative to start spot LNG import from second half (H2) of this year, officials at state-run Rupantarita Prakritik Gas Company Ltd (RPGCL) said.

JKM, the benchmark for spot LNG prices for North Asia, plunged to a historic low of US\$1.925 per million British thermal unit (MMBtu) last week, as the ongoing global shutdown to combat the coronavirus pandemic has reduced world demand of LNG, sources said.

The RPGCL, a subsidiary of the state-run Petrobangla,

completed inking deals with the suppliers over the past one month, after selecting them through a competitive bidding, to source around one-fourth of the country's total required LNG from spot market.

The RPGCL has already signed master sale and purchase agreement (MSPA) with 14 global suppliers separately to import lower-priced LNG from spot market, they said.

Bangladesh has been importing lean LNG under long-term deals from Qatar's RasGas, which is now merged with Qatargas and renamed as Qatargas, and Oman's Oman Trading International (OTI). The country started regular import of LNG in August 2018.

Electricity Bill Collection Halves Amid Corona Crisis

The power sector is in a difficult situation as overall monthly bill collection came down by over 50 per cent thanks to the three-month waiver on the surcharge of utility bills.

This financial pressure will cause difficulty in making payments for power import from India as well as bill payment to independent power producers (IPPs), a top official said.



We are receiving demand notes of around Tk 25 billion per month from six power distribution companies as a bulk consumer, said an official at Bangladesh Power Development Board (BPDB).

"But the electricity bill payment from the bulk consumer has come down around 50 per cent in March," he said.

If the coronavirus crisis prolongs further, the payment of

bills for imported electricity and local power sponsors might get delayed, he feared. "I have already asked the local power plant sponsors and leaders of the IPP sponsors to expect a delay in power bills."



2020 Oil Demand Expected to Drop 11 Percent

Rystad Energy is forecasting that oil demand will decrease 10.9 percent, or 10.8 million barrels per day (MMbpd), year over year in 2020.

The prediction, which sees oil demand at 88.7MMbpd this year as of May 5, is Rystad's latest in a line of weekly forecasts that aim to calculate the effect of the coronavirus on demand. These are frequently updated as a result of evolving developments around the world.

Rystad's latest forecast shows that global demand for road fuels will fall by 11.2 percent, or by 5.3MMbbpd, year-over-year. The company sees global jet fuel demand falling by almost 33.6 percent year-over-year, or by 2.4MMbpd. Total

oil demand in the United States for this year is now fore-casted to fall by 2.2MMbpd to 18.3MMbpd. Total oil demand in Europe is expected to fall by 1.7MMbpd to 12.5MMbpd.

April's demand for oil was estimated at 71.8MMbpd, or a 27.1 percent drop, according to Rystad. The company expects May's demand to fall by 21.3 percent to 77.7MMbpd and June's demand to drop by 15 percent to 83.5MMbpd.

Rystad's previous forecast projected a decrease in oil demand in 2020 to 88.8MMbpd. The company's estimates show that total oil demand in 2019 was approximately 99.5MMbpd. Total oil demand in 2021 is currently expected to hit 98.8MMbpd.



Bapex Initiates Work to Bring New Gas from Srikail

State-owned Bangladesh Exploration and Production Company Ltd or Bapex has initiated work to bring new gas for consumption from the newly-discovered gas reserve at Srikail East -1.

It will acquire necessary land for building a seven-kilometer pipeline and road to add around 12-15 million cubic feet per day or mmcfd of nat-



ural gas to national gas grid, a senior Bapex official said.

This additional gas from new reserve will help meet the mounting natural gas demand across the country and ease import pressure on LNG or liquefied natural gas imports, he said.

Officials said Bapex discovered the presence of natural gas at around 3,055 meters

depth from the surface while drilling an exploratory well at Srikail East -1, some seven kilometers away from the currently producing

Dharmendra Pradhan Hints at New Gas Policy



With current pricing formula making natural gas production economically unviable, Oil Minister Dharmendra Pradhan recently hinted at bringing in a new gas policy as well as launching a gas exchange very soon as part of reforms to promote greater use of environment-friendly fuel in the world's third-largest energy-consuming nation.

Pradhan also said that India favors reasonable prices that give some space to the producer countries.

"We have to have a reasonable price. India is a major consumer. But at this juncture, India's viewpoint is the price should be reasonable and responsible. Very low prices are not the answer. Reasonable prices are the answer," he said.

Speaking in the latest edition of the CERAWeek Conversations series, he said, "Oil prices should give some

Srikail gas field.

Reserve of the newly found commercially viable structure is around 100 billion cubic feet, or Bcf, as per initial estimation.

There are a cumulative 16 meters of gas layer unto

space to the producer countries. It should be profitable for them; it should be viable for them."

The transcript of his address was provided by the organizer, IHS Markit.

His views come days after international oil prices plunged to USD 18.10 a barrel, its lowest since November 2001. Rates have since rebounded to around USD 30 per barrel.

On longer-term energy policy priorities following national lockdowns, he said, "We are moving towards a new gas policy, a new tariff policy. We are planning for a gas exchange very soon and we will be liberalizing our distribution mechanisms."

Natural gas prices in India have fallen to their lowest in more than a decade, leading to producers like ONGC incurring losses in businesses.

EF

3,071 meters depth at the new gas structure, located at village Pakhajipur of Bangora in Cumilla.

Bapex drilled some 3,482 meters from the surface to discover the new gas structure.



7 Energy Projects Suffer for Coronavirus

A total of seven energy projects may be delayed for over a year due to Covid-19 impacts, officials said.

It was part of 32 projects which is being implemented by the energy and mineral resources division under the annual development program.

The estimated investment in the projects is Tk 6611.48 crore.

The projects are Tk 5426.27 crore Installation of Single Point with Double Pipeline, Tk 141.87 crore FEED services for ERL, Tk 248.75 crore Jet-A-1 Pipeline project from Pitalganj to Kurmitola, Tk 2861 crore Dhaka-Chattogram pipeline project, Tk 1962.38 crore 150 kilometre Bagura-Rangpur-Syedpur gas trans-

mission line, Tk 1154.42 crore Maheskhali-Anw a r a

Parallel Gas Pipeline, Narsingdi compressor station and Rupkalpa project.

The energy and mineral resources division on Saturday informed State Minister for Power and Energy Nasrul Hamid about the delay of the energy projects during a videoconference.

Energy and mineral resources division senior secretary Anisur Rahman, BPC Chairman Shamsul Alam and Petrobangla Chairman ABM Abdul Fattah attended the conference.

According to energy division sources, most of the projects may delay for minimum six months and maximum over a year due to Covid-19.

Govt to Construct 305km Pipeline for Transportation of Petroleum

The government is planning to construct a 305-kilometer fuel pipeline for ensuring quick supply and checking pilferage of petroleum.

In this regard, the government has already directed the deputy commissioners of Cumilla, Feni, Chandpur, Narayanganj, Munshiganj and Chattogram districts to take necessary steps for acquiring land for the project.

The pipeline will pass through 19 upazilas of the six districts, source said.

The Bangladesh Petroleum Corporation (BPC) authorities have already reviewed the project cost and sent it to the Prime Minister's Office (PMO) for approval, official sources said.

Around 1.5 million tonnes of fuel oil is consumed in Dhaka and its surrounding districts a year, according to BPC.

From Godnail and Fatullah in Narayanganj district, oil tankers usually transport oil through waterways to the depots in the country's northern areas including Baghabari (Pabna), Chilmari (Kurigram) and north-western Chachna Bazar (Sunamganj).

Some 200 tankers are used to transport nearly 90 percent of oil through waterways. Currently, Bangladesh depends on coastal tankers, railway wagons and Lorries to transport both crude and refined oils to end-users across the country.

Small barges, mostly owned by

the private companies, also carry petroleum products on various riversules.



Low Demand Shuts Most Oil-Fired Power Plants

ost of the 'expensive' oil-fired power plants are shut now due to lower electricity demand amid the ongoing countrywide shutdown to combat coronavirus pandemic.

According to the state-run Bangladesh Power Development Board (BPDB), all diesel-fired power plants, having the total generation capacity of 1,140 megawatts (MW), are now shut along with a good number of furnace oil-fired ones.

The BPDB has asked the plant owners to keep majority of the oil-fired power plants shut to save the entity from counting huge payment for electricity purchase.

Some other power plants are under maintenance.

The board, however, has to count capacity payment, which it will have to pay to the power plant owners under a contractual obligation as 'incentives' for keeping their plants idle.

As per power-purchase agreements, this penalty is calculated on the basis of around 40 per cent plant factor of the power plants, including the oil-fired rental and quick-rental ones.

Electricity generation across the country fell by around 33 per cent on an average to around 6,000 MW due to demand fall.

ΕP

BPC Defers Three Oil Cargoes to May

The state-run Bangladesh Petroleum Corporation (BPC) has deferred arrival of three petroleum oil cargoes to May, as the ongoing nation-wide shutdown to combat the coronavirus pandemic has reduced domestic demand amid insufficient storage facility.

The BPC will have to defer seven more oil cargoes of May, if the shutdown prolongs, domestic demand continues to remain low, and storage insufficiency persists, said a BPC official. Each of the cargoes has the capacity to carry around 30,000 tonnes of oil

products.

The BPC's oil storage tanks are almost full due to regular import of petroleum products until mid-April despite sharp fall in domestic demand.

Currently diesel consumption dropped to around 7,500 tonnes per day, which is less than half of the usual consumption.

Jet fuel consumption fell to onetenth of normal consumption at around 70 tonnes per day.



Power Consumption Almost Halves

Bangladesh Power Development Board (BPDB) has expressed concern over huge drop in electricity consumption in the current hot summer and irrigation period as over half of the generation capacity stands idle.

Officials said the demand for electricity came down to 7000MW-8000MW in the current period against the generation capacity of around 20,000MW due to the coronavirus outbreak.

They said the demand for electricity was 13500MW in the same period last year.

"We are incurring a huge loss due to the significant drop in electricity consumption against the generation of 20,000MW," a top official of BPDB said.

He said the BPDB is now generating 6500MW of electricity from gas-fired plant and importing around 1000MW from India while the rest of around 1000MW of electricity is being generated from the coal-fired ones.

Most of the Independent Power Producers (IPPs) plants in private sector were standing idle due to low consumption rate of electricity.

The government is paying capacity payment of these power plants as per the agreement although the plants stand idle, officials said.

The government is reviewing the capacity payment of the private power plants, which stand idle during the Covid-19 pandemic, sources said.

BREB's 'Durjog E Alor Guerrilla' to Ensure Non-Stop Power Supply



B angladesh Rural Electrification Board (BREB) is set to serve people across the country in an innovative way to ensure uninterrupted supply of electricity in response to the coronavirus outbreak and severe weather season.

To this effect, REB has taken an innovative initiative called 'Durjog e Alor Guerrilla' for smooth service to its consumers.

Each Palli Bidyut Samity has its linemen, linemen or supervisors of mini construction firms, regular village electrician and trained village electrician and some other skilled workers, said a REB statement.

Now, REB will form 'Durjog e Alor Guerrilla' unit across the country with the blending of its manpower and local manpower.

liver quality care for all ma-

rine and power engines, and

auxiliary machinery - both

MAN and non-MAN brands.

It's a natural move for us and

one that has been requested

for quite some time by our

customers. For them, having

maintenance on their ma-

chinery - whatever the brand

- carried out by the same

service provider is particu-

larly convenient."

With this new initiative, each headquarters of Palli Biduyut Samity, zonal office, subzonal office, area office and complaint centre will have necessary guerrilla units where one unit will remain on duty and other units will be kept on standby.

In the statement, BREB said its operation has become a little bit tough due to the fast spreading coronavirus and lockdown.

Besides, it will be difficult to ensure electricity if any lines get disrupted due to the bad weather or monsoon rain in the coming months.

Considering the facts, they have decided to form the new innovative unit across the country so that they can serve the people better.

EP

The PrimeServ Omnicare organisation for engines and power is based in Rotterdam from where it will drive a one-stop, global service for customers, using MAN PrimeServ's existing network. Ultimately, customers will be assigned a single team for all maintenance jobs, and receive just one bill.

MAN PrimeServ Expands Omnicare Concept

AN PrimeServ, MAN Energy Solutions' service brand, has extended its 'PrimeServ Omnicare' concept from turbomachinery into the marine and power segments. This one-stop service solution now also focuses on maintenance that covers non-MAN as well as MAN machinery, including engines, turbochargers and re-

power segments, PrimeServ Omnicare provides a maintenance service with OEM (original equipment manufacturer) spare-parts, based on global agreements. PrimeServ Omnicare has already been offered by MAN Energy Solutions' Turbomachinery after-sales division for the last

three to four years with great

success.

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iliaries.

Christian Ludwig, Head of PrimeServ Omnicare at MAN Energy Solutions, said: "Our intention is to de-



Christian Ludwig, Head of PrimeServ







পাওয়ার গ্রীড কোম্পারী অব বাংলাদেশ লিঃ POWER GRID COMPANY OF BANGLADESH LTD.

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মানসম্পন্ন বিদ্যুৎ নিরবচ্ছিন্নভাবে দেশের সকল মানুষের নিকট পৌচ্ছে দেয়াই আমাদের অধীকার

- 🧩 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 সাশ্র্রয়ী হোন। আপনি বিদ্যুৎ সাশ্র্রয় 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।
- রিকাল ৫:০০ টা হতে রাত ১১:০০ টা পর্যন্ত সময়ে বিদ্যুতের চাহিদা বেশী থাকে। এ
 সময় দোকান, শপিংমল, বাসা-বাড়ীতে আলোকসজ্জা হতে বিরত থাকুন।



Does Negative Price of Crude Oil Make Money for Traders?

Engr. Md. Shahin Alom

he unthinkable drop in global gasoline consumption in recent weeks due to stay-at-home orders during the COVID-19 outbreak has pushed down both oil and gasoline prices due to excess supplies. Other than the space needed to store that excess supply is running short, which is part of what led to the negative oil price in USA on April 22, 2020.

The price of US benchmarked crude that would be delivered in May was selling around \$15 a barrel on April 22 morning, but it fell negative around \$40 per barrel during the day. The price reflects to be closer to the "true" price of crude oil. It was the first time futures contract price of oil has gone negative for the petroleum industries.

Does it mean, filling station is ready to fill up the gasoline tank at free of cost? What would be the impact on downstream petroleum segment? Or, will Asian market price drop soon?

The crude oil found underground is a mixture of water, sand, salt and natural gas.

Searching and finding underground oil reservoirs and drilling wells are risky, complicated and expensive activities. The cost of drilling an exploratory oil well can vary between \$1 million to \$35 million. The average time required to discover, production and market oil is between 3 and 10 years.

The upstream production of the oil industry refers to finding oil reservoirs and bringing

oil up from the underground and this include also exploratory work, initial drilling, followed by the production phase, which is the actual extraction of oil from the underground.

The downstream sector is involved with purifying crude oil and refining it into different products. The transportation and marketing of crude oil and its products are also involved in this group.

Generally, the price of crude oil refers to the commodity spot price of a barrel (159 Ltr) of benchmark crude price for traders. The price differences of a barrel of crude oil based on its grade, which is determined by its specific gravity (density of crude oil at 20 C /density of water at 4 C) or API (American Petroleum Institute) gravity [(141.5/SG)-131.5], oil is lighter and floats on water if API gravity is greater than 10 and oil is heavier and sink if less than 10; sulfur content of oil and the location of oil field to refinery. Heavier, sour crude oils

are less expensive than lighter, sweeter oil i.e. the price also may vary with its mixture of hydrocarbons, color, composition and consistency.

Crude oil can be classified as either sour or sweet, depending on the amount of sulphur contains. Oil with a high sulphur content (>0.5% wt) is considered sour. Sweet crude oil (<0.5% wt), has low amounts of sulphur compounds and price also higher.

Benchmarking of oils defined based on few common type of crude oil to determine the value of other crude oils.

Brent Blend is a blend of several crude oils from fields in the North Sea region, which is located above Germany and the United Kingdom. The price of oil Africa, Europe and the Middle East tends to be based on this oil. Dubai/Oman crude is used as a benchmark for Middle East sour crude oil; flowing to the Asia-Pacific region. Tapis Crude oil is produced in Malaysia that is used as a reference for light oil from East Asia. West Texas Intermediate (WTI) is a very high-quality, sweet, light oil produced in North America.

Commodity spot prices and futures prices are each quotes for a sales contract, but the agreement between the





buyer and the seller differs; the spot price is the current quote for instant buying, payment, and delivery of a specific commodity. The futures price is an offer for a commodity and financial transaction will occur later. The current negative price is the talk of the world now based on the commodity futures price. Basis is used by commodities' traders to determine the best time to buy or sell a commodity product. Trader's takes the decision for buying or selling based on whether the basis is strengthening or weakening.

The Organization of the Petroleum Exporting Countries plus (OPEC+) controls over 50 percent of the global oil supplies and about 90 percent of the proven oil reserves. OPEC has total of 13 member countries including Iran, Iraq, Kuwait, Saudi Arabia and Venezuela, Libya, the United Arab Emirates, Algeria, Nigeria, Ecuador, Angola, Equatorial Guinea and Congo and the world's major 10 non-OPEC oil-exporting nations.

There are complicated factors of the process of crude oil such as the geological complexity, or tax burden. The total cost of oil production varies considerably in different countries. In Saudi Arabia, the total cost of one barrel of oil is less than global other; the price of production including taxes, administrative and transportation costs is around \$8.98/ bbl. Countries with the lowest total cost of oil production are Iran and Iraq with \$9.09/bbl and \$10.57/bbl approx..., respectively. In Venezuela, it has

a total cost of oil of \$28.99. For the South American country, the production process is complicated by the fact that the vast majority of Venezuelan oil deposits are represented by extra heavy oil, which production cost is higher. The US non-shale is around 20.99/bbl and US-shale around 23.35/bbl.

The price currently reflects the May contract, which will expire on April 22 of 2020, rather than the June contract is currently sighted the bulk of the trading. The WTI contracts for future delivery have traded at much higher prices than the front-month May contracts. The upward slope of price for later months is known as contango. It highlights that the shortage of crude in recent weeks as the coronavirus causes devastation on global demand for oil.

Negative prices means producer or someone with a long position in oil would have to pay trader to take oil off of their hands to store. The main concern is the expiration of the May contract. There would be nowhere to store as a surplus of crude already fills up available storage.

Earlier in April, OPEC and its allies are agreed to cut production by 9.7 million barrels per day, it's about 10% of current global production. But it's realizable that the deal didn't go far enough to control huge oversupply.

Venezuela is the top largest oil reserves estimated at 300.9 billion barrels in the world for today. Besides, other top three includes Saudi Arabia 266.5 billion barrels and Canada 169.7 billion barrels. However, the record reserves of oil do not always agree understanding the potential benefits as much as possible.

The crude is not the best predictor of retail gasoline price. Instead, wholesale gasoline prices are determined by the contract of gas stations that will pay, although future prices factored into the contract on basis in USA. It is remembered that the crude oil prices only have an indirect impact on the retail price for gasoline and other downstream products.

Naturally when oil prices fall, gasoline prices fall and that benefits go to the consumers. "Oil prices are falling now due to less driving vehicles and industries as an impact of the COVID-19. So, it's difficult for anyone to take advantage of lower gasoline prices if the situation does not improve to its normal, we have to wait for next 6-7 months for observing all over the benefits of petroleum products. But, today, only gasoline and gas marketing companies may go for benefit purchase, but remember the storage facility and marketing. Otherwise, all benefits will be consumed through managing ship or storing.

ΕP

Engr. Md. Shahin Alom; Deputy General Manager, MJL Bangladesh Limited, has more than 13 years of experiences in petroleum segment. email: sxalom@gmail.com







e are living in a key moment. Coronavirus pandemic has thus far amply cautioned us on the probable consequences of continued lockdown. Bangladesh is noticeably experiencing the impacts of corona-led economic and humanitarian crisis. While the response from the government to absorb economic shocks within its capacity has been appreciated, it would be worthwhile to look into the post-corona Bangladesh and radically rethink how industry sector can be stimulated. This is also a rare opportunity for the government to adopt significant change in fiscal policy for the industrial sectors.

Many of the problems, to date, have emanated from the closure of industries, affecting millions of workers and the established value chains. Some industries have already adopted lay-off strategy. As the lockdown prolongs, the likelihood of further lay-offs would only increase. In post-corona Bangladesh or when the lockdown would be lifted, probably gradually, industries would again be in need of reducing operating expenses. In the midst of this, industries may apply the tried and tested recipe of firing employees. However, there are other av-

enues of cost minimization, for instance, enhancing technical energy efficiency. Many of the industries in Bangladesh, as substantiated from different studies and investment grade energy audits, are wasteful of energy, be it due to lack of knowledge or technical and financial capacity. Energy efficiency, according to a ballpark estimate, can lead to even more than 20% energy savings in many industries of Bangladesh and therefore, has the potential of reducing significant cost. Notably, energy efficiency at industry level also represents attractive business case with very high financial returns. On the other hand, industries may further be benefited from productivity improvement, enhanced competitiveness and may utilize saved energy for additional operations.

To yield the advantages of energy efficiency, it is, however, essential to develop action plans at industry level and learn the best practices that would improve energy efficiency with the uptake of best available technologies.

While best available technologies are likely to save energy, ensuring efficient equipment operation and maintenance would help guarantee optimal energy performance. For this to be reinforced, energy management system may be implemented at the industries. Energy management system would, further, help enhance awareness on energy efficiency and conservation across all levels of the industry and thereby, reduce the probability of rebound effect. To sum up, industry managements may rescind the lay-off strategy if they can enhance energy efficiency at their facilities.

For the government, industrial energy efficiency again represents multifaceted benefits, viz, energy security, saving foreign currency, avenue of investment for banks, job creation, environmental benefits etc. Improving industrial energy efficiency would directly reduce the industrial demand for fossil fuels and the need to import fuels. There is significant knock-on effect on fuel usage at power plants attributed to reduction in electricity consumption at industries, led by energy efficiency, and would further result in less import of fossil fuels. The economy, as a whole, would be benefited from lesser import with reduced dependency on external sources and improved energy security. Moreover, industrial energy efficiency can reduce stress on electricity systems, particularly at times of rapid growth in demand, and delay the need for investment into new generating capacities. Delaying or forgoing investment in new power plants, the government can cut extra operational and maintenance cost.

Notably, many industrial energy efficiency projects with attractive rates of return largely remain unimplemented in Bangladesh. On the other hand, the crisis, sparked by corona, would have escalated impacts on the banking sector of Bangladesh. In post-corona Bangladesh, industrial energy efficiency could be an excellent business prospect for the banks and non-bank financial institutions and they may help leverage large levels of investments to industries.

Industrial energy efficiency accompanies with the job opportunities for energy auditors and energy managers and business opportunities for energy service companies. While the energy efficiency market of Bangladesh is at its infancy, the market, if developed, may induce significant job creation in the foreseeable future.

As the government is now intended to meet the immediate needs and once the pandemic is subsided, there would have unprecedented opportunity to steer the industrial energy efficiency sector. Therefore, a stimulus package for the industrial sector may be designed including more radical approaches to accelerate promotion of energy efficiency while aligning with existing policy and regulatory systems and eliminating practical barriers to investment.

While the Central Bank has, of late, reduced the interest rate of green refinance scheme to 8% from prevailing 9%, the revised interest rate doesn't seem to create the impression that the demand for energy efficiency finance would increase. The interest rate of green refinancing scheme of the central bank, therefore, may be further reduced to a level that banks and NBFIs can onlend to industries at a rate of 6% to 7%. It may be necessary to examine simpli-

fying the approval procedure under the green refinance scheme to facilitate the speedy disbursement of fund. In addition, the government's stimulus package may provide tax rebate for industrial energy efficiency projects. The right policy signals would create the desired alacrity among the industry managements to invest in industrial energy efficiency and this would stimulate the formation of a strong supply chain for energy efficiency project implementation in the country. It would have a multiplier effect in the post-corona economy of Bangladesh as well. From energy and climate policy perspective

Bangladesh, a strong supply chain for energy efficiency would be a big stride towards achieving the energy efficiency targets under the energy efficiency and conservation master plan and the nationally determined contributions.

ΕP

Shafiqul Alam;

A Humboldt Scholar, is a Senior Advisor in an International Development Agency. He has more than a decade of experience in sustainable energy and climate change

Report

BPC Plans to Rent Private Tanks

Bangladesh Petroleum Corporation (BPC) is facing trouble as it can't store imported fuel oil anymore. Its tanks are almost full as the demand for fuel in the country decreased by 60 percent due to the nationwide shutdown since March 26.

A BPC official said that with most factories and transportation being shut down for the past month, the demand for fuel oil had significantly dropped. As a result, BPC has been unable to sell off its stockpiles of oil.

To weather the crisis, the state-owned company is planning to store oil in its pipelines and rent private petroleum and power company tanks to store an additional amount of diesel.

BPC officials said that Bangladesh will not be able to take advantage of a his-

toric slump in oil prices in the international market amid the global coronavirus pandemic due to the lack of storage capacity in the country.

BPC usually imports crude oil, namely Arab Light oil and Murban oil, from the Saudi Arabian Oil Company and the Abu Dhabi National Oil Company.

On April 23, the price of one barrel of Arab Light oil was \$16.01 and that of Murban oil was \$19.04. The price per barrel of crude oil of each has fallen 45 and 50 percent, respectively, in just one month

As of April 22, BPC currently has reserves of around 9.41 lakh metric tonnes of fuel oil. Its storage capacity is 9.5 lakh metric tonnes.

Due to the limited storage capacity,

around 1.2 lakh metric tonnes of diesel and 20,000 metric tonnes of crude oil are now stuck in five vessels at the outer anchorage of Chattogram port. Another import of 4.5 lakh tonnes of fuel oil is awaited next month.



EP





















May Heralds Even More Disruption & Uncertainty for Petrochemicals

Nigel Davies

he impact of the coronavirus lockdowns on the oil, gas and chemicals industries' integrated value chains is radically shifting relationships and profitability.

It is also making planning virtually impossible, as BASF suggested last week.

The environment around refining and chemical margins remains challenging, Shell CEO Ben van Beurden also said this week.

"The key to the profitability of our chemicals plants and refineries is their integrated value chain from their feed-stocks to the multiple products they produce," he said.

"The demand volatility of a particular product can have a broader impact on

the operational capability of the integrated value chain. For example, a reduction in the demand for jet fuel at a refinery can impact the viability of the entire refinery. Looking ahead, we expect significant price and margin volatility in the short to medium term."

Companies are also confronted by recessionary trends in the markets and in the countries in which they operate.

"This volatility presents a unique challenge for oil and gas producers, with the need to balance the requirement for cash today, with appropriate investment across the portfolio to generate cash tomorrow," van Beurden said.

Shell's steep cut in its dividend made headline news.

Oil, gas and chemicals companies are seeking to preserve cash in extraordinarily difficult times while maintaining a level of business that serves them and their customers best.

Upholding operations in these multiple value chains is key. But we are seeing refinery run downs and closures alongside the squeeze on chemical plant operating rates.

Operators of Europe's crackers and the plants downstream from them are working on shifting sands.

ICIS analysis, updated from only a few weeks ago, looks at the European cracker output under threat from reduced refined products demand, for instance.

The estimate now is that, potentially 37% of the region's propylene capacity is impacted, 37% of benzene, and 31% of ethylene.

This is apart from the pressure put on production of these vitally important chemical feedstocks from generally weakened downstream demand.

BASF has shuttered facilities serving markets closely related to automobile production. Across the group, its plants are operating at more than 60%, management said.

Dow on Thursday said it is idling five polyethylene (PE)/elastomers facilities in the Americas for at least one month, and it is running reduced global propylene oxide (PO) and methylene diphenyl disocyanate (MDI) rates until industrial demand improves.

It is running its siloxanes production at

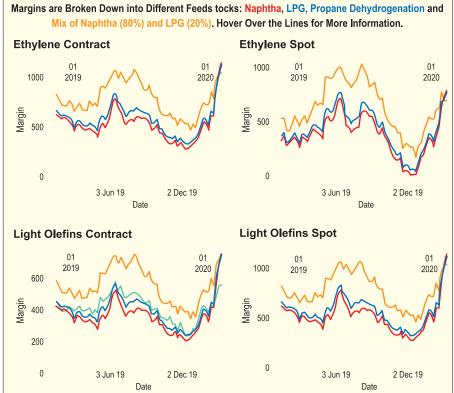
reduced rates globally.

ExxonMobil said on Friday that volumes at its chemicals division were down in the first quarter for its non-US chemicals operations while margins for the segment were lower in the quarter, year on year.

US chemicals operations were constrained by overcapacity and the volumes from newly installed US Gulf Coast plants, but margins had remained firm because of cheaper quarter to quarter feedstock costs.

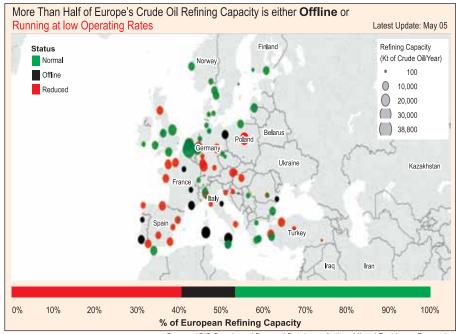
LyondellBasell said

Ethylene & Light Olefins Margins in Europe



Source: ICIS Margin Analysis





Source: ICIS Supply and Demand Database; Author: Miguel Rodriguez-Fernandez

that its olefins & polyolefins segments – in the Americas and Europe/rest of the world – had experienced consumer-driven demand for polymers used in packaging and medical products but that the impact of the pandemic and low crude oil prices would continue to impact its businesses in the second quarter.

"Weak demand from markets for industrial and durable products is expected to persist," it said.

Producers are seeing improved liquid cracker margins in Europe and in northeast Asia while the ethane feedstock advantage persists in the US and the Middle East.

What is gained in terms of margin at the cracker, however, does have to be translated into profits downstream, whether a company is integrated or not.

There is increased tension between integrated and non-integrated players now in important contract price negotiations across the board in chemicals.

For the latest reporting period, some of the big petrochemical producers have acknowledged the gains they made towards the end of the quarter from lower crude oil derived feedstock costs.

The data show the considerable gains made by naphtha cracker operators per

tonne of product sold, as long as they are able to translate the gains on the monomers either into profits directly or into integrated downstream businesses.

At the moment, those lower costs are

working their way down through various petrochemical and plastics production chains, prompting steeply reduced product prices.

Inventory holding losses also played a significant part in reducing reported profitability for petrochemical producers in Q1.

The dynamic of these cost and price movements will play out particularly noticeably in the second quarter.

European ethylene and propylene contract prices for May fell for the third consecutive month; watch this video by ICIS Senior Editor Nel Weddle to find out more.

April was an extremely difficult month for the chemical and plastics industry in Europe and elsewhere.

May brings with it even more disruption and uncertainty.

EP

Nigel Davies; Insights Editor, ICIS

Report

Global Oil Production Shut-In in Q2 to be Largest in History

This year's second quarter will see the largest volume of liquids production cuts, including shut-in production, in the history of the oil industry, according IHS Markit analysis.

As much as 17 million b/d total liquids output (including nearly 14 million b/d of crude oil production) is now expected by IHS Markit to be cut or shut-in between April and June 2020.

"The Great Shut-In, a rapid and brutal adjustment of global oil supply to a lower



level of demand is underway. All producing countries are subject to the same brutal market forces. Some will be impacted more than others. But there is nowhere to hide," said Jim Burkhard, vice-president and head of oil markets, IHS Markit.

Oil demand in the second quarter of 2020 is expected to be 22 million b/d less than a year ago.

This collapse in demand combined with low oil prices, storage constraints, and government ordered cuts are driving what is an extraordinary level of liquids production cuts and shut-ins around the world.

North America and OPEC members, as well as countries in the Commonwealth of Independent States—particularly Russia—are expected to be the source of most of the cuts.





Bangladesh Launches \$218.7m Green Transformation Fund, Says GlobalData

Bangladesh has introduced a US\$218.7m Green Transformation Fund (GTF) to provide soft loans to solar developers, other environment-friendly products and Eurozone's energy efficiency components' importers.

This is in addition to the existing US\$200m fund to offer soft loans for dollar-denominated imports, says GlobalData, a leading data and analytics company.

Somik Das, Senior Power Analyst at GlobalData, comments: "The decision to introduce a fund was taken to support the developers and importers better-access to finance with low interest. The sectors covered under this fund are renewable energy and energy efficiency, water conservation and management, waste management, resource efficiency and recycling.

"Access to low interest loans will be a much needed relief, especially post-COVID-19 as projects may be delayed due to liquidity and supply chain issues. Soft loans will be of great significance as renewable companies (developers and importers) get access to funds at lower interest rates, which may help them to sail through the difficult times."

However, the 3% margin (1% by central bank and 2% by authorized lender) covered by the lender and central agency in

Solar Module Makers Lose Tk 150cr Due to Coronavirus Outbreak

Solar module manufacturers say the coronavirus outbreak has hampered their operations and forced them to shut down factories leading to a huge financial loss which will be "impossible to overcome without the government's assistance".

In a recent letter sent to the Commerce Ministry, the manufacturers said the losses will only pileup if the situation does not improve.

Industry insiders said nine local companies are currently manufacturing solar panels to meet the growing domestic demand with their annual production capacity of 100MW.

About 10,000 people are employed in the sector directly and indirectly, they said.

Coronavirus outbreak and subsequent government-announced holidays



post-COVID market scenario may not give complete relief to the developers who are already facing a lot of adverse market conditions.

It is expected that equipment costs will be higher due to the supply chain issues and this may result in higher upfront costs than earlier. The lower interest rates offered under GTF may not be able to offset the impact of increased equipbrought economic activities to a grinding halt, leaving millions of people without jobs and forcing businesses to suffer huge losses.

The manufacturers said they have been facing a shortage of raw materials since the crisis broke out, putting them in great peril.

"At the same time, the manufacturers had to shut down production following the government's order to ensure workers' health safety," Munawar Moin, president of Solar Module Manufacturers Association Bangladesh (SMMAB), wrote in the letter to the Commerce Ministry.

SMMAB said many local entrepreneurs have made huge investments in the sector using the government help as the Prime Minister declared the solar photovoltaic panels as Product of Year 2020

under light engineering product category.

It said the government has been extending support to flourish the solar industry and a result of it, so far 5.8 million solar home systems have been installed across the country.

ment costs.

Das concludes: "The Central Bank and authorized lenders may closely follow the after-effects of the pandemic and reduce their margins if needed, to be able to provide any further relief necessary to the industry borrowers. This will help in the rebound of not just the industry in particular but the economy as a whole."



SOLARISING BANGLADESH

Rahimafrooz Solar is reaching across cities, towns and villages, from households to factories, and spreading the light of development across the entire nation.

Our Solutions: DRE and Cleantech Applications



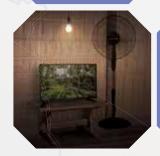
Over 35MWp of installations done



SHS installations in 48,000 villages



20,000 green jobs created



Foremost PV EPC company







IEA, Denmark Host Ministerial Discussion on Clean Energy



Ministers from around world joined by leaders of international organisations and major companies in meeting focused on role of energy efficiency and renewables in stimulus plans

Ministers from around world joined by leaders of international organizations and major companies in meeting focused on role of energy efficiency and renewables in stimulus plans.

The International Energy Agency and the Government of Denmark recently hosted a high-level roundtable meeting in which government ministers and business leaders from around the world discussed the importance of making clean energy a central part of the global economic recovery from the Covid-19 crisis.

Co-chaired by Dan Jørgensen, Minister for Climate, Energy and Utilities of Denmark, and Dr Fatih Birol, IEA Executive Director, the virtual meeting focused in particular on the potential of energy efficiency and renewables – two of the key pillars of clean energy transitions – to create jobs, enhance economic competitiveness and improve the resilience of energy

systems.

"Putting clean energy at the heart of stimulus plans is an excellent strategy for revitalizing economies while building a more secure and sustainable energy future," said Dr Birol. "I am delighted that such a high-profile and diverse group of ministers and leaders – in large part from countries supporting the IEA's Clean Energy Transitions Program – joined us today for this vital conversation during such challenging times. I warmly thank everyone for their contributions, and Minister Jorgensen for his leadership."

At the meeting, ministers from around the world highlighted the extraordinary challenges governments are confronting as a result the immediate public health and economic crises – and their desire to make well-informed decisions in their plans to rekindle economic growth as their countries emerge from confinement.

Tesla Plans UK Expansion

Tesla has applied for the license.

nited States-based electric carmaker Tesla Inc has applied for a license to supply electricity in the United Kingdom, according to a recent report.

The purpose of the license from the energy regulator may be to introduce the company's Autobidder platform, the report said, citing a company source.

The application did not make clear why

Autobidder is a platform for automated energy trading and is currently being operated at Tesla's Hornsdale Power Reserve in South Australia.

Having built a significant battery business in recent years, the carmaker is now preparing to enter the British market with its technology, the paper said, citing industry sources.

GREENpage

TNB Subsidiary Partners with Envision Digital

NB Renewables Sdn. Bhd. ("TRe"), a wholly-owned subsidiary of Tenaga Nasional Berhad ("TNB"), the national electricity utility company, is partnering Envision Digital International Pte Ltd ("Envision Digital") to deploy big data analytics applications in its large scale solar (LSS) farm in Sepang, Selangor in Malaysia to improve energy productivity and operational efficiency.

The 50 megawatts (MW) solar farm is one of the largest in Malaysia with 238,140 solar panels generating more than 110,000 megawatt-hour (MWh) of energy in its first year of operation in 2019.

The project with Envision Digital will involve the deployment of its cloud-based digital analytics applications. Powered by Envision Digital's AloT (Artificial Intelligence of Things) operating system, EnOSTM, the applications will strengthen TRe's ability to actively contribute to the growth and use of renewable energy sources across the company's portfolio of energy assets.



Together the end-to-end solution will help TRe's operations team to have quick, real-time access to the farm's operation status, generation performance, power output, and accurate power forecasts. This will improve operational and maintenance efficiency, and ensure TRe can manage grid supply and demand effectively.

The company did not immediately respond to a request for a comment. In 2017, the carmaker built world's largest lithium ion battery to help keep the lights on in South Australia.



IRENA, ESCAP Step Up Joint Efforts to Support Asia-Pacific's Crisis Response

The United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) and the International Renewable Energy Agency (IRENA) will work together to improve access to sustainable energy, bolstering the Asia-Pacific region's response to the COVID-19 pandemic.

The two organizations will offer recommendations to governments in the region positioning the energy transition as an integral part of the immediate response to the crisis and medium to long-term recovery efforts.

Asia-Pacific, home to half of the world's population, is largely dependent on fossil fuels. Diesel, for instance, fuels the majority of the region's off-grid electricity needs.



According to ESCAP, 200 million people in the Asia Pacific region live without electricity and 1.2 billion people without access to clean cooking fuel. Joint efforts will focus on developing sustainable energy policies that are closely integrated with health and industrial development policies to bolster recovery efforts and rebuild economies.

"The pandemic is an opportunity for us to rethink our economic growth path that has come at a heavy cost to the people and planet," said Armida Salsiah Alisjahbana, United Nations Under-Secretary-General and Executive Secretary of ESCAP.

"To bring about a fundamental shift for the energy transition, we need to adopt the motto of 'no more business as usual'

for all stakeholders. Policy-makers should not lose sight of the looming climate crisis, but rather design economic stimulus packages with social inclusion and environmental sustainability built into every decision in particular sustainable energy development."

EP

Adani Green Plans Rs 10,000 Crore Capex for FY21

A dani Green Energy plans to invest Rs 10,000 crore in capital expenditure in the financial year 2020-21, but expects project execution to be delayed on account of the disruption caused by the Covid-19 pandemic.

Billionaire Gautam Adani-led Adani group has committed to invest over 70



per cent of its budgeted capex into clean energy and energy-efficient systems so as to become the largest solar player

in the world by 2025 and the largest renewable player in the world by 2030.

"With the long-lasting impact that COVID-19 is due to have on all sectors, sustainability driven business is imperative. Green Energy and Renewable Energy motivated investments will continue in this coming fiscal year," Gautam Adani, chairman, said in a recent press statement.

Adani Green, which is the clean energy arm of the conglomerate, aims to scale up capacity to 25 gigawatts by 2025 from a portfolio of 6 gw now, which includes projects that are under construction.



Researcher Developing Cutting-Edge Solution for Wind Energy

A UMass Lowell researcher investigating how to identify damage in wind turbines before they fail has received \$1.4 million to develop a solution.

Murat Inalpolat, assistant professor of mechanical engineering, has devised a way to assess the integrity of wind turbine blades by using sound. The new grant from the U.S. Department of Energy will support these efforts.

Wind power is projected to become a more than \$170 billion industry over the next four years, according to a study by Global Market Insights Inc. There are nearly 60,000 wind turbines in the country and more than 341,000 around the world, according to figures from the U.S. Geological Survey and the Global Wind Energy Council.



Commercial wind turbine blades, which are made of fiberglass composite, can measure 200 feet or more in length and weigh many tons. Given their exposure to the elements, blades can split, crack or develop holes along their edges. Currently, this damage cannot be detected until after a blade has failed, according to Inalpolat.

"There is no other technology in today's market that can monitor the condition and safety of turbine blades while they are operating," said Inalpolat, a Merrimack, N.H., resident. "Our proposed system is low-cost, reliable, robust and it can be installed on both new and existing wind turbines."



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Petersberg Climate Dialogue Keeps Momentum Towards COP 26

EP Desk

he 11th edition of the Petersberg Climate Dialogue (PCD XI) focused on ways to enable a clean, climate-friendly, resilient recovery from the COVID-19 pandemic. The two-day dialogue was the first major climate ministerial meeting of 2020.

The Dialogue took place from 27-28 April 2020, in a virtual format, enabling broader participation.

Over 30 climate ministers and highlevel representatives spoke via video to discuss measures that could pave the way for a green recovery from the economic crisis posed by COVID-19, with additional video meetings taking place between other stakeholders and nonstate actors, between UNFCCC lead negotiators, and among representatives from the finance sector.

Many acknowledged that COVID-19 and the impacts of climate change are exacerbating each other.

The Dialogue also focused on: how countries can move forward with ambi-

tious climate action despite the postponement of UNFCCC COP 26 until 2021; and designing stimulus programs that will facilitate a more committed climate policy in future.

The Dialogue was co-hosted by Svenja Schulze, German Federal Minister for the Environment, Nature Conservation and Nuclear Safety (BMU), and Alok Sharma, UK Secretary of State for Business, Energy and Industrial Strategy and incoming UNFCCC COP President.

German Chancellor Angela Merkel reinforced the importance of multilateralism while the world is facing COVID-19. UNFCCC Executive Secretary Patricia Espinosa stressed that while COVID-19 has not postponed the climate emergency, recovery from the pandemic has the potential to put the world on a more sustainable and inclusive path.

Sharma stressed the need for an ambitious roadmap for COP 26. He urged paying particular attention to the power

and transport sectors, which are priorities for the UK Presidency. He cited the challenge of accelerating progress towards a zero-emission and climate-resilient global economy, while creating jobs and supporting communities through the transition.

UN Secretary-General António Guterres said the same leadership required to fight COVID-19 is also needed to address the climate crisis. He proposed climate-related actions to shape the recovery, including the need to: deliver new jobs through a clean green and just transition; invest in sustainability; and work together as an international community.

Other speakers included: Ngozi Okonjo-Iweala, Brookings Institution; Nicholas Stern, Chair, Grantham Research Institute; Christiana Figueres, Convener of Mission 2020; Achim Steiner, UN Development Programme (UNDP) Administrator; and Kristalina Georgieva, International Monetary Fund (IMF) Managing Director.

During the ministerial discussion, many acknowledged that economic recovery programs will be necessary as a midand long-term response to the crisis, and that the COVID-19 pandemic and the impacts of climate change are exacerbating each other.

They emphasized the need for: aligning

economic recovery plans with the Paris Agreement on climate change and the Sustainable Devel-Goals opment (SDGs); multilateralism, international cooperation, support for developing countries to ensure a successful recovery; enhanced NDCs without delay, despite the postponement of COP 26 until 2021; and further exchange among ministers, including possibly another virtual meeting in late summer.



German environment minister Svenja Schulze at the opening press conference of the 2020 Petersberg Climate Conference

Oceans May Rise Over A Meter by 2100, Five Meters by 2300



ceans are likely to rise as much as 1.3 meters by 2100 if Earth's surface warms another 3.5 degrees Celsius, scientists warned recently.

By 2300, when ice sheets covering West Antarctica and Greenland will have shed trillions of tonnes in mass, sea levels could go up by more than five meters under that temperature scenario, redrawing the planet's coastlines, they reported in a peer-reviewed survey of more than 100 leading experts.

About ten percent of the

world's population, or 770 million people, today live on land less than five meters above the high tide line.

Even if the Paris climate treaty goal of capping global warming below 2C is met a very big "if" — the ocean watermark could go up two meters by 2300, according to a study in the journal Climate Atmospheric Science.

Earth's average surface temperature has risen just over one degree Celsius since the pre-industrial era, a widely used benchmark for measuring global warming.

Total Sets 2050 Net-Zero Emissions Target

products used globally by its customers, rising to 100% for enproducts used by

age carbon

intensity of

energy

In addition, the company will pursue a reduction of 60% or more by that date in the aver-

otal has set a target of net-

zero emissions by 2050 or

sooner for its worldwide oper-

customers in Europe.

This will be achieved in intermediate steps of 15% by 2030, and 35% by 2040.

Its ultimate goal is to become a broad-energy company, with oil and gas, low-carbon electricity and carbon-neutrality solutions as integral parts of its busi-

That strategy has been in place since 2015, with the

Air Pollution Raises Risks, **Vulnerability**

angladesh extremely vulnerable to COVID-19 as thousands of Bangladeshis are already suffering from chronic diseases because of their past exposure to air pollution, according to the study conducted by Centre for Research on Energy and Clean Air (CREA).

"Past air pollution exposure has made people much more vulnerable to COVID-19 and is now contributing to the death toll and the enormous pressure on healthcare systems from the disease", said Lauri Myllyvirta, the lead analyst of CREA citing multiple studies.

The research, titled 'Air Quality, Health and toxic impacts of the proposed coal power cluster in Payra, Bangladesh' released in a virtual press conference, jointly organized

by CREA an independent research

organization focused on revealing the trends, causes, health impacts, and the solutions to air pollution, and Bangladesh Poribesh Andolon -BAPA (Bangladesh Environment Movement), a Bangladeshi civil society platform.

The study has found that the air pollution will worsen if Bangladesh continues with its plan to build Payra power hub, a cluster of eight large power plants with a total capacity of 9.8GW and combined with very lax emission standards.

In Bangladesh, air pollution is responsible for about 11 percent of the disease burden from diabetes, 16 percent of lung cancer, 15 percent of chronic obstructive pulmonary disease, 10 percent of deaths from ischemic heart

> disease and 6 percent from stroke, according data available f r o mGlobal Burden of Disease Study 2017.



company now claiming to be the leading major in terms of reduction of its scope 3 average carbon intensity, with a reduction already achieved since 2015.

Chairman Total Patrick Pouyanné said: "We recognize that the trust of our shareholders, and society more widely, is essential to Total remaining an attractive and reliable long-term investment.

And only by remaining a world-class investment can we most effectively play our part in advancing a low carbon future...

"As the EU has set the target to achieve net-zero emissions by 2050 and thereby lead the way for other regions to become carbon neutral over time, Total takes that commitment to become neutral for all its businesses in Europe."



ations.

UN Chief Praises South Korea's Simultaneous Fight Against Virus, Climate Change



The country was providing a "remarkable example" of how "the two things can be put together," Guterres told journalists during a press conference.

Under a so-called Green Deal, South Korea has put to-gether what Guterres called "very ambitious" plans for a post-coronavirus economic recovery which include a reduction of emissions and coal-fired plants.

Earlier in the day, South Korea reported no new locally transmitted coronavirus cases for the first time since the disease was detected in the country more than two months ago.

"The Republic of Korea has been extremely successful in addressing COVID-19," Guterres said.

Eradication of the virus coupled with an environmentally friendly, socially inclusive economic recovery "is an example that should be followed everywhere" Guterres said.

According to the UN, the fact that containing the pandemic has led to reduced greenhouse gas emissions shows how drastically the climate crisis affects humanity, threatening millions of people across the globe.

Growing Demand for Natural, RE Gas Stations in the US

ean Energy Fuels Corp. announced new fuel agreements for its Redeem™ renewable natural gas, along with multiple station expansions to accommodate the continued demand for the ultra-low carbon fuel produced from organic waste, across key sectors of the transportation industry.

"Despite this unprecedented challenging time that the

country is experiencing with COVID-19, Clean Energy continues to expand the use of a clean, ultra-low carbon fuel to fleets," said Chad Lindholm, vice president, Clean Energy.

"Many of our customers including heavy-duty trucking, refuse, and transit agencies are performing heroic duty by continuing to operate under extreme difficult cir-

WorldGBC, GRESB Join Forces to Drive Net Zero Carbon Buildings

ondon, England World Green Building Council (WorldGBC) and GRESB have announced a collaboration that will see companies who commit to making their portfolios 'Paris Proof' by signing WorldGBC's Net Zero Carbon Buildings Commitment (the Commitment) recognized.

The Commitment, which recognizes businesses committed to ensuring their portfolio of buildings operate at net zero carbon by 2030, and advocate for all buildings to be net zero carbon by 2050, is supported by Green Building Councils' asset level net zero standards in 15 countries and counting, which all adhere to WorldGBC's global principles for net zero carbon buildings and provide third party assurance of performance.

The inclusion of the Commitment by GRESB is hoped to drive uptake of net zero standards across large portfolios in addition to dozens of other Green Building Council rating tools already recognized.

Globally, almost 40% of energy related greenhouse emissions occur from buildings, with 28% coming from the operations of buildings themselves.

The Commitment is unique in positioning energy efficiency as a central component to achieving decarbonisation across building portfolios, in addition to generating and procuring renewable energy to meet reduced energy demand.

This represents the most cost effective, best practice approach to ensuring buildings

are fit for purpose and provide healthy and comfortable environments.



EP

cumstances. We applaud them and will support them any way we can."

Clean Energy has completed a time-fill station upgrade for the city of Chesapeake, VA which recently obtained 12 new natural gas refuse trucks increasing its fleet to 60.

The contract calls for an approximate 2.5 million gallons over five years and includes operations and

maintenance.

Clean Energy also completed construction of its fourth station for USA Hauling at their Waterbury, CT yard. The 30-truck private time-fill station will dispense an estimated 1.8 million gallons over the five-year contract which also includes operations and maintenance.

Source: Clean Energy





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'Response to Offshore Bidding May Fall Short of Expectation'

here are concerns over getting expected response to the upcoming fresh bidding round for offshore exploration. The authorities are taking preparations for launching the bidding round after making the model PSC more attractive, including increasing the gas price. On the other hand, work on multi-client surveys could not be started even after concluding the contract due to the COVID-19 outbreak. It is not sure at this stage when it can be started. Hence it is uncertain when expected data and information about offshore, especially the deep water prospects, would be available. Considering the situation, launching of PSC bidding should be further put back.

Former Chairman of Petrobangla Md. Mosharraf Hossain said this in an exclusive interview with Energy & Power Editor *Mollah Amzad Hossian*.

Bangladesh could not launch fresh PSC bidding for oil and gas exploration even after long time of resolution of maritime boundary disputes with India and Myanmar. What are your views?

India and Myanmar received offers from International Oil Companies (IOCs) for their respective offshore blocks. Evaluating those offers on priority basis, they have entered into contracts with successful bidders. They have already achieved some successes as well. But Bangladesh unfortunately could not take required initiatives at all even after successful resolutions of maritime boundary disputes with Myanmar and India long time back. In the past, few round of offshore biddings failed to attract encouraging responses.

I believe that giving more priorities to LNG import rather than to exploration of own gas and oil resources has created such situation. On the other hand, though required preparations for launching offshore bidding have been taken now, the situation is not in favor due to the pandemic – the IOCs specially the oil majors are unlikely to be interested in making risk investments in the Bangladesh offshore now.

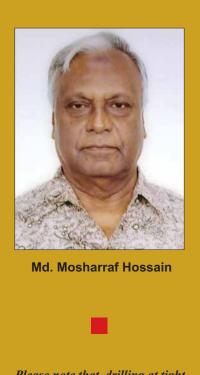
We have no option but to diversify our fuel mix strategy. For this, we must give higher priorities to our own coal and gas. We must expedite own gas and coal exploration and exploitation. The strategy must also include utilization of imported primary fuel from global market at this time of low price.

There is no doubt that IOCs played the main role in achieving success in discovering gas resources in the onshore. But for a long time, the IOCs are not being given opportunity in onshore exploration. What are your views?

What you said is true, but in Bangladesh the IOCs are not being given any opportunity for exploration in onshore. And again, BAPEX on standalone basis or in association with GAZPROM could not make any notable achievement. Therefore, I am in favor of making onshore exploration IOC-focused. India has achieved success in doing that. In my opinion, Bangladesh would also achieve success if IOC engagement is given priority. Bangladesh may evacuate gas easily to national gas grid from most of the onshore discovery as national gas grid of GTCL is now well spread across the country.

For a long time Bangladesh is following a BAPEX-alone policy in onshore exploration. But as you also mentioned nothing much could be achieved. Do you think BAPEX on standalone basis is competent or capable for achieving much in future?

In my opinion, BAPEX is being over evaluated. It is not really possible to achieve major success in onshore exploration relying on BAPEX alone. The



Please note that, drilling at tight structures of Chattogram, Chittagong Hill Tracts or at deeper horizons are way outside the capabilities of BAPEX alone. Rather based on present worked out blocks, proposals may be sought from IOCs through blocks bidding.

maximum achievement of one exploration well each year can be done by making BAPEX fully equipped with modern equipment, technology and human resources. But BAPEX can definitely identify and map resources using its capabilities of 2D and 3D seismic surveys. In the past also, IOCs achieved success utilizing the data and information of prospects identified through local initiatives.

I feel that if, through a policy, local entrepreneurs are made partners of BPAEX, it could have achieved success going beyond the government's exclusive domain. India achieved success in exploration letting own local private companies in successfully conducting



petroleum exploration. It is not possible for BPAEX to achieve major success working alone in consideration of the existing system, manpower, financing and decision making process.

We have noticed that there are some suggestions for engaging IOCs through PSC bidding by creating separate package for further explorations in previously identified structures in greater Chittagong, Chittagong Hill Tracts and for exploration in the deeper prospects of under-exploitation gas fields. What is your opinion?

Please note that, drilling at tight structures of Chattogram, Chittagong Hill Tracts or at deeper horizons are way outside the capabilities of BAPEX alone. Rather based on present worked out blocks, proposals may be sought from IOCs through blocks bidding. BAPEX is working in some blocks for a while. For these blocks, if any IOC shows interest to work as joint developers with BAPEX under Joint Venture Agreement (JVA), they must be given priority attention. IOCs would have greater confidence for working in Bangladesh if BAPEX become their JV partner.

Finally through a long-drawn process, updated Model PSC document got approval and all preparations were taken for launching a fresh bidding round. Do you think the bidding now would get encouraging responses from IOCs?

The COVID-19 pandemic has made serious dents and impacts all over the world. Lockdown, shutdown has drastically reduced the demand making crude oil, petroleum products, gas (pipeline and LNG) over-supplied. Consequently, the oil and gas prices in the global market have crashed to all time low level. The IOCs especially oil majors have started restructuring, getting out of many previously contracted exploration endeavors. They have withdrawn from all plans of future explorations. I do not think there would be any encouraging response from oil majors if offshore PSC bidding is let out now. Of course, the price proposed in updated model PSC appears attractive in consideration of price of gas in global market now.

In view of the situation prevailing in the global fuel market, there may not be much encouraging responses even if the deferred PSC bidding is initiated in September 2020. In my opinion, without fixing time limits for offer submission, it may be kept open. There may be opportunities for getting attractive offers in the longer term. The other alternative is waiting till the situation returns to business as usual in the post-pandemic period. At this stage, no one can say when that time would come.

The COVID-19 pandemic has made serious dents and impacts all over the world. Lockdown, shutdown has drastically reduced the demand making crude oil, petroleum products, gas (pipeline and LNG) oversupplied. Consequently, the oil and gas prices in the global market have crashed to all time low level. The IOCs especially oil majors have started restructuring, getting out of many previously contracted exploration endeavors.

The government was ready for announcing fresh round of PSC bidding in offshore area on March 2020 setting September as time limit. But for the outbreak of COVID -19 that was cancelled. How do you foresee this PSC bidding in future?

We must remain prepared. But the ensuing September is not the right time for it. IOCs are progressively withdrawing from existing contracts. There are considerable doubts whether oil majors or

competent IOCs would respond at all to PSC bidding of Bangladesh if launched in September 2020. But there may be some forward looking IOCs who may come up with attractive proposals if the PSC bidding is delayed by a few months. Petrobangla should wait and closely monitor how energy world evolves in the post-pandemic period.

But it would not be a bad idea requesting for EOI from interested IOCs for exploration in Bangladesh on a continuous basis. Provisions may be created for evaluating such offers twice or even times every year. Success may be achieved if PSCs can be concluded with evaluated bidder (s) through negotiations.

Many countries have cancelled their plans for PSC bidding as price of crude oil and gas recorded all time low in the global market from pandemic impacts. What should Bangladesh do?

I have said already that there are no issues with bidding. But apart from one or two future looking IOCs there may not be encouraging responses. Hence the time limits for submission of offers may be kept open for a while.

Some experts have observed that the price of gas and market demand are fixed and firm. Hence IOCs would be interested to invest irrespective of global situation. What do you think?

The price of gas that Bangladesh new model PSC has included is the highest so far in the context of global price of oil and gas at the moment. But no IOC would risk investing billions of dollars targeting a single market only. The global context must be taken in view. No IOC would invest in Bangladesh considering Bangladesh market or Bangladesh situation alone. The world situation would also guide their decision making process.

Petrobangla has concluded a contract with a joint venture company in March 2020 for carrying out multi-client surveys in the offshore. It was the plan to start receiving data and information from December 2020. But it is being told now that for coronavirus it is



uncertain when they can start work. What are your views?

Please note that initiatives for multiclient surveys were taken as Petrobangla does not possess enough data and information of offshore specially deep water prospects of the Bay of Bengal. Petrobangla signed agreement in March. But if, as you said, for corona situation works cannot start, then 2D seismic surveys as proposed in the Model PSC cannot start on time, if successful bidders cannot be provided with at least some data to start with.

Petrobangla must open all its data they have to the intending bidders. This will make all IOCs getting a preliminary idea about oil and gas prospects of Bangladesh. If these are not enough for IOCs as primary data to start works, there would not be any option but to wait till the availability of data through multi-client survey. This may require deferring the PSC bidding.

What kind of challenging you think corona may create for Bangladesh's endeavor for oil and gas exploration?

The post-pandemic period may witness a big change in socio-economic and political landscape. The entire world order may change. Bangladesh would need to overhaul energy planning. A major transition would be set in the energy world. The world would move more aggressively to green energy, renewable energy moving out steadily from the fossil fuel. Bangladesh must prepare for that.

Top priority national attention must be diverted towards exploring and optimally utilizing all own primary fuel resources. Bangladesh has admirably entered into regional energy trading. This must get more impetus. Bangladesh must go all out to regional hydropower development and sharing.

The government has signed joint venture agreement with GAZPROM. How do you look at it?

GAZPROM is a world reputed energy conglomerate. It is a great news that they agreed to work with BAPEX for oil and gas exploration. But now their present engagement is merely as a drilling contractor. Coming out it, they must invest and work jointly with BPAEX for exploration and development of new resources. Please note that Russia or Former Soviet Union assisted Bangladesh a lot in the past in oil and gas exploration. They are well aware of

lead, prospects and possible resources in many areas of Bangladesh. Getting a Russian state-owned company as joint venture for BAPEX must be considered an added advantage.

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Report

Virtual World Bank, IMF Meetings Recognize COVID-19's Impact on Development

The World Bank Group President and the IMF Managing Director welcomed the G20 announcement that official bilateral creditors will allow IDA countries to suspend repayment, stressing that this initiative will help "safeguard the lives and livelihoods of millions of the most vulnerable people".

In a Communiqué, the Development Committee emphasizes that the World Bank Group must address immediate economic needs and long-term development priorities, including affordable energy access, energy security, and resilience to economic and environmental vulnerabilities and climate change.

The World Bank and the International Monetary Fund (IMF) Spring Meetings 2020 recognized the "devastating effects" of the COVID-19 pandemic and emphasized the critical role of multilateral cooperation in containing the pandemic and mitigating its health, social

and economic consequences.

The World Bank/IMF Spring Meetings 2020 convened virtually from 14-17 April, due to the COVID-19 pandemic.

World Bank Group President David Malpass reflected that the development gains of recent years "can easily be lost" if the world does not quickly strengthen systems and resilience. He said the COVID-19 impacts will likely "hit the poorest and most vulnerable countries – and people – the hardest."

In a Communiqué following its virtual meeting on 17 April, the Development Committee notes the COVID-19 pandemic's "exceptional negative shock" on the global economy and disruptions to trade, supply chains, and investment flows.

The Committee asks the World Bank Group to help mitigate disruptions and

support efforts to preserve

preserve jobs and provide affordable medical supplies and ensure food security and safety across borders, cluding by working to resolve disruptions to the global supply chains.



World Bank Group President David Malpass

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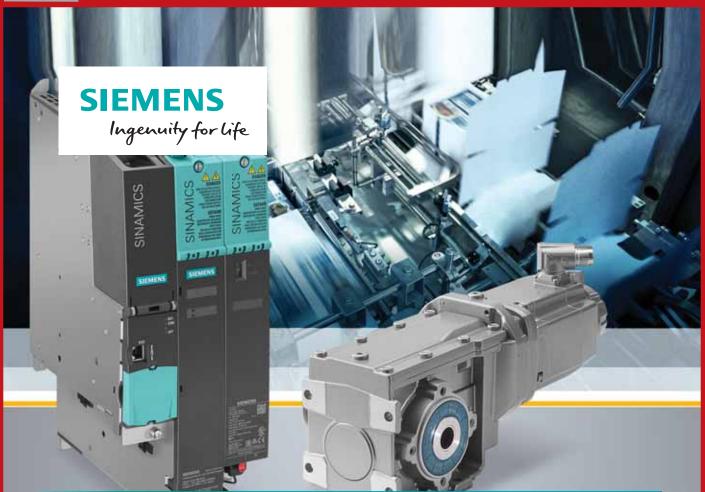




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