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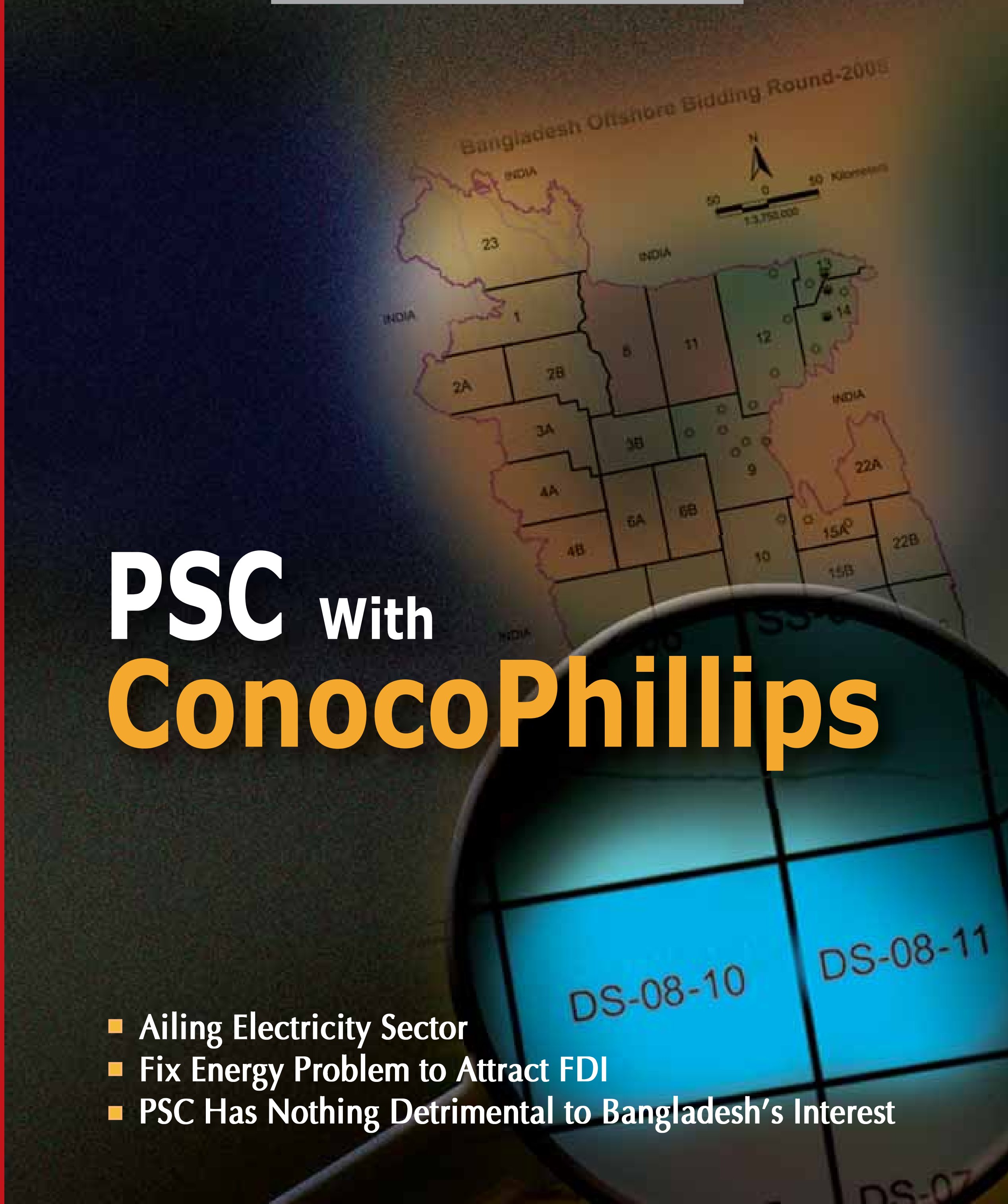
July 1, 2011

ENERGY & POWER



PSC With ConocoPhillips

- Ailing Electricity Sector
- Fix Energy Problem to Attract FDI
- PSC Has Nothing Detrimental to Bangladesh's Interest

Editorial, News and Commercial
Room 509, Eastern Trade Center
56 Inner Circular Road (VIP Road)
Naya Paltan. GPO Box : 677
Dhaka-1000, Bangladesh
Tel & Fax : 88-02-8354532
Email: ep@dhaka.net
energypower@gmail.com
Website: www.ep-bd.com

Price
Bangladesh: Tk 25, SAARC: US$ 3, Asia: US$ 5, Europe: US$ 6, North America, Africa & Australia: US$ 7.5

EDITORIAL

ENERGY & POWER

Bangladesh has finally made a long awaited deep-sea gas exploration deal with US company ConocoPhillips awarding them two blocks in the Bay of Bengal. Although it was done through a standard production sharing contract, a section of citizens raised protests and even called hartal saying that the country's interests have not been protected in the deal. They particularly protested the export option arguing that the country would be deprived of much of the gas to be explored. On the other hand, the government has not made a clear cut statement to refute this particular allegation. Therefore, the debate is going on. And the people are a bit confused. They don't know whether the protests are justified or the government is correct. The situation arose just because of lack of transparency in making the deal. The government must make it clear all the provisions made the contract and let people know that the country's interests are well protected, otherwise the government will have to face agitation while making such deal in future. The country badly needs gas and there is no alternative to explore all the options to increase gas production.

highlights

43 The Bangladesh PSC has ensured the ownership of the people on the oil and gas resources as well as protected the sole authority of Petrobangla in controlling the use of oil or gas to be extracted. The contracting company under the PSC does not have this authority. Associate Professor of Law of Chittagong University Dr Abdullah Al Faruque has expressed the view in an exclusive interview with EP.

9 At present four IOCs are producing gas from five Bangladesh gas fields. The Jalalabad, run by US company Chevron, produces 150 MMCFD. Bangladesh's share is 78 percent of the gas while Chevron 22 percent. If the production is more than 150 MMCFD and less than 300 MMCFD, Petrobangla owns 80 percent and the rest 20 percent Chevron. Bangladesh gets 83 percent if the production at Jalalabad is more than 300 MMCFD.

COVER

Published by the Editor from 187 Elephant Road (Raj Complex), Dhaka 1205
& Printed at Ananda Printers, 166 Arambagh, Dhaka 1000, Bangladesh

Content

Green Page


Green page

Call for Green Energy Fund to Enhance Energy Capacity

The Energy & Power had introduced Green Page marking its stepping into the 7th year to campaign for efficient use of energy, energy conservation and using environment-friendly energy. Encouraged by the readers and patrons, the EP decided to continue with the pages as it is stepping into the 8th year. The EP would make its best effort to keep up the campaign

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India to Press Ahead on Nuke Power

India's Commerce Minister called for more cooperation with the United States on nuclear energy and brushed aside talk of scrapping ambitious plans in the wake of Japan's Fukushima crisis.

On a visit to Washington, Commerce Minister Anand Sharma said he has faced questions on whether India should rethink its nuclear energy policy and responded flatly: "My answer was no."

India's fast-growing economy is heavily dependent on highly pollutant coal and imports of crude oil. Less than three percent of India's electricity comes from nuclear power but it hopes to raise the figure to 25 percent by 2050. France, Russia and private US and Japanese firms are in fierce competition to sell new reactors to India.

Power Crisis to End by 2030 in Pakistan

The Pakistan federal government has approved an energy security action plan that targets an end to the power crisis by 2030.

The plan also envisages production of additional 8,800MW through nuclear power plants coupled with promotion of alternative energy resources for production.

Officials said that a new nuclear power plant will start producing 340MW in June while construction on two similar projects is also under way. Another 1,000MW project is proposed to be set up in Karachi, according to the plan.

They said that talks with nuclear plant suppliers are in process for the promotion of nuclear power plants in Pakistan. The government is also trying to encourage local investors and companies in energy production.

The officials said that the plan will help Pakistan overcome the prevailing energy crisis and also reduce energy cost. The officials said that sites for more nuclear power plants were being reviewed.

They added that the plants will bring billions of rupees of investment amid helping social and economic development in Pakistan.

India Increases Coal Imports by 43%

Electricity utilities in India increased imports of coal by 43 percent in May to 2.97 million metric tons from a year earlier, reported India Coal Market Watch.

Imports in April were at 2.34 million tons.

The Central Electricity Authority, a supervisory body, has set a target of 35 million tons of imported power-plant coal for the year ending March 2012, the newsletter said.

Domestic coal supplies to power plants fell 7 percent to 28.54 million tons in May from a year earlier.

ADB Pledges US$ 120M For SL

The Asian Development Bank (ADB) has agreed to provide financial assistance of US$ 120 million for the implementation of Sustainable Power Sector Support Project in Sri Lanka in line with the government's target of providing electricity to all households by end of 2012.

The project will contribute to a reliable, adequate and affordable power supply for balanced and sustainable economic growth in Sri Lanka and increase electricity connections in rural areas, specifically in the Eastern, North Central, Southern and Uva Provinces.

In this connection, Secretary, Ministry of Finance and Planning, on behalf of the Government of Sri Lanka and on behalf of ADB, Candice McDeigan Head Portfolio Management Unit of the Sri Lanka Resident Mission of ADB, signed two Loan Agreements.

The total investment cost of the project is US$ 162.03 million (Rs 17,553 million) of which US$ 42.03 million (Rs 4,553 million) will be provided by the government of Sri Lanka. The total loan from the ADB includes a loan of US$ 10 million (Rs 1,083 million) from the Asian Development Fund (ADF) and a loan of US$ 110 million (Rs 11,917 million) from Ordinary Capital Resources (OCR).

The Ceylon Electricity Board (CEB) and Sustainable Energy Authority (SEA), under the Ministry of Power and Energy will be the project implementing agencies. The project is scheduled to be completed by April 2014.

Sri Lanka to Monitor Radiation from India

Sri Lanka will set up a body to deal with radiation emergencies that may arise in the event of any accident at nuclear power plants in neighboring India.

The cabinet approved the setting up of the Atomic Energy Regulatory Council, said a government statement.

"Since Sri Lanka is in close proximity to the nuclear power stations in south India, it has been found necessary to establish an independent regulatory arm in keeping with the advice given by the International Atomic Energy Agency," the statement said.

Sri Lanka and India are divided by a narrow strip of sea, known as the Palk Straits. The recent nuclear disaster in Japan put Sri Lanka on alert over the threat the island may face if a similar disaster occurred in India.

The government will replace the country's existing Atomic Energy Act in order to introduce nuclear power technology in the country, the statement added.

Chevron to Drill 18 Wells to Increase Gas Production

Chevron to Drill 18 Wells to Increase Gas Production Chevron, the USA based oil and gas Company, is set to drill 16 development wells and two exploratory wells at Jalalabad, Moulvibazar and Bibiyana gas fields in the next one year.

The international oil campany has been asked to increase gas production by 1,000 mmcfd from these three fields by 2012 to enhance country's gas output from 2200 to 3300 mmcfd.

"Chevron will drill 16 development wells in Jalalabad, Moulvibazar and Bibiyana, however two exploratory wells would be drilled at Jalalabad and Bibiyana to assess the reserve of these two fields," said Petrobangla Chairman Dr. Hossain Monsur.

According to Petrobangla, Chevron submitted a US$ 350 million capital budget to carry out the plan.

"To conduct the drilling operations we need one year as we have to construct concrete drilling pit, mobilize drilling rig and associated equipment, management and treatment of waste and decommissioning of rig and materials," said a Chevron official.

He said the crucial issue related with this development plan is pipeline constraint.

According to the Petrobangla, to improve the gas flow from north to south it needed to implement some pipeline project.

Chevron is producing nearly 920 mmcfd from three gas fields in Moulvibazar, Jalalabad and Bibiyana which is half of the country's daily gas production

Energypac Power Signs Deal with CPA

Energypac Power Generation (EPGL), one of the leading companies in energy and power sector of Bangladesh, has signed a contract with Chittagong Port Authority (CPA) for installation, testing and commissioning of 20 High Mast Lighting System at different locations of the yard.

Captain Anwarul Hoque Chowdhury, (E), psc, BN, MEMBER (Engineering) and Commodore Anwarul Islam, ndu, afwe, psc, BN, Chairman, CPA signed the deals.

On behalf of Energypac Power Generation Ltd. Engr. Md. Irteza Hossain, Head of Project Division (BPR) signed the paper.

Engr. Abdul Khaleque, DGM, Energypac Engineering Ltd, Engr. Md. Abu Ismail, Director (Elec & Mech), Chittagong Port Authority and other key officials from both organizations were also present on the occasion.

Titas Gas Launches Project to Improve Gas Supply

The state-owned Titas Gas Transmission and Distribution Company Ltd (TGTDCL) is going to undertake a project to improve its gas supply efficiency with the consultancy support of Pegasus International (UK) Ltd.

The TGTDCL has signed a deal with the UK-based company on June 14.

The total estimated cost of the 'Supply Efficiency Improvement Project' is over Tk 555.20 million. Among the cost, the Asian Development Bank (ADB) will provide over Tk 347.02 million, and Bangladesh government will provide over Tk 208.18.

TGTDCL Managing Director Muhammad Abdul Aziz Khan said that they were going to run the project to improve gas supply efficiency in Dhaka and adjacent areas under the Titas coverage, and ensure cost-effective use of gas.

He said the project envisages improvement of supply efficiency through reducing wastage of gas by domestic customers, combating gas pilferage by dishonest industrial consumers and captive power plants, and ensuring efficient utilization of gas in gas-based industrial units and power generation.

Padma Oil Submits Papers to SEC

The state-owned oil company-Padma Oil Company Limited-has submitted all necessary documents to the securities regulator related to resumption of its shares trading.

A top official of the Securities and Exchange Commission (SEC) said the regulator will discuss the issue at its next meeting.

On March 30 last, Dhaka Stock Exchange (DSE) suspended the share trading of Padma Oil as the Board of Directors of the company halted its earlier recommended dividend by breaching the securities rules.

In December 2010, the board of the company recommended 100 percent cash dividend for the year that ended on June 30, 2010.

On January 2, 2011, the High Court issued a three-month stay order on distribution of recommended dividends following a writ petition filed by an investor challenging the declaration.

Then on March 21, 2010, the board halted its previous declaration and recommended 50 per cent cash and 50 per cent stock dividends.

Under the circumstances, the DSE suspended the trading of the company's shares following a directive of the SEC.

Standard Chartered to Finance $20m Power Plant Project

Standard Chartered Bank has become the sole facilitator for a 5-year term financing of $20 million for the Khanjahan Ali Power Company Ltd for its 40 MW power plant in Noapara of Jessore.

Jim McCabe, CEO of Standard Chartered Bank, Bangladesh, and K. M. Ahsan Shamim, Director of Khanjahan Ali Power Company Ltd, signed a deal in this regard at the head office of United Group in the city recently.

Hasan Mahmood Raja, Chairman of United Group, Ayesha Aziz Khan, Finance Director and Jafer Ummeed Khan, Director, of Summit Group, Venkataramanan Anantharaman, Head of OCC, India and South Asia, Nirukt Sapru, Head of Growth Markets, South East Asia and South Asia, Milan Mehra, Head of Regional Structured Trade Finance and Financing Solutions, Abrar Anwar, Head of Origination and Client Coverage, Mahfuzur Rahman, Head of CTA, Arif Ainul Suman and Director-CTA, Syed Shadman Rahim, Associate Director, Financial Market Sales of Standard Chartered Bank, were also present at the signing ceremony.

Jim McCabe said “We are proud to be the sole financer for this 40 MW power plant and once again be a partner in progress for Bangladesh.”

United Group Chairman Hasan Mahmood Raja said “We are very pleased to have contributed to country’s power supply and we thank Standard Chartered Bank who came forward to finance a viable project and has provided us the right financial package with pertinent currency and interest rate hedging tools.”

BKMEA Asks Govt to Cut Furnace Oil Prices

Bangladesh Knitwear Manufacturers and Exporters Association urged the government to reduce the prices of furnace oil to be used as an alternative to high-cost fossil fuel.

In a statement, BKMEA also asked the government to keep tax at source at 0.40 percent instead of pushing it up to 1.50 percent on all exportable goods and withdraw 15 percent and 9 percent value-added taxes on rented industrial houses, effective from June 11, 2009 and January 1, 2011.

The leaders of the association at a meeting at Narayanganj Club welcomed the budget proposal for fiscal 2011-12 for proposing cuts in duty on import of chemicals used for running the effluent treatment plants, increasing the period of bond license renewal from one year to two, special incentives to the knitwear sector and duty reduction on cotton waste, potassium nitrites and potassium carbonates.

Govt to Provide 6Lacs New Power Connections

The government has decided to provide prospective consumers with over 600,000 new electricity connections by December this year.

The decision was taken at a meeting of the Ministry of Power, Energy and Mineral Resources at Bangladesh Secretariat, with State Minister Muhammed Enamul Huq in the chair.

Prime Advisor Dr Tawfiq-e-Elahi Chowdhury, Power Division Secretary Md Abul Kalam Azad and managing directors of power distribution agencies attended the meeting.

BPC to Pay 3.3% Premium to Kuwait Petroleum

Bangladesh Petroleum Corporation (BPC) will pay 3.30 percent premium to Kuwait Petroleum Corporation (KPC) for the next six months.

"We will pay 3.30 percent premium to KPC for July - December period. However, they (KPC) asked for five percent premium", said a top BPC official.

The new rate will be effective from the month of July.

BPC has a deal with KPC under which the Kuwaiti oil company will provide 520,000 tonnes of diesel at a premium of US$3.15 per barrel and 140,000 tonnes of jet fuel at a premium of $4.40 per barrel. Kuwait is the major supplier of diesel and jet fuel to Bangladesh. BPC settled the premium rate issue last week at Dubai under which the KPC will ensure the supply of diesel on 60-day delayed payment basis during July-December 2011.

BPC officials said it has also fixed the premium with Emirates National oil company and Malaysian Oil Company at the same rate.

BPC projected to raise its annual oil import by over 40 percent to 4.85 million MT from the current 3.70 million MT from next year as the country has moved to tackle the power crisis installing diesel- based power plants.

Two Power Projects Get Nod for Foreign Funds

The government has approved proposals of two power projects for receiving foreign funds, involving $45.5 million.

Standard Charted Bank will provide the loans in foreign currency, said a Bangladesh Bank (BB) press release.

The scrutiny committee for foreign loans, headed by BB Governor Atiur Rahman, gave the approval.

United Ashuganj Power Limited is taking $26 million loan repayable in 34 months and Khanjahan Power Company Limited has got a sanction of $19.5 million for 56 months respectively at an interest rate of LIBOR+4.0 per cent.

> **The company is bound to sell to the government at the price mentioned in the PSC from its share found as cost recovery. The rest is distributed between the government and the IOC as profit gas...**

PSC With ConocoPhillips

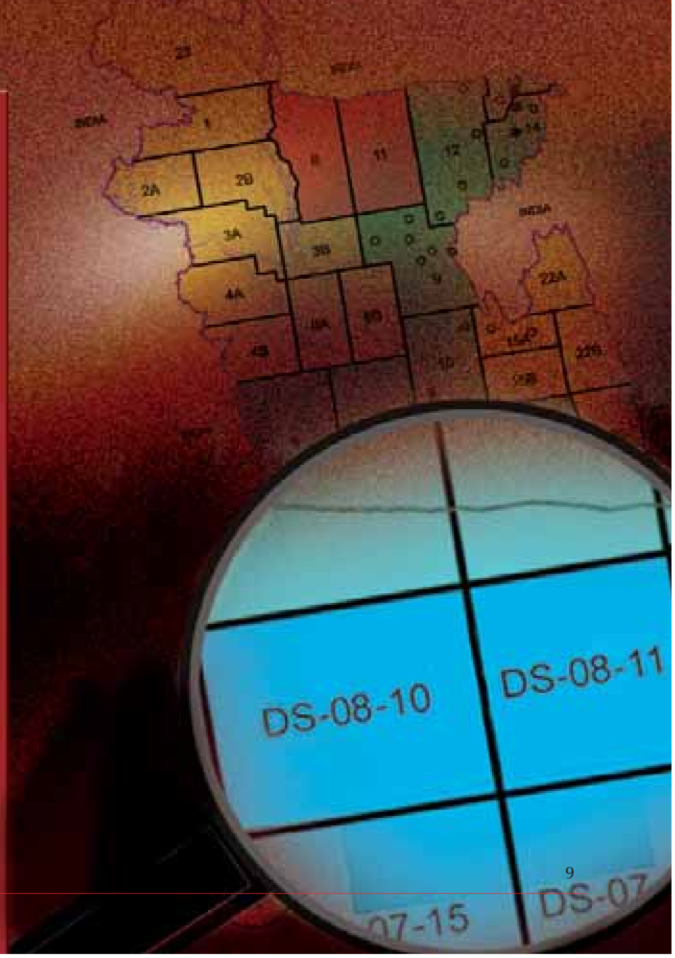
Zahid Newaz Khan

Production Sharing Contract (PSC) is again a matter of national debate in the country after the state-run Petrobangla signed PSCs with US-headquartered ConocoPhillips for oil and gas exploration in two deepwater gas blocks offshore Bangladesh in the Bay of Bengal.

Such a debate in Bangladesh is nothing new although it's not between the two major political parties who take opposite position to almost every other issue.

Once again the opposition came from a small group of people who have extended the name of their organization from oil-gas protection committee (OGPC) to "national committee to protect oil-gas, natural resources and power-port".

Even the Prime Minister Sheikh Hasina herself reacted to their claim that the national interest was not protected in signing the deal with the ConocoPhillips that the group claimed to be



"anti-state". She also accused the committee of not taking the side of people when the country was facing severe crises of electricity and gas that her government inherited from the past regimes and is trying hard to solve it.

Under the PSCs, ConocoPhillips won the right to conduct hydrocarbon exploration in DS-08-10 and DS-08-11 spanning a total area of 5,158 square kilometers (1,992 square miles), 280 km (174 miles) off Chittagong, where water depths are 1,000-1,500 meters.

The US-based company can explore 70% of DS-08-10 and 85% of DS-08-11, with the rest in limbo until the maritime boundary dispute with India and Myanmar is resolved.

The OGPC's arguments are:

1. Country should explore its natural resources by its own companies instead of PSC.

2. If gas is discovered it will be exported in the form of LNG.

3. Bangladesh has to purchase gas from ConocoPhillips at a higher price.

4. Offshore natural resources will be destroyed at the hands of the foreigners.

5. The country will not be able to realize compensation in case of any accident.

6. The offshore exploration will create political and military tension in the region.

However, the government refused each and every apprehension and claimed that every clause of the PSC protected Bangladesh's interest and benefit.

PSC

PSC is an agreement between a government and an international oil company (IOC) for exploration, development and production of oil and gas.

Countries not having financial and technical capacity to explore oil and gas sign such PSCs. Even some countries, including Saudi Arabia, having the capacity go for such contracts to avoid the risk of investment in case "no discovery".

One can take even the example of Bangladesh. The IOCs invested US$ 2.2 billion in Bangladesh since 1992. But, the companies had the scope of cost recovery of only US$ 1.25 billion as they didn't find any recoverable reserves by the investment of rest US$ 1.0 billion. Had Bangladesh invested the money the country would have counted the billion dollars simply as wastage.

The critics of PSC argue that Bangladesh could have hired the technology for offshore exploration. Apparently it sounds good. But, in making the point they forget the fact that the country not only lacked in technology but also in required huge investment. If the technology and human resources are hired and no discovery takes place finally Bangladesh would have bear the huge investment cost. In case of PSC the cost is totally of the IOC.

Also, globally PSC is now the most accepted way of international contracts for oil and gas exploration as it ensures the ownership of the state. On the other hand, the previous practice of concession and royalty made the company owner of a block.

Moreover, the model PSC of 2008 under which Bangladesh signed PSC with ConocoPhillips has certain changes compared to previous ones that protected more interest of the country.

Cost Recovery

If an IOC, under a PSC, discovers oil and gas by totally its own investment, and if the reserve is commercially viable for production the company again by its own investment goes for development and production program. Once the production starts, the company gets a share of oil or gas for cost recovery of its investment.

The company is bound to sell to the government at the price mentioned in the PSC from its share found as cost recovery. The rest is distributed between the government and the IOC as profit gas.

The PSC signed with the ConocoPhillips is more balanced as the 2008 model PSC, prepared after reviewing the PSCs of India, Pakistan, Malaysia, Vietnam, Trinidad, East Timor and some other countries, has two major developments

1. It ensured that the contracting company will pay all taxes and duties. According to previous PSCs, Petrobangla had to bear the tax-duty costs.

2. It cancelled the provision of negotiations alongside bidding. The model PSC ensured selection of a company only through competitive bidding internationally.

The critics, including the OGPC, claimed that 80 percent of the gas will be owned by the IOC while 20 percent by Bangladesh. A simple data will clarify that it's a misconception.

According to the daily gas report of Petrobangla, the supply on June 21 was 2002 MMCFD. Of the supplied gas, 953 MMCFD (48 percent) was by NOCs while 1,048 (52 percent) MMCFD by IOCs. Bangladesh is getting 60 percent of the IOCs supplied gas as profit gas.

Bangladesh's Share

At present four IOCs are producing gas from five Bangladesh gas fields. The Jalalabad, run by US company Chevron, produces 150 MMCFD. Bangladesh's share is 78 percent of the gas while Chevron 22 percent. If the production is more than 150 MMCFD and less than 300 MMCFD, Petrobangla owns 80 percent and the rest 20 percent Chevron. Bangladesh gets 83 percent if the production at Jalalabad is more than 300 MMCFD.

Bangladesh is getting higher share in the produced gas as the field was discovered earlier. Almost similar sharing takes place for Moulvibazar as PSC was signed with the Chevron after the field was identified.

In Moulvibazar field, the country gets 70 percent and Chevorn 30 percent if the production is 150 MMCFD. If production is 150 MMCFD plus, but less than 300 MMCFD, Bangladesh and Chevron's share is 73 and 27 percent respectively. And Bangladesh's share becomes 75 percent when the production is 300 MMCFD plus.

But, Bangladesh's share is not less in the gas fields discovered by the IOCs themselves.

Bibiyana was discovered by Chevron. According to the PSC, Bangladesh owns 68 percent and Chevron 32 percent for 300 MMCFD plus production. At present, the production is much higher than the 300 MMCFD mark.

Not only with Chevron, similar sharing takes place for other IOCs, too.

Bangladesh's share in Bangura field of Irish company Tullow during the cost recovery period was 61 percent. After the cost recovery, the country gets 66-85 percent, subject to volume of production.

In offshore Sangu, Bangladesh and Australian Santos share 50 percent each if the production is up to 100 MMCFD. If the production is up to 150 MMCFD, Bangladesh gets 55 percent while 65 percent for production up to 250 MMCFD, 75 percent for 350 MMCFD, 85 percent for 450 MMCFD and 87 percent for 450 MMCFD plus production.

Sharing with ConocoPhillips

According to the PSC, ConocoPhillips will get at best 55 percent of total produced gas during the cost recovery period of its investment. The rest 45 percent will be distributed between the ConocoPhillips and the Petrobangla as profit gas. The distribution will take place as per daily production.

After the cost recovery, Petrobangla will get 50 to 80 percent of total gas and 60 to 85 percent of oil or condensate.

Another argument by the OGPC is that if Bangladesh can invest for pipeline why not for exploration. Apparently this is a good point. But, again it's the question of risk investment.

The question is as to when Bangladesh will spend money from the offshore pipeline. The answer is when there is a commercial discovery, not before that. So, it's not a risk investment as the investment will take place only when it's certain that there is enough gas reserve and Bangladesh can transmit its profit gas (55%-80%) or from the portion of ConocoPhillips which is bound to sell its share to Bangladesh from the offshore field.

While pipeline investment is totally risk-free, the investment for exploration is a total gambling. After spending millions of dollars for exploration the country can get nothing. But, if the investment is made by an IOC under the PSC, Bangladesh doesn't need to be worried at all.

Price of Gas

The price of gas to be purchased from ConocoPhillips in case of a commercial discovery has been fixed based on high sulfur fuel oil (HSFO) price in Singapore market. However, highest price of per metric ton HSFO has been fixed at US$ 180 (ceiling price) and lowest price US$ 70 (floor price).

Again the price of HSFO in Singapore market is always higher than that is mentioned in the PSC. It will be crystal clear if one considers the recent price of HSFO in Singapore which is from US$ 550 to US$ 600.

Price of HSFO in all the PSCs signed by Bangladesh is lower than the actual price. And that's how the country always gets gas at much lower price than its international price. The ConocoPhillips is not an exception, too.

LNG & Export Row

The OGPC and some civil society members in one side argue that Bangladesh will have to buy gas from ConocoPhillips at a higher price, and on the other they say Bangladesh will not be able to purchase gas from the IOC as the company will go for export as the Bangladesh's offer is lower than the price the US company will get from export.

Both versions are based on misconception.

From the pricing analysis, based on HSFO price in Singapore market, it's clear that Bangladesh is getting gas from the IOCs at a much lower tariff than the international market. It will also get gas from ConocoPhillips, if any offshore discovery by them, at a much lower price.

On the other hand, the ConocoPhillips has no option of exporting gas if Bangladesh buys from them.

According to the PSC, the gas the ConocoPhillips will get for cost recovery and as profit gas, has to be offered to sell to Bangladesh under the price mentioned in the PSC. Petrobangla will get six months time to make a response. If Petrobangla is not willing to buy the gas, the ConocoPhillips will then be able to initiate steps to sell the gas to a third party within the country.

If the two options, at first purchase by Petrobangla and then domestic third party, are exhausted only then the company will get the opportunity to go for export in LNG form. Still, it has to take Petrobangla's approval for selecting buyers as well as conditions of export and price of LNG.

The rising demand of gas in the country and its lower price compared to international market clearly show the chance of export by ConocoPhillips is very thin. It's a misconception that the Petrobangla will allow export keeping huge demand inside the country.

Again if the export takes place it has to be in the form of LNG. But, an LNG project is not viable if the reserve is less than 15 TCF

History said that all the PSCs of 1974, 1988, 1992 and 1997 had the option of export, but no export took place. The main reason is that the country itself has huge market.

The 1988 PSC had the option of both pipeline and LNG export. The 1992 PSC had also allowed the LNG form of export. Moreover, it had not compulsion of selling gas to a third party within the country in case of refusal by the Petrobangla to purchase gas. The 2008 PSC has made it mandatory. So, possibility of export has also lessened.

Apprehension of Military Tension

Bangladesh is lagging behind India and Myanmar in offshore exploration. While the neighbors had a good number of discoveries, Bangladesh is yet to start. One main reason of being "late Latif" is lack in farsightedness of the policymakers.

Then it witnessed a setback when the caretaker government took practical action for offshore exploration, due to opposition by the OGPC. At that time the group argued that the caretaker government has no right to sign PSC and it has to be kept for an elected government.

But, when the elected government took the decision to sign PSC with ConocoPhillips for two offshore blocks now they are saying it's anti-state.

Also, the OGPC leaders in one side claimed that the government suspended exploration in some areas of the two blocks following objection by India and Myanmar, to protect interest of the two countries. On the other hand they claimed that the exploration in two blocks will create political and military tension.

It's not clear that what's their real

position on the matter.

If the nation wants to meet the growing demand it has no alternative but to go for offshore exploration. But, at the same time it can't explore the disputed areas claimed both by Bangladesh and Myanmar as well as Bangladesh and India as the decision is pending with the United Nations following claim on the offshore blocks by the neighboring countries

It's now clear that neither India nor Myanmar has any objection on the areas ConocoPhillips will go for exploration. Also, ConocoPhillips has no objection as some areas of their awarded blocks will remain out of exploration due to the pending decision by the United Nations.

Compensation Row

It's alleged that the PSC doesn't have enough protection in case of any accident. However, confusion will be over if clause 10(19) is read which is: The Contractor shall obtain insurance coverage during the term of this Contract, for and in relation to Petroleum Operations for such amounts and against such risks as are specified below and/or as may be specifically agreed by Petrobangla, and shall furnish to Petrobangla policies/certificates evidencing that such coverage is in effect. Such insurance policies shall include Petrobangla as additional name insured and shall waive subrogation rights against Government and Petrobangla. The said insurance shall, without prejudice to the foregoing, cover:

a) Loss or damage to all installations, equipment and other assets for so long as they are used in or in connection with Petroleum Operations, provided however, that if for any reason the contractor fails to insure any such installation, equipment or assets it shall replace loss thereof or repair damage caused thereto without benefit of Cost Recovery.

b) Loss, damage or injury caused by pollution in the course of or as a result of Petroleum operations.

c) Loss of property or damage or bodily injury suffered by any third party in the course of or as a result of Petroleum Operations for which the Contractor may be liable.

d) Any claim for which Petrobangla may be liable relating to the loss of property or damage or bodily injury suffered by any third party in the course of Petroleum Operations.

e) The cost of cleaning up pollution following an accident in the course of or as a result of Petroleum Operations.

f) The cost of removing wreck or debris as a result of an accident during Petroleum Operations.

g) The Contractor's and/or Operators liability to its employees engaged in Petroleum Operations.

h) Cost of well control and re-drilling expenses in accordance with the Standard London Energy Exploration and Development wording (E.E.D.8.86) or such other form in common use in the International Petroleum Industry and as may be agreed by Petrobangla.

It said: Insurances specified in clause 10.19 (a) to (h) above to be concluded with local insurance companies in accordance with Bangladesh Insurance Law as long as coverage is available as above and in accordance with International Petroleum Industry Standards.

The PSC further said: In case of Petroleum that has been produced to the surface, Contractor shall ensure against such risks of loss and damage for such amount and with such insurer or insurers as may be agreed with Petrobangla, and shall nominate Petrobangla and Contractor as joint beneficiaries under such insurances. Any benefits arising there from shall be divided between the Parties in proportion to their respective entitlements to Petroleum at the relevant time. Insurances specified in clause 10.19 (a) to (h) above to be concluded with local insurance companies in accordance with Bangladesh Insurance Law as long as coverage is available as above and in accordance with International Petroleum Industry Standards.

In case of Petroleum that has been produced to the surface, Contractor shall ensure against such risks of loss and damage for such amount and with such insurer or insurers as may be agreed with Petrobangla, and shall nominate Petrobangla and Contractor as joint beneficiaries under such insurances. Any benefits arising there from shall be divided between the Parties in proportion to their respective entitlements to Petroleum at the relevant time.

Real Critical Point

The real critical point for Bangladesh in overseeing the PSCs, including with ConocoPhillips, is running the joint management committee (JMC) properly.

Like other fields, Bangladesh lacks in real experts who represented the Petrobangla in the JMC. So, if anything goes against Bangladesh's decision by the JMC it might be due to lack in expertise. So, a good option might be hiring real experts to represent the Petrobangla in the JMC.

A group like OGPC can really works as a pressure group if they keep the JMC under monitoring. A good sign is that the energy sector officials are now more careful in every deal and operation due to presence of such a pressure group.

But, unfortunate part is that a section of people talk in one way when serve the government, but take a U-turn when they are not in the government machinery.

Just take one example. Bangladesh's energy sector saw the first controversy when a discovered field, Jalalabad, was awarded to Occidental (Now Chevron) in 1992 with SKM Abdullah was Chairman of the Petrobangla. His argument was that small fishes have to be sacrificed to get big fishes. But, the same man joined the OGPC following his retirement and started campaign against the IOCs.

Without questioning anyone's patriotism it's better for the country if real experts talk about on real ground. That might bring fruit for the nation. Emotional and irrational demand will only hinder the energy sector development that will create sufferings for people.

But, the government should also try to avoid unnecessary controversy and debates. The present debate on ConocoPhillips deal is getting ground due non-disclosure of the PSC signed with the US company. The government should immediately disclose it.

EP

Zahid Newaz Khan,
News Editor, Channel I

PSC: Setting The Records Straight

Mohammad Mejbahuddin

The recent debate over signing of the Production Sharing Contract (PSC) with a US company, ConocoPhillips, has been driven mainly by inadequate information and misunderstanding of the provisions of the contract. In the midst of confusion, we have also seen objective reporting by a number of major print and electronic media, which helped to remove some of the confusions surrounding the PSC.

The PSC has been concluded protecting our national interest keeping aside any other considerations. It is a common knowledge that our proven reserve of natural gas is about 8 Tcf, which can supply energy for a maximum of 7 years.

The imperative of energy security for Bangladesh demands ensuring access to all forms of energy resources, including the natural gas -- the energy of choice for the country. In order to exploit the untapped energy potentials of our extended continental shelf, a renowned oil and gas company has been assigned the responsibility of exploration at the deep sea constituting blocks 10 and 11.

Some people have expressed the view that we could have engaged our national company BAPEX to do the same work. While I fully empathize with this feeling, it must be clearly understood that BAPEX is yet to attain technical prowess and financial muscle to venture into the hydrocarbon exploration at deep sea. A day will definitely come in future when BAPEX like Petronas of Malaysia will be equipped to undertake drilling activities in our deep sea blocks.

But, if we choose to wait for our national companies to grow in strength and then explore our energy resources it will be suicidal. Enhanced supply of energy will be a sine qua non for increasing the energy intensity to reach a double digit GDP growth rate for Bangladesh.We may choose to delay but time will not (Benjamin Franklin).

We must act now and explore all avenues to ensure energy security for Bangladesh. We cannot afford to wait when the country is reeling from severe energy shortage. Any delay on our part to tackle this crisis head-on will be akin to the historical spectacle when Emperor Nero fiddled when Rome was burning.

The debate and controversies have centered around two aspects of the PSC, namely, export of gas and share of Bangladesh.

It is a matter of record that all previous PSCs have provision for export with prior permission from the government should Petrobangla and other prospective customers decide not to take gas from the contractor under the PSC. Despite inclusion of the export provision, we have not had any occasion of exporting gas from our currently producing fields. The export provision can only trigger if our full domestic requirements are met and there is no buyer for the contractor's share of gas. In all likelihood, the export window will remain a theoretical possibility. It not only presupposes a big commercial discovery in the range of 6/7 Tcf but also huge investment, if government agrees, of between US$ 2.5- 3.0 billion for a medium-sized liquefaction plant.

The argument against export comes not from economic considerations. Rather the desire is to keep our energy resource for future consumption by us. For argument's sake, if we are lucky to strike a big reserve in deep waters, we can always avoid export by foreign companies through conserving and controlling production in the fields run by our national companies.

The most outrageous part of the debate involves assertion by some quarters that Bangladesh will get only 20 percent of gas if there is commercial production.

Mohammad Mejbahuddin

This only exposes the soft underbelly of their mathematical reasoning. Nothing can be far from the truth. We must not lose sight of the fact that actual benefit must be assessed only after we take into account the cost incurred in developing and operating any field. The accounting of the cost must be done not only for IOC but also for national company.

Once cost recovery is done our share of profit gas (free) will range between 55 to 80 percent depending on level of production. More production will mean greater share for us. To take one example, Petrobangla currently gets about 75 percent of production from Bibiyana field being operated by Chevron as profit gas.

However, the profit sharing arrangement will be different in case of blocks 10 and 11 given significant differences in cost implications of developing and operating a gas field located in our extended continental shelf. Ultimately Bangladesh's share will depend on the actual size of the reserve as well as cost that need to be incurred to bring the hydrocarbon resources to the doorsteps of consumers in Bangladesh.

It is premature to pass judgment about our share of profit gas other than the range mentioned above let alone putting any definite number at this point in time to indicate our share.

The PSC that the government signed with ConocoPhillips is a balanced one based dominantly on the provisions of Model PSC 2008.

One major improvement over other operating PSCs is that Conoco will be paying its corporate tax if there is a commercial discovery whereas Petrobangla pays tax of companies currently working under already signed PSCs.

In respect of price of gas at which contractor will be obligated to sell to Petrobangla, the PSC with ConocoPhillips puts a price cap indexed to price of HSFO. This implies that Petrobangla will be buying contractor's share at a relatively stable price irrespective of prices obtaining in international market.

The current estimate is that purchase price of gas will hover around US$ 4.50/Mcf. If we consider the fact that the contractor will have to pay corporate tax at the going rate then the price of per unit of gas will be even lower.

As against this, Indian PSC allows arms length sale by contractors where price is determined by the interaction of the market forces. It is obvious that our PSCs including the one with Conoco provides protection from unpredictable upward movements in energy prices.

EP

Mohammad Mejbahuddin,
Secretary,
Energy & Mineral Resources Division

Negative Intentions & Reality

Prof. Dr. Md. Hussain Monsur

Md. Hussain Monsur

Bangladesh, so far, has explored a limited quantity of indigenous natural gas reserves. Proven gas reserve is not enough to sustain long. Already connected natural gas supply to power, industry, fertilizer, commercial, domestic and other sectors is worriedly looking for the gas abundance to meet future demand. If gas reserve is not enhanced through exploration and development, the further expansion of all these sectors will either be stagnant or be bound to find import markets for primary energy sources. In such case, the importing cost will be much higher than the domestic gas price and may cause negative impact on the gas consuming sectors and the economy of the country. The consequences shall have to be borne by the country's end users that are the general public. Therefore, considering diversified challenges and to ensure energy security by 2021, the country has no alternative but to go for immediate hunt for exploring new gas fields irrespective of offshore or onshore areas.

Country's onshore gas resource/reserve status is well addressed and has got a momentum, but it is not enough to cope up with increasing gas demand. Deep offshore area is still virgin and this huge area is left unattended. It deserves immediate hunting to know whether any oil and gas reserve exists in the offshore subsurface or not.

Our neighboring countries India and Myanmar have been conducting oil/gas exploration operation under PSCs near the respective deep sea borders. Disputes are there in regard to maritime boundary. Bangladesh's right has to be established in the deep sea. Deep sea exploration is risky and huge cost dependent by technological nature itself. Specialized expertise, equipment, technology and manpower are necessary. Till to the tenure of the recent past government, country's only oil and gas exploration company BAPEX was to drill wells with 22 to 32 years' old rigs. Present government has already procured one onshore deep drilling rig and one more is to be procured very soon. Offshore technology oriented rig, equipment and experienced manpower are not at all available in BAPEX. It is not in the state of the art stage to conduct so highly technological and risk oriented exploration jobs in the deep sea. Moreover, exploration job does not guarantee to find oil/gas. It is dependent on the existence of oil/gas in the sub-surface. It can be confirmed only upon drilling upto the reservoir depth after spending of huge money as applicable by nature of the job. If no gas is found, the whole efforts will go in vein and the money is lost. Therefore, the steps as have been taken to signing Production Sharing Contract for Bangladesh Deep Sea Blocks DS-08-10 and DS-08-11 appear justified and for the sake of the country.

Some Contract Highlights of the PSC With ConocoPhillips

Contract area is located about 280 kilometers distance from the Chittagong port. Water depth varies from 1.00km to the 1.50 km. Tentative drilling depth from the sea bed is minimum 2.20 km, and from the water surface it stands to be from 3.20 km to 3.70 km deep. Until oil/gas is discovered, the contractor will bear all technical and financial risks and liabilities. Petrobangla or the government will not bear any of such risks and finance. If gas is discovered, then contractor should prove that the reserve is commercially viable. The ownership of the gas reservoir will remain with Petrobangla, thereby with the govt./nation which is ensured in the contract. Contractor will then be allowed to recover its cost from a share of gas to be produced which is maximum 55% of the produced gas per year. Remaining portion is termed as the "Profit Share", out of which Petrobangla's share will be from 60% to 85% for oil/condensate and from 55% to 80% for gas production. That means, the more the daily production will be there, Petrobangla's share will increase as per slabs indicated in the contract.

Contractor's exploration and development programs including financial involvement will require Petrobangla's prior approval/consent. Mandatory exploration jobs (seismic surveys and exploration drilling) are defined in the contract. Failure to drill exploration wells will result the contract termination after 3 years. Gradually Bangladeshi minimum employment is 50% during exploration period and minimum 70% by 10th production year. Contractor cannot claim gas prices unlimited. The Floor and Ceiling prices are limited within $70 to $180 to be calculated based on HSFO Singapore for natural gas, and on the 3 selected crude in Singapore market FOB prices basis for Oil/Condensate.

Contractor is bound to deliver its own share to Petrobangla and Petrobangla will pay the price of contractor's share gas as per contract rate. Contractor may consider selling of gas to 3rd party within the country only when Petrobangla will find no consumer within the country and as such refuses to get this gas. Here, Petrobangla's consent is a must. If no 3rd party consumer within the country is found, the contractor may consider to covert the gas into LNG to export after Petrobangla's approval. It may be noted that, some portion of such LNG will have a share of Petrobangla's profit share gas and its price will be of the same price of LNG and be the Petrobangla's own share. However, it is remarkable to note that present government has decided not to export gas/LNG until 50 years of contingent stock is ensured for country's future demand meet. Right at this moment, government has decided to import LNG to meet country's demand. Accordingly its infrastructures including construction of FSRU and LNG terminals are under construction process. Since Bangladesh itself has decided to import LNG, in that case the question of exporting LNG does not arise.

Therefore, applicability of LNG conversion and export step will arise only when the country's gas demand is completely met and it is surplus. Nevertheless, Petrobangla has the right to have a contingent stock of maximum 20% gas out of surplus exportable gas in LNG form. A minor corner explains it as the 20% of the total producible gas, which is completely wrong, misconception and misleading. I think, conscious people of the country will understand the reality and the national interest of the Deep Sea PSC signing. Of course, they will nullify the negative intentions of the vested corners.

EP

Prof. Dr. Md. Hussain Monsur
Chairman, Petrobangla

Disclose PSC, Clear Confusion

Nahid Anjum Siddiqui

The production sharing contract (PSC) with US company ConocoPhillips has become one of the most debated issues in the country. The debate would perhaps rank next to the debate over the amendment to the Constitution of the country. It is now well evident that the people of all section, particularly the conscious and politically sensitive ones, often and again are locking in arguments and counter arguments on the issues at every corner of the country. The nation even witnessed a half-day hartal in September 2009 when the government approved the Conoco proposal on the deep offshore blocks. The National Committee on Protecting Oil, Gas, Mineral Resources, Power and Port (OGPC) also announced a half-day hartal program on July 3, protesting the signing of the agreement.

The Energy & Power took an initiative to seek opinions on the PSC from the informed society – be they politicians or civil society members. The news survey suggested that the opinion leaders have expressed almost a similar view that the government should disclose the agreement to clear the confusion created over the issue. They also tried to look at the concerns over the provision of gas exports and the share of gas to be discovered from the deep offshore blocks 10 and 11.

Following are the excerpts from the opinion as expressed by the experts:

Dr. M. Tamim
Professor, Department of Petroleum and Mineral Resources, BUET

Export is the main issue of opposing this contract. Hypothetically, if a small field (1 TCF or less) is found spending $110 million, the decision of development that may run up to 500-600 million US dollars will depend on the economics of the project. If the company declares it as commercial discovery and Bangladesh wants to buy the gas, it is likely that the company will never be able to recover its cost. Even then, if they go ahead (extremely unlikely), for Bangladesh, a minimum of 25% of the entire gas as profit gas is ensured in the contract. The present ceiling fixes the gas price at $4.5/MCF. After recovering tax from the company, the effective gas price is about $4/MCF. The final cost of the gas including our profit gas would be $3/MCF. This would be a fantastic deal. In case Bangladesh refuses to buy it, there is absolutely no chance for the company to invest $2 billion for an offshore LNG plant.

Dr. M Tamim

Looking at the other extreme of probability, let us say that 5-10 TCF gas is found. Each TCF is capable of producing 200 MMCFD for 15 years. So, 5-10 TCF gas will allow production of 1,000 MMCFD to 2,000 MMCFD. Presently Bangladesh is producing 2,000 MMCFD with a deficit of 500 MMCFD. The projection is by next 10 years the demand will easily exceed 4,000 MMCFD. Even in case of a quick success, the offshore development will take at least five years to come on stream. With a large discovery and the same or little higher development cost, the cost recovery will be realized in 4-5 years time. In the long run, Bangladesh's

AKM Mosharraf Hossain

cumulative share in a large discovery will be over 60% (conservatively). As a result, the effective gas price will be only $1.6/MCF.

The next question is will Bangladesh be able to buy 2,000 MMCFD gas? It will be extremely difficult for Petrobangla to maintain even the present level of production for the next five years as many of its fields are gradually declining. There is no other alternative to discovering new gas fields - whether onshore or offshore to meet the future demand. The question of being unable to buy even 2,000 MMCFD at an effective price of $1.6/MCF does not arise at all because the present import option of LNG price is not less than $10/MCF.

Any contract may be questioned on many issues but that must be based on facts and rationale, not cynicism. On the basis of the PSCs being carried out for the last 13 years in the country, the offshore 2008 contract is well balanced and protects the interest of the country. Petrobangla has handled the existing contracts fairly well (there is always room for improvement) and I believe that with proper monitoring and attention they will do a good job in the future too.

AKM Mosharraf Hossain

Former State Minister for Energy

I don't see any problem in the PSC if the company is selected through a transparent bidding system. However, I am not sure whether it was international standard. If so, it was a good initiative. On the other hand, OGPC is damaging the interest of the country in the name of protecting the resources as they are forcing the country into a crisis.

Meanwhile, we are wasting gas through generating electricity. So we should extract coal for this purpose. Otherwise, it would be a criminal offense.

And there is no alternative to extract coal through open-pit mining method. We should keep in mind that the OGPC is opposing exploration of the resources not for the interest of the country, but for their publicity and increasing their importance. They are hatching conspiracy to create an energy crisis of big nature through forcing the government to keep the resources underground.

Mahmudur Rahman

Former Energy Adviser

There is no alternative to explore oil and gas through PSC to meet the massive demand for gas in the country. In this consideration, the PSC signed with Conoco was positive. We have had arranged withdrawal of the court's embargo to initiate offshore bidding. But the confusion created among the people over the PSC due to the selection process that was not transparent. That means, the selection process was not open to the people as to why the company was selected. Many think that the government signed the agreement with a US company to cover the affected relationship with USA over the issue of Dr Yunus. The government is com-

Mahmudur Rahman

Maj Gen (Retd.) Subid Ali Bhuiyan, MP

pletely failed to remove the people's confusion over the PSC.

I did not have a look at the PSC. But there are saying that we will have to buy the gas at international market price. If it is so, we are the losers. I do not also think that the rights given to the company to sell gas to third party is right. I think, there is a huge demand for gas in the country and Petrobangla is capable to distribute the gas after buying it from the company.

However, foreign companies should not be allowed to explore the onshore blocks. BAPEX should be assigned to do it. On the other hand, I do not support the stance of the OGPC because they are opposing investments in this sector which are coming only from the western countries. They are not sparing a single word when the ports and transit facilities allowed to our next door neighbor. It seems to me based on the situation that they are working for the interest of a special country. On the other hand, the committee is opposing foreign investment in the energy sector, but not recommending any realistic alternative. What alternatives they are suggesting are utopian or unrealistic.

Maj Gen (Retd.) Subid Ali Bhuiyan, MP

Chairman, Parliamentary Standing Committee on Ministry of Power, Energy and Mineral Resources

The PSC with ConocoPhillips is the best one so far Bangladesh signed for exploration of gas and oil. The overall interest of the country as well as the people

Rashed Khan Menon, MP

was completely protected in this case. You all know that the people will have to be provided with power and to do that gas and coal must be there. We do not have any information about the reserve in the deep offshore fields while huge investment, experience and technology needed to know the information. So, the government had not an option to take an initiative better than the PSC. However, we have a failure that we could not let the people know the fact through media and a certain group took the advantage to mislead the people.

I think, the government is taking every single decision in the energy sector in a transparent manner for the welfare of the people and advancement of the country. For this reason, the parliamentary committee has suggested the ministry to let the people know the rationality of every agreement in this sector, not only the PSC with ConocoPhillips.

A government, which is working for the welfare of the country, should not have any reservation in this regard. We should keep in mind that not only Bangladesh, all our neighboring countries like India, Myanmar, China and Malaysia are exploring gas and oil through PSC. The recently signed PSC has ensured 100% of our ownership on the oil and gas to be discovered in the fields and use of 100% of the oil and gas will be controlled by Petrobangla, which has all the rights to buy, apart from its share, all the gas and oil to be produced from the blocks. And there is a huge demand for gas in the country. So, it's nothing but a propaganda that the gas is going to be exported in LNG form.

Rashed Khan Menon, MP

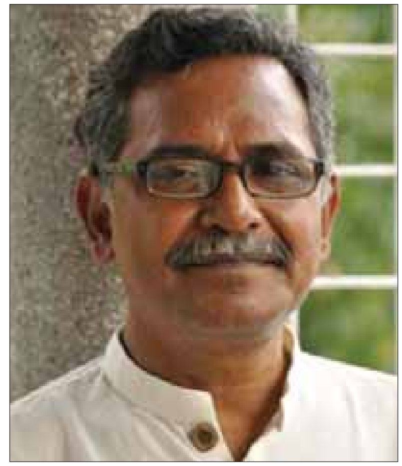
President, Bangladesh Workers Party

If you want my opinion, I strongly oppose this agreement signed by the government and Petrobangla with ConocoPhillips. In this agreement, two parts are conflicting -- 80:20 profit sharing is one of them. This profit sharing ratio is completely serving the foreign company's interest instead of Bangladesh. Foreign investors invest here for their interest, no doubt of it. This is business. Where the question is business, we must think of our interest first. But in this agreement, it seems we will serve for ConocoPhillips.

Moreover, in this clause, ConocoPhillips will offer the government when it would be discovered. If the government denies purchasing gas, ConocoPhillips will offer the local company. What will happen if ConocoPhillips's tariff is out of the government capability? What will happen if local company cannot afford purchasing the gas? Ultimately, the result is clear. It will export gas outside Bangladesh and the country will be loser.

The second thing is pipeline construction. In the agreement it is not mandatory for ConocoPhillips to construct

Sharif Nurul Ambia



Prof. Anu Mohammad

pipeline. So, if ConocoPhillips denies construction of the pipeline and if the situation arises, Bangladesh must have constructed it to supply gas from deep sea to land. It will cost high. Meanwhile, LNG import by Bangladesh is under process. The gas field will be fully controlled by ConocoPhillips. BAPEX should have been a control partner in this agreement. I oppose the agreement as well.

Prof. Anu Mohammad

Member Secretary , OGPC

Since 1997, Bangladesh's gas sector is going through a critical condition. American and Indian missions, the World Bank, ADB and many international organizations were involved in conspiracies over the sector. Some clauses of the PSCs can be used against the National Interest. Energy specialists have showed and alerted the government about the inconsistencies of the contract and clauses against the national interest repeatedly.

From the beginning of this procedure, the National Committee on Oil-Gas Protection (OGPC) showed the logics and information why we should not sign the agreement. But the government and Petrobangla have ignored all these and signed the agreement. The clause 15.5.4 says, "where Petrobangla has installed necessary facilities to transport and use gas to meet domestic requirements, Petrobangla shall be entitled at its option to retain in kind any natural gas produced up to Petrobangla's share

Abdul Awal Mintoo

of profit gas, but in no event more than twenty percent (20%) of the total Marketable Natural Gas." It means, ownership of the rest 80% of the cost recovery gas will be going to the ConocoPhillips's pocket through the deceptive way.

And this pipeline will cost a minimum of US$ 350 million, which is more than three times of ConocoPhillips's primary investment of US$110 million. Many argued that we have not enough power, technology and capital. What should we do rather than this? This tendency makes us weaker. I strongly oppose this agreement.

Sharif Nurul Ambia

General Secretary, JSD

I have not gone through the agreement very well. From my level of knowledge

Aftab-ul-Islam

about the agreement, this is contemporary for our huge demand of gas in households and industries. Moreover, to explore gas from deep sea, we need big amount of investment, which is not possible by the local investors. And the government cannot bear this huge money alone. Most of the oppositions of the agreement argued about the profit-sharing ratio. Every investor wants to secure their money and this clause of agreement is not more than this. They just want a security of their investment. So, from Bangladesh's point of view, this agreement is revolutionary.

Abdul Awal Mintoo

Former President, FBCCI

Any natural resource like oil and gas cannot become a resource until it is used for the welfare of the people after exploration and extraction of the resource. Exploration is so highly technical and expensive that Bangladesh does not have the capacity to meet. These activities are being carried out through PSCs across the world. In this consideration, the signing of the PSC through following the international practice of bidding is positive. We should keep in mind that we don't have the capability to extract the resource on our own initiative. So there was no alternative to sign the PSC.

Those who are saying that the contract is not balanced they have not compared the features of the PSC with those of other countries. If they are saying the contract is lopsided without having a comparative analysis, we don't need to response to their demands. I think the oil, gas protection committee is the creation of Awami League. The current Petrobangla Chairman has had working relation with them. The Petrobangla Chairman should now explain to the people whether the PSC is unequal or not.

Aftab-ul-Islam

President, AmCham

No resources can be treated as asset unless those can be extracted and utilized for the welfare of the people. And utilization of the resources is the responsibility of the government, not those who are opposing the move in the name of protecting the oil, gas and coal. We know that we have a supply shortage of energy and there is no discovered gas field in hand to increase production. Whatever resources we have, we do not have the financial and technical capability to explore them. So, the PSC signed with ConocoPhillips was an appropriate initiative. There is no doubt that it has been possible to sign an international standard PSC, which has protected the interest of the country.

Even then, the so-called oil, gas protection committee is misguiding the people through propaganda. The government should publish the PSC through the parliament to make people understand that the campaign on excuse of exporting gas is a mere propaganda. I do not think it would be rational that

Asif Ibrahim

the government would delay coal extraction amid fears of criticism.

Asif Ibrahim

President, DCCI

There is no alternative to explore gas as the country is suffering from energy crisis. In this consideration I welcome the PSC with ConocoPhillips if it is in the interest of the country. We don't know the details of the contract as the government did not make it public yet. Those who are opposing it have also the right to protest against the contract. However, there is no time remains idle to explore gas as the country desperately needs energy.

AKM Shamsuddin

Chairman & CEO, E-zone

AKM Shamsuddin

There is no meaning to keep resources underground. So, there was no alternative to sign the PSC for exploration of oil and gas. In this consideration, the government has done an appropriate job of late.

Those who are demanding that BAPEX should perform the exploration activities they do not have actual perception about BAPEX. However, there is no alternative to the government to enhance the negotiation skills of the manpower in this sector. I would like to pose a question why people are not vocal against profit repatriation by the foreign power producers and mobile phone operators operating here.

Instead, a certain group is opposing the move to attract foreign investment in exploration of primary energy. Their main objective is not protecting the interest of the country, but to push the country into a crisis through delaying assured supply of energy. Overall, they are in a mere campaign against the PSC, but not giving any rational alternative.

Prof M M Akash
Department of Economics,
University of Dhaka
This agreement is made according to the Model PSC 2008, which is reported to have been changed 1% or so which was not disclosed and there is another clause in the agreement itself not to disclose the final agreement for the people! So, we can comment on this final agreement only on the basis of assumption.

Whispering about the agreement, there comes four changes in it. Firstly, the authorities of Petrobangla gave further concessions so that the measurement point could be decided unilaterally by the ConocoPhillips. Secondly, the court about arbitration or obligation can be located in Singapore, which was restricted in the previous original model PSC. The third point is about the clause of payment of inefficiency damages, which was omitted by the new committee in the agreement. And lastly, the committee will work on joint approval, which indirectly may limit the Petrobangla's control.

If these four changed clauses are really included in the new agreement, the thing is going to make anxiety, no doubt. But the original promise was not to change any clauses. Even in the original PSC, the clause says, 'ConocoPhillips may construct that pipeline'. It means that Conoco Phillips can construct the pipeline if the authorities of ConocoPhillips think to do so. It is not mandatory to ConocoPhillips. It is true indeed that they will have to offer the gas first for sale to us under the agreement, but given the huge opportunity cost and past corruption heritage, I think Petrobangla will not be able to withstand the pressure to allow to export. Further so because they may produce in excess of our demand and capacity to buy. With all these, I can say that this contract gives ample scope to the contractor to go for export, jeopardizing our energy security.

Prof M M Akash

Mortuza Ahmed Faruque

Mortuza Ahmed Faruque
Managing Director, BAPEX
It was very good to sign the PSC as it would facilitate starting exploration activities in the offshore, which should have been started much before. And the PSC with ConocoPhillips has protected the country's interest much better than the previous ones. This PSC ensured 100 percent ownership of the people, not the company. On the other hand, Petrobangla will decide how the gas to be discovered will be used. We should keep in mind that the gas can be exported in LNG form if there is a huge discovery and only when there will be no room for utilizing the gas in the country.

Meanwhile, BAPEX is strengthening its capacity gradually to explore oil and gas in the onshore. But it has not the financial and technical capacity to explore even in the shallow offshore. To attain the capacity to explore in the shallow offshore, it will have to work with foreign companies through joint venture. It is irrational to think that offshore exploration will have to be carried out when BAPEX would achieve the capacity.

Those who are opposing the PSC, they are doing it on a pre-set irrational assumption. They should refrain from the campaign against the contract

EP

SPECIAL ARTICLE

Offshore PSC-Cynicism Vs. Facts

Dr. M. Tamim

The main issue of opposing the Offshore 2008 contract is the issue of export. Let us examine the two extreme cases. A very likely case is nothing will be found from these two blocks. In that case the entire investment by the oil company will be a loss to them with Bangladesh having no financial responsibility. That is the principal reason behind signing a PSC for most of the countries - to avoid the high financial risk. Hypothetically if a small field (1 trillion cubic feet or less) is found spending $110 million (minimum work requirement?), the decision of developing that may run up to 500 to 600 million dollars will depend on the economics of the project. If the company declares it as a commercial discovery and Bangladesh wants to buy the gas, it is likely that the company will never be able to recover its cost ($700+ million). Even then if they go ahead (extremely unlikely), for Bangladesh, a minimum of 25% of the entire gas as profit gas is ensured in the contract. The present ceiling fixes the gas price at $4.5/Mcf (thousand cubic feet). The new contract says that the companies will pay their income tax which is currently paid by Petrobangla for the existing contracts. The current gas price is about $3.6/Mcf (base price $3 + tax $0.6). After recovering tax from the company, the effective gas price will be about $4/Mcf in the new contract which is actually only marginally more than the older contracts. The final cost of the gas including our profit gas would be $3/Mcf (0.75x$4). This is the worst case scenario and would be a fantastic deal. In case Bangladesh refuses to buy it, there is absolutely no chance for the company to invest $2 billion for an offshore LNG plant with a one tcf reserve.

Looking at the other extreme of probability, let us say that 5 to 10 tcf gas is found. Each tcf is roughly capable of producing 200 MMcfd (million cubic feet per day) for 15 years. So 5 to 10 tcf gas will allow production of 1000 MMcfd to 2000 MMcfd. Presently Bangladesh is producing 2000 MMcfd with a deficit of 500 MMcfd (there are additional suppressed demand at the present low price of gas). The projection is that by next ten years the demand will easily exceed 4000 MMcfd (Ref. Petrobangla). Even in case of a quick success the offshore development will take at least five years to come on stream. With a large discovery and the same or little higher development cost, the cost recovery will be realized in 4-5 years time. In the long run, Bangladesh cumulative share (after paying cost recovery) in a large discovery will be over 60% (conservatively). As a result the effective gas price will be only $1.6/Mcf (0.4x$4).

The next and a very critical question is "will Bangladesh be able to buy 2000 MMcfd gas in next ten year time?" It will be extremely difficult for Petrobangla even to maintain the present level of production for the next five years as many of its fields are gradually declining. There is no other alternate to discovering new gas fields - whether onshore or offshore to meet the future demand. The question of being unable to buy even an unlikely 2000 MMcfd at an en effective price of $1.6/Mcf at the measurement point does not arise at all because the present import option of LNG price is not less than $10/Mcf. At that kind of low gas price which needs to be sold at $4-5/Mcf to the customers for future sustainability, development projects will boom like mushrooms. The high price speculation that piped offshore gas will be more expensive than the imported gas is mere

Sangu offshore gas platform

propaganda. The large Bombay height gas discovered by Reliance Energy of India is being sold at $5/Mcf in the Indian domestic market. The Myanmar offshore gas was bought by the Chinese at $4.25/Mcf. If the government or Petrobangla keeps selling gas at the current weighted average price of $1.6/Mcf, the Bangladesh gas sector will not be able to survive because domestic transportation, distribution and other infrastructure will require at least the average price to be $3.5/Mcf to the consumers. The cost of finding and producing gas has increased ten folds than early sixties when most of the Petrobangla fields were discovered. Any comparison with that cost is equivalent to demanding a Dhanmondi residential plot at taka ten thousand today.

In the really extreme case of a 15 tcf discovery, the chance of LNG export becomes a reality. In that case Bangladesh will have the right to use a maximum of 20% of the entire gas for domestic use that can be raised to 30% after ten years. Although the Bangladesh share of the entire gas will not be less than 70% for the life of the project (Bangladesh share keeps increasing as the size of the discovery is bigger). That means even if the company sells 80% of the gas at a very high price, Bangladesh will get at least 62.5% (100x50/80) of that export revenue. Higher the company can sell the gas bigger will be the revenue for the country in billions of dollars. Now the equation for the 20% (3 tcf) is simple. That part will have to be brought onshore by Bangladesh. The pipeline and a processing plant will cost in the range of 500 to 600 million dollars. If the excess capacity of Sangu's Salimpur plant can be used, this cost will come down. This gas is part of the profit gas for Bangladesh costing nothing. The transportation and processing will be in the range of $1.0/Mcf. The daily supply of 600 MMcf gas even at $2/Mcf will be a bonanza for the country (compare that with the proposed 500 MMcfd LNG import at $10-15/Mcf).

The alternate to PSC contract, is being suggested that BAPEX should do all the activities, both Onshore and Offshore. Despite all the praise of BAPEX successes, it has its limitations. First of all, until the last caretaker government none of the previous governments seriously supported BAPEX development. The seven year vision plan, proposed by BAPEX, was approved in its entirety by CG including the gas price increase to Tk 25/Mcf from Tk 8/Mcf (old gas). That would eventually be raised to Tk 50. Instead of lip service and rare example of continuity the present government is sticking to that plan. BAPEX hopes to add 200 MMcfd by 2014 (not sufficient for the country) and become self sustaining. Accordingly they have acquired a new rig and presently fully occupied for the next three-four years.

BAPEX has so far drilled relatively low risk areas and enjoyed a 3:1 success ratio but the ten BAPEX discovered fields have only about 3 tcf reserve in place out of which 2 tcf is recoverable. It simply couldn't take chance with the more risky areas principally due to financial risk. Apart from money, it also lacks technology and strong management. Even for onshore, it is not possible for BAPEX to embark on exploration work outside its present plan although they are in the right track to attain higher international standard. To suggest that BAPEX should do offshore drilling is preposterous. Even with third party contract, as suggested by some quarters, the financial risk is too high. Moreover they do not have the required management skill engaging a third party. Ridiculing Petrobangla for inefficiency/corruption, poor management and at the same time to suggest that BAPEX be engaged in a multi-million dollar deal with a third party is unreasonable.

We are importing cars, cutting edge telecommunication technology, several power plants, airplanes and many other very expensive types of machinery. Should we attain the capability to manufacture all of them? The author only has the experience of Economics 101 (a real novice) but clearly understands the theory of 'Comparative advantage'. After space technology, the next cutting edge engineering and technology is used in offshore drilling. It is not understood why Bangladesh being one of the poorest countries should venture offshore drilling capabilities? It will only waste money and time and the eventual cost will be much higher. Moreover, what the country will achieve by doing so? Just to avoid or for the fear of export, if all exploration by IOCs are stopped, what would be the price to pay? To construct a very tangible low risk venture like 'Padma Bridge' the government had to go to World Bank, IDB, ADB and Jaica to raise a mere $2 billion. Any suggestion that Bangladesh is capable of doing its own exploration is not only irrational but also ill intentional. Not a single country in the world has developed its oil-gas sector by itself and without foreign help.

With the scanty exploration in the onshore blocks, IOCs discovered only about 5 tcf gas in the last 15 years where the prospects are much higher. Two wells in two frontier offshore blocks, where no seismic data is available, are extremely unlikely to produce even a 5 tcf discovery. Let us pray for the country's sake that a miracle like that happens. Moreover, awarding just these two blocks allows us to develop our offshore prospect in phases. Hopefully by next year the maritime border dispute with Myanmar and India will be resolved and a quick seismic survey of the entire offshore area will give us clear idea of the future prospects. We may then proceed accordingly in steps.

Any contract may be questioned on many issues but that must be based on facts and rationale, not cynicism. On the basis of the PSCs being carried out for the last 13 years in the country, the offshore 2008 contract is well balanced and protects the interest of the country. Petrobangla has handled the existing contracts fairly well (there is always room for improvement) and I believe that with more attention and monitoring they will do a good job in the future too.

EP

Dr. M. Tamim, *Professor,*
Dept of Petroleum & Mineral Resources, BUET

PSC Amendment & Offshore Petroleum Exploration

Engr Khondkar Abdus Saleque

In the backdrop of the persistent power and gas supply crises, Bangladesh government has recently taken two decisions on offshore exploration of petroleum in the Bay of Bengal. Santos, the Australian exploration company has been given the right to sale its share of profit gas to willing third party end users inside the country. The Production Sharing Contract [PSC] has been signed among US oil giant ConocoPhillips, Petrobangla and GOB for exploration in two deep sea blocks [excluding areas under disputes neighbors]. Both the decisions have been disputed by a section of civil society claiming itself as the "Oil, Gas and Port Protection Committee [OGPC]". This group, also claims to have exclusive proprietary right of patriotism, is agitating against the mining of Bangladesh's own high heating value sweet coal for a long time. But conspicuously import of dirty polluting coal from neighboring country does not bother them or they never protest government's extremely difficult to implement initiative of importing expensive LNG or coal. They oppose Bangladeshi efforts in exploring petroleum resources in the Bay of Bengal. What they are up to? Who are sponsoring them? Are they really acting for the people of Bangladesh? What is its representative strength? The situation demands some brain storming on PSC provisions amendment with Santos and signing of PSC with ConocoPhillips.

Santos which bought interest of Shell-Cairn of blocks 15 and 16 including operations of Sangu offshore gas field. The PSC signed in mid-1990s has been amended. After 12 years of operation, Sangu gas field is on the verge of depletion. In the recent times, Santos carried out 3D seismic survey in its allotted blocks. Some potential small pay sands around present Sangu wells and south Sangu has been located. Relatively huge investment is required to tap into these pay sands. PSC with Shell-Cairn and Holland Sea research signed in mid-1990s included a gas price mechanism which even was lower than the prevailing gas price at international market at that time. Over the last 12 years, the cost of offshore drilling has increased manifold. To continue further development of Sangu field, Santos requested Petrobangla to revise cost or give them authority to negotiate marketing their share of profit gas with third parties inside Bangladesh. We have been told that several industries in gas-starved Chittagong are willing to negotiate with Santos directly if they get stable supply of gas. Santos proposal indicated some early gas by January 2012 and gradually more and more subsequently. There are indications of gas in south Sangu, Magnama and Hatiya. Successful exploration and development campaign of Santos in Chittagong is major option to gas supply to Chittagong in near future. There is nothing wrong in the commercial decision of government in allowing Santos to third party market access of its share of gas. But significant works in the mid-stream may need to be done to account for the gas in Chittagong system.

The model PSC was first used in 1974 by the then Bangabandhu government when six IOCs were engaged in 8 offshore blocks of the Bay of Bengal to explore oil. The model PSC underwent several updating and amendment as the country acquired experience through pains and gains over the last three decades. The PSC 2008 was formulated by a properly constituted government company taking references of many PSCs in operation in the regional countries. An accredited international expert examined its pros and cons. Dr Kamal Hussain, the then Minister of Law & Parliamentary Affairs and later on Minister of Energy [who is also an internationally reputed energy legal counsel] also vetted the draft document. Finally, the draft PSC was approved by the council of advisors of the caretaker government. Bidding round was invited on the legally approved PSC during the caretaker regime. Several companies took part in the pre-bid road show held in Bangladesh. Some logical incentives were included in the draft PSC to attract major investors for deep water drilling in prospective offshore frontier of Bangladesh. But the response to the bid was extremely discouraging. Some people thought that the strong protests by India and Myanmar discouraged most of the IOCs and even those working in Bangladesh to stay away from the bidding. But the reason was very different. Major IOCs while considering bidding anywhere undertakes series of risk and other analysis and always go for a bankable document. While preparing the financial model on the basis of draft PSC 2008, it appeared to most of the leading PSC operators that it would be extremely risky under present terms to invest in Bangladesh offshore. That is the reason why Chevron, Exxon Mobil, Shell BV, BP, Oil Search, PETRONAS stayed away. Even Santos submitted conditional bid. But surprisingly ConocoPhillips and Irish Company Tullow submitted a little bit aggressive offer and were considered the evaluated bidders for offshore blocks. After thorough evaluation the committee recommended for ConocoPhillips for 8 blocks and Irish company Tullow for 2 blocks. The caretaker government did everything but to make award and left it for an elected government to take decision. The present government took almost two and a half year to re-evaluate and examine all pros and cons of the matter and finally signed PSC with ConocoPhillips for the two blocks.

Meantime, the model PSC remains on Petrobangla website as a public document.

As neutral observer, we find nothing wrong in concluding the PSC with a leading IOC in a legal manner. This writer had the opportunity to review and compare Bangladesh PSC with some other PSCs in operation in the regional countries. In many aspects like corporate tax, profit sharing matters Bangladesh PSC has much stringent conditions which, however, should have been taken into consideration by so called civil society. Unfortunately, a part of our civil society always opposes FDI and private sector investment in exploring and exploiting our domestic energy resources. On the other hand, some beauracrats never explain important national contracts like PSC to general people in a transparent manner. In this situation, ill motivated agitators and some section of ill-informed media create gossip.

The PSC 2008 has not created any provision for 80% export of discovered gas resources in the form of LNG. One must know how PSC operates. Our PSC has two parts. Cost recovery gas and profit gas. Any PSC operator has to make huge upfront investment in survey and exploration to try and discover significant resources. After extensive study, IOC has to provide credible evidences for a significant commercial discovery. If not, IOCs expenses are not covered under cost recovery. Offshore drilling is like a pure gamble. For winning something, investor loses in many cases. Bangladesh offshore is largely unexplored. Even not much survey works have been done. Hence huge pre-exploration works and substantial investment is essential. If some incentives and some market signals are not given, no IOC will consider it prudent to take risks. Bangladesh PSC has not included any provision which cannot be seen in other PSCs in operation.

IOC after commercial discovery will submit development plan to Petrobangla and government. At this stage, Gas Purchase and Sales Agreement (GPSA) will be negotiated. The first portion of the PSC gas comes under cost recovery by IOC. Any cost included in the budget under PSC is approved by a joint management committee comprising of equal number of members from Petrobangla and IOC. It is at this stage Bangladesh needs experienced professionals and experts to assess IOC proposal technically and financially. Petrobangla and government may lose if it fails to identify cost elements professionally and evaluate costs efficiently. Upon commencement of production, IOC recovers costs over and agreed period from a part of the gas selling the gas to Petrobangla under agreed price formula. Rest of the gas is called profit gas. The profit gas is shared between Petrobangla and IOC. The profit share split changes as more and more costs is recovered. The Petrobangla share may vary from 65-80%. This gas Petrobangla gets free. In this scenario, it is unwise to even think that any IOC can take 80% gas under any PSC.

Now what happens if ConocoPhillips discovers a huge gas reserve in its allotted block? If that happens where else than Bangladesh has huge hungry market for the IOC with least investment? Will Bangladesh refuse to accept IOC share of gas without using it for its own economic development? Desperate Bangladesh government is planning to import expensive LNG and coal. Will it not use its first right of refusal? Bangladeshi and foreign industrial entrepreauners are willing to buy basic fuel at higher costs if available. So why worry? Any question of export to anywhere arises only if Petrobangla refuses to buy and third party users inside Bangladesh cannot buy it. Such situation is inconceivable for Bangladesh at this stage and in near future. Provision for export of Gas in the form of LNG is in existence in all PSCs in Bangladesh. But it never happened.

Some people have raised question about costs involved in building expensive 250KM+ submarine pipeline to bring gas to onshore. IOC even to set up LNG plant onshore will invest in case of substantial discovery. Offshore floating LNG terminal concept will not work here. Reliance discovered a large gas field in KG basin. It has not set up LNG plant or not exported gas.

Bangladesh in PSC 2008 included provision of corporate tax to be paid by IOCs. It will increase investment and prolong cost recovery. One must remember IOCs will recover any investment made whether it is capital expenditure [capex] or operating expenditure [opex]. One must remember Bangladesh does not have capacity [technical or financial] to carry out exploration in offshore. No bi-lateral or multilateral donor or development partner provides grant or loan for exploration. Bangladesh could not explore petroleum in deep waters of the Bay of Bengal despite of aggressive exploration campaign of neighbors in adjacent territorial and disputed waters. The opposition to Bangladesh efforts will strengthen the hands of neighbors who, according to many, have already encroached Bangladesh territory. The resolution to maritime boundary dispute may take 5-7 years. In the meantime, Bangladesh must try and explore in undisputed areas. The PSC 2008 has lot of safeguards of Bangladeshi interest. The provisions are well drilled successes in regional PSCs.

But our concern is whether Petrobangla in its present shape can effectively monitor PSC operations in matters of technical auditing and cost control? Do they have financial experts to carry out financial model or evaluate financial model of IOCs development plan submission. It needs qualified experienced cost accountants and petroleum/ reservoir and production engineers. Does Petrobangla have such expertise? Bangladesh loses under PSC due to its lack of capacity in managing and monitoring PSC operation. The government must arrange training and capacity building of gas sector professionals for reaping benefits under PSC.

OGPC excesses backed up by some peripheral left leaning political parties are among other reasons for the present gas and energy crisis. By creating unnecessary barriers and impediments to national efforts of exploring and exploiting own fuel resources, OGPC is serving the energy mafia syndicate which is thriving on import of dirty polluting coal from across the border. They are confusing society and misguiding government policy makers. The elected government must work for the greater interest of the country and the people.

EP

Engr Khondkar Abdus Saleque
Energy Specialist, AEAI,
Sheberghan Gas Fields Development Project, Kabul, Afghanistan

Call for Green Energy Fund to Enhance Energy Capacity

EP Report

Industries Minister Dilip Barua has proposed formation of a Green Energy Fund for climate change in order to enhance energy capacity of the developing countries.

He also informed that Bangladesh government has taken a number of steps on attaining energy safety in the country.

The minister was speaking at a roundtable titled "energy for all-time for action" at the Vienna Energy Forum 2011 in Vienna's Hofburg Hotels.

UN Industrial Development Organization (UNIDO) in association with Australian Federal Ministry of European and International Affairs and International Institute of Applied System Analysis (IIASA) organized the program.

Reneta Christ, Secretary of Intergovernmental Panel on Climate Change, Rohit Khanna, Program Manager of World Bank, Vincent Kitio, chairman of UN-Energy Africa, NH Ravindranath, chairman of Global Energy Facility's Scientific and Technical Panel, also addressed the program.

Addressing at the program, industries minister said considering the reality Bangladesh government has given top priority on green industrialization in the country.

"We encouraged setting up knowledge based hi-tech industries with zero pollution. Our government has adapted renewable energy policy and extended renewable energy technology to the rural people to meet their energy needs," he said.

Ministerial meeting on Energy & Green Industry at the Vienna Energy Forum 2011 in Vienna's Hofburg Hotel. Photo: Internet

He said Bangladesh government has set targets for developing renewable energy resources to 5 percent of total power demand by 2015 and 10 percent by 2020 to achieve the goal.

"The government also exempted tax on solar energy equipment to make the use of solar energy more popular and has formulated an energy roadmap to increase the power generation to 20,000 MW by 2020 to ensure uninterrupted and quality power supply for all through improvement in generation, transmission and distribution system," Barua said.

The world leaders in their speeches emphasized on 3 pillars--economic, environmental and social sustainability and energy—for sustainable development and poverty reduction efforts.

The 3-day round table is likely to adopt a working plan on how to eradicate dilemma of energy sector created by climate change. EP

Bangladesh Achieves Marked Growth in Renewable Energy Use

The country has achieved a significant growth in renewable energy use especially of solar energy with the number of solar home system (SHS) installations crossing over 1.0 million until last month.

Supportive multilateral donor agencies, proactive role of local firms and motivation by a pool of professionals are leading the surge in renewable energy use across the country.

In 2003, the country had only some 20,000 units of SHS installed, which soared by 50 times within eight years, available data revealed.

Utilization of wind energy, biomass energy and micro hydro use are also getting pace in Bangladesh where 51 per cent of the total households still do not have power connections.

"The growth in SHS use in the country is amazing," said IDCOL Company Secretary S.M. Formanul Islam.

Infrastructure Development Company Limited (IDCOL), a state-run non-banking financial institution, is the main lender to local renewable energy companies.

The IDCOL initiated funding to its partner organizations to install SHS for rural people in 2003 with a target to install 50,000 SHS by 2008.

"But we have achieved the target with support from our partner organizations three years before the deadline in 2005," said Islam.

The IDCOL alone has helped installing 940,000 SHS across the country until May 2011, he said.

"Encouraged by the recent success we have set a target afresh to enhance installation of SHS to 2.5 million by 2014," said the IDCOL company secretary.

The IDCOL is now installing 42,000 more SHS every month, he said.

The IDCOL receives grants and loans from different multilateral donor agencies including the World Bank (WB), the Asian Development Bank (ADB), the Islamic Development Bank (IDB), the United Nations Development Program (UNDP), the German KfW to provide funding assistance to its partner organizations.

It lends funds to some 30 partner organizations offering interest rates between 6.0 per cent and 8.0 per cent to encourage renewable energy use across the country.

Among the renewable energy firms, the performance of Grameen Shakti, one of the 30 partner organizations of IDCOL, has been outstanding in promoting renewable energy use. EP

Green Architecture Seen to Save National Energy

State minister for Energy and Power Muhammad Enamul Haq has said that promoting green-architectural design of building particularly in readymade garment (RMG) and textile industries could save a significant size of the national energy.

“More than 40 percent of total energy is being used in industrial buildings. This amount can be minimized significantly by using green architectural design in the industrial belt specially RMG and textile sector,” he said.

Enamul Haq, as chief guest, was inaugurating a two-day workshop titled, ‘Performance Based Design: Introduction to Computer Based Lighting Simulation Techniques,’ a training program on promoting green architecture concept in the country.

Department of Architecture at Bangladesh University of Engineering and Technology (BUET) organized the workshop at the Council building of the university in collaboration with Deutsche Gesellschaft fuer International Zusammenarbeit (GIZ).

The state minister said that energy saving basically means saving the cost by adopting green strategies in the industries that ultimately could help minimize manufacturing cost and help boost the economy.

BUET pro vice-chancellor (VC) Prof M Habibur Rahman, Prof Dr Zebun Nasreen Ahmed, chairman of the Architecture department, among others, addressed the inaugural session while BUET VC Prof SM Nazrul Islam presided over the session. EP

India Set to Produce 700 MW Solar Power in 2011

India is on track to produce 700 megawatts of solar power at a cost of $2.2 billion by December, ahead of an initial target for an ambitious plan that seeks to boost green power generation from near zero to 20 gigawatts (GW) by 2022.

Under India’s Solar Mission, investors bid to build solar power plants and the winning bids are determined by the electricity tariff that they accept as viable. Such has been the interest that the government has been flooded with investment pledges for the first batch of projects rolling out in December.

India’s 20 GW solar plan is likely to attract overall investment of about $70 billion, the government has estimates. Issued in 2009, the plan envisages India producing 1,300 megawatts (MW) by 2013, another up to 10 GW by 2017 and the rest by 2022. EP

Solar Power Must For New SME, Agriculture Branches: BB

The Bangladesh Bank in a circular made it mandatory for banks which want to finance the SME and agricultural projects to set up solar power panels for providing electricity.

BB's circular mentioned that if any bank plans to open a new branch to finance projects in the agriculture or small and medium enterprise sectors, they should inform it whether solar power panels are available there to provide power to the branch.

The BB will not allow any bank to open any such branch without installation of solar power panels.

The circular containing the new directive has been sent to all the chief executive officers of the banks.

The circular said that the new branches should be environment-friendly, and should prioritize the effective use of sunlight, the use of renewable energy, energy-efficient bulbs and machinery, along with proper use of water.

The new directives are in line with the implementation guideline of 'green banking' which was announced last February.

EP

Fishermen in Kurigram Chars Get Benefit

Fishermen in the char areas are now enjoying solar power in three upazilas -- Phulbari, Nageswri and Chilmari.

At least 70 ultra-poor families at 13 villages are receiving the facilities. They are happy as they got 20-watt power in each of their houses.

The villages are West Dhanirum, Kuti Nagorajpur, Bhangamor, Ajoatari, Anatapur and West Phulmati under Phulbari upazila, Kumandopur, Katgiri and Char Kapna under Nageswari upazila and Khamer, Wari, Bhatto Para and Char Bailbandiarkhata under Chilmari upazila.

Fishermen in the char areas are enjoying solar power

RDRS-Bangladesh, an NGO, did the great job by giving solar power units free of cost among the families. The market value of each solar unit is Tk 12,500.

Moniruzzaman Monir, technical officer of the project of this NGO, said "We are distributing solar power units free of cost among the ultra-poor fishermen families who live in remote char areas and who are members of our Village Disaster Management Committee (VDMC)."

EP

EC Renews Push for 2030 Renewables Target

The European Commission has put its full weight behind a new target to raise the share of renewables in the continent's energy mix by 2030.

The security that this would provide to potential investors was "more important than ever", EU Climate Action Commissioner Connie Hedegaard told a launch of the Intergovernmental Panel on Climate Change (IPCC)'s renewable energies report in Brussels.

Hedegaard spoke favorably about a recent call by the renewables industry for a legally-binding target of 45% renewables by 2030, but stopped short of endorsing it.

"Where exactly the figure will be, we should discuss and analyse," she said. "But I will say that I will do whatever I can to get this discussion reflected in the energy roadmap that will come out later this year for 2050."

In March, Energy Commissioner Günther Oettinger told EurActiv that in this document, the Commission would propose "a long-term target for 2030 and 2040 and 2050 and there will be a higher target for renewable energy".

Speaking in a videotaped address to the conference, he said that Brussels had to consider renewables targets for 2030 if clean energy growth was to be continued.

"The renewable energy industry has already called for 45%," he said. "Our current work will review all the literature and explore different possible pathways for the European Union."

The European Commission's president, José Manuel Barroso, added his voice to the fray, telling the meeting that "2020 is already around the corner and we need to think of intermediate steps up to 2050".

"We need not only to think but to act," he added.

EP

Ailing Electricity Sector

Shamsul Islam

Electricity Sector is certainly one of the most important infrastructures for our sustenance and steady growth as a developing country. Neglecting this sector can be very expensive and can cause serious present and future problems. Unfortunately we are not applying our thoughts and decision making process appropriately. Ad-hoc and temporary measures are being taken to overcome the problems encountered. Whereas all measures including the temporary once must fit into a well planned master plan for the sector. By master plan we do not mean a big book prepared by the foreign consultants for 10, 15 or 20 years duration. It is a coordinated action plan to be implemented in phases. We reckon no huge investment is needed for improvement of this sector. A enumerated below are some of the suggestions to be incorporated in a well produced plan for the sector. By no means does the author claim to be an expert on every aspect associated with electricity sector. But my long association with this sector involving close and active participation in electricity sector in several countries I venture to suggest certain points for consideration of those who are in the position of authority in the sector at present.

Recruitment of Management Personnel

All members / Managing Directors without exception in every corporation / autonomous body in this sector must be recruited in the same way as is practiced at present in some of the company like PGCB, DPDC, DESCO etc.. This is the only way to get the services of best of the available talents in the country. Extension of tenure of no Director / Member shall even be considered. Granting personal favor at the cost of improvement of electricity cannot be acceptable.

It is the leader who leads the organization for its success or failure. Without a good general, winning a war cannot be expected. All the employees, engineers and officers must be united to fight a war against malfunctioning, inappropriate decision making, procrastination and all other such ailments. At present the employees do not know where they stand and what the future holds for them.

An Integral Part of The National Planning And Efforts

Any sector including electricity sector cannot be in isolation from the overall needs, requirements and planning of the country. Through installation of so many rental power plants at scattered locations using imported liquid fuel has increased the import requirement of the country in geometrical progression. We cannot afford to allow such increase in import bill. Our foreign exchange reserve has been depleted to a dangerously low level. Load shedding for 1 or 2 hour is certainly irritating and causes a lot of inconvenience but imbalance in trade and rapid depletion of foreign currency reserve is causing sliding down of value of taka. This is creating numerous problems to the nation as a whole. We must consider the impact of any such decision to our not so strong economy. Our export performance is primarily based on RMG where value addition is not that high. Export of man power is not likely to increase soon. Country first then the requirement of a particular sector like electricity.

Uncertainty in Reorganization Process

Several years ago a process of reorganization making BPDB as the principle holding company was started. This has certainly stagnated and consequently no tangible benefit is being derived. The employees do not know what lies for them in future. They come to the office and without much work leave at the end of the day. Whereas the entire work force must act in unison to improve every aspect including distribution and sale of electricity.

Notional Decision Making

Decisions to install major power plants at a cost of Millions of Dollar are taken on an ad-hoc basis on the personal impression of some high up in power. Installing a large power plant at Bibiyana or power plants at Bagerhat and Chittagong are based on superficial knowledge and whims. All such decisions must be made on proper feasibility studies.

Constructing a gas pipe line from Bibiyana to Ashugonj and installing a power plant of adequate capacity at Ashugonj would have reduced the total investment very considerably. Several high voltage transmission lines already exist to transfer power to load centers from Ashugonj. The second east west interconnector over the Jamuna Bridge emanates from Ashugonj. No new transmission line construction would have been needed. Whereas it was decided to build a large power plant at Bibiyana leading to construction of two large new high voltage line towards load center around Dhaka and Comilla.

Importing coal from abroad for running power plants is an utopian idea. The coal imported from India for Barapukuria power plant remains stored without use. The per unit cost of electricity produced at Bagrehat or at Chittagong using coal imported from Indonesia or Australia (if available) would be very high indeed. Whereas ad-hoc decisions were taken to install large power plants at those two locations instead of installing them near the coal mines in Dinajpur.

Electricity sector cannot be operated at the discretion and whims of amateurs.

Training & Education

Unless our engineers and technicians are properly trained to transport, store, wash and use coal and to efficiently operate coal fired steam power plants we have little future in electricity sector. Using indigenous coal for power generation is the only way to improve power sector. Simple graduate engineers working in the office and placing unwilling engineers and technicians at the power plants mostly against their wills will not be able to improve power sector.

It is essential to make separate, attractive pay packages for the power plant employees. Select the best and train them properly if we are to produce large quantity of electricity using coal as a fuel.

I have more suggestions and those I hope to submit for consideration of readers in future.

EP

Shamsul Islam

Former Chairman, BPDB

Samutang Gas Field Goes Into Operation

EP Report

The Samutang Gas Field in Khagrachhari went into operation under the management of the Bangladesh Petroleum Exploration and Production Company Limited (BAPEX).

Around 17 MMCF (Million Cubic Feet) gas per day will be extracted from the field through the new well number 5 reducing existing gas crisis in Chittagong Zone, Dr. Hossain Mansur, Chairman of Petrobangla said.

The Karnaphuli Gas Field Company Limited has already completed laying 30 km pipe line for supplying gas to Chittagong from Samutang field. The laying of another 35 kms pipe line would be completed soon, he said.

"Hopefully we would get 20 MMCF gas from the well regularly that will help improve overall gas situation in Chittagong region," the Chairman said adding the Petrobangla has taken up a massive plan to increase gas supply to the port city from next October.

Dr Hossain Monsur said in order to augment gas supply to Chittagong, they are installing another 80 kms pipe line from Samutang gas field to supply 30 MMCF more gas to this zone regularly.

Md Golam Mortoza, Managing Director of BAPEX said they have a plan to drill another well on Samutang gas field for improving the gas supply to the area. He said, hopefully, country would get 40 MCCF more gas regularly from this field in future.

The zone needs around 200 million cubic feet (MCCF) gas a day to stimulate the economic activities in the region.

According to FBCCI, about 200 big industries failed to run because of gas shortage.

The investors have been facing serious problems to run their business in Chittagong due to non-availability of gas and power. The power plants situated in Chittagong are not getting adequate supply of gas.

"Rawzan and Sikalbaha, two big power plants have been facing severe gas shortage and thus failing to generate electricity to their capacity, a Power Development Board (PDB) official said.

According to him these power plants are producing around 200 MW electricity against their 857 MW capacity. "We are giving top priority to increasing gas supply to Chittagong , so we have taken some augmentation, pipeline installation and new drilling programmes there," Dr. Monsur said.

He said with the help of international oil company Santos, Petrobangla has taken up plans to drill three wells. "Hopefully we will supply an additional volume of 50 to 60 MMCF gas per day from Sangu gas field," he added.

Sangu field has been supplying only 17 MMCF gas regularly. The Petrobangla chairman said Sangu can supply up to 500 MMCF per day, but that needs huge investment. EP

Vienna Nuclear Safety Conference Dhaka for Crisis Management

State Minister for Science and ICT Yeafesh Osman has urged the states to establish an emergency crisis management centre to deal with nuclear contingencies for the developing countries especially for LDCs.

He made the call at the ministerial conference on Nuclear Safety at International Atomic Energy Agency (IAEA) in Vienna. All the nuclear powers and important stakeholders are attended the event.

The minister suggested exchange of information at the time of emergency through an institutional structure under IAEA to ensure flow of vital information.

He said that nuclear technology is still clean and reliable source of energy for the humanity.

Yeafesh said Rooppur Nuclear Power Plant is the flagship project of the government taken to implement soon. He stressed the need for an international and regional cooperation to ensure the highest and most vigorous level of nuclear safety based on IAEA's safety requirements.

The conference has been organized to draw on the lessons from the accident at the Fukushima Daiichi, Japan to strengthen nuclear safety throughout the world and contemplate on the possible future actions.

Earlier, State Minister Yeafesh Osman met Sergey Kirienko, former prime minister of Russia and the Director General "Rosatom", the State Corporation of Russia, the renowned Russian nuclear technology provider.

Kirienko assured the minister of Russian full support in the quest of Bangladesh towards civil nuclear program.

He also had a courtesy call on Dinh Tien LE, vice minister of Science and Technology of Vietnam. They emphasized the mutual cooperation and exchange of experience and knowledge as both the countries are embarking on the path of nuclear energy. EP

Govt to Set Up Plant to Generate Power from Gas Condensate

EP Report

The government has decided to generate electricity from natural gas condensate apparently in a desperate move to diversify the country's energy sources for electricity generation and ease its mounting demand, a top official said Sunday.

State-owned Bangladesh Power Development Board (BPDB) has already floated tender to select a consultant to facilitate installation of the condensate-fired power plants.

"We are now scrutinizing bids from several firms to appoint as consultant to help set up the country's first condensate-based power plant," said BPDB Chairman ASM Alamgir Kabir.

He said the country has huge prospects to generate electricity from the gas condensate, now available at different gas fields as by-product.

Kabir, however, did not say anything about the capacity of the planned condensate-fired power plant.

Currently, the country's average daily condensate output is around 6,475 barrels from 19 operating gas fields across the country, a senior Petrobangla official said.

With the augmentation of natural gas production, the condensate output is also increasing day by day.

Petrobangla, which is now struggling with the growing condensate output as currently the country does not have much scope to utilize this huge gas by-product, has welcomed the BPDB move to build condensate-based power plants.

"It will help check wastage or pilferage of a huge volume of condensate," said Petrobangla Chairman Dr Hussain Monsur.

Currently, a very limited quantity of condensate is being refined at state-owned Eastern Refinery Ltd (ERL) to produce diesel octane.

Condensate is also being used in Kailashtila natural gas liquid (NGL) or condensate fractionation plant to produce sulphur and lead-free and environment- friendly liquefied petroleum gas (LPG), motor spirit (petrol) and diesel.

The capacity of ERL and Kailashtila plants is limited, and a significant quantity of condensate is being exported outside the country, said a Petrobangla official.

A 'strong' syndicate is active in pilfering condensate by making leaks in the condensate-carrying pipelines, he said.

State-owned Gas Transmission Company Ltd (GTCL) could not stop condensate pilferage even after hiring a private security firm, said a GTCL official.

Officials said once appointed, the consultant will recommend capacity, type and location of power generating units to be run on gas condensate.

The firm concerned will also suggest electrical interconnection and power outflow arrangement for the planned condensate-fired power plant

EP

Big Expo 2011 & BACE Expo 2011

Over 100 companies including 25 from overseas will be participating at the twin international tradeshow on Supplementary Power BIG EXPO Bangladesh and 5th edition of Architectural, Building & Construction Products & Technology Tradeshow BACE Expo 2011.

New products, new materials and machinery with latest technology will on display from some of the leading companies of Bangladesh as well as exhibitors from overseas countries like India, China, Singapore, Pakistan etc. The 4-day long tradeshow will be held on July 6-9 at Bangabandhu International Conference Centre.

Saif Power Tech Present BIG EXPO of Bangladesh, the International Batteries, Invertors and Generators Expo of Bangladesh, is being organized to create a platform for all the stakeholders involved in the area of alternate power generation, transmission and distribution to come under one platform to explore the possibilities of providing alternate power generating solutions to the trade and industry looking for additional alternate power options.

The maiden edition of the show is being organized by ASK Trade & Exhibitions Pvt Ltd India and Zakaria Trade & Fair International Bangladesh .

At BIG EXPO of Bangladesh, Companies will be displaying their technology, know-how and products and services and explore the business potential in Bangladesh's one of the most promising and highly potential industry sector. Nearly 60 companies from Bangladesh, India, china and Singapore are participating in the show.

EP

Fix Energy Problem to Attract FDI

EP Reoport

German federal minister for economic cooperation and development Dirk Niebel has emphasized on creating congenial environment for investment in Bangladesh with no corruption and low bureaucracy. "We are looking at ways to increase the attractiveness of your country for our investment," he said, after a meeting with finance minister AMA Muhith here recently.

Niebel led a 32-member delegation to Bangladesh, including the European Union commissioner for development cooperation Andris Piebalgs, who called for fixing energy problem to attract long-term foreign investment.

The delegation during their four-day visit raised the issues as the Finance Minister urged Germany and other EU countries to invest in Bangladesh's weak infrastructure sector, including energy, power and transportation.

They urged the government of Bangladesh to expedite implementation of the donor-funded projects.

"We find the implementation process of donor-funded projects to be very slow. The government takes much time to give approval to the projects," Andris told a press conference in the city.

"We have requested the finance minister to implement our projects fast," he said, adding that trade between EU and Bangladesh is increasing significantly. "We can help develop the private sector in the country."

The delegation held high-level political talks during the visit and extended full support for the country's development. They had meetings with Prime Minister Sheikh Hasina, BNP chairperson and opposition leader Begum Khaleda Zia, State Minister for Environment Dr. Hasan Mahmoud and members of the civil society, when issues of mutual interest on investments, development cooperation and climate change were discussed.

The visit concluded with field visits to a number of development projects supported by Germany and the European Union in the fields, including a renewable energy project in Satkhira. The distribution of solar energy plants and the use of energy efficient stoves contribute to the overcoming of the energy crisis and show new ways of sustainable use of resources – an essential question in this country which is highly affected and threatened by climate change.

As important trading partners, the European Union and Germany support improved social and environmental standards in Bangladeshi industries, for instance in the garment sector.

As they called on the Prime Minister, Hasina expressed her gratitude for European support in holding elections and requested for it to continue.

After the talks, German minister Niebel said, "Germany has supported Bangladesh since its independence. Bangladesh is a very dynamic developing country. I am deeply impressed by the successes it achieved in these past years." He said that poverty and child mortality rates decline and economic growth has been remarkable for 20 years. Through my visit, I would like to encourage our partners to continue the reform path and invest in good governance in order to realize the huge development potential of the country. "I promise our Bangladeshi partners that the continued support of the German Federal government."

EU Commissioner Piebalgs added, "The EU has been a longstanding supporter of Bangladesh as it has been achieving remarkable economic growth, a good track record for achieving the Millennium Development Goals, and a reputation as a vibrant democracy. It will continue its support as Bangladesh aims to become a middle income country by 2021."

Piebalg clarified, "As Bangladesh's biggest export destination, the EU imported 6.6 billion euros worth of goods from Bangladesh in 2010. Investors from the EU are increasingly seeking opportunities in and with Bangladesh. In order to promote even stronger economic cooperation and growth, the EU seeks to assist the Government of Bangladesh in its efforts to strengthen democracy, rule of law and the fight against corruption."

EP

German Federal Minister for Economic Cooperation & Development Dirk Niebel & European Union Commissioner for Development Cooperation Andris Piebalgs Meet with Prime Minister Sheikh Hasina at her Office

SAARC Power Grid

Dr. Kamal Raj Dhungel

South Asian countries are facing the power crisis. The demand for electricity has increased over time because of industrialization, urbanization and modernization. But, the supply has not kept up pace with the demands. There obviously is a big difference between the demand and supply of electricity. The duration of load shedding could be different in different countries, but is a normal routine that slows the efficiency of the economy.

Some countries like Nepal face an acute problem of load shedding, where supply of energy varies by season. Seasonal variation makes the power supply under threat, while the demand keeps growing continuously as the use of electricity increases in the households, commercial, service and industrial sectors. The consumption of electricity in most of the member countries of South Asian Association for Regional Cooperation (SAARC) varies. Every country has power surplus and deficit by season. Some countries in the region have power surplus such as Bhutan, while others face power shortage. Climatic variation in these countries plays an important role in making excess/deficit supply of electricity.

Looking at the pattern of load shedding, the phenomena has become a regional problem. Non-existence of power trade mechanism between the SAARC countries is the main barrier to import/export power during deficit/surplus of energy to maximize its use in a rational and efficient way. Power trade between these countries could facilitate the enhancement of the regional economy. This trade between and across the countries, if realized, expands the scope of economic development of the region.

Whatever electricity is being generated at the present time, and what could be added in the future in the region calls for optimum utilization. A country with surplus electricity could export it to a power deficit country. In this manner, no country in the region would face the possible power crunch.

Nepal is facing an acute problem of power shortage that makes a daily routine of load shedding ranging from an hour to 14 hours a day.

The variation in season is also different in each country. It means some are consuming more power than others during a particular season. For instance, India's power demand in summer is more sensitive than in Nepal, while power demand in winter is more sensitive in Nepal than in India. India has power surplus during the winter season, while Nepal has it in late summer. Both Nepal and India can export their surplus energy to each other during the respective seasons.

Similar is the case of Bangladesh, Pakistan and Sri Lanka. Every country in the region has the realisation that energy trade between and across the country is a must for accelerating the pace of economic development, and ensure energy security in the region.

For this to happen, countries of the region should have a strong will and commitment for power trade through regional cooperation. Each country should have to take the initiative for arriving at consensus on the issue among the SAARC member countries.

Each country should have to pay attention to the modality including funding sources, conducting feasibility study and generating electricity through various sources (hydro, solar and wind). Development of the sources most viable in terms of investment cost, rate of return, comparative advantage etc.

Ideally, India should take the leadership to undertake power trade among the SAARC countries, because it is very rich in resources with almost double digit economic growth rate. Despite its high installed capacity, India faces energy shortages in the range of 10 per cent during peak hours. As is expected, a credible idea has been floated by Indian Minister of State for Power KC Venugopal in relation to power trade between India, Bangladesh, Nepal, Pakistan and Sri Lanka. This idea is about a construction of regional power grid linking these countries which has the potential to create 1,00,000 MW capacity in the region. To put the idea into action, SAARC member countries should have to take the initiative, and fully support the idea floated by the Indian power minister. A regional institutional hub under the SAARC as the main implementing agency to undertake the initiation to put the idea into action needs to be created. The body for such should comprise of one member from each SAARC country, and it would be responsible for creating fund, construction of regional power grid, coordinating and advising on the matters of fund-raising program to the government concerned, determination of cost share to be contributed by each participating country on the basis of benefit they will receive.

This idea of SAARC power grid would integrate the regional power market, and a powerful means to supply power during the crunch in the entire region, and harmonize ties among the countries of the region.

Nepal, which is facing acute power shortage among the countries of South Asia, should take the initiative to put this idea into action. EP

"PSC Has Nothing Detrimental to Bangladesh's Interest"

Dr Abdullah Al Faruque

Bangladesh had gains from the PSCs. BAPEX has acquired onshore exploration capacity due to the exploration works under PSCs or technical supports from the friendly countries

A certain group of the country has long been pursuing an anti-PSC movement based on an irrational perception, although there is nothing against the interest of the country. The Bangladesh PSC has ensured the ownership of the people on the oil and gas resources as well as protected the sole authority of Petrobangla in controlling the use of oil or gas to be extracted. The contracting company under the PSC does not have this authority. Associate Professor of Law of Chittagong University Dr Abdullah Al Faruque has expressed the view in an exclusive interview with EP Editor ***Mollah Amzad Hossain***.

Dr Faruque has obtained PhD on Stability and Risk Management in Petroleum Contracts from the Centre for Energy, Petroleum, Mineral Law and Policy (CEPMLP) of the University of Dandy in the UK. Following are the excerpts from the interview:

EP: A certain group within the country has long been criticizing the efforts to explore oil and gas through appointing IOCs under PSC on consideration that it would affect the country's interest. What do you think?

AAF: It cannot be answered in a single word. Exploration of oil and gas under PSC is being carried out in almost all the developing countries. About 60-70 countries are following the PSC system. Even developed country like Russia, is also following the system.

There are some risks associated with the process of exploration and development of hydrocarbon. These are geological, and commercial risks. Geological aspects of petroleum contracts may give rise special kinds of risks resulting from varying degrees of uncertainty associated with the physical characteristics of petroleum operations. The main unknown geological factors and uncertainties in petroleum exploration relate to the discovery, the size of deposit, and the economic viability of development. Petroleum contracts are also vulnerable to commercial risk such as changes due to future price developments, error about the future technology and market developments as well as ordinary commercial risks occurring through fundamental changes of circumstances which are beyond the control of the parties. PSC is a better mechanism to distribute the risks and benefits arising out of the petroleum operation. However, most of the risks are borne by companies, not the host government, under PSC system until they found commercial discovery of oil and gas after making huge investment.

The popularity of the production-sharing concept amongst the developing countries lies for its political appeal of ownership of resources since PSC system vests all hydrocarbon discovered in the host state. Here, the companies are considered merely as the contractors. The companies take all the risks and get only a part of the profit gas in the event of successful commercial discovery. Bangladesh has adopted this system. The PSC is also popular for both the host states and companies mainly for its flexibility in its negotiation process and its proven effectiveness and adaptability in very different settings.

Now the question is that why the foreign companies are being brought under the PSC for oil and gas exploration. Because, petroleum exploration is highly capital intensive, risky and requires necessary technological support. Bangladesh does not have capacity and required technology to take the risks, in particular in case of offshore exploration. I do not see anything harmful in the PSC. Rather, the recently concluded PSC for exploration of offshore fields is more rational from economic point of view and to meet our growing energy demand. It must be admitted that we could not develop Petrobangla for lack of political will. Hence, we have no alternative to IOCs at this moment.

EP: How do you evaluate the country's first Model PSC formulated immediately after formation of Petrobangla in 1974, following the PSCs of other countries specially Indonesia? Six companies have been awarded for exploration of gas and oil in the Bay of Bengal under the first PSC.

AAF: It was very timely initiative. The PSC system introduced by Indonesia in 1966 had gained instant popularity. The then visionary leader of the newly independent Bangladesh did not also hesitate to take the progressive step. But we could not make much headway, despite being first in the region to adopt the system. Although it was possible to formulate the Petroleum Act 1974, form Petrobangla and procure 5 gas fields from Shell BV, the progress could not be continued due to the political changes of 1975. We also could not yet amend Petroleum Act 1974 to incorporate the environmental and social issues of petroleum operations. Petrobangla could not be developed like PETRONAS or other state-owned enterprises. I think these happened due to lack of political commitment.

EP: What do you think about awarding few blocks to IOCs in 1988, 1992 and 1997 through various changes in the PSC?

AAF: All the PSCs so far signed in Bangladesh have been concluded in a transparent manner. Around 50% of the country's gas demand comes through the PSCs while developing skills of the local manpower. They have definitely a positive impact on Bangladesh. There is no justification in this situation to demand by a certain group to scrap the PSCs. However, I don't think it was right to hand over Jalalabad Gas Field discovered by Scimitar and later owned by Bangladesh to Occidental under PSC. It was not an appropriate decision.

EP: How Bangladesh has been benefitted or lost through allowing IOCs to operate in Bangladesh under PSCs?

AAF: Overall, Bangladesh had gains from the PSCs. BAPEX has acquired onshore exploration capacity due to the exploration works under PSCs or technical supports from the friendly countries. Local manpower have got the opportunity of higher training as PSCs have the provisions for training and employment of local people. The local manpower got opportunity to work in International Companies. They also acquired technical knowledge from the contracting companies operating here.

EP: What do you say about the demands and statements by OGPC against the PSC agreement with ConocoPhillips?

AAF: They are staging demonstration on the basis of a misconception. They are arguing that all the gas will be exported. This is not correct. After commercial discovery, Petrobangla will have the first right of refusal. If there is not enough gas demand in the country, or Petrobangla cannot buy the gas for any reason, the IOC will have to sale the gas to third party inside Bangladesh. If that even does not happen, the IOC may export the gas with the approval of Petrobangla after converting it to LNG. Furthermore, establishment of LNG requires separate agreement with the Petrobangla. Therefore, under the PSC, export of discovered gas is only remote possibility.
I consider that export of LNG after setting up of a LNG plant and associated facilities will not be commercially feasible unless 15-20tcf gas is discovered in two offshore blocks. LNG is huge investment intensive. We must remember that the Bay of Bengal has some potential for discovery of Petroleum. India and Myanmar are exploring for Petroleum through engaging IOCs under PSC in the region. Why Bangladesh should in the Bay of Bengal?

We had invited bids for 28 offshore blocks. Some companies responded too. But due to the maritime boundary disputes with neighbors, it was possible to conclude PSC with ConocoPhillips for 2 blocks only. This exploration will assist Bangladesh's claim for its lawful demand over maritime boundary in the ongoing arbitration process in the Law of the Sea Tribunal in someway.

Generally PSC for offshore exploration provides more incentives to the companies due to higher level of risks and capital involved in such exploration. Compared to others, our model PSC, 2008 is not too much attractive for the companies as it offers few incentives to the companies except provision for export. For instance, under the model PSC of 2008, the ceiling price of gas indexed to HSFO price at Singapore has been fixed as US$ 180 per ton. The gas price in this situation will be US$ 4.5/1,000scf.This is not attractive in the context of risks in offshore drilling. Moreover, companies will have to pay corporate tax, which in earlier PSCs were paid by Petrobangla on behalf of the company. Arbitration will be held outside Bangladesh according to international norm. There is nothing wrong here. Generally, any dispute settlement under investment contracts such as petroleum agreements takes place in neutral venue of third state. It is now a proven reality that FDI is beneficial for third world countries.

However, the government should publish the recently signed PSC, showing full respect to the popular demand. All petroleum contracts are published in Barrows Supplement published from New York. I do not consider this as a classified document.

EP: You have achieved higher degree on PSC. How do you compare Bangladesh PSC and contract with those of other countries?

AAF: Model PSCs are prepared in different countries taking into consideration the geological conditions, existing laws and resource potential of the country. Some general clauses are universal in all PSCs. However, detailed provisions may vary from country to country depending on onshore or offshore exploration, prospectively of hydrocarbon and legal traditions. In my opinion, Bangladesh PSC has nothing harmful or detrimental to the interest of the country. But monitoring PSC is a huge challenge. Rate of return of the company in consideration of discounted cash flow must be carefully examined.

Our PSC has scope for renegotiation like many other PSCs if IOCs make huge profit. There is stabilization clause in many PSCs. But our PSC does not have that. The inclusion of the clause means no such law can be formulated which may cause additional financial obligation to the company after signing of contract. For example, tax stabilization may provide that applicable tax regime will not be changed throughout the lifetime of the contract. But in our PSC all changes in taxation and other matters will be applicable to the company.

EP: A certain group is claiming that a US company has been allowed to export gas through the PSC. What is your opinion about it?

AAF: It is an unreasonable claim. The IOC has been selected through competitive open bidding. Petrobangla will be in total control if gas is discovered. Petrobangla will retain exclusive control even if gas is to be exported in the form of LNG. The people retains its ownership over resources, IOCs will never assume the ownership.

EP: The government is working on formulating a model PSC for onshore blocks. Some people are opposing it .What is your view?

AAF: All matters should be looked into from economic point of view. Any model PSC for onshore blocks should accommodate for national company to work as a partner. Even some blocks may be given to BAPEX exclusive for exploration without PSC. Before finalizing the model PSC, Petroleum Act 1974 should be amended to create stronger obligations for companies to address potential social and environmental negative impacts of petroleum operations.

EP: How do you evaluate Petrobangla's PSC negotiating and monitoring capacity? What Petrobangla should do to enhance the capacity?

AAF: Petrobangla has learned a lot through works. But for enhancing it, the government must take the initiative for higher training for employees of Petrobangla. Fresh and competent professionals must be inducted and their capacity must be built through continued training to fill the gap as and when necessary. Petrobangla's capacity should be enhanced for monitoring of enforcement of PSC. Negotiation and bargaining skills must also be enhanced. An efficient cell should be set up for legal and regulatory matters. If necessary, at every stage assistance of specialists can be taken.

EP

Protecting A Supercomputer From Power Grid Disturbances

EP Desk

The ABB solution is installed at the National Institute of Water and Atmospheric Research (NIWA) in Wellington, New Zealand, where it protects the institute's new climate modeling supercomputer and the entire NIWA site from voltage fluctuations.

The new IBM supercomputer is the most powerful climate research computer in the southern hemisphere. It can perform 34 trillion calculations a second (being upgraded to 65 trillion/sec in 2011), and is designed to provide fast and accurate weather and environmental forecasting as well as early warnings of severe hazards like flooding and storm surge.

Protection of the $9.5 million supercomputer and its invaluable data from damage or destruction is vital. The computer is housed in a purpose-built clean room that is designed to withstand natural and manmade disasters like severe earthquakes, tsunamis and fire from within.

It is also protected from the equally devastating effects of power surges and voltage sags that have the potential to shut down the computing facility and damage the highly sensitive equipment. This is provided by an ABB PCS100 AVC active voltage conditioner.

The PCS100 is an inverter-based system that protects sensitive industrial and commercial loads from voltage disturbances. An ABB innovation, it provides fast, accurate voltage sag and surge correction as well as continuous voltage regulation and load voltage compensation.

With a system efficiency approaching 99 percent, the PCS100 offers significant energy savings compared to the conventional alternative of uninterruptible power supplies (UPS), the efficiency levels of which typically lie in the mid-90s. This is especially important for energy-intensive supercomputer facilities, which consume large amounts of electricity and require constant cooling to dissipate the heat they generate.

> *ABB active voltage conditioners have uniquely high levels of system efficiency and a footprint that is just a fraction of conventional solutions*

> *Energy efficiency, compact footprint and efficient power protection are key factors in data center design*

Whereas UPS batteries are a power storage device that release energy when needed, the PCS100 is continuously online, monitoring the power network and injecting an appropriate power correction within 1-2 milliseconds of sensing a deviation. This is fast enough to protect even the most sensitive environments like a supercomputer or wafer lab from a disturbance.

Storage batteries are also high maintenance and have a short operating life of between 5-10 years. ABB active voltage conditioners, on the other hand, require virtually no maintenance and have a much lower total cost of ownership.

ABB AVCs are protecting sensitive commercial and industrial applications in a broad range of applications worldwide, including semiconductor factories and wafer labs, solar cell manufacturing facilities, food and beverage plants, and the process industries.

One of the most recent installations is at Weta Digital's award-winning supercomputer center in New Zealand, where the AVC is not only protecting the entire facility but significantly reducing site energy consumption as well. Weta Digital is a world-leading visual effects company whose recent successes include the film Avatar, which won it the Academy Award for Best Visual Effects in 2010.

EP Desk; Source ABB