

Gas Exports: Promises and Perils

by Nuruddin Mahmud Kamal

Recent IOCs discovery of Bibiyana, Sangu and Capna has been appraised and certified through third party certification institutions as per international practice. Unless these discoveries are appropriately field-tested and evaluated the reserves of gas will remain highly speculative. The exploration effort of Rexwood or UMIC has remained a mystery for some time. Therefore, it is not clear where do we stand in terms of additions in gas reserves. Optimism is good but much of greed might kill the goose that is laying golden eggs!

THERE is a big gossip in Dhaka that Bangladesh is important to world energy markets because it has up to 80 trillion cubic feet of natural gas in 20 geological structures. Such highly speculative news and views have opened a new dimension in dialogues and debates. We suddenly hear more about gas than we had ever wanted to know or thought it possible to ask. We also find ourselves awash in a tidal wave of conflicting opinions. There are people who claim the drama is not real but has been created by the business elite to enter into this new business. Some maintain it has been contrived by the international oil companies.

The elite of Dhaka are getting addicted to instant coffee, fast food business, pure cotton shirts, five-minute news, direct dialing and expect quick and easy answers to most things. There are none. Nor are there any instant solutions. However, there are real answers and real solutions. Some of the answers are tough. They involve sacrifices, mental attitudes and a person with plenty of guts. Some of the solutions will take more time than people would like to believe. They would not like that either. But with good common sense we can figure out what's right, or what's reasonable if we have all the facts. When the chips are down, what we really want to know is who the players are, and what the stakes are and whether or not the deck is stacked.

I don't remember who once said, "Everybody's ignorant — only about different things". Most city or town dwellers in Bangladesh who have access to as have been blissfully ignorant about everything that lies behind their gas ovens because it has always been abundant and cheap. Until now there has been little reason to ask any questions. The complexity of the national and international hydrocarbon industry is why there is no quick and easy answers to many questions we want answered. It is also why there are so many misconceptions.

To understand all this, we have to take a look at a lot of things: the nature of the gas industry and the difference between the handful of international oil companies (IOCs), Petrobranga, Bapex and the bureaucratic tangles; the events that led to our becoming an energy-short nation; the decisions made by government and government-guided corporations and industry in underestimating consumption and which sources of energy would supply it; or why did not we have an implementable national energy policy, although we had been in an energy crisis since mid-70s. In hammering out a workable energy policy and legislation to implement it, understanding the economics involved is most important, as well as controversial issue.

We can hardly be optimistic about the solution of our energy problem for many reasons. As a research scientist at ECSIR once told me, "If you can define a problem, you have it half solved." Not only we cannot thoroughly define our problem now, but as the result of the multitude comments, observations even recommendations that have been made in the past two decades, we know that we are not the luckiest of all developing countries. We do not have an "equivalent" physical resources and technology to become self-sufficient overnight. Our real energy problem is immediate and short-term, not long-range.

However, the specific issue that I would like to deal with today is about export of natural gas. Let me begin from the beginning. Natural gas is currently the only indigenous non-renewable energy resource of the country, which is being produced and consumed in not-so-much significant quantities.

Generally, Bangladesh is known in the energy world as a single source or single resource country because other possible options have not been tapped. Nearly six to seven per cent of the total population, that too in urban locations in the eastern part across the mighty river Jamuna flowing almost north to south separating the country

into two parts, have access to piped gas in their homes, commercial places etc. Gas, the source of commercial energy, plays an active role towards the growth of the economy.

At present, nearly 84 per cent of power generation in the country is based on natural gas and the entire urea fertilizer requirements of the agricultural sector is met by utilizing gas as a feed stock. In terms of demand-supply situation, out of the total energy consumption, non-conventional and non-commercial energy play a dominant role. However, in the commercial energy domain natural gas play the most vital role. Gas now accounts for about 70 per cent of the domestic commercial energy supply. So much dependence the country has grown on the single source. The existing high pressure transmission infrastructure network is being extended across the Bangabandhu Bridge, and hopefully, by the end of 1999 areas like Sirajganj, Baghabari and perhaps Bogra would come under the gas network. More claimants of gas throughout the country will come up soon and natural justice will suggest that those claims must also be met.

Indeed, natural gas is very valuable resource for Bangladesh. Both the present and future generations have claim on it, quite rightly as a citizen of this country. Therefore, if gas itself and the proceeds from gas could be used to build infrastructure, increase the productive capacity of the economy and take the economy to a higher growth plane on a sustained basis that would also be a very worthwhile gift to the

future generation. It is a common knowledge that the pie is not even big enough for 125 million people of Bangladesh.

Nevertheless, our expectations are high on gas reserves, but we must not be carried away on the ground of expediency or on some foolish decision. There are not many good examples of state level gambling, but an individual or business people surely involve themselves in high risk and high return investment, even if that is gambling.

The news of discovery of Capna in Sylhet is encouraging, but without any scientific basis. When someone claims that the reserve could be 80 trillion cubic feet (TCF), the indication is rather bullish. Unfortunately, the news goes further to state another unreal number that the country has a gas reserve of 30 to 40 TCF including 13 trillion already discovered. These are pure bluff. But what is important is that what is the motive behind the storyline?

The second storyline appeared in the DS on June 8, 1999 as, "Negotiations on to export gas to India?" As a citizen of Bangladesh, for which I also fought in the War of Liberation against Pakistan, I feel very perturbed. These news items are very agonizing for the state and the people.

Let me now explain why I am particularly disturbed and suffer discomfort from the news items. I happen to have had long association with the energy sector, as a student of Geology and Petroleum Economics and as a public servant of the Republic. I am not known to be nosy, but as a normal human

being perhaps suffer from nostalgia. For long 20 years, I was deeply involved in the energy sector, which even today compels me to write, discuss and share thoughts for the development of hydrocarbon sector in Bangladesh.

Unfortunately, during my tenure in the public service at least on two occasions I had the opportunity to hear from high ups in the government expressions like, "we are floating on gas" (in 1981) and the second occasion, "we are soon going to become a member of OPEC" (in 1987 after discovery of oil in a one minuscule well wonder at Haripur, Sylhet). Now, it seems the situation has aggravated further and a number of vested interest groups including some teaching faculty members, professionals, business executives and even some diplomats are keen supporters or promoters of gas export from Bangladesh. This article is not aimed at criticizing published reports, rather aimed at describing the issue as I understand.

The debate on export of gas has been intensified in the recent times. The most recent report on 8 June is taken on a real world level — business has come into the scene, no more academicians, policy planners or professors. Thanks to Prime Minister Sheikh Hasina for making a bold commitment. The report asserted that while the country's highest decision maker has taken a clear stand on the subject of export of gas, a leading Indian weekly claimed that negotiations with Bangladeshi companies and two multi-national oil companies for a transnational

pipeline to take gas from Bangladesh and Myanmar to India were in "advanced stage".

What is more distressing is that an Indian weekly 'Outlook' in its 31 May '99 issue reported that the state-owned Indian Oil and Natural Gas Company (ONGC), recently engaged by Petrobranga and conducting gas development and drilling in Sylhet area, was negotiating with two Bangladeshi companies, namely, Mohona Holdings and Banamco Energy and the much talked about IOC Messrs Unocal (in the process of buying out Occidental) and Cairn (being bought out by Shell). The storyline goes further to indicate that Bangladeshi companies would have controlling stake in the project and gas producer in Bangladesh could enter into the game. Be that as it may, my humble submission is that the issue be taken seriously forthwith, otherwise the problem will aggravate.

In a recent article on 'Gas contracts and tasks before Bangladesh' published in the DS in six tranches during May 25-30, 1999, I touched upon the subject of gas export based on proven reserve of gas etc., which is the standard practice in international oil and gas industry contrary to the belief of some pessimists, I understand, neither the world nor Bangladesh is running out soon of the hydrocarbon resource.

However, the proven reserve is depleting over time. To offset the declining trend, the critical need is to make further investment in this high risk venture and find more gas for future use. Also, it is important to establish whether Bangladesh today

has adequate 'surplus gas' to export. So far, out of 20 gas fields with an estimated recoverable reserve of 13.74 trillion cubic feet (TCF) some 3.27 TCF consumed during the last three decades, around 10.47 TCF gas is recoverable. Bangladesh cannot afford to commit itself to sell out even a portion of this reserve.

Basically, there are two main consumers of Bangladesh gas: generation of electricity (46 per cent) and production of fertilizer (37 per cent). In FY 1997-98 almost around 83 per cent gas produced daily was dedicated to power and fertilizer sector. In 1999, on an average 1900 megawatt (MW) electricity is being generated daily through use of gas. Remaining about 300 MW or over depends on imported fuel. In a cubic meter of diesel/kerosene. About 400-430 million cubic feet (MMCF) per day gas is supplied for electricity generation.

Gas use, for obvious reason, will expand soon in the areas across river Jamuna. The 1995 Power System Master Plan (PSMP) and Fifth Five Year Plan projection published in March 1998, it would seem that in the next 15-16 years i.e. by 2015, electricity generation will increase by a factor of five. The projected generation is around 10,000 MW by 2015, a quantum jump from the existing daily average of 2200 MW. Assuming a gradual but faster growth after 2001/2, by 2015 almost 2400 MMCFD gas would be required for power sector alone. Similarly, fertilizer production and other industrial and commercial and home consumption will grow as infrastructure network expands.

Current estimates on proven reserve suggest that Bangladesh can meet its electricity needs through use of natural gas for the next two decades. However, unless serious production effort is carried out successfully, fossil fuel will find difficulty in meeting most of Bangladesh's commercial energy needs beyond 2015, let alone leave enough 'surplus gas' for export.

Let me also present one other related issue: the country

imports approximately 2.4 to 2.5 million tons of crude oil and petroleum products annually. The cost of such import has tremendous impact on the balance of payment of foreign exchange and economy of the country. Effort therefore has to be made to substitute imported oil by indigenous gas. Other old and new gas use and oil substitution in generation of electricity would obviously place new demands on gas. The pressure will continue to mount higher and higher. For example, during FY 1997-98 around 209 BCF of gas was consumed, while in nine months from July '98 to March '99 more than 210 BCF gas has been utilized.

With two more private power plants (190 MW) commissioned by end June '99, the total consumption is likely to go up to 280 BCF in FY 1998-99. Present daily consumption is around 900 MMCFD including supply of about 160 MMCFD from IOCs (Cairn/Occidental) would increase several times over in the next 15-20 years. Meanwhile, hopefully Petrobranga's donor financed gas development drilling programme would be accomplished and another at least 150 MMCFD gas would be added soon. A rough calculation for electricity generation alone over the 20 year period would be about 4.5 TCF, close to 42 per cent of the present proven/recoverable reserves of gas.

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The author is Retd. Additional Secretary and former Chairman, Power Development Board.

Magurchhara Inferno — an Environmental Holocaust

by Dr. A.H. Jaffor Ullah

Apart from the loss of a huge amount of natural gas whose volume cannot be ascertained by any means, there was an irreparable damage done to the ecosystem of Magurchhara. It will take years before the natural flora and fauna will reestablish in the devastated area. Furthermore, the groundwater must have been contaminated badly due to the leakage of organic compounds that came out with the natural gas. From the perspective of an environmentalist, Magurchhara incidence could be dubbed as the 'Environmental Holocaust' of Bangladesh.

TWO years ago a man-made disaster had befallen in northeast Bangladesh — a region rich in fossil fuel. To be exact the date of this disaster was June 14, 1997. The fire that had erupted in the gas-field 'Magurchhara' on the early hours of June 14 (Saturday) was immensely so huge that no one was able to go close to it, never mind the extinguishing of the fire.

On hearing the news in NFB (News From Bangladesh), an Internet news daily published from Dhaka on June 15, 1997, I was dismayed and I spent some agonizing hours. On June 18, 1997, I finally wrote an editorial on it and e-mailed the same to NFB. That editorial entitled 'Lesson from the recent gas-field burning' was published on June 19, 1997. Sitting some continents away from Magurchhara, the epicenter of the hellish fire, I could sense that something bad was happening to a region of Bangladesh that endowed with pristine natural beauty. The fire was so enormous that it took months before it could, extinguish by itself. Finally, when it was safe to go to Magurchhara to examine the extent of the damage, an irreparable ecological disaster had taken tolls on wildlife and biodiversity.

The sad part of the whole episode is that the gas exploration company, the Occidental Oil Company of USA, had no contingency plan in the event a fire breaks out during exploration. They did not have any safety protocol, nor did they have any fire extinguishing gadgets at hand. In other words, the company showed no respect for the land or its inhabitants. Later we were told that the Occidental Oil had subcontracted

the exploration job to another foreign company. By doing so, did Occidental breach the contract?

After two long years and an ecological disaster, still at hand, it turns out that Occidental had left Bangladesh in a hurry. It is, thus, a sad testimony for globalization. In theory, globalization is supposed to bring unprecedented prosperity to all economies of the world, specifically the Third World nations rich in natural resources. But in practice, things turned out to be entirely different. May I ask one of those soothsayers in the West who were agog with globalization to step forward now and tell us — what did go wrong with globalization in Bangladesh?

The Magurchhara disaster is a grim reminder that a country rich in natural resources, such as Bangladesh, should think twice before inviting any multinational companies with open arms. There is always a risk involved in extracting fossil fuels or minerals from beneath the ground. Thus, safety of our people and environment should be the prime consideration before any 'Production Sharing Contract' is doled out to any mega-corporation. Let us face the hard reality that a foreign company will always try to do the job as frugally as possible to maximize their profit. These multinationals are here in Bangladesh not to do a Good Samaritan job, but to make money — lots of money. Thus, they will try to cut corners. Bangladesh's government should be vigilant to make sure that safety protocols are not compromised while performing gas and oil exploration in the country.

I remember reading a news

report on the Net where it was mentioned that some of Bangladesh's expert in the field of geology and ecology had assessed the damage done by the devastating fire of Magurchhara. Apart from the loss of a huge amount of natural gas whose volume cannot be ascertained by any means, there was an irreparable damage done to the ecosystem of Magurchhara. It will take years before the natural flora and fauna will reestablish in the devastated area. Furthermore, the groundwater must have been contaminated badly due to the leakage of organic compounds that came out with the natural gas. From the perspective of an environmentalist, Magurchhara incidence could be dubbed as the 'Environmental Holocaust' of Bangladesh.

I still 'shake' my head with utter disbelief that Bangladesh's government showed a pathetic leniency to

Occidental Petroleum and let them off the hook so easily. Bangladesh's neighbor, India, also suffered badly in the hands of another multinational in December 1984. The American chemical company Union Carbide was the guilty party in Bhopal disaster where about 45 tons of toxic volatile compound Methyl Isocyanate was leaked into the environment. Consequently, about 2,500 people died because of the exposure to this deadly organic compound. The litigation dragged on for quite some time but the guilty party — Union Carbide — had no choice but to come up with the compensation. Unlike Bhopal, in Magurchhara incidence was let loose by Bangladesh government. And this is deplorable. As because no loss of lives resulted from the ball of fire in Magurchhara, Bangladesh government thought there is no point in going after the com-

pany whose negligence had caused this environmental holocaust. What about the loss of trapped methane gas into the atmosphere? Those assets belong to the people of Bangladesh. This fire had caused the emission of a huge amount of carbon dioxide gas into the atmosphere, which is bound to contribute to the greenhouse effect and warming of the surface of the earth.

Environmental organizations in Bangladesh should seriously consider taking Occidental Petroleum Company to an international court.

In January 2000 when most environmental organizations of Bangladesh would meet in Dhaka to talk about the deteriorating environmental conditions in the nation, they should discuss in depth the Magurchhara incidence. Any lesson that we have learned from Magurchhara incidence should be enumerated. The impover-

ished nation of Bangladesh should not have to endure one more environmental disaster coming from energy exploration. The environmental groups in Bangladesh should most certainly form a watchdog group to monitor the activities of the multinational companies; moreover, they should be on the vigilance making sure that all precautionary measures are being taken by the exploration team to avert a repeat performance of Magurchhara disaster. Bangladesh's natural resources belong to her people and they should guard collectively these assets.

The damage from Magurchhara gas explosion was estimated to be about \$135 million US dollars (equivalent to about Tk 600 crore), according to Bangladesh government's assessment. A recent roundtable discussion arranged by Bangladesh Petroleum Institute and USIS had revealed that Oc-

cidental Oil Company of America was not paying any compensation for the damages resulting directly from Magurchhara gas-field fire. Petro-Bangla Chairman, Mr. Mosharraf Hossain had revealed in this roundtable conference that his organization has no jurisdiction over regulating the exploration activities of the foreign companies. Naturally, the question arises — who is supposed to monitor and regulate the energy exploration activities of the multinational companies.

Bangladesh's independent non-governmental law organization representing the interest of common people should ask the government to reveal the terms and conditions of 'Production Sharing Contract' those are being given to various multinational companies. Those contracts should spell out clearly the liabilities, the exploration companies are supposed to undertake while searching for natural gas and petroleum products.

This writer lives in Louisiana, where a tremendous amount of gas and fossil fuel exploration goes on in the Gulf of Mexico located in the South of the state. And we all know that the energy companies those who are involved in exploration in the Gulf have to abide by the strict laws of the

land. Safety concerns are of paramount importance in America. Isn't that a pity the same corporation, when they venture out to the Third World countries for natural gas and petroleum products, will lax the standard and resort to shoddy practices to undermine the laws of other nation. To me this has to change. Bangladesh should firm up their safety rules and enforce every bit of it in the strictest term.

An energy-rich nation such as Bangladesh should develop a comprehensive guideline for energy exploration. They should consult other nation's policy and guidelines. Bangladesh's NGO's like POROSH, BCAS, IUCN, CUS, and US-based organization like Bangladesh Environment Network (BEN) have a positive role to play and they ought to help Bangladesh government prepare the guideline for energy exploration and save Bangladesh from future ecological disaster.

The author is a member of Bangladesh Environmental Network (BEN) a US-based organization of non-resident Bengalis. BEN had completed its first meeting in Atlanta on June 5-6 in preparation of the first major Environmental Conference in mid-January, 2000.

Indonesia Breaks into 'Ruling' and 'Nationalist' Blocs

Jay Solomon in Jakarta

Mr. Habibie is capitalizing on Islam's increasing role in Indonesian politics. Many of the new parties are Muslim-based and champion economic preferences for the nation's 180 million faithful. Mr. Habibie's reelection would mean continuing policies favoring them - fused with an adherence to the economic programs espoused by the International Monetary Fund, Golkar members say.

Anti-Antibiotics

by M. A. Obaydullah

THE discovery of antibiotics gave doctors the upper hand in the war on harmful bacteria. These drugs helped cure infections that had long been fatal.

But the bacteria are fighting back. According to epidemiologist Edward Tseloni of the State Medical Society of Wisconsin, a number of pathogens are gaining resistance to the drugs, and one reason for the growing problem is the overuse of antibiotics.

Resistant bacteria flourish through a process of natural selection. Antibiotics wipe out most of the harmful organisms in a person's body, but a few resistant germs sometimes survive. Those reproduce, passing the drug resistance to their offspring.

This has created an abun-

dance of bacteria that don't respond to common antibiotics. One example is pneumococci, which causes ear infections and pneumonia.

Back in the 1980s, there was no resistance to this organism. If you used penicillin, you cured it. And now we are seeing strains of this that are resistant to multiple antibiotics, and we are seeing that about 25 per cent of all the strains now have some level of resistance.

However, doctors have to resort to increasingly stronger antibiotics. The nightmare scenario here is that the resistance continues to increase and these organisms develop resistance to our drugs of last resort. And then we could be faced with a situation where you have infections that are virtually untreatable.

ident Suharto - he was his hand-picked successor - would provide political ammunition for parties campaigning on reformist platforms.

Mr. Habibie's backers say the incumbent will draw strong support from Indonesia's largely Muslim voters, as well as constituencies outside the main island of Java.

Opposition parties now talk confidently of launching a united campaign against Golkar over its Suharto links. "Nominating Habibie... only shows Golkar seeks to maintain a status quo position," said Taufiqurrahman Saleh, chairman of the National Awakening Party, or PKB, a leading reform party. Over the weekend, PKB, along with Ms. Megawati's party and Mr. Rais's, announced plans for a coalition after the vote, with the hope of winning at least 50

per cent.

Mr. Habibie's nomination would have been deemed nearly impossible last May, amid the tumult of student protests and rioting that forced Mr. Suharto's resignation. But the 62-year-old Mr. Habibie has proved adept at countering reform-minded critics: Forty-five new political parties will compete in June's vote and hundreds of new newspapers will scrutinize it. Political opponents of the Suharto regime have been released from jail.

Capitalizing on this lineage, Ms. Megawati has become the linchpin of Indonesia's nationalist political camp. Supported by retired military generals and the leader of Indonesia's largest Islamic organization, Ms. Megawati is promising to maintain Indonesia's secular state, fearful that Islam's increased political role could exacerbate divisions in a country. Ms. Megawati is reluctant to follow Mr. Habibie's offer of independence for the restive province of

East Timor, fearing it could mark a dangerous precedent.

Her party - the Indonesian Democratic Party of Struggle, or PDI-P - stresses aiding the poor and cleansing corporate and financial sector rampant with corruption. Advisers to Ms. Megawati say she'll also support affirmative action policies, though not to the detriment of ethnic-Chinese businessmen. And economic policies will continue to follow IMF prescriptions, though with potential alterations, such as introducing a fixed currency regime.

Voters for reform are also turning to Mr. Rais, the U.S.-educated Muslim leader whose threat last May to march one million Indonesians on Mr. Suharto's office hastened the former president's fall. Mr. Rais has spent much of the past year remaking his image from that of a pure Islamic figure to

one who appeals to a wider base. He resigned from his post as chairman of Indonesia's second-largest Islamic organization and set up the National Mandate Party, or PAN, an inclusive, multi-racial body.

Mr. Rais is by far the most aggressive in demanding an investigation into Mr. Suharto's family wealth. And he has been seen as an alternate source of economic and political decentralization away from Jakarta. PAN economists are also considering the implementation of a currency-board mechanism to stabilize the rupiah, but promise to maintain the IMF-prescribed reforms.

Mr. Rais' tough stance on the military's role in politics is seen as alienating some in the establishment. But his cross-over appeal both to reformist and Islamic camps will gain him support when the parliament convenes to select Indonesia's new leader.

Other candidates are Gen. Wiranto, the military commander, and the Sultan of Yogyakarta, Hamengkubuwono X.

The author is a staff reporter of The Wall Street Journal. This piece appeared in WSJ on May 17, 1999.

Garfield

