

Challenges in the Energy Sector: What Should We Do?

by Nuruddin Mahmud Kamal

While our recent energy policy has taken into account emerging patterns of the developing world's scenarios and its reflection on the geo-politics of the globe, we must also determine how much we can depend on foreign private investment in future or, for that matter, what kind of dependency syndrome is developing in the power sector in particular.

THE Government of Bangladesh faced formidable challenges in the energy sector harnessing its energy resources for sustained long term socio-economic development and the more immediate challenge of overcoming gas and power shortages. The need to move quickly to add generation of electricity and new gas pipeline facility was not underestimated. However, the decision makers experienced that serious efforts were needed to attract fast track private investments.

There were two intricate issues involved under this perception: one, a dynamic vision was needed to address the fast growing primary energy (gas) rich sector, and the other was to address the realities of power sector and improve management. The task of securing adequate investment for meeting the growing demand was very difficult. These challenges implied firming up maximum commercial and economic value for gas, however without jeopardizing the interest of the country. The National Energy Policy 1995, acknowledged that the shortages of capital had prevented systematic development of energy resources throughout the country and that necessary attention had not been given to policies that could bring forth needed in-

vestment from the private sector. In October, 1996 the Government approved, as a follow-up of Energy Policy 1995, Private Sector Power Generation Policy of Bangladesh to promote private participation. That was the beginning of private sector power generation in Bangladesh.

However, in order to define the policy objectives and the strategies required to realize them, a number of questions would need to be answered. These questions may be: Does Bangladesh have sufficient proven natural gas to meet long-term domestic gas demand and also consider likely benefits from potential export possibilities of the country? If yes, what strategies would be most beneficial for the country? If no, why not? These dilemmas must be overcome at the earliest. In the electricity sub-sector what logical sequence of events under the reform process be most appropriate from the country's point of view? Whether the present public sector monopoly in generation be replaced overnight by private sector or a combination of public-private development would be more profitable for the country? In this context, three most common approaches for developing private sector participation in the electric power sector include: privatization of existing assets through the transfer of ownership; long-

term lease of public electric power facilities for operation and maintenance by the private sector; and development, ownership, and operation of new electric power generation facilities by the private sector. To date, in Bangladesh, private sector participation has remained in the third category.

The Government of Bangladesh (GOB) has successfully promoted private participation both in the upstream and downstream energy activities i.e., gas exploration and production under Production Sharing Contract (PSC) and power generation — through Independent Power Producers (IPPs) respectively. As private investment increases, GOB would get the opportunity to further reduce its own exposure to relatively high risk activities. Within a span of about two and a half years, about 300 MW of private power has come into operation. Hopefully, by the end of 2002, another 970 MW of new capacity addition would take place in addition to at least 500

MW from the public sector. This by no means is a small achievement for any government in Bangladesh, at least from the point of view of challenge faced boldly.

While through transparent and competitive bidding, the negotiation with the IPPs were conducted as per procedure, one donor observed about the progress, "at risk due to delays forced by institutional problems and inter-agency feuds." These are perplexing and unwarranted observations, which did give rise to an impression that the private sector operators must be given out anything and everything without any scrutiny and at their asking terms. Unfortunately, because of undue patronage, at least one IPP managed to hedge vital details of their offers right from the beginning which almost jeopardised the negotiations. Apparently, the company still have some unbusinesslike plans up their sleeves. The government and the authorities concerned must be on guard

during the period of implementation to protect the national interest. Such examples do make the host country very suspicious about the private sector deals.

Indeed, the Government is aware about positive international attention that Bangladesh has achieved through those competitive and transparent bids. GOB has already taken some steps in the private power investment and is now initiating measures to address other critical issues relating to overcoming infrastructure bottlenecks and institutional constraints in expanding the opportunities for use of commercial energy. But nothing seems to matter regarding the dilemma in energy consumption, particularly the non-conventional or non-commercial energy fuels development and their distribution in the rural areas. The government apparently is indifferent about any institutional support to augment the current unhealthy situation.

The Government however is

committed to identifying and overcoming constraints that limit the efficient transmission and distribution of gas and power. The high priority placed on these aspects came into sharp focus after the Hon'ble Prime Minister Sheikh Hasina took charge of the Ministry of Energy and Mineral Resources (MEMR). GOB's willingness and determination to allow private participation in gas and power has since been reinforced. Issues relating to deregulation is being looked into to address some deep-rooted problems in the under performing public sector organizations.

Reportedly, actions are underway to commercialize as much as practically feasible state owned companies and create more opportunities for increased investment. The Government is clearly looking towards the private sector for much of the investment requirement. Although many conditions do not appear conducive but the timing appear to be appropriate for implementing a credible reform pro-

gramme for the electricity and gas sectors, perhaps with the themes of decentralization, demonopolization and commercialization.

Amongst others, a number of critical issues lingered the development of energy sector in the past which include, but not limited to, donor assistance and shortages of fund. In fact, financing of energy projects largely remained in the quantitative areas rather than the qualitative and quality of energy services. Moreover, due to non-systematic exploration and exploitation of hydrocarbon, lack of attention to institution building and institutional support for new and renewable resources of energy, hardly any balanced development of energy resources commenced. Though delayed, some attention has now been given to encourage private sector participation to supplement and complement the public sector efforts to fill in the gap of shortages of fund in the government coffers. Indeed, other development programmes like industrial development etc. have been constrained due to shortage and unreliable supply of natural gas and electricity. The fact of the matter is that organizations dealing with commercial energy have not been operated and managed efficiently. Worse still is that proper and adequate attention was not given to meet

the total energy needs of the vast majority of rural population.

While our recent energy policy has taken into account emerging patterns of the developing world's scenarios and its reflection on the geo-politics of the globe, we must also determine how much we can depend on foreign private investment in future or, for that matter, what kind of dependency syndrome is developing in the power sector in particular. Questions may be asked: do we wish to isolate domestic energy demand from external influences? If so, how? A number of authors in the recent past have placed serious enquires through their writings in The Daily Star about the emerging politics in South-east and East Asia and the comparable technological competencies in these countries in terms of sharing their resources. If it so happens that our neighboring countries do plan to join the power league in future what should be our role? Apparently, we are not sure. I, for one, do not even dare to say that the government is hesitant. Yet, in my opinion, the most important issue is the initiative required to strengthen our thought process.

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Will the Genetically Engineered Crops Do More Harm than Good?

by Professor A. S. Islam

In view of the existence of two diametrically opposite views, one in favour and the other against GMOs, the developing countries like Bangladesh, where biotechnology is in its infancy, are confronted with a very difficult situation — which to follow.

WE all rejoice at the prospect of coming into commission of the National Institute of Biotechnology (NBI) in the not-too-distant future. The NBI scientists would soon make their decision to select crops and other research topics in which work of the institute should begin. In the Biotech Conference scheduled in Dhaka on the 15th of August, Dr. M.S. Swaminathan, one of the star biotechnologists was the keynote speaker. Since Dr Swaminathan heads the Rural Biotechnology Institute established by him some years back in Madras, he is in a position to help NBI to select doable research programme, it should embark upon for the economic benefit of the country.

The big question now is whether or not NBI should choose to work on the production of genetically modified crops (GMO), also known as genetically engineered (GE) crops or transgenics, in view of the vehement opposition voiced in Europe and Japan and more recently by some countries of Africa against the use of genetically modified crops.

What are GMOs, GE crops or transgenics? Before I go further to discuss the issue, let me explain what GMO means. High technology is available by

means of which a plant or an animal can be genetically modified through insertion of hereditary material called genes from a completely unrelated organism, say a gene from a bacterium to a plant or from a human to a bacterium. Such modified organisms are called transgenics. GM, GE and transgenics are synonymous. Say, for instance, there are American cotton transgenics containing a gene from a bacterium (*Bacillus thuringiensis*), the plants of this variety produce an insecticidal protein which kills cotton bollworm. The latter is an arch enemy of American cotton wherever it is grown. There are American cotton varieties which, in addition to containing genes for resistance against insect pests, also contain a gene which imparts to it resistance against a popular herbicide called Round-up. The last-mentioned varieties of cotton can be grown with reduced tillage and minimum of insecticides, thus saving top soil on the one hand and ground water and air from pollution on the other.

How do we account for diametrically opposing views between USA and Europe in regard to the GMOs?

According to an article of Roger N. Beachy published in the 16th July issue of the presti-

gious journal, "Science", of the United States, the field trial with GMOs started in 1986. It took several years for the Food and Drug Administration (FDA) and the Environmental Protection Agency (EPA) to evaluate the GMOs under field conditions before they recommended release of such genetically transformed crops. In the assessment of performances of GMOs, all concerned quarters: scientists, consumers, breeders, FDA, EPA and actual users were involved. FDA and EPA cleared the GE crops because they found them superior in their performance over conventional varieties.

Within the last three years GE crops became so popular that currently 40 per cent of corn, 50 per cent of cotton and 45 per cent of soybean varieties grown in the United States during the current year are transgenics.

Reasons for non-acceptance of GMOs in Europe: According to Beachy, non-acceptance of GMOs by Europe is due to a growing number of editorials in

the dailies in a grossly exaggerated language about the dangers of GMOs and secondly European decision makers in recommending GMOs did not seriously take into consideration farmers' opinion and those of others concerned in such an important matter. As a result in Europe, including England, the public opinion is growing very fast against the use of GMO crops. The opinions expressed by NGOs influenced public's decision to keep away from the GE crops. In fact, European countries except Great Britain have imposed a ban on the import of GMO crops.

Some NGOs in Great Britain e.g. Greenpeace are so much against GMOs that whenever they get a chance, they destroy the field where such crops are grown. On the 25th July edition of some leading British newspapers, photographs appeared on the front page showing the destruction of such crops by the Greenpeace members.

Voice against use of GMOs is gradually building up in the USA: Recently in the United

States also voice is being raised against GMOs. This group is discouraging the cultivation of GE (Bt) maize arguing that as against bumper crop in certain regions such as Prairie, yield of GE maize in some areas is below average and that already in certain areas the crop is under severe attack of corn borer.

Prince Charles is also against GMOs: The campaign against such genetically tailored crops is supported by no less a person than the Britain's future king Prince Charles. He challenged those who advocate that the increased productivity of GMOs will not only feed the hungry mouths of developing countries where food shortage is chronic but the built-in resistance of GMOs will greatly reduce the use of insecticides saving the environment from further pollution. Prince Charles said that more in-depth research is necessary to establish the fact that GE crops are safe for human and animal consumption before they are released to the market. He said that if multinational compa-

nies diverted a part of the huge amount of money, being spent now by them in developing GMOs, to research for improvement of existing crops, there would be comparable varieties to bridge the food gap. Such improved varieties would ensure, on the one hand a safeguard against genetic erosion, and on the other allow the small and marginal farmers planting their own crops to feed themselves.

What should countries like Bangladesh do in the face of such conflicting views about GE crops? In view of the existence of two diametrically opposite views, one group in favour and the other against GMOs, the developing countries like Bangladesh, where biotechnology is in its infancy, are confronted with a very difficult situation — which side to follow. Let us examine the situation in the perspective of Bangladesh.

Now that NBI will be operational soon, a decision is to be made about selecting crops to be worked upon to produce transgenic crops incorporating desirable traits including resistance of crops to pests and diseases. For the present, it will be wise to confine our research to non-food crops such as jute, cotton and some timber trees; and defer any programme on rice, corn and oil crops except to conduct trials with the imported genetically modified foodgrains in the experimental grounds within the premises of NBI under expert supervision.

Why do we need to confine ourselves presently to non-food

crops? Based on scientific proofs, those against GMOs argue that production of resistant varieties containing genes such as Bt is not a permanent solution. Over a period of only a few years, such transgenics lose their resistance against the particular pest the variety is bred for. Secondly, the pollen of GMOs by cross-fertilizing with their relatives may create superweeds which would defeat any attempt to eradicate them from arable land even by the strongest weed killer/herbicide. Thirdly, humans may not show any symptoms of harmful side effects immediately after the consumption of such food but, the group thinks, that the bad effects of foreign genes may surface subsequently during the life time of individuals using GMOs or in their progeny.

Would transgenic jute or cotton pose such a problem? Jute crop suffers a great loss from the attack of hairy caterpillars. Obviously, varieties containing Bt gene will be resistant to such a pest. Of the two species (*Corchorus capsularis* and *C. olitorius*) of jute, which yield "White" and "ossa" brand of jute fibres respectively, NBI may initially confine itself to "White" (*C. capsularis*) varieties only, because first it's self-pollinated and as such it would not cross-fertilize with non-GMOs; and secondly *C. capsularis* has no wild relatives and it does not cross with either the cultivars or wild races of *C. olitorius*. As such it's extremely unlikely that it would produce superweeds infesting jute fields.

However, people should be warned against using jute leaves as one of the items in their diet.

What about the GMO varieties of jute retaining its power

of resistance? Techniques have been standardized to slow down the development of Bt-gene resistant caterpillars. It has been demonstrated that if the planting is done with GMOs and non-GMOs in the ratio of 4:1, toxin-resistant insects do not develop or develop very slowly, if at all. Recently a super Bt gene, which is reported to kill the newly developed resistant strains of caterpillar, has been discovered in Egypt. If necessary such genes may be used to breed new varieties of jute capable of warding off the future enemies of jute. As regards growing GMO American cotton with Bt gene, the risk is not very high because in the first place American cotton is not an indigenous crop and chances of development of superweeds are extremely rare. American cotton does not cross with the Asiatic cotton, the cerium variety grown in Bangladesh; so development of weeds from the crosses of American cotton X Asiatic cotton is very unlikely.

Genetically Engineered Aspen varieties with 40 per cent less lignin. Early this month a genetically engineered Aspen tree (it is a kind of poplar tree) with 40 per cent less lignin has been reported by Professor Vincent Chiang of Michigan State University. This variety of Aspen will be extremely useful to the paper industry: first, it will save millions of dollars now used to bleach excess lignin; secondly, freedom from use of chemicals will keep the environment clean.

The second area of research should be to produce transgenic jute varieties with less lignin similar to transgenic aspen tree reported recently in a joint venture between a university and a private company.

'A Monarchy, Madam. A Monarchy'

Ardeshir Cowasjee writes from Karachi

"Those who fear that fields will lose to bricks and those who might hope to gain from such an exchange would do well to remember the age-old anecdote about an open space in London. 'Were I to enclose Green Park within my garden, what would be the cost?' asked Queen Anne. 'A monarchy, Madam. A monarchy,' replied Robert Walpole. 'Each successive time, this has fallen on ignorant, deaf, and deafer ears.'

acres allotted to various builders and developers for a price. The people protested and successfully resisted.

The year 1990 brought into power in Sindh a ruler Jam Sadiq Ali of Sanghar. In April of 1991 a gang of 'toughs', engaged by builders Wasif Wazir Associates, invaded the park site, overpowered the Society's chowkidars, broke into the site offices and destroyed whatever furniture and fittings there were. They also destroyed whatever saplings and plants had been nurtured. The matter was reported to Jam Sadiq. True to form, he declared himself to be 'shocked' and promised to 'investigate'. Jam, of course, did nothing and the land-grabber continued his job. He built a wall around what he claimed to be his property.

Threatening noises that endangered the Society's possession of the property were heard. So, to save its land, the Society went to court through its then president, Mahmud Ali. The Member, Land Utilization of the Board of Revenue wrote to the advocate-general of Sindh, "...in pursuance of the Prime Minister's directives as well as concurrence of the Chief Minister of Sindh...", he referred to other allocations

made in favour of seven builders and urged him to take up the matter "at your personal level." He was asked to make strenuous efforts to have the stay order vacated and the constitutional petition dismissed.

Luckily for us, the A-G was unsuccessful. Come 1997 and the advent of the second round of Nawaz Sharif, and now in 1999, the Sharif sidekick Saifur Rahman has identified plots of land on which the 'Mera Ghar' can be built, one plot being the Horticultural Society's land. I informed Saif that this land was not for him to grab and that he should make sure that the prime minister is not ushered there to lay a mass-produced foundation stone or plant a sapling. Saif managed this. For the information of the prime minister, his man Saifur Rahman, his governor of Sindh, and his advisers, secretaries, administrators and officers, the legal status of the Society's 30 acres is as follows:

"1) The Horticultural Society of Pakistan was allotted 30 acres of land in Deh Qewari, Taluka Karachi, possession of which was handed over to the Society on 19/9/82. On 23/4/91, Wasif Wazir Associates unlawfully and by use of force trespassed on five acres of this land. The Society lodged a report with the police on 25/4/91. Meanwhile the Government attempted to cancel the allotment of the remaining 25 acres. Threatened with the cancellation of the plot, the Society filed Constitutional Petition No.D-520 of 1991 in the High Court of Sindh.

"2) The petition together

with its stay application came up for hearing on 8/5/91. The Court (Saizuddin Siddiqui CJ and Imam Ali Kazi J) issued notice to the AG and called for para-wise comments from the Government of Sindh (R) and also restrained Wasif Wazir Associates (R2) from raising any construction on the plot. A commissioner was appointed to inspect the site and submit his report to the court. (3) The commissioner visited the site on 9/5/91 and reported that there was a boundary wall with an iron gate surrounding five acres of the 30 acres, and the chowkidar of Respondent No.2 claimed it to be the property of that Respondent. There was no construction other than walls with sheet-roofing on which a few labourers were working. The remaining 25 acres were undeveloped.

"4) On 6/6/91, the Court (Saizuddin Siddiqui CJ and Abdul Rahim Kazi J) admitted the petition for regular hearing and ordered that the interim order passed earlier was to continue until the hearing of the stay application.

"5) On 16/6/91, the AAG for the Government of Sindh produced a copy of an order dated 4/5/91 passed by the Government of Sindh which purported to allot 25 acres of land to some seven entities/persons (later these were discovered to be Ahmad Ali Construction Company, Mobin International, Nasir Abdullah Hussain, China Builders, Mustapha and Company, Combined Builders, Mrs Sabra Begum). The order was passed by the Secretary, Government of Sindh, Board of Revenue, LU Department, issued with the

approval of the Chief Minister, the land to be used for residential-cum-commercial purposes. On this the court ordered that as the petition had already been admitted, the petitioner's possession of the land should not be interfered with until the hearing of the stay application and that the Sindh Government order dated 4/5/91 would not be further implemented. Subsequently, the petition was amended to also implead the seven entities/persons.

"6) The last time this petition came up for hearing was on 10/3/99, but it was adjourned for want of time. The application and petition are still pending and will come up again for hearing.

"7) The present legal position: As far as the five acres of the 30 acres is concerned R2 claims it to be in his possession. The Society disputes the possession. The court has restrained R2 from raising any construction thereon. As to the remaining 25 acres, they are in the possession of the Society and the court has directed that this possession will not be interfered with. This order is still operative. The order of the Sindh Government dated 4/5/91 remains suspended."

Now to a quotation which I have used many a time before, an excerpt from a letter written to The Times (London) in February 1987: "Those who fear that fields will lose to bricks and those who might hope to gain from such an exchange would do well to remember the age-old anecdote about an open space in London. 'Were I to enclose Green Park within my garden, what would be the cost?' asked Queen Anne. 'A monarchy, Madam. A monarchy,' replied Robert Walpole. 'Each successive time, this has fallen on ignorant, deaf, and deafer ears. Whether we like it or not, right now the only possible saviour of the people's land of the parks, playing fields, gardens, and open spaces, is the judiciary.

by Jim Davis

Garfield®



James Bond

BY IAN FLEMING

DRAWING BY HORAK



MANY THANKS, LIZ, BUT I THINK THE MINISTRY HAS OTHER PLANS FOR ME

YOU MUST BE PASSING UP AN OFFER LIKE THAT!

MAYBE - BUT EVERY TIME I THINK OF MESSING, I SORT OF CHOK UP!

End of story

602