

## Tribute to Bangabandhu

MUCH before it became politically correct to do so, this paper had called for declaring 15th August as the National Mourning Day. We did so from two major considerations: one was to pay respect to the man who led us to our independence; two, to mark the day that brought military intervention into our politics for the first time so that it never occurs again. It is with that same spirit we observe the National Mourning Day today.

We strongly feel that there really should not be any controversy about Bangabandhu's role as the leader of our Liberation War and that he should be given all due honour and respect that he deserves. He was the man who united the nation behind one demand. By his nearly 14 years in prison and his relentless political activism through the decades of the fifties and sixties, he made us aware that we needed to be independent and that we would have to fight to get it. It was his unmatched courage and relentless commitment to the cause of independence of our people that made him so very dear to our heart. In an era of political opportunism and cowardice, he stood up, towering far above all else and became the most vibrant symbol of our dream of independence. More than anything else he restored pride in all of us. Suddenly we felt as tall as any self-respecting citizen anywhere in the world and refused to be treated as second-class citizens by our West Pakistani counterparts. For all this we pay our tribute to the magic that was called Sheikh Mujib.

On this day a section of our military toppled an elected government and usurped power for the first time. Not only was Bangabandhu and his family killed but four months later the four leaders of the war-time government including Tajuddin Ahmed who, in the absence of Bangabandhu, led the war of independence were also murdered. Why were all these leaders assassinated? We are convinced that all this was to push back the gains of our Liberation War, the foremost of which was democracy. We never wanted military dictatorship to return on the sacred soil of independent Bangladesh. But that was exactly what happened, and stayed with us till mass upsurge toppled Gen. Ershad's government and democracy was restored.

As a part of our tribute to Bangabandhu we call upon all to rededicate ourselves to two things: development of Bangladesh, and strengthening democracy. If we remain as poor and backward as we are, we will be insulting the memory of the man we led us to independence. We must intensify our struggle for democracy and development and implement the Sonar Bangla of Bangabandhu's dream.

## Violence on CU Campus

INTERNECINE conflict, often bloody, within Bangladesh Chhatra League (BCL) seems to have become a familiar phenomenon at different universities across the country. Even before the outrage over the recent fracas between the 'killer' and 'rapist' groups of the BCL on the Jahangirnagar University campus died down, rival factions of the student front of the ruling party went into an armed clash at Chittagong University on Thursday last, leaving 50 wounded including four bullet-hit police personnel. The Syndicate came up with a rather hackneyed administrative measure: indefinite closure of CU. Police, for their part, also went by the book, raided a few halls of residence and "arrested 10 BCL cadres along with arms and ammunition." Such 'raids', in all probability, would make no difference and a handful of armed goons, in the name of student politics, would continue toying with the fate of general students.

In recent times, student politics has often hogged the headlines for wrong reasons. Violence on campus at different educational institutions across the country has often been perpetrated on materialistic rather than idealistic issues. Besides, many a 'student leader' has been implicated in cases of such heinous crimes as murder, rape, extortion, kidnapping, arms and drug dealing, etc. On the whole, it has been a fall from grace for student polities. Mainstream political parties have made matters even worse. While denouncing on-campus violence in public, they have hardly taken any tangible effort to disassociate themselves from the 'deviant' activists. The prime minister's much-publicised anti-terrorist stand does not sit in with an apparently endless sequence of violence perpetrated by the student front of her own party.

In our view, alarming escalation of campus-centred violence lends weight to President Shahabuddin's call for a moratorium on student politics. While denouncing the incident and urging the authorities to resume academic activities at CU, we would like to extend our plea to the mainstream political leadership to sever relationship with their deviant student activists rightaway.

## Talk Less, Solve Problems

THE sufferings of doctors and patients at the General Surgery Department of the Dhaka Medical College Hospital (DMCH) can be summed up with the comment of an exasperated doctor who said, 'There is no end to problems.' A report in *The Daily Star* on Saturday gave a graphic account of the ordeals faced there.

The number of patients has been increasing every day but there has not been any corresponding increase in the number of beds in the hospital. The number of operation theatres remains low as the availability of medicines and instruments is yet to improve. Almost three critically injured patients are admitted every hour. This leads to hurried operations that might cause infection. Conditions in this department are so depressing that even the lights in the operation theatre don't work properly and the hydraulic system does not always function. The working doctors complained of unsympathetic attitude of the administration towards the problems of the department. DMCH has to treat the bulk of emergency patients of the country which at times reach a staggering number of around 200 a day. The condition in which the doctors have to perform their duties are despicable and these must be improved without fail.

We hear of national health policy designed to expand facilities in rural areas but we don't think the health ministry is addressing the problems of hospitals in earnest. To bring more people under the medicare wing of the government is a noble aim but the authorities should, at the same time, engage themselves in improving the standards of treatment at the most important and busy hospital of the country.

# The Energy Challenge for 21st Century Bangladesh

by Md. Khalequzzaman

**Bangladesh needs to develop an action plan for energy production, transmission, and supply. With the current trend of globalization of trade and technology transfer, it will be possible to adopt technologies that are both efficient and environmentally feasible for Bangladesh in the 21st century.**

FOLLOWING the October Revolution, V.I. Lenin defined socialism as "the electrification of the whole country and the transfer of power to the Soviets (people's representatives)." This goes to show how important the electrification was for the overall development of a country more than 80 years ago. The need for electrification of Bangladesh remains just as vital today. At the present time, the United States has the world's largest economy. Since all industrial and other economic activities rely on electricity or other means of power, the primary energy production can be considered as an indicator of a country's economic strength. The USA has about 6 per cent of world's population, but consumes more than 30 per cent of the world's energy. India, on the other hand, has 15 per cent of world's population and consumes only 1 per cent of world's energy. Bangladesh has about half the USA population and about one-eighth of India's population. However, the energy production in Bangladesh is not a match to either of these countries. In fact, even amongst the 40 countries classified by the World Bank as "low income countries", Bangladesh's commercial energy use stands at less than 31 per cent of the average of these countries. Prime Minister Sheikh Hasina recently (May 26, 1999) reiterated the importance of developing the power sector by saying that her government had prioritized the power sector as it was the "primary base of all infrastructure development" in the country.

Bangladesh still remains an agrarian country. Because of the fast population growth, the amount of per capita cultivable land is dwindling very fast. In order to survive as a nation, and to prosper in the 21st century, Bangladesh will have to shift from an agrarian economy to an industrial economy. Consequently, the power generation will have to increase drastically to achieve that goal. Electrification of the whole country should be taken as the top most priority. According to the report of the Task Forces on Bangladesh Development Strategies for the 1990s, as of 1991, 73.1 per cent of the total energy consumption comes from biomass fuel, such as agricultural residues, tree residues, fuel wood, and dung. The use of biomass is not only an ineffective means of energy generation, it is also extremely detrimental to the environment. For instance, the forest cover in Bangladesh has been reduced from 15.6 per cent to 13.4 per

cent between 1973 and 1987. According to some reports, the present forest cover is less than 9 per cent. The decrease in forest cover contributes, among other adverse effects on the environment, to the increase in flooding propensity. Therefore, I believe, a drastic improvement of the power sector is an absolute prerequisite for the overall development of the country.

To meet the growing demands of electricity in the domestic and industrial sectors, Bangladesh will have to come up with a plan for massive production of power. The country is not self-reliant in energy production. As of 1983-84, imported fuels (petroleum and coal) accounted for 44 per cent of primary commercial energy supply and required about 22 per cent of the country's export earnings. The dependence on imported oil eventually will create uncertainty. According to a recent report in the *Scientific American* (March 1998), the global production of conventional oil will probably begin to decline within next 10 years. Bangladesh needs to reduce its dependency on foreign oil gradually, while explore the feasibility of developing alternative sources of energy.

The prospect of using natural gas to generate electricity is pretty bright for Bangladesh. In a recent article published in *The Daily Star* on June 4, 1999, Nuruddin Mahmud Kamal (ex-chairman of the PDB) mentioned that the amount of proven reserve of natural gas in Bangladesh is 10.47 trillion cubic feet (TCF). According to the report of the Task Forces on Bangladesh Development Strategies for the 1990s, the data on natural gas usage in 1989 indicated that about 150 billion cubic feet of gas is used annually, of which 6 per cent and 45 per cent are used for domestic and power generation, respectively. The usage of gas by the domestic sector is very low, but is increasing at a rate of 12 per cent. Only a fraction of Bangladesh population living in major cities has the access to gas. An increase in domestic usage of gas will help cutting back on the use of biomass fuel, which accounts for 73% of total energy consumption of the country.

The amount of electricity production will have to in-

crease drastically, should Bangladesh decides to bring all her citizens under a national electric grid, and to increase industrial activities. Natural gas can be used to produce more electricity. Natural gas burns cleaner than oil and causes less damage to the environment. Fuel derived from natural gas using Fischer-Tropsch synthesis creates fewer emissions of carbon monoxide, nitrogen oxides, and particulates compared to reformulated diesel. Research is underway to convert natural gas to liquid form. One research group in Canada, CAMNET Energy Technology Center, made progress in converting natural gas into liquid form that is usable in cars. Another group of researchers in Syntroleum Corporation in Tulsa, USA, has developed a way to convert gas into liquid fuels using blown air. When these methods of gas conversion into liquid fuels will become readily available in future, Bangladesh will be able to rely on its own gas to meet most of the power needs.

There has been lots of discussion in the press recently about the possibility of gas export from Bangladesh to India. Apparently, some foreign companies and donor organizations are keen on the idea of exporting gas from Bangladesh. According to Nururuddin Mahmud Kamal, currently about 400,430 million cubic feet (MMCF) of gas is supplied per day for electricity generation only. At this rate of consumption of gas for electricity generation (which uses 45 per cent of the total gas consumption), the gas reserves will last 60 to 65 years. In other words, the total reserve of gas will last about 27 years when all other sectors of gas usage (fertilizer, industry, domestic, etc.) are considered. As mentioned earlier, only an insignificant fraction of the population in Bangladesh currently uses gas for domestic needs. In addition, the amount of gas consumption will increase drastically should Bangladesh decide to produce more electricity to meet increased demands in the power and fertilizer sectors. If the rate of consumption increases five fold during the next 15 years, as envisioned by experts, then the gas reserve will last less than a decade at best. It is worth mentioning that about

10 per cent of the annual energy needs of the USA comes from natural gas, which (18 TCF) is more than the total proven reserve of Bangladesh (10.47 TCF). It is very clear that under no circumstances Bangladesh should consider exporting gas.

Other possible means of alternative sources of energy include wind power, hydroelectric power, tidal power, solar power, and nuclear power. Generation of electricity using wind requires high wind speed and available open space. Valleys within mountains can funnel winds at high speed, and are suitable locations for wind turbines that can generate electricity. Parts of Chittagong and Hill Tracts might be feasible for generation of electricity using wind power.

Despite an abundance of surface water, the potential for hydroelectric power is limited at best. The Kapal hydroelectric station is the only major power generating facility in the country. Building of the Kapal dam in the early 1960s caused inundation of localities around the reservoir, which led to uprooting of many indigenous people, as well as to confrontation between the victims and the government. Because of low terrain and high population density, the prospect of developing hydroelectric power is not environmentally feasible in other parts of the country.

Generation of electricity using tidal power is very similar to hydroelectric power. Tidal channels are dammed off and tidal water is forced to pass through a narrow gate to which a turbine is connected. The direction of the turbine can be changed to allow both incoming flood tide and outgoing ebb tide to work on the turbine. However, development of tidal power causes problems to navigation. Siltation behind dams also limits the life of operation. Since most tidal channels are used for navigation in Bangladesh, generation of electricity using tidal power will have to be limited to isolated channels inside the Sundarbans area.

Solar power uses sun's energy to produce electricity. Solar energy is plentiful in Bangladesh. Generation of electricity using solar power is environmentally feasible. Development of solar power should be a top priority for Bangladesh

in the 21st century. Most of these alternative sources of energy discussed earlier are still more costly compared to the energy produced by conventional methods. However, with an increase in energy demands and with an advent of more efficient technologies in the future, the production costs and price will decline. To meet the increasing demands of energy, Bangladesh should also consider developing nuclear power as a source of future energy.

To meet the world's energy demand in the future, further research and development of nuclear energy will continue throughout the world. Many countries in North America and Europe heavily rely on nuclear energy. For example, France uses up to 75 per cent of nuclear energy to meet the national demand. Canada, Germany, UK, Sweden, USA, and Japan also use a significant amount of energy generated by nuclear reactors. According to the Energy Information Administration, the USA produces about 15 per cent of its electricity (477 billion kilowatt-hour) supply from 132 nuclear reactors. India produces about 2 per cent of its electricity (5.5 billion kilowatt-hours) from nine nuclear reactors.

Although nuclear energy is very efficient, it is relatively costly. Also, there are some risks involved in safety procedures and the disposal of waste materials generated in nuclear power plants. Occasional accidents can be dangerous. However, "energy overreaction" against nuclear power plants certainly play a major role in mobilizing public opinion on this issue. Except for the Chernobyl disaster, which was caused by a faulty and outdated technology in the former Soviet Union, and the Three Mile Island incidence in the USA, there have not been any significant accidents associated with nuclear power generation. Operations in all other sectors of industry have some risks associated with accidents. For instance, the Bhopal disaster in 1984 was caused by a chemical industry (the Union Carbide), and was equally dangerous. The problem of radioactive waste disposal remains an unresolved issue. As far as the radioactive waste disposal is concerned (in the case of fission reactors), recent studies show

that clay-rich seabeds can be suitable for disposal of such waste. The Bengal fan has one of the highest sedimentation rates in the world and could be one such location for burial of radioactive waste.

There are different kinds of nuclear reactors. The most efficient type is the "Breeder Reactor" which is not only efficient, but also relatively safe. In addition, the nuclear fusion reactors, as opposed to fission reactors, use heavy deuterium and tritium (a form of hydrogen) as a source of reaction. Fusion reactors will produce water as by-products — not radioactive waste (i.e. absolutely no environmental risk is associated with them). One gram of deuterium-tritium can generate energy equivalent to burning 45 barrels of oil! These fusion reactors are still in research stage, but significant strides have been made in development of these reactors. Dittmar and others recently reported the findings of their research at the Centennial Meeting of the American Physical Society held in Atlanta, USA in March, 1999. According to the report the dream of sparking tabletop nuclear fusion has become a reality, promising not commercial energy but a promising scientific pay off. The heat took place on a lab bench only about 1 meter wide and 3.5 meters long. There, scientists zapped clusters of atoms of deuterium or heavy hydrogen, with brief but extremely powerful laser pulses. In addition, research is ongoing in the USA and in Japan to develop cold fusion (i.e. at room temperature). These are all matters of future.

We need to adopt a power generating technology that is economically feasible and environmentally sound. Bangladesh is not at the leading edge of technological research. This situation gives us an opportunity to learn from other people's mistakes. Bangladesh needs to develop an action plan for energy production, transmission, and supply. With the current trend of globalization of trade and technology transfer, it will be possible to adopt technologies that are both efficient and environmentally feasible for Bangladesh in the 21st century.

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## The Question of Big Borrowing and Future Development

by Dr. A.H. Jaffar Ullah

**Bangladesh has two problems to solve. One, how could she pay the interest year-in-year-out without choking the future growth of the economy. Two, how could she tell the exploiting class to take their hands off the development funds.**

Thus, quite a few economists were warning the government telling that this practice had to stop otherwise the country would rob the future of the next generation. Fortunately for America that this year there will be a budget surplus for the very first time in a long while. This means that the government would take more money from its citizens as income tax and then they would spend to run the government. The economists in the US are certain that the country will be in the black, finally. This would also ensure that economic expansion in the U.S. would continue unabated. The bottomline is America's future generation will not suffer for the follies of their elders.

Let us now see if the future of Bangladesh looks rosy under the present scenario of borrowing heavily from foreign source. Mind that the country is borrowing these extraordinary sums of money to finance some developmental projects in Bangladesh. I would not be worrying about this borrowing had I been assured that every borrowed dollar would end up in the appropriate place.

For the last thirty years, the U.S. had budget deficit each and every year. The deficit amount was borrowed from the citizens. The U.S. government had to float U.S. Treasury Bonds — long terms, short terms, intermediate terms, etc. — enticing the common citizens to buy these treasury-backed bonds. Thus every year, the U.S. government was obliged to pay interest and principal to the lenders, the citizens who purchased those Treasury Bonds. The borrowed amount was becoming ridiculously large in the late 1980s and early 1990s.

We should not be deluding in thinking that Bangladesh will behave responsibly in disbursing the development money. The accountability issue in modern-day Bangladesh is still fraught with hopelessness in the aftermath of big-loan defaulting by some private bank's directors. I wished the World Bank authorities had pressed hard the Bangladesh government to do the necessary so those bank-loan defaulters would be barred permanently to

dread how much money will make it to the development site.

Do you think that 50 per cent of the funds will be utilized in the development projects? Often times I have mentioned that unless and until we can institute a civil society in Bangladesh, not all these exercises will mean much for the destitute and indigent of the country. Mind you that every foreign project that comes to Bangladesh is sugar-coated with the label "for poverty alleviation." But as you know, a substantial sum from the development projects is being used wastefully to pay for the staff, training, procuring automobiles, furniture for the office and what not, and our needy people end up getting a smidgen leftover, if they are that lucky.

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join the free enterprise and mercantile communities.

Any sound economist should be worried at the news that Bangladesh is the second most borrower of the World Bank in South Asia. For comparison let us see how much India is borrowing from the World Bank to finance her developmental projects. India is borrowing \$ 1.5 billion. With a population of about one billion, their per capita borrowing is about \$ 1.5. However, Bangladesh is borrowing over a billion dollars with the population of only 125 million. Thus, Bangladesh's per capita borrowing would be about \$ 8.8. This value is six times higher than the value computed for India. Thus, Bangladesh will face an unusual hardship as compared to India to pay the interest accrued each year on this loan; never mind repayment of the principal.

There ought to be a healthy dialogue going on between private sector economists, university professors from economics and finance department, and the government economists to figure out how much Bangladesh can afford to borrow from the world body. The country will have to bear the brunt of hardship that might follow from excessive borrowing.

For long the World Bank, IMF and other international agencies have assumed the role of proverbial *Gauri Sen*. If, Bangladesh needs money for development, the ever ready *Gauri Sen* is there to finance the project. Bangladesh is probably hoping that one of these days the debt amount is going to be outrageously so large that the U.S. and other G-7 countries will simply declare the amount

as a non-performing loan. They know quite well that the impoverished nation of Bangladesh will have to go belly-up repaying the amount. So, why do it? After all, it is World Bank's duty to see that tranquillity exists in the World as far as solvency of a nation is concerned!

Do you realise that Bangladesh's central bank is also doing the same thing to the big-loan defaulters of the nation? The unscrupulous businessmen who borrowed hundred and thousand crores of Taka from various banks in Bangladesh may not pay even one Taka. Government has to safeguard the big-loan defaulters' financial empire, because if they go bankrupt then it might lead to financial chaos in Bangladesh. The central bank would fight tooth and nail to make sure that it never happens.

But who would pay the bigger price for the folly of a few? The common people, of course. When excess money ends up in some pockets instead of circulating in the economy, as desired, the result is disastrous. Thus, Bangladesh has two problems to solve. One, how could she pay the interest year-in-year-out without choking the future growth of the economy. Two, how could she tell the exploiting class to take their hands off the development funds.

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## To the Editor...

### Cacophony or respect?

Sir, The Fifteenth of August, the National Mourning Day, is a day to remember our great leader Sheikh Mujibur Rahman with due solemnity. But every year from the 14th August there starts a competition of high pitch making. The speeches of the 'father of the nation' and other recordings are played on loudspeakers in high volume and the quality of the mikes are so poor that it is hard to recognize his voice and it makes a harsh cacophony of only what the players would know.

Is this paying respect or the opposite? The same thing happens on the death-anniversaries of late President Ziaur Rahman. Isn't this sick-mindedness? Is there anybody to put an end to this and evolve something better?

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### Who will bell the cat?

Sir, It is