

Small Power Plants: Key to Electrification

by Muhammed Aziz Khan

BANGLADESH has never come across an opportunity to alleviate poverty as profound in importance as finding gas in the poor country. Bangladesh is afflicted by shortage of electricity, stifling economic growth and social welfare. We have ample gas resource; estimates vary from 30 trillion cubic feet (TCF) to 70 TCF. The best transformation of natural gas for Bangladesh is in electricity, which can be applied for maximum value addition. Until now this has not happened as fast as desirable, due to lack of investment.

In the recent past, Government of Bangladesh (GOB) has invited international oil companies (IOCs) to invest in gas exploration and for power generation in private sector. The response received is good; IOCs are now producing about 35 per cent of country's gas requirement and one US company AES's power plants come on stream with about 1100 MW that is about 35 per cent of electricity in the national grid would be provided by independent power producers (IPPs).

The challenge the government faces in the short term is how to pay for all this energy in foreign currency and in the long run how to bring the sector in the hands of Bangladeshi companies both in the form of technology transfer and management transfer, thereby improving the net worth for the country.

Lead time: Small power projects can be implemented within a year as demonstrated by a 100% Bangladeshi company United Summit Power Co. Ltd (USPC); quite to the contrary large project typically takes four years. This allows implementation of small power plants to actual demand rather than waiting for years. For example, demand in Sirajganj area is currently 50 MW, plant for which can be set up in a year's time. But if the policy is to set up a 360 MW plant we have to wait for demand to pick up and set up transmission line. This again deprives the present demand and stifles growth.

Less need of transmission: Small power plants being situated at the load centre does not require transmission line compared to huge investment and time necessary for transmission of electricity produced by centralized large power plants. Further, system loss during transmission is also high according to DESA transmission system loss is 6.5 per cent. Maintenance of transmission lines is very expensive, though I could not find actual figure for that.

Gas grid or power grid: GOB has rightly put emphasis on gas transmission. In National Energy Policy, as is being implemented, we see gas network will be extended all over Bangladesh. To our satisfaction gas has now gone west to

political-economic point of view. Let us take:

Enterprise: I will start with the basic factors of production, and labour, capital and enterprise. For small projects, we have the entire aforementioned ingredients available in Bangladesh. A 50 MW power plant would require about \$30 million, for which equity is available within our private sector; debt is available from our banking system. Whereas for large projects of 100 MW to 400 MW these are not available, as they typically require huge investment, as such large projects are implementable only by multinational companies.

Sense of belonging: Smaller power plants being distributed around the country will bring in a sense of belonging to the villages and will have a ripple effect on the local economy. This will not only provide impetus to growth but also encourage customers to pay.

Equal opportunity to local entrepreneurs: Infrastructure such as electricity is very sensitive and GOB should provide, if not more, equal opportunity to local entrepreneurs to get involved in this sector. Unfortunately, today the bidding process followed by GOB not only supports foreign companies but often effectively bars local companies from participating in the electricity sector. For example GOB discounts prices received over a period of time at 12 per

cent whether the offer is in Taka or US Dollar. This is most unjustified as Taka interest rate is 14 per cent vs 7 per cent for Dollar. US Dollar also appreciates by about 7 per cent per annum. These should be adjusted in the evaluation process of the GOB. Annexure 2 compares most different IPPs with these adjustments showing a very competitive price for small projects.

Small power plants with appropriate bid documents can provide the equal opportunity to local entrepreneurs and benefit to the government and people of Bangladesh by making the cost of electricity affordable and payable in Taka.

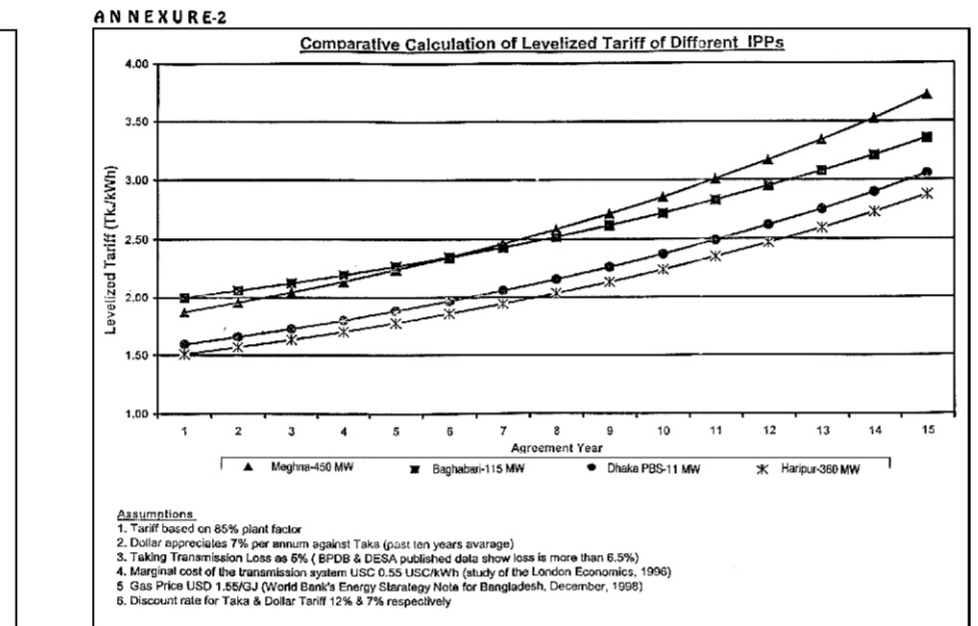
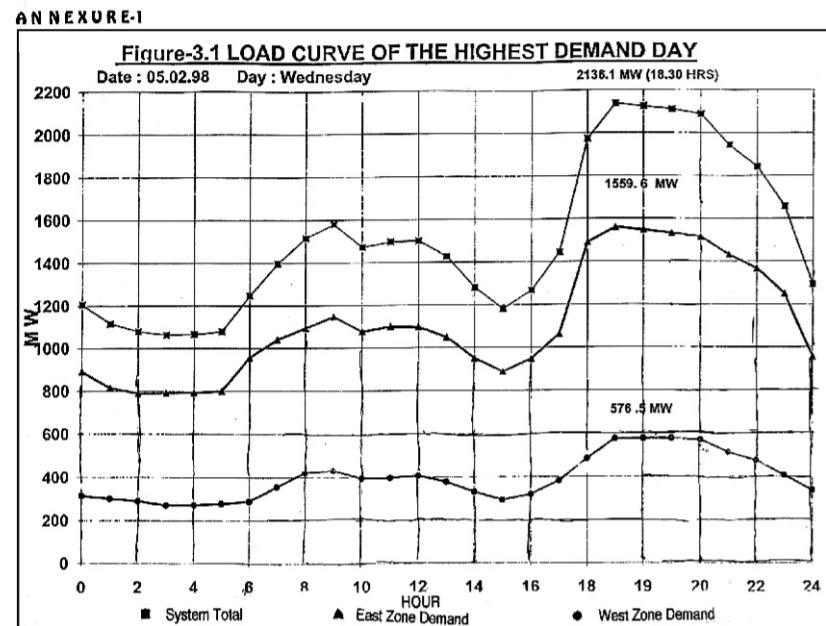
Taka vs Dollar: Bangladeshi entrepreneurs investing in Taka will seek their equity return in Taka. Should the local banks provide the debt repayment would also be in Taka. Further there is another dimension to it. If part of the equity comes from the stock exchange, the stock market will get a boost from the quality stocks, therefore the infrastructure of capital market itself will improve. On the other hand debt provided to these generating companies are of best quality, and local banks will have better loan portfolios. Local bank's understanding of the business and project financing will improve the country's overall banking sector. As a consequence GOB will be able to buy electricity in Taka and relieve

the pressure on foreign exchange reserve.

From the above it is amply clear that distributed small power plants are the right solution for Bangladesh. If we consider the gas pipeline network and the electricity transmission network, I believe we can start by opting for smaller power plants in Sylhet area on the existing gas network. This way we can add 150 MW, which is the current shortfall, within two years. In Baghabari where gas has already reached, two 50 MW power plants in 2001 and 2003 can be built. Similarly Sirajganj can have 50 MW by 2001 and another 50 MW by 2003. Subsequently as gas transmission progresses distributed small power plants can and should be built.

Conclusion: Bangladesh needs power, which is a basic infrastructure. Only 18 per cent of Bangladesh's population has access to electricity. It's sad to say that we have about 50 TCF gas and our people do not have electricity. Through small power plants we can help ourselves and lighten up Bangladesh.

The author is Chairman of Khulna Power Company Ltd. He is also the Chairman of United Summit Power Company Ltd., and Summit Group of Companies. The article is based on his discussion paper presented at 'Tech Transfer 2000: Bangladesh' held recently at BUET, Dhaka.



The GOB's privatization policy for gas and electricity is specific and thus not fruitful, the solution is total all-encompassing privatization with a regulator's role for the government.

Here, however I will discuss how and why small power plants are the right solution for Bangladesh.

Electricity demand curve: The demand of electricity in Bangladesh is expressed in the load curve (Annexure-1) shows a 40 per cent difference between peak demand and off peak demand. At 8 PM, night demand is about 3000 MW, compared to 1600 MW, say, 3 AM. Small plants can be put on and off in tandem with the demand curve. Large power plants on the other hand cannot handle this variation in demand, resulting in huge inefficiency. Large power plants can only work as base load plants.

Sirajganj. As (a) we have a huge reserve of gas, (b) gas transmission is much more economic, (c) all the areas of Bangladesh deserving gas for their various usage should get gas, (d) there is little or no system loss in gas transmission and (e) less maintenance is necessary for gas transmission lines, so we must all hope and believe gas network will be expeditiously implemented all over the country.

But large power plants require more electricity transmission capacity and stability at huge cost and expenditure. A parallel electricity transmission network to a gas transmission network is certainly a waste. It will be inappropriate to transfer two easily convertible energy in parallel.

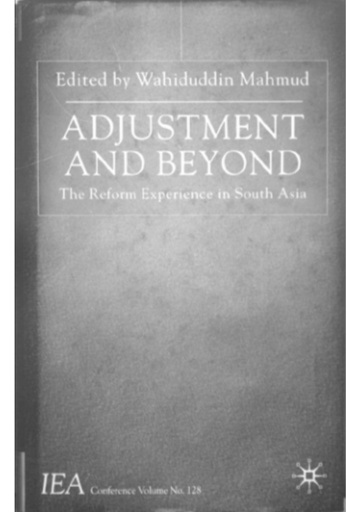
A good solution for Bangladesh is to set up small power plants along the gas network. This is also suitable from the socio-

ECONOMIC REFORMS IN SOUTH ASIA

Are Further Liberalisation, Privatisation and Opening of Markets the Way Forward?

Wahiduddin Mahmud (ed), Adjustment and Beyond: the Reform Experience in South Asia. Palgrave Publishers (Global Academic Publishing of Macmillan Press, New York); Published in association with International Economic Association, January 2001; page xxi + 343.

Book Review by Selim Raihan



notwithstanding many important differences in the country-specific situations. A general conclusion is that the crisis originated from the interaction between international capital market imperfections and institutional weaknesses in managing domestic financial liberalization. It is also noted that the crisis occurred only after these economies had went for full liberalization of external capital account transactions in the early 1990s and had subsequently acquired large exposure to short-term foreign debts. The lessons for South Asia seem to be that external financial liberalization should be gradual and selective, accompanied or preceded by the development of efficient domestic financial institutions and adequate capacity for their regulation and supervision. At the same time, South Asia must learn the positive lessons of the erstwhile East Asian miracle.

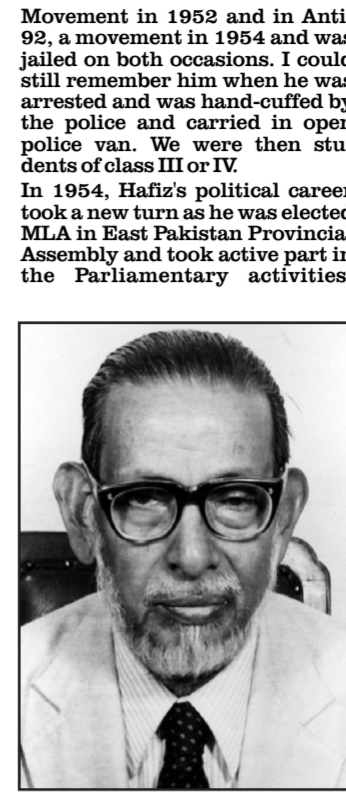
The episodes of crises in the global capital markets also bring home the inadequacies of the standard Bretton Woods macroeconomics in dealing with the problem of deregulated capital markets. In this context, the paper by Nadim Ul Haq and Mansoor Dailami (IMF and World Bank, respectively) discusses the problems of devising sound macroeconomic policies for developing countries exposed to risks of volatility in international capital flows, while Peter Nunneke (Kiel Institute of World Economics) emphasises the importance of

policy consistency and credibility. There are clearly many unresolved issues, such as how to deal with large capital inflows and the associated problems of asset market bubbles and exchange rate management. Edmund Fitzgerald, an Oxford economist, attempts to analyse yet another important, but relatively unexplored aspect of short-term capital flows, namely, the transmission mechanisms through which the instability of such flows affects the real economy variables including investment, production and employment. An understanding of these mechanisms is necessary for assessing the social returns from such capital flows as distinct from their private profitability.

Several authors have put the role of the IMF to close scrutiny. Yale professor Koichi Hamada argues that the IMF should incorporate both the ground realities of recipient countries and modern developments in economic theory in its operations, and that monitoring of IMF itself is as essential as monitoring by IMF of the client countries. Deepak Lal of the University of California (UCLA) goes even further to suggest that 'the IMF has increasingly become the international debt collector' for foreign lending agencies instead of performing its role as the lender of the last resort. He argues that IMF's short-term loans should be denominated in local currency so as to make it bear the risk of failure of its economic stabilization programmes in client countries.

Lest We Forget Mirza Golam Hafiz: Leader with a Mission

by Md. Anwarul Afzal



Movement in 1952 and in Anti-92, a movement in 1954 and was jailed on both occasions. I could still remember him when he was arrested and was hand-cuffed by the police and carried in open police van. We were then students of class III or IV.

In 1954, Hafiz's political career took a new turn as he was elected MLA in East Pakistan Provincial Assembly and took active part in the Parliamentary activities.

Like others of his generation and the one that followed them in the sub-continent, Mirza Golam Hafiz lived courageously under their flags. Born as a British subject he lived to work for and saw the departure of British colonial rule from the sub-continent. Hafiz was born in Dinajpur district in 1920. He did M.A. in Economics from Calcutta University in 1941 and BL from Dhaka University in 1948. He began his early life in Jalpaiguri, took active part in politics in preparation India, joined All India Muslim League Federation in 1938, went to Dibrugarh (Assam) to participate in the Anti-Line Movement launched by Maulana Abdul Hamid Khan Bhashani and was imprisoned. He took part in Tevaga Andolan (peasant movement) of North Bengal and was absconding.

As a citizen of the post-1947 two-part state of Pakistan he fought, with quiet dignity to establish, protect and preserve the inalienable rights of the Bengali citizens of Pakistan as he rose to the high position of a reputable lawyer both nationally and internationally. During this period he strived for ensuring justice, human rights, democracy. He was one of the lawyers from Asia who pleaded in Vietnam War Tribunal of Bertrand Russell, the great philosopher, in Paris. He also pleaded in the Agartala Conspiracy Case in the erstwhile East Pakistan and escorted Sir William Thomson, the UK Queen's Council Lawyer from London to Dhaka for pleading in the Agartala Conspiracy Case. But Thomson was not allowed to enter Dhaka city by Pakistani Government and he had to return to London straight from Dhaka Airport.

Mirza Golam Hafiz was associated with East Pakistan Civil Liberties League as its Secretary General from 1948 to 1950, participated in the Language

During his early political career, he was in close touch with many rare national leaders in British India. It was so because they used to visit Farbatipur Railway Junction and Saidpur Railway Junction as Trade Union Leaders. It inspired him to be a Trade Union activist. He did not charge any legal fee from Trade Union.

Hafiz was a romantic realist. He lived with his times. Because of tremendous negligence and glaring disparity in matters of development of North Bengal from where he hailed, he fought for a separate province in North Bengal during Pakistan time and placed its demand on several occasions. Afterwards inspired by Hafiz, Justice Anwar Ali (late) launched the movement demanding for a separate province. Hafiz was the Minister, the Speaker and the Member of Bangladesh Parliament. He was a dedicated Philanthropist and was actively associated with a number of social and legal organisations. He was the Vice President of East Pakistan Bar Council and also of All Pakistan Bar Council for two terms. He was the President of Supreme Court Bar Association in 1973. He visited 57 countries in the world and participated in many international conferences including Commonwealth Parliamentary Conference, Afro-Asian Peoples' Solidarity Conference. He was the President of Bangladesh-China Maitri Samity and visited China several times as the head of Bangladesh's goodwill mission. Exacting responsibilities of the senior position in the government, society could not prevent him from sparing a few moments for us all, comparatively too younger. Yet he always treated us as equals with whom he shared some of his fondest thoughts and dreams and depressing frustrations.

A noble dream inspires humanity to strive to be true humans. So do the life and work of men like Mirza Golam Hafiz who passed away on 20.12.2000. We pray for the peace of the departed soul.

The writer is ex-Member, National Railway Consultative Committee, Govt of Bangladesh.



All health information to keep you up to date

Always children first

Difference between vomiting and regurgitation

Vomiting is the forceful throwing up of the contents of the stomach. In young babies it is easy to confuse this with regurgitation which is the effortless bringing up of small amounts of milk during or just after the feed. If your baby seems generally well and brings out a little milk during or after a breast feed or bottle feed, it is known as regurgitation. It is not actual vomiting and is seldom a cause for concern. It is usually due to the swallowing of too much air while feeding.

TV and children

Effects of heavy television watching on children

The extent of television viewing by children in the US is enormous, with average daily viewing being between three and four hours. TV viewing ranks as the number one waking activity of the American child. Schorr has summarized seven principal effects.

- Increased aggressive behaviour and acceptance of violence.
- Difficulty in distinguishing between fantasy and reality.
- Distorted perceptions of reality (vis-a-vis consumerism, extent of violence, role of minorities).
- Trivialization of sex and sexuality.
- Increased passivity and disengagement.
- Negative effects on cognitive learning.
- Loss of time and potential to inform and to teach "prosocial" behaviour.

Next: Before the doctor comes and other tips.

Garfield by Jim Davis

