

Report No. 10

**BANGLADESH'S POWER SITUATION  
PROBLEMS AND RESPONSES**

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**Centre for Policy Dialogue**

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*In support of the dialogue process the Centre is engaged in research programmes which are both serviced by and are intended to serve as inputs for particular dialogues organised by the Centre throughout the year. Some of the major research programmes of CPD include **The Independent Review of Bangladesh's Development (IRBD), Governance and Development, Population and Sustainable Development, Trade Policy Analysis and Multilateral Trading System and Leadership Programme for the Youth**. The CPD also carries out periodic public perception surveys on policy issues and developmental concerns.*

*As a part of CPD's publication activities, a CPD Dialogue Report series is brought out to widely disseminate the summary of the discussions organised by the Centre. The present report contains the highlights of the dialogue held on May 23, 1999 on the theme of **Bangladesh's Power Situation: Problem and Responses**.*

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*Dialogue on*  
**Bangladesh's Power Situation: Problems and Responses**

**i) The Dialogue**

An in-house dialogue was held at the Centre for Policy Dialogue (CPD) on **Bangladesh's Power Situation: Problems and Responses** on 23<sup>rd</sup> May 1999. Professor Rehman Sobhan chaired the dialogue. The main themes of the dialogue were centred on the current actual situation in the power sector, its underlying problems, and the future prospects in resolving those problems.

**ii) Key-note presentation**

Dr. Towfiq-e-Elahi Chowdhury, Secretary (Petroleum & Mineral Division), Ministry of Energy & Mineral Resources, Government of Bangladesh presented the keynote paper. He began with an observation that, Bangladesh is a country with a very low per capita energy consumption -- less than 50 per cent of energy consumption comes from commercial sources. Breaking down the percentile contribution of different sources that constitute total volume of commercial energy, he pointed out gas as the major source of energy in Bangladesh because, 70 per cent of commercial energy comes from gas, the rest 20 per cent comes from power and 10 per cent from coal. Again, 80 per cent of power generation comes from gas.

Dr. Towfiq informed the dialogue that there are three sources of power generation in Bangladesh: Bangladesh Power Development Board (BPDB), private source and rural power company. He added that there are three organisations responsible for power transmission: BPDB, Power Grid Company of Bangladesh and Dhaka Electric Supply Authority (DESA), BPDB, Rural Electrification Board (REB), DESA and Dhaka Electric Supply Company (DESCO) are responsible for the distribution of power. He noticed that there are two regulators in the power sector: Ministry of Energy and Mineral Resources and Chief Inspector of Industries.

He informed the house that REB was created in mid `70s to facilitate the distribution of power in the rural areas. Admitting the fact that our power system has been suffering from severe inefficiency and high system loss since the very beginning of its inception he informed the house that the donor community, since the mid `80s, has been pressurising the GOB to separate distribution from generation and transmission in order to improve overall efficiency in the power sector. There has also been a general consensus among the policy makers regarding the need for a competitive and efficient power industry in Bangladesh. Thus, as part of the power sector development programme, DESA was formed in 1990 to take part in the distribution of power in Dhaka city.

Recalling that 80 per cent of power comes from gas Dr. Towfiq then discussed the problem of the scarcity of gas supply for power generation developed during the mid '90s. He noted that the problems were inadequacy and low pressure in gas supply in a number of power plants. He added that a plan has been chalked out to ease from these constraints. He informed the house that the gas supply situation would improve with the completion of the pipelines now under construction and development of new gas fields by the international oil companies.

Narrating the year wise capacity addition, he mentioned, in 1998-99, 630 MW has been added to the existing generation as against 150 MW in 1997-98, 195 MW in 1994-95, 120 MW in 1993-94 and 71 MW in 1991-92. According to him, there was no capacity addition in 1996-97, 1995-96, 1992-93 and 1990-91.

Dr. Towfiq pinpointed one of the major problems of governance in the power sector, by indicating the fact that for a number of power plants the actual or expected date of commissioning has been much longer than the planned period for rehabilitation. There were instances where a mere rehabilitation of a power plant took nine years to accomplish. Again, most power plants took about eight or nine years to be built.

In spite of the governance failure he argued that there has been some success in the power sector. Putting a comparison between the projections made by Power Sector Master Plan (PSMP) on generation of power and the actual achievements of the PDB during 1995 and 1999, Dr Elahi argued that during most of the years mentioned, actual generation had been higher than the PSMP forecast. Again, the growth rate of energy consumption has been far ahead of population growth rate thus resulting in an increasing per capita energy consumption. Moreover the annual growth rate of energy generation has been much higher than the GDP growth rates during/between 1990-91 and 1998-99.

Dr. Towfiq admitted that load shedding is a major problem in the power sector and in recent times it has taken serious shape in the urban areas, especially in Dhaka city. Proposing a solution for that he presented three separate charts of daily power consumption for three consecutive years and argued that power demand in peak hours could be reduced a great deal if the power demand load can be controlled. Peak demand could be spread throughout the day so that the demand curve could be made as flat as possible. Dr. Towfiq noted that other present problems of the power sector included power relay co-ordination, inability of the BPDB to shut down various power plants needing rehabilitation as there was a constant demand pressure and lack of balance growth of the power sub-sectors.

On the question of the reliability of the system he argued that it depended much on the stability of the system. Again stability of the system depended on the capacity of reserve. He observed that for the stability of the system there was a need to have a certain amount of reserved power in the hand of BPDB. This was necessary to maintain the shock absorbing capacity. He argued that at present there was no ideal capacity of reserve. He added that the viability of power industry depended on the tariff rate for the gas resource and the tariff for gas needed to be at par with international levels.

He thought the system loss in the power sector and the unsatisfactory performance of the System Loss Reduction Scheme was initiated in 1985-86. He opined that the attempt to separate distribution from generation and transmission through the creation of DESA has turned into a failure. He informed the house that DESCO has been created for the commercial and maintenance aspect of distribution in a selected area of Dhaka city and initial results of 'contracting out' of some selected areas have shown some improvement.

Finally, he argued that the big constraint for the development of power sector is the shortage of fund. He estimated that the power sector as a whole now required substantial investments of around 5 billion US dollars out of which 70 per cent would be required for power generation and the rest 30 per cent for transmission and distribution. However, he expected that the appearance of the private sector in the scene would help to remove the fund constraint.

### **iii) Discussion**

Taking part in the discussion Professor Rehman Sobhan, Chairman CPD, pointed out two sets of issues that needed to be addressed properly. Firstly, he asked for clarification about the public perception regarding severe power shortage in relation to demand compared to the past and then he wanted to know whether there has been any aggregation of demand in the power sector. Secondly, he wanted to know what was the actual supply of power and how it was related to the evolution of demand, i.e., how effectively the matter of load shedding has been resolved.

Dr. Towfiq answered that there has been no index to compare the extent of load shedding in consecutive years. Although due to the recent load shedding there has been a lot of inconvenience for the city dwellers, the agricultural sector has been largely unaffected and the industrial sector has not suffered from any serious constraints. Dr. Towfiq also added that there would be a capacity addition of 600 MW in the coming future.

Mr. Azimuddin Ahmed, former energy secretary, observed that the increasing system loss should immediately be contained to ensure smooth supply of electricity

for consumers. He opined that system loss occurred in three parts of the power system: generation, transmission and distribution. He argued that generation loss has never exceeded 4 per cent, though Raozan power plant has been performing rather badly. On the other hand transmission loss has never exceeded 8 per cent but major losses occurred in the distribution part which constitutes about 20 per cent of the system loss. He stated that pilferage, under-billing, meter tampering were some of the ways of distribution loss. He noticed that against an installed capacity of around 3000 MW, the country is getting around 2200 MW of power. He thus found that the country has actually lost 800 MW installed power generation capacity because of negligence in the maintenance and management of power plants. He argued that instead of privatisation and installation of new power plants it would be better to upgrade the existing power plants.

Lt. Gen. (Rtd.) Nooruddin Khan, Minister for Science and Technology, observed that the power crisis took sharp hikes during the months of March and April every year, and this has been the case for decades. About system loss he opined that unless we alter people's nature, it is impossible to force it down. There are some unscrupulous meter-readers who are responsible for under-billing and meter tampering. About generation and demand he informed the house that during the last three years REB has installed 30,000 km of new lines. Also taka 500 crore has been assigned to REB for the solar power system. He also argued that in the case of system loss REB was performing better than BPDB and DESA. About the sluggish implementation of plan he argued that Khulna steam line power plant took nine years for rehabilitation because the original plant was Czechoslovakian, the contractor to repair the plant was Chinese and the Consultant was British. About the fund crisis he added that ADB and World Bank have stopped funding for power sector development since the beginning of the 90s.

At this point Mr. A.M.A. Muhit, former finance minister, enquired about the target for generation of power in next two years. In reply Mr. Nooruddin Khan informed the house that it was 3600 MW by 2001.

Mr. Nooruddin Khan also opined that labour union in the power sector was a difficult issue to manage. He argued that experiences so far has shown that private companies has come for generation but not for transmission. He gave example of Hathhazari– Comilla line which was built by BPDB not by the KFW, a private power company. About repairing of the power plants he argued that unless there were sufficient reserves it was not possible to go for repairing. In his views demand for power has been increasing steadily where by 2001 it would be 3600 MW and by 2010 it would be 4500 MW. He argued that we should not depend solely on government funding. Private investment should come forward to solve the fund crisis. But he suggested that at least 50 per cent of the generation capacity should be in the hand of

BPDB so that it could supply power in times of crisis. He considered keeping load shedding up to a minimum level for Dhaka city as a vital task for every government. About system loss he observed that dishonest meter readers and dishonest consumers have a nexus in this regard.

Mr. Quamrul Islam Siddique, Chairman of BPDB, argued that present shortfall is around 300 MW and the acute problem was in DESA area. DESA took 900 MW from BPDB and suffered from a 25 per cent system loss. DESA needs to be restructured; with all old employees, DESA has got vested interest groups, deeply rooted in its system. DESA has a due of taka 22,000 crore payable to BPDB. According to him, checking for and putting a stop to leakage and pilferage would save a lot even from the existing generation and distribution system.

Disagreeing with the Chairman of BPDB Mr. K.Z. Azam, a member (engineering) of DESA, argued that DESA has reduced the percentage of system loss from 35 to 22.11 between 1991 and 1999. However, DESA failed to inject adequate power due to obsolete power transmission lines, he added.

Dr. S.A. Samad, Principle Secretary to the Prime Minister, opined that DESA power distribution system was already overloaded and if new power generation was added right now, DESA could not support it. He also expressed his doubts over the figures of demand for and supply of power, because these figures were not exactly accurate, he opined. Therefore, it was very difficult to calculate the real gap in demand and supply. There was no harmony between the growth of other sectors and the power sector. There has been a high growth in the construction sector in the last two years and this was not taken into account. He also found that for the last 10 years there has been no external investment in the power sector. He pointed out the fact that many of the public enterprises have been bill-defaulters and the amount of default was alarming. Adamjee Jute Mill alone defaulted for taka 80 crore of electricity bills. He informed that different government offices have separate allocation to pay the electric bills but they do not pay it. He feels that the common culture is not to pay the public utilities. According to him the BPDB itself owes the government Tk. 9000 crore in arrears. There are serious gaps and lags in planning and implementation of the programmes to reduce system loss and to develop the human management in the power sector. He maintained that the trade unions resist system loss removal measures and lent support to the unscrupulous sections of BPDB and DESA employees responsible for pilferage.

Mr. Jamal Uddin Ahmed, former deputy prime minister, drew a bleak picture of the power sector. He argued that shortage of power has been a problem of management right from the very beginning. Power development was left as development of any other industry thus ignoring the special features of power

industry. He argued that most of the industries now use their own generators because of the serious load shedding. 90 per cent of the RMG factories have got their own generators. As a result cost of production was going up so were the prices of the industrial products. Garment exports has slid down by 20 percent in the recent years due to this problem. Therefore, industrial sector has suffered and will continue to suffer if proper steps are not undertaken. He suggested disconnecting the illegal connections to get rid of the curse of system loss. He informed the house that in Chittagong, load-shedding continues for three to four hours and may sometimes lasts up to eight hours a day, and it could get worse in the future. Due to severe load-shedding, operation of Chittagong port was now at stake. He thought that no government has given serious attention to the underlying problems. He was also critical of the effort of the government to set up the barge-mounted power plant (BMPP), because these were small plants for a small locality. He argued for establishment of modern big power plants and upgradation of the existing power plants since most of them were pre-historic. He also pointed out the fact that consumption of gas in the power plants was high which was a threat to the natural gas reserve. He thought that no government has seriously given any deserving attention to the power sector. As a result foreign direct investment (FDI) was reducing and, in fact, there has been no major FDI in the last three years due to power problem. He, therefore, urged to have a national focus on power. As demand was rapidly rising the government alone could not cope up with it, he noticed.

According to Dr. Towfiq-e-Elahi nothing was wrong with having generators in the industries. He thought that system loss was an inherent part of the whole problem. When people do not pay for services they are enjoying, the demand for that service becomes infinitely elastic.

Dr. Nazrul Islam, former member of Planning Commission, suggested that power surplus was better than power shortage. He recommended for a power commission, comprising technicians, economists, sociologists, press, politicians, advisers from the parliament, in order to have a better understanding of the power sector problems and then programmes to solve them. He argued that this power commission would look after the entire energy sector. He also opined that load shedding could have been tackled properly with improvement in the management of the power sector.

Brig. M.A. Malek, Chairman, REB, argued that actually, BPDB generated adequate power to meet its demand. He informed the house that there were 2.3 million consumers under the REB coverage. The consumers of REB largely paid their bills, but some government officials were bill-defaulters. He argued that there was little scope for theft under the REB system, because, any shortfall of bill was shared by the members of the *Palli Bidyut Samity* (PBS).

When asked by Professor Sobhan why the private power projects took so long to get launched, former chairman of BPDB Mr. Nooruddin M. Kamal informed that the BPDB literally began the private power scheme from scratch. No successive government had any clear strategy about the power sector. He also added that there was no document, no guideline, no expertise, no negotiator or anything to initiate private power in the country. He thought that BPDB started it all and as time went by BPDB came across various unforeseen legal and financial aspects of private power sector. Therefore, delay was only a natural consequence.

Mr. Zahiruddin Khan, former planning minister, found that there was a genuine crisis in the country's power sector despite the fact that there was adequate gas to overcome it. This called for developing a think tank in the government and chalking out a new strategy. He argued to decentralise power generation even at the industry level. He was in favour of establishing small power plants of even 1 to 2 MW to overcome the peak load in the industrial sector. He also argued for better remuneration for the power sector employees.

Petro Bangla Chairman Mr. Mosharraf Hossain informed the meeting that with a daily gas production of 987 million cubic feet, currently there was no gas shortage. He observed that though there was adequate gas reserve for power, the power plants did not utilise them optimally. To sustain the gas supply, new gas fields should be developed and exploration should be encouraged.

The final observation was made by Professor Sobhan and he opined that Bangladesh has enough gas and should not be energy starved. Rather the power sector should be fuelling industrialisation and encouraging FDI. He also noticed that while the government emphasised on installing new power plants, the existing plants should be properly maintained and the efficiency of the sector should be increased. He thought that the time has come to ask whether we are scientifically planning the power sector, and whether the plants are cost effective and whether the power demand forecast is correct. Finally, he recommended for preparing guidelines for the development of the power sector in the next 20 years.

**Annexure A**

**List of Participants**

(in alphabetical order)

Mr. Azimuddin Ahmed	Chairman, Ansar VDP Development Bank and Former Secretary, Ministry of Energy and Mineral Resources, GOB
Mr. Jamal Uddin Ahmed	Former Deputy Prime Minister Government of Bangladesh
Engr. K.Z. Azam	DESA
Dr. Towfiq-e-Elahi Chowdhury, B.B.	Secretary, Ministry of Energy and Mineral Resources, GOB
Mr. Tapan Kumar Das	Member, P&D
Mr. Uzzal Kanti Das	Chief Engineer, P&D/PDB
Mr. Moazzam Hossain	Editor, The Financial Express
Mr. Md. Mosharraf Hossain	Chairman, Petrobangla
Mr. Syed Maqbul Hossain	Former Division Chief Planning Commission
Dr. Nazrul Islam	Former Member, Planning Commission
Prof. Nurul Islam	Emeritus Professor, IFPRI and Former Deputy Chairman, Planning Commission
Mr. S.M. Shamsul Islam	Member, Distribution, WAPDA, MCA
Dr. Sadequ Islam	Visiting Research Fellow, CPD and Professor of Economics, Laurentian University Canada
Mr. A.M. Zahiruddin Khan	Former Minister for Planning, GOB
Mr. Nooruddin M. Kamal	Former Chairman, PDB
Lt. Gen. (Rtd.) Nooruddin Khan	Member of Parliament and Minister for Science and Technology, GOB
Brig. M. A. Malek	Chairman, REB
Mr. A.M.A. Muhith	Former Finance Minister, GOB
Dr. S.A. Samad	Principal Secretary to the Prime Minister
Engr. Quamrul Islam Siddique	Chairman, PDB
Professor Rehman Sobhan	Chairman, CPD

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