

# The state of power sector & way forward

A round table on, "The state of power sector and the way forward," was organised by the Daily Star on 17 Feb 2006. It was participated by professionals, subject experts, academics, and members of the civil society. The Editor of The Daily Star, Mahfuz Anam, moderated the discussion. The transcript of the discussions is published below.

## Mahfuz Anam

On behalf of the Daily Star I welcome you all to the roundtable. We want this discussion to be in-depth and interactive. It's a technical subject. We shall endeavour to look at the problems and find ways as to how to overcome them. Power sector problems have been thoroughly discussed in various forums and also covered in the media. Today there is a caretaker government in power. There are some immediate decisions that are to be taken. You know very well that the result of a decision comes after many years. Therefore there is not a moment to lose. At the moment load shedding ranges between 2000 and 2500 MW. The internal growth of demand for electricity is increasing by 10% annually as a result demand will exceed 5500 MW this summer against a supply of 3300 MW. There is a shortfall of 2500 MW. And it is likely to rise in the near future.

Basically, we would expect a direction from you regarding how we can overcome the problems. So, let this be an interactive session. I would now like to invite Sharier Khan of The Daily Star to make his opening remarks.

## Discussion

### Sharier Khan



From my 15 years of experience as a journalist I have observed that if the political leadership in Bangladesh wants, then anything that is near-impossible can be made possible. Its best example is in this country. Because of corruption no project gets completed in time and there is cost escalation which goes against national interest. But there is an example of one project being completed in time, and it did not go against the interest of the country. I have heard the power secretary arguing with some donors saying that it is not possible to implement a project with transparency. But we have seen some private power projects like Meghna Ghat, Haripur etc. There were debates and arguments between power companies and the relevant negotiating authorities but in none of the cases was there any instance of re-tendering. All of these projects, as old as eight years, are running well. When private power projects were being implemented public sector projects were having different types of problems. But today we are talking about the success stories. We have seen that even though we have examples of success before us, after 2001 private power projects began to close down and experienced people in the sector were sidelined. We don't know whose interest it served. In the end, the problems have brought us to the situation we are facing now. The element of dishonesty in the whole deal made some people rich, but there was no gain for the country. Therefore it is true that if there is honesty then any power project, however big it may be, can be implemented within 3 to 4 years. It is possible in Bangladesh. Some of those who were behind the success stories are present here today.

I believe if a good plan is taken and efforts are given to implement that then the shortfall of 3 to 4 thousand megawatt can be easily handled.

## Mahfuz Anam

We have a positive mindset today. We have self-confidence and we believe that we shall be able to do it, assuming that this government has the determination to do it. Let us see what recommendations we can put forward before the government so that it can solve the power sector problem in an effective and transparent way. I now request the immediate past State Minister for Power Maj. Gen. Anwarul Kabir Talukdar to make his statement.

## Maj. Gen. Anwarul Kabir Talukdar



Today we are keen to talk about the positive side. We may talk about problems the whole day but if we do not talk about directions, as to how these problems can be solved, the discussion will have no meaning. It is also true that a doctor has to diagnose the patient accurately before prescribing medicine, otherwise the disease may come back after seven days.

In every activity leadership is very important. In a government political leaders give that leadership. Therefore success or failure will depend on leadership.

Electricity is a highly technical and complex technology. Here leadership has to be given jointly by the political and technical people. There is no scope here to undermine the role of one another. Because, the electrical and mechanical engineers have the knowledge and expertise, on the other hand there is the political leadership with a vision and commitment to the country and to society to take it forward. The spectrum of the vision of the political leaders has to be broader. But unfortunately we have seen that there was lack of both, there was crisis of both.

The technical experts could not give correct advice, similarly political leaders also could not do it. The leader, be it the state minister for power, is the team captain. If the team captain is lacking in his leadership ability, and personal character, then there would be disaster. In that case the experts under him will not be able to do much.

In my view the reasons of today's problems in the power sector are -- inept leadership for many years, especially in last five years during the tenure of the post government. There were shortcomings among the experts as well. Then there is the issue of power infrastructure to ensure uninterrupted supply of electricity and its quality. There are many weaknesses in the infrastructure. There are organisational weaknesses too. These have to be overcome. There have to be large-scale reforms. There is a power sector reform master plan but that is only in paper. There is no drive to implement it to meet the need of the time. This is needed for our industrial

and agricultural development.

Then comes the issue of corruption. It is unfortunate that many of us have been engulfed by corruption. Now what is the solution for corruption? If the top person of the organisation is honest, upright, and has commitment to the nation, then 80 percent of corruption can be routed out. As far as the remaining 20 percent, many other areas have to be addressed, because power sector is not an isolated island. It is very much a part of this society. Therefore, if all the other root causes of corruption can be removed, then the remaining 20 percent can also be removed. I feel if at least 80 percent of the ministers in a cabinet remain above corruption then 80 percent of the secretaries will also be above corruption. Similarly, officials below him and the departmental head, that is the chairman of Power Development Board, is free of corruption, and if he has dynamic leadership, then my assumption is that 80 percent of the people involved will behave rationally -- in other words, will not involve in corruption.

Now, the question of trained manpower. The former PDB chairman who is sitting here had told me that for the last ten years there has been no recruitment. In an ongoing process every year people will go on retirement or go on deputation. But there has to be a process to fill up those empty posts. I failed to comprehend why there was no recruitment for many years. As a result, today it has become almost a daunting task to find a good chairman for PDB or Board Members.

In other areas also there is dearth of competent people. Competent people also do not get proper patronisation. You have to give incentive to competent people. Competence has to be evaluated. A distinction has to be made between good and bad. A good man has to be rewarded and a bad man punished. There is no such practice in this sector. In my four-month tenure in the power sector I have visited almost all the places except two or three. In some places some officials did not like my unannounced visit. In one place I asked the officials to show me the accounts of income and expenditure. None could show me the balance sheet. They were looking at one another. Then the relevant official told me there was a loss of 6 to 7 crore taka. But I calculated a loss of at least Tk. 50 to 60 crore. It was the plant at Rajuan. We took a decision over there to the effect that in every power plant a balance sheet has to be maintained. But in every step that I took for the welfare of the country I faced obstacles.

I want to mention one more thing. The power plants are in operation for many years now. But no gas purchase agreement has been signed till date -- between the power station and the gas company. What is the reason behind this? I gave a deadline of 30 days to submit a report to me. Unfortunately, I could not succeed for various reasons. As for autonomy, of PDB, I noticed that every file comes to the ministry -- unnecessarily. My opinion is, I shall give the official concerned a charter of duties -- there would be an understanding that he would produce this much electricity and at the end of the month we would like to scrutinise his balance sheet. After that I would monitor the work in different ways and methods. But you will be surprised to know that some teachers of BUET along with some of their students developed a software that would enable anyone with a mobile phone set with internet connection to learn what power station is producing how much electricity. So far this is being done in a primitive way through telephone. If the person is interested to know more, then with the help of the mobile phone can learn how much input is being given by which feeder of DESA or DESCO. The BUET team demonstrated this before me. I wanted to introduce this but I could not do it. At that time people expressed their surprise that how could such a huge work be done at a cost of only Tk. 10 or 12 crore. According to them it should cost Tk. 300 to Tk. 400 crore if brought from abroad.

Next I would say that there is lack of coordination between the donor community and us. Either it is intentional or it is because of lack of knowledge. We have to take offers from the donors keeping the national interest above everything.

I have a short prescription. We are mainly dependent on gas for running our power plants. Non-technical loss i.e system loss, which in plain words is theft, has to be reduced. At present this is between 16 and 19 percent. It is possible to bring it down to 10, by taking drastic measures, within a period of 3 to 4 months. This will give us 200 mw. You will be astonished to learn that a report has been prepared at a cost of Tk. 3.5 crore but that report was never placed before me in four months. I have no idea what recommendations the committee had put forward in that report to improve the situation. I would like to suggest that if we install capacitors then the system will be upgraded and power output will increase by 100 mw. It is possible to do this within three weeks.

We can also use energy saving valves and save about 100 mw. As for maintenance of de-rated power stations, thousands of crores have been spent but maintenance has not been done in a systematic way. I can mention a project proposal that was taken up by DESA and after a little probing I found out that the entire proposal was prepared by collecting data over telephone. The project cost was some 100 crores. My opinion is, if we can do technical auditing by an independent body then we can learn about the status of each and every machine. We shall be able to decide then what is to be done about that machine and how much it will cost. We have spent thousands of crores of taka in last ten years, then why should output go down?

I want to tell you about a pre 1971 project at Karnaphuli Power Station. No. 3 unit. A proposal came to me to do overhauling of the unit at a cost of Tk. 170 crore, which would result in getting an extra 15 mw of electricity. I found out that by spending Tk. 150 crore I could install a brand new unit and get 50 mw. I sent the note to the authorities but they kept insisting on repairing the old unit at a cost of Tk. 170 crore. But as long as I was there I did not let it happen. All my notes in this regard are self-explanatory and are on record. I want to talk about the 4 and 5 units of Kaptai, which were under repair costing 7 to 8 crore taka. A component had broken down. The contract was drawn in such a way that it could not be completed in one go. At that moment another project costing Tk. 160 crore was sent to me. Marubeni was the sole contractor. I wrote back to the ministry that some repair work was being done at that moment so let us observe the matter for six months. I discussed the issue with JBIC president. My idea was that if the repair work is done properly then it should run smoothly for a long time. But my higher authority told me that the 160 crore-taka project has to be undertaken. I told them that we have just spent crores in repair work so we shall go for the new project only when it will become essential. My suggestion was to observe for six months how the repaired unit functioned. I can say that in this case also honesty and commitment were missing at the top level.

As for rental power, according to this system power stations will purchase electricity from contractors for a period of 5 to 15 years. But PDB Chairman told me not to go ahead with the idea because under this system PDB will have to pay subsidy. My calculation was in 15 years the government would have to pay around Tk. 4000 crore as subsidy.

Many people talk about the necessity of tackling emergency situation. My answer is, there are better ways to face emergency. We may tell the FBCCI leaders to set up 1 to 10 mw small power plants. We shall not supply electricity during peak hour and we give them six months time. We shall give them all facilities as per IPP. In that way these units would become self-reliant as far as electricity is concerned within six months. From there PDB can purchase the unused electricity. We could purchase 200 to 300 mw within fifteen days. The unused electricity is lying idle with various industrial concerns such as fertiliser companies. We can buy it at very cheap rate. And people are ready to sell it to the government. But a vested group is working against it. They are in favour of rental power station. They would suck the blood of the people of this country. They are not interested in small



power stations. I feel the government should immediately encourage the entrepreneurs with IPP facilities and bank support. If it is done I feel a large capacity building up would be possible in six months.

Next is load management. According to my own calculation we can increase about 200 mw through better load management. We can get 100 mw from recycled energy. With the garbage of the city we can generate 50 to 100 mw electricity. We don't need gas, neither we need to burn our coal. These should be kept as strategic reserves. On the other hand we do not know what is being done with the garbage.

My last point is reform activities. As far as theoretical work of Bangladesh is concerned it is as good as that of America. But unfortunately when it comes to implementation we are at the bottom rung.

## Nuruddin Kamal

It was one hundred years ago that electricity first came to Bangladesh. It was in February 1907. The most important aspect is the vision and commitment of a political government for this sector. Between 1991 and 1996 there was a demand of 200 mw yearly, so in five years it was 1000 mw. When the new government took over in 1996 they found a shortfall of 590 mw. They knew that they will have to increase production from 1800 to 2000 MW. From 1996 to 2001 the requirement was 1250 mw at 250 mw per year. Against that what was available was 1750 mw. Then came private power plants. From 2001 to 2006 demand was calculated at 400 mw yearly, that is 2000 mw in five years. Against that only one plant was put to operation of 80mw capacity. It is not running at the moment. This is the background of power crisis. It is unbelievable that



a government in five years could not add more than 80 mw. If we think of a solution keeping the background in mind I think in the beginning two or three mandatory decisions will have to be taken. Almost 85 per cent of the power plants are located in the eastern zone of the country, and only 15 percent in the western zone. But as per population, users and their demand, it should have been in the ratio of 55 to 45.

I think for the next five to seven years there can be a mandatory government decision to the effect that no new power plant will be set up in the eastern zone. In that case we can set up 3000 mw power generation plants in the next three years. There are 70 rural electrification 'sameetees'. If each is allowed to generate 20 mw then we will have 1400 mw. This can be done in two years. In the western zone, from Khulna to Dinajpur, some areas have been identified. If we set up power plants at ten areas, each of 100 mw capacity, then it can immediately give 1000 mw and later about 1500 mw. As for captive generation, at this moment installed capacity is 6475 mw in the country - 5275 mw plus 1200 mw (captive generation). We can easily get 200 mw from this 1200 mw, at a cheap rate.

Personally, I am against rental power. I think this subject should not be discussed at all because it will only harm the interest of the country.

## Mahfuz Anam

Would you kindly give a clear definition of rental power?

## Nuruddin Kamal

The barge-mounted power plants are rental. But the nature of this rental is different. In this system the cost of generation will be high and unit cost will be high -- somewhere around Tk 12 to 14 as opposed to barge-mounted plants which is about Tk 2.30 to Tk 3. But with rental power we have to sign an agreement for 15 years.

In 1997 we had gone to India as a delegation. There was a discussion on the possibility of buying electricity from Farakka. They had 400 MW as surplus. Asian Development Bank was ready to finance the project. I believe they are ready even now. This is a possibility. The private power policy was drawn in 1996. Then there was small power plant policy. But all these were kept under lock and key in last five years. This issue should be discussed and reintroduced. With the assistance of Summit Group we got the first private sector power plant in Khulna. It took only about ten to eleven months to commission the project. Time is very important today.

System loss is basically theft. If this can be stopped then a substantial amount of saving can be done. Government claimed that there is 300 to 400 mw system loss, but I feel it is about 500 to 600 mw. If we can stop 50 percent of the theft then we can have about 300 mw.

I feel two separate transmission systems should be evolved - one in the eastern and the other in the western zone. In that case blackout would not engulf the entire country. Between 1990 and 1997 there were blackouts on 12 occasions. But we have gradually come out of that situation.

The Power Development Board is still under a centralised control. If the decentralised system like REB is adopted then a scenario can be developed.

## Dr. Hasan Mansoor

You have talked about commitment of the political government. If we criticise the political governments then no political government will feel encouraged.

After the Awami League government came to power they had generated 1874



MW electricity in five years. All the agreements were done in a transparent manner. Another agreement was done at the tag end with Barapukuria electricity plant project to produce 250 MW in two units. It was a 200 million dollar project in 2001. It was implemented in three years. But when I went to visit the plant the cost was shown as 209 million dollar. That means 9 million dollars was added soon after the signing of the agreement through corrupts means.

About 90 percent of the power plants in the country are gas based. Now we have to consider the status of gas supply in the country. A power plant usually remains operational for 30 years. Therefore if we cannot supply the required amount of gas then it would not be feasible to set up those plants. The Barapukuria power plants have been set up on the basis of availability of coal in the area. The mine would produce about 3000 tons coal daily and 70 percent of that would go to the power plants. But since coal production came down, one unit of the power plant had to be shut down. If the coal mining process is not developed and constant supply is ensured then no coal-fired unit will have any guarantee of running smoothly.

Sangu's production has stopped and as a result all industrial units dependent on Sangu gas will also close down. It is the same with Bakhrabad. If compressor is not installed in Bakhrabad then there will not be the required pressure in centre grid. Therefore before setting up a plant supply of raw material has to be ensured. In most of the countries power plants are coal based. In the northern zone all power plants should be coal based but the method of mining coal has to be modernised. Open pit mining should be further developed.

## Mohammad Aziz Khan

I have the privilege to be involved in the generation of about 200-mw electricity in the private sector. In my opinion, to go forward we have two challenges before us. The first one is the philosophical challenge. The government or the state controls the entire infrastructure in Bangladesh, including electricity. We have moved towards free market economy. According to the principles of free market economy governments have to accept the fact that business will be conducted by the private sector. But this did not happen during the tenure of the past government though private sector power generation policy was taken up in 1996. Unfortunately this policy was not implemented properly. That's one philosophical challenge.

The other philosophical challenge is, it seems whosoever is in power, including the present caretaker government, wants solution within three to six months of the start of a crisis or a problem. But there is no solution in six months. Be it rental of any other thing there is no solution. Electricity is a challenge that cannot be solved in six months. Both the



past government and the present caretaker government may want it but that is only to gain political advantage. Therefore, they fail to see the long-term solution or real solution of electricity crisis. Those two challenges need to be addressed.

Then the practical solution. What can we do in the coming days? Bangladesh is in a privileged position. It has gas - the cleanest fuel to generate electricity. It needs to be connected from north to south of the western region. We have fixed stock across Bangladesh. The other thing we need is customer. We have customer in every step. Electricity consists of generating, transmitting and distribution. Today generation of electricity is not rocket science. There is no problem in the electricity sector. The problem is in the implementation, in the issue of governance, how do we allow the private sector operate in the free market economy. Then there is a comprehensive document called power sector master plan updated in June 2006. This document gives details.

We have a current shortfall of about 2000 mw. By 2011 the shortfall will be 5000 mw if we do not add any more electricity. From today the people of Bangladesh need to think how by 2011 we will have 5000 mw, how that will be transmitted and how that will be distributed. And how that will be done in a most cost effective manner.

In the last five years there has not been much addition to generation capacity. Therefore, instead of 2500 mw in the coming five years, we have to add 5000 mw. That would require about 3.5 billion dollars. The challenge now is money. How do we get it? There can be public-private partnership, private sector investment, larger combined cycle power plants as well as distributed power. All these are necessary if we are to implement 5000 mw in next five years so that in 2011 we can say that we have a balanced power system. I have found ADB very enthusiastic. The whole world wants to give fund to the electricity sector - not to the public sector but to the private sector. So, if we allow free market economy, money will not be a problem. There are international investors who want to come to Bangladesh.

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## LIST OF PARTICIPANTS

1. Lt. Gen. Nooruddin Khan, PSC (Retd) former Minister for Energy.
2. Maj Gen Anwarul Kabir Talukdar, PSC (Retd) former State Minister for Energy.
3. Dr. Tawfique-e-Elahi Choudhury, BB, former Secretary, Ministry of Energy.
4. Mr. Nooruddin M Kamal, former Chairman, PDB.
5. Mr. AN M Rezwana, former Chairman PDB.
6. Mr. Alamgir Kabir, GM Commercial, PDB.
7. Md. Reazuddin Plant Manager, Meghna Ghat Power Plant.
8. Mr. Mohammad Aziz Khan, Chairman, Khulna Power Company.
9. Dr. Hasan Mansoor, Chairman, Dept. of Geology, Dhaka University.
10. Mr. Munir Khasru, Associate Professor, IBA, Dhaka University.
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