

# The state of power sector

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Electricity sector is such a sector where, if the company is well managed, there is little reason for bankruptcy or default. Therefore the government of Bangladesh can say that the single limit of 15 per cent bank loan will be extended up to 50 per cent for the borrower. This will help form capital three times over. We have seen wonderful response in Dhaka Stock Exchange of Summit Power Ltd as well as of DESCO and Power Grid Corporation of Bangladesh. So let us try to encourage the stock market. Also if we can provide 20 per cent equity then the whole world is waiting to provide the rest. So, in my opinion I do not see any challenge as far as funding is concerned.

Then comes the question of technology through which we can have a cost effective solution to the problem. The most cost effective solution at this point is combined cycle power plants and larger power plants. Currently we have a concept of 450 mw power plants in major demand areas like Dhaka. These should be converted to 700 mw. Otherwise we shall not be able to complete the concept of 5000 mw in 2011.

Regarding distributed power, Rural Electrification Board (REB) has achieved wonderful results. We have power plants in Narsingdi, Comilla and Savar. Each station produces stable power of 33 KVA. I would suggest REB and PDB to find out where they have 33 KVA grids that are capable of accepting 20, 30 or 40 MW and allow that to the international community. In the past, the government had said that foreigners were not allowed or payment will not be made in dollars. This may be a government prerogative but when they say foreigners are not allowed to bid it creates an unfortunate situation with the World Bank and Asian Development Bank. Because of the restrictions these banks are saying that you have not done the reforms properly and so on.

So, basically my opinion is I do not see we have any major challenge if we accept what we have already provided through the private sector power generation policy and if we implement what is given in the master plan.

## NM Rezwan

In my opinion, there are six problems in the power sector. There was lack of investment in bringing new generation for the last six to seven years. We should have added 500 mw every year to meet the demand but against that we have added very little. That again is not running properly. Then, cost effective tariff has not been introduced. This is a very important point. It is important to make PDB commercially viable to run on its own. Tariff should be based on commercial principles. If this organisation is forced to sell at a price lower than its manufacturing cost then it shall not be able to operate normally. Because of present PDB tariff structure it has to incur a loss of Tk. 73 crore every month. It is selling per unit of electricity at a price, which is lower than the manufacturing cost. If the organisation is allowed a profit like 10% or 15% then PDB will be able to add new power generation units every year from its own earning.

## Alamgir Kabir

Our cost of supply at present is about Tk 4.50 but we are selling at Tk. 3.00.

## Aziz Khan

Bangladesh government through provision in parliament has created Bangladesh Energy Regulatory Commission (BERC), which is supposed to decide what is the cost of generation of electricity as well as tariff of electricity. But this commission also needs reforms. One of the areas this government should look into is how to bring about reform so that BRC can become fully workable. They are the ones who are mandated to listen to the producers as well as customers, and find a middle path for both.



## NM Rezwan

Assuming that system loss in PDB has come down to 5%, there is 100% billing and there is no corruption, even then the PDB will incur a net loss of Tk. 73 crore every month. So, PDB cannot be viable unless a commercial tariff is set. Therefore BERC should listen to our grievances. PDB is not getting the government subsidy. Another point is lack of efficient managerial capacity and lack of technical know how. There is political interference. Whenever we go for a big tender or evaluation we face various pressures. As a result it becomes difficult to take a decision. But at the

moment there is no such thing, therefore this is the time to take bold decisions. If tender for four or five 450 mw power plants are processed now then we may go for long-term solution. Small power plants like 20 mw or 30 mw will be drops of water in the sea.

Another problem is long bureaucratic decision making process. If the organisation is given full autonomy then this may improve. At the moment it takes 3 to 4 years to place a work order. This is too long a time. In other countries it takes 3 to 6 months to issue the work order because they need not send it to the ministry.

## Mahfuz Anam

If you are given ideal autonomy then how soon can you do it?

## NM Rezwan

We are enjoying ideal autonomy in some of our companies like Power Grid Company of Bangladesh, DESCO etc. There we are doing a project even in six months time. Till now all the projects have been completed in time and decisions have been taken in most transparent way. But that has not been possible in PDB. Why? Because of interference from the government, ministry, secretary, minister, state minister, PMO office etc.

## Mahfuz Anam

So, you want to say that if you are given autonomy you can do a project in six months.

## NM Rezwan

Yes. There is another important reason why we are not being able to work. This is due to politicised workers' union activity and in some cases service associations'. Every government has patronised them. They interfere in postings, transfers and promotions. Because of workers' union we cannot always take bold decisions.

Regarding rental power I can say that electricity crisis will deepen in the coming summer. As an emergency measure the past government had thought about rental power. There was a tender. The quoted rates suggested that we would incur huge loss. I had told the state minister that unless you increased our tariff then PDB would simply collapse. But at the same time there is government's political commitment to provide electricity. So what to do? Some of the quoted rates are lesser than some of our power plants. Therefore, for immediate relief to people, though it is not the ideal problem solving method. I think there is no better alternative to rental power. It is a bitter pill to swallow. Since PDB will face huge loss, the government should arrange for subsidy.

As for captive power, we had floated an open tender inviting everyone who is willing to sell to us. Government had fixed the price at Tk. 1.90 per unit. But there were only two bidders. We shall get 5 MW from then. We are going to draft a contract. I have suggested that very few would be interested to sell at this rate. There is possibility that the present caretaker government will increase it to Tk. 2.10. Then we may expect 200 mw from that source. That is also a solution for the time being.

## Mahfuz Anam

What was the logic behind going for rental power for 15 years?

## NM Rezwan

There will be marked difference in price if contract is given for 15 years instead of 5 years. For 15 years contract price has been quoted at Tk. 2.66 but for 5 years price it would be somewhere around Tk. 4.50.

## Alamgir Kabir

Bidding concept for rental power is different in other countries. Nowhere the contract is given for 15 years. Here it is IPP in the guise of rental. Professional rental service providers come for a maximum of one to two years, in some cases even for less than one year. Even in Germany during the last world cup they had taken rental power. For rental tender conditions are given that equipment have to be brand new. But in Bangladesh they may bring junk.

## Mahfuz Anam

Mr. Aziz Khan what is the life span of a new power plant?

## Aziz Khan

For combined cycle it is 30 years and for small projects it is 20 years. The concept of solution in six months is flawed. So all the solutions coming

out of the flawed thought will be flawed. It is also important wherein in Bangladesh you want to set up a power plant. We have limited space in this country where you have natural gas supply and evacuation possibilities.

## NM Rezwan

I want to recommend one thing. The government should take immediate decisions as to what should be the public - private generation ratio. Otherwise no coordinated decisions are being taken. The government should go for some big power plants.

## Mahfuz Anam

Just for our information, what is the policy in India? What is the government and private sector involvement?

## NM Rezwan

In India they have opened up the sector. It is going towards total privatisation. In the power sector master plan there is a World Bank prescription that recommends about 33 percent IPP. And we have achieved that. They were worried that too many IPP would cause foreign exchange drainage.

## Noor uddin Kamal

According to the decision taken in 1996-97, recommendation was for 25 IPP and 75 percent government sector. My personal view is it should not exceed 30 percent.

## Aziz Khan

The challenge is, the public sector has failed. In the last five years the government has added only 80 MW. So would you only allow 20 MW to the private sector now?

## Mahfuz Anam

But we cannot take the 80 MW as a bench mark.

## Munir Khasru



Any policy, private or public, is irrelevant so long there is a flawed, non-transparent, non-workable and corruption-driven procurement policy. Our procurement policy breeds corruption. I had the opportunity to look at all sorts of procurement guidelines. The existing policy allows theft. If you follow the World Bank and ADB procurement guidelines then you can always say that you have done it according to the book. There are hundreds of ways you can bypass and cheat and get away with the technical matters. Let me give two small examples in plain language. We talk about lowest bidder. When we are investing 200, 400, 1000 crore taka why would lowest cost be the only criterion? After you have qualified technically then comes the price quotation. There is a large mafia network here. The people in the design section of PDB are thieves. The rule says that no one should stay in one place for more than two years but in reality people are working for 5 to 6 years. They have connection with all the private companies. You cannot catch them because they have read these guidelines for years together. They know each and every clause and how to bypass them.

Mr Aziz has talked about bringing about a change in the philosophical aspect. You have talked about empowerment of the private sector. I think the private sector will have to change its philosophical approach. You will not indulge in corruption. Private sector is equally culpable as the public sector in the corruption process. When the last government announced captive power policy and small power generation policy, some local entrepreneurs approached us to prepare the technical proposal. As an added request they told us that we shall have to go and meet some people in some special places.

We were the appointed consultants of ADB. There is one technical evaluation and one financial. Regarding two tenders I want to say that when we came the technical evaluation had been done already. We were told to look at the financial part and give our opinion that it was OK. I said how could I give the comment unless I know about the whole thing. You are asking me to certify something without letting me see it. Interestingly, ADB, PDB and others were also pressing us to expedite the matter. I then put down my feet and said we cannot hurry like this because at the end of the day if something goes wrong you will come and tell us that you had certified it. In the technical proposal against many items were written, 'to be explained later'. And it was approved by ADB. I asked them how could you approve it? There were no answers because it had come from Manila. Our problem is if Washington or Manila says something then we have nothing to say. So, we have to have our own procurement guidelines. I would recommend to the present government to have a separate set of guidelines for heavy investment projects to make sure you cannot utilise the loopholes and make the country bleed.



## Alamgir Kabir

Former State Minister Anwarul Talukder has talked about the failure of the political leadership as well as failure of experts. In this regard I want to say something. By experts we mean PDB chairman, members etc. In other countries there is some kind of team of professionals to help the government. There is no such system in our country. Even if there are some good professionals, they may not reach upward. The system has also not developed where the voice of those experts would be

heard. They are intentionally kept at a distance. Then we still have seniority as the only criterion for promotion. In such a way an inefficient or corrupt man can reach the top position. As a result we are having bad managers. We have to look at that area. During the rule of BNP government in 1990 initiatives were taken regarding private sector power generation policy etc. Later the Awami League government continued with that. We have seen that wherever there was political and non-professional interference, something went wrong there.

## Mahfuz Anam

What steps can we take?

## Alamgir Kabir

I feel, instead of inventing anything new, we can take those of the past that had brought us success. One, we should go for some emergency maintenance and do changes in the procurement system. Because of present procurement system we have often seen that a large plant remains shut for two years for parts worth only Tk. 3 to 4 crore because of the tendering and procurement processes. We have to go for immediate maintenance and recover 300 to 400 MW. We can quickly set up some quick power plants and also go for rental power from reputable firms and get power within 3 months.

## Mahfuz Anam

In case we go for rental power, how much megawatt should we target?

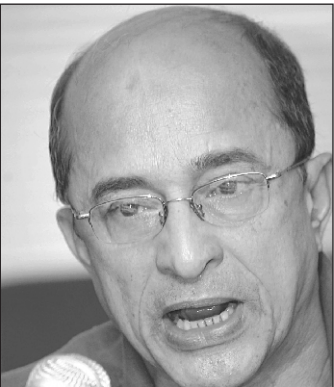
## Alamgir Kabir

It can be 200 to 300 MW. It is one way of meeting the crisis at the moment. For the long-term plan it is given in the master plan where and what type of plant should be set up. We need both type of plants. We should follow that plan. To meet peak hour demand we need all types of plants.

## Dr. Toufik-e-Elahi Choudhury, BB

If the government publishes a white paper on the power sector with full statistics then we will be able to understand the problem. Once you release the white paper then lots of recommendations will come from outside.

Most importantly, there is going to be a crisis. No one can avoid that. Therefore, you have to prepare the public. Tell them that a



crisis is coming so let us share the difficulties. There are ways of optimising during difficulties.

At one stage we succeeded in undertaking irrigation at night. The crisis comes during the peak hours. The rest of this time can be handled somehow. If we can improve this peak hour management through making the public aware then we may get some cooperation from them. Or else there will be violence out there.

For short term thinking we have to go for a problem solving mode. We have to find the bottlenecks in supply chain and address those.

One who is running a huge power plant should have some financial power to do immediate purchase or repair works. This would ensure optimal use of the asset. What you need is a team of experts. We have to think of risk mitigation measures. In my opinion there will be grid failure this year. How can this be mitigated? Along with that you have to start a strategic plan. Power sector will never be able to stand on its feet if it does not become viable. Whether it is public or private sector. If some reform programmes can be started so that these cannot be reversed then that would be big achievement. There has to be rules and good people to implement those rules. It is doable. It was done before under political governments so this can be done in a neutral environment.

We are also talking about daylight saving. If we can finish our work before dusk then we can reduce the peak hour rush. Once you can dent the peak hour then you will have made a big improvement. If we can finish work by 4 in the afternoon then the load curve will flatten considerably. Those who pay bill regularly and those who will use less electricity during peak hour will get discounts on tariff as incentive. Energy regulatory body has to be made functional. Scope of getting electricity from captive power is very limited. We can also think about opening up for market merchant operation. It would be like setting up an industry. That would result in competition. It would not require PPA.



## Md. Reaz Uddin

In reality the total generation in Bangladesh is less than 3000 mw. I do not agree about corruption in private sector and I protest it. If foreign companies are to come here we have to ensure whether Bangladesh government will be able to make payment. Right now my company is in crisis because we have a claim of about 40 million dollar to the government. According to PPA, payment is supposed to be made within two months. But it is already over three months that we are not getting paid. Our price is below Tk. 1.40. So it is not true that price of private sector electricity is higher.

Are we maintaining the existing power plants properly? Last summer Bangladesh's total production was about 3500 mw. But this year production will be less. Why? Because of lack of maintenance. But we have always done repair and overhauling in time.

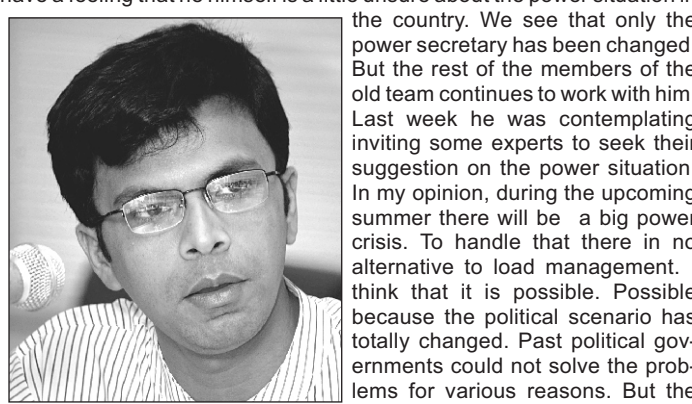
Then the government formulated the policy of pre-shipment inspection (PSI). Now that will again delay import of essential parts and equipment by another two months. On one side government is asking for power from us but on the other you it is creating various rules and regulation to discourage us. I have gone to NBR chairman, secretary and others on many occasions but in this country people cannot take decisions. PDB authorities have to take quick decisions and implement them. Another thing is there is a lack of skilled manpower in our country. For plant maintenance we have to bring experts from outside. Some new laws have come that says that if I have to bring someone from outside I have to go through BOI. We face lots of problems and this results in delay in everything.

In my opinion tariff should be like that of Meghna Ghat or Haripur, which is Tk. 1.776. But in reality it is impossible to work with that rate. It was fixed in 1998 but since then the energy sector has undergone changes worldwide. So, if you want to offer that tariff rate today then operators will keep loopholes. The price of power plants and components has risen by 40 per cent. So we have to look at the reality. There is huge manpower at BPDB and as a result their overhead cost is very high. Our staff strength is 170 and we are running three power plants. To save electricity we switch off our aircoolers when we are not in office. But in other offices power is on twenty four hours. This way we shall be able to save some megawatts.

At the moment system loss is 20 to 22 per cent. Some technical system loss is acceptable. But that should be about 7 to 8 per cent. But what is happening in the name of system loss is theft. If you can stop theft you can save about 200MW. I also suggest renovation of some old power plants. If we can do it through quick decision then we may get some power from them. The management system of BPDB is 50 years old. This area has to be improved. The condition of the national grids also needs attention. Because faulty grids affects the voltage and this ultimately damages our machinery.

## Shabuj Yunus

After talking with caretaker government adviser Mr. Tapan Chowdhury I have a feeling that he himself is a little unsure about the power situation in



the country. We see that only the power secretary has been changed. But the rest of the members of the old team continues to work with him. Last week he was contemplating inviting some experts to seek their suggestion on the power situation. In my opinion, during the upcoming summer there will be a big power crisis. To handle that there is no alternative to load management. I think that it is possible. Possible because the political scenario has totally changed. Past political governments could not solve the problems for various reasons. But the decision of the present caretaker government to conserve electricity from 6:30 to 10pm can be implemented. I feel there is no other better alternative. Regarding rental power a decision has already been taken to the effect that Gas Supply Agreement (GSA) will have to be done. We can see that many of the old decisions are going to be implemented. But if changes were not brought in those areas then that would not bring any result.

We have also seen that PDB gives false or erroneous facts and figures regarding demand and supply. My suggestion is, let us give the correct picture to the people so that they can remain prepared. In a meeting last week PDB high officials told the power adviser that during summer the demand for electricity would be about 3900MW. Now I have no idea from where did he get that figure. Our calculation says that it can never be 3900. Because on the PDB generation sheet it is mentioned that during last summer it was 4200 MW. So, we have confusing figures like 3900 MW and 4200 MW.

My last point is, we have noticed ongoing gas problem in recent months. It has been said by the experts that because of gas crisis we are not being able to run larger power plants. From the ministry we have come to know that with the commissioning of Bibiana gas field supply position might improve.

## Sagar Sarwar

The problems during next summer will be very acute, and may defy solution. We have to go for long-term

solution and for this reason some contracts need to be signed within the next 6 months. In my opinion small plants will not solve electricity problem on a long term basis. Also for more power the government should consider indigenous power generation companies to operate.

## Lt. Gen. Nuruddin Khan

PDB has the huge responsibility of supplying electricity all over the country. So, if we can give PDB some relief then it will be good for the organisation. And since DESA is responsible for Dhaka let permis-



sion be given to this company to generate some power on its own.



Dhaka's demand is 1400 to 1500 MW. But we are getting 1200 to 1300 MW. So, there is always some shortage. DESA always depends on Shiddirganj power plant for electricity. It is said that during the tenure of the last government each member of parliament gave order to REB for 40 kilometer of power line in their area. Now you may calculate 40 into 200 MPs. That means already 8000 kilometer of line has been laid against that order in last 5 years. But electricity could not be given there as there is no electricity. Therefore, I feel REB could be given some generation opportunity. When I was in charge of the ministry we proposed

for REB to go for small generation of power. Then three of the 10 MW plants each were set up.

If we can set up 10 MW, 20 MW and 30 MW power plants near the industrial areas then we can sell the steam at a cheaper price to the various industrial units. Many units will then want to buy this steam from the power plants instead of having their own boilers.

## Mahfuz Anam

That means we can encourage setting up of 10 MW, 20MW and 30 MW power plants through REB and also sell the steam as by-product.

## Gen. Nuruddin

Yes, that's right. The next problem is, DESA owes PDB Tk. 5000 crore as unpaid bills. Also Biman never pays the electricity bills. There are other government offices that do not pay their electricity bills regularly. If this money can be recovered then PDB will become financially solvent. Therefore, if a discipline of payment of bills is not established then PDB will collapse.

About system loss I want to say that if we cannot ensure revenue collection then there will always be system loss. System loss includes line loss and generation loss. Because of old machinery and equipment there is generation loss. Then there is further 5 to 7 per cent loss when power goes to the old grids. And we all agree that theft has to be stopped in the name of system loss. There has to be total reform in this area.

Revenue return is also necessary to pay the private sector plant owners. If we can ensure return of investment for the IPP then ADB is willing to provide funds. This will help the growth of IPP. There are many other problems for which we cannot open the entire sector to the private entrepreneurs at the moment. Some control mechanism of the government should be there through PDB and DESA. Let the provision for 33 per cent for the private sector continue for the time being. But, unless revenue earning is ensured they will not be able to continue for long.

We want to keep major gas generation in the hands of the government so that we may properly control and utilize it. The problem of price fluctuation of gas will remain as a problem. But efforts should be given to explore areas for new gas fields.

If there is no buy back guarantee private sector does not feel encouraged to come to the scene. We may say that anyone can set up a power plant but when there will be no buyer of power the entrepreneurs will sustain loss. That's why they want a minimum guarantee from the government about buying back a certain percentage of power. If such guarantee is given by the government many private power plants will come up in the country.

We hope a time will come when the private power generators will give some kind of guarantee to the government and on the basis of that the government will allow them free generation. We have two coal-fired plants in the country. And we have to ultimately go for coal fuel to generate power. There is good reserve of coal in North Bengal. Coal generation is cheaper than gas generation. We had progressed considerably with the Roop Pur nuclear power plant project. It was about to be completed but for some reason the work stopped. We must try for that. There are similar power plants in India, Korea, China and Pakistan. Why are we not able to have one nuclear power plant?

Solar power generation is available in most countries of the world. But we have not progressed in this area. Even in Germany, which is a rich country, they use solar power to heat utility water. They do not use electricity for this. This concept is not growing in this country only because the cost of panels is very high at the moment.

It is possible to have small hydro-electricity plants near Shangu and Matamuhuri rivers.

Dynamism in leadership has to come in the power sector. The young should be in execution of things and older experts should take care of planning.

As for combined cycle power plants I know that it is now available in 50MW size. As for transmission problem so long we only had the East-West Grid. But after commissioning of Jamuna Bridge another line has been installed. Elenga is a point to provide gas to North Bengal. If we set up plants in Baghabari or Sherajganj then entire North Bengal will have electricity.

Everywhere in the world there is rationing of electricity. So, we have to change the culture of keeping shopping malls open in the evening. We'll be able to save electricity through rationing.

As for maintenance, old plants cost more money for repair and there is more scope for corruption there. None of these plants run for more than six months and then again tendering is done and so on. We have to identify corrupt bidders and contractors otherwise maintenance will yield no result.

## Mahfuz Anam

Gentlemen, we have had a very interesting discussion and quite a few good suggestions have emerged. We shall have similar discussions in the future, more focused on specific issues. Thank you for your participation.

## RECOMMENDATIONS

- Decentralise decision making process and make PDB autonomous.
- PPR- finalise all relevant documents.
- PSI/ visa issues be addressed administratively.
- Government should issue White Paper on power situation.
- Focus on short term problem solving.
- Coordination between all tiers of leadership must be ensured.
- Government may consider utilising decommissioned Russian nuclear submarine.
- Commercialise the current organisation.
- Tariff must be increased to commercial standards. Make BERC functional.
- Disconnection drive must continue with heavy penalty.
- Undertake realistic load management.
- Consider industrial zone holidays on different days.
- Allow indigenous power generation companies to function.
- Strengthen maintenance programme. Make procurement process easy.
- Provide incentives to users for electricity saving.
- Irrigation be done during off-peak hours.
- Involve the experts and professionals in decision making.
- Encourage professionalism. Reward good performance.
- Address the problems of IPP.
- Metering system be made more effective.
- Go for 4/5 big power station of 400-500 mw capacity.
- Remove public and private sector dilemma - Public sector should lead.
- Regional electricity trade may be considered.
- East-West power generation should be given equal emphasis.
- Update vision statement of 2000 and proceed accordingly.
- Reduce grid dependency by having the Pali Biddyt Samity to produce 20 mw each.
- In the western region power generation should be 3000 MW in the next five years.
- Caretaker government should form a committee or taskforce with experts in the field to address the issue.