



INNOVATIONS FOR SUCCESSFUL SOCIETIES

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MUKHERJEE: It is the 21st of July, I am Rohan Mukherjee, I am with Mr. S. C. Das who is the Principal Secretary Home of the government of Assam. Mr. Das could I start by asking you to give us a brief introduction of yourself and your involvement with the government of Assam's reform efforts since 2001?

DAS: *I am S.C. Das, Subhash Chandra Das, I joined the Administrative Service in 1981. Since then I have been serving the government of Assam. Since 2001 I have worked in the following departments including industries department, agriculture department, education department, and planning department. Then after since 2004 for about three years I worked as chairman of the Assam State Electricity Board. There I was involved in the power sector reforms during those three years.*

After September 2007 I am working as Principal Secretary, Home and Political under which generally deals with internal security and the police administration.

MUKHERJEE: So you've been involved in a number of different departments and I'm sure you've been involved in a number of different reform efforts in the government. Which would you be most comfortable talking about?

DAS: *To tell you frankly most of these things were about one year in most of the departments but in Assam State Electricity Board (ASEB) I was there for three years so I think I'll be more comfortable to speak about the reforms that we took up in Assam State Electricity Board. Of course it is almost again two years since I left the organization. I may not be able to give you all the correct facts and figures but generally, the principles we had adopted and what we exactly did to bring in the reforms in the power sector or giving electricity to the poor people that maybe, I'll be able to tell you.*

MUKHERJEE: In fact we are most interested in that. So if I could start off, when you came to the ASEB in 2004, what were the major issues and challenges that you perceived?

DAS: *Actually when I went there in 2004, in fact, in December 2002 one agreement was signed by Assam State Electricity Board with the government of India and Asian Development Bank to carry out the reforms measure in Assam State Electricity Board. One of the main reasons why they had decided to go for reform with the Assam State Electricity Board is that though Assam State Electricity Board was created well back in 1958 it was an integrated organization which was dealing with both all the transmission, generation and distribution sectors of the electricity power distribution. Over a period of time, because of mismanagement, because of lack of monitoring, because of lack of auditing, lack of proper accounting it had reached such a state that when Assam State Electricity Board was defaulting in payments to its suppliers, meaning those who were supplying the gas etcetera or to its vendors.*

Similarly they could not pay for power purchased, as in many cases Assam State Electricity Board used to purchase about 60 to 70% of its requirement from the other generating units. So they could not pay the bills to the central sector, CPSU, Central Power Sector Units like NTPC (National Thermal Power Corporation), NEPCO (North East Electrical Power Corporation) and NHPC (National Hydro Power Corporation). So it reached such a state that it was on the verge of collapse and even the payment of salary to its employees was not regular. Then things like payment of the pensionary dues were in arrears. So even though provisional pensions were paid but their Provident Fund Dues or the

DCRG, that is Debt-cum-Retirement Gratuity etcetera, were not paid on time. ASEB already had overdues of over one year or something like that. So that was the situation in ASEB

So in that prevailing situation in ASEB, the government decided that improve the functioning, to give better service to the people and to make Assam State Electricity Board or the power sector in the state a self-sustaining one, the reform measures were adopted by the government.

MUKHERJEE: Sir, so these issues were in some ways already in place when you came?

DAS: *Actually, as I told you, the agreement was signed in 2002, but the process was going on, the PricewaterhouseCoopers, were engaged as the consultants. They had started the work, but in the meantime, in the one year before I joined, you'd be surprised. We had frequent change of chairman from 2002. Then the government decided no, this is too much, if we keep on changing the chairman every other day naturally it cannot take it (ASEB) on the road to reforms. That's why government decided and after they decided to post me, they told me specifically that I will be there for three years minimum.*

It is a fact that the first notification of the reforms measures, one of the major issues, was concerning the unbundling of the ASEB. It was supposed to be unbundled into five companies. Actually one was generating company, then one was a transmission company, and they wanted to make three distribution companies as per the views of the Price Waterhouse Coopers (PWC) and also as per recommendations, during the technical assistance study by the ADB (Asian Development Bank). So, after I joined in September, the first notification came on tenth of December 2007. So though all things were there, the real reform started immediately after I joined.

There was a lot of opposition to the reforms, but at least at the executive level, that is at the engineers level, we have about 1000 of them, at the managerial level, at their level they had the understanding that there is no problem, we'll go for the reforms. We know that things have come to a standstill but they always wanted that their old service conditions should be protected. So they were more worried about their service conditions, as they were going under the corporate structure, because earlier it was a government statutory body. So they wanted that their service is protected and should not become worse than the prevailing ones. They will get a different pension and other benefits once they go to the corporate structure, of course, we in our Electricity Act in 2003 already had a provision that whenever state electricity board goes for any unbundling or goes for the corporate type of organization, there will not be any change in the service structure to the disadvantage of what should I say, to the disadvantage of the employees.

So that provision was already there. But still the employees didn't really, they were not convinced with that provision. I always used to tell them that you can go to the court, etcetera. Then I convinced the government that let us sign an agreement with them, a tripartite agreement between Assam State Electricity Board management, with the employees' organization and the government of Assam saying that we will take care of all your service conditions. Then they were worried about one thing, that you are saying that the pension will be paid. Now at least retired employees are getting the pension out of the revenue that we are collecting every month. But once these things are separated, naturally the pension will not be paid. Where is the pension fund?

Then I told them okay, we'll make a provision for creating a pension fund. But they say that pension fund you are going to create is not going to have sufficient money to pay our pension. That time I told them that okay, it may not have sufficient money but we take an assurance from the government that whatever will be the shortfall in the pension fund, they will pay. Then they say that if the government doesn't have fund, then I used to tell them, that if the government fails, then there cannot be anything, there will be chaos. So you have to have confidence in the government. Naturally then government will pay for the pension. We did conduct a study by the actuaries and we took into account all the existing employees which was around 23,000 one time, but when I joined it was around 17,000. So we saw that the last employee, youngest employee or his dependant is going to get pension till 2061. So we assessed the requirement of fund to be set up for payment of pension till 2061. Accordingly we prepared the pension scheme and got it published by government in our official Gazette. So once these two things were done, tripartite agreement and then the pension scheme, the government commitment done, then the employees became a little bit convinced. After they got convinced, we notified on 10th December 2004. In fact, the agreements were signed on the 10th, notification pension scheme was done afterwards.

MUKHERJEE: The 10th of?

DAS: *The 10th of December 2007.*

MUKHERJEE: Okay.

DAS: *I joined in September. So after that we separated into different companies. So that was the thing. So initial obstruction was there, but the main associations, and the union of the employees did, agree to take forward the reforms after they were convinced about their service condition, about their pension, future pension.*

MUKHERJEE: So in terms of the timeline you said you joined in 2004 or 2007, just to clarify.

DAS: *Sorry, it was 10th of December 2004. Notification was 10th of December 2004 because I left ASEB in September 2007.*

MUKHERJEE: Thank you.

DAS: *So notification was December 10, 2004.*

MUKHERJEE: In what ways did the sort of resistance to the unbundling come about? How was it expressed by the employees?

DAS: *The employees were mostly—they expressed one thing. As I told you they were more worried about their service condition, the security of the employment and their future payment pension schemes. Once they were convinced about this, of course we told them that any employee who will be joining, they will be going by the corporate culture because it is for the existing employees. New employees will go for the corporate culture or we are not going to assure them of any pension. They will be by the new pension scheme. To that they (existing employees) did not have any problem. So the main thing is that the objection was regarding service conditions, because on paper no Employee comes and tells you that they don't want to work even if they knew working conditions may vary under corporate structure. They don't work or et cetera that's a different thing. . So that is initial restructuring. I personally think reform was welcomed by the employees after these two, three things, the tripartite agreement, pension*

scheme. Also it was welcomed by another thing. They always wanted to tell us that we were telling that you will make five companies, or five corporate—how it will improve? Then as part of the reform measure government said that once this reform measure takes place we'll allow ASEB to start on a clean slate. You will be surprised that as on the day of the signing we had around 5000 crores of rupees as outstanding. Out of that maybe around Rs.2000 crore were to the other organizations and to the government we owed around 3000 crores of rupees. Why we owed it? Whatever funds government used to give us it was to be given as a loan saying that we will invest and repay. But it was never repaid.

*Similarly we owed around 700 to 800 crores to NEEPCO, around Rs.300 crores to NTPC(National Thermal Power Corporation) and then also for power to West Bengal State Electricity Board, to the coal authorities like the Eastern coal fields, also to Oil India Ltd. and ONGC (Oil and Natural Gas Corporation). So all this money government said, we'll pay out of the reform money. The whole reform money was actually—there are two parts of the reform money, around 100 million dollars were given which were to go into for this reform measure paying outstanding dues and another 150 million was given for building of the new infrastructure. So one thing is that ASEB employees also become convinced that once the government is taking over these liabilities that means that ASEB will be able to function because they're going to be free from liabilities
Then secondly also another thing they were convinced okay, you will become clean in the balance sheet but today our whole infrastructure is such, that if you give power to that, there is huge transmission loss, at that time the T and D loss was around 45%*

MUKHERJEE: Transmission and distribution?

DAS: *Transmission and distribution loss was around 45%. Then the collection efficiency was very poor. ASEB didn't do billing of more than 80% of the consumers. Then most of our meters were out of order. Then whatever billing we do, even out of that we collected only 80%. So we were not collecting even or 36% of whatever power was put into the system. At that time we had seen that whatever was the cost of supply and what is revenue realized per unit of power there was a difference of about 1 rupee. That means we were losing 1 rupee in every unit of power sold by ASEB*

So that being the thing, then when we're told that you are getting another 150 million dollars from the ADB to improve your infrastructure, also government of India was giving you another Rs. 650 crore which was also available on state government taking up the reform measures, under APDRP. There was an Accelerated Power Development and Reform Programme (APDRP) of government of India. So this money, all you are going to get only when you are going to sign the reform agreement. So they (employees) thought yes, if we get this money, we can improve etcetera.

So it was not reform only in the narrow sense of it. They knew that there will be a lot of infusion of funds because it is a fact that prior to that for about ten years there was hardly any investment of funds in Assam State Electricity Board. Investment of funds was not only because ASEB did not give proposal, but even the state government was having a lot of financial problems. Because of that there was no investment proposal. That when they saw that at least in cash, apart from government taking over the liabilities of all these vendor organizations, they(Governemnt) are giving us an additional ,around Rs.450 crore under APDRP plus under ADB would be another Rs.1000 crore. So naturally employees become a little more convinced rather these reform measures

became acceptable to the employees and their initial resistance gave away. Because resistance is always apprehension or fear of the unknown.

MUKHERJEE: Is it correct, is my understanding correct that the ADB funds that were given were intended for the ASEB to start on a clean slate, that the government would essentially forgive the debt of—?

DAS: *Actually the ADB fund was not—as I told you ADB fund, out of 250 million, 100 million dollars was for the reforms measure and 150 million dollars was for infrastructure building and this 100 million dollars was released to government but it was in government 100 million dollar would be how much, around 400 crore for exchange rate of 40 rupees if you take that time. Then government was supposed to add money to that. It is not that 400cr was sufficient. So ADB was—the condition was yes, they have done that clean yes, also all cash flow etcetera in that study, technical assistance study, that what is the funds necessary, what would be bigger. It is not only starting on clean slate, they said that after you take up reforms, at least for next two years you will be running at a loss. To make up for the loss also then funds were provided by the Government.*

MUKHERJEE: Sir, how, again going back to the question of the employees, was there any kind of institutional mechanism through which you interacted with them? How did they inform you of their concerns?

DAS: *They informed me through their officers association and the employees union and you will be surprised to know there were about 21 unions in there, in the Assam State Electricity Board. So all of them used to come because each level has a association or union, from linemen right up to the executive officers, engineer officers. So all of them, they used to tell us their grievances through their association.*

MUKHERJEE: Apart from preventing the ASEB from going into insolvency were there any other goals of the unbundling reform?

DAS: *Another goal was not only the insolvency because the basic purpose of the government was to give service to the people, the electricity service to the people. The government realized that in Assam, in rural areas, out of around 50 lakhs of families, at the time of the reform only around 10 lakhs of households was having electricity, that is one.*

Then if you see from the point of consumption of power that our power consumption was very low power consumption., if you say it is 8500 units per year per person in USA, in Assam it was below 100. So that was the level. So government too thought that if you want to expand etcetera, etcetera and also give proper service but the government before expanding also thought that giving proper service, because whatever power service was being given to the people in urban areas were very poor not to talk about rural areas. In rural areas, Assam was lowest from the bottom it was sixth among all states in terms of the number of households under the electrification in Assam at that time. So government thought that to give better service, to go for expansion etcetera also reforms are necessary.

MUKHERJEE: Sir, aside from sort of negotiating with the trade unions, the various 21 different trade unions, did you look to any other groups for support?

DAS: *What I did, actually immediately after, see as I told you I joined in September and by 10th of December it was in progress and they signed and all only this problem*

was there. We could avoid strike by the employees whereas all over India whether it is with Karnataka or with Uttar Pradesh when it was unbundling there was strike. Because we could do this thing of convincing the employees and signing the agreement, there was no strike, everybody quietly accepted, so that was the biggest thing. After that, what I did, to tell you frankly, we had 150 subdivisions, the lowest unit, which does the billing etcetera. That is distributed around 23 districts. And 23 districts means 12 circles under ASEB.

So I personally visited to all those places and met all the gazetted officials and junior engineers. Junior engineers are foreman type of employees, trained in polytechnics. So the junior engineers in ASEB were around 2000. So I went and held meetings with everybody, in all places. Those three years, at least once in a year I went to the districts, held meetings with them and used to know their problem. Also got them involved. There are many things when, which, if I was sitting in the headquarters I wouldn't know but once I started going out, meeting the employees, the lower rung, then you came to know. Because in the headquarters anybody will tell you "sir, in the field they don't know". But when you go to the field you come to know that the main problem is in the head office. Because they (field officials) send proposal, head office people keep sitting on them and put the blame on them because they are the ones who are executing agencies.

So once I started going to the field, etcetera, I came to know that what they are telling, that because of the whole system, procedural problems, many things, even if headquarters wants doesn't get done and even if they sent proposal they do not organize. So one of the things I thought, that one of the biggest things necessary was the simplification of the procedure. Second thing was the delegation of powers to the field. These things I could know once I went to the field and over in the—immediately after taking up reforms we started taking up simplifying the procedures. One example, we have to give some funds to the subdivisions every month, say for hiring of the vehicles, for the oil or minor repairs, etcetera.

So there we just give. I'll deliver. An example say 25,000 rupees I give to a subdivision. We always used to say "unless you send your proposal we won't give. You give, we'll avoid the delay. So we made a system that every month on the first day of the month you have to release that Rs.25,000. That's easy to overcome the delay. But earlier they didn't get the money that way. Then there were many subdivisions who said sir, whatever vehicle was given to us to attend to service complaints, etcetera. That was given in '70s or '80s. There is one off the road, we don't have any vehicle running.

Then we said we don't have funds, so much of funds to purchase a vehicle. So we told them okay, you go for hire. You can go for hiring on monthly basis. You can go for hiring of an SUV where you can carry your ladder also and you can use for your other work also. So we started giving them around Rs.15,000 per month to hire a vehicle. So when we started giving these facilities, that means they started attending to the calls, that is the thing. One good thing, one thing I did, actually, our collection as I told you, our collection percentage was 80% but over a period of those three years our collection percentage went up to 97 to 98%. That means whatever we bill, 97 or 98% collection efficiency is there.

Then our billing efficiency we took up to 95%. Then billing efficiency is that whatever amount you have, what is it here? Now there are two billing efficiencies. One is that billing efficiency is that suppose you have given 100 units of power and you have billed for 60 units, then you're billing efficiency is 60. But

we improved it up in some cases to 70, we took it up to 80 to 90 in some other electricity circles. Another is billing efficiency is service of bills. We started insisting that 100% consumers must get bills monthly. But earlier, what happened, there used to be your employees who used to go and give bills. But afterwards, we changed the system.

We took contractor, outsourcing. We were running short of employees also. We told that each contractor who will be given 1 rupee, one rupee per bill, not exactly 1 rupee, I forget. It was not even 1 rupee I think, it was—I think it was 1 rupee or whatever it is. We're giving them the bill, they serve the bill and we pay them. So that way even if we were not having the employees at lower level, the serving of the bill became very efficient.

Then simultaneously we took up computerization etcetera, all those things we took up. But these efficiencies immediately increased and one incentive, I gave it to them, I'm telling you, I'm not being able to tell you in that systemic manner. One incentive I told them that there were consumers who were not paying their bills, but we were not disconnecting them. If you go and disconnect them, they only they will start paying. That is a good thing.

First they said they don't have vehicles to go and disconnect and all. Then we said, okay, we'll give a vehicle. Then they had to be incentivized, if you go to any of the subdivisional offices earlier, two years back you will not see any employee sitting in a proper chair. So we told them that if you, suppose disconnect, we get some money. That means for disconnection we get Rs.50 rupees and for reconnection we take another Rs. 50 rupees. So that he has to received 100 rupees in advance already. I went to state electricity regulatory commission and said this is too minimum, there should be a disincentive for all this nonpayment. So told them that you make it Rs.150. They agreed. So after they made it Rs.300 for disconnection and reconnection then I told them (employees) see, if you disconnect the individual and he takes a reconnection you get 300 rupees. I told them that out of Rs. 300, I would give you 80%, to the office. You can use it for your vehicle, for your office infrastructure etcetera and for making your office beautiful, etcetera and that gave them very good incentive.

You will be surprised that today we have got two, three offices in Guwahati, in Dispur, which are air-conditioned payment offices now. And they have made all out of this incentive money. So they became incentivized that yes, we can have a good proper—I went to an office in Bihpuria in Lakhmipur district, which is an interior place, I was surprised to see that even assistants were sitting in swivel chairs. They were very happy that they painted their office and also so that they created the proper pay counter, sitting place. So when they got themselves the incentive, they started working.

MUKHERJEE: This must have created some problems with the public if the ASEB went around disconnecting, because earlier on people just went on without paying their bills. So was their any opposition from the public?

DAS: *Opposition from public was there, in the sense that public, when you go to disconnect them or give them bill they say, why should we pay your bills, you are not giving us regular power. But it is again egg and chicken story because it is a vicious circle. We had problems with the public and there has been in many cases, they had to go with police etcetera also for disconnection. But slowly public learned about it, that there is no other way. Gone are the days when ASEB never used to come for disconnection, etc. Now we have to pay them. So people become active, so sure the public initial reaction was there and generally you see*

90 to, 95% of the public is not opposing it. It is a few hoodlums who oppose it because they have got their vested interest. It is those fellows who do the theft of the electricity and all those things.

So because of thefts again I'll tell you, remind you one thing. There are a lot of thefts in the rural area. So your line is going on, that LT line, low-tension line is going on. They will just hook it. They will throw a stone with a wire, hook it and take power. Then I tried to find out why this. Because there are two vested interests. One was my lineman. He will go and tell you if you are a rural consumer, that why go all the way this 30 kilometers to pay your bill and all, and you'll have to go to the different offices, give hundreds of documents, at least four or five documents to the government, your land document and all those things. Instead keep paying me 50 rupees per month and keep taking the electricity.

Then I said, where is the problem. Then they said, well this is the problem, apart from filling up the forms, they have to buy a meter. The meter has to be deposited at their electricity sub division office. They have to take the certificate that the meter is okay. Then I said then nothing doing for the rural area, they will receive a simple one page application cum agreement form and one electricity safety/Testing certificate. That means there is wiring in the houses certified. Otherwise, no affidavit. Why you require an affidavit that I'll abide by rules, etcetera, it is already there, if they turn in this form. Then there will not be any land documents. Why we require land documents, if government evicts him tomorrow, we'll disconnect him. But if we ask him for land documents, he has to run to the revenue office, land revenue office and collect the land document.

So when we simplified it. Then he (SDO) said there was a thing, but sir the meter has to be certified. Oh no, nothing like that. How much connection rural people are taking, maximum 2 kilowatt. So we authorized the SDO himself, not the meter-testing officer, to certify up to the meter up to 2-kilowatt capacity.

MUKHERJEE: So the SDO is the—.

DAS: *SDO is the subdivisional officer who is the lowest engineer and further, he is the one who does the billing and who does the connection and all those things. Now above SDO is the executive engineer, superintendent engineer, then additional chief, then chief engineer who sits in the headquarters. So SDO is the lowest dispensing unit. He keeps all records, he does the billing and everything, he is the one on the cutting edge and so. So when we did that, and we even told some SDOs that we will not interfere, and then there was a big thing. After the consumer applies, then the junior engineer have to give an estimate. So they used to say that unless the junior engineer is paid some money, he will not make the estimate. and there used to be delay even though he will make the same estimate. So we made a standard estimate for the rural consumers to do away with the delay for preparation of estimate.*

We say that for connection in the rural area you have to deposit 450 rupees plus you have to give 400 as your security deposit which is refundable, 450 is not refundable. Then 850 is the standard, no estimate, nothing. When you simply find out there are many SDOs who took the initiative we have melas, electricity connection melas (fairs/meetings) in the rural areas, especially in the areas where there are maximum of theft that let these melas be held. We told these meter suppliers, you come with your tested meter as certified by the SDO. We told some other fellows, you come with switches, electric wires, etcetera and we wish to give connection.

MUKHERJEE: So melas, you mean carnival?

DAS: *Melas means any congregation of people, say where you call all people and they gather in a meeting and in the meeting itself you start sanctioning the household connections. So that worked very well. I will not say that it worked very well that in all 150 subdivisions, but at least there were 25, 30 subdivisions. It depends on the person (SDO) also. So they started again.*

Then another thing was introduced. In the rural areas we introduced Single Point Power Supply Scheme (SPSS) and for this I can tell you, ASEB got appreciations from the government of India also. If you go to Assam State Electricity Board they might be able to give you a copy of this scheme which we called single point power supply scheme because we thought that rural area people, one of the reasons they don't come to pay the dues, or they attempt for theft, is because they have to travel 30-35 km to the SDO's office to make payment against their bills for power supply. The bus fare is sometimes more than their bill amount. So what we introduced, we told that we will appoint some rural agent.

This, actually to tell you frankly some of my—I didn't go, but some of my officers visited Bangladesh and from Bangladesh we got some idea that there they're appointing such agents. So we modified that a little bit and we appointed agents for each transformer. That means, in the rural area, we are telling these agents that some of these hundred households is served by this transformer, so you become agent of these men and whatever you collect as electricity dues, we'll give you 15% commission. That means we fix a meter in the transformer, we give him 10% distribution loss because it is only an LT line. We give him 15% commission to look after his administrative expenses. Therefore, he gets 25% and deposits 75% to ASEB of whatever the billing for the consumers under him.. That way I think ASEB, that by the time I left they had around 2000 agents. We told the agents that if you take one transformer, with 100 consumers you won't be viable. So there were some agents who took about 160 to 180 Transformers. But most of the agents took about eight to ten as individuals, but the other big two, three parties who took about 170 Transformers. But that way we became assured, because they came and deposited the money at the end of the month because we used to bill at one point and the rural people welcomed the scheme as the agent collected his dues from his doorsteps and he was not required to go to the SDO's office. They also got better service as the agent attended to minor maintenance etc.

I visited some of these agent areas. On being asked if they were benefited, they said yes, we are benefited because now when we ring up somebody, at least someone comes and attends to our line faults. Earlier nobody would come from the 30 km away and attend to our line faults. Then one good thing was that, these agents used to come house to house and collect the dues. Earlier we had to go and deposit it. So this led to a lot of reforms in the sense that the people, were happy that there is someone to look after their grievances. These agents also told me about the scoldings they used to get from the consumers for failure to give service and now they realize why it is that people used to get angry at ASEB people. Because now people demand from us prompt service which we cannot avoid as we have to collect their dues at the end of the month.

So this single point power supply was on big step towards reforms.. Of course I know there were defaulters among agents in depositing the dues, collect, we against monthly billing. To protect against these the agents used to deposit as two-month's average dues as security deposits. Some agencies were also terminated for defaults. But I think this was a reform measure to give quick

connection to the public and also help them in paying their dues without much harassment.

MUKHERJEE: So you mentioned that there were vested interests among the linemen who would get money from people who were stealing electricity. Did you adopt any specific measures to deal with that?

DAS: *Specific measures in that we told frankly that wherever there is theft, etcetera, agency to be given, and we also made a system that if anybody applies for an electric connection, the application must be disposed of within 30 days and by modifying the earlier system, then we go to a system that as soon as he deposits the application, his name is to be entered in the computer and he is to be given a receipt so that we know. Earlier their applications used to get lost. So that was one way. By simply indirectly I thought that their vested interest would get reduced because once they can get regular connections easily, naturally vested interest will be affected. Some actions were taken against linemen on specific complaints of corruption.*

MUKHERJEE: So so far you mentioned the unbundling of the ASEB and you mentioned the single point power supply scheme. If you could, is there any other set of reforms or any other particular—?

DAS: *Another important reform we have to take, as we told you, there was no energy accounting or auditing in Assam State Electricity Board. That means we used to just supply power from the source but at the same time no one was knowing how much he was getting paid for.e.g.To a Superintendent Engineer, if I am giving one million units, how much I'm getting in return from him. So we started proper energy accounting and, we also went for energy auditing, right up to 11 Kv, that means power generally comes in 220kv. Your 220kV line is fully metered because we get billed in that. That from 220KV, it goes to 132 kV, from 132KV it comes to 33 kilovolts, from 33 it goes to 11 kilovolts. From 11 kilovolts you have those transformers. From transformers you go to LT line.*

So by the time I left our aim was to go for an energy auditing right up to the transformer. That means if this transformer we have given this much power, how much has been billed, how much has been collected, money against them, what is that T&D loss etcetera. That we are doing for all the 11 kV lines. We had around I think 700, 11 kV lines, 11 kilovolts line. So each 11 kV line has to anything from 10 to 150 Transformers. So that is one area we really insisted and I used to hold a meeting every month to have the energy auditing done. So that is another reform result, this energy auditing. That means to account for all the input power and find out the technical and commercial loss.

So actually, even if earlier we used to say that our loss is only 40% of what we are making many figures used to be on the basis of guess or approximation. But once we fixed meter at all level, introduced meter at all level, then we came to know actually really our loss. Actually by the end, to tell you frankly, our loss did not go below 33%. The T&D loss was still 33% at the level. But at least that was a correct assessment because there are meters all around.

MUKHERJEE: So was any other information that you found useful by doing this audit?

DAS: *Information is that we used to know that where is the loss because I can give you some examples because we keep on blaming the rural areas because many industries we saw that they take a lot of power. Then we have to, we say that our 33 Kv station was showing that per month suppose a 100units was going, and the 11KV line was serving only three industries. But they're there total bill is only*

60, and in 11 kV line technical loss should not be so much. Then we went and fixed another meter in front of those industries. Then naturally in two months, their consumption came down, see I can tell you, we were getting only Rs. 2 to 3 lakhs from them, but we were giving them power costing up to Rs. 23 lakhs and when we fixed that they have to show that here and we are taking reading daily. Their consumption also came down to Rs. 3 to 4 lakhs, whatever was the actual they were getting. That means they were resorting to theft, for 11 kV or 33 kV is not easy without the connivance of our officials.

So when we started fixing et cetera, these meters everywhere, so this theft by the industry was also reduced to a great extent. So one reason was energy auditing brought out the fact that all loss is not for technical reasons and therefore officials had to be extra careful to give results

MUKHERJEE: So in taking all these steps were you able to significantly impact the T and D loss, the transmission and distribution losses?

DAS: *As I told you, by the time I left, it had come down to 33% for ASEB as a whole but if you say Guwahati city it came down to around 11-12%. But as, because ASEB as a whole, but as I told you though we were telling 42- 43% was the loss at the start of reforms, actually it was not a proper accounting. Now, 33%, I think it has come down to 27 to 28%. At least T and D loss had come down by 10 to 12% during my time.*

MUKHERJEE: And has this increased efficiency impacted positively Assam's reliance on outside sources for power?

DAS: *Yes, that is one important thing you have raised because I can tell you that after this 10th of December, you can check it up at ASEB also, we were the one, because in the meantime another system was introduced that if you purchase power from the central power sector units you have to open what they call escrow account with them and also pay them here. You have to open what they directly need. That means whether you pay, deposit the money or not, they will take the money from the bank by debit. So we started making on time, all the payments to NEEPCO, NTPC, even to Oil India Ltd. and all, we could make regular payment and they're doing it even now. Even if we could repay some of the debts which were not waived because as for debts only up to 31st March 2003 was not written off or taken over by government. Debts until that point, we have to take care of ourselves.*

But one good thing, because of all this efficiency, increasing collection, this we could pay all the vendors on time. So that shows that whatever we were doing, all this review, energy accounting and simplification led to increase in the revenue collection. One, I can say that when I joined ASEB that the total monthly collection of ASEB was round Rs. 65 to 67 crore per month as revenue. By the time I left it was around Rs. 120 crore. Of course, it is not only due to efficiency, the consumption also increased during that period, but efficiency factor was also there, at least by 25% more collection was there.

MUKHERJEE: And the decision to set up these escrow accounts was made by ASEB or by—?

DAS: *No, it was as a part of reform measures government of India also said. Because as a part of our one-time settlement, they wrote off many of their interests and they said that in the future this credit limit will be given and an escrow account will be set up there for the part of this.*

MUKHERJEE: How did, you said, you mentioned earlier that there were some funds from the ADB, quite a lot of funds for infrastructure. So did that help the government increase the coverage of—?

DAS: *Actually what happened, because, most of the lines were set up in 1950s and '60s, there was not much investment has been done in the lines. The people of the city of Guwahati, were always complaining, I'm just giving Guwahati as an example, that the voltage is not there and etcetera. So we said that why the voltage is not there, so if Guwahati requires fifteen 33 kV substation, we have only six substations, so naturally by a single 33 Kv line, too many consumers are being. So we went for new substations. We added another seven in Guwahati. So when substations came, then we had more transformers. All our transformers were overloaded. So we went for increasing the number of transformers so that capacity and consumers demand matched.*

So these things improved the quality of service. Not only the quality of service, once the voltage increases, your meter reading also increases. Because if your voltage is low, even the meter will not work properly. And in addition to that of course we also went for digital meters. Earlier it was all mechanical meters and we found that most of our meters, 20-30% of the meters were not working and all billing was done on the basis of average monthly billing. So once the meters were replaced, naturally we started getting results in the form of higher billing. So this infrastructure it included replacement of the meters, having more substations, etcetera and also we knew that to give better supply would require a lot of it.

Actually the ADB fund mainly went for the transmission lines and replacing the—defective meters as well as mechanical meters, etcetera, computerization,

MUKHERJEE: I see. So in the overall reform agenda of the Assam government how important was power as an item?

DAS: *See, to tell you frankly if there is no other issue, no political issue, then the power issue is always there as alive. So actually if the government can give proper power supply, electricity supply, then the public will get satisfied. Now you are in Guwahati, you have seen that because of the heat, which is not uncommon thing in Guwahati or Assam, this time we are having unprecedented hot weather and whatever power there is used for this and all the people are suffering. So power is really important.*

In addition to that, because of this government thought that if we can give proper power to the people to a great extent, one of the services that government is supposed to deliver to the public will be satisfied. Another important thing was there, earlier as a part of reform measures, earlier ASEB was at the mercy of the state government. That means all the cost of your inputs are going up but you cannot increase the power tariff. Why you cannot do this? Because we have to come to government to increase the tariff. So it was not ASEB's fault.

If you continue to give power at 1 rupee which even in the US they don't give, and then you think that you will be viable, how can that be? Government said that if ASEB will be given 3% return on its investment but government never gave that money because government also had their problem. So then, as a part of reform measures, there will be a state electricity regulatory commission. That means the state electricity board, will be accountable to the public as a part of the reform measure. The way they are fixing the power tariff, their losses etcetera, they will have to go and explain to the Assam Electricity Regulatory Commission(AERC) while filing tariff application every year and AERC decide what will be the tariff.

In addition to that, the public got a forum to go and complain about ASEB, about the poor service, etcetera. Earlier they used to complain to government, but government used to hardly respond but now there is an independent forum with independent members etcetera.. So from the public point of view reforms were there. They thought that at least to some extent now, we can make Assam state electricity board accountable. They have to publish all their tariffs; they have to publish all their assets and liabilities; how they're fixing the tariff. Based on that they give objections. There are a lot of hearings, so that way it becomes more public participatory.

MUKHERJEE: Then the Electricity Bill was passed in 2003, is that correct?

DAS: *Right.*

MUKHERJEE: The regulatory commission was set up soon after that?

DAS: *Soon after that. We were one of the first few states in the country.*

MUKHERJEE: Who was behind this? Who gave the impetus for this new legislation?

DAS: *See, as I told you this Electricity Act in 2003 is a government of India act. So government of India as I have told you about Assam situation, all over this country, maybe except West Bengal or Tamil Nadu most of the electricity boards were in red. So government of India took the initiative.. Our state also passed the Electricity Reform bill but because government of India had already passed the Act, and this is a concurrent subject, so their act prevailed, and their act was implemented. The impetus for immediately setting up the state electricity regulatory commission was, as I told you, that we were expecting Rs. 450 crores under accelerated power development and reform program (APDRP).*

These conditions were there, that if you want this money, if you want they give you money, this regulatory commission will have to be made operational. So that was also an incentive, that unless you make these things operational, unless we go for unbundling we are not going to get this money.

MUKHERJEE: And how has the regulatory commission's relationship with the board been?

DAS: *It has been smooth, there haven't been any problems. Actually, of course in the beginning we had problem in the sense the ASEB accounting etcetera was not that proper. The regulatory commission asked for a lot of details. Whatever was available we could submit, but slowly in the last five, six years, the professionalism has also got developed in Assam State Electricity Board. So now they're in a better position to give all the information, etcetera. But otherwise there was no problem because they were independent and from ASEB side they were very happy that there is a body we can tell them now that these are the problems, these are the practical problems. Unless you address them you cannot expect good service.*

MUKHERJEE: So the public grievances that are articulated at the regulatory commission, does the board regularly implement or address some of those grievances?

DAS: *They try to address, this is only because again the review is held. There is some consultative committee with public input. So in the review we have to again tell what action we have taken. Not that all the agreements are attended to you because some of them are not exactly possible also because one of the results*

that is not possible is that because you have shortage of power or something like that. But otherwise, we are accountable. We have to submit an action taken report on whatever decisions have been taken in those quarterly meetings with the AERC. I forget the consultative committee composition. So we have to submit action taken report.

MUKHERJEE: Just to touch upon an earlier topic, the disconnections and also the raising of tariffs, going from 1 rupee to further up. I'm sure that created some amount of discontent.

DAS: *Certainly. Actually if and when some tariff has to go for tariff petition filing, the public hearing is there. Public come and tell, we don't have any objections to pay, but where is the service? Can ASEB assure us they will give us 24-hour supply? Where is the quality? Some people will come, that we got in the mess because of these fluctuations in voltage and all those things. So those complaints always come and once the tariff is announced there is always a big protest to take back the increase in tariff. Earlier though when they used to come, it used to bring it down. Now at least the regulatory commission also withstands that. But the public has by and large have accepted the periodic revision except, some political parties etcetera, as they want to gain mileage out of this tariff increase etcetera. So they come and stage protests but after say fifteen days, they accept it.*

I think we have, so far, from 2003 around four tariff revisions which is supposed to be every year. Now of course from last year I think they have done a long-term tariff revision thing, that we have to give for five years at a time what will be the future tariff et cetera. This tariff thing has also helped us in one way. As I told you ASEB, though that requirement of power is 900 megawatt, only about 200 to 220 MW they generate but around 700 they purchase from outside. So this outside generating you need to pay as per their tariff. It is now fixed by the regulatory commissions. So they just cannot fix anything. So that was one good thing for ASEB, that the ASEB could also go and object to them. Of course, in the case of central sector power generating stations, their tariff is fixed every year by the Central Electricity Regulatory Commission (CERC).

MUKHERJEE: Did you take any specific steps to build public support? Aside from I guess just listening to their grievances, did you actually try to reach out, have any kind of publicity?

DAS: *Some publicity was there, always used to give some newspaper advertisement etcetera, that if you want to service, if you want ASEB to serve people better, naturally kindly pay your bills, etcetera. That is one thing. Then we told people that there are huge arrears, we will give you some incentives, please come and help us, Then when we were fitting electric digital meters there were a lot of objections because rumors went out that all their bills will go up by 30-40%. So our people in the field they went and held meetings with the citizens committee and etcetera and tried to explain it. But you fit it and use it and also side-by-side we told them that it is not only that we are fair, we were also promoting CFL bulbs. So then your power consumption goes down. So we gave them that idea also.*

We also told them many people, that you please check your wiring. If the wiring is loose you'd definitely have a lot of leakage of power. So there was a lot of interaction at the SDO, subdivision officers' level regarding this.

MUKHERJEE: Sir, and subsequently, I mean in a lot of other states this fear of the bill going up has actually come true in some states. Has that been the case in Assam?

DAS: *But here also I have seen that more or less bills have not gone up by more than 10-15%. In some exceptional cases bill might have gone up because some of these meters are tamperproof meters so they could not play around with the meters. If they were resulting to theft earlier, then that must have stopped.. But generally it has gone up by 5-10% because earlier mechanical meters and as you know mechanical meters when they become old, the wear and tear is high; but digital meters that wear and tear is not there. Earlier as I told you because of low voltage the mechanical meters we use, didn't run that fast. But now with improved voltage etcetera and meters being digital and digital meters seem to have minimum power leakages.*

MUKHERJEE: So sir in implementing these wide, sort of this wide set of reforms, did you come across any unforeseen obstacles in your way that sort of didn't go to plan? Things that you were planning didn't actually come to fruition?

DAS: *I have come through unforeseen obstacles but exactly it is not coming into my mind now because we had a lot of problems, a lot of problems from the employees also. Because some unforeseen obstacles were, say one thing was getting cooperation of the employees. I had that obstacle. Second thing is to make all the employees accept this—make them computer savvy because we were introducing computers so we had to arrange a lot of training for them etcetera and also to tell them some indirectly many people are not willing to learn computers. Then we said okay, if you don't learn computers, etcetera, and take up this billing through computers, etcetera, you might get transferred out and we'll put you as telephone operator somewhere. So that type of carrot and stick policy we had to adopt.*

There were some unforeseen yes, unforeseen, one was when we went to fix these digital meters. In many places some boys came and attacked the work vehicles carrying digital meters and burned them in the public, in Guwahati city only. Say about 30-40 meters they burned them.

Then again they(field officials) had to go house-to-house, explain to all people that this is not a bad thing. So those objections had come. In many places where people were there not allowing us to fix these new meters for about two months. Then a lot of convincing had to be done. Even some people went to the court also against these digital meters saying that this is, this should go to—then we had to fix, have some third party inspection. We said that we were ready for a third-party inspection that the digital meters are the proper meters. So that type of public objections came no doubt.

MUKHERJEE: Were the third-party inspections carried out?

DAS: *We told public, to tell you frankly, public have common complaint, but at the individual level not many people come. So we told that anyone who wants a third-party inspection they can file an application and we will go by it. We didn't get many because as a group they will say a lot of things, but when as an individual want them to do, people generally, they accept it.*

MUKHERJEE: So running the ASEB itself is a huge task and in undertaking these reforms you would have had to—

DAS: *And one more good thing I did, and for that actually I'll tell you it is an interesting thing. We had a project of 100 megawatt, we were running shortage of power. All unions etcetera will come and tell you, so you are running shortage of power, this Karbi Langpi hydroelectric project which was started way back in 1978 and this is 2004, till today we haven't been able to complete because of various reasons. The Japanese had already given the turbines and all of them. I took up that challenge and in another two years I completed the project and it was commissioned in January 2007 of course with active support from the state Government. That also sent a very good signal with my people, with the employees, etcetera.*

Also in 2008 etcetera, last year, and in 2007 we had a very good monsoon and it (the new Hydro project) added 100 megawatt of power generated by ASEB. So actually that was one other feather in the cap that I could carry along the employees with me because they saw my sincerity that he is trying to do this project also which had been lying idle for the last 28 years. I got it commissioned.

MUKHERJEE: So sir, in doing tasks like that you would have had to spend a lot of time and effort organizing people and moving resources into various projects.

DAS: *I got the full support from the government, that is one thing. Because Karbi Langpi project, in those two years, I spent 225 crore, rupees, that is 2250 million rupees. We got a loan of 1250 million rupees and balance we got from the government 1000 million. So naturally government support was a must and for getting that loan also government guarantee was necessary. So one thing is that I got good government support to do the work; that is one thing. Secondly from the employees we got good support. Actually we always have the wrong impression that people don't work; but if we can give them proper work and ask them to deliver, I think most of them come up and deliver.. There will always be black sheep but most of the people come forward to deliver.*

MUKHERJEE: So did you have any problems finding the right talent to help you design and manage these reforms?

DAS: *Actually one thing is that government decided that there has to be a consultant during these reforms. As I told you PriceWaterhouseCoopers was our consultant. In addition to that, SMEC (Snow Mountain Engineering Corporation) of Australia was there as consultant They were also our consultant for the transmission projects etcetera. Then for our APDRP project, Power Grid was there. So we had consultants. But most of the things were done by in-house talent. When we were doing that Hydro project also, the government said that we don't have any experts and you have to take a consultant. So we took Lehman International as a consultant for the hydroelectric project. But this consultant was no doubt very useful in the sense that we became doubly sure that we were doing the right thing, but most of the things were done by the in-house engineers.*

MUKHERJEE: And were you satisfied, in your own staff at the high level, highest levels, as the chairman were you satisfied with the talents of your highest—?

DAS: *I was satisfied. They were all old hands, they had good knowledge etcetera. The only thing is that they were not getting opportunities. As I tell you, technically even today or even that time ASEB was not starved. What was starved was the money and the procedure. If we could have given them good finance at the right time, they would have been able to deliver even earlier also.*

MUKHERJEE: Irrespective of that, were you able to take any steps to build capacity? Did you feel the need to—?

DAS: *I forgot to tell you. When I joined I saw that most of the people were not trained. I asked them, they said we have joined, 25 years we have spent, we have never got any training. We gave them opportunities to go outside to attend seminars, etcetera, then they were satisfied and also got the exposure. I even did a pilot project. I tied up with Calcutta Electric Supply Corporation, and made training program for my officers. In those three years I sent around 300 engineers to Calcutta in groups of 25. Just not very long training, seven days training. I told them you go and see what Calcutta Electric Supply Corporation was doing..*

Then we get a lot of training programs from government of India. Earlier we never used to send people. One of the main reasons we did not send was that we didn't have money. But under this APDRP program we had some training funds. So I started sending Engineers to all places. You won't imagine. Even some linemen I sent to Maharashtra, maybe two, one a year. So there were—I told them that if any, if they don't like anything, let them see how things are running. At least I know, in West Bengal things are running better than Assam.

From whatever exposure I had because I, even if I was not in Assam State Electricity Board I was traveling all over India, so I knew. So training, capacity building was one thing as I told you. Whatever training program came we used to send officers. There was an engineering institute in Hyderabad where we were sending. In addition to that there was a Northeastern Power Training Institute at Guwahati, a subsidiary of, national power training Institute at New Delhi. The Guwahati Institute was not having any business. I told them I'll give you every month 30 people for training. So, I did send at least one batch of officers every month to the NPTI, Guwahati.

Then I did one thing, for ASEB for the last ten years they didn't have any recruitment so there was no new talent, so I recruited about 200 engineers, not in one but in two, three phases, about 300 junior engineers, foreman types, and around 100 accountants, or commerce graduates. So these also brought in a lot of the capacity building you are telling, as I got some new people also.

One good thing there was, as chairman of ASEB there was a board, when we went to corporate culture; we had all the powers to take all those decisions. Then whatever engineers I took, I thought that there was need of induction training for them. Earlier engineers are recruited today, tomorrow they are told to go to office and do the work and learn on their own. So once we did that, we did some, two months induction training and they were given the overall view etcetera, the engineers were also very happy. Many distribution engineers working with ASEB for many years have never seen a generating unit of ASEB. So these things—so capacity building was a major part I forgot to tell you.

MUKHERJEE: Were there enough talented individuals to recruit at these levels as engineers and—.

DAS: *It was available. Not, I'll not say too many, but when we held—suppose we were taking a hundred, about five hundred engineers applied, electrical, because we take only electrical and mechanical, not other engineers. Now of course ASEB have started campus recruitment from our engineering college and National Institute of Technology, NIT. One is there and we have two engineering colleges. Now they have started campus recruitment.*

MUKHERJEE: And were there objective and clearly specified criteria for recruitment?

DAS: *Clearly specified and I can tell you when I was there we did it by open examination. We ensured that it is 100% impartial. I used to tell people that not a single candidate, sponsored by anybody was taken in. They were strictly on merit and proper selection.*

MUKHERJEE: Were you able to take any steps to make sure that those lower down, actually in charge of recruiting were able to follow this?

DAS: *Yes, I was able to make sure about that. Because you see something like, things like that all the examination papers were set up, only we got three papers. Last moment on the previous day prior to the exam, the final paper was set. Then the interview board was announced only on the day of the interview. So we used to take, the best part of it in Assam, whenever you have all these recruitment dates and when people come to know that there is a lot of illegalities or irregularities taking place, they go to the court, etcetera. You will be surprised that all the recruitment I held during my tenure, there was not a single news item anywhere that incapable people or many people without merit are getting in, or any malpractices have been adopted. Not a single court case arose.*

I, after the joined also, I asked many engineers during interaction, all these young boys, that did any of you pay any money? They said no, they never expected that they can get job like that. So that way I can tell you that recruitment was very impartial.

MUKHERJEE: That's fantastic. So we spoke a lot about—

DAS: *I think we've spent one hour already.*

MUKHERJEE: Okay, I'll just quickly conclude then.

DAS: *I think if you want to speak to the present Chairman of ASEB, that will possible.*

MUKHERJEE: In that case would you like to add anything else because we're trying to build this resource for leaders in other parts of the world who are building up state institutions and also reforming institutions like the ASEB that are not functioning so is there anything you'd like to add—?

DAS: *To what I have said?*

MUKHERJEE: Yes.

DAS: *Actually, as I told you, whatever you do, you'll have to carry along the employees. It is not that we can throw them away and do the reforms, etcetera. As a leader at the top of the organization, head of the organization, or even at a middle level of management, unless we take the employees into confidence, you cannot succeed in anything. We'll have to see what are their problems, not that everybody is a bad guy. Some of the general problems are there, if we address their problems, then naturally they will also give and we'll have to trust our employees. It is not that you need to be lenient with them. If you find any employee, I'll tell you, during my tenure I terminated the services of around three or four employees, engineers, because they were found involved in corrupt practices, misappropriating revenue, etcetera. So we have to be strict with them, but at this time you have to trust with them and take them along. Then only we can receive the reforms.*

If we want to, do the change by ignoring the employees or the stakeholders, I don't think we'll be able to do that.

MUKHERJEE: Thank you very much.

DAS: *Thank you.*