BANGLADESH JOURNAL OF PUBLIC ADMINISTRATION Volume VII, Number 1 & Number II 1998

REVAMPING PUBLIC UTILITIES IN THE POWER SECTOR : A QUEST FOR TOTAL QUALITY MANAGEMENT

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INTRODUCTION

The power sector in Bangladesh has a critical role in not only promoting economic growth but also raising the quality of life of both rural and urban population. The level of electrification in Bangladesh is still low with only 16 per cent of the population having access to electricity. Per capita generation is only 96 kilowatt per hour. These indicators are very low compared to even those in the neighbouring countries. A GDP growth rate of 7 to 8 per cent a year would require a corresponding growth in power generation of 15 to 20 per cent. But in reality it has been difficult over the last decade to achieve a power generation growth of over 7 percent a year. Consequently, the load shedding today is a way of life since the system is unable to meet the peak demands.

Power generation and supply of electricity remains a state monopoly. Three state owned utilities under the Ministry of Energy and Mineral Resources (a separate Power Division has been recently created by the Government) – Bangladesh Power Development Board (PDB), Dhaka Electric Supply Authority (DESA) and Rural Electrification Board (REB) are responsible for managing the

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electricity, its development and distribution in the country. PDB is responsible for generation and transmission of power in the country and distribution in urban areas except the area under greater Dhaka. DESA takes care of distribution of electricity in the greater Dhaka area including the metropolitan city of Dhaka and REB is responsible for distribution of electricity in rural areas.

At the time of independence in 1971-72, Bangladesh inherited a small power system with an installed capacity of 550 Megawatt. The present installed capacity has reached 3118 megawatt, although the actual generation capacity now is between 1800-2000 megawatt. This is mainly due to the fact that a number of power plants are out of operation for maintenance and rehabilitation and a few very old ones are out of commission. Power plants are predominantly gas based having a gas based capacity of 2385 megawatt while furnace oil and diesel based capacity account for 503 megawatt and hydro based capacity is 230 megawatt. The present estimated peak demand of electricity is 2200 MW but demand is growing faster than the current pace of generation. It has been estimated that on an average additional 300 MW of generation capacity is required to be added every year to meet the peak demands. Needless to say power generation projects are highly capital intensive and require huge investments. The investment requirements for power sector development during 1998-2002 has been estimated to be Taka 1800 crores (equivalent to US$ 400 million). Since resource constraints would not allow the Government to provide such a huge amount of funds required for the power sectors and adequate resources were also not forthcoming from bilateral and multilateral donors, the power sector was recently opened up to private investment. The Private Sector Power Generation Policy approved by the Government in October, 1996 has attracted an encouraging response from foreign private investors and a number of power plants are now being constructed in the private sector. This has given a new dimension to the power sector development.

High system loss still remains a major concern for the power sector. The combined system loss of the three utilities is over 32% now. This was 41.3 percent in 1992. As such, no perceptible improvement has taken place during the last two years. A high proportion of the over all loss remains on account of power theft or pilferage which is euphemistically called non-technical loss. Poor management, undisciplined employees, corruption at both utility and consumer levels, lack of firm political support are responsible for high non-technical losses in the power sector. Reduction of non-technical losses require sound management with some investment on supportive hardware like meters and test instruments.

Since the Government owns, operates and regulates the power sector utilities, this has sometimes resulted in overlapping of functions and unclear responsibilities with lack of accountability and inefficiencies in the operational performance and service standards of the power utilities particularly PDB and DESA. The Government has, however, initiated a comprehensive reform programme in the power sector with the objective of increasing the operating efficiency of the power utilities and improving the reliability and quality of the existing power supply system. The Government has moved positively to create an enabling environment to attract private investment in the power sector. It is hoped that the reform measures when fully implemented, will significantly improve the operations of the power sector utilities.

This paper will mainly focus on an overview of the present state of the power sector in Bangladesh and then an effort will be made to examine the problems and constraints affecting the performance of the two major power utilities in Bangladesh viz. Bangladesh Power Development Board (BPDB) and Dhaka Electric Supply Authority (DESA) and strategies for their performance improvement in the context of Total Quality Management approach.

Power Development Board (PDB)

Power Development Board (PDB) has grown very big over the years but its operational efficiency and financial health has not improved. PDB's operations are characterised by lack of management and commercial independence, utter disregard for accountability, unclear management responsibilities, endemic inefficiency and lack of transparency. The standard and quality of service provided by PDB is very poor and far below acceptable levels. High system loss (about 22 percent) and pending receivable bills (about Taka 1600 crore) have all along been its 'Achilles Heel'. Moreover, PDB has earned the dubious distinction of being the largest loss -making public enterprise in Bangladesh to day and continues to be a heavy financial burden on the Government. Load shedding and frequent power interruptions due to poor maintenance of the network are also a regular phenomenon. Coercive practices of the trade unions with affiliation and allegiance to different political parties makes the environment even more difficult for the organization.

The structure of the Board itself is not conducive to efficiency. It is over centralized, non-transparent and largely unaccountable with enough leverage for arbitrary actions. Moreover, reluctance of the Board to delegate reasonable administrative and financial authority to the zonal and district offices including the Project Directors is a major hindrance to efficiency improvement. Staff motivation and commitment to deliver is virtually non-existent and corruption has reached endemic proportions.

Dhaka Electric Supply Authority (DESA)

DESA was created out of PDB in 1991 for performance improvements, but desired results have not been achieved because it was created without addressing fundamental institutional deficiencies. The management structure of DESA is similar to that of PDB and lacks accountability and transparency. Absence of performance based

accountability does not allow the management to hold an employee responsible for his failure or lapses. The work force is undisciplined, lacks motivation, unconcerned about their job responsibilities and unresponsive to the needs of the consumers.

DESA's Board like PDB's is an internal one and enjoys a certain level of administrative and financial authority. While it is true that it does not enjoy full management independence, experience shows that whatever authority it enjoys, is not always exercised transparently and in the best interest of the organization. Financial management is very poor, procurement process is extraordinarily lengthy, cumbersome and non-transparent (True for PDB also). Government oversight is very weak and ineffective and fundamental problems are structural nature.

Total Quality Management : Relevance and Applicability to Power Sector Utilities

Total Quality Management (TQM) is, in essence, the committed involvement of both management and employees to conduct business by consistently meeting customer expectations. It is a management approach for an organization focused on quality, based on participation of all employees, customer satisfaction and commitment for continuous improvement. Continuous improvement is the hall mark of TQM. It presupposes team work and constructive working relationships that recognize people as the enterprise's greatest asset. TQM demands organization wide total involvement. Under the TQM approach, all the three letters of the acronym carries equal weight. TQM strongly emphasizes the need to focus on every single aspect of the business from the point of view of adding new value. Nothing is peripheral and everything and every one adds value. It is a necessary pre-requisite for achieving competitiveness.

The concept of TQM had actually originated in the manufacturing context and was essentially product based -- advocating zero defects.

But later, the core concept and some of the TQM tools and techniques came to be widely used by commercial and public organizations with a great degree of success.

For public utilities in the power sector, the TQM approach essentially has to do with quality of service as distinguished from quality of products. TQM works best in a competitive environment. It may be argued that the monopolistic nature of the power sector entities will not render TQM workable and therefore, TQM applicability will not be relevant in the absence of a competitive market. The argument is untenable because even in the absence of a competitive market, nothing stops a power utility from enhancing the quality of its service by eliminating waste, reducing cost and improving management of the processes through which services are delivered. Some core TQM concepts, tools and applications which are generic to all occupational settings can be applied to all government owned power sector agencies with considerable advantage.

The key conceptual elements of the TQM approach which are relevant and can be effectively applied to the state owned utilities in the power sector of Bangladesh are :

a) Attitude and Motivation : Quality is a behavioural question and the major challenge for a power utility is to change attitude and then initiate and cultivate organization wide motivation, Motivation is one of the basic cornerstones of TQM. An unmotivated person does not fit into the TQM approach.

b) Participatory Management and Communication: Participative management is indispensable. TQM involves everyone fully. It requires removal of communication barriers between management and workforce.

c) Goals and Objectives : Goals and objectives should be clearly defined. There should not be any ambiguity about the mission.

d) Continuous Improvement : TQM is an evolving competitive strategy. It looks for continuous improvement in the areas of cost, reliability, innovation, efficiency and business effectiveness.

e) Strong Customer Focus and Value for Money : Customer satisfaction is the single most important principle of TQM approach. Customers must have a feeling that they are receiving value for money.

f) Leadership and Team Work : Leadership and team work are fundamental to the successful implementation of TQM techniques. TQM requires both leadership and management skills.

g) Reliability : Reliability and dependability of service is of crucial importance. Performance should be consistent.

h) Responsiveness : Willingness of employees to provide services is a fundamental pre-requisite. This will come with motivation.

i) Credibility : Trustworthiness and reputation are important attributes for customers.

Strategies for Performance Improvement of the State Owned Power Sector Utilities in the Context of Total Quality Management Approach

With liberalization of the economy and increased involvement of the private sector in the near future not only in generation but also in transmission and distribution, the two government own power sector utilities will have to perform efficiently and cost effective way to survive in the competitive market. Against this scenario, Total Quality Management practices holds out a good prospect for revitalizing the two power sector utilities.

The concept of TQM can be used by PDB and DESA in achieving significant performance improvement. However, the foremost pre-requisite for cultivating TQM methods and principles is the creation of an enabling environment for the organizational management. These include but not limited to corporatisation, introduction of commercial characteristics, decentralization of decision making and maintenance of an arms length relationship between the agencies and the government. Once the right conditions are in place, it would be easier for the management of these agencies to use and build up on the TQM culture.

The utilities i.e. DESA and PDB should first start with motivation and leadership - two cardinal principles of TQM. An unmotivated person cannot perform. TQM gives a great deal of importance to leadership as it provides both mission and vision. It is not enough to do things right, it is important to do the right things all the time. Leaders are the people who do the right thing while managers do things right. Communication barriers among the personnel in the agencies constitute a major handicap in developing a dynamic work culture and team spirit. As such elimination of communication barriers and development of team work should be a major corporate goal.

TQM Philosophy recognizes people or customers as the greatest asset of enterprises. Making efforts to understand the customer's or user's needs, learning their specific requirements, providing individualized attention should be an important strategy for both PDB and DESA. They must establish their credibility and legitimacy as service providers to ensure that the users receive real value for the money they spend to get service. PDB and DESA are also widely known for their extreme apathy and unresponsiveness to the users. As service unreliability is commonplace, responsiveness to the customers and reliability of promised service, with concern for quality must be built in to the strategy of these power utilities. Quality concern must occupy a central position in the thinking of their management. They

must remember that unlike quality of a product which is built in to it at the factory before delivery, the quality of service occurs during the process of delivery. Understanding this distinction will help these two agencies achieve considerable efficiency improvements. Total Quality Management approach has a number of important lessons for both PDB and DESA. Let us take a detailed look at PDB and see what needs to be done in order to use TQM approach.

Power Development Board

The present inefficiency and mismanagement of Power Development Board (PDB) cannot be remedied without major structural reforms. The following reform measures, can set the stage for significant management and operational improvement of PDB.

a) PDB would be functionally unbounded with generation, transmission and distribution being operated by separate entities - one handling generation, another operating the transmission system and a separate company or companies responsible for distribution. The current vertically integrated structure of PDB makes it difficult to identify specific **areas** of poor performance. Therefore, the vertical separation of generation, transmission and distribution which has been done in a number of countries in Asia and Latin America, will make costs in each segment transparent and will lead to improvements in operational efficiency.

b) **As** a first step, transmission segment will have to be taken out of PDB's existing functions leaving only generation and distribution with PDB for the time being. **A** separate transmission company called Power Grid Company of Bangladesh (PGCB) which is at present wholly owned by the Government has already been created. This Company will take over the entire nationwide high voltage transmission lines from PDB within an agreed time frame.

c) PDB's generation functions are also planned to be corporatised with the power stations functioning as individual profit centres so that costs can be isolated and their performance can be monitored and rewarded depending on satisfactory performance.

d) Since private sector participation in power generation has been allowed, PDB's generating stations operating as corporatised entities will have an opportunity to engage in healthy competition with the privately owned power generating plants. Corporatisation alone will not, however, achieve this unless the Companies are operated on strictly commercial considerations with full operational independence like a private company.

Distribution is the most problematic and tricky area in the whole power system. Separate distribution Companies in PDB's four zones should be created as soon as the situation permits. Once the generation and distribution companies are corporatised, their shares should be offered for sale to the public in phases and up to 49% of the shares could be sold. The advantage of this, from the point of view of the Government, is that while the Government would retain control of the Companies, private capital is mobilized to support the company's development objectives. However, in order to attract private capital in this manner, it is essential that these companies are managed properly and earn a reasonable return on their investment. The reform programme which is under review by the Government also calls for actions along these lines.

Another important issue to remember in the reform process is the need to create an appropriate and transparent independent regulatory system for the power sector utilities. With the present undifferentiated role of the Government as owner, operator and regulator, there is actually little regulation with respect to sector entities' performance standards and service codes. An independent

regulatory body is, therefore, necessary to see that consumers are protected from possible abuse of monopoly power of the utilities and are guaranteed of adequate and reliable supply of electricity at a reasonable cost. It also ensures operational safety, promote economic efficiency and protects the interests of other stakeholders including the industry/utilities and the Government. It also plays an important role in supporting investment by protecting investors from possible arbitrary action by Government. The Government has already decided to create an independent Regulatory Commission for the power sector. It will be the first of its kind in Bangladesh, although Regulatory Bodies in power, telecommunications, gas and water sectors are in operation in many countries for quite some time. The tasks of the proposed Regulatory Commission would include framing of rules and codes of practice for operation and maintenance, establishment of performance standards and uniform system of accounts, approval of construction standards for safe installation, approval of tariffs, enforcement, issuing service franchises to distribution Companies – both public and private etc. Necessary legislation for creation of the Regulatory Commission is being drafted. It is being designed in a manner that allows it to remain independent of Government control. The Regulatory Commission, when it starts functioning, will greatly enhance the transparency, accountability and operational efficiency of the public utilities in the power sector.

Even if implementation of reform measures with respect to distribution is delayed, the Government must see to it that PDB does not remain happy with status quo. It must change and it should not be 'business as usual'. Things are expected to change for the better once the proposed. Regulatory Commission consolidates its operation. The Commission, among other things, must ensure quality of customer service. It should make PDB establish and publish a set of realistic customer service standards which must be met. There can be two sets of standards as is prevalent in the U.K. The British model has been adopted by a number of countries with some minor modifications. One

is called "guaranteed standards" and the other is "overall standards" In case of failure to meet any declared service included in the list of "guaranteed standards", a certain amount of money as refund should be made to the customer to compensate for the service not provided. The utility must strive to meet the services listed in the "overall standards" but would not be required to pay any monetary compensation for failure to provide any of the services. All the standards should be periodically reviewed by the Regulator.

The PDB management should be given managerial autonomy but, the management should be held accountable for efficient operations through performance contract. There should be clearly defined performance targets. Rewards/incentives for good work and achievement of target and punishment for failure should be strictly implemented. A system of hire and fire would actually work wonders in the public utilities including PDB and DESA if the Government and the political leadership has the commitment to do it.

The above reform measures are in line with the Total Quality Management approach. Once the above reforms are implemented, application of Total Quality Management practices will be easier and quality and reliability of service will also improve.

Dhaka Electric Supply Authority

Since the problem of DESA is basically structural, the solution must address the structure first. Power sector reforms would require DESA to be a corporatised entity run strictly as a commercial organization. Currently, the performance is not up to the mark.

Like PDB, DESA has no customer orientation. In fact, the customers are quite often harassed and held 'hostages' by its failure and non-performance. With very high system loss and account receivable, the organization continues to be a heavy drain on the Government's scarce resources. Corporatisation is important because

that will allow DESA to have managerial autonomy and will contribute to its operational efficiency.

A beginning has been made in this regard recently. A Company called Dhaka Electric Supply Company (DESCO) operating in a particular area of Dhaka City has been created under the Companies Act. The Company is initially owned wholly by the Government but has a fully autonomous Board of Directors with virtually no administrative control of the government. The Company has initially taken over the operational responsibility of Mirpur Division of DESA on an experimental basis. Eventually, its operational area is expected to be expanded gradually to include the whole DESA area. The Company's compensation package is attractive and its has given emphasis on qualitative aspect of staff recruitment.

Like PDB, DESA should establish customer service standards to be published and widely circulated representing a contract with those it serves. The Regulatory Commission, when operational, will have to enforce it. DESA should have a regular customer survey to ascertain the kind and quality of services the customers receive and want.

DESA should pay urgent attention to its complaints handling functions and should open appropriately positioned counter services. Courtesy, responsiveness and efficiency in complaint handling and other counter services will project a better image of the organization. Particular attention should be given to proper selection of counter staff, recognition/incentive to high performing staff, organizational motto/slogan and directional signs and sign boards.

In the short term, DESA should take measures to contract out some of its commercial functions like meter reading, billing, bill distribution and bill collection in selected parts of its operational area. Strong political support is crucial to the success of this venture. DESA should ensure performance based accountability in every sphere of its operations. It should also strictly implement the incentive/punishment

scheme (which now exists in paper only), fixing targets for improvement of the system loss, account receivable and other area of operation.

Conclusion

The Government, of course, has an important role to play in creating awareness about the 'quality' issue in public service. Once the reformed structure is in place, PDB and DESA would immensely benefit by adopting a quality management programme built on the TQM concept. The Government, on its part, must give utmost importance to quality management in the power sector because it has been seen that most successful service delivery programmes in Bangladesh with a high degree of customer satisfaction centres on quality consciousness having sound monitoring system. Finally, strong political commitment will be crucial to the success of any government interventions for qualitative improvements in the power sector.

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