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West Bengal Power Sector Reforms: Lessons Learnt and Unfinished Agenda

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EXECUTIVE SUMMARY

The smooth restructuring of the power sector in West Bengal, characterized by a vibrant civil society, unionized and influential public sector workforce, political sensitivity towards Central Government's reform program is a significant achievement and holds out important lessons for future. With improved and restructured power sector, State Government is currently supporting the newly formed utilities in building capacity to equip them to achieve the restructuring objectives. State government is implementing restructuring measures, including capacity building, in a phased manner over a period of three years. The West Bengal experience of reforms in power sector provides key learning on the sequencing, design and implementation of reforms program. Given difficult socio-political conditions in the state, documentation of state power sector reform process as a Policy Note was envisaged to disseminate information to different stakeholders (nationally & internationally).

Around the turn of century, India was going through a phase of economic liberalization and Left Government in West Bengal was opposed to policies adopted by the Central Government. The State Government had limited financial resources to improve physical infrastructures for social sectors like health and education. The State Government also realized that loss making PSEs were intense strain on State Budget. The reforms program undertaken by the Central Government for Central Public Sector Undertakings (CPSUs) was largely through disinvestment. West Bengal Government was staunchly against disinvestment in profit making PSUs and had a desire to demonstrate higher efficiency and services delivery under Government ownership.

In this context, Public Sector Enterprises (PSE) reforms were initiated during 2001-2005 by the Public Enterprises Department (PED) with financial support from the Department for International Development (DfID). The overall strategy for PSE restructuring included a measured beginning and creation of a justifiable, transparent, accountable and representative system of restructuring the enterprises. The employees and workers were extensively consulted during restructuring process and a strong Social Safety Net Program was designed and implemented to ensure security and economic participation of displaced workers. The benefit from PSE reforms though small in magnitude, showed a very strong assertion by the government that it is committed to development, reforms and improved financial management for improving the overall development performance of the state, without, ignoring the interests of the labour. The West Bengal Government extended the PSE Reforms framework to State-owned Power Sector entities in 2005.

The Government of West Bengal (GoWB) viewed the restructuring of the power sector mandated by the 2003 Act, as an opportunity to bring in operational efficiency and governance improvements across the three state-owned power utilities. However, even before contemplating structural reforms, the State Government took measures such as bringing professional management (through induction of bureaucrats to replace technocrats) and providing longer tenure, amendment to legislation to provide teeth to anti-theft control measures and greater stakeholder acceptability for reforms by committing to improvement strictly within Government ownership.

The utility management also took a slew of measures to improve the financial and operational performance. The improved financial viability helped in not looking at “price increase” as an option adopted by many other reform states. The absence of “price” and “privatization” as critical issues help in building wider political consensus and acceptability for reforms.

West Bengal had an advantage of learning from the reform and restructuring experience in other 11 states which preceded it and adopted measures to better guide the process and try to overcome the issues which led to shortfalls in achieving certain reforms and restructuring objectives in these states. One of the major fall-outs of the above reforms program was the capacity to sustain internal ownership. This indifference in turn was accentuated by lack of any visible change or initiative to change demonstrated by the utilities. Lower than expected improvement in efficiency and service delivery after the restructuring and the initial enthusiasm for reforms started waning in other states. Unlike other states, West Bengal had internal drivers for reforms and the focus of reforms was largely on improving governance and service delivery mechanism. Therefore, the reforms have relatively larger ownership and acceptance amongst the internal stakeholders in the utilities. West Bengal also followed an approach of picking up battles judiciously and deferred decision on few critical issues like multiple distribution companies for future keeping in mind overall success and acceptability of the program.

The learning's from the other states helped State Government in adopting a phased approach with extensive stakeholder consultations to restructuring of state power sector entities. The extensive stakeholder consultations and patient hearing of key staff issues such as staff terminal benefits, transfer of staff post restructuring helped in building trust and acceptability for reforms and restructuring. The phased implementation of restructuring gave the state government and top management of the utilities enough time to implement the corporate governance and internal reform initiatives. Another key learning utilized by West Bengal is preparing a conservative business plan with nominal tariff increase, conservative assumptions on revenue from trading and subsidizing consumers. The State Government also showed commitment by finalizing the financial restructuring plan with write-off of around USD 2,500 million of Government loans from the books of the utilities.

The state government and the power department in West Bengal realized the importance of improving corporate governance in the state-owned power while designing the restructuring process. To formalize and ensure corporate governance improvements, provisions for induction of independent directors were incorporated in the Articles of Association of the two restructured entities – West Bengal State Electricity Distribution Company Ltd. (WBSEDCL) and West Bengal State Electricity Transmission Company Ltd. (WBSETCL). The provisions for appointment of Directors, their tenure and remuneration, powers, duties, rights and liabilities, and process of appointment were also incorporated in the Article of Association. A performance linked group incentive scheme was introduced in both WBSEDCL and WBSETCL immediately after restructuring. The introduction of the performance linked incentive scheme helped in pushing certain unpopular change measures like abolition of non-functional offices, rationalization of manpower across offices and outsourcing of operation of rural substations. The objective of building performance based culture in the organization was partially achieved through the success of the above scheme.

Even though West Bengal had its share of success it still has significant challenges in sustaining the change and creating wider pool of change agents. Bringing customer service orientation and access to electricity for all are key issues facing the distribution company in West Bengal. This is being attempted through a DfID supported Capacity Building Technical Assistance for both the restructured entities. The State Government also has an unfinished agenda of initiating internal reforms and governance improvement measures in the Generation Company.

1: PREFACE

The process of reforms and restructuring in Indian Power Sector begun in the early 1990's with a few State Governments enacting state level legislations[1] to reform and restructure integrated State Electricity Boards (SEBs) prior to enactment of the Electricity Act, 2003 ("the 2003 Act"). The first state to restructure its integrated SEB under a state level legislation was Orissa in 1995. Later, Haryana, Andhra Pradesh, Rajasthan, Uttar Pradesh, Karnataka, Delhi and Madhya Pradesh followed suit. Though power is a concurrent subject in the Constitution, the first major policy thrust from Central Government came only in 1998 when it enacted the Electricity Regulatory Commission Act, 1998 to pave way for formation of Central and State Electricity Regulatory Commissions and distancing of Government from tariff determination. The most significant and wide-ranging change in legislation is recent promulgation of the 2003 Act, which superseded all the previous electricity related legislations and created a more open environment for investment and competition in the sector. The 2003 Act also required statutory restructuring of integrated SEBs and separation of trading function from transmission and system operation.

In April 2007, West Bengal became the fourth state, after Maharashtra, Assam and Gujarat, in India to restructure and corporatise its integrated SEB under the 2003 Act. Though, the 2003 Act (Part XIII) required SEBs to be reorganized within one year of the effectiveness of the 2003 Act, compliance has been slow with many states[2] having obtained special permissions from Central Government to extend the deadline specified in the 2003 Act.

The smooth restructuring of the SEB in West Bengal, characterized by a vibrant civil society, unionized and influential public sector workforce and political sensitivity towards Central Government's reform program is a significant achievement and holds out important lessons for the future. The power sector restructuring process in West Bengal, involving extensive stakeholder consultations, greater focus on corporate governance issues and phasing out of structural changes, differs significantly from the process adopted in other states.

With improved and restructured power sector, the State Government proposes to support these newly formed utilities in building their capacity to equip them to achieve the objectives of the restructuring exercise. State government plans to implement the restructuring measures, including capacity building, in a phased manner over a period of three years. Given difficult socio-political conditions in the state, documentation of the state power sector reform process as a policy note that can be used as a tool to disseminate information to different stakeholders (nationally and internationally) was envisaged.

This paper compares power sector reforms in West Bengal with other states in India and attempts to highlight the positive factors, which could be considered for future reform processes in the country. It also takes a critical look at some areas where West Bengal could have done better and also attempts to identify areas which would require greater focus in the subsequent phases to achieve the overall objectives of the reform and restructuring process.

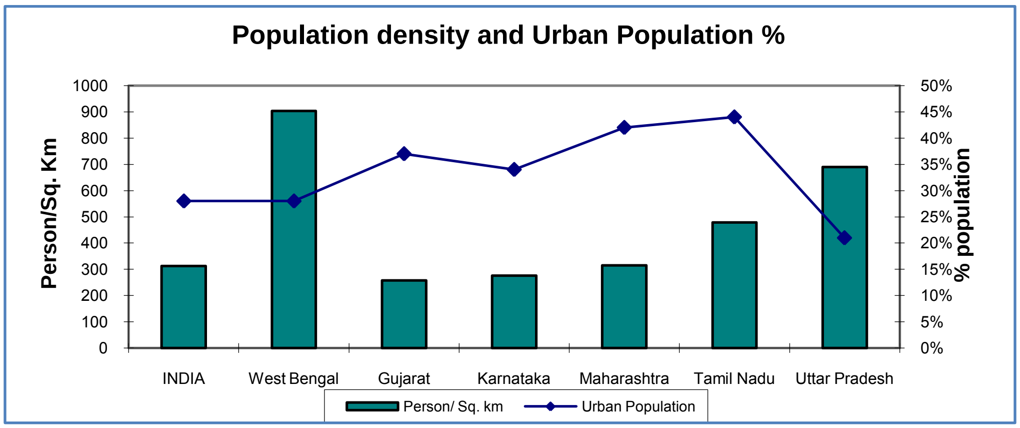
[1] Orissa, Haryana, Andhra Pradesh, Rajasthan, Uttar Pradesh, Karnataka, Delhi and Madhya Pradesh have restructured their SEBs under state level legislations.
[2] Punjab, Bihar, Jharkhand, Himachal Pradesh, Tamil Nadu and Kerala have still not restructured their integrated SEBs.

2: CONTEXT

Economic and Socio-political Scenario in West Bengal

West Bengal with a population of 82 million in 2001 Census is the fourth most populous state in the country. West Bengal accounts for about 2.7 per cent of India's area but has 7.8 per cent of country's population. The state ranks first in terms of the population density (904 per sq. km.) as per 2001 census. Only 28% of the people live in urban areas and Kolkata City accounts for the lion share of population staying in urban area. A comparison of population density and percentage of urban population for some of the large Indian states is depicted below in the chart.

Figure 1



The land reforms[3] carried out by the Left Government in the state is one of the landmark policy reform measures in the country. The most significant effect of the land reforms has clearly been the unleashing of productive forces, and led to dramatic expansion in agriculture output growth in starting late 80's and in 90's. However, the agriculture growth has started declining at the turn of the century. The following Table summarizes growth in NSDP and Agriculture during the decade of 1995-2004.

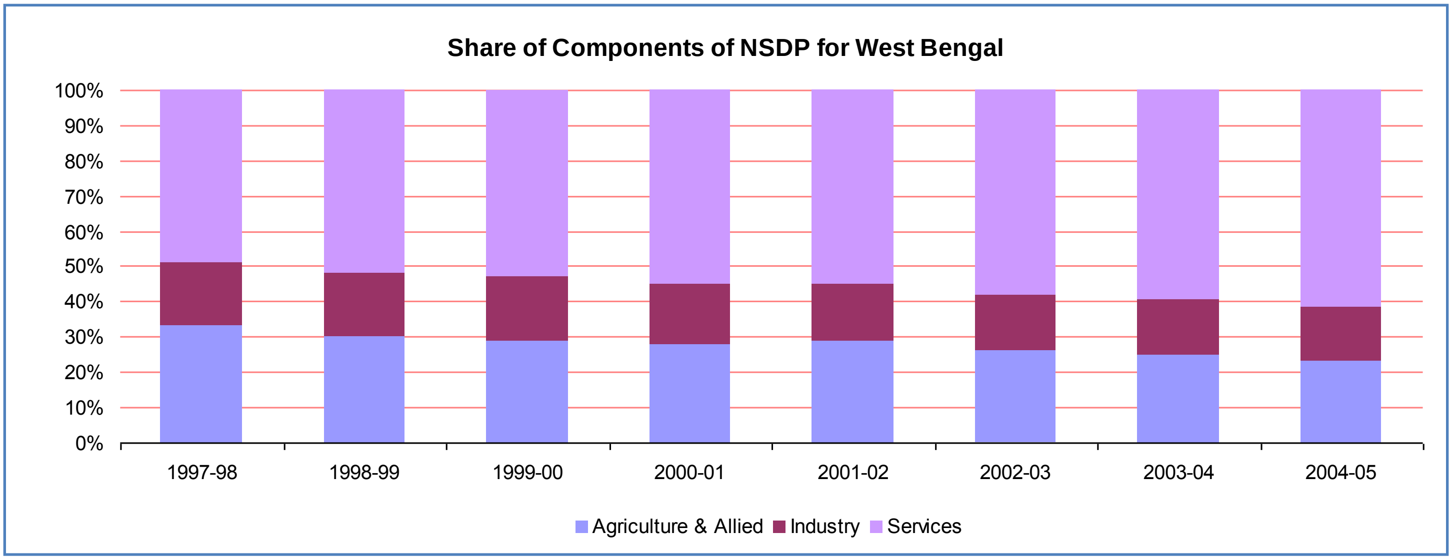
Table 1

CAGR of SDP	5 yrs	5 yrs	Decadal
	1995-1999	2000-2004	1995-2004
State Domestic Product	11.3%	6.1%	10.8%
Agriculture	13.4%	3.0%	8.3%

The share of Agriculture in the Net State Domestic Product has come down over last 5 years. During the same period, the share of Service Sector has seen noticeable growth driven by financial and banking sector activities from around 50% in 1997-98 to over 60% in 2004-05. During all this period the manufacturing sector remained stagnant and was beset with problems arising from pervasive trade unionism in the state.

[3] West Bengal Land Reforms Act 1971 and subsequent amendments paved way for equitable distribution of land in the state and abolition of tradition large landlords common in other Indian states

Figure 2



In the federal structure followed by India, the State Governments have relatively limited powers to mobilize resources and control over basis economic processes. However, the State Governments have the onus of providing basic infrastructure for improvement of human development indicators like health and education. During later part of 90's decade, larger macro-economic changes were sweeping the country brought out by the economic liberalization policies of the central government. The State Government in West Bengal was also forced to look at the productive management of the resources and one of the initiatives taken up was Public Sector Enterprises (PSE) reforms during 2001-2005. The PSE reform framework had considerable impact on the design of power sector reforms and restructuring. In following section, we briefly discuss the context, process and outcomes of the PSE reforms during 2001-2005.

Public Sector Enterprise (PSE) Reforms Framework (2001-2005)

A restructuring of State Government's loss-making Public Sector Enterprises (PSEs) engaged in manufacturing activities was designed and implemented over 2001–2005 by the Public Enterprises Department (PED) with financial support from the Department for International Development (DfID) of the Government of United Kingdom.

The following drivers were key consideration for the State Government for taking up the reforms initiatives in PSEs:

a) Loss making PSEs were intense strain on State Budget - annual budgetary commitments to PSEs equaled the overall budgetary deficit;

b) Improving the Human Development Indicators required freeing up financial resources;

c) On-going reforms program undertaken by the Central Government for Central Public Sector Undertakings (CPSUs) largely through disinvestment;

d) Desire to demonstrate higher efficiency and services delivery under Government ownership.

As the above considerations were pushing the State Government for initiating reforms there were some limiting factors trying to pull backwards. Some of these limiting factors were:

a) Status Quo Orientation and consistent opposition to Central Government policies of disinvestment by the ruling Left-front Government;

b) Pervasive Trade Unionism with the state having one of the most influential workers' unions and associations in India. The unions and associations have been vocal in their opposition against reforms;

c) Reforms was equated with privatization and associated apprehensions of job losses;

d) The management of PSEs were characterized by lack of focus on accountability, viability and customer service.

Hence, it would be worthwhile to understand the objectives and the approach adopted in PSE Reforms, as it later contributed significantly in creating political acceptance and a credible environment for restructuring of state power sector utilities.

BOX I: PSE Reforms Framework in West Bengal – Phase I

In FY2001, as no structured framework for restructuring of its PSEs existed, Government of West Bengal (GoWB) decided to initially take up the loss making PSEs under Public Enterprise Department (PED) for restructuring and evolving a framework for replication in future for remaining PSEs.

This approach also targeted at obtaining experience in the complexities of restructuring PSEs and gaining popular acceptance to the implementation of restructuring measures. Initially, it was decided to begin with a pilot project comprising 16 PSEs under PED to which, a few additions were effected through the period of its design (over 2001-2003) and during course of implementation (2003-2005).

To summarize, GoWB decided that its loss making PSEs that were becoming increasingly dependent on budgetary support, would be restructured in order to:

- Unblock the assets of PSU which were structurally unviable;
- Achieve viability under continuing ownership of government which have potential for viability without much investment, through restructuring of business and financial liabilities; and
- Achieve viability through transparent Joint Venture Transformation process in respect of PSUs requiring investment to achieve viability.

Recognizing that any type of restructuring would need the concurrence and support of the employees, the PED prepared an Early Retirement Scheme (ERS) in intensive consultation with trade union representatives at all levels, with a view to compensate workers displaced as a consequence of restructuring. In the political context of West Bengal, no such policy change or substantial restructuring in industry was possible without the involvement, and participation of the broad majority of workers.

The overall strategy for PSE restructuring in the state included:

a) A measured beginning;

b) Creation of a justifiable, transparent, accountable and representative system of restructuring the enterprises;

c) Involvement of employees and workers even before beginning of restructuring process;

d) Development of a system of independent monitoring of the public enterprises by people other than bureaucrats and politicians; and

e) Developing a strong Social Safety Net Program to ensure security and economic participation of displaced workers.

The magnitude was small, but this reform was a very strong assertion by the government that it is committed to development, reforms and improved financial management for improving the overall development performance of the state, without, ignoring the interests of the labour.

The success of first phase of PSE reforms had significant contribution to Power Sector Restructuring Program not only in terms of the approach and framework but also in terms of creating a political and social environment for better acceptance of the program.

Changed Economic and Business Scenario in the country

West Bengal embarked on its reform program at a time when three significant and inter-related factors had changed the operating scenario for the electricity industry in the country. These were the following:

a) *Capacity addition the sine qua non for the economy:* By 2005, the country had put in a couple of years of very strong economic performance with over 8% GDP growth rate over successive years since FY2004 with likely continuance of this trend over the future[4]. The provision of infrastructure and availability of power became sine qua non and the focus shifted back to adding generation capacity rapidly to bridge the increasing electricity demand-supply gap in the country.

b) *Availability of cheaper sources of finance:* High levels of liquidity prevailed in the Indian economy at the turn of the century, leading to softening of interest rates and making finance easily available for the electricity sector, despite its relatively poor financial performance over the years. With cheaper finance, higher cost loans could be refinanced and investment financing could be easily sourced, which masked the inefficiencies in operating performance for the electricity sector in many states. While providing temporary relief for the sector[5], this was somewhat detrimental for the sector as it also slackened the urgency for reforms.

c) *Liberalization of the electricity industry:* Several factors, including de-licensed generation, provision of open access and development of a trading market, provided alternative commercial avenues for investors in the industry and have over the past few years, served to alter the risk-perception of the electricity industry. The wide participation of investors in the Ultra Mega Power Projects, without any guarantee from the government and without buyout provisions in the model contracts, marks a significant shift in risk-perception of investors.

Though the above factors created a positive push for the sector, it also reduced considerably the influence of central policy makers, electricity regulators and development financial institutions on sustaining the reform measures. Meeting the statutory requirement posed by the 2003 Act was the only driver propelling the states to restructure their integrated SEBs.

Extending PSE Reforms Framework to Power Sector Utilities

Public sector utility providers (power and transport utilities) accounted for the bulk of PSU losses in the state. WBSEB had large financial deficits requiring budgetary support from GoWB. It was felt that successful restructuring of power sector utilities would therefore contribute significantly to the overall

[4] India has recorded over 8% GDP growth rate over all years from FY2004 onwards, except for a year in FY2005 when GDP growth rate dipped to 7.5% due to lower than expected growth in the Agriculture sector.

[5] Interest rates have started hardening significantly in India over the past one year with commodity price driven inflationary pressures.

objective of the PSU restructuring objectives of GoWB, viz, to free up budgetary resources for deployment in social and infrastructural development sectors to further economic growth in the State.

The key take away from PSE Reforms framework for power sector restructuring included:

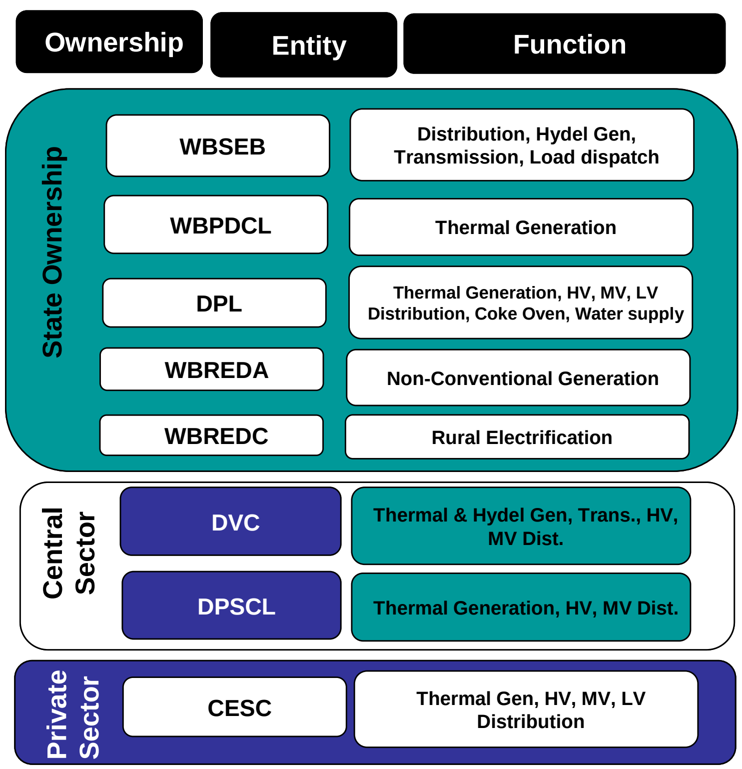
- A tested framework to create a stakeholders consensus on similar issues;
- Importance of extensive stakeholder consultation process;
- Importance of corporate governance and internal reforms in the restructuring process;
- Social safety net program for the displaced employees.

Employing about 34,000 employees in FY2005 and WBSEB revenues in excess of Rs 4,200 crore, the restructuring of the power sector in the state formed 'Phase II' of GoWB's PSE restructuring exercise.

Competitive Landscape in West Bengal Power Sector

Historically, the power sector in West Bengal has had experience with a variety of ownership and functional structures, as captured below in the adjacent chart.

Figure 3



In addition to building upon the past experience from a variety of ownership structures in power sector, the state had also a history of multiple distribution licensees in Asansol and Durgapur belt before Open

Access[6] was formally introduced under the 2003 Act. The large consumers in this belt have had an option to select from multiple distribution licensees (DPL, DVC, DPSC, and WBSEB), which had a positive impact on the operational efficiency and customer service levels of the state-owned utilities due to competitive pressures of operating in the same region.

After introduction of the 2003 Act, the state initiated the formal process of restructuring the power sector in October 2005. Following three state power sector utilities were taken up for restructuring:

- West Bengal State Electricity Board (WBSEB), engaged in generation of hydro power, transmission, and distribution of power across 6 million consumers over the State;
- West Bengal Power Development Corporation (WBPDCL), engaged in thermal power generation, with a capacity of 2,900 MW capacity[7];
- Durgapur Projects Limited (DPL) (401 MW capacity)[8], engaged in generation and distribution of power within the city of Durgapur apart from having 0.5 MT coke oven plant and 41 MGD water treatment plant.

Though, the reform and restructuring exercise was initiated for all the three utilities, the primary focus were on WBSEB, which was relatively larger in size compared to other two utilities.

The strategy adopted for Power Sector Restructuring and Reforms in West Bengal included the following:

a) Sector stability prior to structural change;

b) Learning from the other reforming states to frame the guiding principles for reforms;

c) Phased restructuring process and extensive Stakeholder consultations to internalize the need for change;

d) Patient handling of staff concerns and issues;

e) Role of WBSERC in the entire restructuring exercise; and

f) Focus on Corporate Governance and Internal Reforms.

[6] The Electricity Act provides for non-discriminatory open access (option to choose their suppliers) for all consumers above 1 MVA as per phasing to be determined by appropriate Electricity Regulatory Commission. In West Bengal, all consumers above 1 MW would have the option of Open Access from April 1, 2008.

[7] WBPDCL has added 1,270 MW generation capacity in last two years

[8] DPL added its seventh unit of generation capacity 300 MW in April 2008

3: SECTOR STABILITY PRIOR TO STRUCTURAL CHANGE

The State Government and utilities took a number of initiatives to improve the financial performance and efficiency of the State-owned Power Utilities prior to taking up the structural reforms. The focus of this initiative was largely on reducing the high distribution loss and improving the generation availability to use the surplus energy for trading.

West Bengal could build wider acceptability and political consensus for reforms in absence of two major issues of "Price Increase" and "Privatization" generally associated to such programs in other reforming states. This has been achieved through the measures taken to bring sector stability prior to structural changes.

Around the time PSE Reforms was initiated, Government made a significant change in approach towards the management of power sector entities. The changes include:

- **Induction of Bureaucrats to head WBSEB:** As a major shift from technocrats heading WBSEB, the State Government appointed bureaucrats with reasonably longer tenure to bring in better administration, commercial orientation and stability in WBSEB.
- **Amendment to Anti-theft provisions in the 1910 Act:** In July 2002, the State Government brought in amendments to provisions in the Electricity Act 1910 to provide more power to utility to deal with theft of power. Numerous raids were conducted on unauthorized hooking across the state and a Vigilance wing was created in corporate office for supporting the field units.
- **Commitment to improve within State Government ownership:** Political leadership in the Government was committed to improve the viability and performance of the utilities within Government ownership. This commitment provided the much needed comfort to labour unions and helped in broad based political support for reforms in the electricity sector.

The change in top management and longer tenure helped the bureaucrats heading the organization to bring in changes. Some of the key changes brought in and its impact include:

- **Commercial Orientation:** Keeping with State Government objective of reducing dependence on state resources, the concept of commercial orientation was introduced in WBSEB. Along with commercial orientation, the top management tried to bring in a measure of responsibility and accountability amongst senior officers.
- **Computerization of Billing:** The computerization of billing was started much earlier in late 90's and subsequently the entire consumer billing was computerized. Many other distribution utilities achieved 100% computerization of billing but what makes WBSEB achievement special is that entire computerization was done internally and not through outsourced billing agencies[9].
- **100% Feeder Metering:** The feeder metering for energy auditing and estimating distribution losses was pushed as one of the reform initiatives by Ministry of Power, Government of India. WBSEB started this initiative in 2002 and completed near 100% metering by 2005. It also outsourced the meter reading and analysis for structured reporting for decision making. The top management started utilizing feeder metering information for performance monitoring.

[9] Many other SEBs in Andhra Pradesh, Rajasthan, Orissa, Uttar Pradesh, etc. also achieved 100% computerization of billing but through outsourced billing agencies. Most of them are still to internalize the billing.

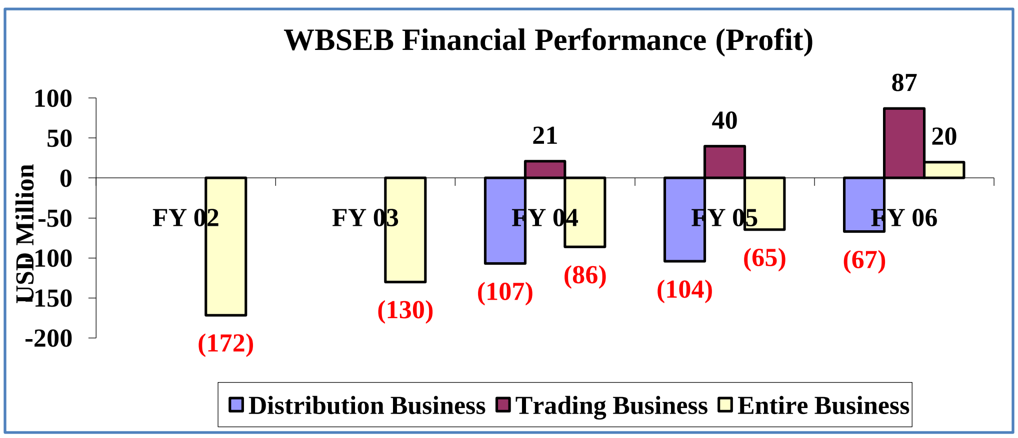
- **Joint Management Council:** The concept of Joint Management Council (JMC) meetings were started around 1999. JMC consisted of management representatives and representatives from recognized unions and associations. These meetings helped in amicable sorting out of contentious issues between management and employees without disrupting work and agitations.

All the above changes helped in improving the performance of the utility. Most of these improvements came from targeted reduction in commercial losses.

Improving Performance: All the three state-owned power sector utilities showed improvements in their operational and financial performance over 2-3 years immediately preceding the commencement of restructuring process. WBSEB had brought down Aggregate Technical & Commercial (AT&C) loss levels from 34% in FY2001 to 28% in FY2005.

Unlike large demand and supply gap looming over most of the states in the Northern and Western region, West Bengal was energy surplus and only had marginal peaking gap. In fact, WBSEB had been able to sell close to 3,000 Million Units (23% of its entire energy sales) in FY2005 and as is apparent in the graph above, the revenue earned from the sale of surplus energy contributed towards improving its financial performance. WBSEB had an overall profit[10] of USD 20 Million[11] in FY2006 with a consistently improving trend in performance of its distribution business.

Figure 4



The improvements in distribution business have been achieved through better control and monitoring activities supported by some key technological interventions by the utilities. To minimize loss from theft of electricity, the State Government took stringent anti-theft measures in 2001 through a State amendment of the statute.

One of the key differentiators in the strategy adopted by West Bengal is the use of managerial interventions to reduce losses rather than through investments. The improvements in operational efficiency have been achieved through minimal investments. Some of the key initiatives taken during this period included the following:

- 100% metering of transmission and distribution feeders up to 11 kV and above;

[10] This profit after tax amount does not include the prior period debits of $ 84 million. With prior period debits, WBSEB made a loss of $ 64 million in FY2006. For looking at performance, the prior period debits in each year have been excluded in the analysis.
[11] The exchange rate used for conversion is 1 USD = INR 40.

- Near-100% metering of consumers of around 5 million consumers;
- 100% computerization of billing with District-level computer centers;
- State amendment to provisions under anti-theft legislation;
- Strict monitoring and vigilance activities to prevent theft of electricity ;
- Concerted commercial efforts to increase trading from FY2004 onwards;
- Smaller capacity DTRs to improve HT/LT ratio;
- Balancing of phase loadings of distribution transformers;
- Use of LT ABC in theft prone areas; and
- Energy Auditing and Monitoring.

There was considerable reduction in Government Support to WBSEB prior to the initiation of restructuring:

- The financial support from GoWB internal resources to WBSEB has not been significant compared to net cash support of average USD 125 million/annum in previous years. And the external borrowings from JBIC and APDRP were routed through GoWB and appeared as GoWB loans in the books; and

- WBSEB started servicing the Electricity Duty payments to GoWB regularly and revenue subsidy support provided by GoWB for agricultural consumers to WBSEB was negligible.

With improving financial performance, the utilities rationalized consumer tariff for subsidizing consumers and also kept the retail tariff to small consumers at a reasonable level. West Bengal utilities did not have major concerns on "Price" front and this further helped in bringing political consensus to move forward with the reforms and restructuring initiatives.

Figure 5

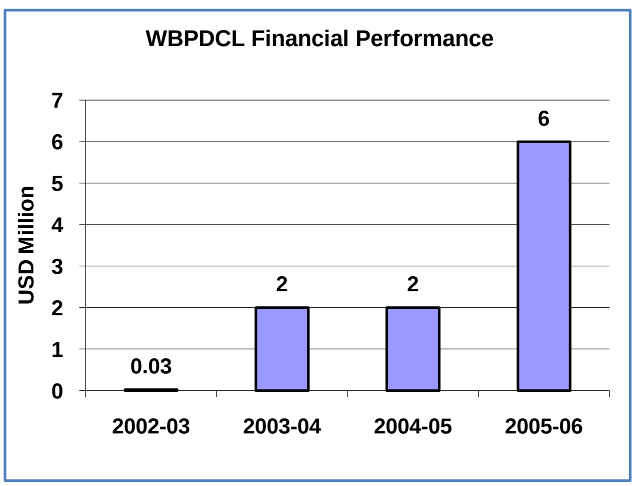
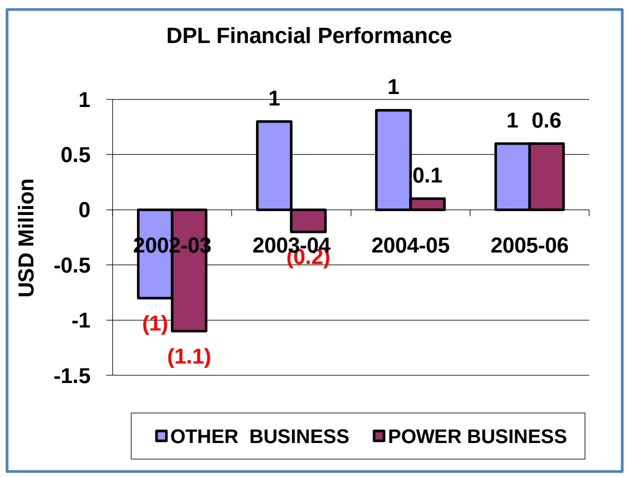


Figure 6



The other two utilities WBPDCL and DPL also showed marginal improvements in the operational efficiency and financial performance through better management of their assets as shown in the graph below.

The improvements in operational efficiency and financial performance demonstrated by the utilities provided the right platform to launch structural changes and organizational reforms. These improvements endorsed the political belief that performance can be improved within government ownership and helped in securing greater autonomy for utilities required to bring in the organizational reforms.

4: LEARNING FROM OTHER STATES

West Bengal had an advantage of learning from the reform and restructuring experience in other 11 states[12] which preceded it and adopted measures to better guide the process and try to overcome the issues which led to shortfalls in achieving certain reforms and restructuring objectives in these states. In the following sections, we look at some of the key learning's from other states and the measures adopted in West Bengal while designing an effective reform and restructuring program.

Internal Reform Drivers and Organizational Reform

A deeper analysis of the history of reform programs initiated prior to notification of the 2003 Act throws up interesting insights. In early and mid 90's, most of the states which initiated reforms during pre-Electricity Act era were cash strapped and were badly in need for financial resources to improve the power sector infrastructure. The credit rating and debt-worthiness of the SEBs was very low with large scale default on both debt and power purchases. In such an environment, international funding institutions like the World Bank and DfID came to rescue of the state governments and provided much needed financial support with a condition that the state should initiate reforms in the power sector. The main objectives of reforms program were to attain financial viability, to bring in investments and to reduce the burden on public exchequer.

The business plan[13] developed for the restructured entities were aligned to these objectives and failed in many cases due to un-anticipated eventualities like natural disasters (drought, super-cyclone), industrial recession, etc. The initial experience of Orissa, where the State Government has completely dissociated from the sector after reforms and restructuring, was an extreme case. The other states learnt from Orissa's experience, took a more pragmatic decision and provided their support to sector during the turnaround transition period. These aspects were also reflected in the business plan which is discussed in detail in subsequent sections.

One of the major fall-outs of the above reforms program was the capacity to sustain internal ownership. This indifference in turn was accentuated by lack of any visible change or initiative to change demonstrated by the utilities. A vast majority of workforce in the utilities was untouched by the structural changes brought in as part of the reforms and restructuring process. This led to lower than expected improvement in efficiency and service delivery after the restructuring and the initial enthusiasm for reforms started waning.

Lessons for West Bengal

Enactment of the 2003 Act resulted in a conducive external environment with a more open power market and confidence in power market was established after the one-time securitization[14] of SEB dues undertaken in late 1990s. Both the above developments worked in favor of the West Bengal power sector.

[12] These are Orissa, Andhra Pradesh, Rajasthan, Uttar Pradesh, Haryana, Karnataka, Madhya Pradesh, Gujarat, Maharashtra, Assam and Delhi.

[13] The learning from business plans in other states has been covered in detail in subsequent section.

[14] A one-time securitization of power purchase dues of SEBs to Central Power Sector Units (mainly NTPC and NHPC) was carried out in 2003 through a tripartite agreement involving Central Government, RBI and State Government. It put in place for a mechanism wherein a provision was kept to directly deduct the power purchase dues from the State Plan allocation in case of default.

The improvement in inter-regional transmission connectivity and development of the trading market provided West Bengal an opportunity to leverage its surplus energy by exporting to power deficit states. The trading surpluses helped in improving the financial viability. Relatively easy availability of financial resources at affordable financing cost also provided confidence to the state power utilities to take up large scale investment. An ambitious generation capacity addition program was pursued with investment of over USD 2,500 million to add about 2,500 MW generation capacity in tenth[15] five year plan (2002-2007) by WBPDCL and DPL.

In parallel, the Government of West Bengal was implementing the PSE Reforms program to improve performance of its state PSEs, which was a success and encouraged the state to extend it to state power sector utilities, the largest recipients of the state support.

The improving operational and financial performance along with favourable external factors helped in creating an environment for reforms and restructuring. Unlike other states, West Bengal had internal drivers for reforms and the focus of reforms was largely on improving governance and service delivery mechanism. Therefore, the reforms have relatively larger ownership and acceptance amongst the internal stakeholders in the utilities.

The GoWB also viewed the restructuring of the sector mandated by the 2003 Act, as an opportunity to bring in operational efficiency and governance improvements across the three state-owned power utilities.

One size does not fit all

In most reforming states in India, significant focus of restructuring has rightly been on the ailing distribution (and retail supply[16]) segment of the business. For immediate solutions to improve efficiency and viability of the sector, the State Governments focused on creating smaller and manageable distribution companies as a part of their SEB restructuring process. Multiple companies were expected to induce benchmark competition amongst each other and help bring in greater managerial focus in distribution circles to improve efficiencies. The other objective of creating multiple distribution companies was to explore the possibility of private sector participation as a means of effecting fundamental organizational and operational changes in the distribution segment.

Table 2

State	Restructuring Phases	
	Phase I	Phase II
Orissa	1995 – SEB unbundled into GRIDCO (Single Transmission and Distribution Utility) and OHPC (Hydro generation utility)	1999 - 4 distribution undertakings formed out of GRIDCO and privatised in 1999. 2005 -Transmission business of GRIDCO was carved out as OPTCL in conformance with the 2003 Act.
Haryana	1998- HSEB unbundled into HPGCL (Generation Company) and HVPN (Transmission Company)	1999: Two Distribution Companies UHBVN and DHBVN as subsidiaries of HVPN
Andhra Pradesh	1999 -APSEB unbundled into AP Genco and AP Transco	2000- Central, Eastern, Northern and Southern Power Distribution Companies separated formed

15 The commissioning of the projects by WBPDCL, DPL and WBSEDCL eventually got delayed due to various reasons and expected to become operational in 2008.
16 A distribution licensee in India, under the 2003 Act, is responsible for developing and maintaining an efficient, coordinated and economical distribution system for supply of electricity in its licensed area of supply.

State	Restructuring Phases	
	Phase I	Phase II
		out of AP Transco
Karnataka	1999 –Generation Company (VVNL) and Transmission and Distribution company (KPTCL) was formed after restructuring of KEB	2002-KPTCL remained a transmission and bulk supply entity while the Distribution business was restructured into Bangalore, Mangalore, Gulbarga and Hubli Distribution Companies
Rajasthan	2000 – RSEB unbundled into Rajasthan Vidyut Utpadan Nigam (Generation Co.), Rajasthan Vidyut Prasaran Nigam (Transmission Co.) and three Distribution Companies (Jaipur, Ajmer and Jodhpur Discoms)	
Uttar Pradesh[17]	2000- One thermal generating company (UPRVUNL), one hydel generating company called (UPJVNL), one transmission and distribution company (UPPCL) At a later date in 2000, Kanpur Electricity Supply Company (KESCO) was formed by carving out distribution area of Kanpur town	2003-UPPCL became the Transmission and bulk supply entity while distribution business was restructured into four Discoms namely, Purvanchal, Paschimanchal, Madhyanchal and Dakshinanchal Vidyut Vitran Nigams. UPPCL is acting as the Holding Company for Discoms
Delhi	2002- DVB restructured into one Holding Company, one Genco, one Transco, and three privatised Discoms (NDPL, BYPL and BRPL)	
Assam	2003- ASEB into One GenCo, One Transco, three Discoms and ASEB (TradeCo)	
Madhya Pradesh	2005 - MPSEB remained an entity for bulk supply, MPTransco as the Transmission entity, MP GenCo as the generation company and three Discoms namely Paschim, Madhya and Purva	2006 – the residual functions and rights related to bulk supply vested in MPSEB was vested to MP Power Trading Company Limited (TRADECO).
Gujarat	2005- GEB was restructured into 7 companies one GenCo, TransCo, four Discoms and a Holding Company (GUVNL).	
Maharashtra	2005 – One GenCo, TransCo, one Discom which was also the TradeCo and one holding Company	

As evident from the above table, more states in recent times have opted for a single-phase reform to form multiple successor utilities. Considerable time and energy has thus been expended on developing the ‘right’ industry structure, within the several political, administrative and capacity-related constraints confronting the decision-makers. In many states wide disparities between the successor distribution companies led to complex differential bulk supply tariff regimes, etc., which became increasingly difficult to administer over a period.

It is also evident that the creation of multiple distribution companies has not yielded the desired results of bringing in greater managerial focus in distribution in most of the states due to limited pool of experienced managerial resources in the public sector and State Governments struggled to find effective top managerial resources to lead these companies. Further, without adequate internal reforms and corporate governance in the distribution companies, the means of achieving the intended benefits have been largely missing.

[17] The state of Uttar Pradesh was later reorganized to form Uttaranchal (now called Uttarakhand). It led to further reorganization and separation of power sector companies for the state of Uttaranchal.

In West Bengal, the unions and associations also had an apprehension that formation of multiple companies would be a prelude to their eventual privatization (as was envisaged in number of other reforming states) and were vehemently opposed to the idea of creating of multiple companies.

Lessons for West Bengal

GoWB learnt from experiences of other states and hence, the power sector reforms program in the state is less obsessed with restructuring and focused more on reforming the operations of the utilities. West Bengal's approach to industry restructuring is summarized in the following table. The restructuring process for DPL and WBPDCL is at Annexure I.

Table 3

Key Issues	Provisions in the Industry Structure
• Widely varying efficiency levels across distribution circles and need for efficiency enhancement across the state	• Distribution business structure to enable focused attention on local efficiency, consumer service and quality of supply issues through dedicated management teams • Phased transition to multiple distribution companies
• Inadequate cost coverage of distribution businesses and high dependence of distribution business on Trading surpluses	• Maintain close links between trading and distribution businesses for utilization of trading surplus for distribution viability in medium term and to manage taxation, trading margin & regulatory issues
• Lack of adequate availability of skilled managerial personnel to manage independent distribution companies	• Enabling systems and processes for benchmarking of performance between various areas/regions working as SBUs rather than working as separate Companies which would require separate top management team
• Enable achievement of Rural Electrification (RE) targets to enhance access to electricity (with plan to electrify 6000 villages and add 45 lakh new consumers over next few years)	• Ensure continued availability of cross subsidies between regions in the transition period to obviate Tariff Shocks • Distribution Business structure to ensure coordinated planning and execution of Rural Electrification
• Need to enhance competitiveness through commercial pressure to improve performance and efficiencies	• Direct power procurement by distribution business to put commercial pressure to improve efficiencies
• Existing Hydro Generation capacity is only 163 MW. • PPSP (900 MW) with Capital Work-in-Progress (CWIP) of Rs. 931 Crore (FY2005) is a peaking power plant and is most efficiently utilised to meet the peak power shortages in State and elsewhere.	• Current size of the Hydro business does not mandate a separate company • PPSP needs to work in close coordination with trading function and hence has to stay structurally together
• Envisaged separation of SLDC business from Transmission into a separate government company	• Not an immediate requirement with no time frame mandated by the 2003 Act; immediate separation not preferable in view of coordination issues;
• Dependence of distribution business on trading surpluses with significant growth in trading volumes, revenues & surpluses in last few years	• Need for focused attention on Trading business in the state and requirement to keep it together with Distribution business
• Need to provide mechanisms to realize competitive advantage of energy surplus for profitable trading with trading volumes envisaged	• Separation of Trading business in a Trading Company would require complicated mechanism for transfer of Trading profits to distribution business

Key Issues	Provisions in the Industry Structure
to grow six folds in next 5 years	

Phased approach to structural changes

The learning's from the other states helped State Government in adopting a phased approach to restructuring of state power sector entities. The separation of trading business from the transmission and system operation function being one of the statutory requirements was decided to be taken up as part of first phase of restructuring of WBSEB into 2 corporate successor entities – West Bengal State Electricity Transmission Company Limited (WBSETCL) and West Bengal State Electricity Distribution Company Limited (WBSEDCL).

It was also decided that each discrete business function i.e. power transmission, system operation, distribution and retail, trading and hydel generation; would work as a separate Strategic Business Unit (SBU) within these two restructured entities. A transition period of 3 years was envisaged beyond which the institutional capability of SBUs have to be assessed and a final decision on separation of these SBUs into separate companies were to be taken.

The phased implementation of restructuring not only gave the state government and top management of the utilities enough time to implement the corporate governance and internal reform initiatives (elaborated in the following sections), but also helped in creating a greater acceptance of the reform program amongst the various employee unions and associations. This approach also provides the flexibility for mid-course corrections if needed. Experience elsewhere showed that the credibility of reforms as perceived by employees was critical for the success of reforms. The phased approach provides enough opportunity and time to demonstrate the same.

Conservative Business Plan

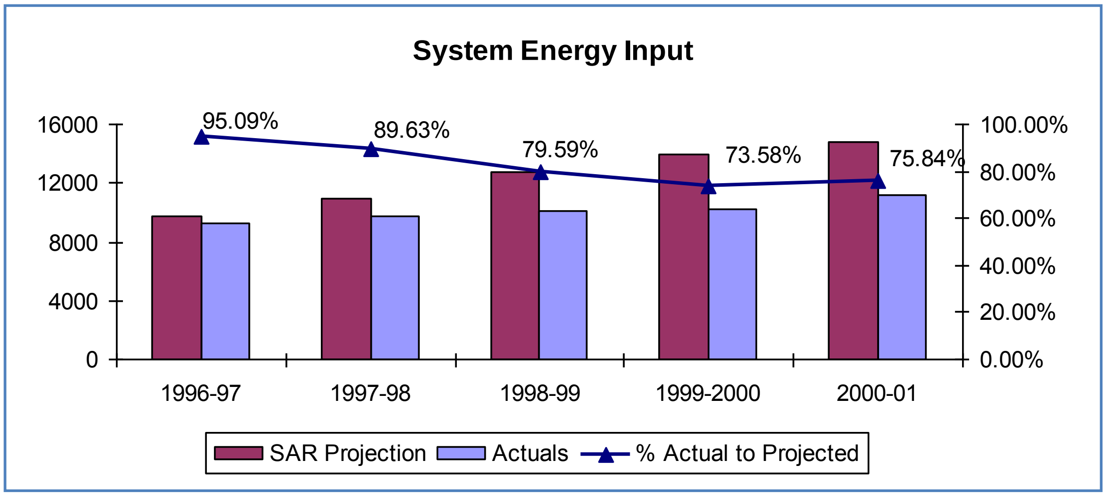
States which undertook restructuring of their power sector earlier than West Bengal framed business plans for achieving objectives of power sector reforms. But most of these business plans, with the assumption of higher than achieved year on year tariff increases given the political economy challenge, efficiency gains, and growth in subsidized sales (domestic and agriculture, which is largely unmetered also), failed to achieve the desired results. The utilities and the state governments found it difficult to meet these commitments, with consequent delay in the turnaround of the utilities from the targets fixed as part of business plan. The level of deviation from targets was too high for a few states and the State Governments have to resort to repeated bail-outs later on.

The states soon realized the problems involved in eliminating cross-subsidies and deriving a tariff that could recover the costs fully cannot be pushed in short term. Imperfect estimation of projected energy sales was also one of factors contributing in failure of business plans.

The lower than estimated energy sales to subsidizing segments were one of the reasons for large deviations from business plan in Orissa. The Kanungo Committee, set up by the Government of Orissa to examine power sector reforms in the state, had made following remarks and compared the business plan projections with actual input into the system.

Viability exercise under the reform scheme had been worked out on the basis of certain assumptions of which projection of the demand for power was a major one. Unfortunately, the demand growth that came to be realized was very different …….. The Staff Appraisal Report (SAR) assumptions thus turned out to *be highly ambitious compared with Actuals. We understand that it is so, not only in terms of totals but also in the share between EHT and HT/LT demand. The latter is even more important for viability purpose because much of the T&C loss occurs in the HT/LT segment.*

Figure 7



Source: Excerpts from Kanungo Committee Report on Orissa Power Sector Reforms

Aggressive tariff increase and high growth in energy sales assumed in the business plans, projecting early turnaround of the ailing utility business in the state, created an acceptable basis for moving forward with the restructuring process as in most cases the major objective of the state governments was to reduce the high budgetary support to these utilities. However, when such targets were not met, questions were often raised on credibility of the entire exercise.

In most of the other states, the retail tariff drastically went up either immediately before or after the reforms and restructuring without any consequent improvement in quality of supply and service. As a result, most consumers equated the reforms process with increase in retail tariff for the same or lower level of quality/ service (as there is likely to be some disruption during the transition phase).

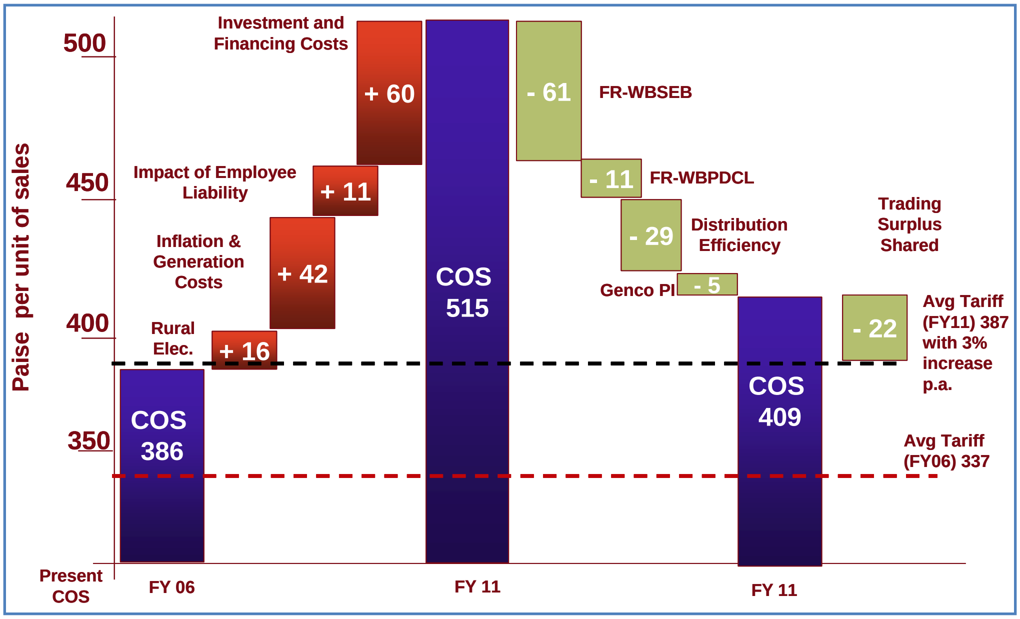
In 2000, following restructuring of Andhra Pradesh State Electricity Board (APSEB), the state government had to rollback a steep tariff increase notified by the State Electricity Regulatory Commission (SERC), through the provision of additional subsidy, after widespread protests marked the revision in tariffs. Andhra Pradesh has found it extremely difficult to effect even marginal increase in tariffs thereafter. In 2005, Government of Delhi too had to rollback tariff increases declared by the SERC, through similar provisioning of additional subsidy from the state government. Thus, GoWB and the state power utilities recognized the need for keeping the retail tariff at reasonable level immediately after the restructuring.

Lessons for West Bengal

West Bengal had the benefit of examining and learning from experience of the other states and thus tried to take adequate care in choosing its overall objectives and targets for its business plan. It is pertinent also to mention that West Bengal benefits significantly from a comparatively low agricultural consumption of electricity and had also demonstrated improvements in operational efficiencies, which leads one to project a more realistic assessment of efficiency gains and electricity sales. Learning from experience of other states, GoWB also assumed realistic increases in tariff.

Figure 8

Following were the key considerations and governing principles adopted while approaching the task of



Financial Restructuring Plan and the Business Plan in West Bengal:

(a) Avoid Tariff Shocks for Consumers;

(b) Provide clean balance sheets to restructured entities to:

- Enable competitive financing of investments;
- Enhance competitiveness through reduction in high carrying cost of past burden e.g. reduce risk of stranded costs of Hydel Generation assets;
- Obtain stakeholder commitments on initiatives required for financial viability (such as debt restructuring and financial support for investments by GoWB, efficiency improvement commitments of utilities, tariff rationalization, unfunded staff pension liabilities, etc).

The state government carried out an exercise to identify the elements of the business plan that were expected to increase the overall cost of electricity. These elements were balanced through reduction in cost achieved through measures like financial restructuring, increased efficiency, surplus from trading and nominal increase in consumer tariff. The graph indicates the "cost push" factors and measures adopted in the business plan to bring them down to manageable level for the restructured entities.

The factors like rural electrification, inflation, generation cost increase, impact of recognition of employee liabilities, and investment and financing costs were expected to increase the average cost of electricity from 386 paise/unit in FY2008 to 515 paise/unit in FY2011. After assuming, average tariff increases at nominal 3% per annum and assuming a conservative impact of efficiency improvement and trading surplus, State Government decided to write-off state government loans worth about USD 2,500 million to provide 72 paise/unit of cost reduction.

Some of the key areas where conservative assumptions were made include:

a) Trading Volume and Trading Price: In FY2006, short-term supply deficit in northern and western region of the country enabled WBSEB to sell its surplus energy at short-term prices at as high as 12.5 US Cents per kWh. However, for business plan, the average trading prices were considered to increase very conservatively at 3%-4% per annum from the average FY2006 levels of 8.0 US Cents per kWh due to trading risks.

b) The Business Plan approved by the state government, assumed sub-inflationary conservative retail tariff increases of 2%-3% per annum with significant levels of cross-subsidization from trading profits.

c) The efficiency gains in the business plan were also assumed at very conservative and realistic levels so that such commitments could be enforced by the State Government through a "performance agreement" discussed later.

    i. The distribution loss levels for WBSEDC were assumed to reduce from 31% in FY06 to 22% in FY12 (an average reduction of 1.5% per annum) and the collection efficiency to increase from 93% in FY2006 to 97% in FY2012 (an increase of 4% over 6 years).

    ii. Similarly, in generation, it was assumed that all the new plants of WBPDCL would operate at the operating norms mandated by WBERC and the older plants (Kolaghat and Bakreswar) achieving specified standards within next 5 years.

The above efficiency improvement targets in business plan have been achieved by WBSEDCL in FY2007 and FY 2008. The delay in commissioning of the additional generation capacity by WBPDCL has resulted in lower surplus energy available for trading in FY2008. However, the actual trading price been higher than the projected in Business plan has partially helped in absorbing the lower revenue due to lower trading volumes.

5: PHASED RESTRUCTURING PROCESS AND STAKEHOLDER CONSULTATIONS

Learning from PSE reforms program, the State Government designed the restructuring process divided into three phases. Extensive stakeholder consultations were designed at each phase and moving into next phase always involved a consensual agreement in the previous phase.

The restructuring assignment was conceptualized as a three phase study which included:

- A rapid diagnostic study in the first phase to identify strengths and weaknesses with their primary causes their primary causes based upon benchmarking with 'best practices' within India and comparable developing countries;

- The industry structure options in the second phase and the financial restructuring plan in line with the restructuring objectives and recommendations on governance and internal structure issues to improve operational efficiency; and

- A detailed implementation plan in the third phase for the restructuring exercise on the basis of approvals of State Government.

The phased program facilitated the process of extensive stakeholder consultations process built into the design of the restructuring. Terms of Reference of the Consultants selected for supporting the restructuring process was also divided into three phase to match the above design.

An extensive consultation process was followed during the optimal restructuring of the state-owned power utilities in West Bengal. This provided an internal transparency to the process and led to inclusive decision-making. In most other states, the reform agenda was driven from the top and involvement of utility officers, staff unions and associations was limited to resolving various employee issues either just before the restructuring or immediately after it.

The consultation process involved the following:

a) Presentation of findings and recommendations of each phase to top management; taskforce and working group members of each utilities; and unions and associations (three one-day long workshops for each utilities for each phase);

b) One to one meetings with employees representatives/unions to clarify issues and doubts on the presentations – these meetings prolonged in Phase II and Phase III of the restructuring program and extended the entire timelines of the restructuring program; and

c) Formal written comments from the unions and associations were solicited and the responses to each and every comment were made while finalizing the reports for each phase and each utility.

The stakeholder consultation process adopted had following objectives:

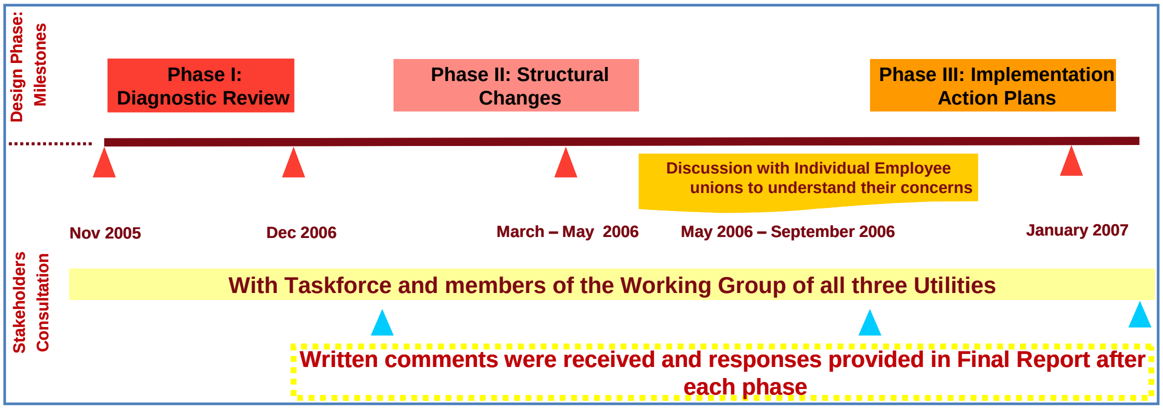
a) Build consensus on the restructuring process through identifying areas of concerns for various stakeholders and taking measures to address the concerns;

b) Act as a good communication strategy for the restructuring process for internal stakeholders and reduce confusions and uncertainties for the employees; and

c) To provide Staff Unions and Associations opportunity to give their inputs and voice any concerns on the restructuring process.

The process followed is depicted in the diagram below:

Figure 9



The following table summarizes the stakeholder consultation process adopted as part of the restructuring process:

Table 4

Stakeholders	Consultation Process
Consumers	Consumer surveys conducted across the state by the consultants to understand future growth and service related issues for various categories of consumers during the diagnostic phase of the assignment.
State Electricity Regulatory Commission (WBERC)	WBERC was involved from the beginning in the issues related to Financial Restructuring and Industry Structure. The business plan projections were shared with the Commission and concerns emerging from the discussions were considered while finalizing the recommendations
Power Restructuring Committee	Presentation on findings from first phase and recommendations of second phase was made in first week of Aug. 2006
State Government Finance Department	Finance department of GoWB was involved from the beginning on issues related to Financial Restructuring and Industry Structure.
Power Department and Utility Management	Continuous interaction with power department and utility management on all aspects in both diagnostic and second phase study
Utility Task Force (consisting of representation from the Power Department and each Utility)	Presentation on progress and interim findings of the various phases of the assignment by Consultants
Utility Level Working Groups (consisting of departmental heads drawn from various departments of the utility)	Presentation on draft findings to utility workgroups (different for 3 utilities) for all the three phases of study by the Consultants
Staff Unions & Associations	Presentation on draft findings to utility workgroups (different for 3 utilities) for all the three phases of study by the Consultants Comments were received from various departments, staff unions and associations and the final report incorporating the points from the consultation process was submitted with a section on the stakeholder comments along with response from the consultants

Experience sharing workshop

Another pioneering initiative undertaken immediately after restructuring of WBSEB was an experience sharing workshop organized by WBSEDCL in April 2007 to learn from experiences of utilities in other states. The workshop covered key issues in generation, transmission, distribution, and other focus areas like regulation, project finance, technical, financial management, etc.

It brought together a diversity of speakers from different backgrounds – Central & State Governments, utility management and consultants. It provided a platform for prominent speakers from a number of Indian public and private sector utilities to share their experiences and best practices.

The workshop was attended by selected senior level officers from WBPDCL and DPL, and more than 150 field level engineers (representatives from all the circles) from WBSEDCL and WBSETCL.

The experience in other states show that the impact and effect of the restructuring was often felt at the head quarters and the employees at middle and junior levels were untouched and often indifferent to reform and restructuring developments. While the wider stakeholder consultation process helped in dissemination of information and richer discussions, the experience sharing workshop immediately after the restructuring process helped in galvanizing the workforce and helped in demonstrating that reforms is not mere structural reforms but is stepping stone to larger internal reforms.

The experience sharing workshop also helped in getting more buy-in for the institutional capacity building program in both the restructured utilities in WBSEDCL and WBSETCL

6: PATIENT HANDLING OF STAFF ISSUES

The PSE reforms experience provided the State Government and Administration much needed insight to handling issues related to workforce displacement. However, the analysis of manpower by the Consultants indicated that due to freezing of recruitments for more than a decade, utilities did not have any significant overstaffing issues. In case of WBSEB, two issues which concerned the employees were protection of staff terminal benefits and preserving “inter se” seniority for promotions after restructuring. During restructuring process, significant time and effort was spent on addressing these concerns. The successful resolution of these issues provided bargaining room for pushing not so popular organizational reform initiatives.

Staff Terminal Benefit Issues

One of the key issues that affect the employees at the time of restructuring is security of their pension and other superannuation benefits. Invariably all the SEBs followed the process of paying out these benefits to retired employees from their revenues following a principle which is popularly called “pay as you go”. The SEBs did not provide separately for pension pay outs and also did not have any trust or fund created to manage such funds. In contrast, all corporatised entities in India are statutorily required to regularly provide an appropriate amount, which is determined through actuarial valuation carried out periodically, required for meeting the superannuation benefits of the employees. Since, in past most of the SEBs had not provided for such pay-outs, at the time of restructuring they had large unfunded liabilities. The workforce in the utilities was genuinely concerned about the security of their post-retirement benefits and wanted credible arrangements to be in place before restructuring the sector.

Various options were adopted by the reforming states in addressing this concern and funding these liabilities. The following table summarizes the extent of liability and the measures adopted by individual states.

Table 5

State	Unfunded Liabilities (Pension Fund Shortfall)	Funding Measures	Implications
Orissa	USD 87.5 million	• Recognition of liability in the books and revaluation of assets	• Large increase in consumer tariff
Rajasthan	USD 442.25 million	• Liability recognized in Transfer Scheme but not in books and gradual funding through surcharge on Bulk Supply Tariff[18]	• Marginal increase in consumer tariff (2.57 paise/unit)
Andhra Pradesh	USD 1,097 million	• Retained in APGENCO and revaluation of assets	• Increase in consumer tariff
Uttar Pradesh	USD 1,544 million	• Liability taken over by Government of Uttar Pradesh and provided from Government budget	• Heavy burden on public exchequer
Delhi	USD 215 million	• Kept with Transmission Company	• Managed through Bulk Supply Tariff

[18] The surcharge on Bulk Supply approved by RERC has later been converted as a surcharge on Transmission Tariff after the separation of Trading function from State Transmission Utility in 2004.

As on March 31, 2006, as per actuarial valuation, WBSEB had liabilities to the tune of USD 852 million towards the payment of employee benefits. After accounting for existing fund availability of USD 201 million, the unfunded portion of the liability was ascertained at USD 651 million. Initially, the state government decided to recognize this liability in the restructured balance sheet and issue a bond against the liability with a guarantee from the state government to meet the shortfalls in the fund.

However, the employees were not agreeable to this. After extensive discussions with various stakeholders, including the employee unions and associations, it was decided to recognize the liability in the opening balance sheets of the WBSEB's successor entities to safeguard employees' interest. Also, USD 201 million was transferred as initial funding from WBSEB to the trust fund. The liability was allocated between the Transmission Company and the Distribution, Trading & Hydel Company in proportion of their respective employee costs for FY2005.

For the balance unfunded liabilities of USD 450 million, the restructured entities (WBSEDCL and WBSETCL) issued 10-year bonds carrying 8.5% interest to the pension fund trust. In the transfer scheme notification, the state government provided a guarantee on these 8.5% bonds to the Staff Trust Fund. This guarantee covered any shortfall in payment of annual interest and repayment obligations by the restructured entities.

The above arrangement was arrived at after extensive discussions in January 2007 and has been crucial to building trust with employees and paved way for smooth restructuring of WBSEB.

Staff Transfer

Transfer of employees has always been a major issue while restructuring the sectors, with power sector being no exception. States that underwent power sector reforms before West Bengal adopted different approaches to handle the issue of staff transfer.

Rajasthan adopted an approach where all the employees of Rajasthan State Electricity Board (RSEB) were permanently transferred to its five restructured successor companies on "as-is where-is" basis on transfer date. Under this approach, the transferred employees would belong to the transferred organization and there were no inter-company transfer. Till date, Rajasthan is the only state that adopted this approach.

Most of the other reforming states followed an approach wherein all the employees were transferred to a principal successor entity and then deputed to other restructured entities. One of the perceived drawbacks in this arrangement from management side was inadequate administrative control over the deputed employees. In fact, the past deputation of employees of WBSEB to WBPDCL at the time of transfer of Bandel and Santaldih plants to WBPDCL in 2001 had similar issues and the state government and WBSEB management were keen to address this issue.

At the time of restructuring of WBSEB also, the process of transfer of employees to two restructured entities became a critical issue requiring multiple rounds of stakeholder discussions between WBSEB management and the Joint Management Council of the employees.

The two options were offered to the employees. First option was same as that adopted by Rajasthan under which all the employees will be permanently transferred to the restructured entities. But the employees had two critical concerns related to this approach:

- Deterioration of service conditions as their transfer/promotion prospects would be limited to the new entity only; and

- A fresh seniority list was required to be drawn up and employees had a concern that their inter-se seniority in promotions would not be maintained.

Considering the importance of smooth restructuring and minimizing disputes with the employees, the second option of deputation was finally adopted for transfer of staff in consultation with the unions. On April 1, 2007, all the employees were transferred to WBSEDCL whereas employees working in transmission sector were deputed to WBSETCL. When new successor companies became operational, the employees transferred to WBSETCL were deemed to be on deputation to the transmission company. To address the issue of "administrative control", WBSETCL was given the power to initiate disciplinary action against the deputed employees under the "Transfer Scheme". The appointing authority was considered as the Disciplinary Authority (in this case Distribution Company). However, the power to initiate disciplinary proceedings was delegated to the Transmission Company for all employees rendering services to the transmission company. These powers with the transmission company were absolute for all 'minor penalties' while for all 'major penalties' the distribution company was empowered to take decisions in consultation with the transmission company.

7: ROLE OF WBERC IN REFORMS AND RESTRUCTURING

Historically, WBSERC set unrealistic targets for efficiency improvement that utilities were unable to achieve. This led WBSERC to set tariffs on normative operating parameters. The result was an erosion of profits of the utilities. Thus, again WBERC's assumptions on high levels of operating performance measures were unachievable and if relied upon then would have led to unrealistic projections in the Business Plan.

The Business Plan therefore considered a 'regulatory reset' of opening Transmission and Distribution (T&D) loss levels. In case of WBSEDCL, the business plan accepted the actual T&D loss levels as baseline for tariff setting with defined targets for efficiency improvements, which would form part of its Performance Agreement with GoWB. Similarly, the Plant Load Factor and Station Heat Rate levels from WBPDCL were assumed at current levels and assumed to improve over next 5 years. The increase in cost to consumers due to the regulatory reset was envisaged to get offset by GoWB measures on financial restructuring.

The National Tariff Policy, 2005, issued under the 2003 Act, requires the regulatory commissions to adopt multi-year tariff principles for determination of tariff for the licensees and generators. The Policy[19] recognized the need for adopting initial "relaxed" norms as part of the multi-year tariff framework.

The concept of adopting "relaxed" norms and achieving a "regulatory reset", as part of a multi-year framework, in light of the National Tariff Policy and GoWB's comprehensive restructuring measures, were discussed and agreed upon with WBSERC as part of the stakeholder consultation process. The suggestions received from WBSERC on the industry structure and financial restructuring were appropriately considered.

Though agreed in principle, WBSERC in its annual tariff order issued for 2008 had only partially adopted these principles and it is understood that WBSEDCL may have some un-recovered costs for FY2008. An alignment with the business plan as part of a multi-year tariff framework from WBERC would go a long way in ensuring a well coordinated business plan in West Bengal.

After a year of restructuring, a review of performance indicated that utilities will meet most of the commitments for FY2008.

[19] The clause reads like this – "In cases where operations have been much below the norms for many previous years the initial starting point in determining the revenue requirement and the improvement trajectories should be recognized at "relaxed" levels and not the "desired" levels. Suitable benchmarking studies may be conducted to establish the "desired" performance standards. Separate studies may be required for each utility to assess the capital expenditure necessary to meet the minimum service standards."

8: FOCUS ON CORPORATE GOVERNANCE AND INTERNAL REFORMS

Unlike other states, WBSEB observed significant improvements in its financial performance prior to restructuring. This improvement obviated the need to focus on quick-win solutions and provided a window of opportunity to focus on basic internal reforms and corporate governance measures even before restructuring.

The state government and the power department in West Bengal realized the importance of improving corporate governance in the state-owned power utilities very early in the restructuring process. This was evident from the design of Terms of Reference (ToR) for advisory services to study and recommend measures for optimally restructuring the power sector utilities in 2005. The ToR specifically covered the following:

a) Review of governance and management decision-making processes on key aspects of utility like project management, investment planning and financing as part of Phase I of the study;

b) Options and recommendation on a comprehensive set of tasks under corporate governance and internal structure issues as part of Phase II of the study; and

c) Implementation plan for recommendations made in Phase II including the extent and depth of institutional reforms required in the state-owned power sector utilities.

The emphasis given to corporate governance issues in the ToR was a clear shift from the restructuring implementation focused ToR for Technical Assistance framed in other states at the point of their restructuring.

Due to lesser focus on governance and internal reform in other reforming states, most of the utilities slipped in their operational performance immediately after restructuring. In many cases, the state governments struggled to find suitable persons to fill the important top management positions in newly formed multiple distribution companies. This had deleterious impact on the utilities.

Reconstitution and Restructuring of Boards

Learning from experience of other states, West Bengal decided to include improvements in corporate governance as one of the restructuring objectives. The corporate governance initiatives in India itself are in nascent stage and most of the guidelines are mandatory only to companies publicly listed in the bourses[20].

However, the state government did not want to lose this opportunity of bringing in better corporate governance in its state-owned power utilities and provide greater functional autonomy to utilities. The Power Sector Restructuring Committee constituted by the State Government gave its “in principle” approval and “go ahead” clearances to the following recommendations on corporate governance and internal structure issues:

[20] Clause 49 of the listing agreement specified by Securities and Exchange Board of India provides a set of corporate governance guidelines which requires mandatory compliance by all the companies desiring to get listed in the stock markets in India.

(i) Reconstitution of Boards of Management of the successor/restructured entities of WBSEB, DPL and WBPDCL in order that the Board consists of at least 50% non-executive Directors and one-third independent Directors;

(ii) Empowerment of all the successor/restructured entities of WBSEB, DPL and WBPDCL to adopt well established practices of corporate governance and transparency; and

(iii) Empowerment of the successor/restructured entities of WBSEB, DPL and WBPDCL to decide independently on issues of personnel recruitment and selection, objective performance assessment and performance linked promotion, compensation and incentives.

These approvals were not easy to obtain as the proposals were debated at various levels within the state government. The power department was able to convince the key decision makers in the government, including the finance department, that greater autonomy and corporate governance structures were fundamental to the realization of viable business plans projected for the successor/restructured entities.

Formalizing arrangements through incorporation in Articles of Association

To formalize and ensure that these proposals for improving corporate governance are actually implemented, the provisions for independent directors were incorporated in the Articles of Association of the two restructured entities - WBSEDCL and WBSETCL. The provisions for appointment of Directors, their tenure and remuneration, powers, duties, rights and liabilities, and process of appointment were incorporated in the Article of Association finalized for WBSEDCL and WBSETCL. The provisions on number of directors read as below:

a) At least 50% of the Directors will be non-executive directors;

b) At least one-third of the Directors will be independent directors.

c) Subject to above, the government may nominate the remaining directors on the Board of the company being either executive or non-executive Directors.

A selection process was also outlined for selection of both functional and independent directors in the Article of Association. Unlike other states and learning from their experience, a process of removing directors was also incorporated as part of Article of Association. The minimum tenure for directors was specified as 3 years to provide stability and certainty.

The initial boards of WBSEDCL and WBSETCL were constituted as per above provisions immediately after restructuring in April 2007 and presently has following structure:

- WBSEDCL: Six functional directors including CMD, four independent directors and two nominee directors from the state government
- WBSETCL: Five functional directors including MD, four independent directors and three nominee directors from the state government including the Chairman

Independent Directors in the Board of WBSEDCL are eminent personalities in technical, finance and business management. Two of the Directors are Chartered Accountants with considerable experience of heading both government and private sector undertakings. They bring in considerable knowledge in finance and business management. Two of the independent directors have technical background and long years of experience in the sector and are expected to bring in fresh perspective in the technical areas for the distribution company.

Like WBSEDCL, the Independent Directors in the Board of WBSETCL are also eminent personalities from varied backgrounds. A number of changes are being affected at the Board level for both WBSEDCL and WBSETCL. A number of Board sub-committees namely Audit Sub-Committee, HR and the Compensation Committees are functional in both the restructured entities. Board meetings are held regularly for both the restructured entities, with detailed agenda circulated to all Board members well in advance. The fresh perspective brought by the independent directors is driving the utilities to take new initiatives. One such initiative is the introduction of performance-linked incentive scheme recently introduced in WBSEDCL.

The boards of WBPDCL and DPL are still to be fully restructured and reconstituted as per the approvals obtained from the state government. Reconstitution of the boards of the two entities acquired more importance due to the fact that the entire top management of these two organizations retires by FY 2010.

These are substantive measures, which sets the West Bengal power sector apart and makes it a pioneer in bringing in more accountability and transparency in its corporate management.

Performance Agreement and Greater Autonomy

The Finance Department of the state government insisted that such greater autonomy to the state-owned power utilities should come with greater responsibility and a monitoring and evaluating mechanism should be created to review the status periodically. This important suggestion was accepted by the power department and it was proposed to develop a "performance agreement" to be signed between the state government and the utility to outline the performance targets for the utilities. This was agreed as part of the capacity building program for the state power sector during the transition period.

Although similar discussions took place in other Indian states as well but West Bengal is the only state where state-owned power utilities adopted and implemented such board structures and signed performance agreements with the state government.

Performance Linked Incentive

A performance linked group incentive scheme was introduced in both WBSEDCL and WBSETCL immediately after restructuring for FY2008. The incentive parameters for WBSEDCL included:

- Reduction in Aggregate Technical & Commercial Loss %;
- Reduction of DTR failure rate;
- Number of meter readings;
- Physical disconnection for credit control;
- New connections released within specified standards; and
- Generation unit availability and utilization factor.

The introduction of the performance linked incentive scheme helped in pushing the agenda of internal reforms and helped in pushing certain unpopular change measures like:

- Abolition of non-functional offices;
- Rationalization of manpower across offices;
- Outsourcing of operation of rural substations;

The incentive payouts for FY08 have also created an environment for differentiating the performance. The total incentive pay-out for achieving the AT & C loss reduction has been USD 1.5 million (at an exchange rate of 1 USD = INR 48) for FY 08. The employees in 7 out of 48 divisions did not get any incentive for this parameter as the losses increased in these divisions in FY 08. Similar payouts were also made for other parameters like reduction in failure of distribution transformers, achieving utilization factors in Hydel generation, etc. In some cases, the annual incentive amounts even reached 2-3 times of the monthly salary of the employees.

Building performance based culture in the organization was one of the objectives of the restructuring and reforms program and it has been partially achieved through the success of the above scheme. The utilities intend to fine-tune the scheme and base it on individual performance in future.

9: UNFINISHED AGENDA AND CHALLENGES

Though the reforms and restructuring program in West Bengal has had many positives it still have few unfinished agenda and also has to persevere with the good work in order to sustain the improvements in the long run. Some of the key challenges facing the sector in West Bengal are:

(a) Sustaining the change and creating wider pool of change agents

(b) Managing the external communication

(c) Providing electricity to all

(d) Organisational reforms in Generation Company

(e) Customer Service Orientation

Sustaining the Change and creating wider pool of Change Agents

Is the change sustainable in long run or change is driven and dependent on few people at the top - is one of the reservations generally expressed by skeptics in this kind of reforms and restructuring exercise. The lack of strong organizational systems and processes and a long history of inadequate governance make them easy prey to slip back into older ways once principal change agents leave the organization. The restructured entities in West Bengal are also no different and would require pro-active and urgent steps to sustain the change and create a wider pool of change agents within the organization.

An analysis of workforce show that a significant proportion (around 50%) of the top and middle management of WBSEDC and WBSETC would be retiring over next five years and finding replacements for them is going to be a daunting task for the organization. Opening up of the sector and increasing opportunities in the private sector is weaning away talent from the public sector entities and West Bengal power sector is no exception to it. It is estimated that the public power sector entities have lost nearly one-third of the entry level recruitments undertaken in year 2005 to private sector. Further, the new emerging areas like trading; power exchange, etc. would require newer skill-sets hitherto not available within organization.

The restructured entities need to bring in necessary organizational changes to retain the talent and also scout for best talent in the industry to sustain the change. The State Government and utilities have finalized a technical assistance program to undertake capacity building in these key areas though support of professional consultants. This capacity building program would work towards sustaining the transformational change and creating a wider pool of Change Agents in the organization.

Managing the External Communication

The power sector utilities have external stakeholders in Regulators, Financial Institutions, and Customers having equal, if not more, interest in the success of reforms and restructuring program. However, most of these stakeholders have an expectation for immediate outcomes of the change which may not be forthcoming from the utilities. These stakeholders further get exasperated by lack of information or communication from the utilities. The lack of visible outcomes and ignorance to the initiatives taken by utilities often creates irritation and impatience in the minds of the external stakeholders and takes away the credibility of the reforms and restructuring process. To certain extent, the reforms and restructuring process owes it success to the support received from these external stakeholders. An open channel of communication helps in better understanding of utility perspective and provides utility a bit more time to show the desired outcomes.

West Bengal has a vibrant civil society and developments in the power sector are being watched keenly. The State Government and State Power Sector utilities need to adopt a proactive external communication strategy to create an environment of trust and bond with the external stakeholders to evince support for the reforms and restructuring changes.

Providing Electricity to All

The restructured generation, and transmission and distribution utilities in the state are still far behind the existing industry standards. Though the standards as targeted in the business plan are based on realistic assumptions, adequate steps need to be adopted to push the utilities on a higher growth trajectory and hence, to be able to supply more power to all.

As discussed earlier, one of the key challenges facing the state is a low level of rural household electrification. Despite having large energy surplus, a vast section of the society still stays in dark. As per 2001 Census, West Bengal had 78 % of electrified mouzas and 20% of electrified rural households. Under Central Governments' Rajeev Gandhi Grameen Vidyutikaran Yojana (RGGVY) scheme, West Bengal is planning to complete 100% mouza electrification by March 2008. In the second phase, the State Government is taking up the task of intensification of electrification and access to electricity to all BPL consumers. However, the following issues are affecting the sustainability of the household electrification program:

(a) At current levels of income, expenditure on electricity constitutes a significant portion of monthly income of a rural household; this leads to inability of households to stay connected to system; in past, number of villages have to be declared de-electrified due to disconnection of all consumers due to non-payment;

(b) Erratic electricity supply leads to a continued reliance on kerosene and other energy sources;

(c) Lag time between availability of electricity and economic benefits accruing from income generating activities in rural areas;

The challenge will be to ensure optimal utilization of the rural network through maximum household connectivity and coordinated promotion of village industries to ensure rise in rural income levels to sustain their staying connected. This would require simultaneous and coordinated effort of government departments and agencies.

In initial years, the financial viability of the distribution company is critically linked to the surplus earned from trading. The business plan assumes such trading surplus to support the subsidized tariff required by the rural electrification program for sustainability. In the event of lower surplus from trading, the state government may have to explore options to support this program till rural households attain capacity to pay for the electricity.

Organizational Reforms in Generation Company

The State Government and Administration have concentrated initially on the restructured entities of WBSEB to bring in the organizational reforms. This prioritization emerged from the need to show visible change in service to customers which were handled by these two entities. A significant portion of the cost to serve (roughly around 80%) a customer is accounted for by generation cost and any reduction in tariff is only possible through large improvements in generation. The State Government realizes the importance of bringing organizational reforms in generation sector and intends to initiate this by restructuring of the Board of WBPDCL. The Government is also contemplating to bring in Capacity Building Consultants for assisting WBPDCL in undertaking transformational change.

Customer Service Orientation

Though, WBSEB was a service organization, customer focus was non-existent in the organization culture. Drastic improvements in service delivery in other sectors like Telecom, Banking & Financial Services, Insurance, Post and Courier etc. have increased service expectations of customers from electricity utilities. As in other sectors, ‘Competition’ and ‘Regulations’ would play a critical role in electricity sector:

- Competition - a critical driver in case of high value consumers;
- Regulatory “Standards of Performance” – a driver in case of for small retail consumers.

WBSEDCL launched a series of customer service initiatives coinciding with the restructuring process to demonstrate the benefit of restructuring to customers:

a) Modernization of Group Electricity Supply Offices by creating amenities for customers;

b) Establishment of “Call Centers” using state of art CRM systems at Burdwan zone for 24x7 operation;

c) Multiple payment gateways for ease of payment ;

d) Developing soft skill for front-end staff;

e) Option of Pre-paid meters for LT residential and commercial consumers;

f) Performance linked incentive to motivate employees for better service to consumer.

The above initiatives are expected to bring in visible changes in the customer service. However, large scale change would require change in mindset and radical changes in the business processes. As part of the large transformational change supported by a Capacity Building assistance program, WBSEDC is driving this unfinished agenda of enhancing customer service levels.

10: CONCLUSIONS

The West Bengal experience of reforms in power sector provides some key learning on the sequencing, design and implementation of reforms program. A number of policy and operational improvement initiatives taken during the preparatory stage helps in bringing structural changes at a later stage. The absence of "price" and "privatization" as critical issues help in building wider political consensus and acceptability for reforms. The approach of extensive stakeholder consultations adopted by West Bengal brought larger awareness amongst the stakeholders towards reforms and also built greater ownership for sustainability. West Bengal also followed an approach of picking up battles judiciously and deferred decision on few critical issues like multiple distribution companies for future keeping in mind overall success and acceptability of the program. West Bengal is using reforms as an opportunity to introduce internal reforms and governance improvement within the utilities with an objective to large transformational change.

Even though West Bengal had its share of success it still has significant challenges in sustaining the change and creating wider pool of change agents. Bringing customer service orientation and access to electricity for all are key issues facing the distribution company in West Bengal. This is being attempted through a DfID supported Capacity Building Technical Assistance for both the restructured entities. The State Government also has an unfinished agenda of initiating internal reforms and governance improvement measures in the Generation Company.

Annexure 1

Restructuring of Durgapur Projects Limited

Like in case of WBSEB, the structural changes in case of DPL power business were also debated in great detail. DPL was set up in the 1950s to promote industrial & economic development in the Durgapur area. The option for merging DPL generation with WBPDCL generation and DPL distribution business with WBSEB distribution business were analyzed. This option had the following issues:

- Generation – Merging of DPL generation with WBPDCL generation could impact the current availability of relatively low cost generation for DPL consumers;
- Distribution – Merging DPL distribution business with the WBSEB distribution business may lead to a Tariff shock for existing DPL consumers leading to closure of some industries in the area which are presently viable on account of competitive tariffs offered by DPL. This may result in disruption in Durgapur area industrial & economic development.

However, the Coke Oven business has a large dependence on imported coal from countries like Australia, China, etc. DPL is not having adequate institutional capacity for competitive procurement of raw materials from the market. As such, the competitiveness of DPL in the coke oven business is limited. The conversion arrangement of DPL with SAIL was also a short term arrangement only and termination of the arrangement by SAIL would could lead to stranded costs for DPL or require it to compete in the market (with limited institutional capacity). This posed a high risk to the State Government and to the viability of other DPL businesses. Hence, it was thought ideal for the DPL coke business to be vertically integrated with the steel industry.

The above restructuring of DPL business would provide greater focus on the power business and it is envisaged that the issue of merging DPL business with WBSEB and WBPDCL could be reassessed after the transition period.

Restructuring of West Bengal Power Development Corporation Limited

Though, there were no statutory and business requirements for any structural changes in WBPDCL, the large capital investment requirements for future projects was seen as a significant driver for improving corporate governance and prepare WBPDCL for better access to financial market through shadow mode compliance with public listing requirements.

The key recommendations with respect to performance and governance improvement of WBPDCL are:

- Reconstitution of Board by induction of one-third Independent Non-Executive Directors on Board along with Shadow Mode compliance with Clause 49 of Listing Agreement to meet listing requirements;
- Formation of Board Sub-Committees for Key Areas like Compensation, Audit & Recruitment;
- Open and Competitive Recruitment to fill up key top management positions;
- Setting up a Commercial & Regulatory Management unit to improve focus on regulatory compliance and target management;
- Designing of Performance Metrics aligning plant with performance of WBPDCL and defining responsibility for controlling each parameter at both plant and corporate levels.

Annexure 2

Early Retirement Scheme and Social Safety Net Program for displaced PSE Employees

One of the significant initiatives in PSE reform framework has been the success of Early Retirement Scheme (ERS) and Social Safety Net Program. The State Government recognized the trauma and pain of loss of employment and offered a compensation package that would permit the retirees to live a life of dignity with the best social security. The key components offered were:

- *Ex-gratia Compensation*: Two options were offered to the employees
- *Retirement Benefits*: Provident Fund, Gratuity and leave encashment as per Statute/ Rules of the enterprise.
- Medical & Accident coverage

The options for Ex-gratia compensation were:

- Option 1: 45 days emoluments at the level of last drawn salary, for every completed year of service or part thereof,

- Option 2: 35 days emoluments at the last drawn salary, for every completed year of service or part thereof plus 25 days emoluments at the level last drawn salary for every remaining year of service or part thereof.

The design of the ERS was such that it attained the twin objective of retaining younger employees with the PSUs and was monetarily beneficial for older employees. Each retiree was counseled under Social Safety Net Program that assessed the need and potential for re-skilling so as to help the employee generate and augment income for his family. The implementation program was effectively managed so that the employees did not see any divergence from the framework agreed with them and thus created greater trust and acceptability for subsequent stage reforms

This project succeeded in evolving a structural framework for restructuring of the PSUs including principles for the restructuring of financial liabilities, compensating and re-skilling employees for any displacement from employment and the State Government playing a central and fully engaged role through the entire process.

Abbreviations

ABC	Arial Bunched Conductor
APDRP	Accelerated Power Development and Reforms Program
APGENCO	Andhra Pradesh Power Generation Corporation Limited
APSEB	Andhra Pradesh State Electricity Board
ASEB	Assam State Electricity Board
AT & C	Aggregate Technical & Commercial Loss
BPL	Below poverty line
BRPL	BSES Rajdhani Power Limited
BYPL	BSES Yamuna Power Limited
CAGR	Compounded Annual Growth Rate
CESC	Calcutta Electricity Supply Company
CPSU	Central Public Sector Undertakings
CWIP	Capital-work-in-progress
DFID	Department for International Development
DHBVN	Dakshin Haryana Bijli Vitran Nigam
DPL	Durgapur Projects Limited
DPSC	Dishergarh Power Supply Company
DTR	Distribution Transformer
DVB	Delhi Vidyut Board
DVC	Damodar Valley Corporation
ERS	Early Retirement Scheme
GDP	Gross Domestic Product
GOWB	Government of West Bengal
GRIDCO	Grid Corporation of Orissa
GUVNL	Gujarat Urja Vikas Nigam Limited
HPGCL	Haryana Power Generation Corporation Limited
HSEB	Haryana State Electricity Board
HT	High Tension
HVPN	Haryana Vidyut Prasaran Nigam
JBIC	Japan Bank for International Cooperation
JMC	Joint Management Council
KEB	Karnataka Electricity Board
KESCO	Kanpur Electricity Supply Company
KPTCL	Karnataka Power Transmission Corporation Limited

LT	Low Tension
MPSEB	Madhya Pradesh State Electricity Board
NDPL	North Delhi Power Limited
NHPC	National Hydroelectric Power Corporation Ltd
NSDP	Net State Domestic Product
NTPC	National Thermal Power Corporation Limited
OHPC	Orissa Hydropower Corporation Limited
OPTCL	Orissa Power Transmission Corporation Limited
PED	Public Enterprise Department
PPSP	Purulia Pumped Storage Project
PSE	Public Sector Enterprises
PSRO	Power Sector Reforms Organization
PSU	Public Sector Undertaking
RE	Rural Electrification
RERC	Rajasthan Electricity Regulatory Commission
RGGVY	Rajeev Gandhi Grameen Vidyutikaran Yojana
RPMO	Reform Project Management Organization
RSEB	Rajasthan State Electricity Board
SAIL	Steel Authority of India Limited
SAR	Staff Appraisal Report
SEB	State Electricity Board
SEBI	Securities Exchange Board of India
SERC	State Electricity Regulatory Commission
SLDC	State Load Dispatch Centre
UHBVN	Uttar Haryana Bijli Vitran Nigam
UPPCL	Uttar Pradesh Power Corporation Limited
WBERC	West Bengal Electricity Regulatory Commission
WBPDCL	West Bengal Power Development Corporation Limited
WBREDA	West Bengal Renewable Energy Development Agency
WBSEB	West Bengal State Electricity Board
WBSEDCL	West Bengal State Electricity Distribution Company Limited
WBSETCL	West Bengal State Electricity Transmission Company Limited