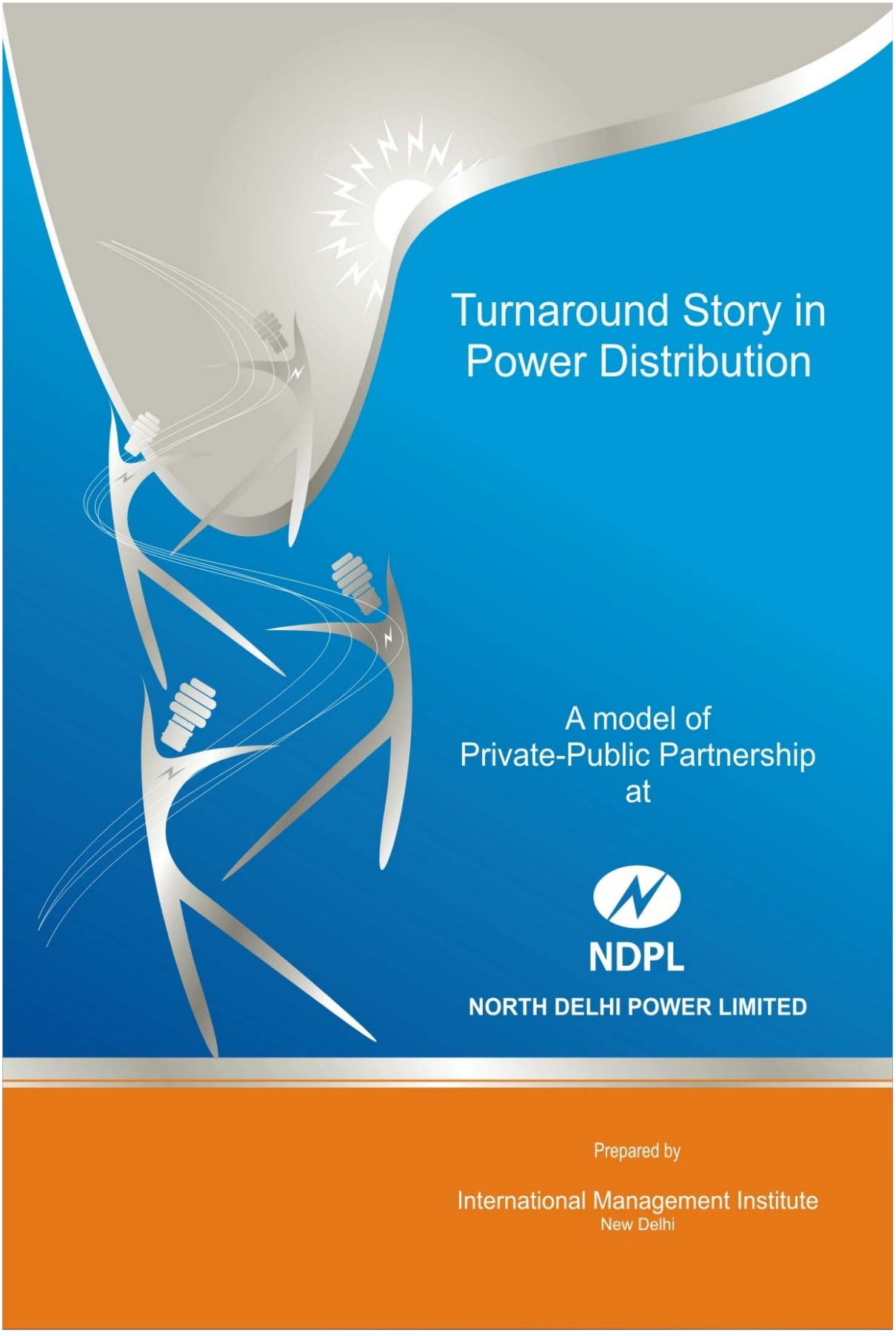
Turnaround Story in
Power Distribution
A model of
Private-Public Partnership
at
NDPL
NORTH DELHI POWER LIMITED
Prepared by
International Management Institute
New Delhi

Foreword

During the Advisory Committee meeting of NDPL's Centre of Power Efficiency in Distribution (CENPEID), Dr. S. N. Pandey asked me whether IMI will be able to record the achievements of NDPL into a story. The thinking was that Power sector is too important a sector for national growth and NDPL story in the context of power sector reforms is worthy of being recorded, observed, understood and emulated.

The offer was too attractive and IMI seized it. Not too many corporates may be willing to spend their time, effort and resources in helping the world of academia to record and interpret their activities. For the most part companies are mired in 'urgent' matters and there was little time for indulging in the "luxury" of academic work. It is quite evident that NDPL understands the value of human capital, the development of which requires intellectual and research backup. It is also evident from NDPL philosophy that it understands the importance of networking with academia. The activities and success of firms like NDPL authenticates the purpose of business academia, viz., fostering innovative thinking in young minds and shaping globally relevant managers. I wish to express my deep thanks to NDPL for this opportunity, and more generally to, if I may, be a network partner for the firm… And pointedly, I would like to thank Dr. S. N. Pandey for having trusted us with the work.

I would also like to take this opportunity to thank my colleague and students who have contributed to this fine study. I am sure that the experience we have gained would stand us in good stead to undertake further work of this kind in future.

I am sure the readers of this report would go away with a sense of optimism and understanding of what a private company can do towards building the country's infrastructural sector which otherwise, as all of us would agree, is in pretty dire straits. You can be assured that this work is only the beginning and we will have more academic output coming from this study that will have major implications in terms of teaching and practice in India and elsewhere.

With best wishes to everyone at NDPL,

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Author's Note

It has indeed been a very pleasant exercise to undertake this project. I would like to thank NDPL management who entrusted IMI with this task. I would also like to express my gratitude to all those at NDPL for being generous with their time and effort that made this study a reality. And finally I would also like to thank IMI for giving me this opportunity.

So many persons in NDPL have contributed generously to make this study a reality. They have been patient and most willing to discuss company issues in a delectably professional manner. They were more than willing to give their time at extremely short notice. I want to particularly thank those whose names appear here who have generously given their views. Behind the hard numbers that speak of NDPL performance is the enthusiasm, determination and collective goodwill that permeates at NDPL. The quotes here from various organizational members of NDPL represent a slice of its collective culture.

This study provides a ringside view of the efforts in place at NDPL as seen by the organizational members for whom enacting the NDPL story is worth their time and effort. The approach this study adopts has not been one akin to - for lack of a better word - auditing. In other words, to use the appropriate term, the study is interpretivistic. The objective of this study is to describe the path a serious commercial firm has taken with very serious organizational members who, unself-consciously, are proving that social-entrepreneurial path and managing modern corporations are indeed converging!

I feel a deep sense of gratitude for everyone who helped. In keeping with the spirit of collectivity that this study represents, let me not attempt to make a long list of names. Even if one attempts to do that it still will leave out a large number of persons involved in this saga. In any case, I suspect that those who helped us in developing this study – whom I admire for what is happening in NDPL - would consider their generosity with time, effort and cheer as merely their "job"!

In shaping the words of this document, though, I must mention the help received from the anchor person at NDPL who came onto the stage towards the end of this research and whose contribution was immense, viz., Mr. Uday Mishra. He went through the manuscript more than once and had valid suggestions on rewriting and rewording some parts. These have been cheerfully incorporated. I also want to mention of the contribution of Ms. Yashi Srivastava, student of the 2008 batch whose initiative and hard work helped shape this document. Two other students, Ms. Jaya Nagdeo and Mr. Mohit Saraogi also contributed to the research process.

As the principal author I would like to make no apologies for the study being "one-sided" in terms of looking at the views from one angle. The approach that is adopted here becomes valid and authentic if we consider the purpose of this study. The purpose is to learn... and contribute towards a cycle of learning. The purpose is to record how a corporate organization could conduct itself within the free market paradigm. While learning requires a critical mind, it also requires a positive mind. This study hopefully should appeal to readers who have a healthy combination of these two prerequisites.

Having said that let us remember that learning is a two-way process. While a critical and positive mind is required for learning, the reverse too should happen. Good learning material

should create critical and positive minds. I sincerely hope that those who are going to learn by reading this study – whether advanced management students or new employees at NDPL during induction or existing organizational members there or others – develop an understanding of what commercial firms can do for society without sacrificing the most cherished of all corporate responsibilities, viz., sustained economic survival. The reader should understand that the objective here is not to report facts and impress anybody… After all, action speaks stronger than words. The reader should ideally reflect on how adversity can be turned to an opportunity, how difficult situations can indeed be dynamic eye openers, what imagination can do to create positive-sum games, how new ideas are upstaging dated organizational theories, how individual intent and interpretations can alter the 'reality" out there, and figure out what more can be done to uphold a higher cause without resting on past glories.

One note on the style of writing: In style, this report has tried to be both factual and evocative. This has been no easy task while also trying to keep the size of the study modest and easily readable by busy executives and over-loaded students. Therefore the reader may find the style toggling between the qualitative and the quantitative; the analytical and the holistic. I do hope that this - and other lapses for which the author takes full responsibility - do not detract the reader from getting a deep sense of the realities unfolding at NDPL… and learning from it.

Happy Reading

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Chapter 1
Introduction

This study describes how North Delhi Power Limited (NDPL) has been able to lay the foundations for a purposive and profit-making organization that is poised to be a model, which it probably already is, in private-public partnership in the power distribution sector. The success that NDPL has been able to achieve is based on a massive change management effort that included streamlining of technical and operational matters, right investments, customer orientation, adept human resources polices and multiple stakeholder management.

The purpose of this study is to provide a record of how the turnaround has been achieved. As objective as one likes to be, there is an underlying assumption that power sector performance has been far from satisfactory in India with the State Electricity Boards performance being dismal. Further, there is an underlying assumption in this study that private participation, particularly at the distribution end, may be the answer and that success of NDPL is something to be studied and understood for better organization of power distribution in the entire country and possibly elsewhere too. NDPL in a short span of six years have won several accolades which are summarized in Annexure: 1.

This study may be carried to the next stage wherein cases could be developed for various functional and integrative areas of management. These cases would not only have value for in-house use for NDPL in their training and induction programs but also elsewhere. This material may be use for classroom teaching of MBA students and also be a source of scholarship for executive education in the power sector. Considering the structural changes that are expected to take place in this sector in future the need for such training material cannot be overemphasized.

Methodology

This study has been prepared based on detailed discussions with the company's personnel, and using secondary information from various sources. In case of primary sources, we have, in many cases, included the names of the individuals and or their role and designations. In case of secondary information, citations have been provided for all the sources which have been consolidated as "References" at the end of the study.

Organization of the Chapters

Chapter 2 gives a brief background of the study. It gives an introduction to the power distribution sector in India, and how this sector looked like in Delhi before privatization. Delhi's power distribution was undertaken by Delhi Vidyut Board (DVB) until 2002, DVB itself being the successor of (Delhi Electric Supply Undertaking (DESU). Neither DESU, nor the new avatar of it, viz., DVB could deliver proper services. We have pointed out several performance parameters of DVB just before privatization. These indicators speak for themselves.

Chapter 2 also carries a discussion on the innovative way in which legislative support enabled privatization of DVB. There were complex legislative, regulatory, financial, political and techno-commercial factors that needed to be addressed before privatization was possible. There were no existing business models anywhere in the world to go by. We have shown how a complex maze of issues was overcome by governmental initiatives. We also have defended the use of AT&C Losses as a magic "target" to be met by the Discoms. Reduction in AT&C Losses, as a key measure, provided a great deal of focus on corporate action.

It may not be out of place to mention here that often the success of the corporate paradigm is attributed to the singular focus on one key parameter, namely the bottom line, or profits. It is almost as if, for the formative years of Discoms, reduction in AT&C Losses stood for such a focused measure. In the study we have also pointed out that AT&C Losses would and should continue to be an important performance-tracking measure for future too.

Next, in Chapter 3, we have discussed how NDPL has undertaken the principle of "Stakeholder Management" and the complexities involved therein. Given the history of power distribution companies in the past (With DVB, for example, having over hundred thousand unattended complaints at the time of takeover), use of electricity as an instrument of appeasement for vote-banks, cynicism among consumers and rampant power theft, managing diverse stakeholder groups and generating trust is indeed a very difficult task.

We have identified the company to have concentrated on five different stakeholders: consumers, shareholders, employees, business associates, society and government/ regulators.

Under each of these, we have broadly discussed the needs of the stakeholders and means by which these needs are met. The manner in which the various stakeholders are being managed is extremely interesting. Within a short span of six years the company has been able to put in place a truly multiple stakeholder-based management system that has started yielding impressive results.

In the next Chapter, viz., Chapter 4, details of changing industry dynamics are discussed. We start the discussion on the Discom industry in Delhi with particular emphasis on the relative performance of NDPL as reported by third-party sources. Here we also discuss the Open Access Policy that has been introduced by the landmark Electricity Act of 2003. As can be learnt from this study, following these legislative initiatives, considerable changes are being witnessed in the electricity sector all over the country. Next, we discuss the Multi Year Tariff (MYT) Policy that has been introduced for the period 2007-2011. This policy will have a major impact on the flexibility that Discoms in Delhi will enjoy in managing their own affairs.

NDPL success can largely be attributed to the nature and comprehensiveness of "Tata parenting" it has received. This is topic of discussion in Chapter 5. Being part of the Tata enterprise, the firm received support and guidance which is the single most important root cause for NDPL's performance and reputation. In discussing this issue, we touch upon how Tata ethos helped NDPL simultaneously promote business and social objectives, institution of governance and ethics mechanisms, the backbone support provided by Tata Business Excellence Model (TBEM) which all the Tata companies follow, and the leadership team that Tata group provides at both board and executive levels.

Chapter 6 discusses Strategic Management issues at NDPL. This discussion covers vision-mission-values (VMV) of NDPL, parametrization of VMV to measurable indices, strategic planning process, identification of challenges and their articulation into strategic objectives, the way these objectives are linked to organizational performance, and how the organizational structure and processes are geared towards performance. In this chapter we also discuss Knowledge Management at NDPL, an emphasis that is generated by a clear realization that a firm like NDPL has to leverage its knowledge to achieve the best in its line of business.

Chapter 7 provides a discussion on NDPL's functional areas. This discussion starts with Operations wherein we have highlighted the changes that have been brought about in enhancing safety, network efficiency, and better service delivery. Following Operations, we have discussed a large number of initiatives for providing better services to the customers. This discussion also touches on how the company re-segmented the market and the nine processes that cover the commercial department's activities. Further in this section, we have discussed how the company instituted various schemes so that the customers can get in touch with the company with various complaints and suggestions -- this involved a complete repositioning of the company from a merely electricity distribution company to an operations-intensive, service-oriented company.

Next, we have looked at the financial function. The agreement with Delhi Govt. envisages targeted reduction of AT&C Losses, meeting consumer electricity requirements in a satisfactory manner and making the right kind of investments in improving technical and commercial performance – not only current performance, but also sustainability over the long run. In return, during the Transition Period (2002-07), which is also referred to as Control Period by the industry, the promise of government was a 16% annual ROE, uninterrupted supply of input (bulk) power and moral support in prevention and eventual elimination of power theft. One of the unspecified aspects in this agreement appears to be the manner in which any capital expenditure (Capex) overruns (over and above the budgetary needs estimated by the consultants at the time of the takeover) would be treated. Given these mutual assurances and responsibilities, the company's survival issues were a) Improve collection and contribute towards reduction in AT&C Losses, b) Recover arrears of the past, c) Rationalize revenue expense stream and d) Make prudent and adequate capital expenses. As will be seen in this study to address these "survival" issues the company had to leverage on many initiatives in the area of automation, IT, business process reengineering, etc. We have also broadly indicated here certain aspects of financial control; the nature of financial freedoms and accountabilities at circle/ district/ zonal levels.

Next in this chapter, we have discussed the Human Resources (HR) function. Here we have given the employee profiles, the challenges faced by NDPL in its transition from a state-owned-enterprise culture to one of Tata culture that focuses on ethics and governance, systems, work-force capacity and capability building and performance orientation.

In an unusually reconciliatory but effective manner, NDPL has been able to fulfill trade union related stipulations they had agreed to at the time of takeover and yet not let these stipulations adversely affect performance. By being committed to having an elaborate dual system of FRSR employee scheme (which pertain to those who chose to be in the erstwhile DVB compensation and benefit scheme) and a new NDPL structure, the company has been able to overcome much of the problems of a not-so-complimentary DVB legacy and anxieties related to transition and change.

The HR systems have been supported by an elaborate but effective system of measurements (through scorecards, etc.) which are monitored, improved upon, and recalibrated on an ongoing basis. These efforts, along with support of systems such as TBEM and other corporate parenting efforts have generated much goodwill and teamwork amongst all employees, irrespective of their cadre and work history.

We have also elaborated on how work systems, job definitions and performance management systems have contributed to certain well-defined drivers of performance: cooperation, initiative, empowerment, innovation, organizational culture, and agility to keep current with business needs. We have also highlighted how systems have been developed to generate education and training needs that evolve out of the company's action plans; this is closely linked to performance issues, which are also discussed in the study.

Finally, we have discussed how NDPL manages its processes. Here all the major processes along with the key support processes have been given. We also provide a brief discussion on how the dynamics of process-function interactions are managed.

In the final Chapter, viz., Chapter 8, we have provided a brief conclusion. Here the emphasis has been on future challenges being faced by NDPL.

Chapter 2
Background

The basis for the electricity sector in Delhi is the three principal acts namely the Indian Electricity Act, 1910; the Electricity (Supply) Act, 1948; and the Electricity Regulatory Commission Act, 1998. DVB used to be the organization that provided power to Delhi Metropolis until June 2002. Until this time the power situation in Delhi had gradually deteriorated to such an extent that there were long hours of power cuts, the number of unattended complaints had piled up to over one hundred thousand and the financial picture of the board was dismal.

Performance of power sector in Delhi has deteriorated dramatically due to various reasons:

- In spite of increasing demand, new capacity addition was minimal.
- T&D losses (Transmission and Distribution losses) increased from 7 percent in 1953 to 23 percent in 1989 and had reached a level of over 50 percent. About 18 percent were transmission losses and 32 percent were lost due to power theft.
- Maintenance had been neglected which led to inefficient working equipment.
- Commercial losses of DVB increased sharply. (From Rs. 207 Crores in 1993 to Rs. 1,103 Crores in 2000).

In the "Strategy Paper on Power Sector in Delhi" DVB identified various reasons for this upsurge in T&D losses which have been put as under:

- Many consumers who were on metered supply still abstracted energy illegally.
- Consumers who lived in electrified colonies did not take legal connections
- Under that legal framework, it was not possible to provide consumers who live in unauthorized colonies with a legal connection. This lead to illegal direct tapping of power from the mains.
- Some industries and commercial establishments in non-conforming areas and urbanized villages resort to misuse or theft due to prevalent conditions of supply.

Moreover the billing system did not work properly and due to huge losses and inability to pay, DVB defaulted on huge amount of money it owed to various organizations.

In such a dismal state of affairs, the Delhi government enacted the Delhi Electricity Regulations Act of 2000. DVB was disbanded effective 1st July 2002 and its distribution related operations were taken over by NDPL and other two Discoms. NDPL was formed earlier after a bidding process which won for Tata Power the opportunity to form equity partnership with the newly created DPCL, a wholly owned company of the Government of the National Capital Territory of Delhi (GNCTD). The ownership structure of NDPL was 49% by Tata Power, 2% by Tata Sons and the remaining 49% by Delhi Government through DPCL. As of now the share holding structure is: Tata Power 51% and DPCL 49%.

The privatization program was mooted through a White Paper prepared by SBI Caps. It envisaged that there would be, in Delhi, one company for generation (Genco), one company for transmission (Transco) and three companies for distribution (Discoms) in areas others than those already serviced by New Delhi Municipal Corporation and (NDMC) and Military Engineering Service (MES). Further it was decided that the first two companies will be wholly owned government companies while all the three Discoms will have majority holding by the private sector.

The area which NDPL would service would be north and northwest of Delhi with a total area of 510 sq. km. with a population of over 5 Millions.

2.1. Distribution in Power Sector: Potential Role of the Private Sector

According to Shahi (2005) the total Annual losses of Electricity Boards aggregated for the whole country for the years shown were as in Table 2.1 below:

Table: 2.1
Annual Rupee Losses on account of Power Losses

Year	Annual Losses (Rs. Billions)
1991-92	31
1997-98	140
2000-01	261

In current rupee terms, losses have moved by over 8 times during the decennial 1990 to 2000. Taking the average annual wholesale price rise to be 7% during this time (see Reserve Bank of India statistics (RBI, 2006), losses have gone up by over four times during this period! This imposes a heavy burden on the country. Mohan (1999) points out that "if the correct tariffs [by the SEBs] were being collected, we would not need any foreign investments in the power sector! (Page: 63).

COO of NDPL, Mr. Arup Ghosh, came up with another way to look at the situation. According to him, AT& C losses would be of the order of Rs. 50 Billions per year per major State Electricity Board (SEB) on an average. With fifteen large electricity boards in the country, total AT&C Losses would be worth about Rs. 750 Billions per year. Assuming a conservative average AT& C loss of 30% and a possible reduction of just 10% with better management, savings alone would amount to Rs. 250 Billions! This is by no means a small figure! Given that this represents only a third of the total AT&C Losses it would be safe to conclude that gains effected by lesser AT&C Losses may provide enough surplus to wipe out the entire losses that the SEBs incur presently.

Traditionally policy makers in the power sector in India had given overriding importance to the supply side. While demand would be estimated and discussed at a macro level, the way to manage the details required to formulate and develop the demand side of the value chain got little attention among policy makers. This is quite evident from the limited coverage this topic received in any major policy document on Power sector reforms. This happens despite the fact that some of the best distribution of electricity happens in areas where distribution is privatized such as in Mumbai, Surat and Ahmedabad. Most of the time the discussion on power sector reforms revolves around fixing and meeting generation targets, investments required for additions to generating capacity and reduction of technical and distribution losses etc.

A proper infrastructure for power distribution creates a dynamic of its own. Efficient power distribution with the dues properly collected would create a self-sustaining value chain. Demand management provides automatic impetus on the supply side. This simple free-market lesson was not taken into account while undertaking elaborate supply-side planning in the power sector. With proper pricing and recovery, sufficient surplus would have been

automatically created for further investments. But it was not to be so. The issue is that demand for electricity and financial health of the distributor will automatically generate enough impetus for expansion of transmission and generation on the supply side. The pull effect would create ideal conditions for flow of capital to these sectors. This marketing lesson can never be overemphasized in the context of Indian Policy Planning that sought to control the supply side rather than facilitate the development of the demand side.

While the importance of distribution was not recognized, the same lack of awareness was shown on the positive role the private sector could play in the power industry. Private sector was seen merely as a source of capital for an industry that could never by financed by State Electricity Boards which were all nearly bankrupt. For instance, Ramanathan and Bhatiani (1999) indicate that one of the major objectives of the Government of India policy initiatives in 1991 was to facilitate participation of *private capital* in power industry. Money alone will not do the trick; it is proper management that does it.

Needless to say the thinking that private participation was for augmenting capital resulted in various initiatives by the government such as those for developing Independent Power Producers (IPP). Lukewarm response to some of the initiatives to develop IPP is an indication of the need to have the demand side in good mettle which alone will provide economic health and long term sustainability. IPP cannot be answer when the customer end (in this case SEBs) of the value chain is in disarray! IPP too would be dragged into the morass of an unviable and non-self-sustaining system that depends heavily on "social" rhetoric and budgetary largess for sustenance.

The irony is that India had (and still has) many lessons in proper management of distribution by the private sector. According to Shahi (2004) "till early 1970s there were various small distribution companies which were later merged into the respective SEBs under the government policies." He further states, "Now less than 5% of the distribution system in India is in the hands of private sector and are being run efficiently and profitably (Page 312)".

Under such circumstances (where the role of distribution infrastructure and good management) has not been adequately understood, the bold initiatives taken by the Delhi government to privatize the distribution end of the value chain was a bold and timely move.

But there were strong reservations about job losses. This was combined with the realization that DVB cannot continue forever. As Mr. S. K. Chowdhary, Circle Head (Metro), mentioned,

> When privatization was on the scene, employees had the fear of losing jobs, but they also had trust in the Tata name. They also had a feeling that the system had so much of political interference that privatization seemed the only viable solution. Since it was in the interest of the general public, it had to happen. Associations and Unions played a constructive role. Chief Minister and other government officials clarified various apprehensions in the minds of employees, Unions, Associations, etc. Then the most important message came from Adi Engineer, Chairman, NDPL that there would be no retrenchment and no salary cuts. He had various interactions with teams in large gatherings and one common message he repeated was "Yeh Ghar Sundar Hai, Ise Aur Sundar Evam Behtar Banayenge" (This house is beautiful; we will make it even more beautiful and better).

These comments summarize the turnaround story of NDPL!

2.2 Legislative Support

Privatization and creation of NDPL required major legislative support of the Central government and that of GNCTD.

Some of the legislative support from central government included enactment of the Central Electricity Regulatory Act of 1998. Under this, an effective Regulatory Commission (whose function initially was envisaged to be simply tariff setting) came into being. This was soon followed by the Electricity Reform Ordinance.

From GNCTD side too there were several initiatives that resulted in the privatization process. This included passage of the Delhi Electricity Reforms Ordinance which empowered Delhi Electricity Regulatory Commission (DERC) to regulate the power industry including licensing and restricting government's role in power policy matters.

Delhi Vidyut Board (DVB) was the state electivity board which came into existence in 1997 under the Electricity Supply Act of 1948. Until 1997 Delhi received power directly from Municipal Corporation of Delhi (MCD) through its wing, Delhi Electric Supply Undertaking (DESU). It was thought that spinning off of DESU which was like a department of MCD and creation of a separate board will solve the deteriorating power situation in Delhi. However it

was not to be. Power situation continued to deteriorate. There was widespread discontent among the residents and finally it was resolved that "privatization" was the only option.

There had to be a slew of legislative and legal initiatives before this occurred. A report of the Delhi Government (www.delhigovet.nic.in/power.asp) showing the milestones in the reform process is shown in Annexure 2. The important highlights of the process are:

a) Conceptualization of the problem and solution to bring about change (through a Strategy Paper) which recognized the importance of distribution in a sector that had until recently emphasized only the production (generation) end of the value chain.
b) Setting up of an exclusive Regulator for Delhi, enabled by CERA of 1998
c) Changes in the legislative framework by introduction of enabling laws such as Delhi Electricity Reforms Ordinance (DERO) which finally became Delhi Electricity Reforms Act (DERA)
d) Engagement of Consultants (SBI Caps and others) for the reform process with the due diligence taking into account not only financial but also personnel aspects too; ensuring smooth transfer of properties to the new entity by means such as registration of "shell companies" for transfer of assets from DVB; investors conference; and transparent bidding process for choosing private sector partners.
e) Involvement of employee representatives at every stage of the reform process and use of formal agreements
f) Feedback mechanisms, monitoring and facilitation of the reform process through coordination committees etc.

This process of facilitation by the government is not (and cannot be) completely over. There are still some "grey" areas where the government has to move decisively. This will ensure that the industry is attractive for investors, there are incentives for suppliers to perform with top efficiency and the market is developed and mature enough to benefit the consumers. According to Mr. Anil Sardana, former Managing Director of the company, some of the key steps should be towards:

1) Creation of one strong regulator for the country – rather than have central and state bodies for the purpose; just like the telecom or insurance sectors.

2) Regulation of only top line (rather than top plus bottom line regulation that exists today). This would incentivize higher cost reductions and efficiency.
3) Creation of a healthy marketplace by allowing supplier (Discoms) sovereignty which would translate to better market segmentation, creation of innovative pricing schemes and contracts (such as vesting contracts for slum dwellers), specialized service to industrial consumers including integration into their power back-ups and so on.
4) Developing the demand side of the market that would include the involvement and education of last mile entity. – 200/ 250 consumer per transformer – and organizing them through Residents Welfare Associations etc.

2.3. Discoms' Performance: A Bold Measure

The three Discoms of Delhi, as seen from above, were formed after a bidding process. A unique feature of the agreement was fixing of Aggregate Technical and Commercial (AT&C) Losses as a measure of performance of the Discoms. Until now most electricity companies relied upon what was called Technical and Distribution (T&D) losses to indicate the extent of losses that were present in their distribution network.

T&D losses are defined as the difference between energy supplied and energy billed. This is a measure which had helped hide much of SEBs' acts of omission and commission. By inflating energy billed it is possible to show that T&D losses are low. And this is very much possible (and have apparently been widely practiced by Electricity Boards in India) when energy billed is not based on proper electricity metering, but on flat rates and provisional bills. In such a situation, the figures (billed amount) promise that financial problems are mainly due to bad recovery of dues while the problem may lie elsewhere. This can lead to disastrous results such as the privatization program in Orissa. The private investors were misled into believing that recovering bad dues will bring in substantial inflow of money which never was to be. It is now well known that it was possible to hide power thefts and operational inefficiencies under the guise of T&D losses.

To get to the root of the problem it is important to understand that losses happen through three means:

a) Technical losses
b) Theft

c) Commercial losses (through improper billing/ inability to collect bills etc.)

To pursue efficiency, an electricity distributor has to clearly understand the extent of losses due to each of the above factors so that proper steps can be taken to bring the three down:

a) Technical losses can be reduced by technical means such as lower losses in electrical conductors, distribution cables and wires/ heat loss in transformers etc. This is largely a matter of balancing loads, making sure that technical specifications are met in the network, instituting proper systems for maintenance and repairs, meeting high standards of operational procedures and making the right kind of capital investments
b) Thefts can be reduced by surveillance by the Discoms, political will, proper assistance from police departments and the executive arm of the government, public education, use of technology to identify and prevent theft, use of civil society organizations etc.
c) Finally commercial losses can be reduced by an efficient meter-reading, billing and recovery system that is accepted by the consumers.

In the absence of proper information about existing operations, there is a learning curve required for the Discoms in understanding the mix of losses and means to fix them up. Unattended accumulation of problems over decades cannot be undone in a day. There is a certain amount of "learn-as-you-go" that can only be achieved by being in the driver's seat. So it was practical and commercially desirable to have an aggregate measure such as AT&C Losses to indicate the financial health of the Discoms. Quite innovatively, AT&C Losses has now became an omnibus measure (at least for Delhi Discoms) to indicate the overall efficiency of distributing entities.

By making AT&C Losses as the key measurement parameter, it was possible to reconcile electricity sourced/ produced with the amount of money generated through its sale – actual money, not receivables! This was a pragmatic way to plug loopholes one by one to reduce all three types of losses. With this measure and a time bound plan, there is incentive for all people - technical and commercial - to bring in their share of expertise to work on a common ground; viz. reducing overall losses.

As far as we know, nowhere else in the world had such a measure been used to fix performance targets. Under the circumstances, AT&C Losses was and continues to be a

prudent measure to capture the entire picture with its implications on operational excellence at all points of the value chain with implications of financial inflows.

The result of the emphasis on AT&C Losses has achieved a remarkable reduction of it during the years since takeover. From 53% at the time of takeover in July 2002 it reduced to 23.74% by 2007.

Once this critical issue of losses is largely resolved, AT& C losses may not necessarily continue to be the most important performance improvement measure. But that is for the future. Until then, this measure would continue to provide an unambiguous measure to be targeted for improvement.

As all good measures, "AT&C Losses" served a dual purpose. Besides providing a "benchmark" to examine performance, it also provided a great sense of direction to employees. As Mr. R Pillai, HOD (PSC&AM), involved with NDPL since inception, stated:

> Message from the top management was very simple: "Losses (AT&C) need to be reduced and we are here to serve and delight all consumers who are honest." All operational strategies and people's energies were built around this key message. You may call them goals/ themes of that time, but mind you, these two themes are central to our corporate strategies even today. You see that has been the focus from day one.

This succinctly sums up the role of strategic intent!

2.4 A New Business Model

AT&C loss being the key performance parameter was not enough. There was need to develop a business model that would ensure that the new entrant (NDPL) would not go down the way of Electricity Boards with unsustainable operations. To achieve distribution reforms objectives, DERC allowed for a "cost plus" business model wherein DERC approves capital expenditure, revenue expenses and returns, based on which a) bulk tariff at which NDPL sources electricity from the Transco and b) the tariff that NDPL charges the final consumers are also fixed. The return was fixed at 16% ROE. In return for the assured ROI, NDPL had to achieve reduction in AT&C Losses from 53% in July 2002 to 31% by FY 2007, while actual achievement was at 24.7%. The initial five years period of 2002-2007 was called Transition

or Control Period. After March 2007, the Multi Year Tariff policy set in whereby NDPL has had to come up with a viable business model taking into account the following factors:

- Sourcing: Open sourcing allows for continuing to source from the existing Transco as well as other sources. This has also encouraged NDPL to set up generating on ownership or part-ownership basis.
- Competition: NDPL would face competition from other potential Discoms/ captive generation/ Association of Person (AoP), merchant power to large consumers from trading companies, or competition from cheap generators through Open Access. However for full-fledged competition to be in place much longer time will be taken because of the non-availability of supply network that potential competitors do not have
- Pricing: A multi-year tariff structure is in place that allows for less short-term control of the regulator on retail price of electricity
- Employee Morale: To start with the morale of the employees were abysmally low. There was need to pull them up all!

The above factors which are already in place would decide the basis for developing the firm's business model that is ever evolving. The economic and financial rationale for the business models (represented by the first three factors) are important, but even more important is the fourth factor, Employee Morale, which influences all action.

A comment by, Mr. R.C. Mangal, Circle Head (Urban), is a telling one:

> Message by Mr. Wadhwa that "staff is our real asset, they are the human capital" made people realize that they are being counted and they had a sense of achievement in whatever they were doing. Mr. Sardana too used to say that our people are perfectly fine, the only thing they need is the 'right direction'. This philosophy of trusting employee capabilities and organizational focus to further build their capabilities through training, exposure, job rotation, etc. had been the hallmark of change management at NDPL.

Chapter 3

NDPL – Driven by Stakeholder Concerns

One of the most remarkable things about North Delhi Power Limited (NDPL) is the way in which it manages its various stakeholders. The situation was (and still is) very complex with non-availability of a suitable business model from the past to go by and path-dependent behavior by various stakeholders. This is compounded, in general, by cynical outlook among most stakeholders towards turnaround of ineffective organizations in the public utilities sector (an attitude which admittedly is now beginning to change). This is exacerbated by the fact that the firm belongs to a sector where the consumer is the "common man" who is highly sensitive to prices for the service offered, viz., electricity. The situation is further made more difficult because the past was marked by "pampering" of politically sensitive and forceful customers, at the cost of a large number of highly dissatisfied "common" customers. And where else than in Delhi, within at least India, can political dynamics be more problematic!

Experience has shown that turning around an organization that is an instrument of populist political policies is far more difficult that starting afresh. In such unenviable circumstances, NDPL successfully negotiated the maze of conflicting interests by forming alliances, obtaining cooperation from diverse constituents, fiercely concentrating on customers and operational efficiencies and by cleverly neutralizing negative forces. Of course, the process is far from complete and it is still on.

In this "crusade" the company has identified six major stakeholders. They are Consumers, Shareholders, Employees, Business Associates, Society and Government/ Regulators. The needs of the stakeholders have been identified as follows:

- Customers: Their major needs include availability, transmission and network system reliability, power quality; superior billing-related services such as accuracy, timeliness, transparency, timely resolution of complaints or/ and ethical issues, if any, and top attention to safety.

- Shareholders: Here the need is to develop a sustainable business model for a private-sector electricity distribution company while ensuring economic wherewithal, which

in other words, translate to normal return on investment and return on equity. It may be noted that NDPL has been paying annual dividends since 2004-05 till date without any break.

- Employees: Vis-à-vis employees the need is to generate an organization that provides excellent working conditions and empowerment at all levels, develops competency, provides for personal development and ensures superior employee welfare.

- Business Associates: Here the important point is to develop a transparent and ethical procurement process, take minimal time taken for payment processing, partnership for product and service development.

- Society: The mandate here is for the company to involve in various Corporate Sustainability initiatives to address social and ecological concerns.

- Government/ Regulators: The need here is compliance to regulation and meeting of performance standards, ensuring performance targets (remember government is a major shareholder in the firm) and adroit handling of public so that there are no adverse political implications vis-à-vis privatization of the utility.

Having identified the needs and concerns of various stakeholders, how does NDPL address these needs in a systematic, ongoing manner? Given below are some of the means by which it achieves better delivery of services, communication of its activities and, in general, improve overall relationship with its constituents.

3.1. Consumers

While NDPL undertakes an on-going process of improving delivery of adequate and reliable power supply through a variety of operational means, it also takes on various activities by which these efforts are properly communicated to consumers. In Chapter 7, an entire subsection titled “Customer Orientation” gives a detailed account of how the company has built up a formidable set of systems and procedures to address customer needs.

The firm has defined its role not as just a power supplier, but as an "extended product plus service provider." The official product-service mix of NDPL consists of supply of power with associated services of network fault management, reliability in power supply, maintenance of street light of various urban bodies such as Municipal Corporation of Delhi, Delhi Development Authority etc., new connections management, metering and billing management, and provision for easy channels of payment. By providing such a detailed and process-oriented definition of the "extended" product-service, the company is able to draw the attention of everyone concerned to the entire spectrum of product-service scope. Each component of product-service mentioned here is supported by appropriate technology, consumer-friendly awareness and action by its employees. Just to drive home a point, let us take the last of the services; provision for easy channels of payment. The company has provided for hundreds of collection centers, mobile vans that accept payments, website payment options and provisions such as "Easy Bill".

These efforts have paid handsomely. The company archives have records of several accolades from diverse consumers. We reproduce some of the comments by consumers who represent a cross section of important institutions in New Delhi city.

> We respect the people of NDPL for various reasons, their behavior, 24x7 services and consumer relationship is par-excellence. Thanks for taking care of MES. *Sameer Pandey GE, Military Engineering Services*
>
> Services improved phenomenally since NDPL took over the distribution. In the last four to five years we are satisfied with the services and want that other utilities of Delhi should learn from the best practices of NDPL. *B.S. Bhamra, Station In-charge, Mother Dairy*
>
> The Power behind the Metro is NDPL; we cheer the efforts of NDPL to keep it rolling. *M. C. Khosla Manager Traction, DMRC*

Individual citizens too have things to say…

> Dear Team NDPL, I am pleased to inform you that my complaint no 13044120 dated 04.05.2008 for installation of electricity meter was attended promptly by your staff. Thank you all at NDPL. Keep it up. *Regards, Manoj D Taneja, Advocate*
>
> I am an NDPL customer from the last 4 years. I find your site ndpl.com very useful and helpful for paying my electricity bills online and for various other information published from time to time. Thank you very much for the good work! My K No. is ….

> Hi, Thanks Team NDPL for the prompt resolution of my complaint and I really appreciate your working. Thanks. *Raja Tanwar*

Besides trying to offer top quality services, the firm's efforts include publications, internet-assisted communication, consumer education, advocacy etc. Some of the services/ communication channels are:

- Quarterly Newsmagazine Navodaya
- Newsletter "SAMPARK" to be sent to consumers with their bills
- Advertisements in print and electronic media
- Advocacy with consumer representatives such as MPs and MLAs
- Education of consumers on policy directives and recent developments
- On-line access to consumers
- Monthly meetings with RWAs, IWAs at district office
- Citizens who are active in giving feedback are given ids on NDPL website so that they are encouraged to continue being active and contributing
- Making known NDPL performance to senior citizens
- Biannual meeting with eminent citizens of NDPL area including MPs, MLAs
- Address to various consumer forums such as RWAs and IWAs by CEO, COO and other top management representatives

Let us see how the firm takes care of other stakeholder interest in the rest of this chapter.

3.2 Shareholders

The company holds quarterly Board Meetings and Audit Committee meetings which are convened in a manner that allows for maximum participation through adequate notice and other means. The monthly MIS statements also provide a means to communicate with the shareholders. As the firm is not listed on any of the stock exchanges NDPL does not strictly adhere to Clause 49 of the listing agreement. But it follows Section 292 of the Companies Act. NDPL follows corporate governance framework advocated by the Tata Corporate Office.

Government being a shareholders, it is felt that not only are the results to be shared, but also concerns about policy issues that have impact on performance. Hence, along with the performance briefs, policy concerns too are shared at shareholder meetings.

Later in the discussion on various measures that are tracked by NDPL we will find that interestingly, NDPL tracks measures such as EVA, Brand Valuation Index etc. to ensure that they are adequately taking care of shareholders. Being in the regulated sector with assured ROI, measures such as EVA and Brand Valuation Index are the ones the firm deems appropriate vis-à-vis its shareholder.

3.3 Employees

Integrating erstwhile DVB employees into the Tata fold was a very big challenge. An incident during the early years is a poignant reminder of the fine sensitivities that had to be carefully handled. Mr. Deepak Sharma, DGM (Administration), mentioned the following incident.

> In the very beginning, that is year, 2002, during one of the communication meetings with participation from more than 150 employees, some employees objected to people having Identity Card around their neck (referring to people from Tata Power who were deputed during the initial period) saying that this was symbolic of discrimination! Though the matter was trivial, management was sensitive to the sentiments of employees. Mr. Adi Engineer announced that as long as I-cards were not issued to everyone, those deputed from Tata Power too would not use the same. In the next three months all employees had their I-Cards!

Much has happened since then. Several conduits have been carefully built over a period of time by means of which the employees are communicated to, their feedback sought and responded to. Or, even more to the point, NDPL believes in the TATA approach of continuous learning through the efforts of its employees and management. These efforts promote identifying and implementing of new ideas as well as make use of prior experience of the employees.

There was much support from the Tata group. As Mr. S. K. Chaowdhary commented,

> There have been various forms of support from the Tata group. A technical team from Tata Power also joined in the beginning, and except a few of them all team members,

> especially senior people like V. C. Mathur, Mr. V. D. Apte and others had a positive influence. Then there has been S. N. Pandey, who relentlessly interacted with people in all offices, listened to them very patiently, captured their concerns and more importantly worked on them. Various communications and meetings by senior people like Adi Engineer, S. N. Pandey, V. C. Mathur, Sunil Wadhwa, and others played a critical role in aligning people to the new direction, new culture and focus on consumers. I still remember the words of Mr. Wadhwa when in one of his initial meetings at the end of which he remarked "These people are so hard working and sincere". Even last year (2007) in many SAMVAD sessions (2-way communication platform at NDPL), he carried the same impression and congratulated teams for such spirit.

Also, commented Mr. Yogesh Luthra, Business Area Head (City):

> The 'Envisioning and Strategy Workshop' at Manesar in 2003 was another milestone. We were looking for a common idea with which we all can relate, and by building on a suggestion we all concluded our punch line – "Hum Milkar Ek Ujjawal Bhawishya Banayenge" (We together will make a brighter future). It was such fun and it invigorated all of us. In the same meeting it was decided that this day onwards no one among us would call each other 'sir', we would be on first name basis. Believe me it was a totally new concept for many of us from DVB, but we felt that the talk of creating an open culture is not merely a lip service; it was being backed by action by top management!

Besides taking care of hygiene factors, there are many additional efforts in place to create a vibrant, modern organization. The firm's effort to create a learning environment is most commendable. Employees coming from external training programs, seminars, workshops etc. are encouraged to convert their knowledge into explicit knowledge in order to benefit the other employees through SHIKSHA, a Knowledge Management initiative to build a knowledge bank. Commenting on SHIKSHA, Mr. Sushil Kumar Shrivastava, DGM (HR), says, 'Building a knowledge bank which will promote future innovations will take us to greater heights'.

Not all experience can be easily codified. Knowledge that is more difficult to be codified needs to seep into the culture of the organization. NDPL tries to develop a culture of performance through Communities of Practice (CoPs) which were rather informal groups that existed within limited work units such as IT and BEG during 2006. In 2007, efforts to convert 'tacit' knowledge to 'explicit' knowledge got systematic through a structured process known as SEEKH. The purpose of the program is to share best practices and new initiatives. Such knowledge is accessible to all the employees through a KM portal called SANCHAY available on the intranet. One message from these efforts is that learning and "learning

organizations" need not simply be the privilege of knowledge-related industries (such as software, IT and so on). With imagination, learning, as a corporate goal, applies equally to as "traditional" and "operational-oriented" an industry as electric distribution. The biggest challenge is to show that learning (individual and organizational) has a positive relationship with performance which NDPL is beginning to show. We can see that there are many lessons in NDPL for people in all industries, irrespective of which industrial sector the person may belong to.

Not all situations were without conflict. What really matters is how these conflicts play out over a period of time. Mr. S K Chowdhary, Circle Head (Metro) had the following to say,

> During LIG (Large Interactive Forum) in 2005, on the very 1st day before lunch the atmosphere became acrimonious. Almost 150 people from erstwhile DVB and the new setup were gathered there. People from erstwhile DVB were feeling hurt on some statements made. It seemed as if the meeting will end since no one was listening to each other. It was only arguments and counter arguments. The senior members like Mr. Sardana, Mr. Mathur, Mr. Wadhwa, Mr. Apte, Mr. Kher etc. were listening and observing all this very patiently. After a brief discussion among themselves, the senior management reps came to the dais and conveyed a very important message that I think is the hallmark of Tata culture. They first assuaged feelings of the team members emphasizing that unless feelings are not shared, how we will know, and how we will work out a solution. It was also emphasized that sharing of feelings – positive or negative – is not only normal, but also necessary. Another very important message was conveyed. It was announced that from this day onwards we would not refer to any employee categorization like 'DVB' and 'Non DVB'. At NDPL there would be only two categories of employees: 'Performers' & 'Non-performers'; and you choose which category you want to belong to!

We find that communication has become an important aspect in NDPL. All "big" and "small" efforts of communication have a place. Given below are some of the specific initiatives designed to enhance communication:

- CEO's message on New Year, Raising day and on achievement of milestones
- Regular Management Review meetings
- Town hall meetings- interactions at Centre of Power Efficiency in Distribution (CENPEID), non-office locations
- Ensuring reply to each and every letter and mail of employees
- Mandatory screen savers, display boards etc. depicting vision, mission, values and quality policy, footnotes in emails reinforcing NDPL values

- Biannual LGIE , JIF with Unions, 'Open Session" by CEO
- Annual Strategy and Excellence workshops
- SAMVAAD sessions at zonal level with participation of CEO and other MTM members
- Fortnightly magazine "Surkhiyan" and online help and support through "Sarthi"

The above means are meant to:

- Facilitate open and frank two-way communication
- Empower the employees
- Reinforce organizational values of Integrity, Unity, Excellence, Understanding and Responsibility
- Obtain inputs for strategy plans/ formulation and business excellence journey
- Share organization's challenges, priorities, and plans
- Resolve issues related to better service delivery to consumers

3.4 Business Associates

Some of the Key Business Associates and the value creation that is achieved vis-à-vis these associates are shown in the following Table 3.1.

Table: 3.1
Key Business Associates for Technical Assistance

Organizational Relationships	Key Names	Key Roles
Suppliers	Power Generators – NTPC, NHPC, SJVNL,THDC, Delhi - GENCO, PTC etc.	Supply Input Power by means of LT PPAs, Bilaterals, Trading etc.
	DTL, PGCIL	State & Central Transmission utility which transmit Power from Generators end to NDPL
Partners *(Business Associates)*	KEMA Consulting, CEA ABB, Schneider, L&T, BHEL, GE, Siemens, Secure, Landis Other Business Associates etc.	System design & consulting Standardization, reduced design cycle time & life cycle cost Technology and service providers towards N/W Management, Meters, Equipments

	i2i, Tyco, Mahindra, AMC service providers IBM, Oracle, CMC, Microsoft, SAP, InfoTech, EMC^2 TQMS, Hewitt, Erehwon, E & Y, KPMG, Deloitte, Grantt Thornton, Various trainers/ consultants	Service providers for metering, secretarial jobs, administration Call centre, Network up-time services , Safety, Employee Services & better administration Seamless integration of processes, Faster communication, Information flow Knowledge sharing, Process improvement, Employee performance & development
Collaborators	WWF, RWAs, IWAs, Eminent Citizens, Public Representatives, NGOs	Enhancement of consumer services, cooperation towards AT&C Loss Control, Energy Conservation

The above associates are engaged through performance contracts or SLAs. For better coordination in critical areas, NDPL has formulated Joint Steering Committees with some of the business associates, for example, GIS Steering committee with InfoTech, SAMBANDH Steering committee with CMC, SAMANVAY Steering committee with SAP, Automation Steering Committee with KEMA. More recently NDPL has introduced Joint Interaction Forums with Business Associates (JIF-BA) for their larger participation in supply and service aspects.

Annual 'Business Associates' Meet is organized from participation from various suppliers, vendors and service providers whereby the company's challenges, plans, performance and philosophy are shared with them. It also helps in building relationship with them for faster release of payments to BAs; a scheme called BIRD has been operational since 2006. Any complaint, problem or ethical issues raised by BAs are resolved in a time-bound manner.

3.5 Society and Corporate Sustainability

Being under the TATA umbrella, NDPL has embraced several means to take care of social, environmental and economic interests of the society. It ensures to incorporate processes which benefit its employees and consumers, as well as the general public. To manage Corporate Social Responsibility activities of the organization NDPL has created a cell called Corporate Sustainability (CS) Group. According to Mr. R K Swamy, HOD (Corporate

Governance), with the rich TATA philosophy of giving back to society what is due to it, NDPL has many community-targeted programs on its anvil.

All stakeholders are part of its CS initiatives. Knowing the fact that happy employees lead to higher productivity, NDPL starts its CS with the employees. It makes sure that its employees are satisfied with their work by providing them with a cordial environment to work in and making substantial investments. Female employees and the physically challenged employees are also provided with favorable working conditions.

The reverse too is true. When the employees know that they are able to contribute to society it generates a positive dynamic of better participation in the work itself. As Mr. S. K. Srivastava, DGM (HR) stated:

> CS activities like Energy Mela, Blood Donation, Health Camps for the poor and old aged, etc. have been a platform for employees to contribute beyond their usual professional work. I can recall numerous remarks of employees from various age groups that they loved doing these activities. More inspiring are the comments I hear during my interactions with various people representatives, school teachers and NGOs personnel. I am sure with more and more volunteers coming forward, we can do even better and more CS activities, thus bringing smiles to many peoples lives.

NDPL has a three pronged CS strategy and broadly segments the community initiatives into:

(a) ***Compensatory*** in nature e.g. JJ clusters who are being forced to pay for electricity are supported through medical help, drug de-addiction, life insurance and such other interventions, the environment protection initiatives to offset the environmental impact caused by business operations and so on,

(b) ***Business Oriented*** which besides serving societal needs also helps NDPL business, e.g. Energy Conservation, and

(c) ***Philanthropic*** which are neither compensatory nor business oriented but NDPL believes that even such initiatives have a long term business case.

Hence, the CS gamut at NDPL is holistic, and as seen from above 3-pronged CS strategy, three dimensions of CS emerge:

- Strategic CSR for sustainability of business and following internationally benchmarked processes and procedures.
- Community initiatives
- Societal Development through Social Advocacy

As part of the first dimension above, there has been a great deal of emphasis on improvements in the office and safety measures adapted in the grids and substations. NDPL was the first Indian organization, nearly three years ago, to become a signatory to the Principles of United Nations Global Compact. Global Compact is a voluntary movement supported by the UN to get corporate organizations to join civil society and labor to uphold social and environmental principles. These principles that consist of ten points broadly cover human rights, labor, environmental, and anti-corruption issues. There is a compliance code that allows/ disallows companies to use its logo/ name in official communication. The UN office provides a forum for stakeholders of the company to air their grievances.[1]

NDPL also works with "Climate Change" and the Energy Program of the Government of India for bringing awareness on energy conservation. Towards power conservation, or "People Power Campaign", NDPL works in WWF-India to make people aware of the need for conservation of energy which ties in with the company's overall efforts towards betterment of public utilities.

NDPL also makes efforts to make people aware of the constitution of India and the fundamental duties by initiatives such as TEAM URJA, whose main participants are school-going children. Around 100,000 school children are a part of the Energy club which organizes such initiatives. The clubs are provided with tips on energy conservation. The organization thinks is necessary because these children are part of the future.

NDPL has also undertaken a new initiative of undertaking Bamboo Plantation as a part of their journey for the energy and ecosystem conservation. It started by planting 200 bamboo

[1] More information about Global compact is available at www.unglobalcompact.org.

plants at its training center 'CENPIED'. Some of these activities involve school children. Children, after all, form an important part of the decision making processes at homes today!

NDPL is also aware of its commitment to distributive justice. Under NDPL's 'Affirmative Actions' program, the company supports SC and ST students by providing educational support through scholarships. There are numerous initiatives by NDPL that can be summarized as follows (Table 3.2):

Table: 3.2

NDPL's CS Initiatives

S. No	Initiatives Taken
1	Health Camps for industrial workers/ JJ Cluster inhabitants and their dependants
2	Energy Club- Principal's Conclave, Core group conclave, Essay Competition, PGLT workshop, URJA Mela etc
3	Blood donation camps in association with the Red Cross.
4	Health check-up camps (General Health, Bone Densitometry, Cardiac etc.) for employees and dependants.
5	Medical & Logistical support to SOS Village, Bawana.
6	Medical and Logistical support to child orphanage at Samaypur Badli.
7	Shramdan by NDPL volunteers for cleaning the Yamuna.
8	Maintaining external interface and collaborating and supporting the initiatives of various agencies like CII, TCCI, NGO's, TERI etc.
9	Participation in the Bhagidari Mela and Pulse Polio campaign of the Delhi Govt. of the Delhi Govt.
10	Medical and emotional support to Multiple Sclerosis patients.
11	Social awareness and advocacy campaign in JJ clusters.
12	Alignment with GRI (Global Reporting Initiatives) and G3.
13	Deployment of TATA Human Index.
14	Slum Upliftment and Up-gradation Project.
15	Adult Literacy Programs.
16	Support to AIDS Awareness activities.
17	Support to Viklang Sahara Samiti – To empower disabled people.
18	Support to various drug de-addiction movements.

As can be seen above NDPL's CS activities cover a wide range of activities that include health, education, improvement of children's welfare, ecology, urban improvement, human welfare and development and others.

CS initiatives have other significant indirect benefits. It helps enhance morale and develop a sense of camaraderie among the employees. Mr. Dileep Kumar, HOG (CS) with a total of 22 years of total with erstwhile DVB and NDPL had a lot to share about the change at NDPL

from what it was at the DVB. According to him, the employees were highly de-motivated and cynical. As a result of this no newer initiatives could be worked out from the employees' side. Being a District Manager himself, in the erstwhile period, he was constantly under vigilance from higher ups and had to report every detail about his district to the head office. This not only made his task accomplishments slower but also prevented exploration for new and path breaking opportunities. Lack of empowerment, and thus motivation, and low levels of efficiency were the order of the day. He remembers his best day at NDPL when the then CEO, Mr. Anil Sardana, himself met with the District Managers and empowered them to make bold decisions. On being asked about the organizational change, he said, "As is the King, so are the soldiers"!

These efforts, coupled with NDPL's consumer orientation, have resulted in the local community viewing NDPL in much favorable light. Mr. Sunil Singh, Business Area Head (Town), who entered NDPL laterally not too long ago had the following to say,

> I joined NDPL in early 2005, but I was following NDPL stories in media almost on daily basis. I was impressed by the way this company was going about implementing new things and new ideas. Coming from a background of distribution of over 25 years, I knew very well how difficult it was for NDPL to drive this type of change. I can say that all this impressed me so much so that I came forward to join them so that I too could contribute to this success story!

The NDPL approach has 'touched" also those who have been in the company for a longer time as highlighted by the following comment of Mr. R. C. Mangal, Circle Head (Urban):

> I have been working with the same company (erstwhile DVB and now NDPL) for almost 40 years. When people ask me about my professional experience, I say it has been in two parts; and more importantly my last 5 years are equal to, or, more than 35 years previously. The new work culture, management style, exposure and training have made me a leader of a different kind. I wish such enablers were there when I started my career. I feel the new generation is lucky and blessed to work for a company like NDPL.

3.6 Government/ Regulator

We start this section with comments by key political leaders of Delhi. Commenting on relative performance of various Discoms, Mrs. Sheila Dixit, Chief Minister of Delhi, on May 09, 2007, had the following to say on CNBC.

> I choose NDPL (Tata Power) any day. NDPL's professionalism is exceptional, their business ethics are exemplary. They are more sensitive to consumers' needs

> compared to other Discoms operating in Delhi. They are very innovative in their work approach.

The then President, Dr. A. P. J. Abdul Kalam, too had something to say of NDPL

> When we studied the DLSA website, it was indeed reassuring to know about the successful settlement of more than 10,000 cases pertaining to NDPL, in the period, Oct. '03 to July '06, under the aegis of pre-litigation stage - *Source: DLSA Website, accessed on Nov. 10, 2006*

As the saying goes, there are miles to go… We point out some of the issues drawn mainly from Consumer Coordination Council's (2005) comments on Aggregate Revenue Requirements (ARR) and Prayas Energy Group Report of 2006. Broadly the issues that are/ would be of concern are:

1. ARR exceeding the collection made by the three Discoms. This totals to about three thousand to three thousand five hundred Crores for five years for all the Discoms put together. It is unclear right now how this shortfall will be made up – whether the government will entirely or partly support the shortfall or so on.
2. Another issue that some of these watchdog institutions have been raising is a 20% payment as commission for accumulated DVB arrears realized by Discoms after the takeover. Of course, this may not be considered contentious because, by contract, a 20% was agreed upon. However, this issue might still come up in future. The point the watchdogs organizations are pointing out is that the arrear amounts collected by the Discoms is included for AT&C loss computation. So, there is a double benefit here, which they think is unduly favorable to the Discoms.
3. The third issue is about AT&C Losses. Here, NDPL is in a far better position than the other two Discoms and it is generally recognized that a reduction in AT&C Losses from about 53% at the time of takeover to about 28% by March 2006 has been a commendable performance. This may be compared with the targeted percentage of 36% by March 2007. The documents we examined indicate at least a 10% lag between NDPL and other Discoms.
4. The next issue is about billing and metering. There are still some consumer complaints but it appears that the complaints in this area are getting resolves as there is greater consumer education. At least this seems to be so for the NDPL service areas.

5. The next issue is about capital expenditure. The CCC report clearly says "…capital expenditure for per MU for BRPL and BYPL appear to be much higher than NDPL though NDPL performance is better."(Page 5)
6. Another issue is distribution costs per KWh. NDPL's was the highest during 04-05 according to Prayas 2006. However, they do admit that NDPL has more than matched this higher cost through better distribution and collection resulting in lowering of AT&C Losses.

These are some of the issues that need resolution. We expect that in short and medium term there would be active effort on the part of NDPL to address these issues squarely and comprehensively. Meanwhile there is also a strong commitment to keep the government informed and updated. NDPL, for instance, sends monthly MIS to DERC. Further the company does ARR filings and has regular meetings with officials of regulatory bodies.

3.7 Compliance - Statutory and Voluntary

The company is under obligation to follow various statutory requirements. The different areas of business where statutory regulations come into play are listed below in Table 3.3, with the corresponding laws that govern them.

Table: 3.3
Statutory Compliance

Sl. No.	Area	Governed by
1	Tariffs and Business	DERC, Electricity Act 2003
2	OHS	Establishment Act, ESI Act
3	Environment	DPCC
4	Finance	DERC, Company Law, Tax Laws
5	Product/ Service	DERC, CEA, IER
6	Labor	Contract Labor Law
7	Social Security	PF, Gratuity, Pension, GPF

The extent of compliance is tracked through a proper measurement system. Besides statutory requirements such as tax laws and electricity laws the company also is signatory to United Nations Global Compact.

NDPL is an OHSAS 18001 certified organization. This is an international occupational health and safety management system.[2] It was created by a consortium of world's leading national standards bodies that brought together on a single platform a set of standards that could be followed by anyone in the world. OHSAS certification covers health and safety management, training for health and safety, risk assessment, housekeeping and hygiene, permits to work, fire, sprinkler systems, protection against noise, hazardous substances etc. It also covers issues such as working from heights, confined places, use of equipment, personal protective equipment, contractors' role, procedures for installation, use and maintenance, use of alcohol and tobacco and certain welfare issues.

The company prepares quarterly Statutory & Regulatory Compliance (SRC) Report on the basis of feedback from various departments. The report contains a compliance score which is the weighted average of compliance on a number of statutes (given in the Table 3.4). The SRC Index has been more than 99% for the last four years. SRC Report is also presented to the Board of Directors in the quarterly Board Meetings.

Table: 3.4
Checklist of Statutory Compliance Report

Serial Number	Item
1	License
2	MYT Order
3	Regulatory Order
4	Electricity Act
5	Electricity Rules
6	Supply Code &Performance Standards
7	Works of License Rules
8	Treatment of Income from other business
9	CEA Regulations 2006
10	DERA 2000
11	Companies Act
12	Income Tax , ST , WCT ,Service Tax
13	Labour & Related Laws
14	Global Compact
15	Environmental
16	Occupational Health & Safety

[2] More details can be had at http://www.ohsas-18001-occupational-health-and-safety.com/index.htm. OHSAS incorporates specifications contained in BS8800, AS/NZ 4801, NSAI SR 320 and a number of other standards.

Chapter 4
Changing Industry Dynamics

The overall industry environment within which NDPL is operating is changing rapidly. It is important for NDPL to respond proactively to this change. Any observer of NDPL can see that indeed the company has been alive to these changes and have been "biting the bullet". The key aspects of the changing environment are a) Emerging competitive scenario and b) Overall regulatory and government-mandated changes

Currently NDPL does not face any direct threat from head-on competitors who are trying to take away market share. However, Open Access Mechanism does provide opportunity to potential competitors. The following are some of the potential sources of threat in the future.

1. Captive Generation (Single)/ Association of Person (AoP)
2. Merchant power to large consumers by Trading Company
3. NTPC, BRPL, BYPL, or any other DISCOM (local/ global)
4. Cheap Generators through Open Access
5. Competition due to possibility of Multi-licensing in an area

Post 2007, there has been a change in the regulatory emphasis with the introduction of Multi-Year Tariff that is described in the next section. The implications of these changes are shown in the following Table.

Table: 4.1
Changes in Business Regulatory Framework during MYT Regime

Regulatory policy/ Guideline	2002-07 Transition Phase	Beyond Mar 2007 Post Transition Phase (MYT Regime)
Tariff setting process	Tariff fixation every year	Multi Year Tariff Regime – tariff fixed for 4 years
Cost Plus Model – expenses and returns inbuilt into BST & RST	All expenses trued-up annually to reasonable limits in case of variance from projections.	Expenses segregated into Controllable and non controllable; No truing up for controllable expenses
ROE in case AT&C loss Reduction target is achieved	16%	14% + Supply Margin
Power Purchase	DTL's Responsibility – single source of input power	NDPL's responsibility- power purchase at market rates + Through PPAs

Performance Assurance	Metering & Billing Regulations – timelines advised by Regulator	Performance Std. Regulations – provision for compensation to consumers in case of non compliance

In this chapter we discuss first relative performance of NDPL which now gives NDPL an edge over competitors. Next the chapter discusses the changes in regulatory regime, viz., Open Access Policy and Multi-Year Tariff Regime that respectively have come into play 2003 and 2007 respectively.

4.1. Relative Performance of NDPL

NDPL's challenges and its response have to be seen in the context of what other electricity distributors in the country have been able to achieve in the Indian Scenario. The following discussion is based on an independent review taken by Prayas Energy Group 2006. This report has compared NDPL vis-à-vis BRPL and BYPL on four parameters; 1) AT&C loss reduction, 2) Capital Investments by Discoms 3) Billing and Revenue Collection and 4) Quality of Service. The report is largely based on data mainly for 2002-03 to 2004-05 and in some cases 2005-06.

1. AT&C Losses: The report points out that NDPL has made significant improvements as compared to other Discoms. To quote the report "In the first two years the reductions were very close to the target years, however in 04-05 NDPL beat the targets by 7 percentage points. Further it claims to have beaten its targets in 05-06 by 7 percentage points again." (Page 5) It seems that while AT&C Losses by March 2006 were about 28% for NDPL, the corresponding figure for the other two Discoms were in the region of 38-42%
2. Capital Investments: Here we again quote from the same source. According to this, the capital expenditure envisaged by SBI Caps (Consultants to the reform process) and actual capital expenditure till 2005-06 are as follows (Table 4.2):

Table: 4.2
Capital Expenditure by Discoms

Company	Capital expenditure Estimated for Five Years (2002-2007) Rs. Crores	Actual Expenditure (2002-2006) Rs. Crores
NDPL	310	1461
BRPL	353	2511
BYPL	358	1759

The report goes on to state that "the level of capital investments requested by companies, especially BRPL and BYPL are very large based on three measures. a) In comparison with the projections made by SBI Caps; b) In comparison with level of investments in another aggressively reforming state, Andhra Pradesh; c) In comparison with the net fixed assets of the companies at the beginning of privatization." (Page 5)

Here too, NDPL is considered to have performed better than the other two Discoms. In the same report, there is a mention about how physical verification by DERC and other means have prevented large increases in ARRs, especially by BRPL and BYPL.

3. Billing and Revenue Collection: This is directly related to reduction in AT&C Losses, and as we have pointed out, the report has favorably shown NDPL to be well ahead of the other two Discoms. There have also been some criticisms vis-à-vis BRPL and BYPL about major discrepancy in reporting of average billing rates from sub-categories of consumers and total revenue recoveries from these sub-categories.

4. Quality of Service: The metering and billing complaints have generally out shadowed efforts by Discoms including NDPL. It appears that there is really no quantitative backing to examine customer satisfaction to compare performance across the three different Discoms. However we would like to quote the following from Prayas, 2006: "the commission further pointed out that metering and billing problems were more acute in the case of BSES companies." (Page 10). That NDPL employees give importance to their customers is very well known from the entry "Concern for Consumers' in their surveys; an entry taken very seriously. It is interesting to note that the number of customers per employee for NDPL, in 2006-07, was 200. The corresponding numbers for the other two Discoms were around 300 and 500.

NDPL is also working with some of the world's best utilities such as China Light and Power and Baltimore Gas and Electric (BG&E) for sharing best practices. Some of the learnings have been converted to twenty eight projects under DRUM initiative. The projects include energy Accounting, Introduction of Ring Main Units, HVDS and packaged substation. Many of these efforts have already paid off. For instance, the SMS based Fault Management System was introduced after benchmarking efforts with MTTR and BG&E. Similarly the company is

in the process of introducing FIBRES, a system meant for market data analysis and competitive data/ information.

NDPL uses various avenues to identify, share and implement good practices. Some of the steps taken for identification, sharing and implementation of best practices are shown in Table 4.3.

Table: 4.3

Best Practices – Identification, Sharing and Implementation

Identification	Sharing	Implementation
National avenues – empanelling institutes & utilities, associations like CPU, CII, FEU, IEMA, PHDCCI, FICCI, ASSOCHAM etc. International Avenues – USEA, SARIE, AESIEAP, participation in CEOs conférence CEPSI etc.	Training programs & presentation organized at HRDI, CENPEID, Organization-wide mail by Administrator, Public folder etc. Revamping of internal communication group focus on people contact like grass root people are involved in a full time basis for sharing information. KRA of line managers are modified to include aspects communication and knowledge sharing	Based on identification of best practices CFTs and COPs (SEEKH) are created for implementation. Examples – SEVAK: Automatic cash collection machine, Prepaid electricity distribution HVDS etc.

While it would be incorrect to make a final judgment, it would be appropriate to state that NDPL has made a mark for itself as a company that has given a lead on creation of a high performing innovative company in this sector.

4.2. Open Access Policy

The Electricity Act of 2003 is a piece of legislation that has already shown a changing scenario for the Indian power sector. It is beginning to impact all the stakeholder groups. One of the key focus areas of this Act is the proposed introduction of Open Access System for all stages of the electricity value chain. The act will impact the nature of transmission and distribution infrastructure of which NDPL is a part. The new act would effectively bring about competition between and among private and public companies at all stages of the value chain including at the distribution levels.

With the implementation of Open Access System, select consumers group (large and industrial) will have the freedom to choose their supplier. This would require the existing power distribution utilities to understand the changing equations and be able to quickly adapt to the new business rules that a competitive environment demands. This would also signal a shift within power utilities, as someone quipped, from a 'connections' orientation to a 'customer' orientation.

With the Open Access System, the distribution companies would woo the consumers by attractive tariff packages and responsive services. Only attracting and retaining profitable customers shall spell survival and success for the distribution utilities. Customer satisfaction shall often depend upon several factors such as:

- Competitive and multiple tariff structure
- Supply of reliable and quality power
- Accuracy in metering and error-free billing
- Responsiveness to customer concerns and complaints
- Offer of complete package by utility providers to manage the entire power requirement cycle of larger consumers like hospitals, institutions, industry etc.

In order to reap the full benefits of the Open Access System, power utilities have to strategize their moves according to the changing dynamics of the market; for instance, to adopt a customer-centric business model there must be a restructuring of distribution companies. With the high competition expected due to the Open Access System the utilities must look for not only improvement their operational efficiencies, but also come alive to changing industry dynamics. This would mean, besides other things, innovations on the purchase side (for instance, trading in power, effectively buying power on the forward market etc.), as well as new ideas on the marketing side which would include new delivery models, far higher levels of service, relationship building and so on.

4.3. Multi Year Tariff Regime

The Initial Transition/ Control Period (2002 to 2007) was marked by efforts to lower AT&C Losses. The professed aim from a public policy perspective was to pass on the benefits of lowered AT&C Losses (and hence, higher collection) to the public through lower electricity

tariffs. In Delhi, admittedly, this did not happen. Lowering of AT&C Losses which Discoms achieved and higher collections did not mean a reduction in the actual tariff paid by the customer. In fact, to achieve reasonable return on investment, rates had to be hiked. This was so precisely because, along with AT&C Losses, the policy initiative also attempted to reduce the extent of subsidies and make the utilities more self-sustaining.

The extent of additional recovery that was possible through reduction in AT&C Losses was not sufficient to offset the extent of cross subsidization that used to take place. But we expect that the electricity rates to be stabilizing, and possibly going down in future. This goes to prove that it takes time for policy initiatives to stabilize. It took almost five years to overcome the negatives of massive subsidy (and inefficiency which was clocked under socialistic rhetoric).

Now the Multiyear Tariff System (MYT) has come into the fore. This would ensure setting up pre-specific performance targets and periodic costs adjustments for all major costs and performance elements. The Discoms are allowed to set in the initial and final values for certain foreseeable (controllable) parameters such as loss levels, salaries, repairs and maintenance etc. Less predicable (non-controllable) costs such as bulk power purchase costs are to be passed on to the customer through tariff adjustments. The DERC would review the position of the controllable parameters only at the end of the control period (now 2007 to 2011) and not within the control period. Thus, Discoms would be given longer period to work - in enhancing efficiency and not be disturbed by the annual tariff exercises. Uncontrollable parameters would be allowed automatic "pass throughs" during the period.

As a result, from April 1 2007, the Discoms have started buying power on their own instead of procuring it from DTL. Tata Power also plans to set up a 1,000 MW plant in Buland Shehar (UP), from which 600 MW power would be connected to Delhi. NDPL proposed a lower tariff by 9.5% compared to the other Discoms with the advent of Multi-Year Tariff regime, but due to lack of consensus among the three Discoms of Delhi, NDPL's consumer friendly proposal was not pursued by DERC. The MYT Regulations, 2007 specify AT&C loss level of 17% at the end of the Control Period (that is, March 2011)[3].

[3] In 2007-08 the actual figure was 23.74

Chapter: 5

Enterprise Level Support - Advantage through Tata Parenting

The mandate for NDPL leadership at the time of its formation was to show how the private sector would be able to bring proper management to the utility sector at the distribution end. This was a challenge. The incumbents from DVB inherited by NDPL were used to working in a typical government environment. Everyone was aware of the extent of inefficiency and corruption. Since retrenchment was not an option as per the agreement that NDPL signed with the Delhi government, it was essential to gain the confidence of the people involved, change their attitude and make them perform in collaboration with the new employees. All these things had to be carefully orchestrated by the management. The fact that Tatas had a history of collaborative culture with the trade union truly helped. The trade union leaders and other opinion makers from DVB legacy were taken on a trip to Tata Steel in Jamshedpur. This was a major eye-opener for the visitors. Harmonious IR was also facilitated by ideas enshrined in Quality and Ethics guidelines from the Tata Group. This included programs such as 'Tata Business Excellence Model (TBEM)', 'Management of Business Ethics (MBE)', 'Tata Protocol on Corporate Sustainability' and 'Corporate Governance Assessment Guidelines'.

5.1 Simultaneous Promotion of Social and Business Objectives

While all business endeavors have to balance economic sustainability and social raison d'etre. Being an electric utility, these efforts has their own peculiarities. With monopolies, which are what electric utilities are for the most part, such effort is even more critical. The mandate for the management includes healthy returns on investments as well as a socially sensitive management orientation. After all power is an essential service that has to reach the masses at affordable rates. For NDPL this task is even more difficult because there were no precedence to go by and the regulatory framework is still at an infancy stage.

As it is, it is difficult to manage these competing requirements. Things were made even more difficult due to the fact that NDPL had to continue from a dire state of affairs. Under these circumstances, leadership at NDPL had a major task in addressing performance issues. Here some of the major aspects of top management leadership are discussed.

"The ethos of a culture comes close to what the historians and philosophers call values of a culture", says Mr. V. C. Mathur at a training session to the executives at the CENPEID. In other words, the distinctive feature of Tata culture is one of values, social orientation and profits as the result of efficient and lawful utilization of resources. Viewed this way profit can be nothing but economic sustainability.

5.2 Governance Mechanisms

The Ethics policy helps NDPL to institutionalize ethics as part of NDPL's organizational culture. The Chief Ethics Officer is the CEO himself. This is followed by the Principal Ethics Officer (PEO) who in turn is supported by Locational Ethics Councilors. There are twelve Locational Ethics Counselors who are assigned various locations within the organization thus covering 100% of all employees. Every month the PEO makes a consolidated report of all the ethical issues faced at all the locations and this is submitted to the CEO for review and action planning. Some of the recent process improvements in the governance area are listed in Table 5.1 below.

Table: 5.1

Recent Process Improvements for Improved Governance

	Earlier Process	**Modified Process**	**Need for Change**
1	Employee concerns not related to ethical issues were not considered by the Ethics committee and hence discarded	Ethics committee communicates the decision to the employee and suggests an appropriate forum for addressing or his or her issue	Majority of the concerns being received by the Ethics committee pertained to HR related grievances such as promotion etc.
2	Highest level of escalation as per the structure is the Chief Ethics Officer Counselor who is the CEO of the organization	Employees have the option of reporting any ethical breach by the senior leadership directly to the Board of Directors. The recent decision has ensured that Ethical concerns are reviewed quarterly by the Board	Multi pronged approach is better than one standardized means to address ethical issues
3	Business Associates could raise their concerns by sending emails to PEO directly	If any ethics related issue is raised at JIFs, the forum passes it to the Ethics Committee	To maintain confidentiality and wider reach of issues concerning ethics

NDPL has sponsored several Lok Adalats which have been instrumental in resolving thousands of cases. According to Mr. Ghosh, a testimony of NDPL's success in this area is borne by recent letter by the power secretary, Mr. R. V. Shahi, to state power secretaries and heads of institutions dealing with power. This letter urges other states to adopt the NDPL approach to dispute resolutions.

Mr. Sunil Wadhwa, currently the CEO and formerly the CFO, in one of the earlier interviews, pointed out the effectiveness of Lok Adalats. According to him over 10,000 cases were pending of which over 95 percent had to do with customers. Several Crores worth claims has been settled since its inception a few years ago. A total of 42 Crores were settled out of 200-300 Crores at the time of takeover. These were all done with the help of Lok Adalat. In 2005-06 alone 1800 cases were settled. The cases were settled by having only two options for settlement – either 70% or 100% of the claim involved. This ensured speedy decisions devoid of haggling. During this time many legal officers of DVB had to be dismissed as the legal department was a hotbed of corruption.

Structurally too there were problems. Some of the outsourced activities were inadequately controlled and were the targets of much corruptive influence. Here are some revelatory words from Mr. R. C. Kher, former GM (Commercial) and currently Advisor (Commercial), who had witnessed malpractices from close quarters:

> We had some workforce, mainly outsourced personnel, who, out of their greed would connive with consumers, and get into malpractices. The Vigilance Department has always been prompt to find out such malpractices and we have taken appropriate actions in all such cases without exception. In many cases, we also got undue pressure to relinquish enforcement cases against unscrupulous consumers who were found to be involved in theft/ meter tempering, etc. But neither management nor employees in general budged. Our adherence to our core values of integrity, unity and responsibility towards society and consumers at large have been the driving force in our management of conduct and processes.

5.3 Tata Business Excellence Model

Tata Business Excellence Model (TBEM) is a framework to attain superior performance (Results) for all stakeholders through deployment and continuous improvements in various approaches (Processes) of the organization. The level of excellence of a Tata company is evaluated by scores attained in the TBEM Assessment, whereby 550 maximum marks are

possible for 'Processes' (under 6 Categories) and 450 maximum marks are possible for 'Results' (under 1 Category and 6 sub-categories). TBEM in NDPL is championed by Business Excellence Group (BEG). This compact group has a decisive presence across various departments in the organization which ensures that the idea of "Business Excellence" is imbibed by all organizational members. Says Mr. Uday Mishra, HOG (BE) & CQH,

> TBEM is more than quality, per se. TBEM gives a framework for being world class and our role is to facilitate deployment of appropriate culture, systems and processes so that every employee is engaged in the business excellence journey. Our next milestone is to qualify for the coveted 'JRD QV Award', given to companies scoring 600+ for the first time.

TBEM framework is concerned with various aspects of the organization. While it does not mandate any specific results, it seeks to make the organization conscious of its own previous commitments on various organizational aspects such as the extent to which planned results have been achieved, the effectiveness of the structure and processes instituted in the firm, the commitment of senior, middle and junior management on the committed processes, the extent to which continuous improvement is being achieved, the vibrancy with which change initiatives are being pursued etc. TBEM is designed to deliver quality results to the customer, create the appropriate processes, and create organizational and personal learning.

TBEM is an adaptation of the well-known Malcolm Baldridge Model of Business Excellence used for formulation and implementation of organizational self-assessment and improvements in all Tata companies. At the Tata Group level this is administered by Tata Quality Management Services (TQMS), which is a division of Tata Sons Limited. TBEM is a corporate tool for Tata group companies to reward performance, create friendly competition and exchange good practices within the Tata companies. According to official Tata site, www.tata.com TBEM also plays three important supportive roles in strengthening the competitiveness of Tata companies. They are cited to be:

- It helps improve business excellence practices, capabilities and results.
- It facilitates communication and sharing of best practices among Tata companies.
- It serves as a working tool for understanding and managing performance, for providing planning guidance, and for identifying learning opportunities.

For using Tata nomenclature, group companies have to sign a contract called the Brand Equity and Business Promotion (BEBP) agreement with the parent company. By using the Tata nomenclature the company is obliged to adopt the TBEM in developing business leadership. The BEBP contract forces the businesses to seek business excellence with specific time frames. Through a system such as this it becomes possible for businesses to track their progress over time and ensure that improvements are made over time.

One interesting aspect of TBEM is the incorporation of ethics and governance issues in the framework, besides incorporation of other issues such as quality, performance and institution of superior processes in the participating businesses. While TBEM itself contains ethics issues, there is also, separately a Tata Code of Conduct that needs to be followed by all the Tata group companies. According to TBEM documents the framework is "embodied in seven categories, totaling maximum 1000 marks: Leadership (120); Strategic planning (85); Customer and market focus (85); Measurement, analysis and knowledge management (90); Workforce focus (85); Process management (85); and Business Results (450)." The results incorporate diverse set of stakeholders and emphasize "Customer-focused outcomes, Product & service outcomes; Financial & market outcomes, Workforce-focused outcomes, Process effectiveness outcomes, Leadership outcomes (Governance & social responsibility, etc.).

There is an annual process of assessment wherein the firms complete an application process using the structured TBEM methodology. The applications are assessed by trained assessors. They also make field visits and talk to a cross section of employees. TBEM is a fine example of a self-corrective mechanism. It includes a module of how the company organizational members perceive the model and the progress made by it in scaling up over a period of time. The model thereby recognizes the power of intent and attitudes in achieving superior performance. Here are some comments from CEO, Mr. Sunil Wadhwa:

> TBEM is an overarching framework for whatever better and best we want to do at NDPL. It is important for the organization to understand and appreciate its strengths and opportunities for improvements, as highlighted in TBEM Assessment. Consistent focus by senior leadership and involvement of employees across levels and functions has helped us make fast strides during the last 12 months in our TBEM journey. It would be interesting for you to know that even our linesmen know basic things and purpose of TBEM. Though JRD QV Award is our immediate goal, our real achievement would be when TBEM becomes part of our daily life and organizational DNA.

TBEM methodology is a “living” framework that is constantly enriched by the recent developments in best global processes and practices. TQMS, on the other hand, helps and guides Tata companies, including NDPL, to achieve global standards of quality. TQMS, on its part, also trains and certifies assessors who are selected from across the group. The point person in NDPL is the 'Corporate Quality Head' (CQH), nominated by the CEO as the process owner and driver of Business Excellence.

Through TBEM assessment the team members in the role of External Assessors get a very insightful exposure to the good practices of other companies and it helps them in replicating the adopted processes/ practices in the organization. While NDPL has been able to create a pool of around forty certified and active Assessors (internal + external), eighteen of them have been involved in the external TBEM assessment of other Tata Group companies during the last two years.

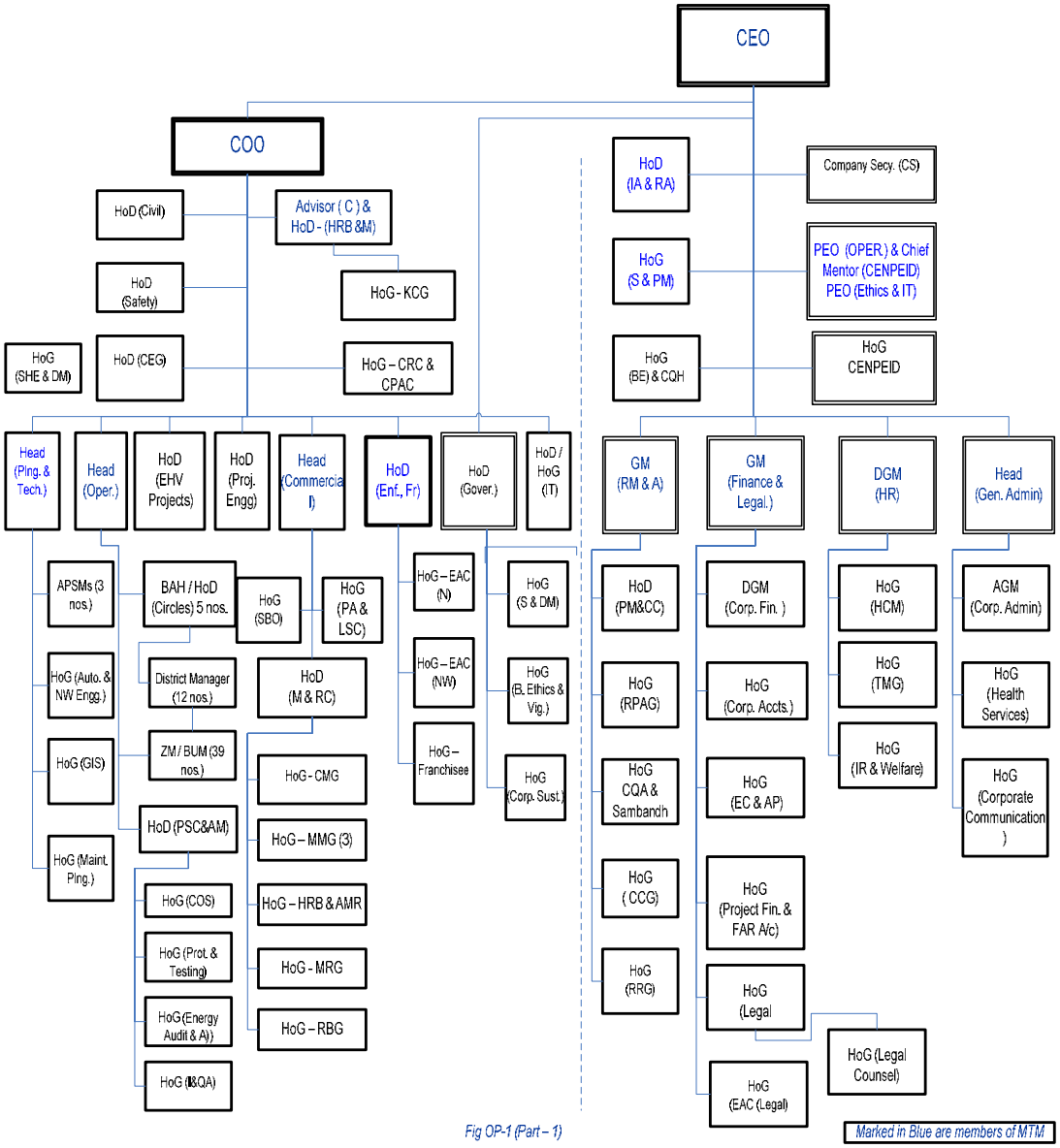
5.4 Top Management Team

The performance of the company is directed, supervised and controlled by the Board of Directors (BOD), currently comprising of ten members – with one member being Executive Director (CEO) and nine others being Non Executive Directors, who bring in a wide range of skills and experience to the board. While six members are nominees of Tata Power, four members are nominated by DPCL. In order to focus on important issues and ensure resolution of diverse matters, the BOD has constituted a set of Committees with specific terms of reference/ scope.

The company’s management is led by sixteen members apex team called Management Team Members (MTM) and is headed by CEO. All the functional heads are part of MTM. Figure 5.1 shows the organizational chart.

Figure: 5.1

Organizational Chart



The chart only shows the reporting in the hierarchical sense. Besides this, there are two other forms of inter-linkages between various roles/ individuals. These two forms are a) matrix reporting required for process deliveries and b) mentoring required for skill and knowledge development. Through such complex channels of communication and mutuality, relationships between organizational members evolve to transcend ordinary boss-subordinate relationships. Such a design gives rise to a rich network in which individual responsibility and authority do

not get fixed rigidly, but are flexible enough to deliver organizational goals while at the same time ensure achievement of individual effectiveness and growth.

But such a structure also creates complexity in terms of having "multiple" bosses to report to etc., and NDPL's solution to such challenge is proper communication and mutual understanding.

It may be mentioned that NDPL is one of the few companies in India to recognize the value of 'Whistle Blowing". It has a "Whistle Blower" Policy to encourage employees to report what they think may be wrong, or bring to notice any less-than-honorable practices while protecting one's identity. Cyber ethics disdain employees from misuse of the company property – laptops, printers, email etc. – for personal use.

5.5 Role of Top management in development of VMV

The top management team was involved in creation of NDPL's Vision-Mission-Value (VMV) through elaborate deliberation on the strategic challenges, assessment of changing business environment, and analysis of critical success factors through a three-day workshop in 2003. These deliberations constantly reinforce the ways and means of incorporating Tata ethos in to the purpose and values of the firm.

VMV reflects both the belief and value systems of the firm as well as the need for responding proactively to changes in the environment. For instance, with the end of the initial control period in March 2007, and in April 2008, with the announcement of Multi-Year Tariff regulation, VMV was again looked into and responses from the various stakeholders were taken to understand its relevance with the current and future business scenarios. The sustainability of the business is performed through parameterization into district level KPIs. These are further broken down into the Functional Department KPIs and then aligned to the JD/ KRAs of each employee. Thus all key deliverables are evaluated and on this basis, the long term and short term plans are monitored.

Chapter 6

Strategic Management

Here we first discuss the Vision-Mission-Values statements and the way the vision has been parameterized. Next the strategic planning process is discussed.

6.1. Vision-Mission-Values

For creation of a purposive culture in the organization and generation of superlative performance, it is generally understood that the organization should start with a deeper understanding of its Vision, Mission and Value (VMV) – whether explicitly stated or not. For larger professional organizations, an explicit definition is usually called for and NDPL is no exception. VMV form a triad that gives the underlying raison d'être for the organization.

6.1.1 Vision

The current Vision of NDPL is:

> To be the most trusted and admired provider of reliable and competitive power, and to be the company of choice for all stakeholders

It is quite interesting to note that NDPL has changed its Vision in 2008 to the above one. The new vision emerged from detailed deliberations. The new statements reflect the importance attached to all stakeholders and the importance attached to relationship building through trust.

6.1.2 Mission

NDPL mission is to:

- Deliver quality and cost-effective electricity
- Ensure excellence in consumer care
- Create a work environment which encourages safety, teamwork, learning and innovation
- Meet or exceed all stakeholder expectations
- Enrich quality of life in the society we work in

6.1.3 Values

Core values of NDPL are:

- Integrity: Fair and transparent conduct of business
- Understanding: Caring, respectful and being compassionate towards our consumers, colleagues and society
- Excellence: Striving to achieve highest possible standards
- Unity: Working cohesively with colleagues
- Responsibility: Being sensitive towards safety, communities and environment

6.1.4. Parameterization of VMV Statement

Many a time VMV statement remains a rhetoric but not so in case of NDPL. To create awareness and major progress on deployment of VMV, NDPL has parameterized it into measurable and tangible targets and indices. Table 6.1 below shows how, in NDPL's case, parameterization of the VMV Statement is achieved by use of illustrative measures used for defining and assessing performance.

Table: 6.1
Parameterization of Vision to Measurable Indices

Deliverable as per Vision-Mission statement	**Indices to capture Deliverables**	**Unit**	**Present status FY-07-08**	**Targeted (FY-11-12)**
Preferred Provider	Consumer Satisfaction Index	%	73	90
Reliable Supply (including the entire spectrum of power services from supply to billing and collection)	SAIDI	Hours	6.19	5
	CAIDI	Hours	0.93	< 1.00
	SAIFI	No.	6.63	5
Competitive Power	AT&C Losses	%	18.5	13.0
Favored company to work for	Employee Satisfaction		65	75

The above Table is illustrative and is provided to only illustrate how the Vision is parameterized. In other words, it is not a complete list of performance measures. Later in "Measurement and Performance", a more detailed list of Key Performance Indicators (KPI) is

provided. It may be noticed in the above Table that the target for AT&C Losses set by DERC is 17% for 2010-11. However, the internal target for NDPL for the same is more ambitious.

6.1.5 Yearly Themes

Every year there is a theme that is emphasized. The themes during the last four years are discussed below. There are several annual initiatives that focus on achieving excellence in performance. Year-wise details are shown below:

- 2003: Parivartan – Change Management: The focus here was on employee development and customer orientation, Integration of the two work forces, and training.
- 2004: Elimination of Electricity Theft: Initiatives were taken to convert the network to incorporating "anti-theft" technologies such as HVDS, LT ABC technologies. There were mass meter replacements and enforcement activities.
- 2005: Performance Consolidation: Having achieved loss reduction targets and supply reliability, the next step was benchmarking against performers.
- 2006: Project Last and Performance Assurance: Emphasis was on low tension network – employee accountability and responsibility to consumers through redressing of complaints, timeliness etc.
- 2007: Performance Assurance: Mapping the internal processes to comply with DERC Performance Assurance Standards and satisfy the consumers with timeline-based delivery.
- 2008: Maturity & Self Sustenance: After having come out of the Control Period and moving into the next phase of MYT, NDPL is now required to manage sourcing of bulk power. This aspect is emphasized by "Self Sustenance". Along with this, the company is also emphasizing on building a culture of "Maturity" defined in terms of Ownership, Accountability and Speedy Execution of duties and tasks.

The interesting aspect of defining and reinforcing a theme is that not only would that theme get importance, but also those factors (or drivers) that are important to uphold these themes. Therefore, NDPL's six-year journey may have meant different things to different people! For those who joined recently it means one thing while for those who have seen the situation in

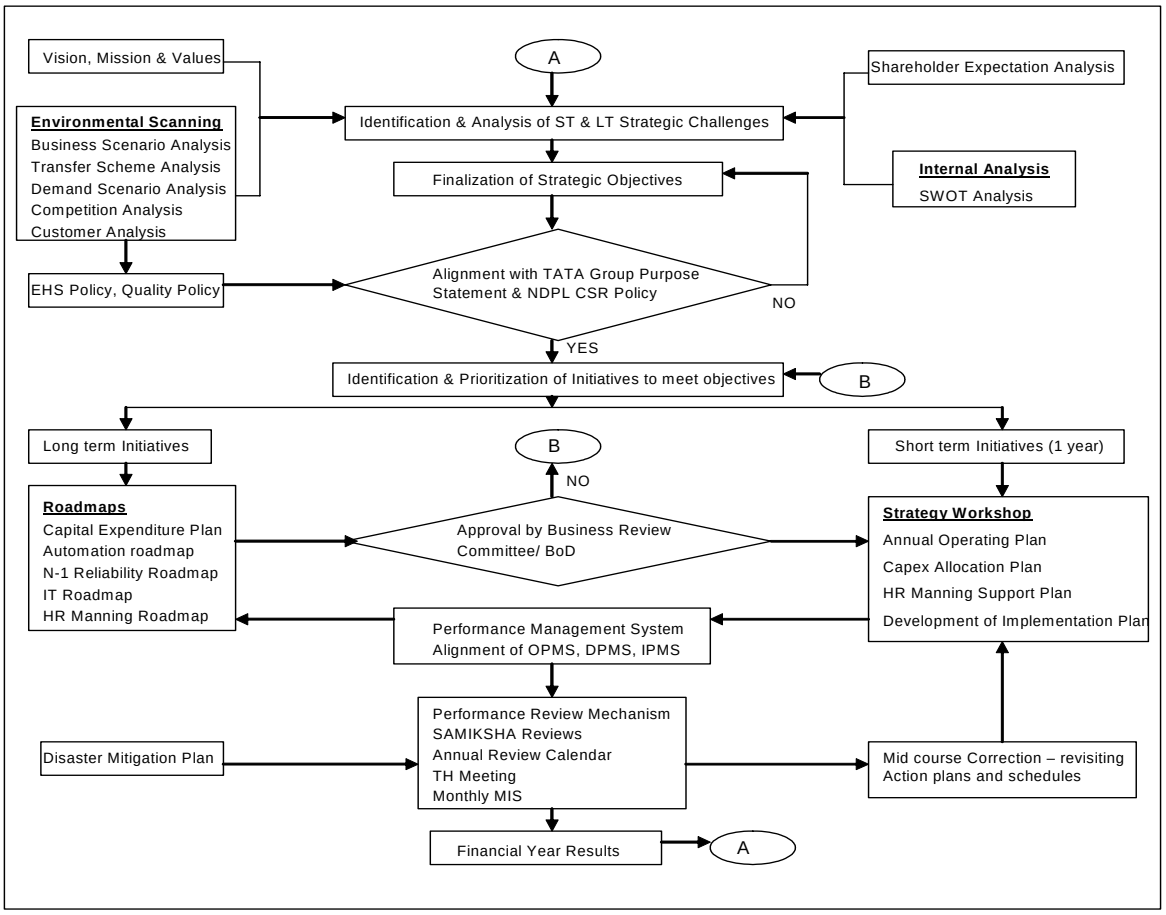
the beginning, the themes are about a sense of continued momentum to the change process. Consider the comments of Mr. S.N. Pandey, an ex-Director of Tata Steel and currently Advisor to NDPL,

> Year 2007-08 has been one of cordiality and harmony. There was no confrontation, demonstration or any bitter incident. Unions have responded very positively. There has been greater sense of cultural integration and assimilation.
>
> While we take pride in our achievement of reducing AT&C Loss to 18% level, for me, more delighting is the fact that quality of life has improved at NDPL in the last 12-15 months. Work environment has improved and people are enjoying their work. The intra/ inter group conflicts have disappeared. Better working relationships and higher level of commitment have come to surface. Passion to perform and excel is visible across the organization.

6.2 The Strategic Planning Process

Figure 6.1 below shows how strategic planning process is carried out in NDPL.

Figure: 6.1
Strategy Development and Deployment Process



The strategy development process is strengthened by inputs from international consultants such as McKinsey, TQMS consultants and various rounds of internal discussions among Functional Heads, HODs, and HOGs from all functions and groups.

In moving from VMV to action and performance, the next step for NDPL was to identify the challenges that the firm faces. Nine challenges were identified as follows (Table 6.2) which were either at the business or operational levels.

Table: 6.2
Strategic Challenges

S. No.	Type of Challenges	Challenges
1	Business Challenges	Power Availability at competitive const
2	Business Challenge	Reduction in AT&C Losses (overachievement of regulatory requirements)
3		Uninterrupted and quality power supply
4		Enhancing public perception with regard to service delivery
5		Regulatory uncertainty
6	Operational Challenge	Performance based regulation
7		Cost control in line with MYT targets
8		Competitive Scenario with respect to high-end consumers
9	HR challenges	Cost savings vis-à-vis quality manpower

These nine challenges were distilled out after much analysis and thoughtful discussions. There were several inputs to this, all part of the Strategic Planning Process. These inputs included Environmental Scanning, Transfer Scheme Analysis, SWOT Analysis etc. In Annexure 3 we show how the above "challenges" helped develop the Strategic objectives for further action.

Next these objectives had to be aligned with Tata Group Purpose Statement and NDPL's Corporate Sustainability policy. Further, the objectives have to be converted to specific initiatives so as to actualize the objectives. These initiatives are divided into long term initiatives and short term initiatives. The former consists of Capex Expenditure Plan, IT Roadmap, HR Manning Plan etc have to be approved by the Business Review Committee and the Board of Directors. Based on this approval, Annual Operating Plans (AOP), Capex Allocation Plans etc. that account for short-term initiatives too are developed.

At the plan level the initiatives have to be parameterized to measurable goals to determine KPI of the Organizational Performance Management System (OPMS), Departmental Performance Management System (DPMS) and Individual Performance System (IPMS). The initiatives are then converted to plans with specified goals.

The feedback loop (please see Diagram 6.1) ensures tracking of performance. This is a key role for top management and is done through various review meetings christened as SAMIKSHA. This includes Management Team Meeting (MTM), Customer Review Management (CRM), Infrastructure Review Meeting (IRM), and Network Review Meeting (NRM) planned through Annual Review Calendar (ARC). Please refer to Section 6.3.2 for details. Improvement initiatives are identified and implemented through Apex Committees, Cross Functional Teams (CFTs), Task Forces and SHINE teams. These improvements are tracked through Action Taken Reports (ATRs), MIS of SHINE and IMS records.

It may be mentioned that at the time of the takeover, there was hardly any strategic planning process or the structure required to perform the planning process. In such a context, senior leadership, after takeover, was constrained to carry out a top-down planning process which over the years has evolved towards a far greater decentralized planning process. In other words in the initial phase, planning was restricted to Board of Directors (BoD), Business Review Committee (BRC), and those belonging to top management. Decentralization has been possible with evolution of a better culture of trust, clarity of objectives, role definition, their communication and a sense of collective destiny. While there is still a dominant role for BRC, BoD and top management in setting the guiding principles, strategic objectives for the long term and detailed strategic initiatives for the short term are identified and evaluated every year with the participation of Functional and Departmental Heads, District Managers, Zonal Managers, and Process Owners. Their participation occurs at the annual Strategy Workshops and Functional Excellence Workshops.

Strategic Planning Process addresses various constraints of being in a utility sector that is highly regulated. For instance, price cap puts control on the top line. The sourcing too used to be controlled which is now decontrolled, post-2007. With the Open Access Policy the company now has flexibility to shop around for power. These factors in different degrees constrain NDPL to expand market or introduce innovative pricing schemes etc. – ways and means generally adopted by firms operating in free markets.

NDPL has defined five years as long term and one year as short term planning horizons. It has adopted five years as the long term planning cycle in keeping with the government norms; Tariff policy and planning cycle followed by CEA, EPS and GoI's five-year plans.

Right now the company does not have any competition and the Strategic Planning Process does not have to consider this otherwise important dimension. But in future it is likely that the firm faces competition as well as new markets/ customers/ opportunities. NDPL Strategic Planning Process (SPP) is designed to take care of future developments.

6.3. Measurement and Performance

This section highlights what key performance parameters are, how they are developed, made acceptable across the organization, measured and monitored. Earlier, in the Chapter we discussed how the VMV statement threw up first Strategic Challenges followed by Objectives, Initiatives and Goals in that order. Using the Balanced Score Card (BSC) approach the firm has been able to measure, monitor and create performance in a sustainable manner. Performance is defined in terms of four perspectives, viz., Shareholders, Regulator, Consumer and Employees. The next four Tables (6.3 to 6.6) show Performance measures that track goals for these four stakeholders. The first column in these Tables shows numbers that correspond with the Strategic Initiatives that were discussed earlier.

Table: 6.3
Performance Vis-à-vis Shareholder

Strategic Initiative	Measures	Units	FY 04	ST Proj. FY 07	LT Proj. FY 10
2,3	EVA	Rs. Mil	115	197	159
8	Vulnerability Share Index	%	21	16	14
8	Brand Valuation Index	%	74	75	78
5,6,7	% policies approved	%	55	65	70
1	Revenue loss due to outages	Rs. Mil	135	135	100
1,2	EADCI	Days	16	16	12
1,2	PADCI	Days	62	90	75

Table: 6.4
Performance Vis-à-vis Regulator

Strategic Initiative	Measures	Units	FY 04	ST Proj. FY 07	LT Proj. FY 10
2,3	AT & C losses	Units	44.9	23	17

Table: 6.5
Performance Vis-à-vis Consumer

Strategic Initiative	Measures	Units	FY 04	FY 05	ST. Proj. FY 07	LT. Proj. FY 10
4	Fixed cost of network per unit input	Rs./ Kwh	0.28	0.34	0.52	0.50
4	Cost of power purchase per unit input	Rs./ Kwh	1.56	1.99	2.19	2.66
4	Cost to serve per unit input	Rs./ Kwh	2.11	2.65	2.97	3.45
8	Consumer Satisfaction Index	%	73	71	73	80
1	SAIDI	Hours	36	23.6	6.9	5
1	CAIDI	Hours	2	1.87	1.3	< 1.0
1	SAIFI	Nos.	18	12.6	5.2	< 5.0
9	Average Days of energization of new connections	Days	36.5	26.4	9	5
9	Provisional billing	%	25	14.32	1.81	< 1.0

Table: 6.6
Performance Vis-à-vis Employees

Strategic Initiative	Measure	Units	FY 04	FY 07	LT Proj. FY 10
11	Employee Satisfaction Index	%	60.1	65	75
10	Training mandays	Days	2968	16319	20000
11	GIF/ LGIE issues addressed	%	71*	89	97**

* For 2005-06
** For 2007-08

Performance of various functions/ departments/ groups is measured through BSC measures, KPIs and MIS measures all of which are monitored at periodic intervals of weeks, months or quarters. There is also a comparative assessment between the various departments with reference to the laid down KPIs. This is done using the Departmental Performance Scorecards (DPMS). DPMS covers nearly 90% of the workforce. The departmental KPIs are

further aligned to the JD/ KRAs of each employed up to the executive level as part of IPMS. Currently a CFT is working on including the remaining 10% of the workforce into the measurement system. It may be noted that the key deliverables are both long and short term oriented.

Talking of the performance system and the way it has evolved over time, Mr. Puneet Munjal, AGM (Finance), a key member involved in development of strategy & performance management system, commented:

> From the very beginning various performance Score Cards and MIS were put in place to monitor and review that we are moving in the right direction. The daily Flash Report was such a wonderful tool in the hands of senior management to see and work upon what all was going on in the organization on key issues. Today we see that management's earnest focus to set the 'right direction' has matured in terms of BSC (Balanced Score Card). The way it has matured in the last 2 years (2007 & 2008) is there for all to see. Even TBEM Assessors had praised our focus on performance management.

There are also Daily Flash reports that track the overall performance of company operations. The factors that are tracked on a daily basis are detailed in Table: 7.2. On the basis of these daily data urgent actions, wherever required, are taken by the process owners on priority basis. The feedback mechanism and the means to correct the situation are built into the system.

6.3.1. Creation of a Performance Culture

Performance of a company depends a lot on how committed the employees are to the organization's guiding principles. To ensure that the Vision-Mission-Values keep getting refreshed in the employees' minds so that they are encouraged to follow these guidelines, VMV boards are clearly displayed at each office. They are also incorporated in the personal diaries and are displayed in rotation as screen savers in each computer and as email footers.

For wider dissemination amongst business associates, NDPL Vision and Mission have been incorporated in the GCC itself. There are also regular surveys conducted to assess the extent of awareness of VMV across the organization and take possible action wherever required.

Concurrently NDPL is also implementing BSC. The SAP SEM module helps align the BSC scorecards with the performance scores through the DPMS.

Creation of performance is ensured by engaging employees in various improvement initiatives. This is facilitated by ongoing training programs on quality, process deployment, leadership development etc. External exposure to employees is also ensured through participation in seminars/ conferences and visits to other organizations in India and abroad. SHINE[4]/ MyCO initiatives, presentation by CFTs, Mission 9X9, Project 'Aashwashan", improvements based on Assessment Feedback Reports of TBEM and CII-EXIM awards are avenues for various forms of employee engagement and performance improvement.

There is also an annual performance review system where performance of employees is discussed with them and overall performance assessed. The provisions of 'variable' salary and bonus linked to performance of individuals encourage people to contribute their best. Weightage is also given to employee contribution to innovations/ improvements and knowledge dissemination. Some examples of employee suggestions that have helped introduce innovations as shown below:

1. As a result of the suggestion that Electricity should be treated just as another exchangeable commodity, a scheme christened as URJA was launched. This is a Gift electricity scheme through which consumers can buy gift vouchers from NDPL and gift them to third parties which they can redeem against electricity bills.

2. Suggestions for the reduction of MTTR led to a SMS based Fault Management System, wherein complaints logged by consumers at Call Centers are forwarded to Linemen directly through SMS. Further it is ensured that the steps taken up to redress the complaint are monitored so that complaint closure is affected on the system. The close loop systems ensure proper monitoring.

3. Some employees suggested that Customer Care should ensure that there should be a hassle-free connection management process. To achieve this, initiatives were undertaken for home delivery of new connections and other services. As a part of this initiative,

[4] SHINE is a scheme to engage workforce in improvement/ innovation projects. Before the inception of SHINE in September 2007, MyCO Scheme was running since April 2006.

NDPL field service executives visit consumers on getting calls at Call Centers, get all relevant documentation completed, and inspect new connections. Apart from this, GIS/ GPS controlled vans install the services with delivery of meters in sealed and bar coded packages.

4. Automatic Meter Reading (AMR) was introduced which was based on GSM mobile technology. This enabled remote collection of meter reading including pointers towards meter tampering. According to Mr. Arup Ghosh, initially the quality of billing was poor. Meters were not accurate and there were inaccuracies in the billing databases, the software was not robust and there were human resource problems with ethical issues which led to deferred revenues as also cost, time and money.

   It was found that there was incompatibility between software required for different brands/types of meters while introducing AMR. To ensure compatibility across different brands/types of common software which can communicate with all types of brands was developed by NDPL and introduced in the field. This technology has been proposed for patenting by NDPL. There was also an issue of availability of modems since no supplier was actually manufacturing and selling these products. The company finally got certain modem manufacturers to undertake design and manufacture them. NDPL worked closely with the manufacturers to standardize the use of software and hardware compatibility. Convincing the high-end consumers was a challenging task for NDPL to make them switch to AMR system. NDPL took many initiatives like media, politicians and industry associations and sought support on grounds of accurate billing to consumers. They also had to negotiate with GSM network providers for competitive rates.

5. There were concerns about the widening demand-supply gap, and the need was being felt for increasing focus on conservation of energy. An innovative concept of energy conservation through school children (NDPL Energy Clubs) was introduced. As a result of this, about 12,500 students have already been given exposure to ideals of energy conservation.

6. Promotion of innovative culture at NDPL has brought about the ‘Mission 9x9’ theme. The employees are motivated to put all efforts possible to reduce the AT&C Losses to 9% by Dec 2009. Such a target set is aimed to provoke employees bring up innovative ideas

to achieve them. “When you know that such targets are to be achieved, you work more towards it. After all many ideas come under pressure-cooker situation”, contends Mr. S. K. Saini, the process owner of Mission 9X9.

6.3.2. Performance Review

To ensure that there is proper monitoring of performance there have been several initiatives. Table 6.7 shown below gives details of Performance Review structure through SAMIKSHA.

Table: 6.7
Performance Review Structure through SAMIKSHA

Name of the Meeting	Participants	Agenda
MTM	CEO, COO, Senior Advisors, all HODs comprising MTM	Corporate BSC Reviews, Org Policy Issues, Business Excellence, Cross Functional issues
IRM	COO, Members of MTM, HOD (CE&C), HOD (Governance), concerned department	Infrastructure issues Security, Training, Administration
CRM	COO, Head Commercial, MTM members, Circle Heads, Concerned Dept.	Commercial BSC Review, Commercial Issues.
NRM	COO, Head Operations, MTM members, Circle heads, concerned ZMs	Operations BSC Review, Operational Issues, District/ Zonal Scorecard Review Performance
FRM	Functional Heads and respective departmental HOGs	Group Performance Review
ORT/PRT/CRT	Head Operations, Circle Heads, Concerend ZMs	Circle, district specific issues

The scorecards are announced through the central Administrator to ensure it is widely communicated to all employees across the organization. The achievements and challenges are highlighted and the best performers are rewarded in quarterly and annual events.

The whole system can be thought of in terms of levels of aggregation with a 4-tier Performance Management System emerging now. At the top level is the Organizational Performance Management System (OPMS) which operates at the corporate level. The performance indicators here are driven down or disaggregated to those at functional level

where the performance system is designated as Departmental Performance Management System (DPMS). The OPMS & DPMS has now evolved to include Balanced Score Card (BSC) framework. The next level is at the "group" or "departmental" level where performance is monitored through various MIS and 'Score Cards' (for zones, districts, grids, etc.). Next level of disaggregation is at the final individual level where the Individual Performance Management System (IPMS) tracks the employee's contributions through monitoring of Key Result Areas, that is part of the individual performance appraisal.

NDPL has ensured that the whole system is more about "performance management" rather than "performance evaluation". The scorecards and measures are slowly emerging rather than be something that are hastily put in place as fixed structural "givens". The bigger philosophy right now is to drive down responsibilities and accountabilities towards lower down the organizational pyramid so that more and more important decisions and accountabilities are assumed at levels relatively lower than where they right now reside. In such a scheme of affairs, assumption of more weighty responsibilities and successful execution of those tasks become more important than evaluation per se!

The fact that these performance enhancing devices are not merely evaluation tools is borne by the Performance Management system having been able to identify certain needs while being implemented such as the following:

1. The condition of Electric poles and other installations on the roads was poor. To tackle this issue, a project called Project Pole Cleaning was launched.
2. Another problem was that of meter installation process gaps. Meter Management group (MMG) was restructured to take care of this.
3. Through 'Improvement Projects on Website' suggestions were sought for website improvement and these were implemented.
4. Focus Group Discussion of MRG, IT, and RBG, a need for continuous updation and upgradation of billing information was felt As a result of the initiatives taken up after this, provisional billing was brought down to from 22% to 3.88%!
5. There was an 'Improvement Project' on DPMS. It was found that there was customer dissatisfaction due to provisional billing. Special employee training was undertaken to deal with cases of provisional billing and means of bringing them on to the system on a real-time basis.

6. Through a task force on Encyclopedia of Internal documents repository, it was found that there is difficulty in locating files in public folder/other folders. To overcome this problem, user friendly front-end was established to locate any file in the system.
7. Through a CFT on Energy Audit, several process gaps were identified. This enabled the certain process to be streamlined and energy savings.
8. A taskforce on standardization of equipment was constituted and certain steps were taken for streamlining procurement and better control on inventory.
9. Through a Special Cell for Consumer Account Cleaning, various disputes and consumer complaints of past arrears, inaccurate consumer data on addresses and security deposits were identified. Accounts are now being "site" verified, cleaned and templated.

6.4. Organizational Issues

The various functions have to be coordinated for delivery of value to the diverse set of stakeholders. In NDPL this coordination is not achieved through traditional hierarchy – one that is based on functional specialization - alone. Coordination of specialization of functions and value delivery is made by pre-determined processes; in other words, between functional excellence and value delivery "sit" processes.

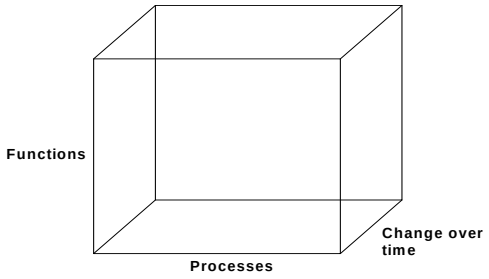
Process orientation helps achieve results without the functional specializations coming in the way of delivery of timely and comprehensive services. Here we discuss how the company achieves integration of activities across various functions through process orientation.

6.4.1. Value Creation

Two Key Value Creation Processes are 1) Networks Operations and Management (NO&M) that delivers power to customers and 2) Revenue Cycle Management (RCM) Process that ensure economic sustainability and financial performance. These processes have to be delivered with reliability, timeliness, high quality etc. There are also corresponding 'In-process' (Lead) Measures and Performance Outcome (Lag) Measures. The difference between the two is that, In-process Measures are technical in nature and cause enhancement of process outcomes, which in many cases are also KPIs for BSC.

Conceptually, the function/ process dynamics can be thought of as two dimensions shown in the following diagram. A third dimension is "Change Orientation" also comes into play in the workings of the firm. Changes over a period of time get incorporated to fine-tuning of the functions and processes as time passes. These changes can be thought of as incremental learnings that functions and processes incorporate into their workings over time. Please see below where Fig. 6.2 gives a diagrammatic representation of the changes over time.

Figure 6.2
Dynamics of Function-Process



To purpose of looking at the working of NDPL through a framework helps us see how results are achieved in the organization. Let us look at the three dimensions of functions, processes and change over time and their interactions in the discussion below.

6.4.2. Functions

There are many functions and sub-functions that are instrumental in making NDPL what it is today. A more detailed list of functions is provided below:

1. Project Engineering and Procurement
2. Operations
3. Commercial
4. Finance
5. Human Resources
6. CEO Cell (BE Group, S&PM Group, IA&RA Group, etc.)
7. Training (CENPEID)
8. Administration
9. IT
10. Others

.

Each of these functions are expressed and delineated from one another through appropriate structure and work system designs.

6.4.3. Processes

While functional arrangement allows specialization, processes are instruments for delivery of results on terms acceptable to the stakeholders. Speed, timeliness, completeness etc. are ensured by the process orientation. Earlier we discussed Key Value Creation Processes of 1) Network Operations and Management (NO&M) and 2) Revenue Cycle Processes (RCP). These are further divided into sub-processes such as:

1. Delivering quality electricity
2. Delivering operational efficiency
3. Ensuring safety
4. Delivery of commercial services
5. Billing
6. Collection of pending bills

The processes mentioned here are for illustrative purposes and are not exhaustive. To address new strategic challenge under MYT, new process for 'power procurement' too has been institutionalized since April 2007.

6.4.4. Functions - Processes Matrix

Given functions and processes, it is possible to Map Functions and Processes. The functions help achieve the processes targets (in terms of quality and timeliness). Table below shows how this mapping is done.

Table: 6.8
Illustrative Cross Matrix of Functions and Processes

	Processes and sub-processes	**Functions**					
		A	**B**	**C**	**D**	**E**	**F**
1	Network Operations and management and sub-processes therein	A1	B1	C1	D1	E1	F1
2	Revenue Cycle Processes and sub-processes therein	A2	B2	C2	D2	E2	F2

A1, A2, B1 etc. in the above Table are activities that are to be performed by the functions towards fulfillment of the respective processes. Once the processes and functions are mapped as above and activities identified, it is possible to specify the exact deliverables and time limits for each of the activities. Tracking these activities provides a control mechanism ensuring quality processes are delivered within specified schedules. It may be pointed out that the functions and processes mentioned here are for illustrative purposes and may be not exhaustive.

6.4.5. Key Support Processes

Support Processes, and within them, Key Support Processes (KSP), are also identified. These support processes are roughly equivalent to what used to be traditionally called as "staff" activities. These support processes ensure continuity and sustainability of Key Value Creation Processes.

It is also important to prioritize the Key Support Processes and this prioritization has to be based on the extent to which they support the Value Creation Processes. In the following Table support processes are shown and the extent to which they support Key Value Creation Processes, Viz., N&OM and RCP; extent being represented by weights assigned to the support processes.

Table: 6.9
Determination of Key Support Processes (VCP-SP Matrix)

Sl. No.	Support Processes	Value Creation Processes		SP/ KSP
		N&OM	RCP	
1	**Manpower Planning & Training**	H	H	KSP
2	Estate Management	M	L	SP
3	**Power Sourcing**	H	M	KSP
4	Security management	M	L	SP
5	Payroll Administration	M	M	SP
6	**Maintenance**	H	L	KSP
7	Administration management Services	L	L	SP
8	**Expenditure Control**	H	H	KSP
9	**IT**	H	H	KSP
10	**Capex Management**	H	M	KSP
11	Corporate	H	M	SP
12	Legal & statutory	M	M	SP

13	**Policy Advocacy**	H	H	KSP
N&OM = Network Operations and Management *RCP = Revenue Cycle Processes* *Each SP has been allotted weighted score using multiplier of H=3, M=1, L=0.SP identified as KSP if its Weighted Score >= 3 on Scale of 0-6*				

It can be seen from the above Table that out of the thirteen support processes, seven have been identified as Key Support Processes.

Having determined Key Support Processes what are the requirements for achieving adequate process performance? This is done by first identifying key requirements, determining in-process measures and performance Indicators. In the following Table, an illustrative list of the above is shown.

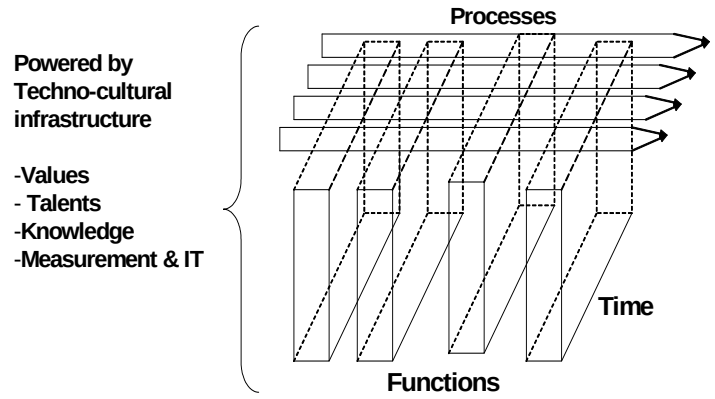
Table: 6.10
Key Support Processes- Performance Indicators (Illustration)

Sl. No	Key support Process	Mode of determining key Requirements	Key Requirements	In-Process measures	Performance Indicators
1	Manpower planning & training	Gap analysis with regard to JD/KRA of employees Employee feedback	Manning the vacant positions People process mapping Develop sill set (Technical, Management competencies)	No. of surplus employees as per Organizational structure	% of vacancies wrt total employees
				Compliance to training calendar	Average Training man days per employee
				Absenteeism	Training effectiveness
2	Power sourcing	Analysis of demand supply gap Analysis of upcoming Power plants	Power security for existing as well as future requirements	Demand/Supply gap	Power Project Matrix
				Timelines for competitive bidding process	Reduction in Demand supply gap

6.4.6. Change over Time

Since July 2002, when NDPL came into existence there has been considerable learning both in terms of expansion of specialized knowledge and fine-tuning of the organizational structure/ functions as well as improvements in the process. This is represented by the figure below.

Figure: 6.3
Changes over Time – Integration of Functions and Processes



The diagram above also shows the functional/structural elements of the organization and the processes they support are in a dynamic state with changes that can be perceived over a period of time. This arrangement gives a dynamism to the organization to change when the external environment changes. Functions, structures and processes are value neutral. And any change can be effected only when it is directed by some value orientation that is provided by techno-cultural infrastructure that the firm provides. We have shown this to be consisting of Values, talents, Knowledge Orientation and Measurement Orientation supported by IT. The techno-cultural infrastructure gives the identity and energy to the organization. It powers processes and functions.

Over a period of time, due to the process management as detailed above, there have been considerable improvements on a variety of fronts. Some of the changes that have been brought about are detailed in the following Table.

Table: 6.11
Improvements in VCPs

Value Creation Process	Earlier process	Improvement	Benefits	Approach to keeping process current	Learning & Innovation
Network Operations and Management	Isolated Pockets of excellence at zones	Business Units formulated	Enhanced Reliability of the poor performing zone, Reduction of AT&C Losses, enhanced consumer service	Tie up with USAID DRUM project or roadmap towards Profit centers	Constitution of BU team to club a good zone for exchange of best practices
	Manual control and data acquisition at Grid S/s	Remote operated Grids	Optimum Resource utilization, Reduction in Outage Restoration time, enhanced employee safety, data transfer	Tie up with renowned consultants (KEMA) & OEMs	SCADA, OMS
Revenue Cycle Processes	Manual reading of energy meters	MR through HHD, CMRI, AMR, Pre-paid metering	Manipulation & error free process, improvement in cycle time Reduction in operating cost.	KRA of PE Deptt Tie ups with OEM	CoP on meter reading among employees and MR agencies PLCC based metering Split Metering.
	Cash counters in NDPL premises	Drop boxes, Easy Bill outlets, On line payment through credit card, OCCM, mobile collection	Ease of payment, enhanced accessibility, Turnover time at counters slashed	Scanning of Technology	SEVAK – Cash/ check collection machine, Payment through SMS.

NDPL is certified under ISO 9001:2000, ISO 14001:2004 and OHSAS 18001. These refer to the quality, environmental management initiatives and the Occupational Health and Safety Standards adopted by the firm. These reflect the organization's focus towards a process

oriented sustainable approach and continuous improvement. NDPL is also striving to implement SA8000 which is a certification to safeguard worker's rights. NDPL is also pursuing ISO 27001:2005 to accredit its security and sustainable information and data management systems.

In NDPL, the group empowered to deal with TBEM issues, viz., BEG, conducts half-yearly internal audit of the processes and documents any deviations from the standards. It also develops CAPA (Corrective and Protective Action) plans to make corrections and come up to the standards. NDPL has a pool of over twenty personnel who are internal certified auditors for this purpose. Two annual external audits are also conducted through DNV.

The Quality Management initiative covers over seventy processes across the various functions like commercial, finance, human resource and operations. The environmental management and the Occupational Health and Safety Standards initiatives are integrated with the Quality Management initiatives via the Integrated Management System. With the help of this system NDPL looks at risk factors like environment and safety. The system has a matrix to calculate the risk and probability. The mother sheet of the matrix is updated from time to time (quarterly) or when new processes are introduced.

The Business Excellence Group (BEG) applies a Process Maturity Index which is a measure of the extent to which the processes have taken roots in the firm and the degree to which processes can influence competencies and performance of organizational members and departments. In NDPL this index, along with other metrics related to improvements, knowledge management, employee engagement, etc., is monitored by Apex Quality Council (AQC) headed by the CEO. Over a period of time the value of this index has shown positive trend at NDPL.

6.5. Knowledge Management

Knowledge Management is an important activity in NDPL today to develop, retain and share intellectual capital. It is managed by the Business Excellence Group (BEG). The same group also is in charge of TBEM which we discussed in Chapter 5. To address issues of KM, BEG has made use of two means; SANCHAY which is Web enabled platform and SEEKH,

consisting of offline communities that is formed in each zone/ district/ systems/ Groups. SANCHAY and SEEKH complement each other.

SANCHAY, the Knowledge Management Portal, works on Microsoft Sharepoint applications and Web browsers. It is an intranet facility accessible and usable to all employees that allows for creation of knowledge repository to access, share and reuse useful knowledge about industry practices, information about competitors, organizational stakeholders, technology changes, scenarios about utility, industries etc.; in short, on any issue relevant to NDPL. It is also a repository of all process documents (IMS), policies, guidelines, work instructions, circulars etc. in the form of 'Ndpl-O-pedia' launched in early 2007. One of the key user-friendly features of Ndpl-O-pedia as well as SANCHAY is its dynamic search engine.

Each zone, district or a group in NDPL has a SEEKH community which is headed by the APSM/ ZM/ DM or HOG who is designated as Knowledge Mentor to inculcate 'learning culture" among the team members. SEEKH sessions are organized by each group every month. This initiative was launched in January, 2008. A community can invite members (Knowledge Guest) from other communities for knowledge exchange. MIS is used to track the progress of these sessions. Based on the Knowledge Sessions the community identifies four points - what knowledge or good practice was shared, the members involved, whether or not new initiatives should be taken, and whether members can undertake any improvement project, which will fall under SHINE. The SHINE program, an initiative of BEG, is an organization wide platform for engaging employees from all levels in continuous improvement – incremental or breakthrough. SHINE is an acronym for Systematic and Holistic Improvement Initiatives at NDPL. It converts employees' ideas into improvement projects and provides inputs to the Knowledge Bank, in the form of SIPS (SANCHAY of Improvement Projects). The SHINE and SEEKH, put together, strive to create an environment of creativity, continuous improvement and innovation in the organization.

The KM is not restricted to only SEEKH or SANCHAY. The other approaches like training and awareness programs, exchange of ideas in various review meetings, information shared through in-house magazines (Navodaya and Surkhiyan), knowledge transfer during the exit process of parting employees, etc. also support KM at NDPL. Various reports to/from DERC, ARR, Annual Reports, etc. form critical knowledge of the organization. The BSC Dashboard

is the real-time knowledge updation on organizational performance accessible to all senior leaders. Various reports by consultants/auditors, MIS, comments by reviewers on reports/ MIS, MOMs of SAMIKSHA, ATRS submitted in SAMIKSHA, etc. form an invaluable set of knowledge for daily work management. New policies, circulars, information, MIS and Zonal/District Scorecards are shared through SANDESH. A window to the outside world (consumers and other external stakeholders) is also provided in the form of website (www.ndpl.com) – called SUGAM – where information of consumers related to their requests, billing, payment, billed units, Metering, new connection forms, safety tips, energy conservation tips, etc. are available. SUGAM also has information (e.g. Pre-qualification documents, press release, latest initiative by NDPL, suggestions, etc.) useful for business associates, community and any other interested parties. SUGAM has undergone a significant upgradation during last one year. The SAMBANDH and DARPAN applications have a feature of building knowledge bank about consumers profile, complaint, query, suggestions and various transactions across processes, thus even a newcomer will know whatever has happened in any particular case. The GIS and SCADA systems – implemented under automation schemes of NDPL – along with SAP warehouse provide a strong backbone of real-time knowledge for managing our operations network and energy accounting.

Chapter 7

Functional Excellence

In this chapter we will discuss various initiatives taken by NDPL within functional areas. These efforts form the nitty-gritty of operations that gives credence to the strategies that were discussed earlier. The discussions here cover:

1. Operations Function that deals with technical issues related to reliable, safe and adequate service delivery
2. Commercial Function that oversees services to customers that include, among others, providing new connections, billing and attending to complaints
3. Financial Function that deals with financial control, resource mobilization, performance monitoring etc.
4. Human Resources Function that deals with work systems, training, performance, career planning, IR issues etc.
5. Information Technology

7.1. Streamlining Operations

NDPL sources power from government-owned Transco (and other sources from April 2007 onwards as the MYT scheme) and distributes it to either the final customer or Single Point Delivery (SPD) contractors/ franchisee agents. NDPL network consists of varying voltages of 66 kV, 33 kV, 11kV, 6.6 kV, 440 V or 220 V. Consumers are billed and amounts collected by NDPL. However the transmission network is maintained by Transco (DTL). NDPL also supplies power for street slighting and also supplies and maintains the lights on behalf of MCD, DDA, PWD etc. This network consists of 54 grids having a total of 10474 substations. The power distribution network (LT, HT, EHV) consists of over 9000 circuit kms with a High tension: Low tension ratio of 0.67 and Overhead: Underground ratio of 2.16.

NDPL operational area is divided into subunits in a 3-tier structure of Circles, Districts, and Zones. In the earlier structure, it was difficult to maintain the reliability of the network for technical reasons. Now with rationalization of the organizational structure and certain investments in place, far greater reliability has been achieved. Technical interventions such as these have been supplemented by systems to deliver better services; such as more maintenance crew and their working round the clock in all three shifts.

Along with these efforts there is also pressure on Zones and Districts to perform as profit centers with clearly defined division (whether Zone, District or Circle) of responsibilities and authority. This has also brought in a sense of ownership, where in people in a zone feel that 'this is my zone,' and 'these are my customers,' and take responsibility to run the business profitably.

The total number of connections from NDPL is around one Million. In terms of nature of connections, over 80% is accounted by domestic segment. But this accounts for less than 30% of the total revenue. The other major segments are commercial and industrial. Industrial consumers account for less than 3% of the total numbers but account for over 40% of the total revenue. Table 7.1 shows the distribution of consumer segments in terms of percent numbers and percent revenue realization.

Table: 7.1

Consumer Segments at the Time of Takeover

Segments	% Consumers	% Revenue
Domestic	82.17	29.90
Commercial	14.43	27.50
Industrial	2.86	42.10
Agricultural	0.54	0.50
Total	100.00	100.00

The current peak demand for the NDPL service area is 1089 MW. The daily average requirement is about 17 MUs, which when we consider 365 days works out to over 6200 MUs per year.

7.1.1. Changes Affected Since July 2002

From July 2002 to 2007-08, NDPL has been able to reduce AT&C Losses from 53.4% to 23.7%. According to Mr. V.C. Mathur, currently Chief Mentor, CENPEID, who was the first COO at the time of the inception of NDPL, "the equipment and substations we inherited were in depleted condition, with serious safety issues." For instance, he says that "there were 11KV breakers which were so dangerous that the operations had to be carried out either by

switching off the entire bus or by standing away from the breaker. There would be grass growing in and around the cables. Condition of transformers was no different."

Transformers are two types a) Power Transformers (PT) - 33/66 KV to 11 KV and b) Distribution Transformers (DT) -11 KV to 440 volts. Most of the Power Transformers had very low Insulation Resistance (IR) value and required filtration and oil replacement. Distribution Transformers' failure rate was very high at 17% of the installed capacity. The major reason for DT failure was the bypassing of the protection of the Transformers.

As a quick solution all DTs were provided with fuses on the HT side. This brought down the DT failures from 8.3% in 2002 at the time of takeover to 1.65% in March 2008. Hot spot checking of overhead lines and equipments was carried out using a thermo-vision camera that identifies high temperature spots. Use of such state-of-the-art cameras provide for easy detection of weak links and prevention of potential breakdowns and residual life extension.

There were occasions when the detected temperature was high as 300-400^{0}C. During the first three months of the takeover over 400 hot spots were identified and attended which brought down the line and equipment failures drastically. Simultaneously trimming of trees which were growing through the overhead network was undertaken for the entire network; the main problem was Eucalyptus trees, which grow very high and during storms and windy conditions, swing and touch them causing the line to trip.

It used to happen that some fault in the LT system would cause tripping at 33KV/66KV grid station because of which a large number of consumers would get affected. This happens because of improper protection co-ordination between the LT and the HT networks.

It normally requires proper configuration to minimize the impact of tripping. As pointed out in the previous paragraph such configuration was badly done earlier. Because of this the downstream areas were not isolated properly and an entire 11KV system could fail because of an isolated problem that should only, if ideally designed, trip locally at the tail end.

Systematically protection co-ordination was undertaken and Ring Main Units (RMU) were installed as a stopgap on the first substation outside the 33 KV/66KV grids to avoid fault from affecting the grid station.

NDPL carried out an inventory of all the network assets and adopted the three R's as the maintenance philosophy:

1. *Run:* This group consisted of equipment which were in good condition and would be continued in service without any major modifications.
2. *Repair*: These could be continued in service after minor repairs or renovation which was carried out and equipment restored to acceptable levels of service.
3. *Replace:* The balance of equipment which were in depleted condition were identified to be replaced and the Capex Plan was drawn up to replace them.

It was estimated that about Rs. 1450 Crores would be required for capital expenditure during a span of five years. Much more has been spent which, as on date, is of the order of Rs. 1669 Crores.

Aside from lack of provisions for protection and protection coordination, another major problem NDPL faced at the time of takeover was the number of cable faults on the 11 KV underground networks. This was mainly on account of the age of the cables with large number of joints in-between which made these cables sick. The joints were so many that, at that time, Mr. Firoze Vandrewalla, Ex. MD, Tata Power commented humorously, "What NDPL has are cables between joints."

A detailed analysis was done and sick cables were identified for replacement which was carried out progressively. With the introduction of new and sophisticated cable fault location vans, the Mean Time to Repair faults on cables was brought down from 7 days to 2.5 days in the case of 66 KV/33 KV cables and from 5 days to 2 days for 11 KV cables.

Direct theft by hooking from the 440V overhead network was another serious concern. To reduce this loss, HVDS system was introduced. In this system, the 440V overhead lines were replaced by 11 KV lines with small capacity distribution transformers installed at regular intervals to cater to 4-5 consumers for each Distribution transformer. Another initiative to quickly bring down AT&C Losses due to hooking was to replace existing conductors by Low Tension Arial bunched conductors (ABC) which are insulated. This drastically brought down the losses.

Protection Department has been set-up to take care of issues of safety and security. This department is now responsible for safe working conditions at the sub stations and other equipment sites, monitoring safe condition of overhead and underground cables and wires, issue of Permission to Work (PTW) to do maintenance work etc.

Also set up was a Power System Control (PSC) Department. This department is in charge of (1) Load dispatch (2) Scheduling of outages (3) Putting up power requirements to Transco and (4) Network studies to monitor power demand patterns and plan for new networks to be added. The idea of "N-1 Concept" has been fully implemented in the 66/33 sub-stations. This essentially builds in redundancy in power supply (so that a when one branch of the network fails another one comes on to its rescue during the breakdown time). This is being introduced to lower ends of the network too. SCADA, a centralized switching system has been introduced which remotely controls on-off switches at the various sub-stations and installations.

Street lighting in the NDPL distribution area is also part of NDPL's function. Previously only 40% of the streetlights were in working condition. Now that has been pushed up to 99%. NDPL had faced a lot of problems here too. When NDPL approached OEM's for spare parts for the street lighting it was found that many of the parts used in street lighting were not original. All these substandard parts have been systematically replaced and the supply chain streamlined.

Major improvements in stores were introduced. Earlier there were seven or eight store locations. This has been now centralized now at Keshavpuram. This store operates round the clock and arranges for delivery of material requested by afternoon to be delivered to the worksite by the next morning. This is a unique arrangement not existing anywhere in the world and has reduced queuing and reduction in consumer response time. This store is open 24 hours. Sub-stores too have been created at the zone level. They have bare minimum items. The sub-store is connected electronically to the main store.

In the Zonal offices there is standardized infrastructure; number of chairs, desks, lockers, computers are specified. The zonal offices earlier were apparently full of dust, files, cupboards and broken furniture!

NDPL also has a Corporate Operations Services (COS) Department. This department helps in the analysis of faults and in drawing out the CAPA (Corrective Action and Preventive Action). It also helps the field people to identify the reason for faults, discuss new initiatives and help come with solutions to their technical problems. According to Mr. Arup Ghosh, transformer failures have been brought down from 11% to 0.75% of total capacity. Average trippings per month has been dramatically lowered from 2000 a month to 20 a month.

All this requires daily monitoring of various parameters. Table 7.2 shown below lists the measures that are monitored on a daily basis.

Table: 7.2

Daily Flash Report

Areas Being Monitored	**Related Performance Measures**
Commercial Bottom Line: Bill Collection	For the Day; For the moth as compared to previous year; Cumulative this year compared to previous year
Macro Level (Top line) Indicators	Net Energy Received; Lost MUs; TRFS 11KV Cable Faults; Collection; Call Answered; Consumers affected; Avg. System availability Index ;CAIDI;SAIDI;SAIFI
Energy Exchange	For the day; For the Month as compared to previous year; Cumulative this year compared to previous year (From Transco, From BSES, To BSES, Energy Consumed)
System Health	Voltage & Frequency- Maximum, Minimum, Average, Capacitor, Bank (HT/LT); MVAR (HT/LT); System Occurrences(for the Day, Month, Year)
Energy Consumption	Energy consumed for the day; Peak demand; Load Shedding; Unrestricted Demand.
DLF & UFR	No. of events; L/S range (MWs); L/S range (Mins); MUs Lost (MTD/YTD), etc.
Fault Management	Faults – day/ cumulative as compared to previous year; Faults attended – day/ cumulative as compared to previous year; Faults pending-day/cumulative as compared to previous year
Interruption Data	No. of events; Average Down Time; Lost MUs; Monthly/ YTD Lost (compared with previous years data) – monitored on following levels: Due to Transco; Due to BSES; 66KV;33KV;11KV;LT System –etc.
Customer Complaints	Complaints received; Complaints answered; Average Calls compared with previous year; %Calls (No supply); % Calls (others); etc.
Affected Customer Base	No. of BD outages affecting customers for > 2 hours at 11KV/LT levels; Calls (No Supply); % Calls (Others); etc.
Weather	Temperature (maximum/minimum); Rainfall

The operational improvements had to be made in the light of the rampant theft that used to take place. Plugging theft was important for two reasons; One, it was a source of significant revenue loss and two, unless these were plugged, there was no question of gaining customer trust. Mr. V. C. Mathur, the first COO, had the following to say,

> The management made it very clear to all employees that drive against theft and malpractices by dishonest consumers would not be successful if consumers in general do not get reliable power. Hence, management focus was on network augmentation and revamping from day one. There involved mammoth efforts. Scores of old and dilapidated transformers, cables, 11KV panels etc. were replaced with new ones on a unprecedented scale one had only imagined.

Mr. Praveen Chorghade, Head (Commercial) concurred,

> Metering and Billing was hell of a problem. Bill once wrong never used to get corrected due to corrupt practices by vested parties and lack of a good system. Honest consumers suffered and the corrupt ones had it all merry! Having electricity connection (K No.) in different names and addresses was quite a common practice by dishonest consumers. Another corrupt practice resorted to by 'Meter Readers' of that time was selling the Bill Reading Book for a sum running into Lakhs!

This idea was further reinforced by Mr. Ashok Chandok, Head (Corporate Enforcement Group)

> Connivance by consumers with Meter Readers was damaging for both revenue and reputation. In the beginning the meters were mechanical which could read a maximum up to 99,999 units beyond which they would re-start from zero again. Owners of some intensive-electricity consuming industries – e.g. Ice factory, Cold storage, etc. – would bribe the Meter Readers to show 'Premise Locked Status' for two months, and hence in third month, at the time of meter reading the meter would not show the 'actual consumption' reading. Rather it would show reading that having restarted from 0. This was one of the most compelling reasons, among others, to replace mechanical meters with electronic ones. The latter ones can read up to a maximum of 9,99,999 (6 digits). This eliminated the possibility of restart for at least six months, a good enough time to detect malpractices, if any.

7.2. Customer Orientation

Electricity, like other infrastructural/ utilities industries, has its own peculiarities; only when there is a problem with the supply does the customer think of the service provider. Further, because of the nature of the product/service (with perhaps the exception of industrial users) there are limitations that the company faces in terms of providing value-added products/ services. According to Mr. Sunil Wadhwa, CEO, it is better if the customer "forgets" the service provider, because this just means that things are going fine. After all, when a utility provider has monopoly this status should not be seen by the customer to be working against

him or her. Therefore, there are little opportunities where NDPL can create 'delight' for its customers.

Sethi (2005) reports how consumers have been wary of privatization of electricity in Delhi. He reports how RWAs have been a) resisting electricity price rises and b) averse to replacement of defective electric meters. There used to be all kinds of wild rumors that float around pertaining to billing. Given the past performance of electric supply in Delhi and the occasional irritants that crop up, it takes a lot to create true customer orientation. Nevertheless over the last six years public image of NDPL has improved vis-à-vis other Discoms. For instance, Chugh (2004) had reported how NDPL is seen in better light when compared to the other Discoms. Various media reports and coverage, including positive words from Mrs. Shiela Dixit, Chief Minister of Delhi, and Mr. A.K. Walia, Delhi's Minister of Power do corroborate the point.

Under such circumstances, a realistic approach to customer orientation requires that it works on building up confidence of the customers with the long term in view. This view was echoed by Mr. Ghosh when he said that NDPL resists making announcement of its successes. However, he said there is need to counter any negative publicity in an atmosphere like this. Positive differentiators would be long-term image of the company marked by transparency in its dealing with customers, openness and transparency within the organization itself, progressive HR policies, social sensitivity etc.

NDPL has been working hard on all these counts. According to Mr. Wadhwa, "We met members of Residents' Welfare Association (RWAs) to explain what NDPL was doing was to seek views from customers as to what they wished NDPL should be doing. Instead of "saying we are right", "ask them what we can do" has been the policy. According to him, consumers were not so treated earlier. They were assumed to be crooks! Often, groups consisting of Tata and DVB employees would meet customers. As the quip goes, one of the Association members stated "You people have made our life better."

As Mr. Ajey Maharaj, HOG (Corporate Communication), commented:

> There was a wide spread perception among citizens that the Electronic Meters are fast, and their reading incorrect. We needed to educate people. To begin with, four meetings were organized, each meeting attended by more than 200 citizens and public representatives (MLAs, representatives of RWAs, IWAs, etc.). Meter manufacturers

(L&T, Genus, etc.) made presentations, explained facts and figures and ran actual demos. On the spot testing on sample basis, too, was carried out on the so-called 'defective' meters, and it was found that meters were found 'accurate' in more than 99% of the cases. To achieve wide spread consumer education, adequate coverage in the media was also given. In fact, some newspapers were keeping a watchful eye on this whole episode and related developments. Ultimately truth emerged. Now people have realized that NDPL stands for quality, ethics and consumer service.

Price increases and issues related to meters are two issues that are largely restricted to middle class localities. When it came to lower sections of society the problems have been different. Many of the dwellings in the slum areas (JJ clusters), as indicated by Sethi (2005), are not constructed with proper permissions from the city authorities. This comes in the way of giving authorized connections to these dwellings. These dwellings also are well known to steal power by one way or the other. Certain schemes have been suggested by NDPL to give authorized connections and prevent power thefts. Table 7.3 shows a list of issues and their current status.

Table: 7.3

Schemes Towards greater Customer Orientation

S No.	Scheme	Benefit to NDPL and customers	Status
1	Electrification of JJ Clusters- Scheme of Rs. 175/- per month	Control on illegal tapping from live wires and provision of legal connections to slum dwellers at cheap rate	Accepted by DERC and implemented
2	Cost sharing mechanism of electrification of non electrified areas for energizing tube well connections	Agriculturalists ensured supply of quality power which enhances life of their tube wells	Being discussed within government circles

NDPL has adopted various unique initiatives for constantly improving its services for various customer segments as per their expectations. It believes that those who use these services would be the best critics which would help them in solving problems. They have special schemes for senior citizens and non-working women. These segments of users are at home for greater number of hours and they are more seriously impacted by the quality of service that utility providers give. YUGANTAR meaning 'New Era' is an initiative wherein NDPL is able to receive feedback from senior citizens during RWA meetings. The other similar forum is "Ujjawala" which is meant for redressing concerns of non-working female members of

households. Such efforts by NDPL have other advantages too. Linemen who undertake repair work and attend to complaints during office hours on working days, for the most part, have to be in touch with senior citizens and homemakers.

The Electrification of JJ Clusters Scheme has proved to be very effective, according to Mr. S. K. Choudhary who had earlier been in DVB for over 20 years before switching over to the NDPL structure. Through the JJ Cluster Scheme, people residing there have to pay a flat rate, for limited load withdrawal. There are no meters installed for these connections. Though the entire cost is not being recovered from the consumers, considering the nuisance avoidance factor and their paying capacity, the scheme is considered fairly successful. In the long run it may even be possible for NDPL to recover the entire cost from these customer-converts.

In the previous section we covered operational excellence. Here we discuss some of the important decisions and actions which are techno-commercial in nature. In delivering high-quality service, commercial/ administrative factors and technological/ technical factors have to come together to create customer orientation. Customer orientation comes into play while undertaking:

a) Fault management
b) New Connections
c) Metering
d) Billing and Collection

NDPL has developed a Fault Management System. This has employed the services of call centers. Calls coming in are recorded on the voice mail and SMS are sent to the concerned Zonal office for every complaint received. NDPL has a Closed User Group (CUG) mobile communication that is similar to the old intercom. The difference with CUG is that the system is based on mobile technology. CUG has been developed by Airtel, complete with SIM cards etc. The company is now working out on the technology to read meters remotely.

To serve the customers, distribution and supply is aided by:

a) Customer Care Centers – 12
b) Customer Call Centers – 2
c) Cash Collection Centers – 25
d) Mobile Collection Centers

The overall collection points including drop boxes and bank collection points would be over 1200. Also provided are internet gateways for direct payments. Receiving payment was an important aspect of customer orientation. Typically a look at a typical queue to remit electricity charges will have a lot of elderly person, including women. Therefore it was important to address this urgently. These are connected through SUGAM, billing system and CRM, SANCHAY and CBT with networks across 106 locations.

Maintenance is now a 24 hour activity. In each zone there is a shift officer in change for each shift. Through this measure NDPL is able to offer maintenance services 24 hours a day which is a definite departure from the earlier situation when maintenance would be undertaken only during one shift. Maintenance and Network augmentation took a life of its own. As Mr. Yogendra Butola, currently TA to COO and previously involved in various operational activities including role of Zonal Manager, commented,

> Every employee from the ranks and files were involved in a massive work related to network augmentation, and when I look back, I realize that we all enjoyed it despite hectic and odd-hour duties, because we all shared a belief that we are rebuilding this organization and we will gain glory that our people truly deserves.

In July 2002, of the over 800,000 connections, over 125,000 of them were given provisional bill due to various reasons such as no meter, meter not traceable, locked premises etc. This number has been brought down to 11,500 (less than 1.5 percent of the customer base) which is better than the international norm according to Mr. Arup Ghosh, COO.

Some of the Learning and Listening Methods followed by NDPL to understand customer needs are as follows:

1. Consumer satisfaction survey by independent agencies e.g. AC Nielsen, IMRB etc.
2. Call Centers for No. Supply, Commercial & Street light Complaints
3. NDPL website for logging of complaints
4. IVRS help lines for Theft and Harassment related issues
5. Feedback forms placed at Consumer Care Centers
6. Regular RWA/IWA meets
7. Meetings with public Representatives
8. Consumer Representatives
9. CGRF & Ombudsman

Mr. Bhushan Sachdeva, DGM (Revenue Cycle Management) says that customers of NDPL are much more satisfied today. The days when power cuts would last for hours are a thing of the past. Better communication with customers, capturing their complaints and reverting to them with prompt feedback has also led to the rise in satisfaction levels. Imagine, when NDPL took over there were over a lakh of pending complaints! Mr. Sunil Singh, Business Area Head (Town) remarked that the honest customers are happier today! He suggested that the real unhappy customers are those whose connected load was huge – with a few air-conditioners running 24 hours continuously – and were drawing power illegally.

Someone else remarked that there was a very "responsible" public servant who "illegally" had a connected load of over 50 KW at his palatial bungalow. When NDPL personnel caught up with this theft the person even threatened that they will be sued for trespassing! But finally this person also had to come around and regularize his connection. There were also some cases of physical assault on NDPL personnel. It is felt among NDPL personnel that those people who are now deprived of the opportunity to steal power are the ones who are still unhappy and try to create negative publicity for NDPL.

7.2.1 Customer Segmentation

The company has also re-segmented its market to give focused attention to specific sectors such as hospitals where uninterrupted power supply is most crucial. Other such focused sectors include places of worship, malls, government departments etc. The company also has detailed segmentation based on connected load within industrial and commercial sectors. The company is planning to give specialized services to industries in terms of advice and maintenance of power backups with guarantees for uninterrupted power supplies and quality of power. In the Figure 7.1, we show the manner in which the segmentation process is done.

It may be noted that market segmentation is based on multiple issues such as 1) net revenue generation 2) Gross revenue and 3) Influencers. To give an example, approach towards the 1st category would be emphasis on service while there may be other segments where the emphasis may be on collection. There are still other segments where the emphasis may have to be of communication and consumer education (such as RWAs).

Figure: 7.1

Customer Segmentation Process

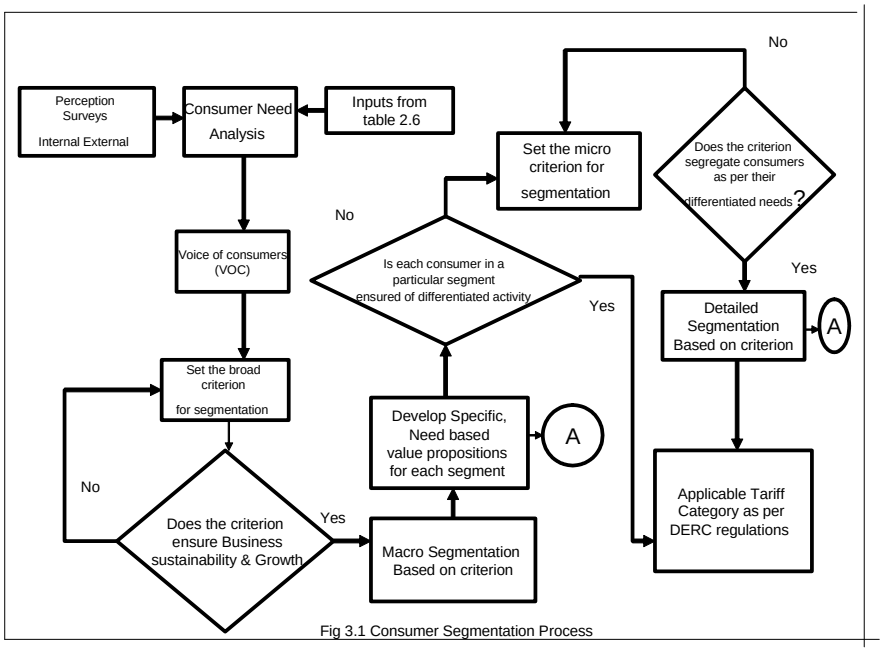


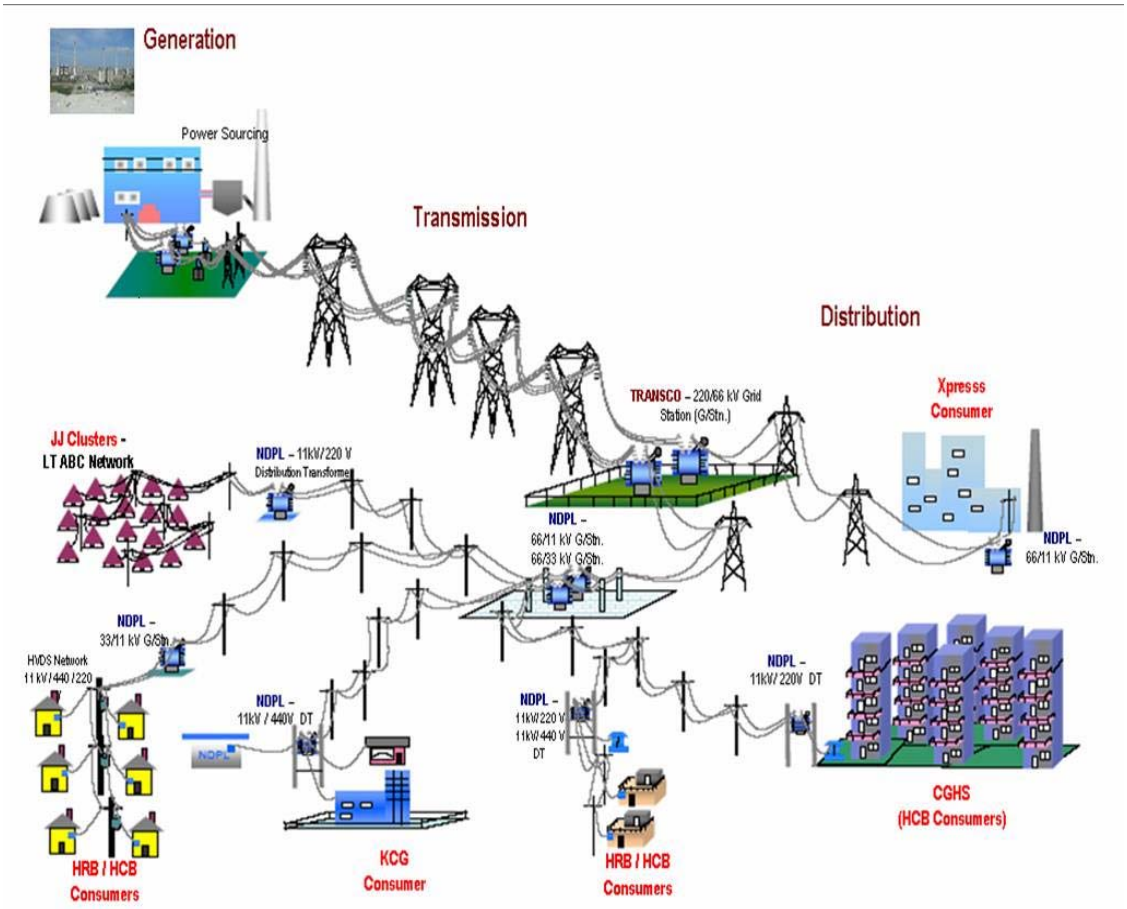
Fig 3.1 Consumer Segmentation Process

Currently the consumer segments at NDPL are as follows:

1. ***High Consumer Base***: These consist of those consumers whose load is between 1 KW TO 15 KW.
2. ***High Revenue Base***: For the consumers, whose load lies between 16 KW to 99 KW, come under this segment.
3. ***Key Consumer Group***: Consumers with load more than 100 KW and less than 500 KW belong to this group.
4. ***Xpress***: Those consumers with a load equal or greater than 500 KW come under this group.

The following Figure 7.2 shows diagrammatically the various segments.

Figure: 7.2
Consumer Segments – Diagrammatic Representation



7.2.2 Commercial Department's Activities

Prior to the privatization in 2002, consumer interface with the distribution sector was highly decentralized. It was a big task for the consumer to get a new connection and register complaints regarding problems with the present connection. One of the challenges identified by NDPL was in improving the quality of consumer's interface with the organization. Virtually a new department was created.

Since then many schemes have been introduced. The changes that have been introduced can be best exemplified by the recent comments of Mr. A.K. Walia, Delhi's Minister of Power, on NDPL's Centre for Network Management,

> With this ultra modern technology NDPL supply will remain fully under control. This will help in fault location and will also look after the network better. It hosts the most advanced electrical automation systems and has put NDPL at par with some of the world's best power distribution utilities in terms of technology. This will surely give consumers an unmatched power distribution experience. *Source Total TV, Feb. 6 2008*

He stated further,

> NDPL has launched the state-of-the-art fault location van and 60 maintenance vans are also hitting the road. These will help in locating faults in 66 KV, 33 KV and 11 KV lines. Any fault can be now immediately resolved. *Source Total TV, Feb. 6 2008*

It was no easy task for NDPL to achieve these accolades. As the commercial department tried to solve the issues, things got more and more complex and difficult to handle. The desk of the Commercial Head was laden with files numbering, perhaps, over hundred at any given time! To deal with this issue, in 2004, a Business Process Re-engineering Department was created which centralized all commercial records. Life cycle for consumer servicing was broadly divided into nine major processes. These incorporated all major responsibilities associated with consumer servicing. Exclusive workforce allocations were made to each process. These processes are integrated through 'SAMBANDH'- which is an integrated commercial software package and the first one for the electricity distribution industry in the country.

Together with these efforts, initiatives were undertaken to overcome the revenue leakage which was mainly due to metering problems. A proper system of recording meter connections with unique identification number called K-number was developed. The K-numbers were properly linked to customer details. This together with the effort to replace faulty meters paid handsomely towards timely and accurate billing.

The nine major processes alluded to earlier are:

1. Consumer Care Group (CCG): This group is responsible for all telephonic inquiries and requests. These may have to do with existing connections or new requests. With a commercial call center of their own, billing and delivery requirements can be met by this group. Usually done over the telephone further services are provided by other groups which are discussed below.

2. Connection Management Group (CMG): This department is responsible for processing new connection requests, dues checking, field visits, and verification of the documents submitted till the generation of Demand Note (DN). It also looks into attribute changes such as changes in name, load requirements etc.

3. Revenue Collection Group (RCG): This group is responsible for revenue collection. Consumers can pay their bills through many modes: a) payments at the collection centers b) through outsourced agencies like ATPM and others such as online payments, ECS, Drop Boxes etc. RCG manages all these operation. It makes sure that the payments made by the consumers are accurately credited to their account. It also simultaneously ensures reconciliation of bank accounts. RCG is also responsible for the preparation of the MIS reports pertaining to these payments.

4. Meter Management Group (MMG): The meter management group is responsible for installing of new meters in the premises once the new connection has been confirmed by CCG and CMG discussed earlier. Its other tasks involve replacing faulty meters, conversion of the electromechanical meters to electronic meters and checking of faults in the network.

5. Meter Reading Group (MRG): Traditionally, the meter reading process was very tedious and time-consuming. First the meter reading official used to collect all the meter readings and prepare a meter reading datasheet with consumer details. Then he punched all readings into the system and finally performed validation. Due to the manual nature of the work, chances of human error were very high. In addition, considering the number of times data was being transferred, the probability of tampering was also high. The manual process led to inconvenienced consumers and decreased efficiency of the overall process right from meter reading, bill printing up to revenue aggregation. To overcome the delays and inaccuracies, NDPL decided to opt for an Automated Meter Reading (AMR) system for about 60% of its one Million customers.

   The separate meter reading group helped streamline processes and contributed in its own ways to help built better efficient systems. The various initiatives undertaken included:

   a. Shifting from in-house to outsourced meter reading

b. Area-wise books to district-wise meter books which helped reduce errors

c. Reduction in punching errors by shifting to handheld devices from manual feeding

d. Stoppage of provisional billing which enhanced consumer credibility

e. 2-step quality check for efficient performance

6. Revenue Base Group (RBG): The Revenue base group is designed to keep the billing up to date, compute and dispatch bills.

7. Revenue Recovery Group (RRG): The group is involved with the collection of bills and dues from the various consumers that are outstanding.

8. Corporate Enforcement Group (CEG): This group at NDPL helps in bringing down the losses due to theft. It has a team of officers which conducts raids at places where theft is suspected. They are aided by CRPF, and also in some cases, by Delhi Police. Meter data of consumers are downloaded and analyzed to throw light on consumer activities. They also receive data from the sources such as a) AMR group b) Zonal Staff, and c) Consumers who provide leads about suspected cases of theft. There is an Enforcement Assessment Cell which deals at the back-end of dealing with consumers who have been accused of theft. At the EAC, the affected consumers are given evidence and explanations for being charged.

9. Revenue Assurance Group (RAG): The main task of the RAG is to analyze the data obtained from the groups mentioned earlier. These data include Billing Date, Collection Date, New Connection Data, Meter Data etc. The RAG then finds out the deviation between the actual and expected data and henceforth gives suggestions for plugging these gaps. This group is also involved in testing changes and modifications made in the software used by the various groups in the commercial department.

While the IT initiatives introduced in the various departments at NDPL help in making processes easier, they also require lesser man-hours and thus fewer workforce, creating its own problems. The excessive workforce at NDPL was identified to be around 200 employees. They were redeployed at various places. Some were employed by a new department which was created for facilitating the recovery of the default revenue from the consumers. This was named as Satellite Back Office (SBO). The target for this taskforce was

recovery of Rs. 125 Crores of which it successfully recovered Rs. 25 Crores. In the first year itself, was a marked achievement!

7.2.3 Schemes for Listening to Customers

With the launch of Online Consumer Care Centers at all Districts, Circles and Corporate levels and the introduction of Power updates on FM channels, NDPL has made the life of a consumer much easier.

There are many other schemes in place to "listen" to the customer. These include customer satisfaction surveys by independent agencies such as AC Nielson, IMRB and others, information generated from call centre operations in terms of the nature of complaints and how they are dealt with etc. NDPL website logins for complaints, Feedback forms at customer care centers analyzed by CCG, RWA/RA association meetings and recording of the events and discussions, consumer representations to DERC, PM's and CM's office, CGRF and Ombudsman and IVRS help line for taking care of theft and harassment related issues.

These measures took time to take roots. As Mr. Sidhartha Singh, HOG (CRC) commented:

> When we invited industrial consumers to attend the first IWA meeting, many of them could not believe that a Discom would invite them to receive their views and suggestions. Many of them echoed that this was happening for the first time in last 25 years. Our patient hearing to their issues and keenness to work on their suggestions/ problems encouraged them a lot. We saw similar pleasant surprise reactions in RWA meetings also. One statement I never forget is – "Yeh To Jaadu Sa Lagata Hai (It seems magic)"! Thanks to commitment of management and staff alike, we have been living up to the expectations of the RWAs/ IWAs.

A cross functional team with members from S&PM, BEG, Corp. Communication, CCG, etc. conducts consumer need analysis. This is carried out in association with frontline departments. Involving a survey this captures employees' perception of consumer needs. This, supplemented with other information coming from other channels mentioned earlier, is captured in the form of "Voice of Consumers" (VOC). The VOC is translated to actions based on segments impacted and sustainability of action for specific segments. Final actions are initiated based on previous segment-wise information on segment potential, cost implications, segment profitability etc. This approach ensures that the actions are in consonance with customer segmentation that was discussed earlier. In 2007-08, a new

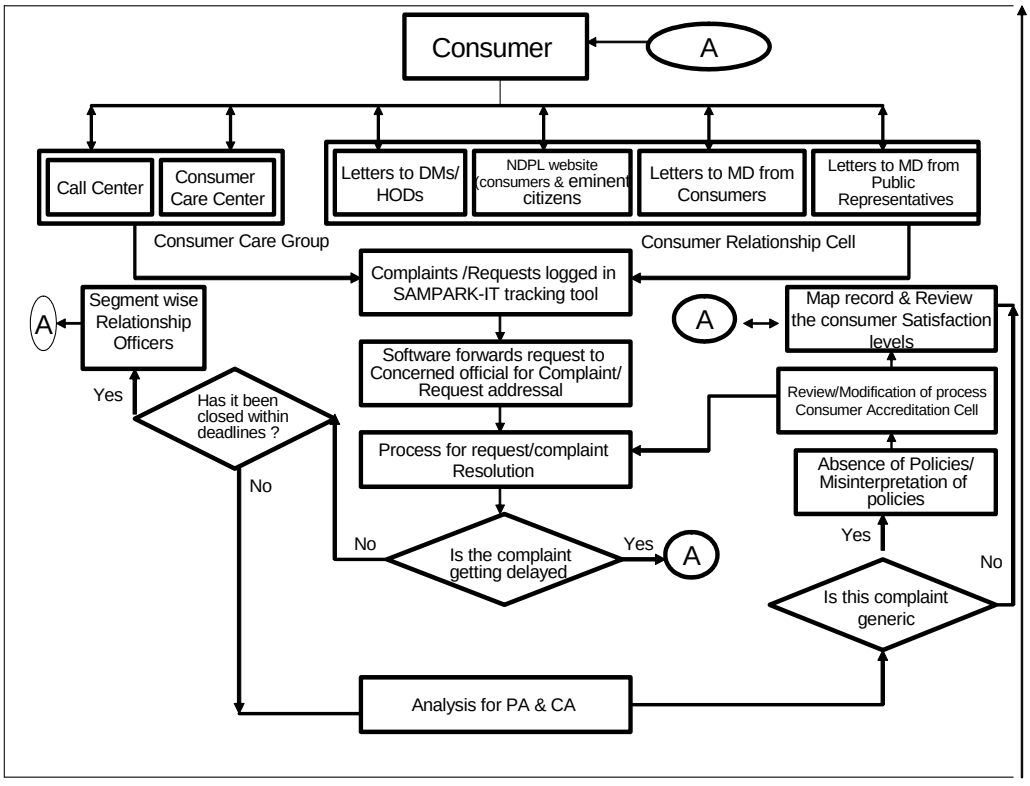
innovative approach called 'Customer Experience Design" (CED) was deployed. Actions emerging from the same are being worked out, at present, under the ambitious project called 'Project Aashwashan' by 8 CFTs involving about 50 plus people from various functions.

Interaction with RWAs and IWAs is carried out using a structured approach. These are scheduled on a monthly basis and are conducted at the district office. The action points are recorded and progress on previous points during the elapsed month are discussed. The CCG analyzes the data and the performance on these are recorded in the scorecards predefined for the purpose.

As per NDPL records, the company also commissions independent market research on customer satisfaction in areas other than its licensed area. These surveys measure the satisfaction levels compared to what they expect from the utilities. Although these figures do not allow direct comparison with other private utilities that belong to the BSES group, they provide some indication of where one stands vis-à-vis fulfilling customer expectations. As a result of this, one of the steps taken is communication on power outages through load shedding schedules.

Figure 7.3

Customer Relationship and Complaints Management System



Another source of finding out one's performance vis-à-vis customer perspective is use of measures such as CAIDI, SAIFI and SAIDI for which data is available for international utilities. These are well-known terms that electricity utility providers use to measure network performance. These measures are linked to KPIs. Customer relationship and customer and complaint management system may be represented by the Figure 7.2 (previous page). Based on the above processes, there have been several initiatives to enhance customer relationship.

To take care of the customer, a number of gateways and initiatives have been undertaken by NDPL. For instance, Customer Relationship Officers (CROs) have been appointed who outreach to the customer representatives. These officers are responsible for relationship building with the customers. There are also efforts to increase customer loyalty and referrals through a number of initiatives. NDPL regularly liaises with RWA's "Eminent Citizen" and Public Representatives. It also targets people with strong influence on the local community for relationship building. Further NDPL service recognizes key accounts which are given comprehensive one-point service. These accounts are individually handled by Client Account Managers.

The Senior Leadership reaches out to the representatives by conducting seminars with RWAs, IWA's public forums, consumer bodies etc. The also interact with all the high revenue generating customers through Annual Xpress Calendar. Apart from these, there have been various initiatives for all NDPL customers. These include Visit of Field Service Executives (FSE) for new connections, URJA - Gift Electricity Scheme, Privileged Consumer Scheme, Letter of condolence to consumers in case of death in family etc.

Behind these efforts are technical backup and systems. These "Key Access Mechanisms" for Customers for shown in Table 7.4 (next page).

Another effective tool used for the consumer benefit is the Fault management system which incorporates a Unique SMS Facility. Cell phones are given to all linemen attending no-current complaints. On receipt of a complaint, Call Centre sends direct SMS to the concerned lineman. Post the fault being attended, an SMS is sent back to Call Centre for information to Consumer.

Table: 7.4

Key Access Mechanisms

Access Mechanism	**Purpose of access mechanism**	**Contact Requirements**	**Method Determination of contact Requirements**	**Deployment of Requirements**
Call Registration Centers for No supply, Commercial, Street Light, Theft & Harassment & Safety Issues	Complaint Posting & Inputs on Theft incidents, Harassment/ Unethical conduct, safety issues	Call Center operational 24*7, Ease of call getting through, Courteous behavior, Accurate information, Intimation on complaint closure. Confidentiality in Theft & Harassment cases	Consumer Satisfaction Survey, RWA & IWA meetings	Training of call center Executives. Imparting functional knowledge to Executives. Password protected IVRS.
Consumer Care & Cash Collection Centers CCC CSO Cashiers	Inquiry Desk Complaint Registration in SAMPARK Floor Management in Consumer Care Centers Ease of Payment	Operational during office hours, Courteous behavior, Complete knowledge about processes & tariffs Anticipated Complaint Resolution time	Feedback forms, RWA & IWA Meetings. Increase in No. of payment avenues	Training in consumer Focus competency as part of LDP.
NDPL website	Billing details Consumption Graph, Duplicate Bill, Bill Energy Payment	Reliable & Updated Information, Ease of Navigation, Secure Website for payments.	Public Hearing at DERC, RWA,& IWA meetings	Complaints sent through website are logged on SAMPARK by CRC which automatically ensures deployment across consumer chain.
CROs/Client Account Managers	Information & Complaints	One point contact for accessing all information and complaint resolution status, communication issues of consumers to Sr. Leadership	Independent & Eminent citizens, Public Representatives, Govt. functionaries etc.	KRAs of CROs & Client Account Managers formulated to address these requirements.

7.2.4 Customer Satisfaction – Determination and Enhancement

Various methods of determining Consumer Satisfaction have been adopted which are listed below:

1. Consumer satisfaction Survey by Independent Agency
2. Feedback forms placed at consumer care centers analyzed
3. Feedback from Independent & Eminent consumers
4. Analysis of complaints filed within the organization, DERC, CGRF & Ombudsman
5. Performance Trend of key parameters

Key Parameters that are measured and monitored through the above means are:

- AT&C Losses
- Reliability Index
- SAIDI, SAIFI, CAIDI
- Billing Efficiency
- Collection Efficiency
- Consumer care and Servicing (Consumer Satisfaction Index)

Some of the changes that have been affected in the processes to better serve the customer can be cited as follows:

1. There were complaints of cash collection centers taking too much time. It was identified that the delay was caused by the cashier having to access the central server. To overcome the problem it was decided that there should be a off-line cash collection module (OCCM). This system ensured that the entire consumer data is transferred on to a CD which is compatible with only one desktop terminal. This terminal posts all the details on the server at regular intervals, but otherwise works offline ensuring greater speed

2. It was found that some of the customers who had clean billing records were denied services. It was found that this was being caused by improper inputting of addresses which caused misidentification of customers. This was overcome by proper address formatting whereby the addresses were structured based on 23 distinct fields. This ensured that similar addresses do not cause confusion.

3. The consumers complained that there was no convenient way to control their power expenditure since the billing was done based on meter reading at the end of the billing cycle. To give consumer greater awareness of power consumption the company developed a system whereby the consumers could prepay for power with intimation from the company well before the limit gets exhausted.

Capturing what the customer thinks of the firm has to be dynamic. In other words, measuring customer satisfaction has to be flexible self-correcting mechanism that constantly seeks to adjust the measurement process to changing scenarios. Dynamism in the measurement process itself is achieved by genuinely being interested in the customer and making incremental adjustments to the measurement process. The following discussion gives details of some of the changes that have been made in capturing customer satisfaction over a period of time:

1. Initially Customer Satisfaction Index was computed only at the firm level. When it came to seeking means of improving it, it was felt that zone-wise attention may be required. Therefore, separate zone-wise surveys were conducted. It was found that this exercise yield important differences across zones. This had implications on micro-level management of customers at zone level.

2. It was decided that the satisfaction surveys would be spread throughout the year instead of being an annual event. This allowed for comparisons across different seasons which allowed for capturing the effect of peak power shortage on CSI.

3. It was found that different consumer segments were looking for different levels of service on various parameters. Such differences could not be captured by one standard questionnaire. Therefore segment-specific questionnaires were developed and administered.

4. At District Offices, feedback forms were introduced to enable the customers to respond to services delivered. This introduced an element of flexibility for the customer to communicate the quality services and provide suggestions at any point in time.

We can see that there are major lessons on how to enhance systems by constant "tinkering". Ultimately, no system is perfect. To make any system perform well it is not adequate to put in place a "theoretical best". It is important to incrementally change the system based on learnings from experience. NDPL adapts the TATA culture beautifully to see how the customer is able to be an instrument of learning for the company!

The inputs collected from these processes are being used for process improvements. For illustrative purposes some of these changes are pointed out below:

1. With sufficient details it was possible to segregate feeders that should ideally have better reliability. In other words, those feeding customers for whom reliability of power was absolutely important (like hospitals) was identified.
2. Identification of feeders with repeated failures was possible. This allowed for making changes in the maintenance plan.
3. Load shedding to loss-making feeders was possible to divert supply to other areas with demand-supply gaps.
4. By matching billing amounts with actual power supplied at disaggregated levels, it was possible to assess the quantum of AT&C Losses (and thereby theft) at micro levels. This allowed for creation of schemes to bring more under billing net, conversion of network to HVDS and LT ABC technology.
5. The new information system also allowed availability of information regarding disconnected services. It was possible to track whether the defaulters have made the right payments that would allow them to be reconnected.
6. Reliability could be enhanced for sensitive and large customers who potentially would have a choice to go to another supplier if and when open access regime comes in.

There was the view among customers that there was inadequate communication regarding power outages. To handle this, various changes were incorporated. NDPL tries to announce the Load Shedding Schedule in advance, and this schedule is circulated to all consumers. Apart from this, for Breakdowns extending beyond 3 hours, MUNADI (which in Hindi means announcement accompanied by drums) using SANCHAR Vans has been strengthened. This enables the customers to be prepared for the power cuts. After all, forewarned is forearmed!

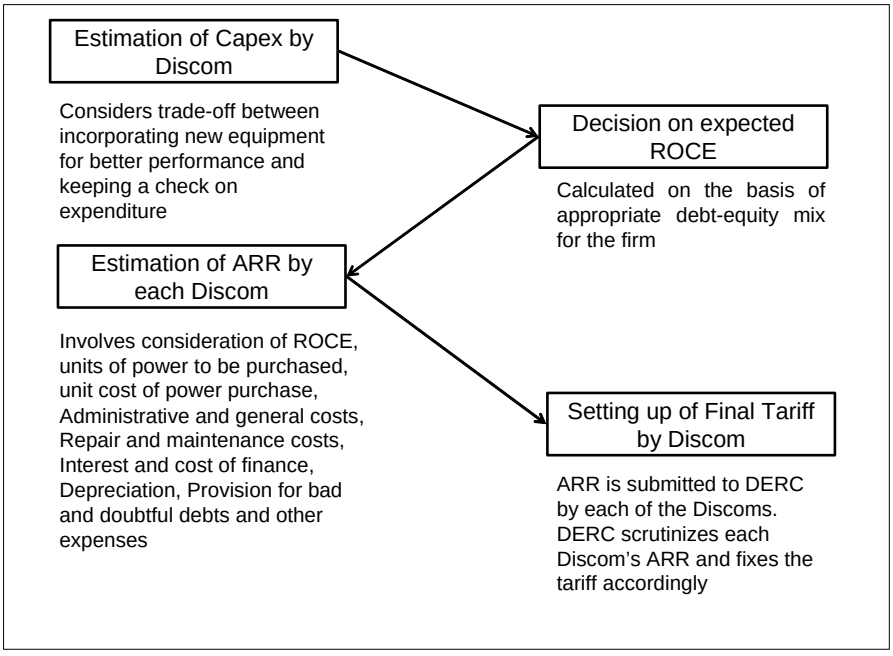
7.3. Financial Turnaround

Being in the regulated industry, NDPL is regulated both in the top line as well as the bottom line. DERC regulations approve capital expenditure and revenue expenses. NDPL meets the annual AT&C loss reduction targets, an ROE of 16% is built into the arrangement by fixing a) bulk purchase tariff at which power is sourced by NDPL from Transco and b) the tariff that NDPL charges the customer. The former consists of the major component of the input cost (the other obviously being the quantum of energy sourced) while the latter forms the major component of the inward cash inflow. The pricing mechanism, as worked out by the DERC, is based on a system of Aggregate Revenue Requirement (ARR). An ARR is a detailed statement of expenditure, in which a Discom lists its proposed expenditure on network upgradation, purchase of equipment, administrative and general expenses and the ROCE.

The following figure shows how DERC arrives at the tariff:

Figure 7.4

Determination of Tariff by DERC



There are three principal ways for NDPL to enhance the overall net financial returns which are discussed below:

a) **Push top line by lowering AT&C Losses:** The privatization policy assured a 16% annual return on Equity until 2007 (Now it is 14% plus a variable component based on performance) provided the annual AT&C targets were achieved. The policy also incentivized over-achievement of loss reduction targets[5]. In the event of any under-achievement of loss reduction targets, the entire loss of revenue was to be borne by the Discom.

NDPL was able to surpass its committed AT&C loss targets in each of the years of the Initial Control Period (2002 to 2007), except the first year, when it narrowly missed the target. A Loss Reduction of over 50% in a short period of less than five years is highly commendable. The following Table shows the committed and actual yearly AT&C Losses during the initial control period.

Table 7.5

Yearly committed and actual AT&C Losses

	FY 03	**FY 04**	**FY 05**	**FY 06**	**FY 07**
Committed	47.60%	45.35%	40.85%	35.35%	31.1%
Actual	47.79%	44.86%	33.79%	26.52%	23.74%

b) **Reduce Expenditure:** As the gross revenue of the company has increased (via increase in billed units) over the years, there has been less than proportionate increase in the Operating, Maintenance and Administrative Expenses. This has resulted in better than expected financial performance of the company. The revenue and expense figures for the Initial Control Period are as shown in the Table below.

Table: 7.6

Change in Revenue and Expenditure

	Units	**2003-04**	**2004-05**	**2005-06**	**2006-07**
Revenues	Rs. Crores	1267.78	1577.21	1734.4	1915.92
Operating, Maintenance and Administration Expense	Rs. Crores	1143.93	1398.07	1468.18	1550.21
OM&A as a percentage of Revenue	%	90	89	85	81

[5] This incentive included sharing of the resultant profits (due to "extra reduction" of AT&C Losses) between NDPL shareholders and the consumers (the latter in the form of reduced ARR requirements, and hence, tariffs during the subsequent year)

c) Make adequate capital investments within the limits approved: Capital investments for Discoms are of prime importance in promoting their performance. It involves a trade-off between incorporating new equipment for better performance on the other hand, and keeping a check on it (as higher capital investments means higher tariffs for the customers through higher ARR).

.

Prior to privatization, the Sector was starved of capital investment resulting in poor quality of service, frequent breakdowns, increased losses, etc. Over Rs. 1350 Crores of capital investment in Distribution Network, etc. has been made by NDPL during the Initial Control Period of less than five years.

7.3.1. Review of Financial Performance of NDPL

The financial profile of NDPL has improved since taking over the respective distribution circles in Delhi which is detailed below in Table 7.7.

Table: 7.7

Financial Profile of NDPL across Years

	Units	2004-05	2005-06	2006-07	2007-08
Profitability					
Revenues	Rs. Crores	1577.2	1734.4	1915.92	2499
PAT	Rs. Crores	56.76	112.53	185.79	281.58
ROCE	%	5.01	8.26	13.4	17.49
RONW	%	13.2	20.14	26.8	32
Liquidity					
Debt-Equity ratio	Times	1.87	1.50	1.06	0.82
Debt-Service Coverage Ratio	Times	11.3	6.64	3.51	3.75
Interest coverage Ratio	Times	9.11	11.57	6.43	4.70
Current Ratio	Times	2.33	1.63	1.42	1.83

NDPL's revenues have increased at a CAGR of 16.19 per cent over the last four years. This increase in revenues is on account of improved billing and collection efficiency along with increase in consumer base and demand growth. PAT of the company has grown at an

unbelievable CAGR of 82.32% in the last four year. The growth in revenue, reduction in AT&C Losses and cost control measures by the company are the main reasons behind this growth. ROCE has consistently increased over the years because of the convergence of accounting ROCE with regulatory ROCE and also on account of incentives due to AT&C reduction exceeding targets.

NDPL, initially had interest-free long term long term loan having moratorium period of 4 years, repayment and interest liability of which commenced in FY 06-07. Further NDPL had availed long term loan in FY 0304, repayment of which also started in FY 0506 due to which DSCR has reduced but has again improved due to increased profitability.

The capital expenditure incurred by the company has increased at a CAGR of 82.57 per cent to Rs. 300 Crores indicating that the company is spending on upgrading and setting up systems to improve efficiency. The asset utilisation ratio, however, is lower at around 1 per cent. This is primarily due to a higher increase in gross assets than in revenues.

The Debt-Equity ratio which has increased in the initial years due to availability of long term loans has gradually decreased to comfortable levels. NDPL has leveraged its internal accruals for meeting the fund requirements for Capex and has not availed major loans. This represents high leveraging opportunity for the company.

7.3.2. Financial Controls at NDPL

There was no separate finance department in DVB. The jobs related to Finance and Accounting was not handled by professionals. Financial statements of the firm were not properly prepared. As Mr. Ajay Kapoor, GM (Finance) commented,

> In the very beginning, we observed that checks were made without making related voucher, a process not at all prudent. Another odd practice was to release payment first, and doing accounting subsequently, whereas it should have been the reverse. We corrected the system on a priority basis.
>
> Cash management and related logistics was a huge problem, and also carried financial risk, besides offering a plum ground to feed corruption. It was found that many transactions were happening through cash. There was this system of imprest money of more than Rs. 40,000/- available with every manager and above. The imprest was used for almost everything - photocopying, stationery, taxis, materials, spares, etc.

While many systems/ facilities (transportation, vendors for maintenance work, etc.) were put in place eliminating cash transactions, an in depth analysis was carried out on usage pattern over six months. Based on the same, imprest money amount was rationalized, replenishment policy redefined (to be done just after 50% exhaust of the total imprest money). The new system is now working fine. Another big benefit that followed was that the cashiers were allocated new job portfolios which led to better manpower rationalization and productivity.

DVB had thousands of pending financial cases accumulated over the years. With privatization (inflow of private equity) the management needed to improve the financial condition of the company. According to Mr. Sunil Wadhwa, even after the takeover, the company avoided rigid financial controls. Finance function is quite decentralized. Correspondingly, what NDPL has is a compact corporate finance team. Those dealing with finance at the circle, district and zonal levels are part of the Operations department. Each Circle has an HOG (Head of the Group) in Finance and Accounts. Interestingly, they do not report to the Finance head. Instead they report to the operational head for the circle. Payments are centralized. There is a pre-audit and proprietary audit group. Interestingly, as Mr. Wadhwa pointed out, there are engineers working in this group. According to Mr. Puneet Munjal the main functions of the Finance department are:

a) Working Capital Management: The main component of working capital requirement is for payment to Transco for power purchases. This along with other costs such as salary warrants use of monthly working capital. This requirement is met by cash credit advances from four banks, and from internal funds. Incidentally, NDPL maintains collection account with two banks which are different from those four that advance working capital.

b) Statutory Compliance: This has been discussed elsewhere under section 3.7. As discussed there the finance department has a major role in ensuring statutory compliance.

c) Projects and Financing: So far there have been no new projects for NDPL except some new initiatives in power generation permitted after the initial control period (that is after 2007). Here the regulator (DERC) specifies an optimal Equity: Debt ratio of 30:70.

d) Regulations: Regulations, mostly under DERC, are discussed in 3.6

7.3.3. Growth Drivers for the future

NDPL has managed to significantly bring down AT&C Losses in its distribution region. However, in the long run, the reduction in AT&C Losses may not contribute to top line growth. AT&C loss level in the initial control period was as shown below.

Table: 7.8

AT&C Losses over the Years

	2002-03	**2003-04**	**2004-05**	**2005-06**	**2006-07**	**CAGR**
Sales (MUs)	2813*	3196	3667	4154	4350	10.82%
Energy Input (MUs)	5342*	5552	5549	5695	5986	2.54%
Units Collected (MUs)	2734	3062	3674	4185	4566	10.7%
Losses (MUs)	2503*	2491	1875	1510	1421	-10.50%
Losses (%)	47.79%	44.86%	33.79%	26.51%	23.73%	--

Top line growth has been and will be more on account of increased energy requirement in line with the economic growth, life style changes and the changing urban profile. Keeping in mind the increased demand expected in the future NDPL would need to look for increasing its supply capacity. One of the measures taken up by NDPL in this direction is the setting up of its own power plant at Rohini, within Delhi itself.

7.4 Managing Human Capital

NDPL HR vision is "To create a learning organization, which nurtures talent, innovation and provides competitive environment that makes NDPL the favored company to work for".

MR. R.C. Kher, who had worked in erstwhile DESU and DVB as Chief Engineer and later as Member, currently Advisor (Commercial), has the following to say,

> During the old DVB days, about fifteen to twenty percent people were working for consumers in the real sense, about fifty percent were fence sitters working for considerations and rest were hardcore non-workers. Vigilance was not invariably used positively but instead as a de-motivating force."

> In DVB we took up a lot of initiatives. Like, for instance, I was in charge of North West (NW). This particular area was known for very high loses, loses in excess of 65%, lawlessness and rowdism. NW took lead in many initiatives such as Single Point delivery (SPD), something that that started for the first time there which subsequently spread to other areas. Unique method of controlling theft was started like giving single phase supply during night. Energy Auditing was started. Very soon we realized that the saying *'Meter hai to heater nahin; Heater hai to meter nahin'* was true and through energy audit we soon saw that the moment we started recording consumption through meter, it came down to as much as one third. However, we could not sustain all these efforts as there was absence of resources and political willingness to take strong decisions. The takeover removed all these barriers and made things happen. The performers were very happy with the changes as their efforts were appreciated and they could see quick decisions on various strategic and critical issues they faced.
>
> The significant feeling after NDPL formation was a change from the feeling of '*obligation to recognition'*. The feeling of being frustrated was lost forever and there was a change from reluctance to come to office to willingness to come to office. There was a huge shift in performance with the support of Quality tools, Training, TBEM etc.

No Human Resource Department existed during DVB times. There was no system for recruitment, job descriptions and employee policies. The challenges for NDPL involved developing a proper database bottom up, developing a proper structure etc. But there was need to be patient. It was decided to continue on "*as is where is*" basis initially. This meant that the organization would continue to have people working where they were working and assume that if, say, ten people are working in a process then ten is required. Thus a gradual, incremental approach towards structural change and organizational redesign was decided upon. This applied to all functions. After many brainstorming sessions around 113 redundant posts were identified. There were many anomalies. For instance, there were occasions when a person who was supposed to deliver duties at a particular place would be actually working at a politician's bungalow!

With no recognized union and, thus no control over processes, in 2003, a decentralized Human Resource department was created with HOG - H.R. in every district to look after employees' needs. With strict control on attendances, all things were slowly streamlined. In 2004, after some rationalization, all the functions were classified into 13 volumes of work-processes, while the surpluses were identified under 'special deployment'. Once in control, issues and problems were gradually identified and looked into. In 2006, HR department at NDPL was centralized. Performance management issues surfaced early by 2007 and the concept of scorecards were introduced.

In Section 7.4.1, we start with an overview of manpower size and profile. Then we discuss work systems and schemes, training, manpower deployment and HR performance – all designed to move towards the HR vision we mentioned earlier.

7.4.1 Overview

NDPL had on the rolls 3751 employees as on March 31st 2008 of which 66% percent are from erstwhile DVB and the rest were recruited post privatization. Additionally it has 434 outsourced workers engaged in support/ secretarial services.

At the time of takeover DVB had employee strength of 5638. Of those some voluntarily separated and some have retired since then. NDPL maintains two pay structures; a FRSR pay structure based on Delhi government norms and another which has a CTC-based NDPL structure. The former is required as per the agreement with the state government at the time of takeover.

The breakdown of the employees in terms of Segment with their key expectations and NDPL offerings are shown in Table 7.9.

Table: 7.9

Breakdown of Employees – Segment-wise

Sl. No.	Segment	Number	Key Expectations	NDPL's Offerings
1	Executives	971	Learning and Growth Competitive Compensation Engagement Opportunities Reward and Recognition	Education/ Training, Mentoring, Cross Functional Teams, SHINE
2	Non Executives	2780	Job Enrichment Avenues for Education Working Conditions Reward and Recognition	Quality Circles, Education and Deployment
3	Outsourced	434	Job Security Competence Development	Inducting in Roles and On-the-job training
4	Total	4185	---	---

Table 7.10 and Table 7.11 respectively show the employee profile in terms of age and qualifications across various segments respectively.

Table: 7.10

Employee Age Profile

Sl. No.	Age	%age
1	≤ 25	9%
2	25 – 35	22%
3	35 – 45	26%
4	> 45	43%
	Total	**100**

As it is clear from the Table above, the majority of the workforce at NDPL is above 40 years of age with educational qualifications less that graduation.

Table 7.11

Employee Qualifications Profile

Segment	Total Number	Those who are Grad/ PG/ Professional
Executives	971	881
Non Executives	2780	324
Outsourced	324	291
Total	**4185**	**1496**

At the time of the takeover, many of the erstwhile DVB employees felt that they had been cheated by the Union as well as the Government. They felt that their destinies had been put into the hands of a "private" company, and their future was insecure. However, gradually, mutual trust began to emerge. Today, the employees of NDPL are happy. Many of them have voluntarily switched over to the NDPL structure from the FRSR structure (which we earlier described as one which maintained the DVB service conditions for those who are erstwhile DVB employees), as there are better growth opportunities and performance-based incentives in the NDPL structure. Changing the attitude of people and making them motivated to work within a performance-based culture is surely a commendable achievement of NDPL.

NDPL is an equal employment opportunity employer which broadly means that no discrimination is practiced on the basis on religion, gender, caste etc. for selection or retention of employees. The staff members who belong to the FRSR pay structure are associated with unions whose leadership is elected through democratic means.

At the time of takeover the company faced immense challenges in terms of lack of productivity and amalgamation of two diverse sets of workforces. These were identified as two strategic challenges (coming from the Strategic Planning Process) of the HR function. To meet these challenges certain Objectives for the HR function were identified which are shown in Column 2 in the following Table. The Table also shows how the objectives have further given rise to HR Action Points.

Table: 7.12

Response to Challenges – HR Function

Strategic Challenge	**HR Objective**	**Time Horizon**	**HR Action Points**
Suboptimal skill and Productivity of workforce	Talent Management	ST	Induction of fresh graduates from premier institutes
		ST	Lateral recruitment dependent on domain specific expertise
	Employee Development	ST	Training needs identification; Formulation of training policy
		LT	Institutional strengthening of CENPEID
	Creating performance oriented culture	ST	Clear JDs, KRAs, alignment with organizational and departmental PMS
	Career progression	LT	Succession planning, fast track plan for achievers
Amalgamation of two culturally diverse workforces	Organization-wide dissemination	LT	Knowledge Management, Relationship building
	Integration of diverse workforces	LT	JIF, LGIE, Team based work culture, benefits of NDPL pay structure wherever beneficial
	Institutionalization of ethics	LT	NDPL Code of conduct, Strengthening of ethics structure

Much work has gone into developing a positive culture. Some of the comments by employees are indicative of the changes that have taken place in the overall culture of the company.

> When the first bonus was announced, people were very happy. They had seen the smiles on the faces of consumers by doing things right, and now the time came to bring smiles on their faces. The revamping of offices was another reason for cheer.
>
> There was this very important meeting going on at Oberoi Maiden, when we came to know that some people have called for a strike at one of our offices. The trigger was water problem and installation of air-conditioners. Though the matter could have been postponed to be handled any other day, the CEO insisted for a dialogue then and

there. We rushed to the scene, heard agitating employees, and came out with a solution that made them happy. Even today, you would see that employees issues raised through any forum (JIF, SAMVAAD, etc.) are documented and worked upon. In general employees have shown higher and higher level of maturity, and issues are being resolved amicably with open dialogue and mutual trust.

We started and kept doing a few things very well. Apart from network upgradation and augmentation, initiatives like 24X7 working at zones, 24X7 store, IT implementation, computer education, RWA meetings, etc. were all to serve our consumers in a better manner. All these had positive implications on the employees.

In whichever locality enforcement cases against theft/ meter tempering were booked – sometimes even more than 1000 cases – we invoked it and relentlessly pursued it despite pressure from interested parties which could be mix of threats, slogan shouting, gherao of our officers/ staff, abusive language and even offers of bribe. This continues even today and we are now well known as an ethical company.

7.4.2. Work Systems and Schemes

Based on Strategic challenges discussed earlier, six areas of soft skills were also identified which were to be promoted as part of the HR initiative. There were 1) Cooperation, 2) Initiative, 3) Empowerment, 4) Innovation, 5) Organizational Culture (performance orientation) and 6) Agility to keep current with business needs and to achieve action plans. These are designed to be promoted through the three routes of Work Systems, Job Definition and Performance-based Management. In the following paragraphs we discuss each of these soft skills and how they are institutionalized through the three routes.

Cooperation

Through Work Systems: Processes are segmented into interlinked sub-processes managed by distinct departments/groups headed by HOD/HOG with defined work mechanisms and delivery targets. SLAs between departments are being worked out; JIFs with Unions of FRSR employees, LGIEs and THMs are being organized regularly.

Through Job Definition: Each employee in the departments/Groups has clear JDs/ KRAs aligned to the Dept/ Group's targets and work requirements.

Through Performance Based Management: Corporate and functional KPIs (OPMS) are cascaded down to the Dept/Groups (DPMS) and further to individual KPIs (IPMS). Reward

and Recognition Schemes and career progressions are linked to OPMS–DPMS-IPMS ensuring cooperation of each employee to contribute to Department/Group performance and there by encourage each Department to excel in organizational performance.

Initiative

Through Work Systems: Suggestion Schemes, Eureka (under SHINE) and Idea Logger (in SANCHAY) are important schemes to receive views of the employees. These suggestions are analyzed and initiatives encouraged through CFTs and specific taskforces. Further, SHINE scheme mentored by those in senior leadership encourage innovative thinking and brainstorming among employees.

Through Job Definition: Initiative is encouraged through job definitions, an example of which would be those emerging from CAPA plans.

Performance Based Management: Initiatives are driven through various review mechanisms. The company Reward and Recognition (R&R) policy recognizes and rewards these new initiatives which are ranked for their usefulness and implement ability.

Empowerment

Through Work Systems: Requisite knowledge, information and infrastructure are provided to all employees. Concept of HOGs and HODs has been introduced to empower employees to take up enhanced responsibilities irrespective of designation. End-to-end ownership of commercial as well as O&M of all distribution network feeders is provided to zonal teams to maintain them fault free.

Through Job Definitions: DoP has been revised to enhance empowerment across levels. Also, there is increased representation of executive employees in strategy workshops and excellence workshops**.**

Performance Based Management: Empowerment is linked to performance in the sense that there is an expanding horizon of responsibility for competent employees through creation of enhanced job profiles without necessarily any change in designation.

Innovation

Through Work Systems: SHINE is the umbrella approach under which all improvement/ innovation are captured, delivered and tracked. Besides, the BE Group identifies and triggers specific improvement/ innovation project from time to time, such as Mission 9X9, Project 'Aashwasan' (also referred as 'Consumer Experience Design' project), benchmarking studies, etc. The MTM (apex management team) members also mandate formation of CFTs/ Task Forces for critical assignments/ projects.

Through job Definitions: There is a defined process for promoting, mentoring, and implementation of innovative proposals through SHINE

Performance Based Management: All completed SHINE projects are eligible for due reward and recognition (R&R) based on evaluation of the project on three factors – (i) Uniqueness (ii) Financial gain/ saving, and (iii) Level of impact on quality, cost, revenue, stakeholders satisfaction and safety (QCRSS framework).

Organizational Culture

Through Work Systems: There has been conversion of manpower-based contracts to performance-based contracts in line with the performance oriented culture of the organization. The deployment of TBEM framework too has helped build excellence-driven work culture and systems.

Through job Definitions: The employees are given exposure to best practices through peer-exchange programs.

Performance-Based Management: Productivity Linked Incentive Program (PLIP) is currently being rolled out.

The implementation of these ideals were by no means easy. The following comments by an employee are illustrative.

> Some of the practices in a government set up take time to wear out. Overtime was one such thing. It took time for employees to appreciate that overtime is neither good for the organization nor for them. When management took decision to do away with overtime, there was a lot of resistance, and it existed even as late as 2006. Credit must go to the employees also that they ultimately understood the rationale behind such a decision. Now overtime is nil and productivity per employee has been going up year after year.

Mr. Uday Mishra, HOG (BE) & CQH, observed,

> For innovation, improvements and quality, an open and trusting culture is required. The management has been nurturing such an environment from the very beginning. Staring from the earlier days of Mr. Adi Engineer, to present days of Mr. Wadhwa, employees have been encouraged to be not afraid of mistakes, as long as it is not intentional. Mr. Wadhwa in his communication emphasizes that NDPL's philosophy is to experiment, improve, find newer and better ways of working; and in doing so if some mistakes happen, do not worry of any penalty or reprimand. People know they should learn from the mistakes, and do better next time. The strong foundation so built has taken us where we are. Today, you see, almost all employees (>3000) are engaged through SHINE, SEEKH, Mission 9X9, T-2/2, etc.. Soon, such sustained passion of people would make us one of the best in the distribution sector worldwide.

Agility to keep Current with Business Needs and Achieve Action Plans

Through Work Systems: There is a continuous review of processes and organizational structure to keep current with enhanced business process and new technologies.

Through Job Definitions: There is increased focus on core areas and outsourcing non-core operations.

Performance Based Management: Surveillance audits, TBEM assessments, participation in CII EXIM and various other awards are promoted. Further**,** there is a high level of IT intervention in these initiatives.

The above initiatives were also supported by centralized Corporate-level monitoring and analysis of performance and decentralized delivery from the zone/ districts/ circles. CENCARE was another scheme to undertake back office volume processing.

Various schemes that have taken have taken root over a period of time. It took constant and painstaking effort that relentlessly conveyed the seriousness of management in driving these schemes forward. Much personal touch was involved. Mr. Surender Sharma, HOG (REM),

who has also been part of erstwhile DVB and has seen transition from close quarters, quipped,

> Well, today you see many R&R schemes for AT&C Loss reduction, Operational/ Commercial Excellence, Shining Star, SHINE, Knowledge Management, CS, Training, etc., let us not forget that the culture of appreciation began from the very inception. Sending congratulatory and encouraging messages were common practices among senior management members, and soon many others also started doing the same. I have seen many employees bubbling with joy on the days they receive such mails from their seniors or colleagues.

Some of the activities are outsourced. This includes low-value adding tasks involved in project execution, maintenance, meter reading, bill distribution, housekeeping and transportation. This year there has been a major overall in introducing performance contract with out-sourced agencies with clearer specification of deliverables and timelines.

7.4.3 Training

At the heart of the distribution problem is the critical need for sustained training and capacity building at all levels ranging from the management of the State Electricity Board/Distribution Companies all the way to technicians, foremen and linesmen at the consumer end of the spectrum and administrative and accounting personnel. While sporadic training has been provided by the SEBs/ Discoms there has been little comprehensive analysis of training requirements and meeting up with them.

The technician cadre comprises of 60% of the total work force and is the backbone of the distribution utility. It had been performing their duties based on the knowledge gained through experience and by simply observing their seniors/ peers.

Perhaps the need for developing behavioral and attitudinal sills were more important than technical skills! As Mr. S. K. Saini, General Manager (Revenue Management & Assurance) observes,

> "When I joined NDPL in 2004, I could feel lack of attitudinal training in employees who deal with consumers. I remember the saying by Gandhiji who said

A customer is the most important visitor in our premises. He is not dependent on us. We are dependent on him. He is not an interruption to our work. He is the purpose of it. He is not an outsider in business. He is a part of it. We are not doing him a favour by serving him. He is doing us a favour by giving us an opportunity to do so.

I think we did everything what Gandhiji did want us to do. This lead us to think on re-engineering our consumer processes with the objective to be more consumer centric, which is the philosophy followed by the TATA Group"

"The biggest challenge for us was to change the mindset of the employee. We brought about change with regular interactions and training. When we joined we had over one lakh pending complaints and there was lack of access mechanisms for the consumer to get in touch with us. We reduced complaints and increased access mechanism and encouraged our consumers to talk to us."

Most linesmen were not provided with any formal training, either technical or behavioral, and were recruited without any skill test. The job profile of a technician requires them to work on the HT/ LT network. Lack of training translates into low levels of confidence in the work areas. Lack of skills may also seriously compromise on safety besides causing poor satisfaction levels for the consumers. Similarly, for the supervisory cadre, very little importance was given towards training. Now the firm is looking at fulfilling the requirements of the National training policy and meet up with the challenges thrown in as a consequence of the Electricity Act of 2003.

There is a constant effort to share skills which is promoted through training programs which are based on inputs from Individual PMS. Training programs also include sharing of ideas. For instance, the zones that perform best are invited to share best practices through events organized for the purpose. There are also structural mechanisms such as merging of better performing zones and lesser performing ones so that there is better mutuality, without compromising on the performance of those who are doing better.

To decide on the training needs there is also reference to "Tata Leadership Practices" from which are drawn fourteen competencies. The following Table shows various training programs to enhance technical skills (the other skill set being 'behavioral'). The overall training policy has been to designed to provide for a minimum of six man-days of training for executive and two days for non-executives. In Annexure 4 we show the details of how the Action Plans discussed earlier are furthered through focused education and training programs.

How is this done? Let us take a specific instance. It may be seen that a key aspect of the Action Plan like "Adherence to Maintenance Management Practices to ensure uninterrupted power supply" is converted to Education and Training Program by ensuring Peer-to-Peer exchange programs with international utilities such as BG&E, CL&P, Tacoma Electric etc. and with different distribution utilities in India like ASEB. TNEB, AEC, TNEB, AEC, MSEB (the latter is through DRUM training projects)

In order to meet the ever-increasing challenges in the Power distribution sector in the wake of reforms and to fully equip employees to address the changed market scenario, NDPL started a full-fledged training center in the name of Center for Power Efficiency in Distribution (CENPIED) in January 2005. Prior to setting up of CENPIED, realizing the importance and the need of training, NDPL had laid great emphasis on this aspect and had started imparting training since August 2002 from HRDI operating from Rohini.

Today CENPIED has its own set of mission and value statement and objectives that govern the training mechanism at NDPL. The target groups for various training programs at CENPIED are the Executives, Supervisors, Technicians, Office Associates, Security personnel, Drivers, Contractors' Employees, Resident Welfare Association Officials, Private Electricians and many more. Special emphasis is given on hands-on training, Opportunity to work on and get trained on actual HT/ LT model network is available. Training for various stakeholders including consumers, contract personnel etc. could also be arranged.

Various pedagogical methods are used for training purposes. The following Table provides the range of delivery mechanisms that are used for training purposes.

Table: 7.13

Training Delivery Mechanisms

Formal Approaches	**Informal Approaches**
Classroom Training, Video Sessions	Mentoring
Role Plays	Excursions/ Expeditions
Outbound Training	Quiz Competitions
Hands on/ On the job training for building technical skills	'Samarth' Management games
Peer to Peer exchange programs	Departmental Brainstorming sessions
e-Learning	Interactions with associates
Town Hall Meetings	Interactions with consumer forums

Training needs of new employees is an important aspect of the training process. The number of days of training and location where training is imparted is shown in Table 7.14.

Table: 7.14

Training Inputs to New Members

Trainee Scheme	Duration of Class Room training	Location
ET	46 days	NPTI, Faridabad
MT	17 days	CENPEID
TT	7 days	HRDI

The total training man-days increased enormously from about 3000 man-days in 2002-03 to about the current level of 20,000 man-days. In future to the extent of man-days expected is of the same order as shown below.

Table: 7.15

Training Man-days

Year	Training Man-days
2002-03	2968
2005-06	19948
2006-07	16319
2007-08	20500
2011-12 (projected)	20000

7.4.4. CENPEID

Centre of Power Efficiency in Distribution or CENPEID was set up by NDPL in 2005. This is the first institute for skill accreditation and certification in the power distribution sector in India. It may be right to say that, world over, it only recently that the power sector has realized the importance of this end of the value-chain. In a short span of three years CENPEID has achieved much with very ambitious plans for its future. The Centre now plans to soon be a profit centre with a self-sustaining activities that will generate adequate revenues. As someone associated with CENPEID quipped, we may even see post-graduate programs of its own and advanced research activities coming from the centre in the not too distant future.

The centre has been set up in association with US Aid and The Ministry of Power, Government of India. CENPIED is symbolically located away from the hustle and bustle of day-to-day operations. It has a peaceful 10-acre campus approximately 2 kms from Rithala Metro Station in North Delhi. With centrally air-conditioned auditorium, a display room, workshop cum laboratories for transformer maintenance and street lightning, CENPIED can claim to be one of the finest training institutes of its kind. Separate outdoor facilities for training in HT and LT switchgear, cabling, pole-erection, high mast lightning, distribution transformers etc. are also available. Let us dwell on the Centre's Vision-Mission statements. After all, we are likely to see the Centre being cast into a separate Profit Centre with more participants drawn from not only India but also other Asian countries.

The Vision of CENPEID is "To be a Center for excellence in providing training, sharing knowledge, conducting research and providing a forum for Policy Advocacy in power distribution in partnership with National and International stakeholders."

The Mission of CENPEID are as follows:

- Design and deliver high quality and targeted technical training to familiarize utility personnel with technical systems, equipment and processes in power distribution chain.

- Institute best practices and certified programs to enhance supervisory and management capabilities and capacity within NDPL and across the utilities in India and Abroad.

- Institute applied research activities and provide Policy Inputs to national and state governments.

- Develop national ad International partnerships, provide study tours and facilitate internships to enhance Distribution Efficiency Practices.

Its main objectives have been defined as follows:

1. To make learning and knowledge sharing as one of the fundamental values within the company and across the power distribution sector.

2. To build competency in employees, and thereby, add to the resource pool of the sector as a whole.

3. Familiarize all personnel with existing and new technology in the power distribution sector.

CENPIED currently has on its roll ten full time trainers with vast experience and thoroughly trained in India and abroad both in technical and management training skills. Apart from this, as many as hundred in-house faculty members drawn from field operations have been specifically groomed in training techniques to conduct its variegated programs. CENPIED is also strongly networked with renowned experts in technical and management fields within and abroad who are invited to be lead and participate in the programs.

Internal Certification is done for programs conducted and External certifications are also being worked out.

CENPIED has achieved 19948 man-days of training with a quality index of 4.40 (on a scale of 5) during 2005-06. CENPIED also organizes regular training programs under the Distribution, Reforms, Upgrade and Management (DRUM) Project of the Ministry of power and USAID. The following Table shows details of DRUM projects undertaken until mid 2008.

Table 7.16

Details of DRUM Project to date

Details	**Numbers**
Technical Themes	8
Management Themes	24
Total number of batches covered till date	52
Total number of training man-days achieved	6712
Total number of personnel trained	1370
Number of utilities covered across the nation	20

Some of the noteworthy initiatives by centre are as follows:

a) Training programs for two batches of Bhutan Electric Supply Company delegates which was specially designed and conducted

b) Training programs on Metering, Billing and Collection for delegation from Afghanistan under USEA/USAID Energy Partnership Program

c) Technical Consultancy was offered to PSEB for reducing T & C losses

d) Consultancy and training of call canter operations were done for Pashchimanchal Vidyut Vitran Nigam, Noida

e) Program on metering and revenue Protection being organized

f) Career Counseling for Employees' Children

g) SAMVAD aur Suraksha (Communication and Safety program for non-technical support staff)

The Centre has tie-ups with academic institutions for offering the following programs:

1. 3-years distance learning program through Birla Institute of technology and Sciences (BITS), Pilani for Bachelor of Science course in Power Engineering
2. Advanced Certification in Power Distribution Management, IGNOU through distance learning.

Other educational initiatives include sponsoring of 5 seats for NDPL employees in the evening MBA program at the International Management Institute (IMI), Delhi and two seats at the Management Development Institute (MDI), Gurgaon for Post Graduate program in Energy Management.

While CENPEID has kept its eyes on advanced training, it also has been instrumental is ensuring that literacy among those who are working at the lower rungs in the organization. Mr. S. N. Pandey made an interesting observation that, thanks to CENPEID's literacy drive, all the employees are now able to affix their signature where required rather than fix thumb impressions. There have been also other efforts that are social in nature. For instance, there was a very well-appreciated drive in creating literacy among women and thereby developing empowerment amongst the participants. It will be interesting to see how CENPEID would

continue to effectively straddle between offering advanced technical and managerial training requirements and also satisfy distributional justice in being sensitive to social and community learning needs.

7.4.5 Drivers of HR Performance

To foster a performance-based culture, NDPL provides various rewards and recognitions to its employees. The programs are designed in such a way that these not only motivate those who win rewards, but also encourages others to compete and be eligible for the rewards and recognitions in future. Mr. Sonavane, a Zonal Manager says that "a sense of ownership that has become a characteristic at the Zones level today which is strengthened by the rewards people receive on performing well."

The various schemes being provided by NDPL at present are listed in Table 7.17.

Table: 7.17

Rewards and Recognition Schemes

	Executives	**Non-Executives**
Rewards	• Shining star of the quarter • Champ ion officer of the year • Champion manager of the year • Consumer confidante award • Mission Accomplished • Valour Award • Catalyst Award • Sportsperson of the year • Preferred associate of the year • 'SHINE R&R' for improvement • 'KM R&R' for knowledge management • 'NISHTHA' Award for Values • 'SURAKSHA Award' for safety	• Shining Star of the Quarter • Champion Workman of the year • Valour Award • Sportsperson of the year • Samridhi Merit Award (Lady Workmen) • 'SHINE R&R' for improvement • 'KM R&R' for knowledge management • 'NISHTHA' Award for Values • 'SURAKSHA Award' for safety
Recognition	• Sterling Performance • Appreciation Letter • "SHABASH" Certificate • Best Engineering Trainee/ Management Trainee/Technician Trainee	• Sterling Performance • Appreciation Letter • "SHABASH" Letter

The following Table shows the total number of formal rewards presented annually over the last several years and what is being planned for the future.

Table: 7.18

Formal Awards Given

Year	No. of Formal Rewards Given
2005-06	79
2007-08	137
2007-08	261

Apart from these, various welfare schemes are in place to benefit the employees and their families. We could see the idea of "happy employees means better productivity" working in NDPL. This also means effective schemes for employees to air any complaints. For example, Joint Interaction Forum (JIF) is a platform for employees to bring up their common problems that might be related to infrastructure and working conditions. According to Mr. Dahiya, IR Manager at NDPL, initially there were a lot of problems related to basic infrastructure, like drinking water, lighting, etc. in the offices and other workplaces. But these things have been largely taken care of now. The district and zonal offices have been renovated and these provide much better working conditions. Still, any employee who thinks that some improvement is required can bring up the issue in a JIF. Table 7.19 lists the schemes and their beneficiaries.

Table: 7.19

Welfare Schemes

Scheme	Beneficiary
Large Group Interactive Event	Employees &management
JIF – Issues related to employees, their, Work conditions , satisfaction	Employees
Training	Employees
Amnesty Scheme – updating higher qualification in the service books	Employees
Scholarship	Employee's Children
Jobs for wards	Employee's children
Mediclaim and Insurance	Employees
Coverage of employees under GPAI(up to 7.5 Lakhs) and Group Insurance (1 Lakh)	Employees

NDPL also participates in independent compensation surveys conducted by agencies such as Mercer (most recently in 2005-06). The data obtained form these surveys are used to calibrate the company's compensation structure.

Another aspect that is constantly emphasized is communication, both within as well as from outside. There are numerous avenues to share diverse ideas some of which are presented in the following Table.

Table: 7.20

Communication Platforms

Platforms to Share Diverse Ideas
ETs/Mts/ lateral inductees Meets
Strategy Workshop/ Excellence Workshops
Meet the CEO
Suggestion Scheme, MyCO, Jigyasa, Idea logger In SANCHAY
JIG, LGIE
Review meetings
Surveys (CSAT, ESS)
Sarthi
Consumer Suggestion Desk
Town Hall meetings

Individual performance assessment starts with plans drawn up for all the employees thorough IPMS which have the following components; Self-appraisal and KRAs which is based on the targets met and Individual Development Plans. KRA is now being fully automated through SAPS-ESS module. ESS is a B2E system that allows employees 24X7 access to the corporate human resources database that provides information to the employees on real-time basis. This enhances two-way communication, lowers cost and enhances timeliness. Individual Development Plan is a framework that includes both customer and business focus.

7.4.6. Career Progression

NDPL has a system of identifying critical positions and potential successors to these positions. This applies to positions Assistant Manager/ Head of the Department. The competency enhancement required for such individuals is tracked and such persons are given focused training. This readies executives to perform when promoted to higher responsibilities.

For a company that offers 24-hour service there is a certain criticality attached to some of the positions. Such positions or roles are identified as critical. In fact if we consider all the positions up to the AM/ HOG level, they are classified into four categories as 1) Most critical, 2) one month vacancy endurable, 3) three months vacancy endurable and 4) not critical position.

It may also be noted that there are 54 critical positions up to executive level. With respect to these positions, NDPL has been quite proactive in terms of identifying potential successors; for 42 positions of the 54 critical positions, potential successors have already been identified. The corresponding figure for lower designations is 100.

7.4.7 Union Interface

DVB had a history of very strong trade unionism. It was a major advantage that union leadership and union members came to understand that reform was inevitable. The reform also had public support. The trade union leadership was able to see that cooperating with the reform process would be more advantageous. However, an atmosphere of cooperation could not be maintained without the assurance of job security. The Tripartite Agreement in October 2000 protected the existing employees from the threat of retrenchment and secured their existing conditions of service and committed GNCTD to establish a Trust for retirement benefits; GNCTD contributed Rs. 860 Crores to make up the initial funding requirement of the Trust of Rs. 1329 Crores and guaranteed the Trust's discharge of its obligations.

The Delhi State Electricity Worker's Union (DSEWU) operates in all the five new entities (three Discoms, one Transco and one Genco). In the year 2006, an election took place in DSEWU after an intense intra-union rivalry. The then General Secretary, Mr. Hira Lal was challenged and following the intervention of the High Court, elections were held. Following this, Mr. Kuldeep Kumar was elected the General Secretary of DSEWU.

According to Mr. Shashi Kumar, Manager (Employee Relations & Legal),

> The problems of the workers prior to privatization were man-made. The workers were making a hue and cry for petty issues. The workers had apprehensions that management would change their working conditions or victimize them. But gradually

> they realized that the management is fair. Thanks to positive efforts from all concerned, the industrial relations scenario today is very cordial.

Another organizational member said,

> I have worked for three companies earlier, but never have I seen the kind of openness the management of NDPL shows. In fact, in the beginning I was hesitant to discuss certain issues thinking my senior would not encourage open discussion. But after a few days of observation, I got courage enough to approach him and talk it out. And over the period, I have experienced that any employee can approach any person – junior to topmost – to discuss any issue of importance.

7.4.8 Grievances Handling Mechanisms

In NDPL a structured Grievance Redressal procedure exists. Any aggrieved employee can submit his or her grievances before their superiors. The concerned employee gets reply within three days after raising the concern. Employees log their complaints on SAARTHI which is a web-enabled help desk. Apart from SAARTHI employees can also raise their concerns via the following channels:

a) JIF (Joint Interactive Forum): Frequent meetings are held under this forum in each of the districts and zones. Employees raise collective as well as individual concerns here. Senior managers also participate in the "Ethics JIF" organized to address the ethical issues faced by employees.
b) VOE (Voice of Employee): The DGM (HR), along with some of the senior officials, randomly visit zones/ districts and interact with all the employees at a meeting. Employees raise their concerns at this meeting. Management ensures that all the employee concerns are captured and resolved.
c) SAMVAD – The CEO pays an official visit to any of the zones/ districts. All the employees in the zone/ district are invited and are allowed to speak freely about their concerns. According to Mr. Manu S, HOG (HR Operations) "In the past even an ALM (Assistant Line Man) had raised his concerns at SAMVAD".

The concerns of the employees are addressed though discussions and deliberations by Apex Ethics Committee. The Chief Ethics Counselor submits a consolidated report on the progress on all issues raised during a particular month which is directly monitored by the Mr. Wadhwa, the CEO, who is also nominated as the Chief Ethics Officer of the organization.

The following Table shows the number of grievances redressed (%) through SARTHI during 2005-06 to 2007-08.

Table: 7.21

Percentage Grievances Resolved through SARTHI

Year	Percentage of Grievances Resolved through SARTHI
2005-06	71%
2006-07	89%
2007-08	97%

7.4.9. Safety

For NDPL safety concerns are top priority and are an integral part of their move towards achieving a better work culture. Thus risk assessment under OHSAS initiative is introduced. "With 'Safety First' campaign, we want to promote the safety culture at NDPL as we respect and care for our workforce and consumers", says MR. Ajai Nirula, Head (Operations). Employees are given 'Suraksha Samman' awards to highlight and promote safety issues. Similarly "Utkrishtha Suraksha Puruskaar" are awarded to teams; viz., districts, projects, systems etc. for exemplary display of safety practices and results. Public installations such as hospitals, hotels and malls within NDPL area are inspected and guided for better safety practices by company teams. Safety concerns of consumers/ community are captured through toll free IVRS systems and issues are addressed in a time- bound manner.

7.5. Information Technology & Operational Automation

Information Technology (IT) and automation was an alien word when NDPL took over erstwhile DVB. The IT systems and applications evolved as a result of far-reaching awareness of what IT can do as the former CIO, Mr. Akhil Pandey says,

> When I joined, NDPL was operating on LINUX operating and mailing system. IT application was restricted to DEBS (Billing Software) and ENERGISE (TCS). IT functions included allotment of hardware, PC and buying laptops. The accounting system was on Tally. We had just a handful of PCs compared to around 3000 today! People were not exposed to working in IT environment. Initially, many also resisted working on the computer. Gradually people got educated on the benefits of IT and working in an IT environment. If you ask me, one of my happiest moments has been seeing attitudinal changes in people to become IT savvy!

> The most encouraging experience during the journey was that I found senior management team very progressive, enthusiastic and convinced about role of IT as enabler in distribution business. In my 36 years of working experience, for the first time, I had met senior team of a company who did not want "unnecessary" justifications such as ROI on technology investments. They were convinced that IT penetration is essential for electricity distribution business. Slowly, IT was changed from a hardware storehouse and PC provider to a facilitator leveraging vendor relationship - for installation and maintenance of hardware - including JIT. With time NDPL invested in a robust IT infrastructure – Network, messaging and office systems. All these helped NDPL to become an efficient organization and the inherited bureaucracy received a silent beating.

NDPL's IT Vision is to make its IT environment a benchmark in power distribution business. Starting with only 2 PCs in July 2002, NDPL deployed the IT based communication system and today holds a seamlessly integrated system with about 3000 PCs/ laptops, for both communication and high end consumer-interface.

The main objectives of the IT strategy for NDPL included increasing the operational efficiencies and enablement of consumer friendly systems and processes, while reducing costs and enhancing timeliness of services. A dedicated IT Group was put in place to meet these objectives of implementing intelligent, integrated, state of art and user friendly systems in all functions of NDPL. The IT initiatives taken are a result of managerial brainstorming of challenge identification and ideas generation. In the very beginning itself, NDPL developed an IT Road Map to guide its IT initiatives. It thus opted for automation in Business, Distribution, Office and Network. It may be recalled that the "IT Task Force for Power Distribution', set up by Govt. of India (in late 90's) had suggested certain milestones under its proposed 'IT Roadmap for Discoms'. It is worth noting here that NDPL has been surpassing all the milestones under this roadmap by speedy deployment of its own in-house IT Roadmap.

The IT Group adopted guiding principles to achieve the Goals and Scope of Road Map. The roadmap sought to:

- Avoid human intervention and develop intelligent systems
- Build secure system with controls to arrest accidental/intentional mistakes with traceability
- Capture and Validate data at source and at the time of origination
- Integrate of all databases and applications with no duplication
- Built in flexibility to facilitate changes made by the authorized user

- Design systems with user convenience as the prime criterion
- Use most recent technology at optimum cost and longevity

The IT & automation planning process at NDPL began by identifying the challenges related to power distribution sector. The requirement of high network reliability was diametrically opposite to the working conditions in the pre-privatization era. Right from the year of the inception, NDPL made efforts to structure its IT initiatives in such a way to provide state-of the art practices to its consumers. Such IT initiatives had to create coherence between various functional areas such as that of the Operations and Maintenance, Finance, Commercial, and the Human Resource systems. Prior to the privatization process, the whole infrastructure was highly inefficient with no operational control and lack of reliable information. There was no proper complaint management system which was manual, complex and subject to delays and errors. NDPL thus mapped a phased plan of catering to the expectations of each of its stakeholders with its IT initiative. This involved bringing IT technology in all of its functional areas. Management support, resource allocations and investments came in regularly to support various IT & automation initiatives as per the IT Roadmap. Says Mr. Akhil Pandey,

> With usage of IT-enabled solutions, a high amount of pressure was felt on the rented network which was dependent on external agency and market forces for price. This prompted us to have our own network of fibre optics which is one of our strengths that gives us a definite competitive edge. Subsequently NDPL's road map for IT was developed taking care of the technology, enablers, system integration and training needs.

NDPL has introduced various initiatives which were designed to support the nine processes (Revenue Cycle Management) managed by the Commercial function. Customer Convenience was one of the strategic objectives along with reduction in AT&C Losses and technology played a key role. By June 2003, all customer-related information with facilities of checking, printing and paying bill online (via the NDPL website www.ndplonline.com) had been implemented under the "SUGAM" Initiative. Payment of bills was made easier by decentralizing the billing systems under various heads - Connection Management, Billing and Metering, Grievances and Payment. By providing its consumers various options, NDPL made payments easy for them. These included tying up, for online payment, through sites such as www.billjunction.com and www.billdesk.com. NDPL also provides for payment through Swipe Credit Card Machines, Direct Credit Payment options and Drop boxes at various retail

outlets. NDPL also introduced E-Check Drop Boxes under the brand name I-Pay to deposit the checks (which have the facility to issue receipts); this is besides traditional check drop boxes, also called All Time Payment Machines (ATPM) at the various customer care centers. Energy calculator to help consumers identify their consumption amounts was also introduced on NDPL site.

The year 2005, for NDPL, was a 'Year of Performance Consolidation", with Technology taking the lead of all initiatives. With the launch of Automated Meter Reading and Data Analysis (AMRDA), in March 2005, NDPL achieved numerous kudos. Efficient electronic meters read data from the consumer side and transferred the same to the server at the NDPL station. This data has been put up on the website (with access only to the specific consumer) which helps the consumer in load planning. The data is not only accurate and also amenable to in-depth aggregation and analysis.

Despite initial difficulties in compatibility between various brands of meters, NDPL took the initiative to set a common platform to make them interoperable. This did not come off easily with the manufacturers initially reluctant to change their design. But eventually NDPL prevailed. Handheld devices to perform faster reading were incorporated while manufacturers were being convinced for agreeing to a common platform.

The GSM-based AMRDA system was helpful both to the consumers as well as the company in data collection and removal of errors. It also helped prompter response to theft and tampering. With the AMR initiative, the billing improved substantially. Today billing accuracy is around 98-99 percent according to Mr. Ghosh. This is a phenomenal improvement as compared to the situation in 2002 when only 50% was billed on actual readings while the rest were so-called provisional billing!

'InfoTech Enterprise" was chosen in June 2005 for GIS (Geographical Information System) mapping which covered the entire distribution network. This enabled NDPL to manage their systems in a more streamlined manner. It interfaced with the ERP system, billing systems and work Management systems to perform better network distribution. The GIS is an effort to integrate all areas under NDPL from one central point. With these innovations, identification of fault points, giving new connections, revenue recovery etc. have all become faster and

more efficient. Metering and checking of dues is as easy as pressing a few buttons of the keyboard!

In January 2006, to make billing payment easier, the company started a 'Mobile Bill Payment Center, which is an office on wheels to promote payment of bills. This had a facility of printing receipts and also check drop boxes. Also introduced were 24*7 kiosks for payment of bills round the clock.

March 2006 also witnessed the launch of the GSM-based street light control system that facilitated automatic switching of the street lights that helped reduce costs. It also facilitated the Automatic Meter Reading (AMR) of the street lights. NDPL was the first to launch such an initiative in Delhi and contributed to the improvement of not only its image but of the entire industry.

Efforts in improving fault location systems are being continuously made and, very recently in Jan 2008, launched the first fully automated fault-location van. It also recently launched the Advanced Center for Network Management which uses complete electric automation systems including Supervisory Control and Data Acquisition (SCADA), Energy Management System (EMS); and Distribution Management Systems (DMS). It integrates all the distribution grids and substations using optical fibers. This system is a landmark in the distribution sector.

Software portals such as SAMANVAY - SAP implementation, SAMPARK - CRM portal, SAMBANDH - the revenue management platform and SANCHAR - SMS enabled Trouble Call Management System made process management relatively easier for the customers as well as the employees.

Data is electronically recorded at various systems such as DEBS, BBS, RRS, SAMPARK, SARTHI and SAMANVAY (SAP) and other customized applications such as i2i. These sources feed data to SAPSEM, SQL based systems etc. The data required for generating monthly DPMS scorecards are collected by the Corporate Monitoring Group from the respective Department/ Group heads. Similarly data required for the MIS is collected by the Process Owners in standard template and passed on to the Corporate Monitoring Group for compilation. IT has supported not only process management but also knowledge management (KM) at NDPL. There are two avenues for information/ knowledge access – internal and

external. Under these there are various systems for accessing information and knowledge. These are listed in the following Table 7.22.

Table: 7.22

Access to Information and Knowledge

Internal	External
SANCHAY – Knowledge Management Portal	Sugam – Online commercial information
Navodaya – News letter	Call Center
Email & Internet	Consumer Care Center
Public & Mass Mail Folder for policies, orders, procedures, manuals, guidelines, forms	Media- Outreach & communication through News Papers etc.
Telephone/ Mobile	Consumer Feedback
Sarthi – Information needs & grievances of employees	Sanchar – Public Information & Announcement
Infraline - Daily sector news & highlights	Sandesh – SMS based services for commercial information to consumers

Broadly the principles that guide access to information in NDPL are: (i) **Confidentiality**: Ensure that information is accessible only to those authorized to have access, (ii) **Integrity**: Safeguard the accuracy and completeness of information and processing to ensure confidence in the authenticity of the information, and (ii) **Availability**: Ensure that authorized users have access to information and associated assets when required. Details of how these principles are implemented to ensure quality is shown below in Table 7.23.

Table: 7.23

Ensuring Data Quality

Functionality	Features
Integrity	1. Data capturing at source 2. Single source of truth (All analytical reports generated from SAP BW) 3. Implementation of Workflow enabled ERP and Billing system
Reliability	1. Data validation at source 2. In-process Validations 3. Regular IMS Audits for Hardware & Software
Accuracy	1. Integrated workflow enabled Applications
Timelines	1. Online availability of Data & Information
Security	1. System Audits 2. Audit Trails 3. Role & Need based access 4. IT Asset Usage/Email/Password Policy
Confidentiality	1. Role based access & Distribution 2. Active Directory Authentification

As evidenced from above details, the IT & automation implementation at NDPL has been very effective in facilitating consumer-centricity at NDPL. The various rewards and recognitions for IT implementation, and also in general for NDPL (refer Annexure 1), show that IT deployment at NDPL is an inspiring success story. Few things (guiding principles of IT management at NDPL) worthy of emulation for any other company, according to Mr. P N Jha, HOD (IT) would be:

- Procurement of reputed brands from authorized channel partners
- Long-term support commitment from respective OEMs & business partners
- Documented and established procurement and evaluation processes
- Technology scanning, evaluation and implementation based on Proof of Concepts
- Policy for Equipment upgrades
- ATS/AMC/EA for major applications and technologies viz. Oracle, SAP, Microsoft
- A lean but competent in-house IT team which manages the business partners effectively for all IT needs of the organization

It may be seen that NDPL has a vibrant IT & automation outlook backed by prudent investment that connects up not only those in the organization but also outside stakeholders such as associates, consumers and others. We will increasingly see the depth of the engagement (facilitated by IT) within the organization and amongst the firm's stakeholders getting further deepened in the years to come.

Chapter 8
Conclusion

In this study, we have elaborated how NDPL has been able to achieve a level of performance that is highly commendable – whether in an absolute sense or in comparison with other Discoms.

We started the discussion by looking at the background under which NDPL came into existence and the nature of the industry at that time. This was followed by how the company identified its stakeholders and the nature of the industry dynamics. Next we discussed the corporate support and parenting (TBEM, Ethics management, Corporate Governance, etc.) provided by the Tata group.

We have shown in this report how NDPL, through sustained application of sound management principles has been able to largely get everyone on board as a team and create a unique company that it is today. The company has been able to significantly overcome many of the impediments it faced vis-à-vis trade unions who were earlier largely confrontationist and also vis-à-vis customers who, for historical reasons, had been thoroughly disenchanted with the services provided to them earlier before privatization of the utility. This is quite commendable particularly because the improvement had to be brought about in the midst of deep cynicism from many quarters including the consumers and consumer groups that represent them. We have also pointed out how many independent watchdogs have by and large given NDPL kudos for its actions and commended its performance vis-à-vis other Delhi Discoms. It is common to see in press and elsewhere mention of NDPL as a success model.

In showing NDPL's achievement we have covered how strategic objectives have been translated to operational terms. We discussed how the company went about devising "functional strategies". In essence, it identified key areas in major functional areas such as Customer Service, Operations, Human Resources and Finance. Together with these, there was also keen emphasis on certain integration of these functional activities. This involved creation of a culture of performance, harmonization of the two workforces - Ex DVB and NDPL recruits, sound strategic management practices, with emphasis on dovetailing activities across functions with Vision-Mission of the company, process orientation, customer orientation, measurement, feedback, creation of an effective network of communication that

went beyond traditional reporting structures, appropriate work design etc. Behind all these efforts were also the important role played by corporate parenting through TBEM, Tata Ethics policy etc.

Needless to say, the company also faces many challenges. These challenges can be said to be with respect to the following issues:

a) Input Supply (bulk power) of Electricity
b) Power Tariff
c) Open Market for Power
d) Further AT& C Losses Reduction
e) Capital Investments
f) Well-defined Role of the Regulator
g) Employee Issues

According to the original agreement with Transco, the latter would provide power only until 2007. Since 2007 the multi-year tariff (MYT) regime has come in place. To explore various power sourcing options for future, NDPL had constituted a Generation & Power Trading Group. This group explores possibilities of accessing own power, including through own generation route. The company is planning a 1000MW plant at Khanjawala. It has now applied for land there. Earlier it was believed that the NDPL will be setting up a plant in Bawana which the government has now decided to build itself. The parent company, Viz., Tata Power Limited, is said to increase its generation capacity fourfold from its current 2300MW to over 9000MW by 2010, which includes the 4000MW Mundra Ultra mega Power project in Gujarat.

With better institutional infrastructure for trading of electivity, it is expected that NDPL will be able to buy electricity elsewhere, pay the wheelage charges and bring it to Delhi. The challenge would be to source adequate power and obtain it at prices that are favorable to the company.

While economic viability will be dependent upon the cost at which power is bought, it will also be dependent upon the top line that NDPL will be able to realize. The extent of control over top line has many if and buts given that the government will continue to fix final energy rates to consumers – which is anyway the case for most electric utilities all over the world. Right now, the MYT structure is in place. How this system is going to pan out on the ground is still somewhat unclear. This is a major challenge the company faces. The question is “How

can NDPL influence government policy towards a price formulae that is objective and realistic?" This issue becomes even more complicated because there are various segments of customers with varying rates. Uncertainty is further compounded by differential pricing for different segments and slab system of pricing within each segment, a system that government and customers will demand to be continued into the future too.

The third challenge is that, until an efficient market for power evolves in the country there is likely to be power shortages – overall as well as regional. NDPL and its parent company, Tata Power, being considered progressive organizations in the power sector will be expected to play a significant role in shaping this market – against much odds inherited through the legacy of power sector mismanagement in the country. NDPL will also have to design an effective power trading systems, create networks with other players in the power exchange sector and reap the potential from such a system. In this respect, the company will have to also educate the customers – power trading has been, and will continue to be, construed as diverting power to more lucrative locations at the cost of starving Delhi customers!

The fourth challenge that the firm faces is further reduction in AT&C Losses. No doubt, the company has been able to effect dramatic reduction is AT&C Losses in the initially phases. Be that as it may, the same downward trends cannot be expected in the future. Any further reduction will require not more of the same! It is quite evident from the numbers that the company has quite a way to go in terms of reaching loss levels comparable to the best in world. Since the profitability of the company will continue to be strongly influenced by the extent of reduction in AT&C Losses, it would, no doubt, be important to put pressure on this important parameter. And yet there is a limit to which this factor can be exploited. Strategies other than those meant for AT&C Losses will have to play a greater role in the future.

There have been substantial investments in streamlining the operations. However, capital investments, as pointed out earlier in the report, were higher than those estimated at the time of the takeover. Who will make up these losses? This is an issue that will impact the bottom line of the company significantly. These will have to be entirely borne by the government or it will have to be shared by government and the Discoms. These are moot points where the decision would impact the bottom line by a huge number at one go!

The regulator-regulated role definitions are only evolving in this sector. Even with the multi-year tariff regime, there is still lack of clarity on many fronts. For example, it is unclear what constitutes performance of the "regulated"? This gives rise to much ambiguity in terms of clearly pursuing a course of action which will satisfy the important stakeholder that regulator/ government is. Another issue is what is the prudent extent to which the regulator can exercise control (or limit) over Discoms' financial expenditure? Beyond a certain point, control naturally becomes counter productive.

The final challenge would be to keep up the pressure on enhancing positive culture within the organization. While the overall climate of the workforce has been assiduously enhanced through various means, it will take some more time before all the employees are completely sold into the new system. Now that a lot of innovations and hard work has gone into developing a new culture and positive organizational climate, the important questions that is being asked are how to enhance systems, talents and performance even better. NDPL had recently scored well (544 in early 2008 vis-à-vis 516 in late 2006) under the aegis of TBEM model, but there are more "peaks to scale", especially given its own aspiration of crossing 600 score in the next year. As they say, the saga continues… and certainly, in case of NDPL, it will be a saga of success and glory!

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Annexure 1
Rewards and Recognition

1. The Edison Award of The Edison Electric Institute (EEI), USA – 2008

North Delhi Power Limited has become the first power distribution utility from India to have received the prestigious honor in the international category by winning the Edison Award.

The award was presented to NDPL, in recognition of its operational excellence in the electric industry, for innovatively utilizing and integrating its Geographical Information System (GIS) with other applications for network planning, operations, commercial and asset management.

The prestigious award is given annually by the Edison Electric Institute (EEI) to honour both international and U.S. electric companies for outstanding contributions to the advancement of the Power industry. A panel of academics and past and current EEI Chairpersons select the finalists and ultimate winners.

2. Excellence in Cost Management 2007" Award by ICWAI.

NDPL won the '**National Award for Excellence in Cost management'** in the category of "**Service Sector with turnover of more than 1000 Crores**" by the Institute of Cost & Works Accountants of India (ICWAI). This is for the first time in India that any electricity distribution company has been conferred an award for cost management initiatives.

NDPL has been acknowledged for its sincere efforts in increasing revenue through reduction in AT&C Losses over a period of more than 5 years through constant endeavor of cost management practices in all spheres in a regulatory regime.

3. 'Power Utility of the Year' Award at Asian Power Awards 2007

NDPL won the **'Power Utility of the Year'** award at 'Asian Power Awards 2007'. NDPL was also the recipient of 'Excellence in Service Enhancement' award last year at 'Asian Power Awards 2006'.

Asian Power Awards are the industry's leading awards independently judging the best in the power industry in entire Asia.

4. 'Most Admired Organization in the Joint Sector/Private Sector' award - 2006

North Delhi Power Limited (NDPL) has been presented the Power Line 'Expert Choice Awards' for the 'Most Admired Organization in the Joint Sector/ Private Sector'. The awards were given by Mr Sushil Kumar Shinde, Union Minister of Power. The awards are based on a first of its kind 'Eminent Expert Opinion Survey' by Power Line, a premier magazine for the Indian power sector, in which sector specialists were asked to give their opinion on various criteria pertaining to Power sector.

5. 'Asian Power Award 2006' for Excellence in Service Enhancement

NDPL has won Asian Power Awards 2006 for Excellence in Service Enhancement. Asian Power Awards are the industry's leading awards independently judging the best in the power industry in entire Asia. There are total of 25 awards of which ten go to power plants and the rest to companies and projects. The awards are aimed at recognizing the broad spectrum of Asia's power supply industry and acknowledging the vital input from all elements of this industry. The award conferred on NDPL is in recognition to its outstanding achievement throughout the year and fortifies it status as a leader in the power industry.

6. Achievers Award for settling 10,000 cases in record time (2006)

NDPL has successfully settled 10,000 cases in PLAs, Special Lok Adalats under the aegis of DLSA during the period October 2003- July 2006. The award was presented to NDPL by the Hon'ble Chief Justice Delhi High Court for this landmark achievement. It is record in the history of Alternate Disputes Resolution (ADR) Mechanism (under the Legal Services Authority Act, 1987).

7. TBEM Score 516 (2006)

NDPL has scored 516 in the very first external evaluation by the assessors of the TATA Business Excellence Model (TBEM) in its maiden attempt itself, which signifies good performance and qualifies for an award for serious adoption. The TBEM Excellence framework is practiced in almost all TATA organization and is based on the Malcolm Baldridge Award.

8. CII EXIM AWARD for Strong Commitment to Excel (2005)

NDPL is the youngest and only Power Distribution utility in India to have been bestowed with this prestigious award for exhibiting strong commitment to excel.

9. NABL Accreditation for NDPL's Meter Testing Lab

NDPL became the 1st power utility in Northern India to receive accreditation for it's state-of-the art meter testing lab from NABL (National Accreditation Board for Testing and Calibration Laboratories). NABL is an autonomous body established under the aegis of Department of Science & Technology, Government of India. The accreditation signifies that the applied testing results of NDPL's Lab are legally valid and at par with test results of any laboratory across the globe.

10. Annual Bhagidari Award for 'Outstanding Work in Promoting Bhagidari Initiative' for the year 2006-07.

NDPL won the Annual Bhagidari Award for **'**Outstanding Work in Promoting Bhagidari Initiative' for the year 2006-07.Smt. Sheila Dikshit, Hon'ble Chief Minister of Government of Delhi, presented the award to Team NDPL at the awards ceremony in the 'Bhagidari Utsav 2007' organized at Pragati Maidan on February 2 and 3, 2007 by the Government of Delhi.

11. National Award to NDPL for Meritorious Performance in Power Distribution 2004-05 & 2005-06

NDPL was awarded the prestigious silver 'National Award for Meritorious Performance for 2004-2005 & 2005-2006' in Power Distribution by the Hon'ble Prime Minister of India Dr. Man Mohan Singh.

The award, instituted by Ministry of Power, Government of India, was conferred in recognition of NDPL's outstanding performance in power distribution.

12. 'PCQuest Best Information Technology (IT) Implementation Award 2007'

NDPL won the PC Quest Best IT Implementation Award for successful implementation of GIS (Graphical Information System) in its distribution network of North & North West Delhi. NDPL was awarded the most challenging project award.

The usage of GIS by NDPL has been touted as an innovative use of IT wherein it has created a GIS map of North Delhi and has captured every detail down to the last street along with each and every piece of electrical equipment including grids, transformers, wires etc in it's electricity distribution area.

13. NDPL wins '*Powering Reliably*' Award for Excellence in Power Distribution at InfralineEnergy Excellence Awards 2007

NDPL won the **'Powering Reliably'** award for Excellence in Power Distribution at InfralineEnergy Excellence Awards 2007 for **Excellence in Private Electricity Distribution** under the Corporate Excellence category.

The award was presented to NDPL by Mr. R.V. Shahi, Former Secretary, Ministry of Power.

14. Best Stall Trophy at Power Exhibition 2006

Healthy participation Of NDPL in the Power Exhibitions organized by the Department of Power.

15. Asian Power CEO of the Year 2006

NDPL CEO was awarded the Asian Power CEO of the Year

16. Intelligent Enterprise Award 2004/2005

NDPL's billing system and other consumer friendly IT interventions have made us achieve the Intelligent Enterprise Award instituted by the Indian Express Group two years in succession.

17. Enterprise Connect Award – 2005

Gold CIO Award to for recognising excellence among CIOs

Annexure 2
Milestones in the Delhi Power Sector Reforms Process

(Reproduced from www.delhigovt.nic.in/power.asp)

February 1999: The Government brought out a Strategy Paper on power. This paper envisaged:

- Setting up of a Regulatory Commission;
- Unbundling of the Delhi Vidyut Board into separate Generation, transmission and distribution companies;
- Disinvestment of distribution;
- Interim measures to improve the performance of DVB;
- Protection of staff interests.

March 3 1999: Delhi Electricity Regulatory Commission was set up under the Central Electricity Regulatory Act, 1998. At this stage the Commission's functions were limited to tariff setting.

November 17, 1999: M/s. SBI Capital Markets were engaged as consultants for the reform process.

December 12, 1999: Mr. V.K. Sood was appointed as Chairman and single member of the Regulatory Commission.

December 22, 1999: The first draft of the Electricity Reform Ordinance was sent to the Central Government. Thereafter, several revisions in the draft were made on the basis of suggestions received from them.

April 7, 2000: The Consultants' Inception Report, indicating the main features of the proposed reform strategy, was received and began to be examined and processed by the departments concerned in the Delhi Government.

June 26, 2000: A Coordination Committee was established to monitor the progress of the reforms. It included representatives of Ministry of Power, Power Finance Corporation, outside experts and consultants, as well as Delhi Government and DVB officers.

October 28, 2000: The Delhi Electricity Reforms Ordinance was promulgated. The Ordinance

- empowered GNCTD to restructure the power industry;
- gave DERC full powers to regulate the power industry including licensing, restricting the Government's role to policy matters.

On the same day a Tripartite Agreement was signed between GNCTD, DVB and employee representatives ensuring the following to all the present employees of DVB:

- No retrenchment;
- No change in service conditions;
- Service under DVB and under successor entities to be treated as continuous;
- Creation of a fund to be administered by a Trust to be set up by the Government, with Principal Secretary (Power) as chairman and with other Government representatives plus employees, for retirement benefits of existing pensioners and employees.
- Existing welfare schemes like compassionate appointment and medical reimbursement etc. to continue.
- Ad hoc pay increase of Rs. 500/- monthly on transfer to the new corporate entities, adjustable against next pay revision.

November 11, 2000: The Delhi Assembly passed the Delhi Electricity Reform Bill, which was sent for Presidential assent.

January 6, 2001: The Cabinet of GNCTD accepted the Consultants' Inception Report with some modifications.

January 17, 2001: An Investors' Conference was was organised by GNCTD, DVB and the Power Finance Corporation (PFC). More than 100 attended – major national and international companies, financial institutions, foreign diplomatic representatives and industry associations.

February 15, 2001: Request for Qualification documents were issued, inviting Statements of Qualification by April 16, 2001. The main eligibility requirement was that the bidder should be a company with a net worth of Rs. 500 cr.

- The documents were sold to 31 parties.

March 11, 2001: The Delhi Electricity Reform Act came into force, after receiving Presidential Assent.

May 10, 2001: A Committee was set up to evaluate the SOQs received. It included the representatives of the Ministry of Power, Central Electricity Authority and a senior outside expert, besides officers of GNCTD.

May 15, 2001: After seven prospective bidders submitted their SOQs, the Committee prequalified six: A.E.S., BSES, China Light & Power, CESCON, Reliance and TATA Power.

July, 2001: Six 'shell' companies were registered, viz. a Holding Company, a Generating Company, a Transmission Company and three distribution companies. These would become successor entities of DVB on operationalisation of the Transfer Scheme.

July 16, 2001: The consultants submitted their Final Report.

October 5, 2001: The GNCTD Cabinet approved the Consultants' Final Report.

November 20, 2001: Government issued the Transfer Scheme Rules which gave the Opening Balance Sheets of the new companies and laid down the manner in which the assets and functions of the DVB would be transferred to the new companies.

November 22, 2001: Government issued Policy Directions binding the regulatory commission to the conditions on which distribution companies would be disinvested as a result of the bidding process.

February 22, 2002: DERC fix the opening loss levels and initial BST, which was a pre-requisite for receiving bids.

April 10, 2002: Bids were received. The Cabinet considered the bids unacceptable 'in the present form' and a Core Committee of senior officers was authorized to explore alternatives including negotiations.

May 31, 2002:

- The Cabinet met and approved the report of the Core Committee, which had obtained acceptable bids after protracted negotiations.
- The Share Acquisition Agreement was signed with the successful bidders.

June 27, 2002: The Shareholders' Agreement and other agreements with the bidders were signed.

June 30, 2002: Transfer Scheme was operationalised and the management handover to the successor entities including the three distribution companies under private management become effective on midnight of June 30th 2002.

Annexure 3
Conversion of Challenges to Objectives

S. No.	Strategic Challenges	Key Factor leading to challenge	Issue of concern/ opportunity	Strategic Objectives
1	Power Availability at competitive cost	VMV, Environmental Scanning, PESTLE	Power Procurement now responsibility of Discoms Huge shortage nationwide/ increasing fuel prices	Reliability of Supply/Competitive Service delivery
2	Reduction in AT&C Losses (overachievement of regulatory requirements)	VMV, Environmental Scanning, PESTLE	Restricts Business growth	Competitive Service Delivery enhance public image
3	Uninterrupted and quality power supply	Stakeholder's Expectations analysis Govt. Regulator, Shareholder etc.	Areas with high AT & C Losses	Competitive Service Delivery Reduction in AT&C loss Achieve High rate of return and positive EVA
4	Enhancing public perception with regard to service delivery	VMV Stakeholders' Expectations Analysis Regulator, Consumers	Controlling Breakdowns in network system	Reliability of Supply Optimize procurement processes, improve project Management Processes
5	Regulatory uncertainty	PESTLE Analysis	Cost Competitive	Competitive Service Delivery Reduce Costs serve Reduce PPC Reduce fixed cost of network per unit of input
6	Performance based regulation	Environment Scanning, PESTLE	Regulatory environment Political Influence	Policy Advocacy
7	Cost control in line with MYT targets	VMV, Environment Scanning, Long Term sustainability Competition analysis.	Implementation of Open Access/captive power plants	Consumer Loyalty Service Delivery- Timely Fault Management Accurate & Timely Billing Premium Service quality Promptness in delivery communication Brand Building
8	Competitive Scenario with respect to high-end consumers	Environment scanning, PESTLE Ability to execute	Last mile service to customers	Consumer Loyalty, Service Delivery – Timely Fault Management Accurate & Timely Billing

		Strategy		Premium Services Quality Promptness is delivery communication billing accuracy and timeliness, premium service quality, communication, brand Building
9	Cost savings vis-à-vis quality manpower	SWOT Analysis Ability to execute Strategy	Integration of Cultural diversities work culture pre & post privatization period	Employee Commitment & Organization Effectiveness

Annexure 4
Training to Support Organizational Action Plans/Initiatives

Action Plans	Focus Area	Education and Training to Support the Action Plans
Adherence to Maintenance Management practices to ensure uninterrupted Power supply	Functional knowledge improvement	Peer to Peer exchange programs with international utilities such as BG&E, CL&P, Tacoma Electric etc. & with different distribution utilities in India like ASEB. TNEB, AEC, TNEB, AEC, MSEB etc. through DRUM training projects
Building Network redundancy through N-1 network	Inputs on Automation roadmap	Interactive sessions with M/s KEMA Consultant towards finalization and support for implementation of roadmap
Technological Interventions such as Metering, LT ABC & HVDS towards AT&C loss Reduction	Familiarity with new technology	Workshop on Metering Technologies by M/s Secure, LT ABC agency M/s TYCO and HVDS agency M/s L&T
Close coordination with Police Headquarters towards support for rigorous enforcement	Awareness of practices in other states	Teams sent to M/s CESC Ltd and M/s CPDCL for sharing of best practices towards strengthening conviction rate in Power Theft cases.
Adherence to Budget with a view to reduce operating costs	Familiarity with SAP – a centralized system for coordination &monitoring	Core Groups trained by SAP India ans Seimens. Teams sent to M/s TPC to understand the implementation requirements. End user Training across different departments
Regulatory management	Policy Advocacy	Training course on regulatory affairs, tariff fixation etc. Peer to Peer exchange with MERC & GERC
Facilitate setting up of Load end peaking Power station capacities to meet the projected demand	Analysis of Demand supply Gap Site selection methodology for Power projects	Enhanced interactions with Turnkey consultant M/s DESEIN for Power Generation projects

supply gap.		Close coordination with M/s E&Y for knowledge sharing on Demand an supply gap
Partnering Assurance initiative towards Consumer affection	Developing Consumer Focus & Introduction to GIS technology	End user training across different departments Training program on Consumer Focus – JAGRITI Visits to international utilities for understanding and appreciating the issues in GIS implementation
1DT in each district to be covered under Project Pole Cleaning by Fy 2007. 100%DTs by 2011	Implementation Methodology for Pole Cleaning	Prototype installation in association with Business associate, Training of meter installation agencies
Adherence to Training Policy	Inculcating Commitment towards training	Formulation Calendar in line with Training programs of similar organizations. Sensitization of all seniors to ensure training of compliance of their subordinates
Strengthening JIF & LGIE forums	Strengthening Team Culture	Teams to address each issue arising from LGIE discussions – teams through inputs from M/s ACCORD

Annexure 5
Abbreviations and Glossary of Terms

S. No.	Abbreviation/ term	Full Form/ Explanation
	AM	Assistant Manager
	AMC	Annual Maintenance Contract
	AMR	Automatic Meter Reading
	AoP	Association of Person
	ARC	Annual Review Calendar
	AS/NZ	Australia/ New Zealand
	ASAI	Average System Availability Index
	AT&C Losses	Aggregate Technical and Commercial losses
	BEBP	Brand Equity and Business Promotion
	BEG	Business Excellence Group
	BoD	Board of Directors
	BRC	Business Review Committee
	BRPL	BSES Rajdhani Power Limited
	BS	British Standards
	BSC	Balanced Score Card
	BYPL	BSES Yamuna Power Limited
	CAIDI	Customer Average Interruption duration Index
	CAPA	Corrective Action Preventive Action
	CBT	Computer Based Training
	CCG	Consumer Care Group
	CD	Compact Disc
	CEG	Corporate Enforcement Group
	CENCARE	Centre for Consumer Care
	CENPEID	Centre of Power Efficiency in Distribution, A NDPL Initiative
	CERA	Central Electricity Regulations Act of 1998
	CFT	Cross Functional Team
	CGRF	Consumer Grievance Redressal Forum
	CII-EXIM Award	Award for Business excellence constituted by Confederation of Indian Industry and Export Import bank of India
	COO	Chief Operating Officer
	COP	Community of Practice
	COS	Corporate Operation Services
	CRC	Consumer Relationship Cell
	CRM	Customer Review Management
	CRT	Commercial

	CSI	Customer Satisfaction Index
	CS	Corporate Sustainability
	CTC	Cost to Company
	CUG	Closed User Group
	DDA	Delhi Development Board
	DERA	Delhi Electricity Regulations Act
	DERC	Delhi Electricity Regulatory Commission
	DERO	Delhi Electricity Regulations Ordinance
	DESU	Delhi Electric Supply Undertaking
	DLF	Decoupled Load Flow
	DLR	Direct Load Release
	DM	Divisional Manager
	DNV	Det Norske Veritas
	DPCC	Delhi Pollution Control Committee
	DPCL	Delhi Power Company Limited
	DPMS	Departmental Performance Scorecard System
	DPMS	Departmental Performance Management System
	DSEWU	Delhi State Electricity Worker's Union
	DRUM	Distribution Reforms Upgrades and Management
	DSIDC	Delhi State Industrial Development Board
	DT	Distribution Transformer
	DTL	Delhi Transmission Limited (TRANSCO)
	DVB	Delhi Vidyut Board
	EADCI	Engineering Average Duration Completion Index
	ED-F	Executive Director – Finance
	EKM	Entrepreneurship & Knowledge Management
	ESS (SAPS Module)	Employee Self Service Module; A SAPS module that provides all the relevant information to the employee about his or her own performance and captures all individual plans for the future.
	FMS	Fault Management System
	FRM	Functional Review Meeting
	FRSR	Fundamental Rules Supplementary Rules
	FSE	Field Service Executive
	FY	Financial Year
	GCC	General Conditions of Contracts
	GIS	Geographical Information System
	GNCTD	Government of the National Capital Territory of Delhi
	GPAI	Group Personal Accident Insurance
	GPS	Global Positioning System
	GSM	Global System for Mobile
	HOD	Head of the Department

	HOG	Head of the Department
	HR	Human Resources
	HRB	High Revenue Base
	HT:LT	High tension: Low Tension
	HVDS	High Voltage Distribution System
	IMS	Integrated Management System
	IPMS	Individual Performance Management System
	IPMS	Individual Performance Management System
	IPP	Independent Power Producers
	IR	Industrial Relations
	IRM	Infrastructure Review Meeting
	IT	Information Technology
	IVRS	Interactive Voice Response System
	IWA	Industrial Welfare Association
	JD	Job Description
	JIF	Joint Interaction Forum
	KCG	Key Consumer Group
	KCG	Key Consumer Group
	KPI	Key Performance Indicator
	KV	Kilovolts
	LDP	Leadership Development Program
	LGIE	Large Group Interactive Exercise
	LT	Long Term
	LT ABC	Low Tension Ariel Bundle Conductor
	MCD	Municipal Corporation of Delhi
	MD	Managing Director
	MES	Military Engineering Service
	MMG	Meter Management Group
	MRG	Meter Reading Group
	MTD	Month To Date
	MTM	Management Team Meeting
	MTN	Motinagar
	MTTR	Mean Time Taken to Repair
	MU	Million Unit (one unit = Kilowatt hour)
	MVA	Megavolts Amps
	MW	Mega Watt
	MyCO	My Enhanced Contribution
	MYT	Multi Year Tariff
	N&OM	Network Operations and Management
	NCTD	National Capital Territory of Delhi
	NDMC	New Delhi Municipal Corporation
	NRM	Network Review Meeting

	NTPC	National Thermal Power Corporation Limited
	OCCM	Offline Cash Collection Module
	OH:UG	Overhead: Underground
	OHSA	Occupational Health and Safety Organization
	OHSAS	Occupational Health and Safety Assessment Series
	OPMS	Organizational Performance Management System
	ORT	Operation Review Team
	PADCI	Project Average Duration Completion Index
	PFC	Power Finance Corporation
	PLIP	Productivity Linked Incentive Program
	PMS	Performance Management System
	PPC	Power Purchase Costs
	PRT	Project Review Team
	PSC	Power System Control
	PWD	Public Works Department
	R&R	Reward and Recognition
	RBG	Revenue Billing Group
	RCP	Revenue Cycle Processes
	RMU	Ring Main Unit
	ROE	Return On Equity
	RWA	Resident Welfare Association
	SAIDI	System Average Interruption duration Index
	SAIFI	System Average Interruption frequency Index
	SAMIKSHA (MTM, CRM, IRM, NRM, FRM)	SAMIKSHA is the Organizational Performance Management System with components such as MTM, CRM, IRM, NRM and FRM.
	SAMIKSHA Forum	SAMIKSHA (Performance Management System) – Review and Meetings
	SAPS-ESS	SAPS- Employee Self Service
	SBI	State Bank of India
	SCADA	A centralized switching system to remotely control on-off switches at various sub-stations and installations.
	SEB	State Electricity Board
	SEM (SAP Module)	Strategic Enterprise Management
	SHINE	Systematic and Holistic Improvement Initiatives at NDPL through Employee Engagement
	SLA	Service Level Agreement
	SPD	Single Point Delivery
	ST	Short Term
	T&D	Technical and Distribution

	TBEM	Tata Business Excellence Model
	TH Meeting	Town Hall Meeting
	TLP	Tata Leadership Practices
	TS	Technical Services
	UFR	Under Frequency
	VCP	Value Creation Process
	VMV	Vision-Mission-Values
	WWF	World Wildlife Foundation
	YTD	Year To Date
	ZM	Zonal Manager