

# Tata Power Delhi Distribution Ltd: measuring beyond the metrics

Monica Singhania and R. Venkatesh

Monica Singhania is Associate Professor at the University of Delhi, Delhi, India. R. Venkatesh is MBA Class of 2011, Faculty of Management Studies (FMS), Delhi, India.

## Prologue

In early 2010, Puneet, General Manager for Corporate Strategy and Planning at Tata Power Delhi Distribution (TPDD) while reviewing the results of the balanced scorecard implementation in early 2005, felt satisfied and relieved. The revenues showed an upward trend on a year on year basis, TPDD had obtained an unparalleled reduction in Aggregate Technical and Commercial (AT&C) losses and there was a holistic improvement in the organization's capabilities. Relaxed, he slid on his chair and the trophy of International BSC Hall of Fame award that was won by TPDD in 2008 caught his eye. The coveted Palladium BSC Hall of Fame award placed TPDD among a select list of 106 companies that have won that award. As he was looking at the award, the tough times faced some few years before flashed through his mind. A sense of accomplishment filled his heart but at some corner of his mind, there was a feeling that the BSC while having addressed existing challenges, needed to be re-looked at, considering the emerging sustainability related challenges across the globe. The balanced scorecard implementation had undoubtedly helped TPDD meet/exceed the expectations of the immediate stakeholders' namely shareholders, consumers, employees and government. However, it still did not reflect neither the expectation of the society, nor fully capture and reflect TPDD's progress on the social and environmental aspects which were emerging as sustainability challenges for companies across the globe. Puneet was aware that India had unveiled its National Action Plan on Climate Change in 2008, the Ministry of Corporate Affairs had released its Corporate Social Responsibility Guidelines 2009 and the Tata Council of Community Initiatives had developed the Tata Corporate Sustainability protocol to assess the performance of companies on community development. Being a responsible Corporate Citizen, TPDD needs to reflect its commitment to societal and environmental responsibilities. Perhaps time had indeed come to revamp the balanced scorecard.

The authors acknowledge the help and support received from Puneet Munjal, Senior General Manager (Corporate Strategy & Planning) at Tata Power Delhi Distribution at every stage during the case writing process. Needless to say, it was his enthusiasm and zeal to excel that enabled the authors to sail through this journey.

Disclaimer. This case is written solely for educational purposes and is not intended to represent successful or unsuccessful managerial decision making. The author/s may have disguised names; financial and other recognizable information to protect confidentiality.

## Tata Power Delhi Distribution

In early 2002, the Delhi Government unbundled the vertically integrated Delhi Vidyut Board (DVB) into six successor companies, among which was North Delhi Power Limited (renamed as TPDD Ltd). Headquartered in New Delhi, TPDD is a joint venture between Government of Delhi and Tata Power Company with majority stake held by Tata Power Company (51 per cent). Privatization was perhaps the only option available to the Delhi Government and this move was viewed skeptically by the employees and management alike. Initially, TPDD faced a tough task ahead with challenges galore both internally and externally. First, it had to alleviate the apprehensions of the employees and then put in place an effective organization committed to sheer quality and best services in power distribution.

In the early days, TPDD struggled to revive the inefficient DVB. During those times, TPDD inherited power distribution in North and North West Delhi in an area of 510 km<sup>2</sup>, supplying

power to 7.5 lakh consumers through a distribution network which was in an extremely dilapidated condition resulting in frequent blackouts and brownouts. The AT&C losses were at all-time high of 53.1 per cent (i.e. for every two units of power bought, less than one unit reached the end consumer); only 48 per cent of street lights were functional; there were approximately 10,000 no-supply complaints per day; 20,000 new connection requests and approximately 100,000 billing complaints were pending and the consumer records were erroneous. In addition to these, TPDD also inherited the demotivated and semi-skilled workforce of the erstwhile entity as part of the privatization agreement. The above was resulting in dwindling revenues, frequent breakdowns and a wide range of customer complaints.

By early 2004, the state of affairs of power distribution in North and North West Delhi started turning around. TPDD revamped the entire network through its run-repair and replace policy, reengineered the entire revenue cycle management process, upgraded the IT and automation infrastructure and established a performance management system to make the employees accountable. It engaged with its employees through various programs for mentoring, motivation, training and also established a structured reward and recognition system. TPDD also established its Centre for Power Efficiency in Distribution to train its employees and upgrade their capabilities making them adaptable to the IT and automation initiatives undertaken post takeover.

Today, TPDD distributes electricity to North and North western parts of Delhi and has registered consumers of over 1.1 million and serves a population of 5.5 million people. In nine years of its inception, TPDD has successfully reduced AT&C[1] losses by more than 75 per cent (i.e. from 53 per cent down to 13.2 per cent at present since its takeover from DVB in 2002)[2].

### **Aligning the organization through balanced scorecard**

By the end of 2004, TPDD already had its performance management system in place which captured data through management information systems in simple databases of spread sheets. However, it was observed that individual functions/departments were operating as separate islands of excellence and sometimes produced incoherent results as the metrics were not aligned with the strategic objectives as required and hence there was a need for a tool that not only aligns with the strategy/vision but also executes and achieves the targets set. It should also help to map the strategic challenges and objectives together and bring about a "strategic focus" organization where all departments/functions work collective towards attainment of the organizational objectives. The strategic objectives should be precise, measurable and realistic.

TPDD was also aware that most of the Tata Companies had adopted the Tata Business Excellence Model (which draws from the Malcolm Baldrige Framework) on their Excellence Journey (Exhibit 1) and any strategic tool that they chose should be able to align itself to the Baldrige criteria[3] namely, leadership, human capital, business/financial results, process/operations results, strategic planning and customer focus.

### **Balanced scorecard**

Organizations all over the world have a tough time while executing their strategic goals. Surveys indicate that 1 in 10 organizations execute strategies successfully[4] and 72 per cent of the CEOs believe that the execution of strategy is more difficult than developing one (Epstein and Jean-François, 1998). Strategic success goes beyond strategy formulation and depends a lot on execution. Balanced scorecard is a strategic planning and management system that is widely employed in business, government and non-profit organizations to align organizational activities to their vision and monitor divisional/organizational performance to their strategic goals. It was developed by Robert Kaplan and David Norton as a performance management tool that included non-financial measures in order to provide a more balanced view of organizational performance to the managers. In a survey of 1,000 organizations all over the world, around 80 per cent of organizations using

balanced scorecard report improvement in operating performance, 66 per cent of organizations reported profit hikes and 61 per cent reported increase in bottom line results[3]. It is an exhaustive tool to find out where the organization needs to improve, align its performance measure to its goals, give a meaning to its functions at all levels and guide the overall strategy of the organization (Exhibit 2)[4].

The common uses of BSC are the following[5]:

- clarify or update a business strategy;
- link objectives to long-term targets and budgets;
- track KPAs that affect competitive advantage;
- facilitate organizational change;
- compare different SBUs; and
- increase understanding of vision/strategy at all levels of organization.

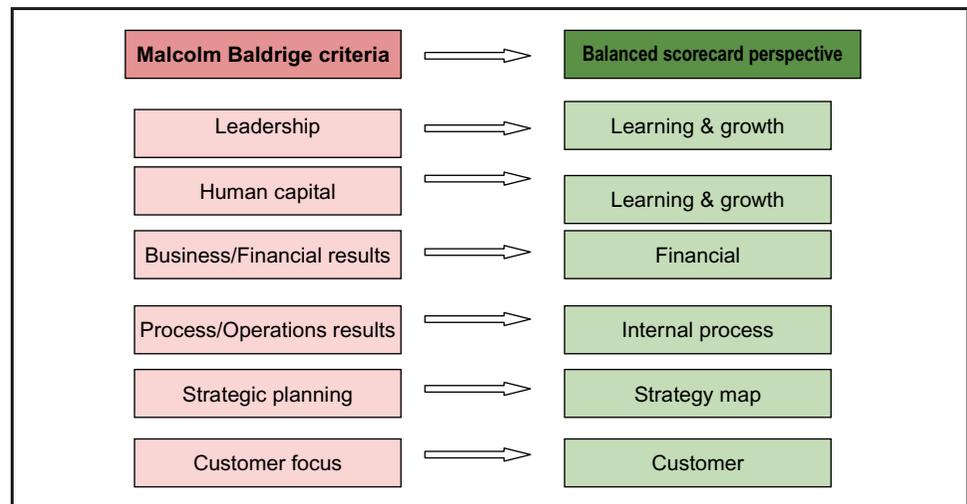
Thus, BSC is a comprehensive tool covering all the aspects of functioning through its four broad heads (financial perspective, customer perspective, internal process perspective and learning and growth perspective) which are used to employ the strategy of the organization. Today, about 70 per cent of fortune 1,000 companies utilize the balanced scorecard to help manage their strategy implementation[6].

TPDD decided to implement the balanced scorecard to align the entire organization towards attainment of the company objectives. The balanced scorecard perspectives were easily aligned to the Baldrige criteria as shown in Figure 1, which gave TPDD further confidence to move further with its implementation.

#### “Balancing” the scorecard

TPDD arrived at the metrics/initiatives of the BSC through a detailed process whereby it started with identifying the challenges of the organization. An extensive external and internal environment analysis was undertaken and strategic challenges identified through the analysis were clubbed under three areas: business, operational and human capital challenges. Majority of these challenges had to be complied due to the regulatory aspects like AT&C loss reduction, performance standards and risk mitigation. In terms of business challenges, there was a need to reduce the AT&C losses, mitigating the regulatory uncertainty. Operationally, it had to meet its performance standards and control its distribution costs. For long-term growth, the employees’ competency had to be improved

**Figure 1** Malcolm Baldrige and BSC criteria



with proper utilization of manpower. These challenges had to be aligned with the objectives of the organization which in turn was determined by the strategic planning process (SPP) (Exhibit 3).

The SPP was the crucial one as it identified the initiatives to be undertaken to achieve the objectives and their targets. TPDD put in place a three tier SPP to ensure horizontal and vertical integration. The SPP started with the review workshop which included key process owners who revisited and validated strengths and weaknesses, strategic challenges and advantages such as core competencies, etc. Output of the review workshop was the first cut corporate balanced scorecard with short and long-term targets which formed an input to the functional workshops. The functional workshops captured the functional area's aspirations, SWOT, cross functional requirements, human resource and financial requirements for the shortterm and longterm along with a rolling five-year roadmap aligned to the corporate scorecard.

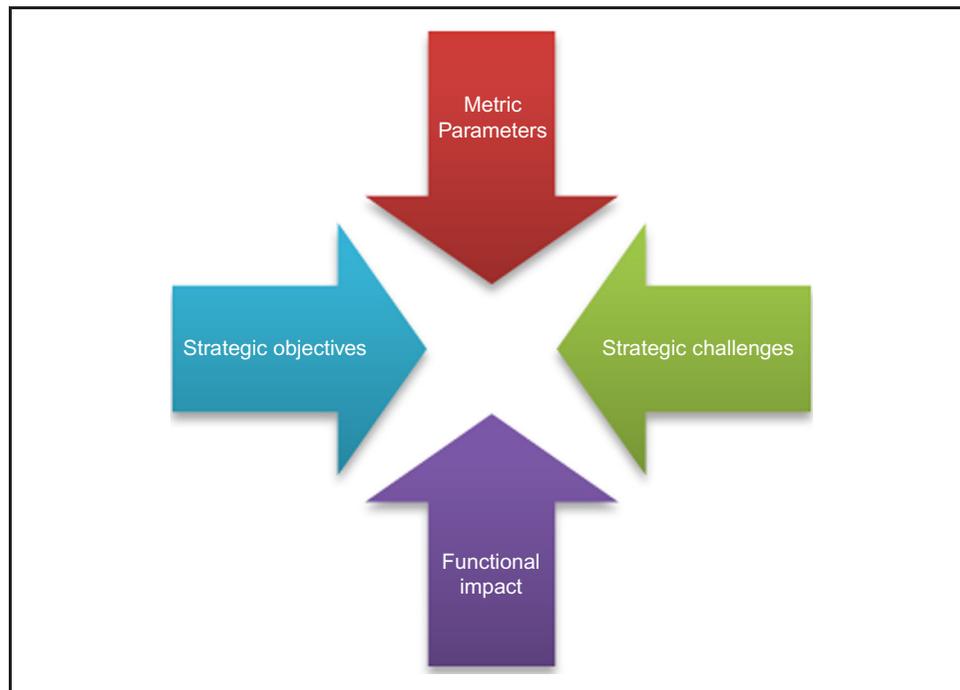
The annual strategy workshop revalidated and finalized the VMV (Exhibit 4), strategic challenges, strategic advantages with detailed action plans to achieve corporate objectives and ensured a top down, bottom up and horizontal integration. The long-term targets helped in finalizing roadmaps in critical areas. The short-term targets were used as input for formulation of the annual operating plans.

Thus, the SPP encompasses all the aspects of the organization in terms of identifying challenges, objectives and their alignment with organizational values (Exhibit 5).

The strategic objectives that flowed out of the planning process were grouped under the four perspectives of the BSC. The objectives were chosen in such a way so that there was a balance among the four perspectives of the BSC (Figure 2). They were then matched with the strategic challenges as to which of these objectives were mitigating the challenges. Also, it was ensured that there should more than one objective that is designed to tackle specific challenge to ascertain that the challenges are properly mitigated (Exhibit 6).

The major advantage of BSC as a strategic tool is identified when there is a "match" between the strategic challenges and the objectives. The challenges as identified by the above

**Figure 2** Major parameters in the design process



process gave rise to the corporate objectives which were captured by the metrics in the scorecard. By mapping the challenges and the objectives, the organization ensured that the metrics intended to serve were highlighting the right measures. For instance, the challenge to reduce the AT&C loss could be achieved by fulfilling the objective of maximizing the rate of return. By maximizing the rate of return, one could ensure that the losses and slippages were reduced and long-term growth was maintained. Similarly, other challenges were taken care by the objectives enlisted and in this way the challenges were identified first to determine the corporate objectives through the SPP (Exhibit 7).

In the scorecard, all the objectives were supported by multiple functions leading to a “balance” in the system. Each and every objective in the scorecard had multiple impacts on the functional domains leading to effective results. They were mapped along the four BSC perspectives with each objective coming under one among them (Exhibits 8 and 9).

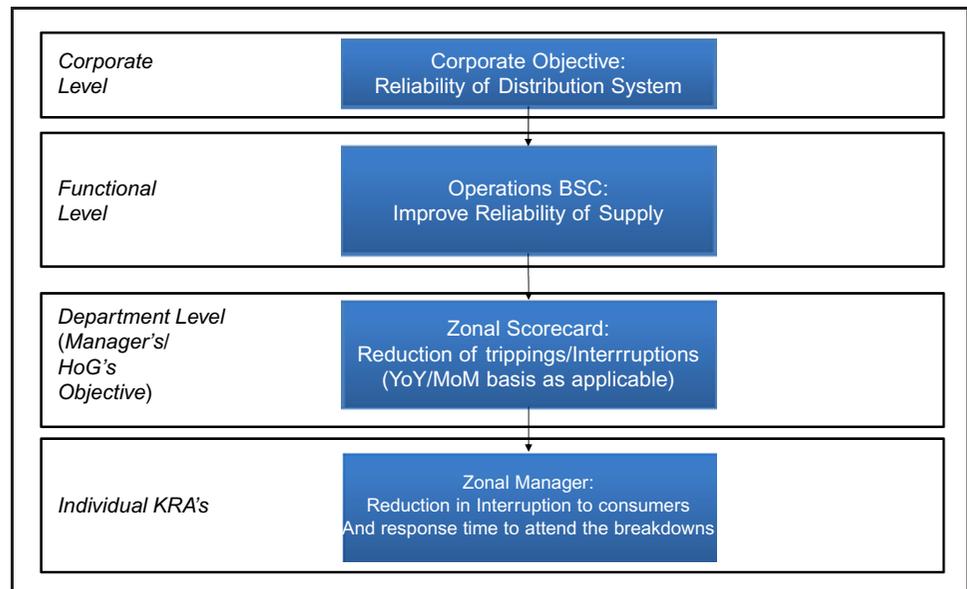
Following this, on the top level one corporate BSC and on departmental level seven functional BSCs were designed. The objectives of the functional BSC were linked to the objectives of corporate BSC. Each and every aspect of the BSC was captured by the respective departments which had their functional implications (Figure 3). For instance, the financial rate of return can be increased by reducing the losses occurring due to the inefficiency in billing and technical loss. These were reduced by replacement of the old meters and prompt recovery of arrear payments (Exhibit 10).

Also, the metrics employed in the BSC were dissected according to the various departmental functions so that one could understand the effect of departmental efficiency. The results of the BSC were reviewed at proper time intervals which enables the strategic planning group to keep track of the various functions both at the group level and at the department level. In this way, Puneet was able to install a comprehensive measure of all the organizational parameters which would affect the BSC (Figure 4).

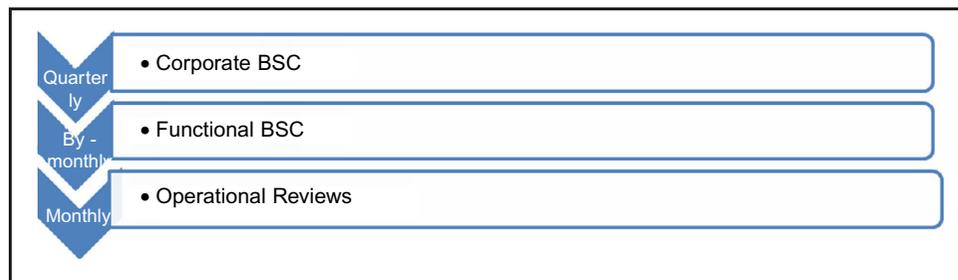
### “Scoring” the scorecard

After the implementation of the BSC, TPDD observed significant performance improvements primarily stemming out of the fact that the BSC had aligned the entire organization towards achievement of common objectives rather than excelling in silos. As a result of its implementation, the customer complaints reduced to a third and the billing efficiency showed significant improvement leading to better quality and service. The AT&C losses

**Figure 3** Trickle down process (Illustrative)



**Figure 4** Review process



which are a significant measure of the discom’s efficiency also halved from the 2004 to the 2006, within two years of implementation (Exhibits 11-14). Some of the key initiatives undertaken by TPDD, which emanated out of its SPP are:

- energy audit up to the department level;
- replacement of old erroneous electromechanical meters with new accurate electronic meters;
- aggressive enforcement activities with scientific inputs and analysis;
- public participation in controlling theft through the concept of social audit; and
- collaboration with NGOs for awareness in slums regarding the dangers associated with direct tapping of electricity from live wires.

The following results show the improvements in the functioning of TPDD.

#### Significant improvement in power supply reliability

Power supply situation in TPDD has improved over the years owing to the investment in the network and stringent maintenance practices. The reliability indices are as shown in Table I.

#### Customer satisfaction

In order to gauge the satisfaction level of consumers, consumer satisfaction survey was carried out by the DERC among 11,140 domestic customers chosen randomly from the each division of the three discoms BRPL, BYPL and TPDD. The respondent consumers were asked about their preference along the seven macro-level parameters namely, continuity of electricity supply, quality of electricity supply, metering issues, billing issues, internal grievance resolution mechanism of discoms, call centers set-up by discoms and behavior of discom staff with consumer. Each of these parameters was further covered more extensively by similarly pre-determined micro-parameters for which the respondents were asked to provide ratings (on a scale of 1-10) indicating how important a parameter was for them. Then they had to rate their satisfaction level with their discom in relation to each micro-level

**Table I** Statistics on power supply reliability

Indicator	On takeover	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008
SAIDI (hours)	110	77	36	23.6	9.3	7.17	6.2
SAIFI (nos)	55	35	18	13.0	5.0	5.44	6.6
CAIDI (hours)	2	2	2	1.87	1.75	1.31	0.9

**Notes:** SAIDI, system average interruption duration index; SAIFI, system average interruption frequency index; CAIDI, customer average interruption duration index

**Source:** TPDD BSC

parameter on a scale of 1-5. The importance as well as satisfaction scores were used to arrive at an index (between 0 and 1) to obtain a comparative measure of the three Discoms (Table II).

### Final lap: lessons learnt

The design of balance scorecard was a tedious task in itself. TPDD was working in a regulated environment where tariffs were constantly under pressure and stakeholders had conflicting requirements. The consumers' always expected lowest tariffs while the shareholders expected reasonable profits. The regulators expected TPDD to provide the best of services to its consumers at the lowest possible costs while the employees expected competitive remuneration.

While BSC was being developed and implemented, Puneet also thought about the concerns that employees will have when it is implemented. Employees' may feel that BSC is not adding any value, it just shows the measurements of particular parameter and it is left for the management to act on it, to generate significant results. In case the metrics are chosen wrongly, then the BSC results will create misunderstanding among the employees. Their appraisals may get affected and the BSC scores may not reflect their true value added to the organization.

He found out that the successful implementation of BSC has to have the following aspects:

- Right blueprinting, i.e. what to measure and deciding which metric to choose.
- Mapping of the individual goals to the organizational objective, thereby achieving goal congruence.
- Proper review mechanism to study the BSC thereby enabling the management to identify the key focus areas and act on them periodically.
- There should be a balance in the metrics chosen, meaning that the strategic objectives should be supported by as many functions as possible which in turn are captured by the metric parameters.
- In principle, all information system should be merged with the BSC system. Management Information System need not function as a standalone strategic function or a tactical support function. It should merge with the BSC system which encompasses all the functions of the organization.
- There should be a balance between the lead and lag measures failing which the management has to wait to observe the results of any initiative that is taken. A healthy balance between them will ensure prompt observance in the score which will help to decide quickly.
- The incentive system should be linked to BSC. This will ensure that the employees are working towards the strategic objective that was decided upon during the design process.

**Table II** Comparative statistics of consumer satisfaction survey

	2009	2007
TPDD	0.62	0.57
BRPL	0.60	0.54
BYPL	0.54	0.51
Overall Delhi	0.59	0.54

Source: DERC web site

## Epilogue

When everything seems to be going smooth, there was always a feel of uneasiness and introspection in Puneet's mind. TPDD has significantly improved its quality of service, reduced its AT&C losses, aligned the employees to company's objectives and has successfully positioned itself as a customer-centric organization. However, newer challenges were emerging in their work environment requiring a relook at the existing strategy and the balanced scorecard framework. Puneet was aware that the power distribution sector was slowly moving to a competitive scenario with the government allowing consumers to choose their preferred supplier *vis a vis* the existing monopoly situation whereby consumers in a particular area were forced to procure their electricity requirements only from a designated supplier who also owned and maintained the electricity network. Further, the governments were also bringing in more private players through alternative distribution reforms model such as franchisee. At such a moment, the company which not only provides quality service but also cares for its community will certainly be a preferred partner. In addition to the above, combating climate change was becoming an important agenda on the government's sustainability program with increasing emphasis on energy conservation, green products (labeling) and environmentally benign operations of corporates through newer and stringent regulations. For distribution companies such as TPDD, mandatory renewable purchase obligations were in the process of being promulgated. Indian society was becoming increasingly sensitive to the baleful impact of climate change and in the near future would start preferring cleaner, greener and socially responsive corporates for goods and services.

In addition to above external challenges, TPDD was also facing an internal challenge of last mile AT&C loss reduction. TPDD had already achieved loss levels of around 15 per cent; the law of diminishing returns was setting in and further incremental loss reductions required completely new strategies. TPDD observed that these last mile losses were mainly in the slum clusters who were indulging in theft of electricity largely due to limited capacity to pay; further, due to political sensitivities, the possibility of supply disconnection was remote in these areas. Coercive measures such as supply disconnection, registration of theft cases against consumers would only have limited impact work as these consumers who were at the bottom of the Pyramid were forced to steal electricity due to necessity (being unable to afford the tariffs) rather than any ulterior motives of profiteering as was the case in high-consumption industrial/commercial consumers who while could afford to pay were stealing due to greed.

Given the above societal challenges which would, if not addressed urgently and appropriately would impact the very sustainability of the organization. How these issues should be addressed through appropriate metrics which would align and drive the organization in meeting these sustainability challenges. Puneet was in a dilemma whether the classical perspectives of the balanced scorecard which linked consumer satisfaction to profitability enabled through robust internal processes and a skilled and motivated workforce could adequately address these emerging challenges related to inclusive growth of the community and protection of the environment against the ill effects of climate change or was there a need to introduce a newer perspective in the balanced scorecard – “The Social Perspective” which specifically aligned the organization to make concerted efforts for enriching the life of its community and take proactive measures to protect the environment. These questions were playing in the minds of Puneet and Ganesh and they were determined to find a solution.

## Notes

1. AT&C loss is the actual measure of overall efficiency of the distribution business as it measures both technical as well as commercial losses.  $AT\&C\ loss = \frac{Energy\ input - Energy\ realized}{Energy\ input} \times 100$ .  $Energy\ realized = Energy\ billed \times Collection\ Efficiency$ .  $Collection\ Efficiency = \frac{Amt.\ realized}{Amt.\ billed}$ .
2. Delhi Electricity Regulatory Commission (DERC), the state regulatory agency which determines electricity tariffs, promote competition, efficiency and economy in power industry, setting standards and directing discoms regarding their work based on consumer satisfaction survey.

**Keywords:**  
 Performance management systems,  
 Balanced scorecard,  
 Sustainability,  
 Strategic alignment,  
 Partnership

3. Malcolm Baldrige, former United States Secretary of Commerce, a proponent of quality management describes the criteria for performance excellence. The Malcolm Baldrige National Quality Award is given by the US Government for performance excellence. [www.nist.gov/baldrige/publications/criteria.cfm](http://www.nist.gov/baldrige/publications/criteria.cfm)
4. Robert Kaplan, Balanced Scorecard forum 2008, Dubai.
5. Report on Management Tools & Trends 2011, Bain & Co.
6. Malcolm Baldrige CEO survey, 2002.

**Reference**

Epstein, M. and Jean-François, M. (1998), "Implementing corporate strategy: from tableaux de bord to balanced scorecards", *European Management Journal*, Vol. 16, April, pp. 190-203.

**Further reading**

Kaplan, R.S. and David, P.N. (2000), *The Strategy-focused Organization: How Balanced Scorecard Companies Thrive in the New Business Environment*, Harvard Business School Press, Washington, DC.

Kaplan, R.S. and David, P.N. (2004), *Strategy Maps: Converting Intangible Assets into Tangible Outcomes*, Harvard Business School Press, Washington, DC.

Kaplan, R.S. and David, P.N. (2005), "The balanced scorecard: measures that drive performance", *Harvard Business Review*, Vol. 70, July, pp. 71-9.

Kaplan, R.S. and David, P.N. (2006), *Alignment: Using the Balanced Scorecard to Create Corporate Synergies*, Harvard Business School Press, Washington, DC.

[www.tataquality.com](http://www.tataquality.com)

[www.bain.com/management\\_tools](http://www.bain.com/management_tools)

[www.balancedscorecard.org](http://www.balancedscorecard.org)

[www.nist.gov/baldrige/publications/criteria.cfm](http://www.nist.gov/baldrige/publications/criteria.cfm)

[www.TPDD.com](http://www.TPDD.com)

[www.derc.gov.in](http://www.derc.gov.in)

**Exhibit 1**

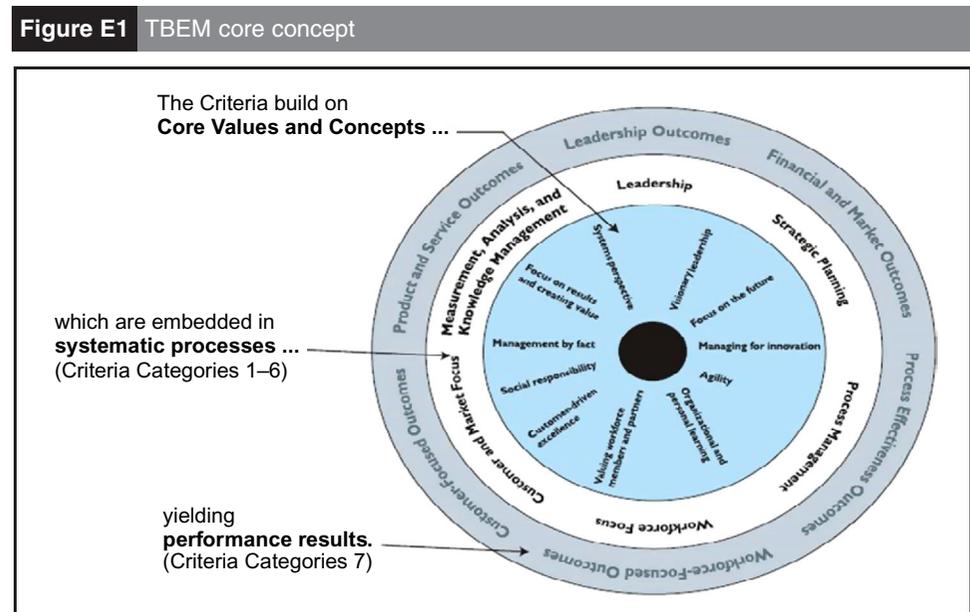


Exhibit 2. Corporate strategic objectives

**Figure E2** Balanced scorecard implementation and experience – survey by Bain & Co

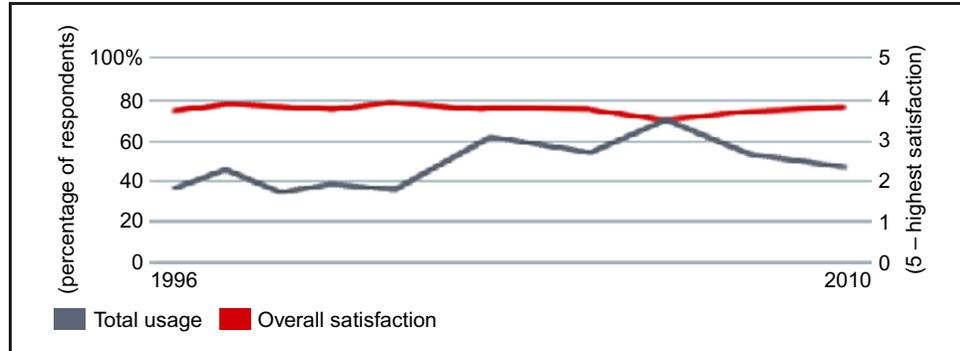


Exhibit 3

**Figure E3** Challenges faced by TPDD (2008-2009)

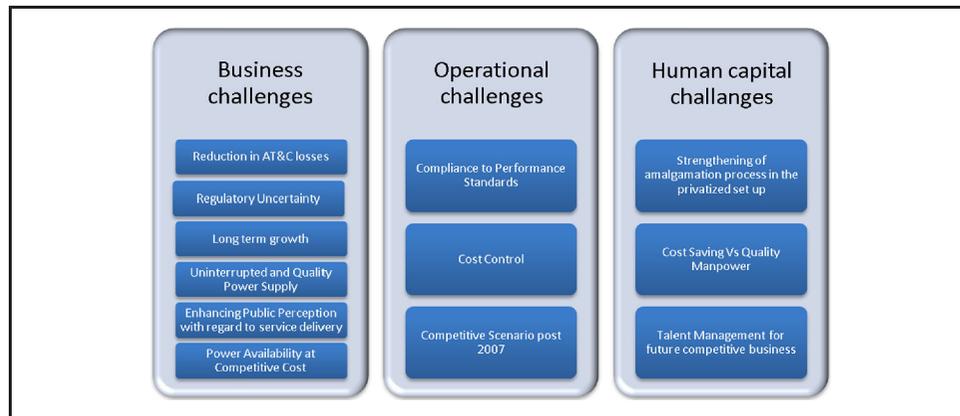


Exhibit 4

**Table E1** Vision, mission and values of TPDD

Vision	To be the most trusted and admired provider of reliable and competitive power, and to be the company of choice for all stakeholders
Mission	To deliver quality and cost-effective electricity To ensure excellence in consumer care To create a work environment that encourages safety, teamwork and innovation To meet or exceed all stakeholders expectations To enrich quality of life in the society we operate in
TPDD core values	<i>Integrity:</i> we must conduct our business fairly with honesty and transparency. Everything we do must stand the test of public scrutiny <i>Understanding:</i> we must be caring, respectful, compassionate and humane towards our colleagues and customers and always work for the benefit of the communities we serve <i>Excellence:</i> we must constantly strive to achieve the highest possible standards in our day-to-day work and in the quality of goods and services we provide <i>Unity:</i> we must work cohesively with our colleagues across the group and with our customers and partners to build strong relationships based on tolerance, understanding and mutual co-operation <i>Responsibility:</i> we must continue to be responsible and sensitive to the communities and environments in which we work, always ensuring that what comes from the people goes back to the people many times over <i>Agility:</i> we must work in a speedy and responsive manner and be proactive and innovative in our approach

Exhibit 5

**Figure E4** Strategic planning process

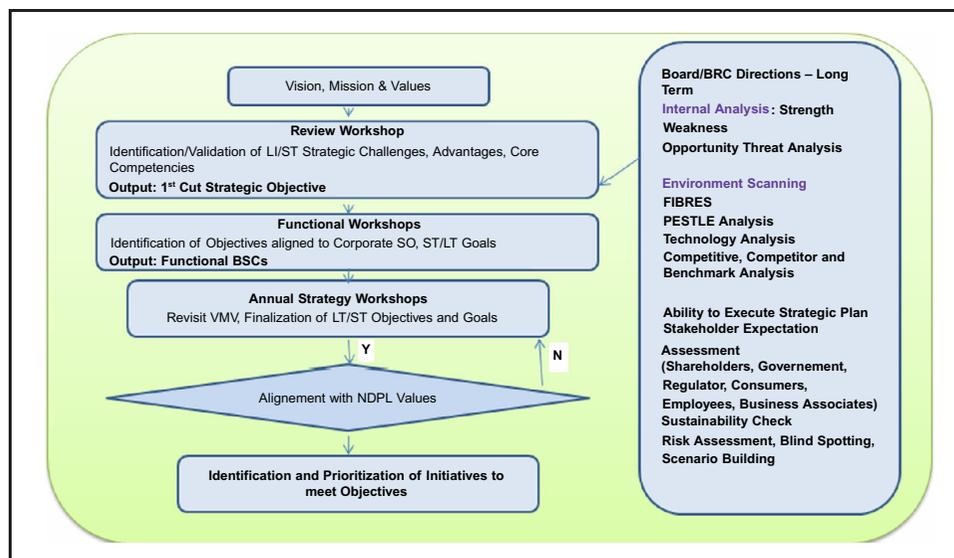


Exhibit 6

**Table EII** Corporate strategic objectives (2008-2009)

Perspective	Corporate objectives
Financial	F1 Maximize rate of return and be + ve EVA
	F2 Optimize cost of power procurement
	F3 Reduce AT&C loss
	F4 Increase productivity of asset base
	F5 Reduce distribution cost
	F7 Grow revenue in non-regulated business
	Customer
C2 Effective follow up	
C3 Effective consumer affection	
Internal process	I1 Optimize procurement processes
	I2 Reduce percentage of energy input to high loss 11 kV feeders
	I3 Effective enforcement
	I4 Power availability
	I5 Reliability of distribution system
	I6 Effective complaint redressal
	I7 Accurate and timely metering and billing
	I8 Enhanced communication
	I9 Performance assurance
	I10 Identify and develop opportunities for non-regulated business
	I11 Assist in realistic regulation and legislation
	I12 Incentive asset sweating
Learning and growth	L1 People development
	L2 Business excellence
	L3 Institutionalizing improvement, innovation and knowledge management
	L4 Employee engagement
	L5 Culture building

Exhibit 7

**Figure E5** Mapping of strategic objectives and challenges

Perspective	Perspective Code	Strategic Challenges →											
		Strategic Objectives ↓											
		Power Availability at Competitive cost	Enhancing Public perception with regards to service delivery	Minimizing AT&C Losses (Overachievement of Statutory targets)	Uninterrupted & Quality Supply	Cost Control in line with MYT Targets	Regulatory Uncertainty	Competitive Scenario for High and consumers	Compliance to Performance Standards	Strengthening of amalgamation process in the privatized set up	Sustainable long term profit growth	Talent Management for future	Cost Vs Quality Manpower
Financial	F1	Maximise rate of Return and be +ve EVA											
	F2	Optimise cost of Power Procurement											
	F3	Reduce AT&C Loss											
	F4	Increase productivity of asset base											
	F5	Reduce Distribution Cost											
	F7	Grow revenue in non-regulated business											
	Customer	C1	Build Consumer Loyalty										
C2		Effective Follow up											
C3		Effective Consumer Affection											
Internal Process	I1	Optimise Procurement Processes											
	I2	Reduce % energy input at high loss 11kV feeders											
	I3	Effective Enforcement											
	I4	Power availability											
	I5	Reliability of Distribution system											
	I6	Effective Complaint Redressal											
	I7	accurate & Timely Metering & Billing											
	I8	Enhanced Communication											
	I9	Performance Assurance											
	I10	Identify and develop opportunities for Non-Regulated Business											
	I11	Assist in realistic Regulation & Legislation											
	I12	Incentive Asset Sweating											
Learning & Growth	L1	People Development											
	L2	Business Excellence											
	L3	Institutionalizing Improvement, Innovation and Knowledge Management											
	L4	Employee Engagement											
	L5	Culture Building											

Exhibit 8

**Figure E6** Balance in the BSC (illustrative)

Corporate Strategic Objectives	BSC Perspective	Ops	Comm	IT& Systems	Finance	HR	Admin	PE&C
Reduce AT&C Loss	<b>F3</b>							
Reduce Distribution Cost	<b>F5</b>							
Build Consumer Loyalty	<b>C1</b>							
Reliability of Distribution System	<b>I5</b>							
People Development	<b>L1</b>							

Exhibit 9

**Figure E7** Functional impact of financial metric F3

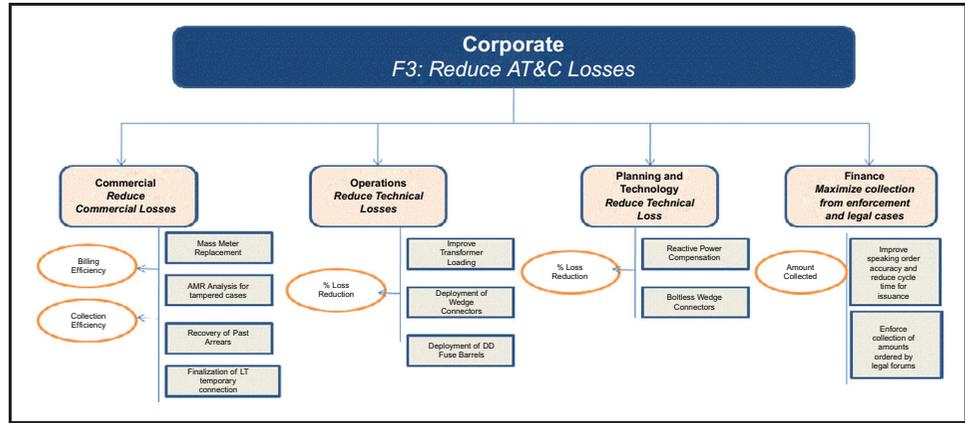


Exhibit 10

**Figure E8** Corporate balanced scorecard (2008-2009)

Perspective	Perspective Code	Strategic Objectives	Measures for Strategic Objectives	Unit of Measure	Actual 05-06	Actual 06-07	Actual 07-08	FY 08-09 Targets
Financial	F1	Maximise rate of Return and be +ve EVA	Return on Equity (RoE/RoNW)	%				
			Economic Value Added (EVA)	INR (in Crs.)				
	F2	Optimise cost of Power Procurement	Cost of Power Procurement (Per unit input)	INR per Unit				
			Cost of Power Procurement (Per unit collected)	INR per Unit				
	F3	Reduce AT&C loss	Aggregate Technical & Commercial (AT&C) Losses	%				
	F4	Increase productivity of asset base	Rolling Investment Carrying Cost (Fixed Network Cost per unit Collected)	Paise per Unit				
	F5	Reduce Distribution cost	Cost of Distribution/per unit realised (Cost to serve - Power purchase cost)	Paise per Unit				
F7	Grow revenue in non-regulated business	Income from Business Consultancy & Asset Sweating Assignments	INR (in Crs.)					
Customer	C1	Build Consumer Loyalty	Xpresss Consumers Satisfaction Index	Index				
			KCG Satisfaction Index	Index				
			HRB Satisfaction Index	Index				
	C2	Effective Follow up	G&I Satisfaction Index	Index				
C3	Effective Consumer Affection	HCB Satisfaction Index	Index					
Internal Process	I1	Optimise Procurement Processes	Average of Daily Peak Deficits	MW				
			Average of deficits	MW				
	I2	Reduce % energy input to high loss 11 kV feeders	MU's reduced to feeders with losses above 40%	MU's				
	I3	Effective Enforcement	Enforcement Collection	INR (in Crs.)				
I4	Power availability	MUs shed (excluding ILS) with respect to total MUs input at 33kV and 66 kV incoming bus	MU's					

Perspective	Strategic Objectives	Measures for Strategic Objectives	Unit of Measure	Actual			FY 08-09 Targets	
				05-06	06-07	07-08		
Perspective Code								
	I5	Reliability of Distribution system	SAIDI	Hrs.				
			SAIFI	No. of Interruptions				
			CAIDI	Hrs.				
			ASAI	%				
	I6	Effective Complaint Redressal	Complaints escalated to CGRF & Legal forums	Nos.				
			Mean Time taken to Resolve O&M Complaints	Hours				
	I7	Accurate & Timely Metering & Billing	% defective bills	%				
			% provisional bills	%				
			% Bills exceeding normal billing cycle slabs	%				
	I8	Enhanced Communication	Consumer Awareness Index - No. of proactive communications (per month)	Nos.				
	I9	Performance Assurance	Average Connection Installation Time	Days				
	I10	Identify and develop opportunities for Non-Regulated Business	No. of Proposals sent	Nos.				
			No. of Projects initiated	Nos.				
	I11	Assist in realistic Regulation & legislation	No of Policy proposals proposed to DERC and other Govt & Legal forums	Nos.				
No of policy proposals approved by DERC and other Govt & legal forums			Nos.					
Learning & Growth	L1	People Development	Training effectiveness Index	Index				
			Training Mandays (Executives+Non Executives)	Mandays				
	L2	Business Excellence	TBEM Score	Score				
	L3	Institutionalizing Improvement, Innovation and Knowledge Management	No. of SHINE Projects registered	Nos.				
			No. of SHINE Projects completed	Nos.				
			No. of Knowledge Sharing Sessions	Nos.				
	L4	Employee Engagement	Employee Satisfaction and Engagement Index	Index				

Exhibit 11

**Figure E9** Reduction in AT&C loss after BSC implementation

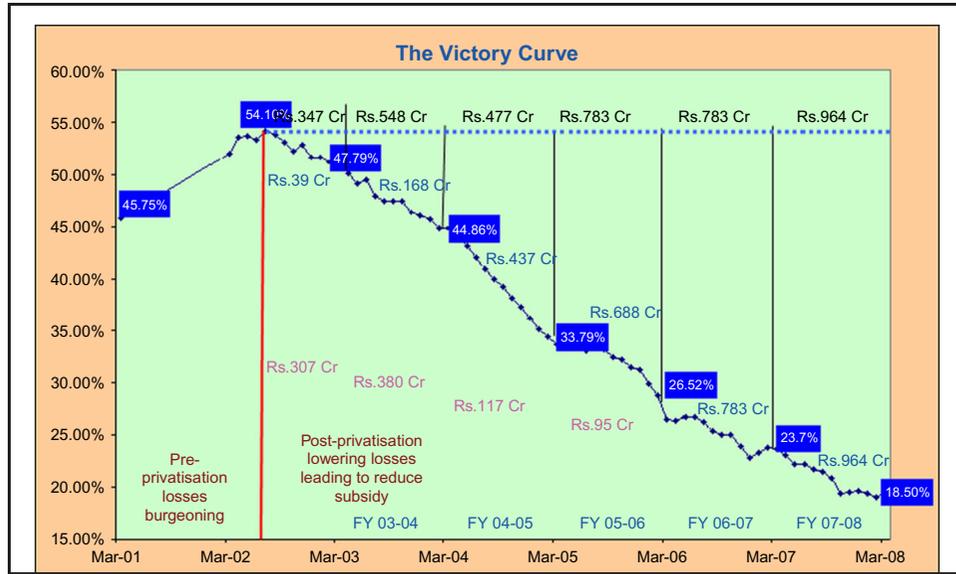


Exhibit 12

**Figure E10** Revenue enhancement after BSC implementation

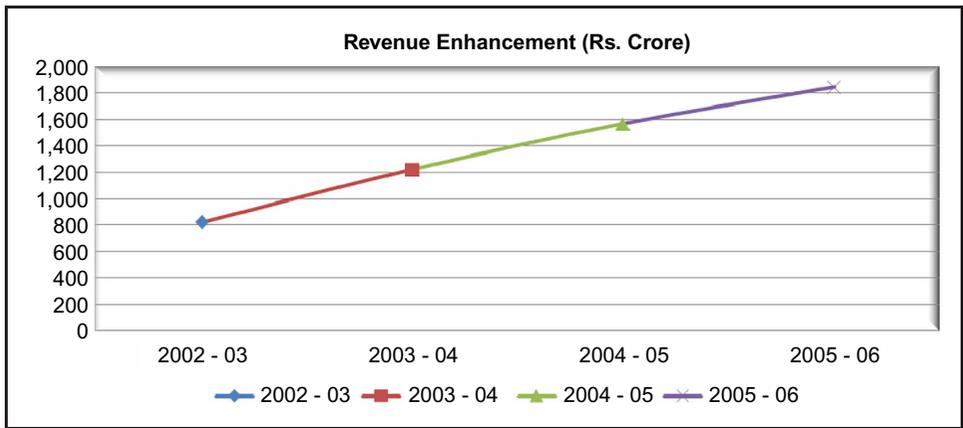


Exhibit 13

**Figure E11** Reduction in complaints after BSC implementation

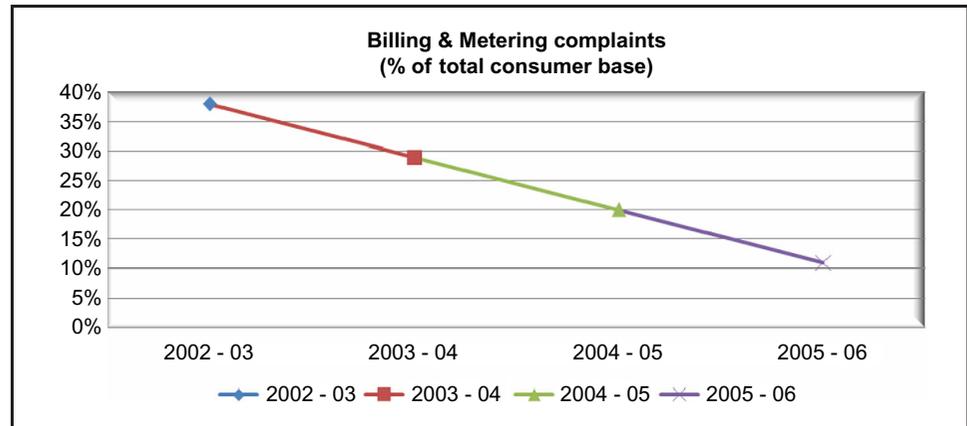
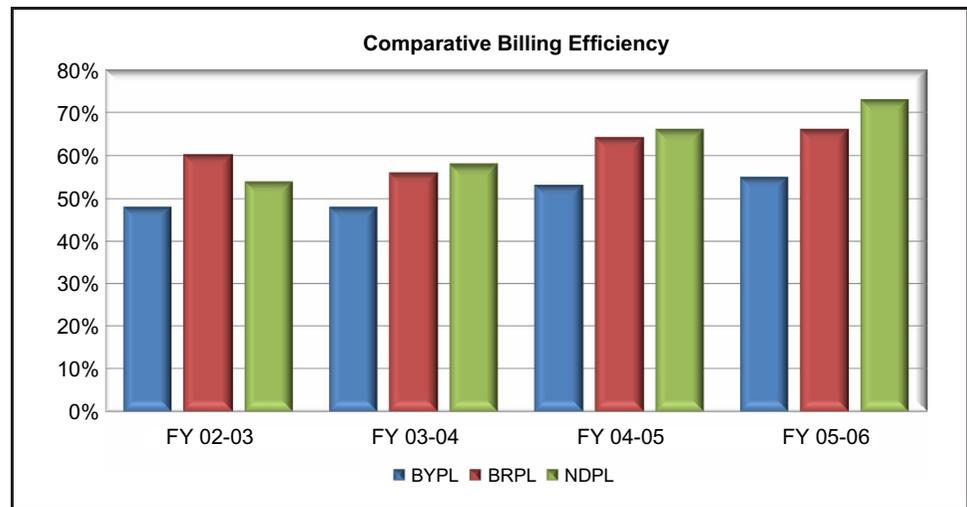


Exhibit 14

**Figure E12** Increase in billing efficiency after BSC implementation



Corresponding author

Monica Singhania can be contacted at: [monica@fms.edu](mailto:monica@fms.edu)

## Teaching notes

Monica Singhanian and R. Venkatesh

### Synopsis

The Tata Power Delhi Distribution (TPDD) case discusses a wide variety of management concepts like strategic management, strategy deployment, performance management system, strategy planning process, vision/mission & values and the role of social welfare and corporate citizenship. TPDD was given its mandate at a crucial time when it has to revive the sick Delhi Vidyut Board (DVB). It faced lots of problems in terms of labor issues, operations, lack of IT infrastructure and infinite demand amid universal service constraint.

After those tumultuous years, TPDD has emerged as one of the competent power distribution company in Delhi region. One of the major management tool that was helpful to achieve this feat was the balanced scorecard which aligned the entire organization towards achievement of corporate goals. Puneet reminisced about the processes and the due diligence that went through in designing and implementing it.

Now after the balanced scorecard success story, he along with Dr Ganesh Das, Head of Group – Strategy wants to take it to a next level and integrate their strategies related to inclusive growth of community and combating the ill effects of climate change which were emerging as new challenges for the organization from both an internal and external environment perspective. They discussed about triple bottom line, social accounting and other methods. But they firmly believe that the balanced scorecard method that helped them to achieve their strategic goals will help them to achieve this objective too. But whether the existing four perspectives namely financial, customer, internal process & learning and growth” would adequately address the emerging challenges or whether there was a need to introduce a new perspective “The Social Perspective” is what they contemplate in the case.

### Learning objectives

This case can be used to highlight many management concepts, some of which are:

- Strategy formulation/development;
- strategic deployment/management;
- performance management system;
- balanced scorecard application; and
- corporate citizenship.

It can be used to teach:

- The importance of strategy in an organization and how it helps the firms to realize their stated vision.
- To highlight the process of strategy formulation and deployment.
- To help students realize the difficulties in realizing a strategic goal through performance management system.
- Use of balanced scorecard as an effective tool for strategy deployment and organizational alignment.
- To introduce students the concept of sustainability of organizations and emerging global challenges.
- To illustrate the complexities involved in a SPP.

The case fits for MBA or advanced MBA students who are in the final year of their course studying business strategy, strategic management and management concepts for leadership. A good idea about the operating industry will help the students to realize the depth of the case.

The students should have been exposed to the industry analysis tools like Porter's five forces, SWOT, PESTLE, McKinsey's 7S and others. They should be able to articulate the meaning and implication of strategy, vision and mission statements of an organization.

### Course positioning

The case can be used in the following courses:

- Post graduate program in public administration. The students can be introduced to the concept of performance management systems in public organizations.
- MBA/Post graduate program in management in strategic management. It can be used to teach students the concept of balanced scorecard as a strategic tool.
- Execute training program for government executives in public sector organizations to highlight the concept of performance management system in public-private partnership (PPP) companies.
- MBA/Post graduate program in management in strategic management. It can be used to introduce the concept of considering social and environmental aspects in strategy planning which are emerging and global sustainability challenges.

### Introduction

The audience should be made to learn the history of TPDD and its operating environment. Ask the students to go through the electricity distribution industry in India particularly in Delhi and the nature of their operations. The instructor may start by opening about the fundamentals of the power distribution industry and its regulatory aspects. These opening questions and discussions will enable students to get a clear understanding of the case.

The power distribution sector has different operating standards that are different from the generation and transmission sector. The stringent regulatory norms that are laid down by the regulatory body in terms of AT&C loss reduction have to be understood. The nature of the sector (which has been in the public sector before being privatized) also has a strong bearing on the organizational aspects of TPDD.

For this purpose, students must be made to browse through the TPDD web site and learn about its business profile. Also, the nature of its operating industry should be thoroughly studied in terms of the tight regulations and universal service obligations that are faced by TPDD. The instructor can then ask the audience few questions about the company and its business and industry profile.

### Characteristics of the power distribution industry

The power distribution sector has in Delhi had been handled by the state owned vertically integrated DVB till 2002. In 2002, Delhi Government unbundled DVB into three sets of functional corporate entities related to:

1. distribution;
2. transmission; and
3. generation.

All the assets and liabilities of DVB were acquired by the Delhi Government and were eventually transferred to six successor companies – one generating company (Genco), one transmission and bulk supply company (Transco), three distribution companies (Discom-I, Discom-II and Discom-III), and one holding company. The three distribution companies (or Discoms) were privatized through sale of majority stake (51 per cent) which resulted in formation of three private distribution companies: BSES Rajdhani Power Limited, BSES Yamuna Power Limited and North Delhi Power Limited (renamed as TPDD Ltd).

Some of the key problems that TPDD encountered on takeover included high AT&C loss (531 per cent at the time of takeover), the presence of a large number of non-metered and illegal customers, under-billing and poor collections. DVB had accumulated a huge amount of receivables. There was neither any register of assets nor an accurate master list of customers. Theft of power was rampant and the distribution network system was much below the requisite standards and in a state of dilapidation. The common employee enjoyed over-security and was indifferent to customer requirements. An army of semi-skilled/unskilled workforce existed which fattened the wage bills resulting into further worsening of the finances.

TPDD was to achieve a complete turnaround and to convert this ailing utility which was burdening the sector with a subsidy requirement of USD300 million annually into a sustainable consumer centric organization. The challenge was humongous considering the unskilled and uncaring workforce that they had inherited as a part of the privatization process.

### References

www.ndpl.com  
www.bsedelhi.com/  
www.ipgcl-ppcl.gov.in/  
www.delhitransco.gov.in/  
www.derc.gov.in  
en.wikipedia.org/wiki/Delhi\_Vidyut\_Board

### Teaching plan/process

*Method 1.* The students have to be told to read the case before coming to class and they should be given the suggested reading of Robert Kaplan and David Norton about BSC. Also, they should be given the assignment questions as home work in order to have a full fledged discussion in the class.

The case can be taught in the following manner (considering two 90 minute class session with a ten-minute break; Table III).

The entire analysis/discussion questions and topics can be taken from the set of the questions given below in the assignment and discussion section. A thorough knowledge about the case is necessary for a fruitful discussion on the matter.

*Method 2.* The students can be divided into groups of four or five and they can be made to present their analysis of the case based on the assignment questions and discussion questions. This will help them to get familiarize about the case so that they will be able to better discuss the analysis parts 1-5 in class. Considering a 90-minute session, we have the situation in Table IV.

<b>Table III</b>	
<i>Instruction</i>	<i>Time period (min)</i>
<i>Session 1</i>	
Case discussion	30
Analysis 1	10
Analysis 2	10
Analysis 3	10
Analysis 4	10
Analysis 5	10
Wrap-up and conclusion	10
<i>Session 2</i>	
Case discussion	30
Discussion 1	10
Discussion 2	10
Discussion 3	10
Discussion 4	10
Discussion 5	10
Wrap-up and conclusion	10

<b>Table IV</b>	
<i>Instruction</i>	<i>Time period</i>
<i>Session 1</i>	
Group presentations	Total time of 60 minutes
Discussion of analysis questions	30 minutes

### *Assignment questions*

1. Analyze the industry in which TPDD is operating – with special features like attractiveness, regulatory scenario and universal service constraint.
2. Analyze PPP method of conducting business.
3. What are the current trends of PPP with examples around the world in different sectors.
4. Discuss alternative ways of implementing strategy in an organization with special mention to performance management systems.
5. What are methods to capture value generated by an organization in a society? Elaborate on non-financial measures of depicting them.
6. Do you think the concepts of core values, vision and mission have significance in today's profit seeking companies? If yes, how? Discuss each of them separately.
7. How can TPDD have fine-tuned its BSC design process?

### *Discussion questions*

1. What are the methods to implement strategy in an organization?
2. Can the PPP model of business can benefit the citizens in general? What are the enablers that the government has to provide to make it successful?
3. Is the PPP model of business can achieve efficiency better than a purely privately owned firm in economic terms?
4. The organization is currently contemplating introduction of a fifth perspective "The Social Perspective" to align its strategies for inclusive growth and environmental protection. Do you believe that this is the correct approach? Give the pros and cons supporting the same.
5. Do you think the four perspectives of the balanced scorecard are sufficient to capture all the functionalities of an organization including the sustainability aspects mentioned in the case?
6. Try to bring in the importance of non-financial concepts in designing and implementing a business strategy.
7. Does management tools like balanced scorecard, dashboards, CRM, ERM work for PPP businesses and non-profit organizations like governments, NGOs?
8. Which among the four perspectives are more important according to you? Why? Do you think any other perspective need to be added along with them to measure their performance?

### *Resources*

1. Refer the TPDD web site – [www.ndpl.com](http://www.ndpl.com) for information about the company policy, vision, mission, values and other details.
2. Delhi Electricity Regulatory Commission (DERC) web site – [www.derc.gov.in](http://www.derc.gov.in)
3. Need to read the papers authored by Robert Kaplan and David Norton on Balanced Scorecard.
4. "Using the Balanced scorecard as a strategic management system"
5. "Putting the Balanced scorecard to work"

### *Analysis*

#### ***Question 1. PPP – give a government's perspective***

We know that all over the world, privatization has become a buzzword to renew sick public companies. This trend was popularized by Margaret Thatcher, the Prime Minister of England who oversaw a series of privatization programs in Britain and made it successful to revive loss-making public companies.

In this light, discuss the various historical background of privatization program in India and the divesting of public assets. Address the concerns for the government when it decided to privatize a particular company:

Pros:

- *Efficiency of operations.* The output of the company increases gradually giving rise to better service. It is a social good as it is positive for the people and for environment too, as it uses less and less resources.
- *Profit making.* Better profits in turn lead to increase in the government wealth which is public. Government can invest that profit in other social schemes.
- *Less management burden.* The size of government being very big cannot effectively manage the company. Privatization will help it to lean down its size leading to better management.
- *Market improvement.* When a company is privatized, it breaks monopoly of the government in that sector leading to better market conditions and efficiency.
- *Simple and effective.* Privatization makes things simple for the administration as it functions according to the market conditions and to check deviations, there are regulators. Thus, the government need not do much once privatization is done.
- *Financing.* Once a public company becomes, it can attract investments from the market. The company can use that for various activities and expansion, which otherwise would be difficult.

Cons:

- *Employee welfare.* The generous employee welfare may be compromised by the private company to reduce its operating costs.
- *Price and subsidies.* The subsidies and the price control that the government practiced to provide cheap service to the public will be done away with leading to public discontent.
- *Public concerns.* The people when faced with private company's higher price will find it difficult to face the new situation.
- *Lack of control.* The monopoly of the government in an industry sector may be lost if it gives to private investors. It may lead to exploitation by the private company in that sector to extract monopolistic profits.
- *Divesting value.* Often public companies are sold at throw away prices leading to huge notional loss to the government. The market undervalues the sick units and as a result the sale consideration becomes drastically less.
- *Lack of interest.* Some times, the stringent conditions that the government puts for post-sale functioning will discourage the private companies to takeover such sick units. In that case, too sales loss occurs for the government.

**Question 2. In what ways does TPDD can effectively capture the social benefits that occur because of privatization? How can they combine both public and private objectives and achieve harmony in their strategy?**

Exhibit 2 details all their guiding values, vision and mission statements of TPDD that is used to arrive at their corporate strategic objectives. The SPP is used to fine tune and arrive at the required objectives that TPDD sets up for itself (Exhibit 5). The management undergoes various steps in this planning process including the PESTLE analysis, Technology analysis and others to find its exact position in the sector and to determine its suitable course of action for the future.

It is in this process, that both the private and public objectives can be combined and designed. Those values that are considered in taking the strategic decisions are juxtaposed with public requirements and then common objectives are set out.

If the SWOT analysis is done, then it will be clear as to where TPDD stands in terms of combining public and private objectives:

Strengths:

- TPDD has in its core the value system that deeply drives its management. It has the ability to take all the employees along with them towards a common objective.
- Lot of consumers, in a sense it provides a large segment of population to serve.
- Being in the capital city of Delhi which is dominated by upscale localities, it is a place to serve better for high end customers and commercial houses.
- TPDD is focused not only on strategy but also its implementation.
- A very dynamic management team which has the expertise from the legendary Tata group.
- The highly structural IT systems that reduce the commercial losses and provide accurate and hassle free billing.

Weaknesses:

- Several players in the field and need to have constant monitoring of the performance.
- Regulatory factors like tariff rates and AT&C loss monitoring.
- No scope to differentiate the customer segments.
- There is also no scope to change tariff rates due to regulatory aspects.
- Rampant pilferage and looting of power by unscrupulous elements.
- Difficulty in complaint resolution and servicing issues leading to rising maintenance costs.
- Universal service constraint as it is a public utility.

Opportunities:

- Growing customer satisfaction for good service and uninterrupted power supply.
- Strong employee bond due to the welfare and training measures taken.
- The effective IT system in place can be exploited for further fine-tuning the operations especially in billing and supply.
- Effective management team can implement out-of-the-box solutions to try our different means to innovate and achieve efficiency.
- Emerging opportunities in the distribution sector in the form of alternative private sector participation approaches such as distribution franchisee.

Threats:

- High-investment industry.
- Huge regulatory uncertainty issues.
- Pilferage is a big threat and takes time to get resolved.
- Emerging competition.

**Question 3. Do you think the four perspectives of the BSC are enough for a company to capture its performance and other features? If yes, then what other perspective(s) would you like to add in that regard?**

BSC essentially takes four perspectives to measure the functioning of the firm. But sometimes, we find that it is not effective in capturing the true performance of a company. There are numerous examples in this regard and let us consider few companies in this issue:

- *R&D firm.* A R&D firm's core output is its applied research output which can be used to develop new products and services. The gestation period or the break even period for such a firm will be very long considering the field of research. Also, it is a risky proposition to engage in, as it involves huge effort in terms of both time and money to retain top scientists and other human capital and still there cannot be any result also. In this case, find out the four perspectives in a regular BSC and then add more perspectives like the *innovation perspective* which can be measured by how much cost is allocated for research purposes.

- *Microfinance institution (MFI)*. A MFI aims to help poor people by lending small amounts of loan to them (for interest) and helping them to build their own business so that they can sustain their lives. Basically, its objectives are social development by micro-lending to poor people who are in the margin of financial services. In this situation, in recent times MFIs are following a commercial purpose and private wealth creation. The private investors are finding investment in a MFI to be a lucrative proposition and thus the social aspects get eroded away. So, applying BSC for a MFI will involve not only the usual four perspectives but also the fifth perspective of *social impact*.

**Question 4. Discuss the strategies being implemented by organizations across the globe to mitigate the sustainability challenges related to inclusive growth of community and mitigating the ill effects of climate change? What are the consequences if organizations do not gear up to this challenge?**

*Excerpts from Walmart Case Study: (Wal-Mart's Sustainability Strategy: Academic Case Study by: Erica L. Plambeck, Lyn Denend, Published: 2007):*

In October 2005, in an auditorium filled to capacity in Bentonville, Ark., Lee Scott, Wal-Mart's president and CEO, made the first speech in the history of Wal-Mart to be broadcast to the company's 1.6 million associates (employees) in all of its 6,000-plus stores worldwide and shared with its 60,000-plus suppliers.

Scott announced that Wal-Mart was launching a sweeping business sustainability strategy to dramatically reduce the company's impact on the global environment and thus become "the most competitive and innovative company in the world."

He argued that "being a good steward of the environment and being profitable are not mutually exclusive. They are one and the same."

He also committed Wal-Mart to three aspirational goals: "To be supplied 100 percent by renewable energy; to create zero waste; and to sell products that sustain our resources and the environment."

*Abstract from "Case study on Corporate Social Responsibility (CSR) of MNC's in India: Dr G. Muruganatham:Assistant Professor, Management Studies, National Institute of Technology, Tiruchirappalli, India.*

In this era of global competition, declining brand differentiation and increasing media clutter, companies are going beyond the conventional marketing mix to increase the value of intangible assets. Over the years, there is a shift from functionally centric brands to emotionally centric – brands to values – centric brands. Today, brands must be inspirational in a socially responsible way to all stakeholders. To achieve the same CSR has become more common in business practices. CSR remains a very relevant strategic marketing tool. Many companies use CSR as a way to increase their image, generate brand equity, and increase employee loyalty.

## **Abstract**

**Title** – *Tata Power Delhi Distribution Ltd: measuring beyond the metrics.*

**Subject area** – *The focus is on a performance management system and its strategic alignment using a Balanced scorecard in a Public Private Partnership framework. This case study analyses the situation for Tata Power Delhi Distribution (TPDD) which needs to realign its strategy to meet the emerging sustainability challenges of inclusive growth and combating the climate change. The case covers the field of strategic management, strategy formulation and performance management system deployment using the balanced scorecard. It touches upon the emerging need for corporates to look beyond economic signals and take social and environmental impacts into strategy planning process.*

**Study level/applicability** – *The case can be used in the following courses; post graduate program in public administration; MBA/Post graduate program in management in strategic management; executive training program for Government executives in public sector organizations to highlight the concept of performance management system in PPP companies.*

**Case overview** – *After the initial tumultuous years, TPDD emerged as one of the efficient power distribution companies in Delhi region. One of the major management tools that was helpful to achieve this was the balanced scorecard. TPDD's general manager for corporate strategy & planning reviewed the process and the due diligence that went into designing and implementing the balanced scorecard. Now, after the balanced scorecard success story, he along with Dr Ganesh Das, Head of Group – Strategy wants to take it to a next level and integrate their strategies related to inclusive growth of community and combating the ill effects of climate change. They believe that the balanced scorecard method that had helped them to achieve their strategic goals will help them to achieve future objectives too. But whether the existing four perspectives: financial, customer, internal process and learning and growth would adequately address the emerging challenges or whether there was a need to introduce a new perspective – “The Social Perspective” – is what they contemplate in the case.*

**Expected learning outcomes** – *The case can be used to teach the following: the importance of strategy in an organization and how it helps the firms to realize their stated vision; to highlight the process of strategy formulation and its deployment; to help students realize the difficulties in realizing a strategic goal through performance management system; use the balanced scorecard as an effective tool for strategy deployment and organizational alignment; to introduce students the concept of sustainability in the organization and emerging global challenges; and to illustrate the complexities involved in a strategic planning process*

**Supplementary materials** – *Teaching notes.*