6. FRUITS OF REFORM

Power sector in the country is undergoing a transition. The intent of such transition is two fold – to improve the financial and operational performance of the sector and to improve the availability & quality of supply to the customers and increase customer satisfaction. The State Electricity Boards that once dominated the power sector were marred as much by internal problems as by external interventions. Therefore, a comprehensive reform programme aimed at creating better business environment and at improving business processes of utilities was undertaken.

The reform agenda in Gujarat was not limited to restructuring of the SEB or creation of the corporate entities responsible for functions across the electricity value chain but to ensure improved service quality, better financial health and effective utilisation of resources. The state power sector from losses of over Rs 1932 Crores in FY 2003-04, Rs 927 Crores in FY 2004-05 and is on the path of registering Profit before Tax of approximately Rs 203 Crores in FY 2005-06. This translates into a favourable financial recovery of around Rs 2000 Crores during three financial years. This chapter outlines the wide range of initiatives taken by the erstwhile Gujarat Electricity Board to achieve the turnaround in a short span of three years.

Early Beginning

Understanding the changing business environment, Gujarat decided to embark on an ambitious reform programme with the enactment of the Gujarat Electricity Industry (Reform and Reorganisation) Act as early as

May 2003. This process got further impetus with the enactment of the Central Electricity Act in June 2003.

The early beginning led to Gujarat being the first state to unbundle after the enactment of the Electricity Act, 2003. Gujarat's model of a holding company concept for restructuring is unique and is now being followed by most of the major states that have unbundled after Gujarat.

As part of the restructuring and reform agenda, erstwhile Gujarat Electricity Board (GEB) has been reorganized to create vibrant, viable and consumer centric utilities. The vertically integrated utility, erstwhile GEB has been unbundled, through a unique model, into seven separate companies – one each for generation and transmission and four distribution companies. The seventh company, Gujarat Urja Vikas Nigam Limited (GUVNL), is the holding company and acts as nodal planning and co-ordinating agency in the sector as well as the bulk supplier to the licensees in the state.

Reforms also mandated the regulation of business environment by a State Electricity Regulator. To undertake and regulate the reforms process, Gujarat Electricity Regulatory Commission (GERC) was created in 1999. The GERC since then has issued three tariff orders (in Oct 2000, June 2004 and May 2006 with tariff increase only in October 2000) and various regulations covering licensing, supply code, grid code, tariff setting, Open access and dispute resolution, protection of consumer interest and fair play to all sector entities. The presence of an independent regulator has reduced the uncertainties and provided reassurance of a mutually beneficial and level playing field to new entrants.

Financial Restructuring

While undertaking the process of restructuring, the need for providing the new companies with cleaner Balance Sheet was recognised. Therefore, the unbundled entities have started with better financial parameters as the State Government has converted loans into equity and has also taken over the servicing of a part of the sector's debt. Further, the financial restructuring envisages matching commitment from the utilities in the form of efficiency improvement.

The State Government has made a commitment of Rs 15,000 Crores to be invested in the sector over a period of seven years against which the utilities have committed a saving of Rs 10,000 Crores through efficiency improvement. The State Government has also supported the sector through timely subsidy payments for the last three years.

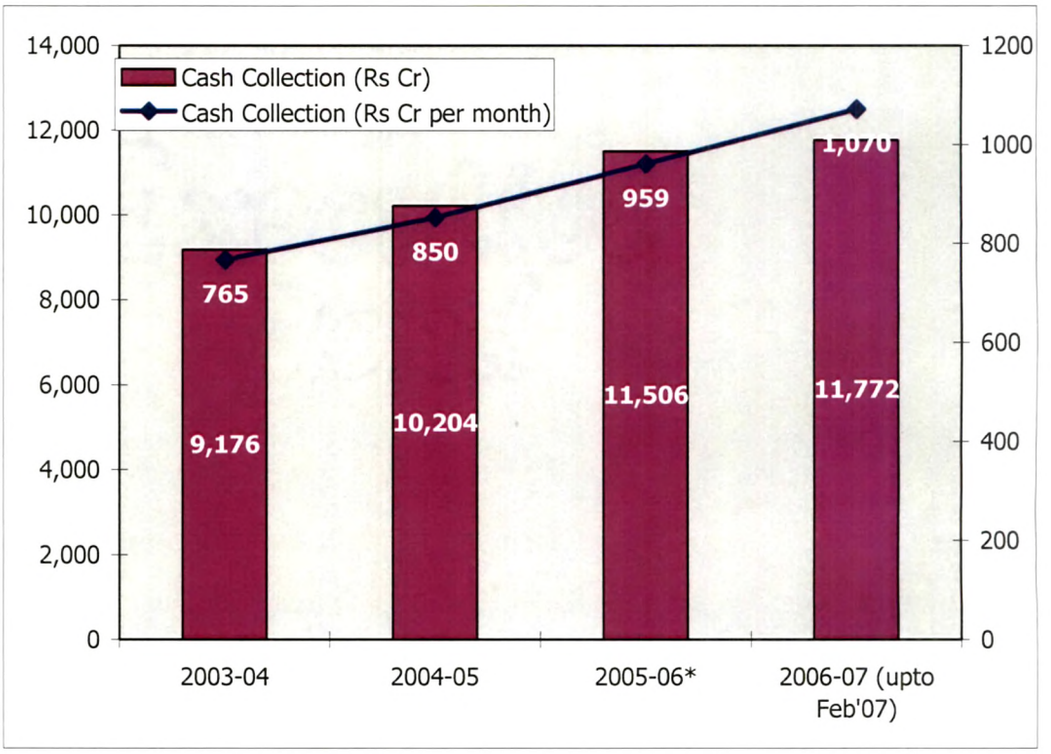
6.1 Improved Financial Management

The contribution of improved financial management in terms of collections, power purchase & fuel costs and interest burden cannot be undermined.

Cash Collections

Erstwhile GEB and now the distribution companies have introduced innovative and customer friendly collection initiatives that have resulted in an increase of 24% over the last three years without any tariff increase. These collection initiatives include cash collection at post offices, mobile

collection vans tie up with banks and increased operating hours for the cash collection counters. Customer friendly initiatives along with internal targets and at the field level have led to such improved collections.



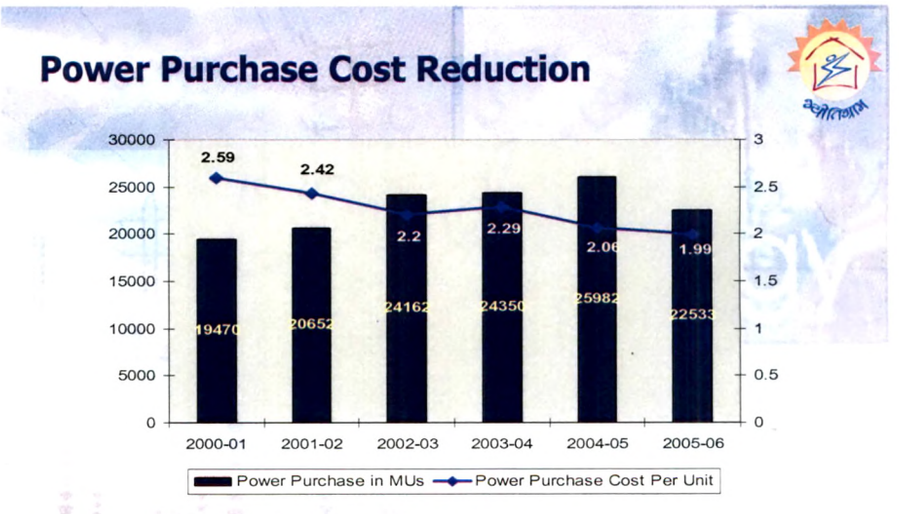
6.2 Power Purchase Costs

GUVNL purchases a substantial quantity of the state's power requirement from Independent Power Plants (IPPs). As an attempt at cost reduction, the Power Purchase Agreements were re-negotiated, thereby obtaining reduction in fixed cost obligations of GUVNL to IPPs. The successful re-negotiation led to a saving of Rs 495 Crores towards fixed costs in the first phase and another Rs 64 Crores in the second phase. In addition, the power purchase is strictly being made based on the Merit Order dispatch and the purchase of

high cost Naphtha based power has been discontinued. Power Purchase being the largest cost component for GUVNL, the above initiatives have resulted in significant savings. Further, timely payment of power purchase dues has earned rebate worth Rs 150 Crores over the last three financial years. Similarly, the incentive earned from Central Power Sector Undertakings is equivalent to Rs 130 Crores. The power purchase costs, therefore, have shown a steady decline:

Power Purchase Cost (Rs per kWH)

Year	Rs. per kWH
2003-04	2.29
2004-05	2.06
2005-06	1.99



- ***The figures for 2005-06 do not include the power purchased (4902 MUs) from 4 units of GSECL. These are included in Generation on account of merger of all generation units in GSECL.***

6.3 Fuel Costs

GEB and now the generating company, GSECL have taken steps to achieve savings in fuel costs through:

(a) improvement in indigenous coal linkages,

(b) development of new indigenous coal sources of cheaper and good quality coal like WCL and SCCL (Saving of Rs 22.58 Crores),

(c) use of washed coal (Saving of Rs 138 Crores) ,

(d) use of imported coal (Saving of Rs 20 Crores),

(e) lesser price for LSHS from IOC compared to market price through negotiation (Saving of Rs 28 Crores).

(f) Reduction in Transit Loss

As a result, the fuel costs for generation of power have increased only marginally in spite of higher increase in coal prices and railway freight, state cess and taxes.

Table: 6.1 Fuel Costs (Rs per kWH)

Year	Rs. per unit
2003-04	1.51
2004-05	1.59
2005-06	1.66

6.4 Debt and Interest Cost

Interest and Finance charges constitute one of the major elements in the total cost. During the last 3 years, various financial institutions were approached

for restructuring of the loans. With restructuring of Rs 4130 Crores of loans, the sector has achieved savings of about Rs 351 Crores. The debt of the sector over the last two years has increased by just Rs 265 Crores even after timely repayment of past capital liabilities indicating that the sector is out of the debt trap. The same translates to about 2% of the total debt (over Rs 12,000 Crores) of the sector and about 10% of the capital expenditure (over Rs 2534 Crores) in the last two years.

Table: 6.2 Interest Cost

Year	%age
2002-03	10.67
2003-04	9.51
2004-05	9.11
2005-06	8.60

AT&C Loss Reduction (a combination of T&D Losses and Collection Efficiency)

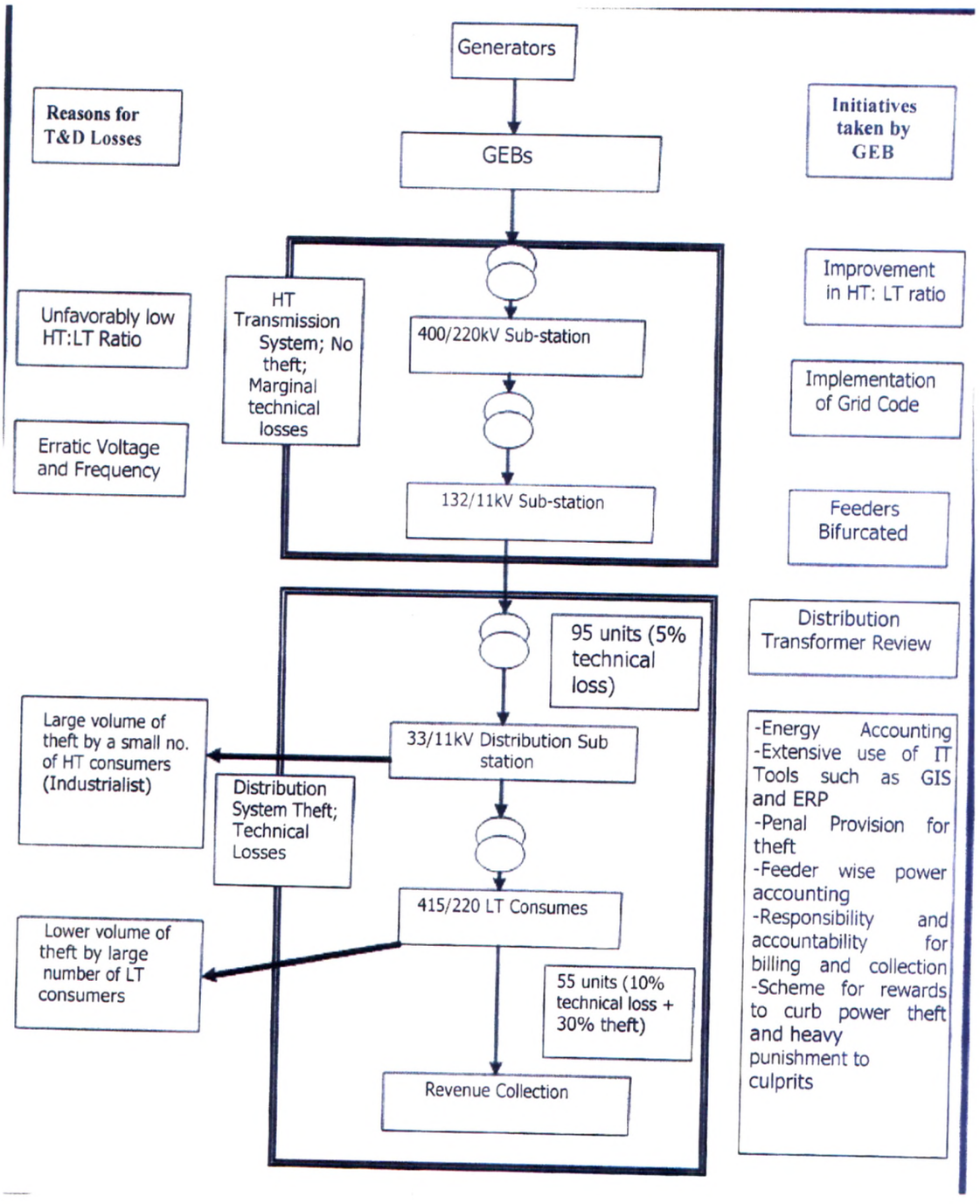
Aggregate Technical & Commercial Losses is a single indicator of efficiency improvements in the distribution segment. While the collection efficiency over the years has been close to 100% and therefore, leaves little scope for further improvement, T&D losses have been reduced by around 9% over the last four years.

Reduction in T&D Losses has a multiplier effect on the financials of the distribution companies. Not only does it lead to reduction in input costs, it also leads to enhanced revenue through recoveries from theft detections and

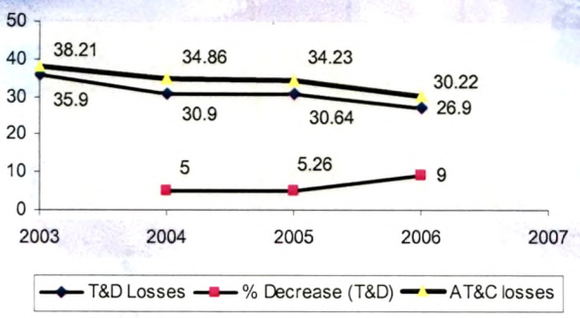
unauthorised use of electricity. Further, with lower T&D Losses, the technical performance of the system improves as well. Distribution companies in Gujarat have been able to reduce the T&D Losses through the following activities –

Table: 6.3

Sr. No	Details	Unit	For last 3 years
1	Faulty Meter Replaced		
a.	Single Phase	No.in Lakhs	26.58
b.	Three Phase	No.in Lakhs	1.55
2	Metal Meter Box Provided		
a.	Single Phase	No.in Lakhs	27.84
b.	Three Phase	No.in Lakhs	1.28
3	Connections sealed		
a.	Single Phase	No.in Lakhs	35.44
b.	Three Phase	No.in Lakhs	1.84
4	Feeders Bifurcated		
	In Numbers	Nos.	868
	Km Line erected	Km	5249.81
5	DTs brought at load centres	No. till 31st Mar,06	1619
6	Renovation of Deteriorated conductors	Km till 31st Mar,06	2593

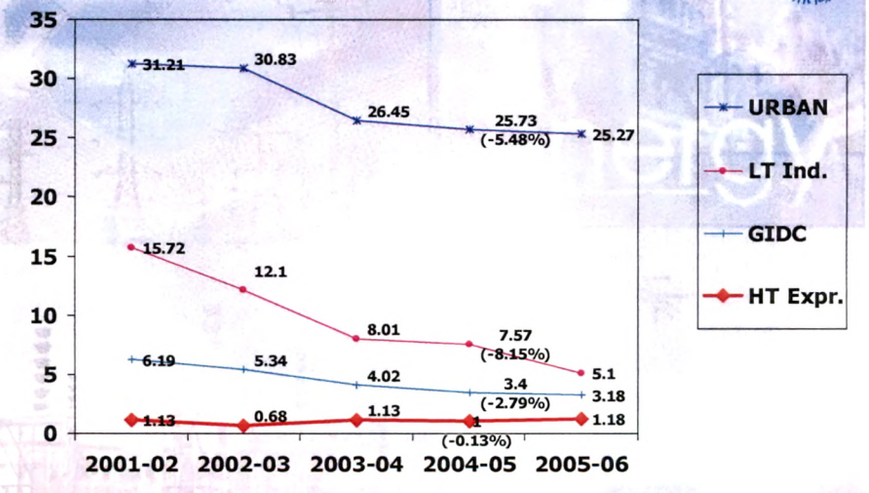

Generators
GEBs
Reasons for T&D Losses
Initiatives taken by GEB
Unfavorably low HT:LT Ratio
HT Transmission System; No theft; Marginal technical losses
400/220kV Sub-station
Improvement in HT: LT ratio
Implementation of Grid Code
Erratic Voltage and Frequency
132/11kV Sub-station
Feeders Bifurcated
95 units (5% technical loss)
Distribution Transformer Review
Large volume of theft by a small no. of HT consumers (Industrialist)
33/11kV Distribution Sub station
Distribution System Theft; Technical Losses
-Energy Accounting
-Extensive use of IT Tools such as GIS and ERP
-Penal Provision for theft
-Feeder wise power accounting
-Responsibility and accountability for billing and collection
-Scheme for rewards to curb power theft and heavy punishment to culprits
415/220 LT Consumes
Lower volume of theft by large number of LT consumers
55 units (10% technical loss + 30% theft)
Revenue Collection

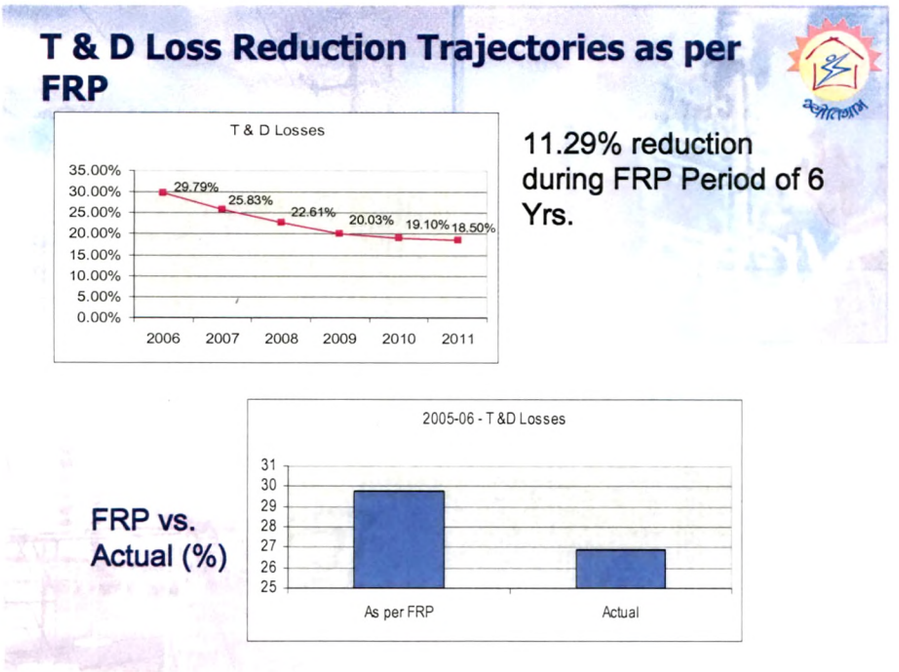
T & D LOSSES Reduction (%)



- 9 % reduction in two years
- Average 2.25% reduction in loss per year

T & D Loss Reduction – Category-wise(%)





Apart from the above, an Anti Theft Bill was passed to check power theft and Vigilance activities (related to theft and unauthorised use detection) in the state have been strengthened through -

1. Setting up of five dedicated police stations,
2. Appointment of Chief Security Officer in each distribution company;
3. Intensified installation checking and
4. Support of local police and ex-army men during the theft detection drives.

Over the last three years, about 63 lakh connections were checked with the following results –

Table: 6.4

S No	Particulars	FY 03-04	FY 04-05	FY 05-06	Total
1	Connections Checked	2147861	2084376	2144100	6376337
2	Detection	214307	153453	158216	525976
3	Theft	107985	101169	96237	305391
4	Malpractice	12408	15182	16221	43811
5	Others	93914	37102	45758	176774
6	Assessment Rs. in Lac.	22393	17719	14674	54786

The above activities have resulted in consistent reduction in losses over the last three years from 30.9% in FY 2003-04 to 26.9% in FY 2005-06.

6.5 Rural Electrification

Rural economy, even in this age of Information Technology, is the mainstay of the national economy. Recognising this fact and the scope for development in rural areas, GEB with support from the Government of Gujarat, initiated the Jyotigram Yojana.

The Jyotigram Yojana is a unique scheme promoted to provide continuous power supply 24X7 to all the villages for purposes other than agriculture. Under this scheme, agricultural consumers are bifurcated and are supplied continuous power from dedicated agricultural feeders for eight hours each day. The remaining rural load that includes domestic, commercial and industrial consumers is supplied three phase power 24 hours.

The Jyoti Gram Yojana involved a total outlay of Rs 1150 Crores, funded entirely by the Government of Gujarat, for erection of more than 53,000 KM of lines and 11,000 transformers across a total of 18,065 villages.

The major activities of the scheme include –

- Bifurcation of Rural feeders into predominating agricultural feeders and feeders having other than agricultural loads.
- Extension of Control Room of Sub-stations wherever required, to accommodate additional feeder panels.
- Erection of 11/22 KV lines in Rural areas including Feeder VCBs at Sub-station end.
- Erection of Transformer Centres.
- Laying lines over River and Railway crossings wherever required.
- Erection of LT lines to separate out Agricultural load from village Transformer Centres.
- Approval of Electrical Inspector/Railway/Forest authorities for charging the new lines/Transformer Centres.
- Pilfer proofing of all electrical connections of village.
- Installation of meters on village Transformer Centres for energy accounting.
- Balancing of village load on all the three phases.

6.6 Benefits of Jyoti Gram Yojana (JGY)

The scheme has led to a reduction in the energy sent out on the purely agricultural feeders and an increase in the energy consumption on Jyoti

Gram Feeders. As a result of the reduction in energy sent out on agricultural feeders and increase in energy consumption on JGY feeders, the sector has gained over Rs 500 Crores from April 2005 to March 2006. Considering a capital outlay of Rs 1150 Crores for the entire scheme, the cost-benefit is favourable.

A study was conducted by the Confederation of Indian Industries (CII) through Institute of Rural Management, Anand (IRMA) to assess the impact of Jyoti Gram Yojana. The study was aimed at ascertaining the Economic, Socio-Cultural, Commercial and Industrial Impact of the scheme. The following are some observations from the study –

Table: 6.5

ECONOMIC IMPACT	SOCIO-CULTURAL IMPACT
○ Visible sign of positive outcomes ○ Employment has gone up ○ Migration has come down due to ▪ More employment opportunity in villages ▪ Improved living conditions ○ Energy efficient lights (CFL) are being used more extensively ○ Purchase of consumer durables increased ○ Electrical and electronic	○ Better awareness about family planning, health issues, AIDS, etc. ○ Increased use of electronic media ○ Mixed reactions of respondents about effects on cultural life of villagers ○ Better education ○ Increased attention and willingness to study: 66% ○ Increased use of ICT (especially computer) in education ○ Improvement in girl child's

equipment damage reduced	education ▪ Duration of study increased by 92 % ▪ School Absenteeism reduced by 13 % ▪ School Drop-out reduced by 80 %
IMPACT ON COMMERCIAL ACTIVITIES o Increase in number of commercial units ▪ Cyber café and telephone/fax/xerox shops ▪ Sale of items like cold drinks and ice creams has gone up o Extended business hours (average 10 hours/day to 12 hours/day) o Reliable and better use of refrigerators o Saving of Rs 50-250 per month on ice to keep certain products cool o Increased general comfort level in the shops	IMPACT ON INDUSTRIAL ACTIVITIES o Average gain in 3 to 6 hours of work/week because of uninterrupted electricity supply o Cost saving from reduced use of diesel generator o Higher worker productivity o Reduced loss and less breakdown due to voltage fluctuation

The study concludes by observing that Jyotigram Yojna is an innovative step by the Government of Gujarat for Rural Prosperity and Better quality of life.

The scheme led to very good social impacts in sectors like education, awareness development and women empowerment. It has led to increase in income and employment the effect of which will be more visible in the coming years.

6.7 Load Management and Energy Audit

One of the greatest advantages of Jyoti Gram Yojana has been the boost to Load Management in the state. Feeder separation not only provides better information about consumption pattern, it also provides an effective control mechanism. With better demand side measures, the sector has been able to serve the state demand more effectively. The sector's own deficit had reduced last year enabling GUVNL to sell power outside the state for the first time.

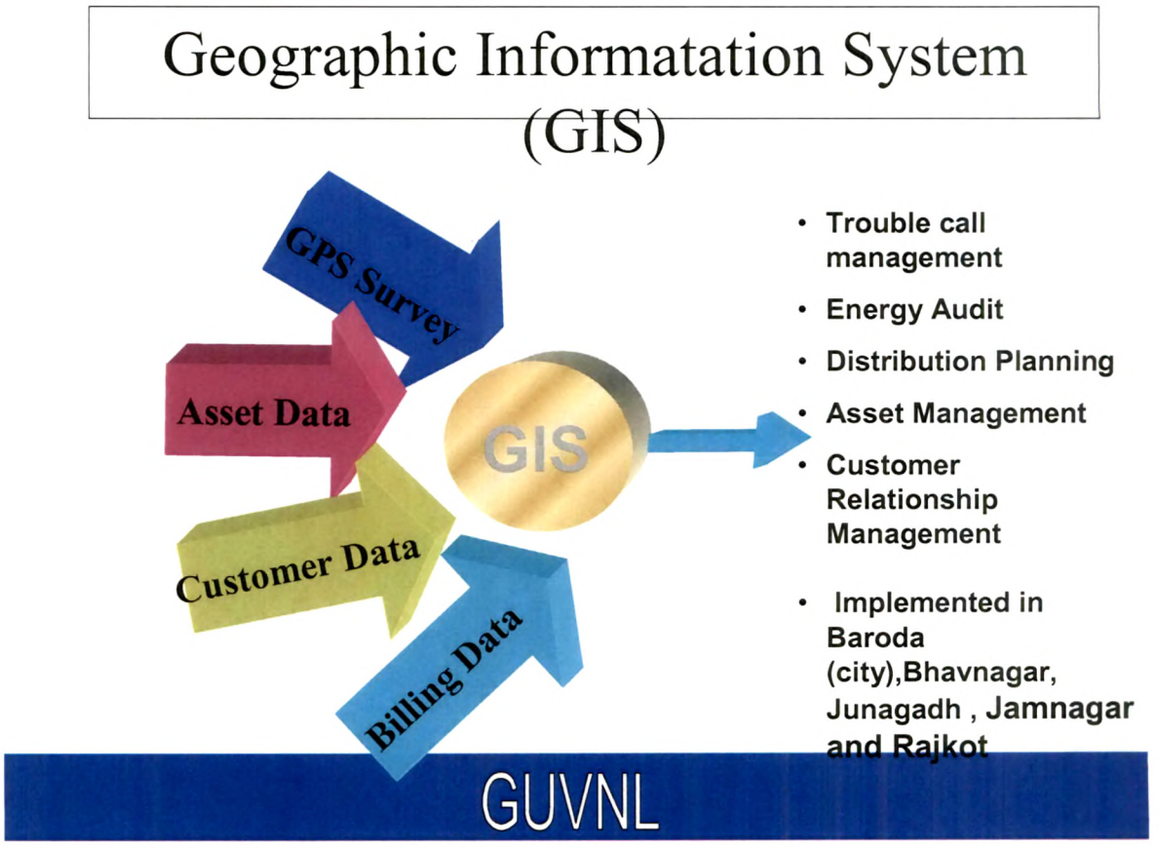
6.8 IT Initiatives

Gujarat is the first state to implement a full-fledged ERP solution in the power sector. The ERP system, christened as 'e-urja', involves seamless flow and processing of data resulting in real time information availability and therefore, facilities decision making. The project is a massive project being implemented across the state at a cost of Rs 110 Crores.

e-urja covers maximum requirements using a standard ERP module. The balance requirements are being fulfilled by best-of-the-breed third party solutions and/or customisation with integration to ERP solution. During implementation, business processes are also being changed, as required,

through Business Process Re-engineering by the solution provider. e-Urja provides connectivity between all the business units in all the companies for real time data transfer and updation that will ensure close monitoring to remove discretion and improve business processes.

Apart from the ERP, various IT initiatives like GIS Mapping, Spot Billing, Computerisation and Data Linkage etc have been undertaken by the utilities.



There are almost 20 locations in all the Distribution Companies where the GIS has already been implemented.

Change Management

The principles for reforms adopted by the state included, apart from the Unbundling and Financial Restructuring, initiatives like training, communication and performance monitoring.

Communication was recognised, very early as a very essential tool for effective reforms. Positive and forward looking communication strategy put to rest a lot of apprehension that the employees had about unbundling and also made them more open to change. The SEB, in order to bring about greater acceptability to change, started team building and productivity improvement initiatives like Five "S" and Total Preventive Maintenance. Employees, as trainers and champions, were directly involved in development and implementation of these initiatives. These initiatives not only improved productivity and work environment but also made the employees more open to change.

With the business environment changing rapidly, employees, in order to be more productive, needed training and development. The SEB and thereafter, the unbundled entities, have trained almost 45,000 employees over the last three years – most of them through resident programs of minimum three days duration. The holding company of all sector entities, GUVNL, now has its own state of the art training centre wherein training programs are being conducted for employees of all the sector entities.

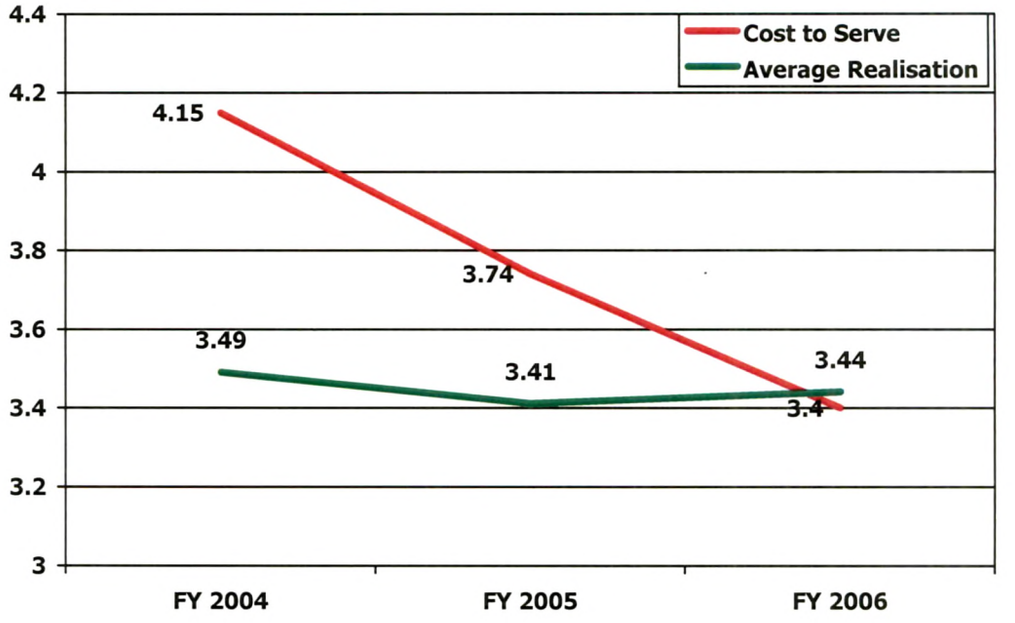
Keeping with the spirit of reforms, the erstwhile GEB and now its successor entities have been implementing initiatives and best practices aimed at

efficiency improvement and optimum utilisation of resources through monitoring of key performance indicators. In the generation sector, KPIs include variable cost reduction through reduction in SHR and coal factor, improvement in plant availability factor and plant load factor. In transmission, attempts have been made to improve line availability through reduced trippings and outages as also through load flow analysis and system studies. Distribution has been an area where emphasis has been on AT&C loss reduction, theft curbing, revenue enhancement and customer care. KPIs across all functions are dynamic and keep changing with requirements and achievement.

6.9 Results of the Reforms Process

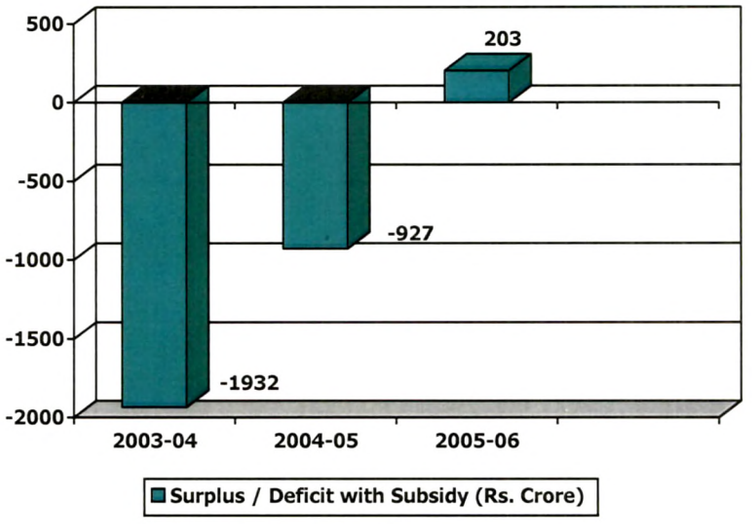
The power sector in the State is now showing glimpses of the benefits of the reform process. Over the last few years, the performance of the sector has seen major improvements – both financial and operational – and this despite fuel and freight cost increase as also no tariff increases. Some areas worthy of mention include –

- The cost to serve which has come down from Rs 4.15 per unit in FY



2003-04 to Rs 3.40 for FY 2005-06 whereas the average realisation, on the other hand, has remained more or less steady between Rs 3.49 and Rs 3.44 in the same period. Therefore, the gap has gone down from Rs 0.66 per unit in 2003-04 of energy sold to Rs -0.04 per unit of energy sold in three years.

- GEB incurred a loss of Rs 1932 crores in FY 2003-04. In FY 2004-05, the losses were reduced to 927 crores on account of vigorous collection drives and cost reduction measures. All the above measures have led to a tremendous improvement in the financial performance of the sector as a whole clocking a Profit Before Tax of approximately Rs 203 crores for FY 2005-06.



Further, all the sectoral companies have shown positive results as can be seen from the profiles and profitability statements as annexed from Annexure – H to Annexure – N. The financial results of GUVNL and its subsidiary companies are attached at Annexure–O to Annexure–U.

- Recognizing the unique initiative of an all round strategy, the State has been awarded the India Tech Excellence award for the most progressive and dynamic State in the country in power sector reforms.
- In addition, the SEB has been ranked the second best State Electricity Board in the ratings conducted by independent rating agencies under the initiation of The Ministry of Power for the second year in running in 2005 and was awarded for 'Outstanding' Performance.

6.10 "eUrja" – End to End IT Solution: The future beckons

The unbundling of the erstwhile Gujarat Electricity Board (GEB) has started yielding results in terms of operational efficiency, improved performance and profitability. The GUVNL and its subsidiaries have now to leapfrog into the future through systems that bring in online applications on the desktop to take appropriate decisions in the wake of stiff competition with the opening of the power sector to private entrepreneurs.

In order to facilitate the same there was a requirement of a system which should cater to requirement of each one of the above companies. This included entire gamut of activities related to Power production, Materials Management, Maintenance, Customer Billing and Services, Project Management, Finance, Human Resources, Power Trading and Network Analysis.

Power utilities in India are moving towards a deregulated framework in which consumers will have a choice in future among competing providers of electric energy. Regulatory bodies have created changes and are driving changes in the business model. Unbundling of the utilities has opened a new era of an Open Access system and competition.

Keeping in mind their high-level objectives and requirements and the challenges they have to face in the rapidly changing environment, there was a need to have a flexible Business and an IT enabling architecture that would allow GUVNL and its subsidearies to adapt itself to changing dynamics.

In light of all these, the erstwhile GEB was the first State Electricity Board to adopt an Enterprise Resource Planning (ERP) based End-to-End IT Solution.

The Vision of the project

"To transform the GUVNL and its subsidiaries into competitive, professional, and profitable companies aligned with its vision and to provide improved services and power infrastructure to the people of Gujarat"

Initial Project planning

To translate this vision into reality detailed planning was made encompassing a total End to End IT Solution to all its companies. The erstwhile GEB Management hired consultants Ms. KPMG for detailing the requirement specifications for the IT solution. KPMG's detailed specifications were then translated into a tender and world class ERP vendors were invited to put in their bids for the solution. The funding for the project including infrastructure required was negotiated with Power Finance Corporation (PFC) of India since the outlay required was large (approximately 100 crores). M/s Oracle along with their implementation partner TCS were chosen as the vendors to provide the package and implement the solution.

Scope of the project

In line with need of the business processes to be streamlined and the detailed requirements specified in the tender the scope of the solution was formulated. The scope of implementation of integrated IT solution comprised of the Oracle e-Business suite, TCS payroll package, third party

solutions for billing, trading and network analysis as well as Oracle collaboration suite in each of the seven companies. This included the entire gambit of activities related to Power production, Materials Management, Maintenance, Customer Billing and Services, Project Management, Finance, Human Resources, Power Trading and Network Analysis. To be done in three stages:

Pilot implementation of solution in defined pilot sites of all seven companies
Rollout to all remaining sites

Maintenance support for three years

The following modules of the ERP, Oracle E-Busines suite (Oracle Applications Release 11.5.10.2) were included:

Oracle Financials – This suite of modules helps to manage various financial activities like payments, money receipts, accounting, assets, bank reconciliation etc

- General Ledger
- Accounts Payables
- Accounts Receivables
- Fixed Asset
- Cash Management
- Treasury

- **Oracle Distribution** – These set of modules take care of the entire Material Management activities like Material Requisition, Purchase

Order, Material Receipt, Online Inventory tracking, Scrap and Ash Sale, Inventory Valuation etc.

- Purchasing
- Sourcing
- Inventory
- Order Management

- **Oracle Process Manufacturing** – Takes care of capturing various generation, efficiency and environment parameters, generating monthly generation cost etc
  - Cost Management
  - Process Operation Control
  - Inventory Management
  - Quality Management

- **Oracle Advanced Planning** - Power forecasting for distribution companies.
  - Demand Planning

- **Oracle Maintenance Management** – Helps in Maintenance Planning, Resource Planning for Maintenance activities, Analysis of various Maintenance activities etc.
  - Enterprise Asset Management

- **Oracle Projects** – Used for better project management, tracking of various project activities and project costs.
  - Projects Costing

- Project Contract
- Project Resource Management
- Project Management

- **Oracle CRM**
  - TeleService
  - Field Service

- **Oracle Human Resource**
  - Core Human Resource
  - Self Service Human Resource
  - Training and Administration
  - iLearning

- **Oracle Business Intelligence** – Will help in generating various analytical/MIS reports that would help in faster decision making
  - Financial Analyzer
  - Financial Intelligence
  - Purchasing Intelligence
  - Manufacturing Intelligence
  - Discoverer

- **Oracle Collaboration Suite** – A separate application that takes care of communication through email, messaging and also helps in document management
  - Email
  - Files

- iMeeting
- Calendar

- **Other 3rd party Applications implemented and interfaced with Oracle Applications**
  - TCS Payroll integrated with HRMS and Financials
  - Consumer Billing interfaced with CRM and Financials
  - Triple Point PowerXL
  - Takes care of the Power Trading Functions of GUVNL and is interfaced with Oracle Applications
  - ETAP – used for network analysis

Benefits

The benefits envisaged from the system covered the needs of the organization, the management as well as the end consumers.

Some of the organizational benefits that are envisaged include:

- Increased asset productivity and reduce operating costs associated with maintenance, procurement, transmission, distribution, and customer service.
- Proactively manage available resources such as inventory, equipment, and skilled personnel and match them to asset maintenance demand, thus optimizing the availability, reliability, and productivity of assets.
- Streamline procurement functions; reduce lead times for procurement, informed decision making inputs for effective and optimal

procurements thereby enabling companies to save significant costs of procurement.

- Optimised management of inventory with reduction in inventory carrying costs.
- Fact-based decisions that decrease operating costs, improve regulatory compliance, enhance safety, and maximize return on investment.
- Streamline Field Service Operations, Improve Citizen Responsiveness and Issue Resolution.
- Consolidation of all customer information centrally and tracking all customer contact in a single place (including Billing information). Over Nine million customers across the Gujarat State will be catered to by the system.
- Efficient Fuel (Coal) Management for Power Generation companies through entire process chain from procurement, receiving to Payments; accurate accounting of coal receipts.
- Power forecasting for distribution companies.
- Improved control over generation costs

Governance benefits

- Improved control, tracking and visibility for all transactions leading to quicker and more accurate availability of information at the desk
- Online tracking of inventory across the organization and leading to improved inventory planning and management.
- Management specific dashboards to monitor progress and Key Performance Indicators.

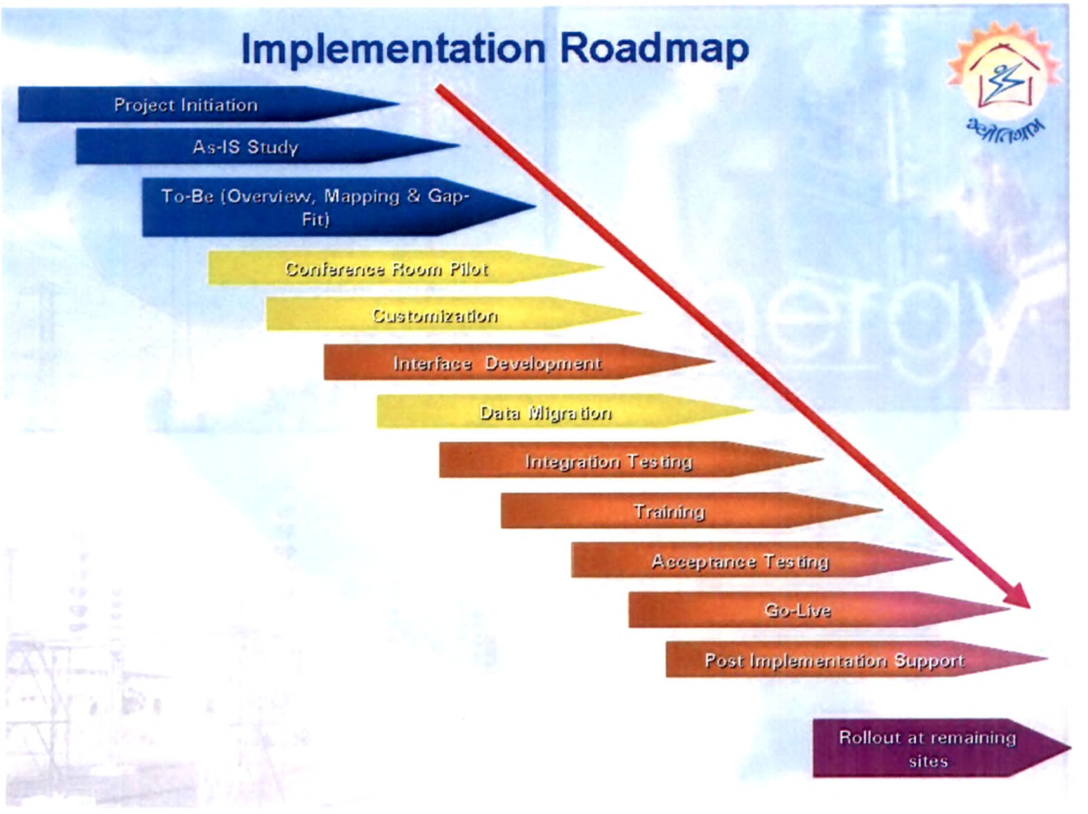
How the system benefits the citizen

- Improved service to end consumers through improved reliability, utilization and maintenance of equipments
- Quicker and improved response to customer queries through detailed online customer dashboards and queries
- More prompt payments to vendors
- Improved management and tracking of environment and efficiency parameters leading to improved environmental safety.

Status of Implementation

The project is being implemented in phased manner wherein in the first phase, one pilot organisation in each of the seven companies has been covered and the subsequent rollout phases, all other locations are being covered. The entire implementation is expected to be completed by September 2007.

The Pilot implementation covered more than 265 pilot locations covering all users including Technical, Financial and establishment users form Vidyut Sahayaks to senior management (around 3000 users). The Rollout has been planned in three phases each of duration of one year.



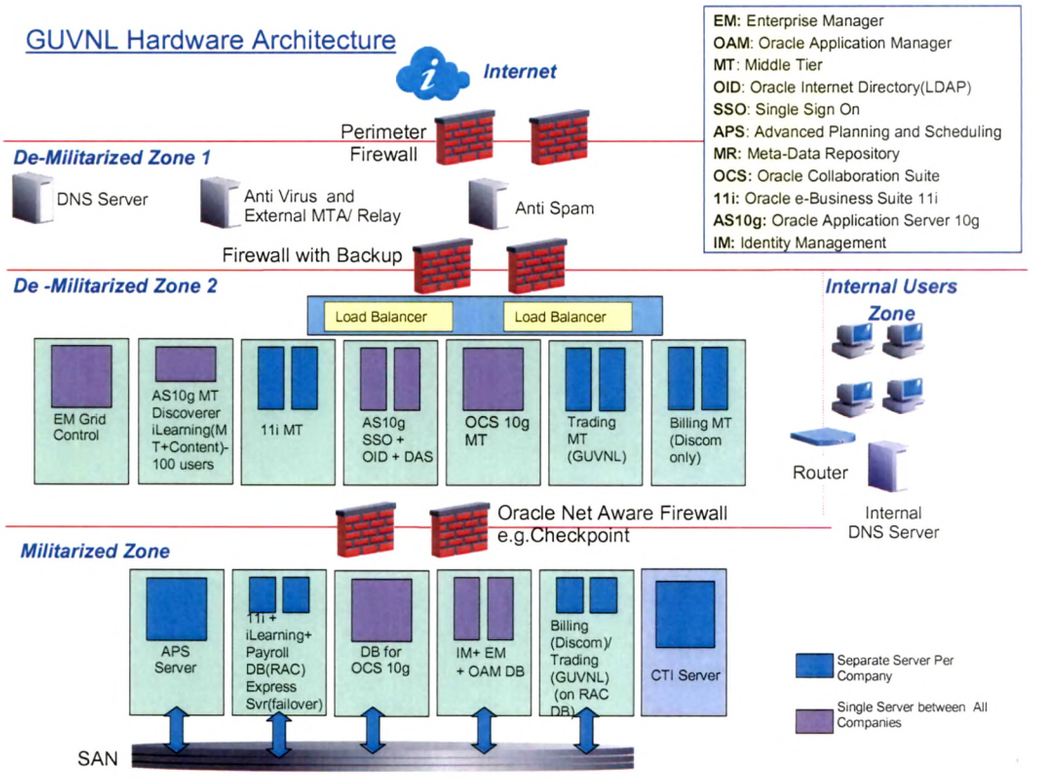
Managing the Challenges

GUVNL management as well as TCS as the Implementation Partner faced diverse challenges during the entire implementation process. This was the first end to end implementation of Oracle E-Business Suite in an Government owned Energy Sector Company with an consolidated employee strength of over 55000 people across all the seven companies. Some of the key challenges faced during this process were:

- A very large geographical Spread
- Project Implementation Scale involving
    - 265 locations being covered in pilot implementation
    - Over 2000 users in the pilot locations
    - More than 1000 locations in the rollout phase

  - Over 6000 users in the rollout locations
- The Post Unbundling scenario posed a great challenge in implementation of this project as there was a sense of uncertainty among the employees due to the various organizational changes happening.
- Very limited exposure and awareness among the intended users/employees regarding the ERP system and the project in particular.
- Providing exposure to the users of the current best practices being adopted in the utility sector across the globe and aligning their existing business processes to the current best processes.
- Mapping of the existing complex business processes (wide variation being practiced differently at various locations of the same company) and standardizing these processes for each of the companies.
- Setting up the user expectations right.
- One of the largest HR process implementation covering more than 50,000 employees
- Strategy of collection and migration of huge volume of data relating to distribution network assets, consumers etc into the system.
- Planning and undertaking a daunting task for training a very large number of non computer savvy end users across the seven companies with a widespread geographical presence.
- Procuring and implementing the necessary infrastructure related with WAN, LAN, desktops and peripherals.
- A State of the Art Date Center with appropriate architecture is required to be set up at the central level covering all the requirements

for the implementation of the e-Urja Project. The typical arciture for the Data Center is represented below.



Some of the mechanisms adapted to meet these challenges were

- **"Communication is the key"**

  Several levels of communication were adopted in form of

  Newsletters - Published on the GUVNL intranet for mass consumption and awareness.

  Workshops for involvement of core team and management at critical stages of the project.

Steering committee meetings with senior management of all companies to provide direction for progress as well as solutions for issues.

- **Management and ownership**: Completely driven and supported by senior management of GUVNL and partnered by management of TCS
- **Package led reengineering :** Used the best practices in-built in the system to optimise processes.
- **Recognition for contributors:** TCS presented certificates to core team members to recognise and encourage ownership of their contribution towards implementing the required processes in the system. GUVNL management has planned for other recognition and incentives during planned eUrja week.

The e-Urja project also envisaged huge infrastructure including a highly secure Date Centre, computers at the user end, closed intranet connectivity and massive training to the Process Champions, trainers and trainees. The project is already in the final phase of rollout implementation across all companies. Many of the packages are already live and being used by the end users with commitment and dedication. It is expected that the 100% online applications shall be achieved by September-07 in almost all the offices of GUVNL and its subsidiaries. This would usher in a new era of advancement in the power sector in Gujarat.

Conclusion

The state's effort has been to address the issues of the power sector in a 'holistic' manner rather than through stand-alone efforts. Today, in Gujarat there is no load shedding in industry and there is no differentiation between the rural and urban areas of the State.

Awards and appreciation :

The Power Finance Corporation in its report on electricity utilites rated GUVNL as one of the most efficient utilities in terms of collection efficiency, AT&C losses, lowest arrears and cash loss reduction.

The Ministry of Power, GoI, Instituted an independent rating of the Electricity Boards and unbundled entities covering the entire gamut of efficiency, regulatory compliance, Govt. support and customer satisfaction. These ratings have been done by the leading rating agencies such as CRISIL and ICRA. Accordingly, Gujarat Electricity Board has been progressively improving its ratings as mentioned below:

- FY 2003: 7th position
- FY 2004: 5th position
- FY 2005: 2nd position
- FY 2006: 2nd position

The Govt. of Gujarat also received the India Tech Excellence Award constituted for excellence in performance and being the most progressive State on reforms.

- The good performance of Generation stations of GSECL over the years has earned them several awards including Gold Medal for Wanakbori Unit-7 and Gandhinagar Unit-5, 5 Silver shields and 14 certificates for outstanding performance.

6.11 APDRP Incentive

The APDRP incentive is the most coveted and prestigious of all the incentive awards for the power sector constituted by Ministry of Power, Govt. of India. Under the APDRP Incentive Scheme, GEB earned a total of almost Rs.600 crores as incentive for cash loss reduction over a period of 3 years being the highest amount for any power sector to earn.

6.12 Looking Forward:

While it will be too early to predict a major turnaround in the sector owing to the uncertanties of fuel availability, increasing cost of fund for investment and the attrition rates of talented employees, the current trend on efficiency and performance signify the will to achieve and move forward in each of the companies.

The Sectoral Growth will be driven by the legal / policy framework through Fully functional Independent Electricity Regulatory Commission, finer

adjustments in the Power Sector Reforms, distancing Central & State Governments from tariff setting, attract private sector participation in Generation and Transmission Projects, create new power stations from the huge natural resources with the availability of primary fuels (natural deposits as well as import facilities) and use the coastline for facilitating fuel imports. In fact Gujarat is looking forward to generating almost 10,200 MW to fulfill the need and make the State power surplus through ultra-mega projects and sectoral investment in the next 5 year.

The GUVNL and its subsidiaries are geared up to adopt professional management techniques, recruit professionals, outsource commercial activities like metering, billing and collection in distribution, Operation and Maintenance in power houses and transmission sub-stations, undertake major and minor R&M of existing plants to improve availability and take distribution reform initiatives such as distribution franchisee framework.

It is also envisaged that the additional impetus will come from Tariff rationalization through encouraging industrial consumption through tariff incentives, move towards Cost of Supply based tariffs for all categories of consumers, align of Electricity Duty (ED) in line with competing states, increase overall efficiencies - including quality & reliability of supply and make the state more attractive to the potential investors through fiscal incentives and tax holidays.

The five core values of the power sector in Gujarat are Customer Satisfaction, Pride of belongingness, Ethically and socially responsive, Participative work culture and Excellence. With these core values and with

the belief that "we will because we can", we should be able to deliver our promise of "reliable and quality power at competitive cost". The need of the hour is to recognise that investment of time and effort in this sector shall reap future benefits for each citizen of the country and Gujarat in particular.