

Presentation on

**Customer Service & Billing Programs in
APCPDCL**

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Delhi

Agenda

- Introduction .
- Objective and goals of reforms & Customer expectations
- Reform milestones in AP.
- Major initiatives taken up during reforms.
- Customer service initiatives.
- Billing solutions.
- Benefits to Customers due to these initiatives.
- Conclusions
- Way forward.

Introduction

- Distribution system in India is often characterized by inefficiency, low employee productivity, lack of customer focus, frequent interruption in supply and poor voltage.
- It is aimed at bringing about sustainable improvements in the operations of the utilities and making them viable businesses.
- The reforms have brought about various improvements in operational structure, commercial orientation, transparency in operation and **overall customer orientation in several states.**
- However, there has been limited success in institutionalizing these changes and sustaining these improvements over a period of time. Therefore, the need of the hour is to institutionalize the changes and bring about sustainable, pervasive improvements .
- **Upgrading the infrastructure, improvements in the internal processes, introduction of latest Technology & focus on Customer service would lay the foundation for sustainable reforms.**

Objectives and goals of the reform process

The objectives set for Power Sector Reform Programme is to create the conditions for sustainable development by promoting :

- Competition
- Efficiency
- Transparency
- Attraction of private capital

The goals of reform are to ensure that :

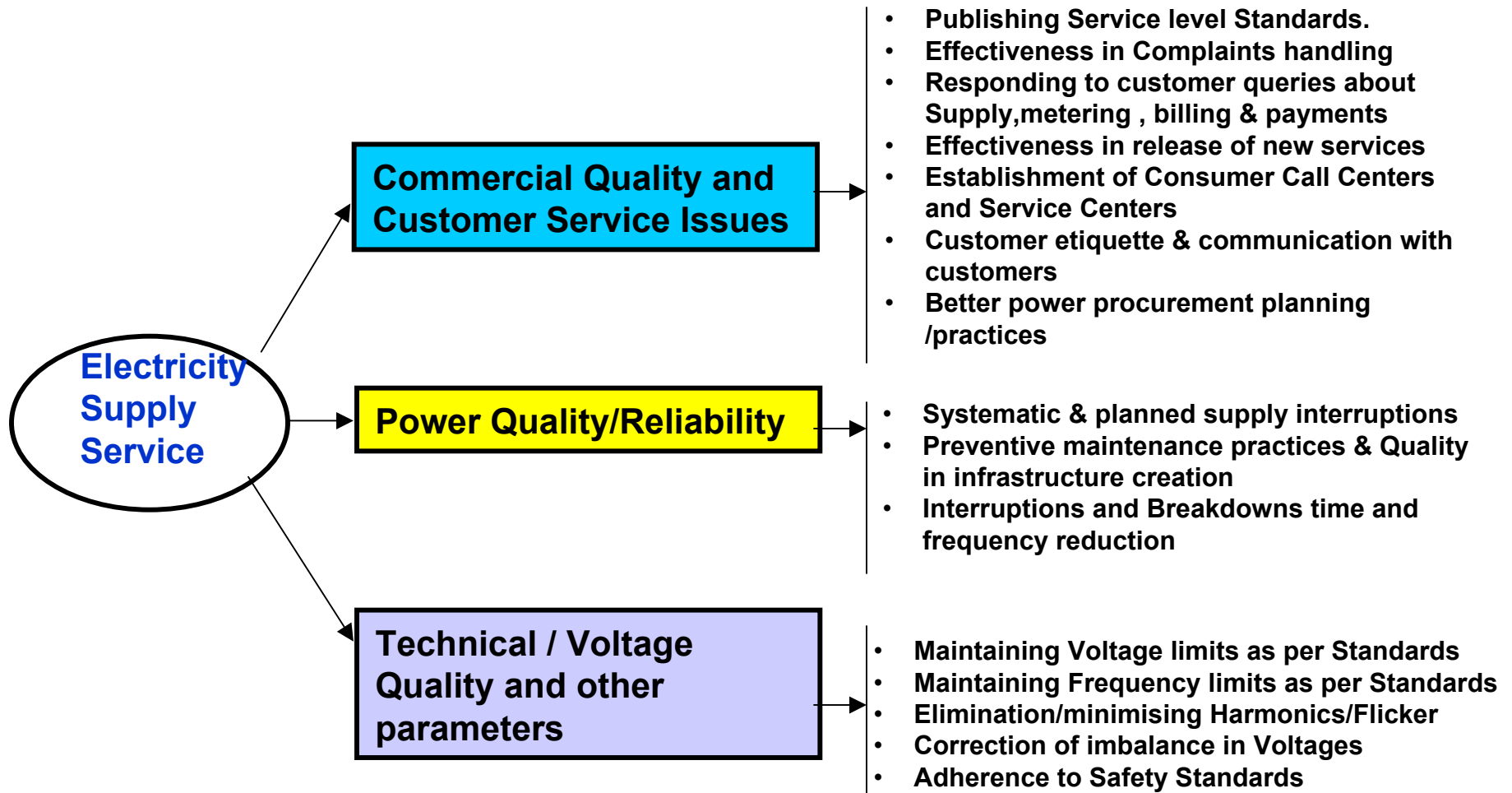
- Electric power is supplied under the most efficient conditions in terms of cost and quality to support economic development
- The power sector ceases to be a burden on the State's budget and eventually becomes a source of revenue for the Treasury.

Ultimate goal of Reforms is however to improve the Quality of service to the Customer ,not only in terms of cost, reliability and availability of Supply but also in improving service in each and every transaction with the customer.

Customer expectation levels and reforms

- As the Customer is exposed to the global economies as well as the improved service levels in many other sectors touching upon his daily life like banking, insurance, telecommunication, etc the expectation levels from the power sector are also high.
- Reforms in the Power sector had definitely a positive impact on the Customer service levels and the combined efforts of the Utilities and Regulators in this regard have started showing results.
- But it's a long way to go before attaining satisfactory levels in customer service

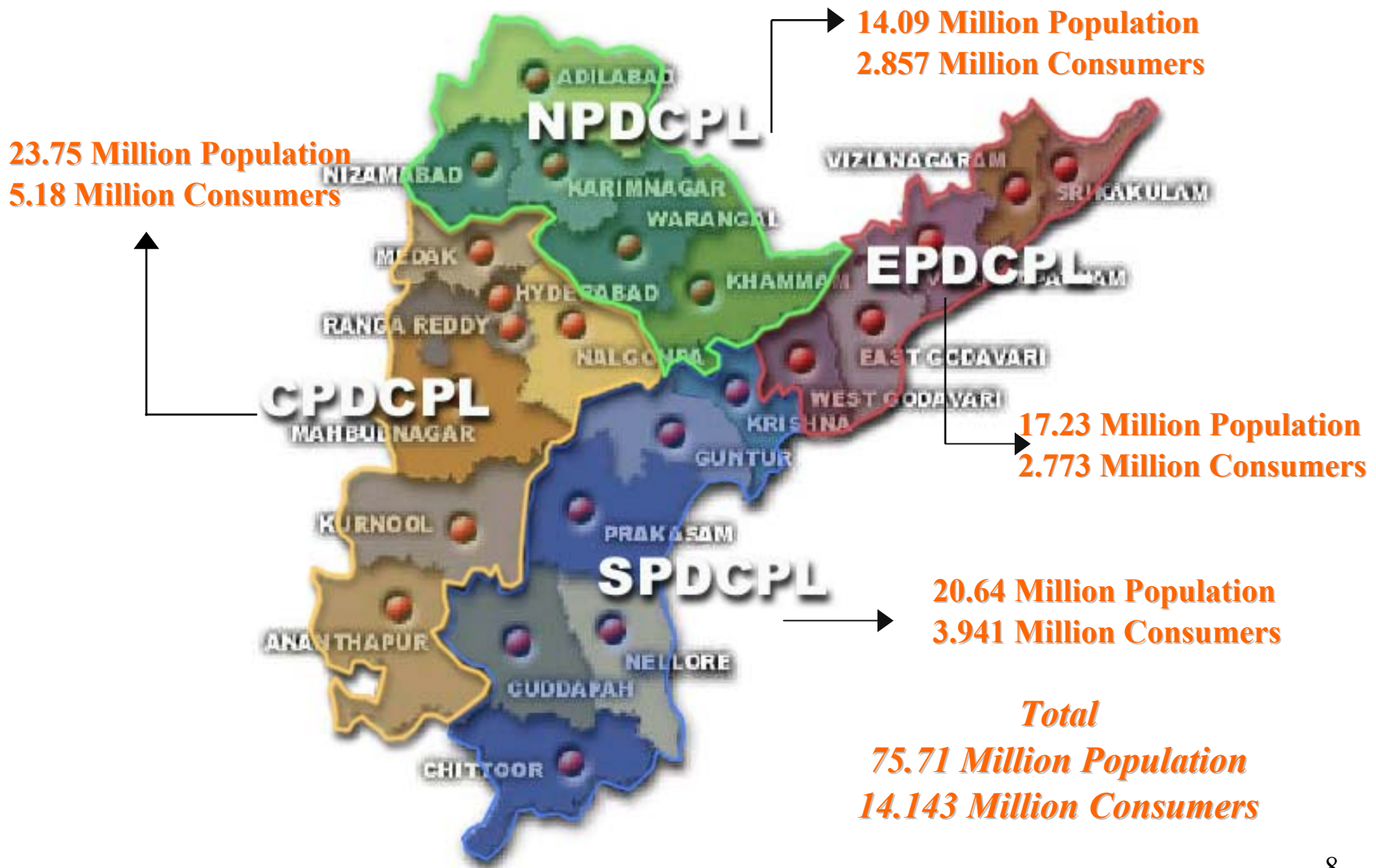
Quality of Service – Areas



Quality of Service-monitoring Standards

- Commercial Quality & Customer service issues: Monitoring w.r.t Citizens Charter which stipulates specific levels of performance .(Standards for service levels) & provisions as per Electricity Act.
- Power Quality / Reliability: Monitoring w.r.t Identified & benchmarked System reliability indicators (SAIDI, SAIFI, CAID etc) and Gird Code standards.
- Technical / voltage quality and other parameters: Monitoring w.r.t. Electricity Act provisions, Gird Code and other Standards.

AP Distribution Companies

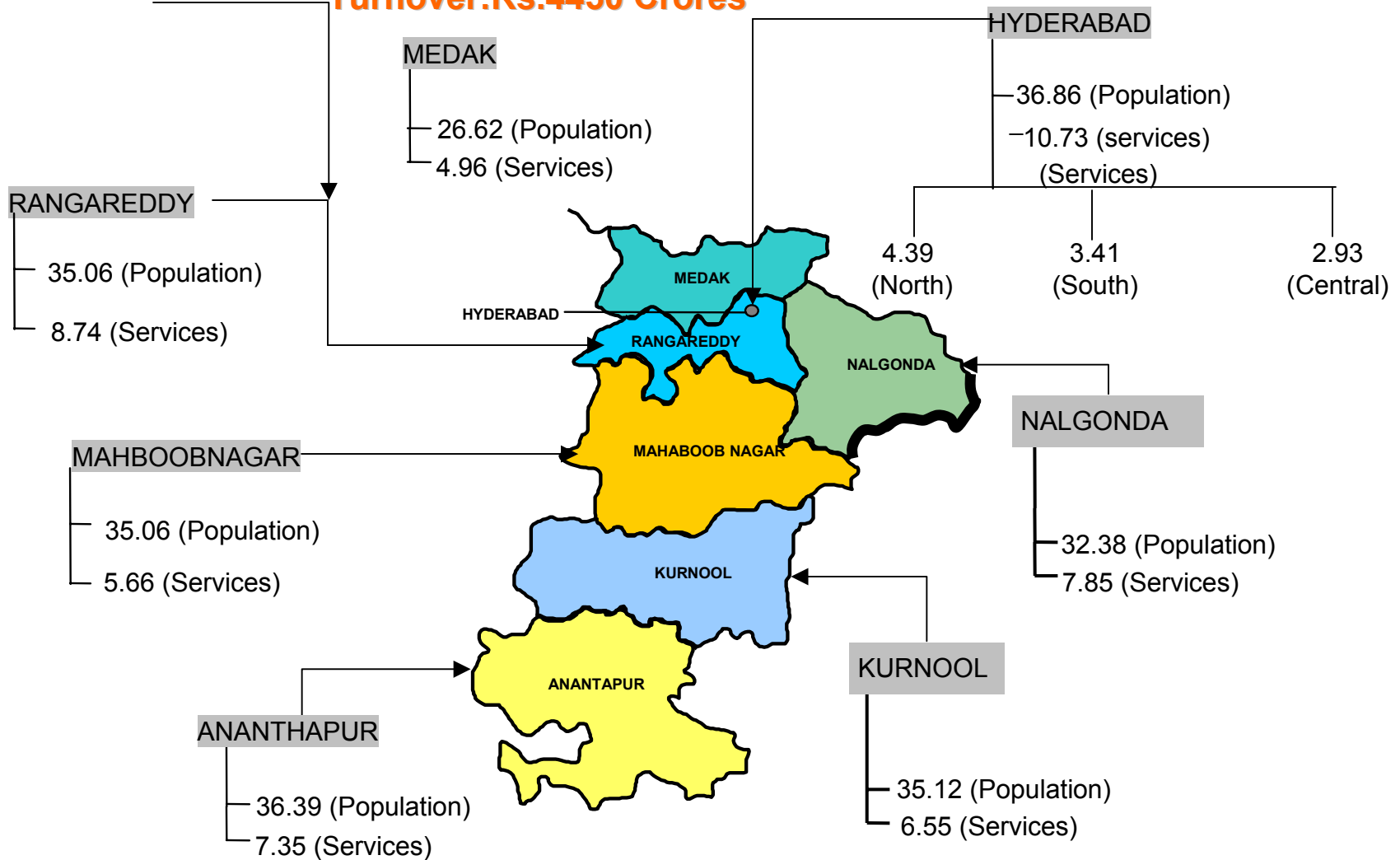


CPDCL

23.75 Million Population
5.18 Million Consumers
Turnover:Rs.4450 Crores

As on January 2004

(Figures in Lakhs)



Salient features -CPDCL

Area of Company – 86869 Sq km

33 KV Substations – 890 nos

33KV System Length –11,588 Kms

Power transformers – 1252 Nos

(3.15 MVA, 5 MVA, 8 MVA, 10/16 MVA,)

11KV System Length – 75,370 Kms

(11Kv Feeders-3142)

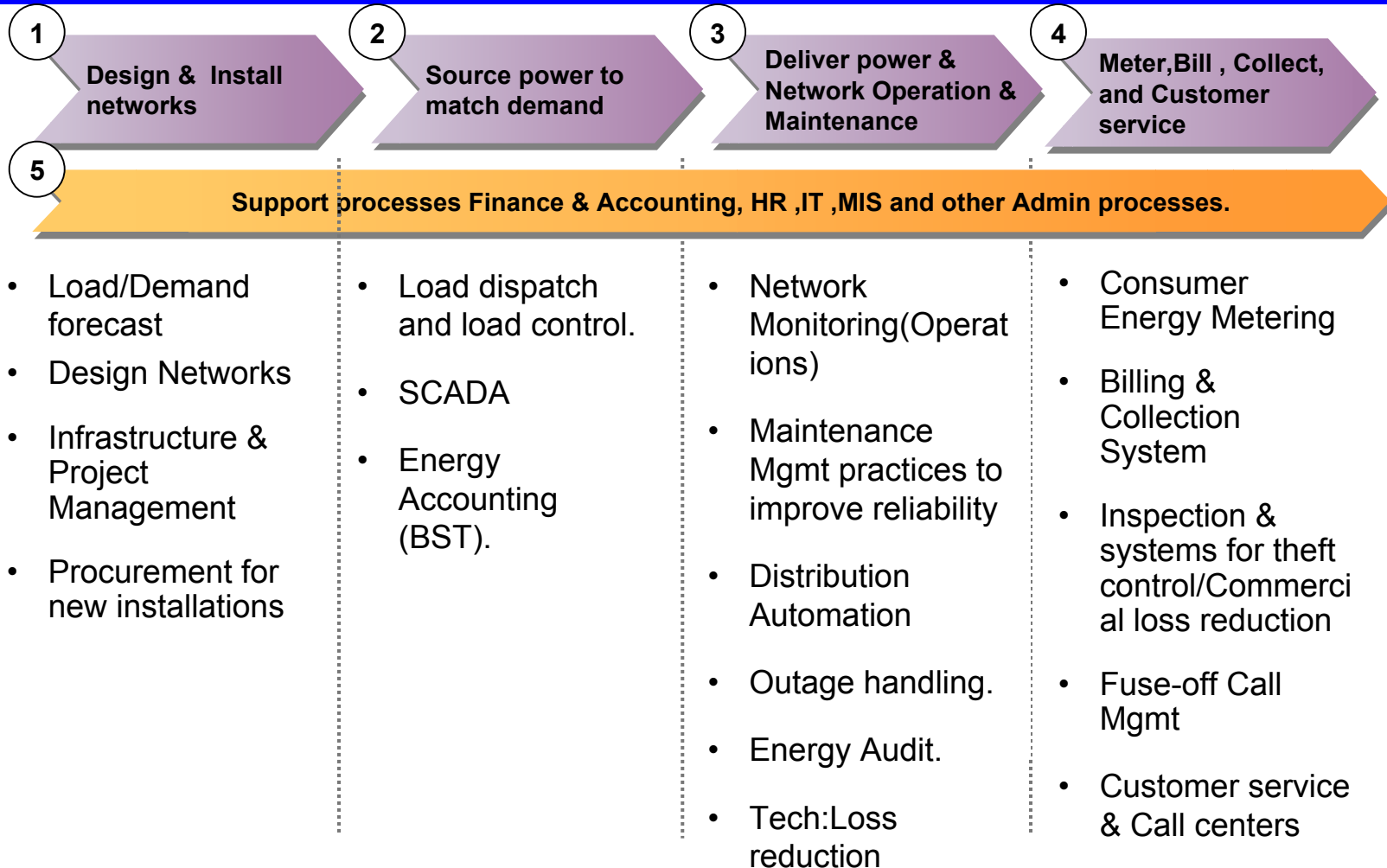
Distribution transformers – 1,07,680 Nos

(500 KVA, 350KVA,250KVA,100KVA,
63KVA,15KVA single Phase)

LT System Length – 1,48,416 Km ***

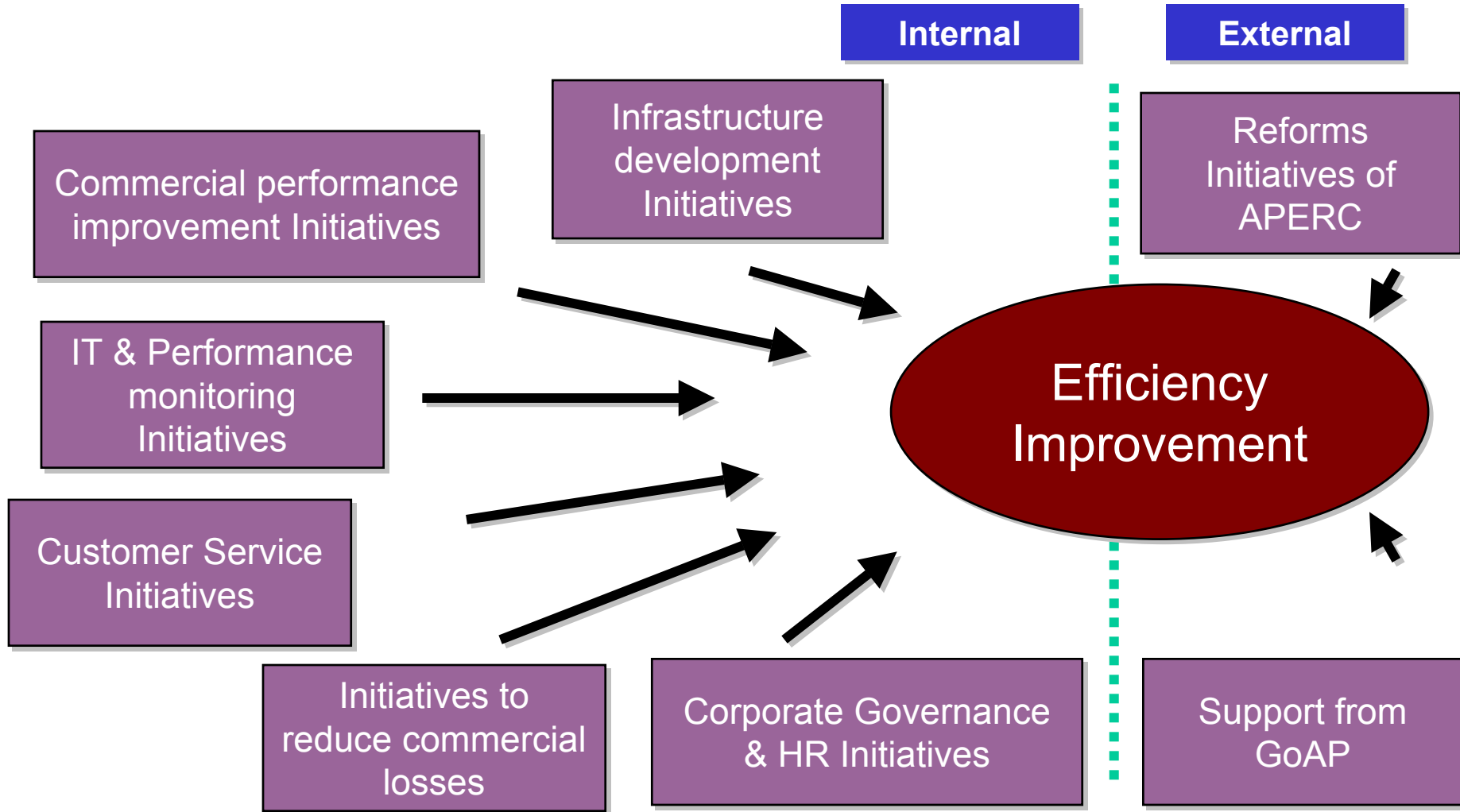
Service Strategy

Value Chain in Power Distribution



Importance given to all the critical segments of value chain with the end objective of improving the Customer Service

Combination of Internal and External factors has enabled Performance Improvement



Customer Service Standards

Service standards in AP

- Power utilities in AP have realised the importance of Customer service and have taken up many initiatives towards improving customer service even before the Act 2003 has been in place.
- The companies have developed a Citizens Charter which is a standard for Service levels and have obtained Regulators approval.
- The companies have specified service levels for many important indicators which are being followed by many Utilities globally.
- Compliance monitoring system has been in place where the actual levels of service are monitored through the CSCs & call centres on a daily basis and appropriate action taken in case of any deviation.

Service standards in AP

Citizens Charter in AP has following Standards and service levels.

TYPE OF SERVICE	SERVICE STANDARD
Restoration of Power Supply (fuse of calls)	Within 4 hrs. in towns & cities and within 12 hrs in rural areas. In case of failure of DTRs the same will be replaced with in 24 Hours in Urban areas and with in 48 Hours in Rural areas
Quality of Power Supply (Variations of voltage and frequency beyond the tolerance limit)	Respond within 4 hrs. if the defect is with in the control of Distribution Companies and 10 days if it is outside of the control
Metering / Meter Replacement	Burnt meter with in 7 days and struck up and defective meters with in 30 days
Application for New Connections/ Additional Load	With in 15 days from receiving of application incase of supply from existing networks and with in 30 days if line extension is involved.
Transfer and Conversion of services	With in 30 days from receiving of application
Billing Discrepancies	Will be resolved immediately if no additional information is required and with in 7 days with if complaint received through post and additional information required.
Scheduled outages excluding statutory power cuts	24 hrs. in advance the scheduled outage plan will be intimated to the consumers
Disconnection and Re-connection of power supply	7 days notice for disconnection will be given and re-connection will be given with in 2 hrs. of proof of

Consumer service Issues –Initiatives Matrix

Issue	Initiative
Large complaints in Billing	Spot Billing solution
Wrong bills and delays in settlement	Vidyut Adalats and on the spot grievance resolving
High failure rate of DTRs and delays in replacements	TIMS for tracking failures and DTRs stock at Sub-division offices
Complaints from Farmers on power supply	Substation level meetings to take quick corrective action
Delay in response to FOC complaints	Establishment of "Round the Clock" Call Centres in all Towns
Procedural delays in releasing new connections,commercial complaints handling etc	Establishment of "Electricity Service Centres" in all Towns
Slow grievance settlement for HT Consumers	Establishment of HT Cell and monthly meetings with HT Consumers.
Reliability of Power to Industries	Creation of Industrial express feeders and special cells to monitoring and restoration of supply
Inconvenience in Paying the bills	Multiple collection systems like E-clearance through banks,e-seva centres,on line payment,bill junction.com etc created
Low voltages to end consumers	HVDS system implementation
Large interruptions and breakdowns	Systematic preventive maintenance and monitoring of reliability indicators like SAIFI,SAIDI &CAIDI
Delays in power supply restoration	Mobile breakdown Vans and state of the art Control & communication system through SCADA.
Consumers feedback and survey	Conducting Vidyut Sadassu(Consumer week)

Communicating With Customers & Customer Relations

Customer Service Centers

Sl. No.	Name of the Circle	No. of Sub Divisions	No. of Subdivisions in which CSC's are in operation
1	Ananthapur	15	13
2	Kurnool	14	14
3	Mahaboobnagar	16	16
4	Nalgonda	15	14
5	Medak	9	9
6	Rangareddy (North)	8	8
7	Rangareddy (South)	11	11
8	Hyderabad (North)	10	10
9	Hyderabad (Central)	9	9
10	Hyderabad (South)	9	9
	Total:	116	113

All the CSC have Web enabled for better access and control

Establishment of Customer Service Centers in Urban & Rural Areas

In order to provide a better and quick services to the consumers the

Utilities have

established customer service centers at subdivision level.

CSC takes care of the following items.

- Releasing new connections (other than industrial) .
- All types of customer complaints / representations will be received acknowledged and redressed within the stipulated time period as per citizens charter.
- In charge of CSC will have the stock of meters for new connections
- In charge of CSC is authorised to collect all the charges by way of DD for new connections.

Establishment of Customer Service Center



[Update Complaint Details](#)

[Update Complaint Status](#)

[Forward Complaints](#)

[Search Complaints](#)

[New Connection](#)

[Add Additional Amount](#)

[Update Connection](#)

[Forward Connections](#)

[Search Connections](#)

[Comp. Abstract Report](#)

[Comp. Details Report](#)

[Comp. Payment Details Reports](#)

[NewConn. Abstract Report](#)

[NewConn. Details Report](#)

[NewConn. Payment Details Report](#)

Complaint Form

SC No. :	<input type="text"/>	Comp. Number :	<input type="text" value="CC10040"/>
Name* :	<input type="text"/>	Address* :	<input type="text"/>
Phone No. :	<input type="text"/>	Mail ID :	<input type="text"/>
SC. Owner Name :	<input type="text"/>	Sub Complaints :	<input type="text" value="Select"/>
Complaints :	<input type="text" value="Select"/>	Service Limit :	<input type="text"/>
Details :	<input type="text"/>	Payment For :	<input type="text"/>
Mode of Pay :	<input type="text" value="Select"/>	DD/Rec Amount :	<input type="text" value="0"/>
DD/Rec Number :	<input type="text"/>	DD Date :	<input type="text" value="16/1/2004"/> <input type="button" value="select"/>
Bank Name :	<input type="text" value="Select"/>	Branch Name :	<input type="text"/>

CENTRAL POWER DISTRIBUTION COMPANY OF AP LTD.

User: cscadmin Office:cpdcl Designation:admin Date :: 16/01/2004

Subdivision Wise Complaints Abstract Report

[Pending Complaints](#)

[Pending Connections](#)

[Comp. Drill Down Reports](#)

[Conn. Drill Down Reports](#)

[Comp. Abstract Report of SubDivisions](#)

[Conn. Abstract Report of SubDivisions](#)

[Complaint Wise Report](#)

[Net Pending Report](#)

[Section wise Complaint Report](#)

[Synchronisation Status Report](#)

[Change Password](#)

Sl No.	SubDivision Name	Total Complaints	Complaints Rectified	Complaints to be Rectified
1	Saifabad	309	277	32
2	Hyderguda	264	212	52
3	Indrapark	210	130	80
4	Azamabad	249	177	72
5	Barkatpura	272	208	64
6	Amberpet	217	111	106
7	Rethubowli	426	372	54
8	Acguards	109	71	38
9	Masabtank	301	224	77
10	Sanathnagar	252	223	29
11	Ameerpet	112	46	66
12	Banjarahills	328	203	125
13	Greenlands	674	430	244
14	Marredpally	170	64	106

District Call Centers - 1912

- Call Centers are opened in all the rural districts apart from urban areas
- Call Centers are opened for proper access to the customers for all power supply complaints
- District wise common single phone number (with four digit - 1912) to report any complaint regarding supply to any consumer
- One point contact for any information and assistance regarding supply

Consumer Complaints in Customer Service Centers in Hyderabad & Other Subdivisions in Districts of CPDCL

No of Complaints Received during Apr 03 - Jan 2004	46,274
No of Complaints Attended	44,480
Pending	1794
Percentage of Pending Complaints	3.88

Common complaints are of wrong billings, low voltage , loose spans , shifting of poles , augmentation of DTR capacity

Monitoring of LT Fuse Off Calls in Hyderabad City

MONTH	Total Complaints Received	COMPLAINTS ATTENDED (ECR)				Total Complaints Attended
		Below 1/2 Hr	Below 1 Hr	Below 2 Hr	Above 2 Hr	
AUGUST	34309	20695	12332	973	309	34309
SEPTEMBER	36089	20232	14820	715	322	36089
OCTOBER	31675	16619	14282	761	13	31675
NOVEMBER	23503	11593	10709	1121	80	23503
DECEMBER	21936	10721	10399	768	48	21936
JANUARY	24164	10810	11997	1298	59	24164
TOTAL	171676	90670	74539	5636	831	171676

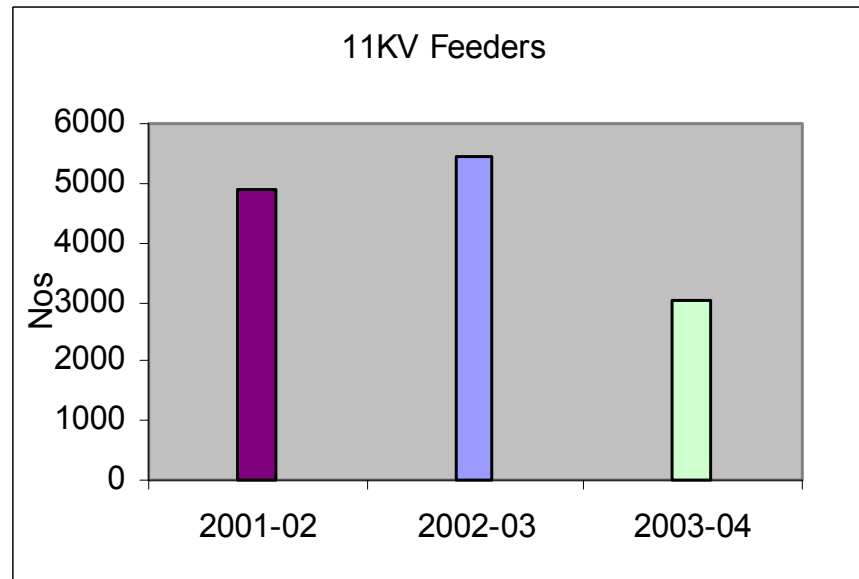
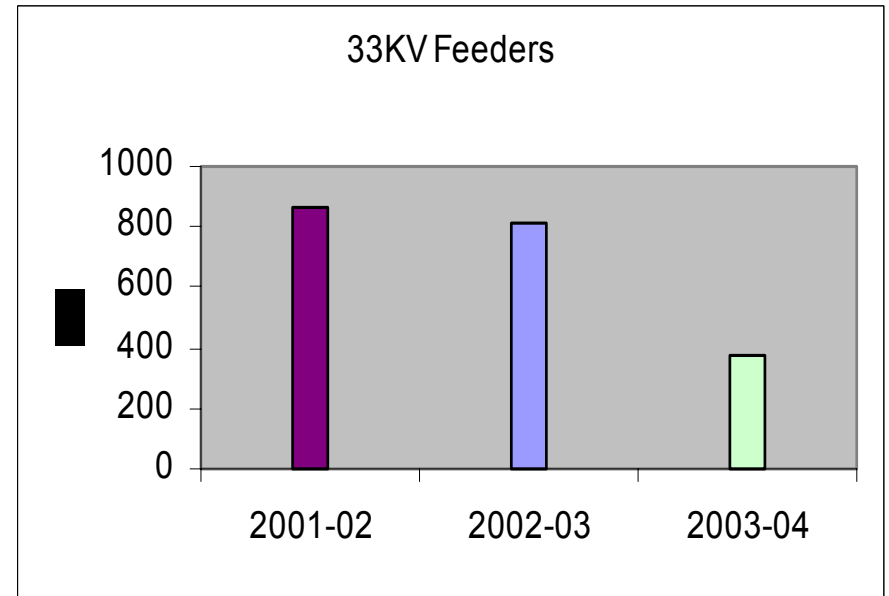
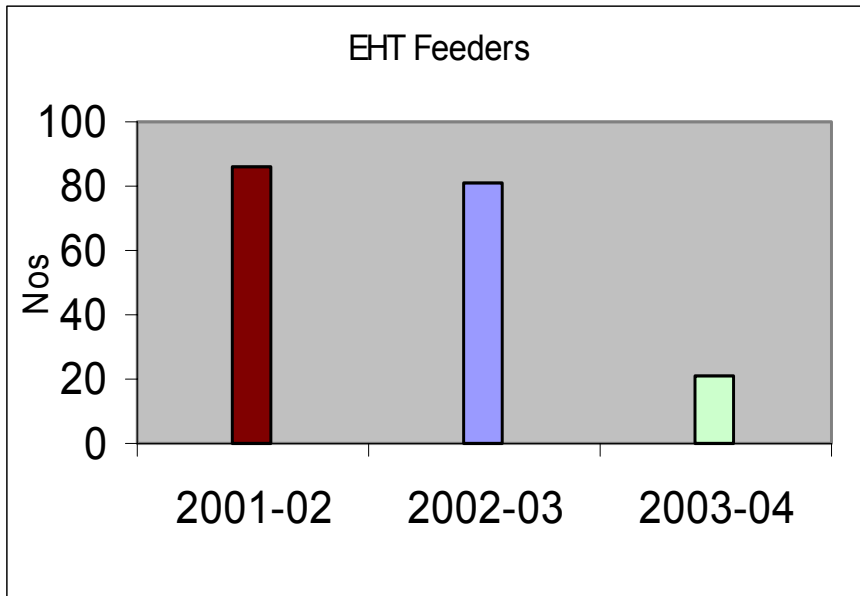
96% of the complaints are being resolved within 1 Hour
53% of the complaints are being resolved within 30 minutes

Monitoring of Power Supply to Industrial dedicated express feeders

- Monitoring of power supply to Industrial dedicated, express feeders and Industrial estates being done by Senior level officials. (DE / Operation & ADE / Operation)
- Segregation of 4 Nos 33 KV feeders and 64 nos 11 KV feeders are contemplated for FY 2003-04 and 90% of feeders are completed and remaining before March '2004

Industrial Express Feeders	
Voltage Level	Nos
220 KV	2
132 KV	27
33 KV	76
11 KV	225
Total	330

Profile of Interruptions in Industrial Express Feeders-CPDCL



Ensuring reliable Power supply and effective monitoring are the most important aspects of Power Utility functioning.

- Ensuring reliable supply fulfills the promise made to its customers and
- Effective monitoring helps to improve the same and also assists in systematic planning/improvements for future.
- International reliability indicators like SAIFI, SAIDI, CAIDI help not only in understand the existing status of power supply but also are good indicators to compare and benchmark the Utilities for improved performance.
- Also indicators like Low voltages/High voltages are monitored.

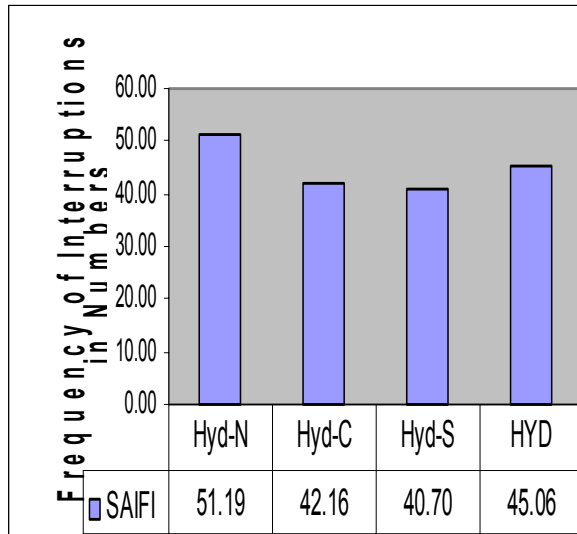
Reliability indicators - (Hyderabad - CPDCL)

Monitoring the Reliability indicators has been initiated in Hyderabad and the same is done for all the 34 Towns and will be extended to MHQs shortly

SAIFI = System Average Interruption Frequency Index
Average No. of Interruptions per 1000 Customers
 = No. of Interruptions occurred on the feeder X 1000 /
 No. of Customers existing on that Feeder

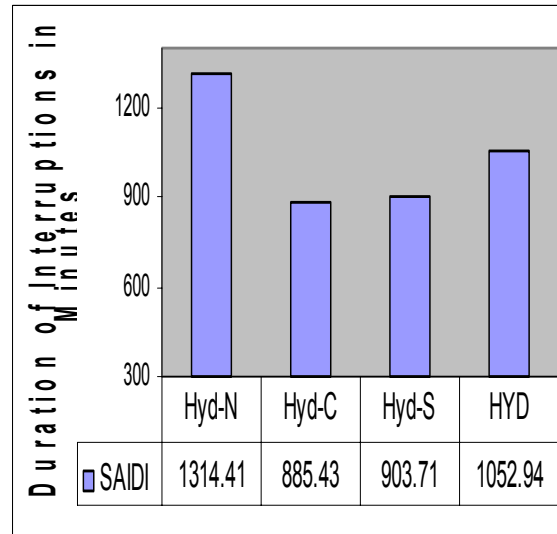
SAIDI = System Average Interruption Duration Index
= Total Duration of Interruption per 1000 Customers.
 = Total Duration of Interruption occurred in minutes on the
 feeder X 1000 / No. of Customers existing on that feeder

SAIFI



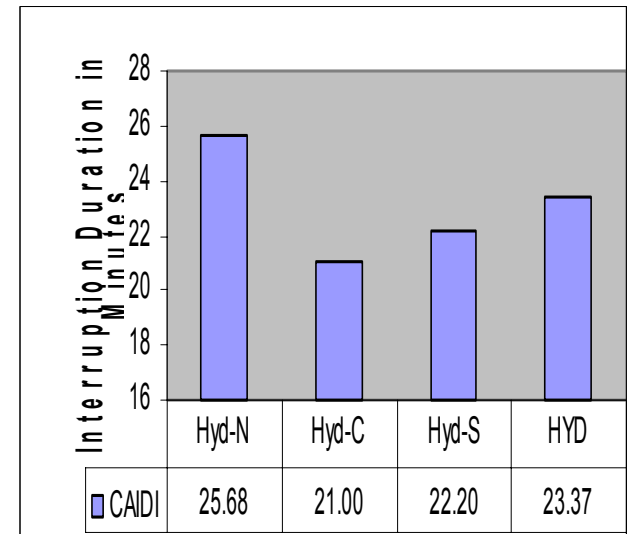
Apr 03 – Jan 04

SAIDI



Apr 03 – Jan 04

CAIDI



Apr 03 – Jan 04

CAIDI = Customer Average Interruption Duration Index.

= SAIDI / SAIFI.

= Average Interruption Duration

Vidyut Adalats

- Vidyut Adalats are conducted basically for rural people
- During Vidyut Adalats the provisions in Citizen charters are made known to the consumers
- Vidyut Adalats conducted to resolve the Consumer grievances relating to Metering , Billing issues and other operational issues
- Mandal wise meetings attended by ADE/AE with the support of Revenue staff to resolve the grievance on the Spot

Organising farmers' Meetings at 33/11 KV Substations

- Substation wise monthly meetings with the Farmers to understand their issues relating to Power Supply
- Taking appropriate action to improve
- Communication and interaction with Farmers (along with Agriculture dept, Ground water dept and Irrigation dept officials)to adopt I.D crops in view of draught
- Explaining the Power availability position in view of low Hydel availability
- Explaining the Importance of DSM measures
- Provision of Special tariffs on adoption of DSM measures for Agri Pumpsets

Billing / Collection Practices & Billing Cycle

Billing Cycle

➤ Monthly Billing :

- All HT Consumers in the company
- All LT Industrial Consumers in the company
- High Value Consumers in Domestic & Commercial in the company
- All LT services in Hyderabad & Rangareddy
- All PWS , RWS and Street lights in the company

➤ Bi monthly Billing :

- In rural areas majority services in Domestic & Commercial

Introduction of Spot Billing

- Spot billing was introduced in order to reduce several functions to few in metering, billing & collection.
- Spot billing introduced first in Hyderabad in November '2001, wherein the bills were issued on the spot to the consumers with the help of a hand held computer.
- On observing billing complaints coming down the spot billing has since been extended to all the districts in the State.

Before introduction of spot billing

Meter reading of all the LT meters were noted down in Meter Reading Books (MRB)

MRBs were submitted to the in house and private accounting agency to feed the meter readings into the computers for consumer wise ledger updation and to generate consumer wise bills.

Bills generated were passed on to the concerned section offices for issuing the same to the respective consumers.

Billing & collection process used to take more than a one and half month and the utility was billing 95% of LT consumers' bi-monthly.

The above process resulting in cash flow problems

MRBs were under the custody of individual meter readers.

After introduction of spot billing

Meter readings of all LT consumers are billed with the Spot billing hand held computers (MRIs)

Bills are generated and issued to the consumer on the spot

Reduction of billing cycle time

Created a transparent method of process that increased consumer confidence

Discrepancies have reduced and majority of billing errors are dealt on the spot

Billing process time has considerably reduced (Below 12 days)

After introduction of spot billing

All the meter reading data is brought into electronic form

Updation of billing information on to the servers without human interface

Enabled the utility with the advantage of handling the work of meter readings through different agencies and individuals

Eliminated the practice of the same meter reader (MRB Custodian) taking the meter readings for a given set of consumers

Utility could shift to monthly spot billing from bi-monthly thus improving upon its cash flow.

Collection facilities

- Payments can be made through regular Electricity Revenue Office Counters and cheque drop box
- Tie-Up with e-seva centers for bill payment and able to pay any where by the consumers. (at present 36 e-seva centers available in and around Hyderabad city and 3 e-seva centers at Anantapur)
- Payments can be made through banks with the help of certain agencies like bill junction.com and billdesk
- Online payment can also be made through citibank from our web site “*www.apcentralpower.com*”

Accounts Receivables

- Accounts receivables are analysed as Category wise, Age wise & Department wise
- Arrears are analysed as more than 6 months, more than 1 year and more than 2 & 3 years for identification of abnormal delays
- Arrears are analysed as Category wise for identifying the arrears in domestic, agriculture, industrial and others
- Arrears in case of Government Departments are closely pursued at highest level for early release of funds
- 2% targets fixed on arrears to Field Officers for collecting accounts receivable every month
- Retired employees engaged for collecting arrears pending since long time
- Revenue Recovery Act is implemented in case of long pending dues

Infrastructure development initiatives

Infrastructure development Initiatives by the Utilities

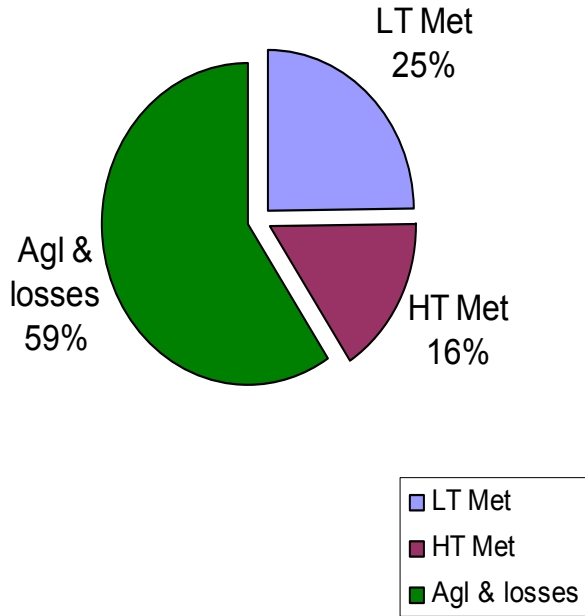
- Infrastructure planning/Upgrading being taken up based on Power system studies to meet future demand, reduce losses, improve voltages and improve reliability. Circle wise Strategic investment plans being developed for 5 years.
- Segregation of industrial load from domestic load and setting up of industrial express feeders. This has been complemented by systems to ensure uninterrupted supply of power on such feeders
- Segregation of Agriculture feeders to provide single phase lighting supply to villages.
- Conversion of LVDS network to HVDS network to improve HT:LT ratio and thereby reduce losses.
- Laying of AB cable in theft prone areas to arrest directly tapping from the bare wires
- Introduction of Under Ground Cabling for improving safety, aesthetics and uninterrupted quality power supply to the consumers in Hyderabad.
- Implementation of massive metering plan

Benefits to the Customers due to various initiatives

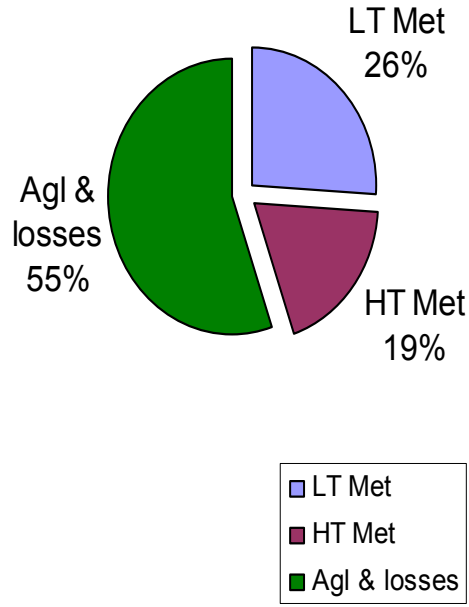
- Citizens charter implementation and monitoring through the Call centers has enabled the utilities to deliver the services promised to the customers.
- Spot billing has enabled transparency and improved credibility of the Utility for the customer point of view in addition to improving the revenues of the companies
- In CPDCL iinterruptions and breakdowns for industrial feeders in 2003-04 have come down by 46% compared to 2002-03.
- In CPDCL the DTR failures have come down from 23.73 % in 2001-02 to 13.25 % in 2003 –04 there by improving the reliability.
- The % of wrong and defective billing has come down substantially after conducting Vidyut Adalats and taking action accordingly
- Low voltage pockets have been almost eliminated and the voltages have improved by 10%.

Benefits form various initiatives in CPDCL

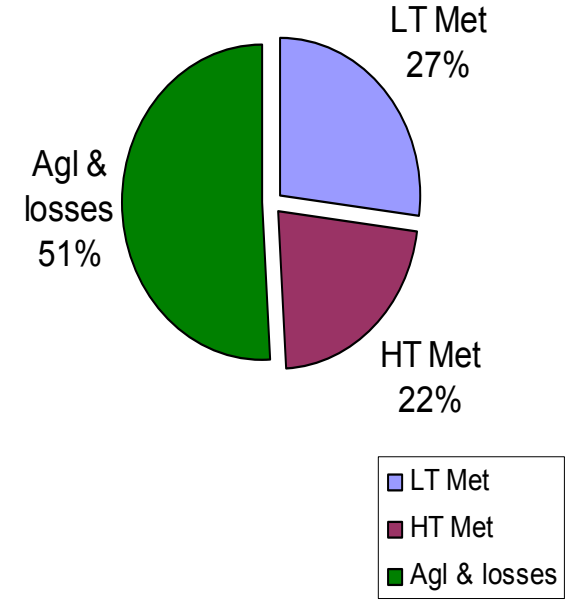
**CPDCL- 2001 - 02
(Apr - Dec)**



**CPDCL- 2002 - 03
(Apr - Dec)**



**CPDCL 2003 - 04
(Apr - Dec)**



Figures in Million Units

Apr - Dec			
Year	Energy Drawal	Metered Sales	Agriculture & Losses
2001 - 02	12036	4930	7106
2002 - 03	12747	5703	7045
2003 - 04	13251	6503	6749

Apr - Dec (%)		
Year	Metered Sales	Agriculture & Losses
2001 - 02	40.96%	59.04%
2002 - 03	44.74%	55.26%
2003 - 04	49.07%	50.93%

Improvement in Metered Sales

2002-03(Apr- Dec) Vs 2003-04(Apr-Dec)

Increase in Input : 504 MU (3.94%)

Increase in Metered Sales : 800 MU (14%)

Increase in Metered Sales :

from 44.74% 2002- 03 to 49.07% in 2003 – 04,
an increase of 4.33%

Total un-metered Energy(Agl +losses) as % of Input

2002-03 (Apr - Dec) 55.26 %

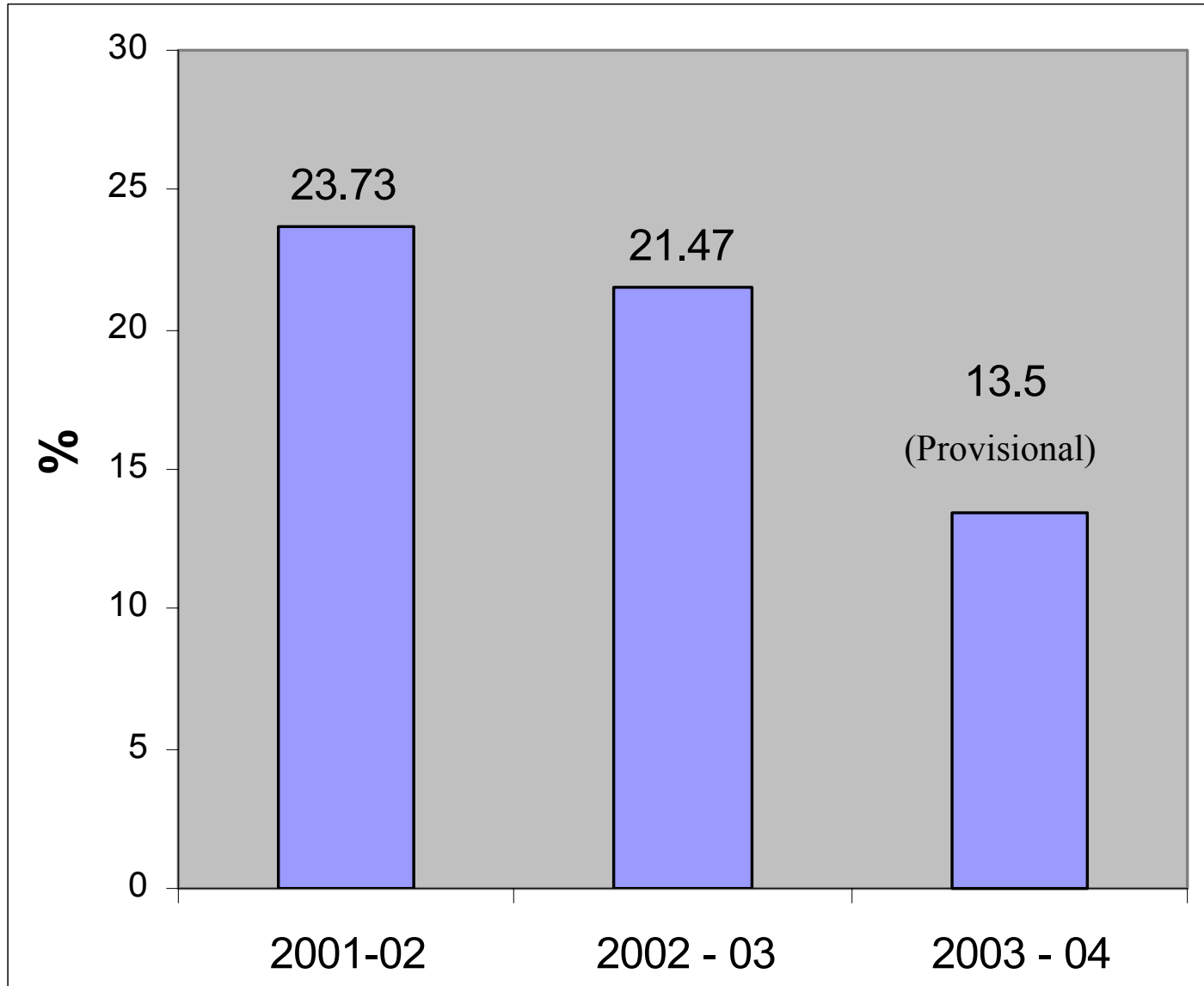
2003-04 (Apr - Dec) 50.93 %

Average revenue per Unit of Energy Input - APCPDCL

2001-02	1.52
2002-03 (Apr - Dec)	1.90
2003-04 (Apr - Dec)	2.06

Average Revenue per KWH Input with subsidy : Rs 2.38

CPDCL - % Failures of Distribution Transformer



Revenue Demand FY's 2001-02 , 2002-03 & 2003-04

Figures in Crores

Month	2001-02	2002-03	2003-04	2003 - 04	
				Increase over 2002-03	% Increase over 2002-03
Apr	224	256	299	43	17%
May	228	272	314	43	16%
Jun	237	302	301	-1	0%
Jul	214	248	295	47	19%
Aug	215	272	295	23	8%
Sep	213	264	314	50	19%
Oct	214	272	304	32	12%
Nov	210	267	304	37	14%
Dec	202	273	300	28	10%
Jan	201	291	312	21	7%
Feb	218	324	335	11	3%
Mar	220	287	325	38	13%
Total	2596	3326	3697	370	11%

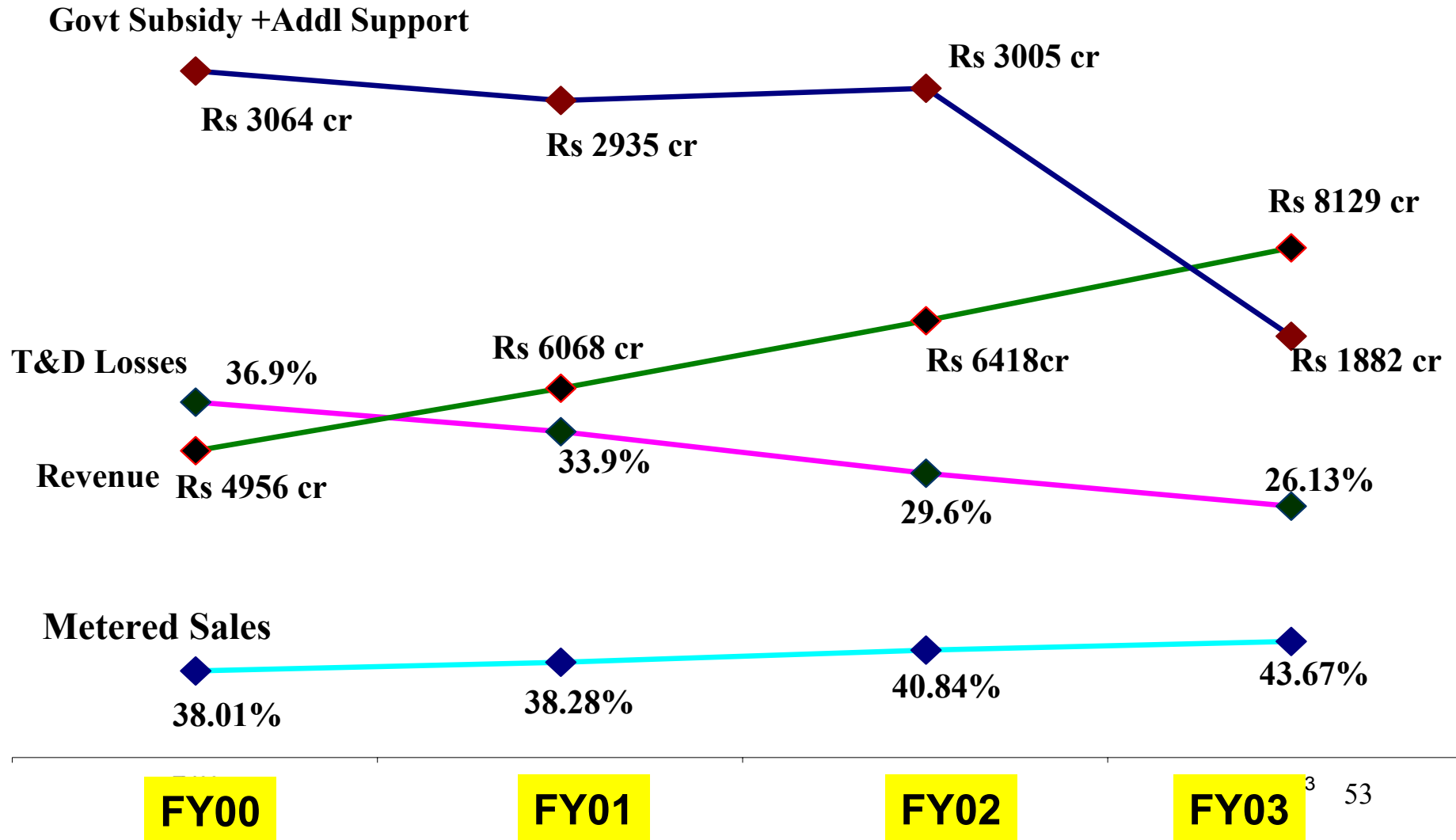
Revenue Collection FY's 2001-02, 2002-03 & 2003-04

Figures in Crores

Month	2001-02	2002-03	2003-04	2003 - 04	
				Increase over 2002-03	% Increase over 2002-03
Apr	216	228	273	44	19%
May	217	253	296	43	17%
Jun	210	291	320	29	10%
Jul	188	249	294	44	18%
Aug	184	251	277	26	11%
Sep	188	250	289	39	16%
Oct	192	277	270	-7	-3%
Nov	213	254	271	18	7%
Dec	196	250	271	20	8%
Jan	184	242	287	45	19%
Feb	225	249	312	62	25%
Mar	195	242	296	53	22%
Total	2406	3037	3455	418	14%

Benefits from various initiatives in AP

Internal efficiency improvements and reduced burden on Government



Investments v/s Reduction in T&D Losses and Reliability /Quality improvements

T & D Loss

36.9%

33.9%

29.6%

26.13%

Frequency

48.7Hz

48.67Hz

48.52Hz

48.88Hz

Average 132kv Voltages

110kv

119kv

116kv

127kv

DTR Failures

28.03%

29.07%

24.33%

18.72%

Investments

Rs 1119crs

Rs 960 crs

Rs 1003 crs

Rs 874 crs

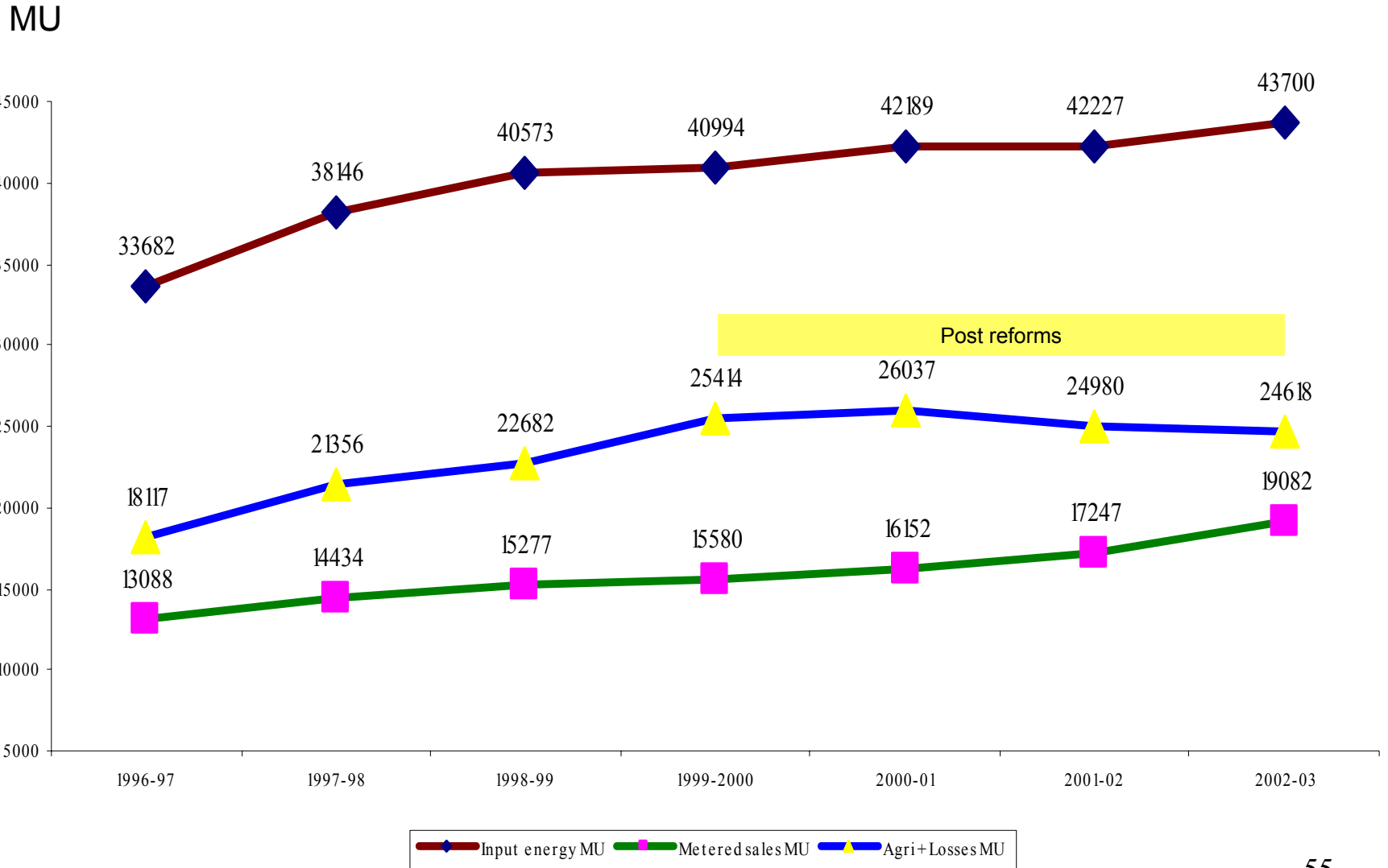
FY00

FY01

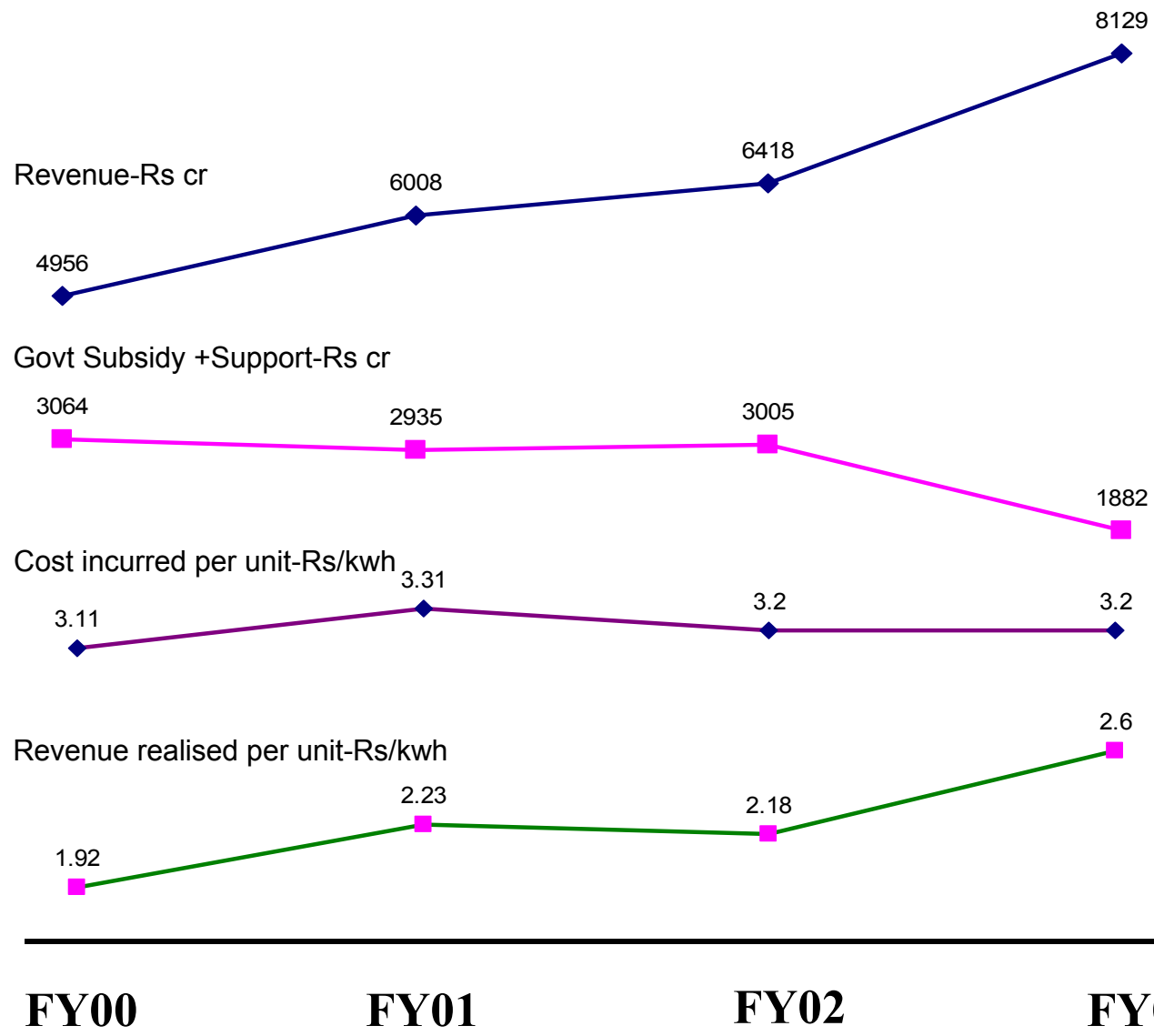
FY02

FY03

Reduction of Agriculture assessed consumption and Losses over the years.



Revenue realised ,Govt support and Cost incurred



Conclusions & way forward

- Due to unbundling the companies have been able to focus more on the consumer service area within their jurisdictions and have taken up many initiatives for improvement.
- Companies have become more responsible and Regulatory intervention, oversight and Directives have helped in formulating Service Standards and effective measuring systems.
- Formulation of Citizens Charter with inputs from Government and Regulator which is a road map for Service Standards levels has been an important first step towards effective consumer service.
- Monitoring of compliance through Call centers, SCADA and through customer surveys has immensely helped in improving the service.
- Consumer Indexing, GIS software implementation and interfacing this with SCADA will result in better energy audit and fault location identification. This will help also help in reduction of Commercial losses and improved consumer service.
- Skill development and training on Customer service related aspects has improved service delivery.

Conclusions and way forward

- Introduction of Guaranteed standards and Over- all Standards need to be initiated. Guaranteed standards shall refer to the Customer service where a penalty is imposed on the Distribution company for failing to meet the target level of performance.
- Introduction of common billing system/ Customer management system integrating all aspects metering ,Billing and Customer service aspects.
- Introduction of performance indicators like “Making and keeping appointments” and effectiveness of Telephone access etc; may induce the Utility staff to further improve their attitude towards the customers. However the back office process and technology needs to support this.
 - Introduction of automation /IT to measure compliance.
 - Call centers management outsourcing to Third party.
 - Conducting more systematic customer surveys.

Thank you