Annexure - I

Most Immediate

F. No. 1-22/2/32/2010-P&E
Planning Commission (Power & Energy Division)

Yojana Bhavan,
Sansad Marg, New Delhi-110 001.

Dated 28-07-2010

OFFICE MEMORANDUM

Subject: High Level Panel on financial position of distribution utilities,

Prime Minister has approved a High Level Panel on 'Financial Position of Distribution Utilities' to look into the financial problems of the SEBs and to identify potential corrective steps particularly in relation to their accounting practices.

2. The composition of the above High Level Panel will be as follows.

(i)	Shri V.K. Shunglu, former CAG	-	Chairman
(ii)	Shri S.K. Tuteja	-	Member
(iii)	CMD/REC	-	Member
(iv)	CMD/PFC	-	Member
(v)	Chairman, CEA or his representative	-	Member
(vi)	Three representatives from SEBs/Discoms	-	Members
(vii)	Pr. Adviser (Energy), Planning Commission	-	Convenor

3. The Terms of Reference of the Committee will be :

(a) Review Accounts of SEBs' and State Distribution Companies as on March 31, 2010 or earlier if updated accounts for the year ended March 31. 2010 are not available.

(b) Review their Financial Position as on March 31, 2010 and in particular, losses incurred and projected distribution losses over the period April 2010 to March 2017.

(c) Review Electricity Tariff including the role of (i) State Governments; (ii) State Tariff Regulator; and (iii) SEBs'/State Distribution Companies in periodic tariff revision,

(d) Assess system improvement measures accomplished in distribution of Power, in particular/in urban areas as well as future needs/ plans.

(e) Examine geographical and spatial compulsions and determine their operational impact.

(f) Review organizational and managerial structure, manpower employed and future requirements / plans.

(g) To recommend plan of action to achieve financial viability in distribution of power by 2017.

4. The above Panel will submit its report prior to the commencement of the preparation of the Twelfth Plan. i.e. by 28th February, 2011.

5. Administrative and functional support will be provided by the Power Finance Corporation.

(**R** K. Kaul)
Joint Adviser (Power)
Tel:No. 23096718

1. Shri V.K. Shunglu, former CAG
2. Shri S.K. Tuteja
3. Secretary. Ministry of Power, Shram Shakti Bhavan, Rafi Marg, New Delhi.
4. Chairman, Central Electricity Authority, Sewa Bhavan, R.K. Puram, New Delhi-66
5. CMD, Power Finance Corporation Ltd., Urjanidhi, 1, Barakhamba Lane,Connaught Place, New Delhi-110001.
6. CMD, Rural Electrification Corporation ltd., Scope Complex, Core No.4./, Lodhi Road, New Delhi 110003

<u>Copy forwarded for information to:</u>

1. PS to Deputy Chairman
2. PS to Member (BKC)
3. PS to Member Secretary
4. PS to Principal Adviser (Energy)

Annexure - II

List of individuals and institutions provided assistance to HLP

S/shri

1. Divakar Dev, former Chairman, UTERC
2. R.K. Narayan, former CMD, POWERGRID
3. K.N. Khandelwal, IA&AS(Retd.), former Dy. CAG
4. M.K.Gupta, former Member, DVB
5. D.K. Roy, former Chairman, OERC
6. A. Velayutham, former Member, MERC
7. A.K. Pradhan, former Director, PVVNL
8. Pankaj Prakash
9. Deepak Pandey, Chartered Accountant
10. P.N. Kaul, former Director, CAG office
11. Sachin Jain, Chartered Accountant
12. Vivek Sharma
13. M/s. Institute of Public Auditors of India (IPAI)
14. M/s. BSR & Co.(KPMG)
15. M/s. Deloitte Tohamastu India Pvt. Ltd.
16. M/s. Ravi Rajan & Co.
17. M./s. CRISIL Risk & Infrastructure Solutions Ltd. (CRIS)
18. M/s. Mukund Chitale & Co.

Pashchimanchal Vidyut Vitran Nigam Limited (PVVNL), Meerut

Diagnostic Study Report for Updation of Accounts

December 2010

List of Abbreviations

ATC	Advice for Transfer Credit
ATD	Advice for Transfer Debit
DCAO	Deputy Chief Accounts Officer
DISCOM	Distribution Company
DDO	Drawing and Disbursing Officer
DTTIPL	Deloitte Touche Tohmatsu India Private Limited
EDC	Electricity Distribution Circle
EDD	Electricity Distribution Division
EUDC	Electricity Urban Distribution Circle
EUDD	Electricity Urban Distribution Division
ETD	Electricity Test Division
EUTD	Electricity Urban Test Division
EWC	Electricity Works Circle
EWD	Electricity Works Division
ECC	Electricity Construction Circle
ECE	Electricity Construction Division
GOUP	Government of Uttar Pradesh
HO	Head Office
ICAI	The Institute of Chartered Accountants of India
IPAI	Institute of Public Auditors of India
IUT	Inter Unit Transaction
ISP	Institutional Service Provider
JE	Junior Engineer
KESA	Kanpur Electricity Supply Authority
KESCO	Kanpur Electricity Supply Company
M & R	Maintenance & Repairs
PVVNL	Pashchimanchal Vidyut Vitran Nigam Limited
O & M	Operations & Maintenance
UPJVNL	Uttar Pradesh Jal Vidyut Nigam Limited.
UPPCL	Uttar Pradesh Power Corporation Limited

UPRVUL	Uttar Pradesh Rajya Vidyut Utpadan Limited
ZAO	Zonal Accounts Office

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1. INTRODUCTION

1.1 A High Level Panel (HLP) has been constituted by the Prime Minister (vide Planning Commission letter F. No. I-22/2/32/2010-P&E dated 28.07.2010) to look into the financial problems of the SEBs/ Distribution utilities. One of the key issues to be addressed by the HLP is the current arrear in finalization of accounts by the Distribution Utilities.

1.2 In the above context, the HLP has appointed Deloitte Touche Tohmatsu India Private Limited (DTTIPL) to conduct a diagnostic study of two utilities namely, Pashchimanchal Vidyut Vitran Nigam Limited (Meerut DISCOM) and Madhyanchal Vidyut Vitran Nigam Limited (Lucknow DISCOM) to look into the current arrear in preparation finalization of accounts and suggest a work plan / road map for updation of their accounts.

Scope of Work

1.3 The scope of work for the study for each utility covers the following aspects:

a) Carrying out a Diagnostic study for updating of accounts till 31st March 2010 involving:
- Status of accounts
- Identification of key issues / road blocks in completion of accounts
- Work plan / Road map for updation of accounts upto the year 2009-10 in consultation with respective utility

b) Preparation of an initial questionnaire to facilitate carrying out diagnostic study

c) Visit the utilities for ensuring the submission of required information by the utilities

d) Visit to utilities periodically to oversee the progress of the work (by telephone, e-mail, etc. and upto 2 visits of upto 2 days each during the entire engagement period upto December 2010/January 2011).

e) Ascertain the overall status of computerization of financial accounting systems in the utilities and the steps being taken by the utilities for preparing the organization for implementation of IFRS applicable from FY 2011-12.

1.4 The deliverables from the study for each utility are as under:

a) A questionnaire to facilitate carrying out the diagnostic study

b) A Diagnostic Report covering the following:-
1. Status of accounts, issues / road blocks in completion of accounts and work plan / road map for updation of accounts upto the year 2009-10
2. Status of finalization of accounts
3. Overall status of computerization in the utilities of financial accounting systems and also a list of preliminary steps to be taken by the utilities for preparing the organization for implementation of IFRS applicable from FY 2011-12.

1.5 The above study is to be carried out in association with Institutional Service Providers (ISP).

Coverage of this Report

1.6 DTTIPL has completed the field visits and diagnostic study for both the utilities. In line with scope of the work, this report covers the following aspects in respect of Pashchimanchal Vidyut Vitran Nigam Limited (PVVNL):-

a) An overview of PVVNL

b) Approach and Methodology followed by DTTIPL

c) Current status on accounts

d) Identification of key issues / road blocks in completion of accounts

e) Tentative Work plan / Road map for updation of accounts upto the financial year 2009-10

f) Other aspects – status on computerization and initiatives if any taken for implementation of IFRS

2. APPROACH & METHODOLOGY

2.1 This chapter provides the approach and methodology followed by DTTIPL to carry out the diagnostic study.

Key objective of the study

2.2 The prime objective of the study is to draw a road map to clear the backlog in the preparation of accounts of PVVNL upto the financial year 2009-10. Accordingly, the backlog in annual audited accounts for the years upto 2009-10 should be cleared and simultaneously the accounts for the year 2010-11 should be audited in time.

Approach and Methodology

2.3 The approach and methodology adopted by DTTIPL to carry out the study involves the following main steps:

- Preparation of an initial questionnaire
- Field Visit to the utility
- Analysis of existing situation and identifying key issues / road blocks in completion of accounts
- Based on the above, drawing a tentative work plan / road map for updation of accounts upto the year 2009-10
- Closing meeting / discussion with the Head of Finance at the end of the field visit to discuss the DTTIPL observations and recommendations.

2.4 Throughout the field visit, DTTIPL coordinated with the ISP's officials, took their inputs/ support into account while developing the road map.

2.5 DTTIPL prepared an initial questionnaire to gather the primary information regarding the status of accounts preparation as on date (refer to Annexure 1). The questionnaire covered the following aspects:

- Details of the present accounting set up
- Present accounting system
- Status of computerization of accounts
- System of internal audit
- Status on accounts preparation and audit
- Status on compilation / consolidation of annual accounts at HO
- Status on compilation / consolidation of accounts at Zones
- Status on preparation of accounts by field offices/ accounting units

- Key issues / constraints faced in timely preparation of annual accounts / expediting clearance of backlog in preparation of annual accounts
- Reasons for delay in finalization of accounts

2.6 The above initial information was compiled by PVVNL with the assistance of ISP. DTTIPL studied the initial information prior to making the field visit to have focused discussions with PVVNL.

2.7 Thereafter field visit was undertaken and commenced with a kick off meeting with the Head of Accounts function and other key officials at the head office. The objective of this meeting was to obtain an overall understanding of the following aspects:-

- An overview of the organization and accounting set up
- Preliminary discussions of the information provided as per the questionnaire, accounts status and key issues
- Preparation of work plan for the field visits

2.8 Based on the above work plan, DTTIPL met the concerned key officials at select offices as under:-

- Head Office – Compilation and Accounts Department / Section
- Zone - Compilation and Accounts Department / Section
- Circle / Division/ Sub Division
- In addition, DTTIPL met and spoken to the statutory auditors both at Branch and HO and also then CAG Team

2.9 The main objectives of the above meetings were to:

- Walk through the current accounting process of preparation for books of accounts, compilation of monthly and annual accounts and the audit process, covering the following aspects:
    - Preparation of books of accounts by accounting units
    - Compilation of Accounts by Divisions
    - Compilation of Accounts by Zones
    - Branch Audit
    - Compilation of Accounts by HO
    - Approval of accounts by Board
    - Statutory Audit
    - CAG Audit
    - Adoption of Accounts by AGM

- Understand in detail the current status on the compilation of accounts and audit
- Understand and discuss the key issues involved / constraints faced in timely preparation of accounts and audit thereof
- Conduct of the status analysis. This also covered understanding the target dates already given by PVVNL in the checklist and the assumptions behind it. This helped in re-defining the time frame.
- Arrive at practicable and implementable road map including time frame, responsibility and actions required

2.10 The above discussions also included ascertaining the status on computerization of accounts and IFRS.

List of Officials met

2.11 The list of officers and the auditors of PVVNL met / consulted by DTTIPL for the diagnostic study are provided in the **Table 2.1** below:-

Table 1: List of Officials met

Table 2.1 - List of Officials met S No.	Offices/ Stakeholders	People met / consulted
1.	Head Quarters, Urja Bhawan, Pashchimanchal	▪ Mr. R P Gupta, Director (Finance) ▪ Mr. Jauhri, DGM (Accounts) ▪ Mr. H N Saxena, Deputy Chief Accounts Officer (DCAO) – HO ▪ Mr. Mukesh Jain, Accountant ▪ Mr. L K Gupta, DCAO -Meerut Zone ▪ Mr. B S Goel, Ex-GM(Finance), Madhyanchal and author of Accounting Rules and Procedures for U.P. Power Companies
2.	Meerut Zone	▪ Mr. L K Gupta, DCAO -Meerut Zone ▪ Mr. Rajesh Sharma, Accountant
3.	Division (EUDD-III), Garh Road	▪ Mr. Sunhera Singh, Divisional Accountant (Works) ▪ Mr. Verma , Accountant
4.	Central Stores Division, Administrative Office	▪ Executive Engineer, Central Stores Division, Meerut ▪ Mr. R K Gupta, Divisional Accountant

Table 2.1 - List of Officials met S No.	Offices/ Stakeholders	People met / consulted
5.	Stores Centre, Meerut (Sub-Division)	▪ Mr. Magan Singh, Assistant Engineer ▪ Mr. Vishal Anand, Section Holder (Store Keeper)
6.	Telephonic Discussions with Branch Auditors	▪ Mr. Saurabh Goel, M/s. Pawan Goel & Associates ▪ Mr. Akhil Agarwal, M/s. Shwetabh & Associates ▪ Mr. Sanjay Gupta, M/s. VAPS & Co.
7.	Telephonic Discussions with Statutory Auditors	▪ M/s. S. K. Kumar & Co., Chartered Accountants
8.	Accountant General's (AG) Office, Kendriya Bhawan, Lucknow	▪ Mr. Saxena and his team at AG Office, Kendriya Bhawan, Lucknow

3. AN OVERVIEW OF PVVNL AND ACCOUNTING FUNCTION

3.1 This chapter provides a brief background of creation of PVVNL, the broad organization structure of PVVNL accounts and an overview of the existing process for preparation of accounts.

Creation of PVVNL

3.2 In pursuance of power sector reforms undertaken by the Government of Uttar Pradesh (GOUP), the Uttar Pradesh State Electricity Board (UPSEB) was unbundled under the first reforms transfer scheme dated 14th January 2000, into three separate legal entities as under:

a) Uttar Pradesh Power Corporation Limited (UPPCL) – vested with the function of Transmission and Distribution within the State.

b) Uttar Pradesh Rajya Vidyut Utpadan Nigam Limited (UPRVUNL) – vested with the function of Thermal Generation within the State

c) Uttar Pradesh Jal Vidyut Nigam Limited (UPJVNL) – vested with the function of Hydro Generation within the State.

3.3 Further through another Transfer Scheme dated 15th January, 2000, the assets, liabilities and personnel of Kanpur Electricity Supply Authority (KESA) under UPSEB were transferred to Kanpur Electricity Supply Company (KESCO), a company registered under the Companies Act, 1956.

3.4 In pursuance of further unbundling of Uttar Pradesh Power Corporation Limited (UPPCL) which was responsible for both Transmission and Distribution functions along functional lines after the enactment of the Electricity Act 2003, the following four distribution companies ("DISCOMS") were created through Uttar Pradesh Transfer of Distribution Undertaking Scheme 2003 during the month of July 2003 -

a) Pashchimanchal Vidyut Vitran Nigam Limited (Meerut DISCOM)

b) Madhyanchal Vidyut Vitran Nigam Limited (Lucknow DISCOM)

c) Dakshinanchal Vidyut Vitran Nigam Limited (Agra DISCOM) and

d) Poorvanchal Vidyut Vitran Nigam Limited (Varanasi DISCOM)

About PVVNL

3.5 Pashchimanchal Vidyut Vitran Nigam Ltd. (PVVNL) is a company incorporated under the Companies Act, 1956 for carrying out the business of distribution of electricity within its defined area of Supply. PVVNL started functioning as an independent distribution company in July 2003 as an undertaking of Uttar Pradesh State Government and a subsidiary company of UPPCL. The area of supply include the districts of Meerut, Baghpat, Ghaziabad, Gutambudh Nagar, Bulandshahar, Muzaffarnagar, Saharanpur, Bijnor, Moradabad, J.P. Nagar and Rampur.

3.6 PVVNL catered to 31,44,040 consumers having connected load of 10,270,918 KW with an installed capacity of 6569 MVA and average annual demand Rs. 3900 Crores in 2008-09.

3.7 The company has been divided into four distribution zones - Meerut zone, Ghaziabad zone, Saharanpur zone and Moradabad zone.

PVVNL's Brief Financials

3.8 A snapshot of Pashchimanchal Vidyut Vitran Nigam Ltd.'s financials is given below:-

Balance Sheet**			
Sources of Funds	**Rs. in lakhs**		
	2004-05	**2005-06**	**2006-07***
Shareholders' funds	85,051	95,652	120,697
Loan funds	70,312	104,418	130,336
Total	**155,363**	**200,070**	**251,033**
Application of Funds	**2004-05**	**2005-06**	**2006-07***
Fixed Assets	131,538	139,867	169,208
Net Current Assets	(31,656)	(57,421)	(108,755)
Preliminary Expenses	119	80	40
P & L Account -Debit	55,362	117,544	190,540
Total	**155,363**	**200,070**	**251,033**
Particulars	**2004-05**	**2005-06**	**2006-07**
Revenue Receipts	273,840	300,512	339,815
Revenue Expenditure	308,515	362,575	412,674
Surplus/ (Deficit)	**(34,674)**	**(62,063)**	**(72,859)**

* Pending approval in AGM

** Provisional Accounts for year 2008-09 and 2009-10 are not available.

Relationship of PVVNL with UPPCL (Holding Company)

3.9 The key transactions carried out among UPPCL as holding company and its subsidiary distribution companies (including PVVNL) are as under:-

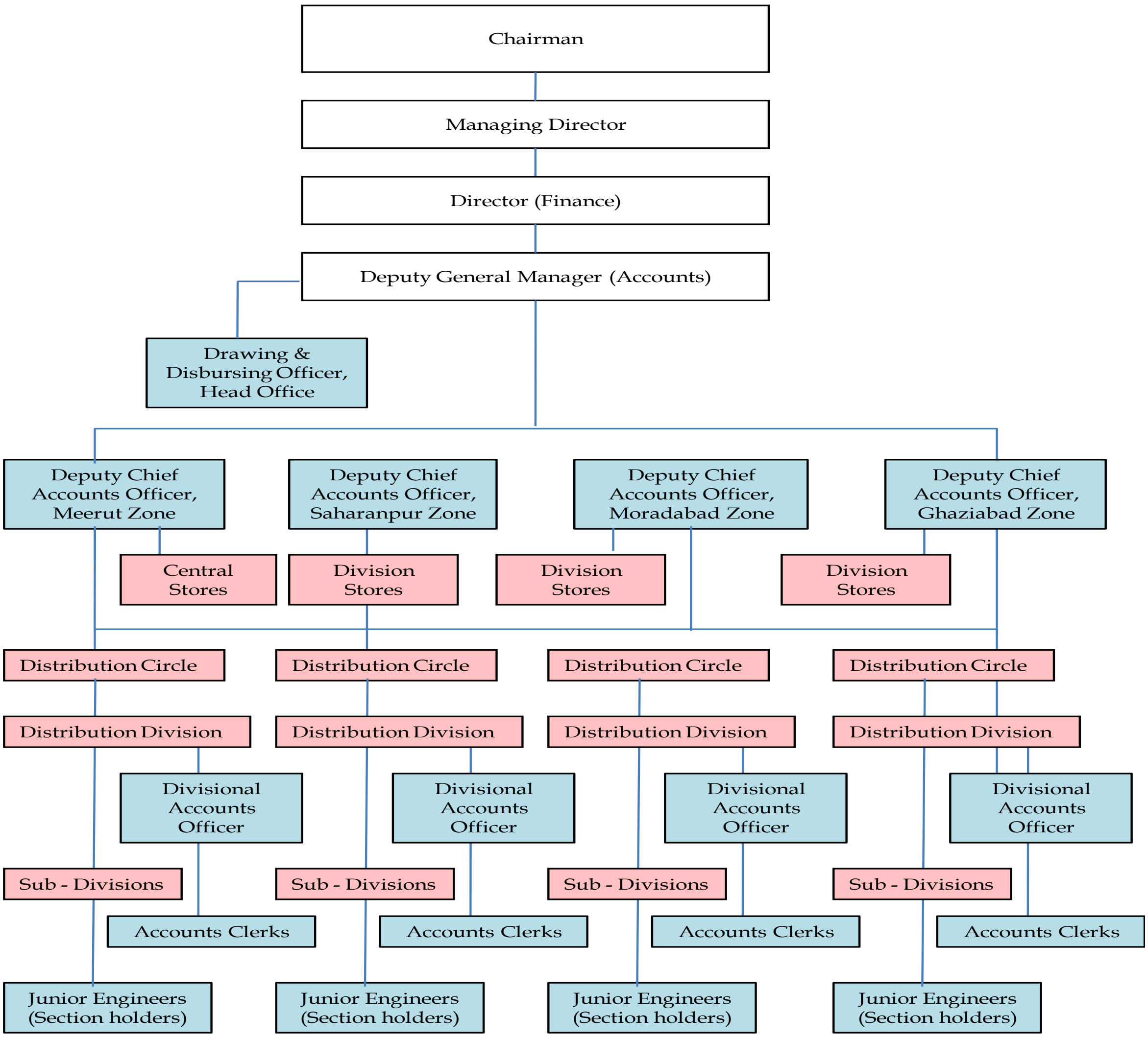
- UPPCL receives funds centrally in respect of the government schemes (both from central government and state government) and other capital receipts. Funds received for the government schemes are allotted as equity (RGGY, APDRP scheme, Dr. Ambedkar Gram Sabha Vikas Yojana etc.), capital grants (PTW and DHS grants etc.) and subsidies (Revenue subsidy, interest assistance etc.) to the DISCOMS.

- UPPCL procures power centrally for its subsidiaries (i.e. DISCOMS).
- PVVNL remits entire revenue from sale of power to UPPCL
- UPPCL disburses salaries and wages, employee loans and advances (for employees belonging to distribution companies) on behalf of the subsidiary companies

Overview of Accounting Function

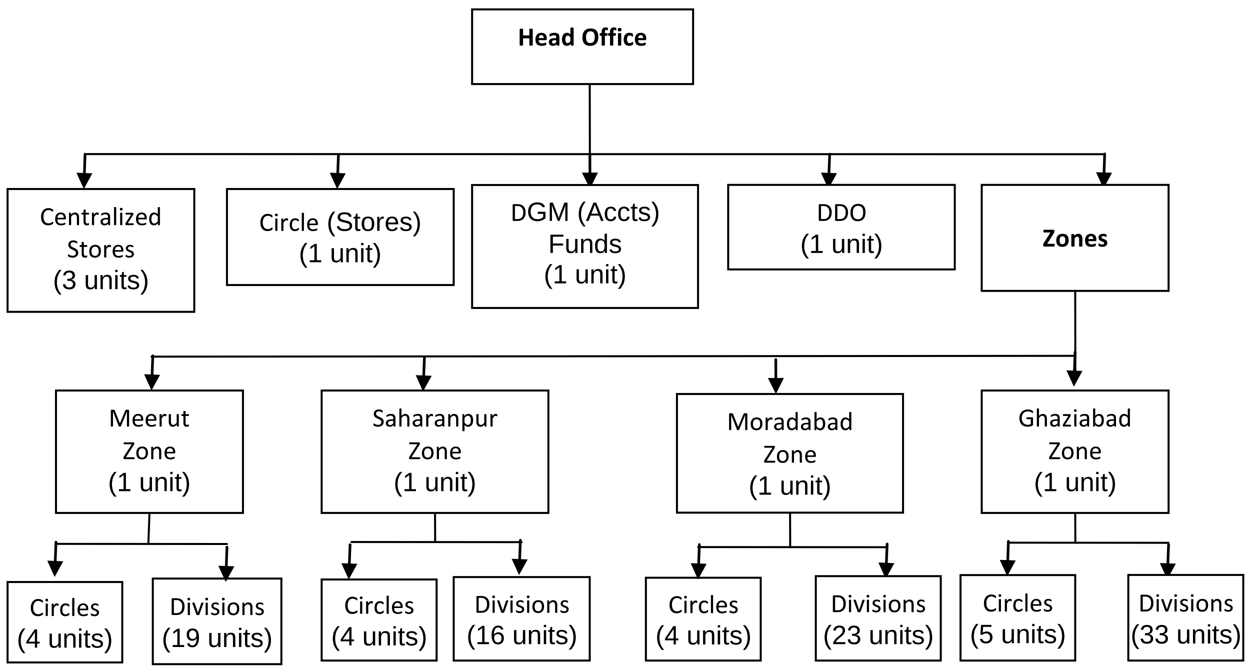
3.10 The Director (Finance) heads the accounting function of the company. The accounting function in the organization is carried out by various accounting units/ field offices as shown in exhibit 3.1 below:-

Exhibit 1: Organization Structure of PVVNL (Accounting function only)



3.11 The hierarchy of various accounting units in PVVNL is given in Exhibit 3.2 as below.

Exhibit 2: Hierarchy of Accounting Units in Pashchimanchal Vidyut Vitran Nigam Ltd. (PVVNL)



3.12 In total there are 118 accounting units in PVVNL comprising of the Head Office, Zonal Offices, Circles (including one Circle Stores) and Divisions (including three Division Stores). The Sub divisions attached to the Division are not a separate accounting unit. However stock register is maintained at the Sub-division level.

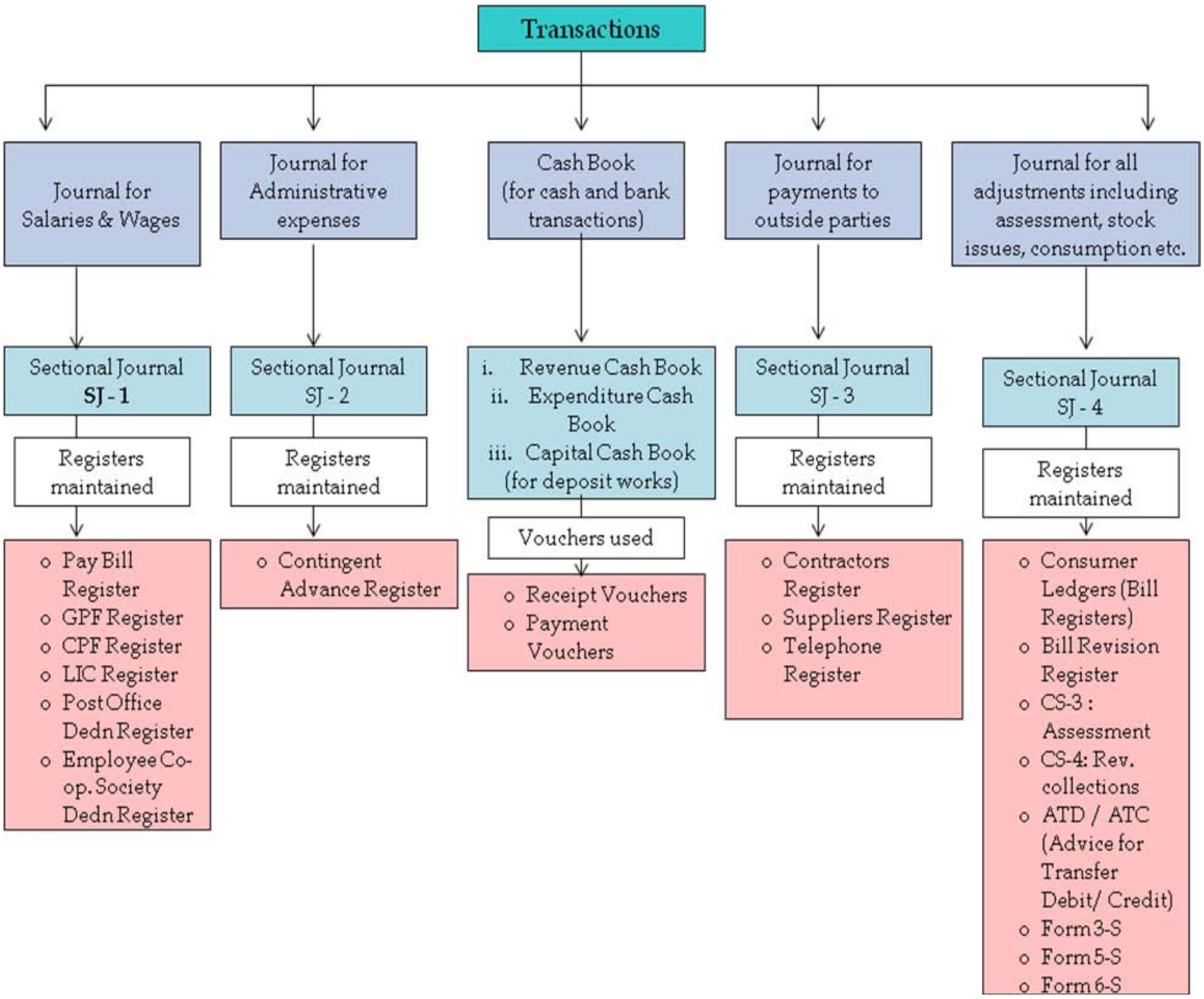
Accounting Process

3.13 The accounting process for preparation of books of accounts and audit includes the following in this order:-

- Preparation of primary books of accounts by accounting units
- Compilation of Accounts by Divisions
- Compilation of Accounts by Zones
- Branch Audit
- Compilation of Accounts by HO
- Approval of accounts by Board
- Statutory Audit
- CAG Audit
- Adoption of Accounts by AGM

3.14 The books of accounts and registers maintained by PVVNL are depicted in Exhibit 3.3 below:-

Exhibit 3: Book of accounts maintained by PVVNL



3.15 The key books of accounts maintain by each of the accounting unit are as follows:

Register	Record for transactions
Sectional Journal 1 (SJ 1)	For keeping records of Establishment expenses
Sectional Journal 2 (SJ 2)	For keeping records of Contingent Advances
Sectional Journal 3 (SJ 3)	For keeping records of transaction related to outside agencies such as suppliers, contractors
Sectional Journal 4 (SJ 4)	For adjustment entries (related to stock issuance and returns, adjustments of wrong bookings and rectifications) There is a requirement of maintenance of Stock Register at the Sub-Division level for recording issuance of materials from Stores and Return of Materials to Stores. Junior Engineer (JE) maintains the Stock Register and submits it to the Executive Engineer of the concerned Division. Accountant at Division level compiles the entries in SJ 4 from the Stock Register.
Cash Book / Bank Book	For recording cash and bank transactions

Register	Record for transactions
Consolidation Register	For consolidation of transactions of SJ1, SJ 2, SJ 3 & SJ 4 and Cash Book
Monthly Trial Balance (MTB)	For submission to their respective Zones

Process of Compilation of Accounts

3.16 The flow of activities and various steps involved in the accounts compilation are as under:-

- Division accounts and Circle accounts are prepared and submitted to respective Zones. They submit their monthly trial balances (MTB) to the Zones and in some cases directly to the headquarters (Stores Divisions/Store Circle and headquarters' own drawing and disbursing officer).
- Zonal accounts are prepared by consolidating the MTBs as received above and are then submitted to Branch Auditor for audit. These include the consolidated accounts of accounting units including Divisions/Circles coming under the respective Zone.
- After the Branch Audit is done, Zonal accounts are finalized and submitted to HO. HO receives 4 accounts from four zones, 4 accounts from stores divisions/store circle and one from its own drawing and disbursing officer.
- Head Office maintains its own accounts and all records. It carries out the compilation of overall accounts on a monthly basis for all accounting units. At the end of the financial year, final accounts of the entire company are prepared by HO. This includes the consolidated accounts of HO along with all other accounting units as under:
    - Three centralized stores
    - Circle (Stores)
    - Zonal Accounting Units
    - Drawing & Disbursement Office (DDO) within the HO
- After merging its own transactions (fund transfers to the divisions and from the holding company) therein and making adjustments for interest on loans, power purchase and certain other provisions, the head office prepares the consolidated monthly trial balance. This contains all the figures required for the preparation of the Profit and Loss Account and the Balance Sheet. These are further subject to reconciliation of inter-company transfers between the Holding Company and other DISCOMS, adjustments of power purchase, grants, subsidies and provision for interest payable on loans, if any.
- After the finalization of annual accounts, it is approved by the Board of Directors.

- The Statutory Auditors usually start the work of statutory audit after they have received the Branch Audit Reports but before the accounts are approved by the Board.
- The approved final accounts are submitted to Statutory Auditors before the completion of statutory audit who submit their audit report to the shareholders.
- CAG audit takes places after the Statutory Auditor's report is submitted to CAG's office.
- Finally the adoption and approval of audited accounts is done at the Annual General Meeting of the shareholders.

  (Please refer to Annexure 2 for certain aspects of accounting)

Status on Computerization of Accounts

3.17 The present overall status of computerization in PVVNL is as given below:

- Revenue Billing is outsourced and computerized. Revenue collections are updated in this system.
- Preparation of Monthly Trial Balances and their consolidation at zones have been outsourced and the Consolidation Registers are printed in the computer output reports for the consolidation of monthly trial balances zone-wise, circle-wise, division-wise and unit-wise.
- All other activities including accounts preparation are done manually.

4. CURRENT STATUS OF ACCOUNTS PREPARATION

4.1 This chapter discusses the current status of preparation and finalization of accounts as also the target dates as planned by PVVNL for completion of accounts in arrears.

Current status

4.2 The annual audited accounts upto the accounting year 2005-06 have been audited and adopted in the AGM. The accounts for the year 2006-07 are pending adoption in the AGM and the accounts for the subsequent years i.e. 2007-08 onwards are pending at various stages of completion. The overall status of accounts from the year 2006-07 till 2009-10 along with the plan for completion as made by PVVNL (as per the filled checklist provided to DTTIPL) for completion are provided in the Table given below:

Table 2: Present Status of Accounts Preparation

S. No.	Activities	Financial Year			
		2006-07	2007-08	2008-09	2009-10
1.	**Completion of Primary Books of accounts:**				
	Submission of Form 1 S (Stores Receipt) and Form 1 S (Stores Issues) by Junior Engineers	Complete	Complete	Not complete; Expected by Nov. 30, 2010*	In arrears; Not planned
	Updation of recording stock adjustments and Closure of Adjustment Register (SJ-4)	Complete	Complete	Not complete; Expected by Nov. 30, 2010*	In arrears; Not planned
2.	**Compilation of Monthly Trial Balances:**				
	Consolidation Registers and Monthly Trial Balances at accounting units	Complete	Complete but changes required	Expected by Nov. 30, 2010*	In arrears; Not planned
	Supplementary trial balance at the year end	Complete	In arrears; revaluation of stock under progress	Suppl. MTBs for 03/2009 awaited for most Divisions;	In arrears; Not planned
	Consolidation Registers at Zones	Complete	Complete but changes required	In arrears; April 30, 2011 as per checklist	In arrears; April 20, 2012 as per checklist

S.	Activities	Financial Year			
3.	**Branch Audit of Zonal Accounts**	Complete	Branch audit reports awaited	Not started; Not planned	Not started; Not planned
4.	**Preparation of Annual Accounts at HO**				
	Consolidation Registers at Head Office	Complete	Provisional; Complete by 10 days after branch audit report	Provisional; Planned for Nov. 30, 2011 as per checklist	Provisional; Expected to complete by June 30, 2012 as per checklist
	Inter-company reconciliation entries and preparation of provisional accounts	Complete	Complete	Provisional; Complete by Dec.15, 2011*	Not done; Planned for July 31, 2012*
4	**Adoption of final accounts by Board of Directors u/s Sec 215 (3) Cos' Act, 1956**	Adopted	Not done; Accounts not yet finalized	Not done; Not planned	Not done; Not planned
6.	**Completion of Statutory Audit u/s 619 (3) (a)**	Complete	Not started; Feb. 28, 2011 as per checklist	Not done; Jan. 31, 2012 as per checklist	Not done; Not planned
7.	**CAG Audit:**				
	CAG Supplementary Audit u/s 619 (3) (b)	Complete	Not started; July 31, 2011 as per checklist	Not done; June 30, 2012 as per checklist	Not done; Not planned
	Receipt of Draft Comments and Reply	Complete	Not done; Not planned	Not done; Not planned	Not done; Not planned
	Receipt of Final Comments from CAG	Complete	Not done; Not planned	Not done; Not planned	Not done; Not planned
8.	**Approval and adoption of audited accounts at Annual General Meeting**	Not done**	Not done; Not planned	Not done; Not planned	Not done; Not planned
9.	**Completion of internal audit**	Complete	Complete	Complete	Not started

* Target dates as per verbal discussions

** Proposed date for adoption of audited accounts for 2006-07 in Annual General Meeting is not fixed as on date.

*** The preparation of books of accounts for the year 2009-10 is yet not complete. The key accounting activity which is yet to be taken up

- Submission of Form 1 S (Stores Receipt) and Form 1 S (Stores Issues) by Junior Engineers
- Updation of recording stock adjustments and Closure of Adjustment Register (SJ-4)

As per the accounting process followed by PVVNL, until the updation of recording stock adjustments and closure of Adjustment Register (SJ-4), the stores issued during the year will continue to be shown under the Stock Account and the final Capital Work Account/ Fixed Assets / Operation and Maintenance Accounts would not get debited. Hence in the absence of the SJ-4 adjustment, the accounts will be materially incomplete and will not show a true and fair status. Thus this activity is very important for completion of accounts.

(Please refer to Annexure 3 for details status on preparation and submission of Monthly Accounts by the Divisions/ Zones for the year 2009-10)

4.3 Based on the above it emerges that submission of monthly accounts by the Division Accounting Units to the Zones for the year 2009-10 is in arrear for a period ranging between 1 to 6 months.

Status on Branch and Statutory Audits

4.4 DTTIPL had discussions with the branch auditors, statutory auditors and CAG officials to understand the current status on audit and their views on delay in finalization of accounts. The key issues that emerge during the discussion are as under:-

4.5 The Branch Auditors have been appointed for year 2008-09 and the branch audit is in progress. The branch auditors are appointed by the CAG for each Zone separately. The statutory auditors have been appointed for three years 2007-08, 2008-09 and 2009-10. The statutory auditors are also appointed by the CAG.

4.6 The main reasons cited by the Branch and Statutory Auditors that generally lead to delay in conduct and completion of audit are provided as under:

- Submission of accounts by Zones is generally delayed leading to delay in completion of branch audit.
- Several changes are made by the Zones in the accounts during the conduct of audit requiring re-checking by the auditors.
- Delay in accounting/ reconciliation of inter unit transfers (within divisions and zones) of materials.
- At times late coming of staff delays the auditors work.
- There is need to appoint a coordinator to facilitate the audit work.

- Departmental circular should be issued before the commencement of audit so that staff is prepared for audit work.

4.7 The main reasons for delay in completion of CAG Audit and adoption of accounts in AGM are provided as under:

- Delay in providing accounts by PVVNL after the audit team approaches PVVNL Management
- Delay in providing responses to the CAG queries
- Delay in organizing AGM by PVVNL. This is due to the reason that PVVNL does not have any post for Company Secretary on a regular basis. Presently, there is only one Company Secretary, who is handling secretarial work of UPPCL as well as all DISCOMS, RVUNL, KESCO, UPPTC, and UCM Coal Ltd.

Please refer to Annexure 4 for details of discussion with branch auditors and CAG team.

Summary of Overall Status / Plan for Completion of Accounts by PVVNL

4.8 Based on the above, the overall current status and plan as per PVVNL for preparation of accounts upto the year 2009-10 emerge as follows:

Year	Overall Status
Accounts for the year 2006-07	▪ The accounts for the year 2006-07 have been audited and are pending adoption in the AGM. ▪ As on the date of the field visit, PVVNL has not planned the date of AGM for adoption of accounts.
Accounts for the year 2007-08	▪ The accounts for the year 2007-08 have not been approved by the Board of Directors (BoD) of PVVNL and the statutory audit is still in progress, and is expected to be completed by Feb 28, 2011. ▪ The CAG audit is yet to commence. It is expected to be completed by July 31, 2011, as planned by PVVNL. ▪ The subsequent activities to finalize the audit and accounts adoption process shall be planned after the completion of CAG audit.
Accounts for the year 2008-09	▪ The completion of accounts for the year 2008-09 are still at the Zonal level and the Branch Audit is still in progress and is expected to be completed after completion of previous year accounts and revaluation of inventory as planned by PVVNL. ▪ The consolidation of accounts and preparation of unaudited

Year	Overall Status
	accounts at HO level are expected to be completed by Dec 15, 2011 as planned by PVVNL. ▪ The statutory audit for year 2008-09 is yet to commence. ▪ Since the CAG audit of the year 2007-08 is expected to be completed by the July 31, 2011, PVVNL has planned to complete the statutory audit for the year 2008-09 by Jan 2012 and CAG audit by June 2012 only.
Accounts for the year 2009-10	▪ The preparation of books of accounts for the year 2009-10 is not yet complete. The key accounting activities which are still to be taken up are as under:- ▪ Submission of Form 1 S (Stores Receipt) and Form 1 S (Stores Issues) by Junior Engineers ▪ Updation of recording stock adjustments and Closure of Adjustment Register (SJ-4) ▪ As per the accounting process followed by PVVNL, until the updation of recording stock adjustments and Closure of Adjustment Register (SJ-4), the stores issued during the year will continue to show under the Stock Account and the final Capital Work Account/ Fixed Assets / Operation and Maintenance Accounts would not get debited. Hence in the absence of the SJ-4 adjustment, the accounts will be materially incomplete and will not show a true and fair status. Thus this activity is very important for completion of accounts. ▪ The consolidation of accounts at Zonal level is planned only by April 2012, by which time the accounts for the year 2008-09 are expected to be completed. The branch audit will be planned only after this activity is done. ▪ The consolidation of accounts at HO level is planned to be completed by July 31, 2012, statutory audit and CAG audit are yet to be planned.
Accounts for the year 2010-11	▪ The accounts for the year 2010-11 are still in the stage of preparation at the field level and are likely to remain in arrear for next 2-3 years going by the above status on the accounts of previous years.

5. KEY ISSUES / ROAD BLOCKS IN COMPLETION OF ACCOUNTS

5.1 This chapter provides the key issues / road blocks in completion of accounts for the year upto 2009-10 based on the following:

- Study/ review and analysis of the overall accounting structure and accounting process followed in PVVNL
- Current status on preparation of accounts and discussions held with the PVVNL's officials
- Discussions with the Branch/ Statutory and CAG auditors described in the previous chapters.

5.2 The key issues / road blocks in clearing of arrears in accounts are summarized below:

S. No.	Description of the Issue / Road Block	Actions Required by PVVNL
1.	<u>Delay in Preparation of Accounts at Divisions level – monthly stock adjustments in the Adjustment Register (SJ 4), Pending for the year since 2009-10</u> Delay in submission of monthly abstracts by Section holders (Junior Engineers in charge of Sections) in Form 1 S (Stores Receipts) and Form 1 S (Stores Issues) who are required to prepare the monthly Form 5 S (Stores Receipts with values) and Form 6 S (Stores Issues with values) to record the monthly stock adjustments in the Adjustment Register (SJ 4) The above activity is not completed even much after the accounting year is over. At present this activity is yet to be completed since for the year 2009-10. As mentioned earlier, in line with accounting process followed by PVVNL, until the updation of recording stock adjustments and Closure of Adjustment Register (SJ-4), the stores issued during the year will continue to show under the Stock Account and the final Capital Work Account/ Fixed Assets / Operation and Maintenance Accounts would not get debited. Hence in the absence of the SJ-4 adjustment, the accounts will be materially incomplete and will not show a true and fair status. Thus this activity is very important for completion of accounts. Based on discussions with PVVNL, it is understood that the delay may be	This issue requires administrative action at the highest level of PVVNL's management to clear the backlog. PVVNL should attempt to clear the SJ-4 stock adjustment for all the pending years (i.e. 2009-10 till date) simultaneously. Clear directions by the Management (Director /Chief Engineer) should be issued to the Junior Engineers to submit their pending returns for the year 2009-10 say within next 1 month (i.e. December 31, 2010) strictly with no time extensions and for the year 2010-11 by April 30, 2011. In order to facilitate the above one time clearance of arrear, a Task Force / Monitoring Cell may be set up at the Division / Zonal and HO level to monitor this task. The constitution of the above Task Force is explained in Chapter 6 Para 4. If required PVVNL can take the help of external/ internal auditors/ ISP at Division level for this on one time backlog clearance. For future, PVVNL should relook at the current accounting practice and evaluate the option of charging the final head of expenditure based on the stores issues instead of waiting for the concerned JE to render their accounts. The control and accounting over the unconsumed stores at sight (in JE's hand) at the year-end may be handled and treated separately.

<table>
<tr><th>S. No.</th><th>Description of the Issue / Road Block</th><th>Actions Required by PVVNL</th></tr>
<tr><td></td><td>attributed to the following factors/ reasons (DTTIPL has not independently verified these reasons) :

Works under various Government Schemes which are recorded as completed projects during the financial year may get carried out even after the reported completion time. Hence, the records of section holders Form 1S and 2S as well as the Adjustment Register (SJ 4) are kept open for recording such works in the previous period.
Urgent field works are completed with the support of contractors. Lengthy tendering processes have to be followed for issuance of work orders in their names. Until the issuance of work orders, accounts are not closed to record such works. This practice results in delays in submission of monthly returns for consumption of stores by Section holders.
There are inadequate number of Junior Engineers due to non replacement of retired JEs and lack of training to newly recruited technical staff.
Technical staff generally gives less priority to submission of monthly returns. The account team does not have administrative control over Section holders (JEs) as technical staffs are controlled by Divisional Executive Engineers.
There is a practice of updating stock registers only on completion of site works. This results in delay in updation of stock registers.
There is a lack of monitoring/ MIS the timely submission of stock returns at the management level.

The Divisions stated that they could compile the monthly trial balances in not more than a week's time, if the Junior Engineers could submit their stock accounts.

The Zonal Accounts Officers are also of the opinion that as soon as the accounts from</td><td></td></tr>
</table>

S. No.	Description of the Issue / Road Block	Actions Required by PVVNL
	the divisions are received, they could compile the accounts within 7-15 days' time. Similarly, the GM (Finance & Accounts), PVVNL stated that he could get the financial statements ready for statutory audit in a month's time if he receives the zonal accounts from the zones duly audited by the branch auditors.	
2.	<u>Delay in reconciliation of Inter-Unit Transactions (IUT)</u> ▪ IUT balances remain outstanding mainly due to following reasons:- a. IUT - Materials – Non submission of accounts by Zones and Divisions while Store accounts are submitted to HO. b. IUT – Inter-Company Balances – Non-updation of accounts by UPPCL after 2006 while accounts of PVVNL are updated till 2008. Other reasons for non-reconciliation of IUT Balances can be attributed to the following:- ▪ ATDs (Advice for Transfer Debit) / ATC (Advice for Transfer Credit) are not issued at the same time when the entry is made in the Section Journal. ATDs/ ATCs are at times sent late (time period varying from 1 to 10 months). ▪ Receipt of acceptances of ATDs from responding unit also gets delayed due to late issuance of ATDs in Form 55 by the originating unit. ▪ Delay in receipt of acceptances of Transfer Debits (ATDs) in Form 56 by responding units are also due to delay in submission of Form 1S and 2S by Section holders to such responding units.	This issue also requires administrative action at the highest level of PVVNL's management to clear the backlog. Regarding reconciliation of IUT Inter-Company balances, holding company, UPPCL and PVVNL need to coordinate this activity in line with the target time frame to complete its accounts. In order to facilitate the above one time clearance of arrear, a Task Force / Monitoring Cell may be set up at the Division / Zonal and HO level to monitor this task. The constitution of the above Task Force is explained in Chapter 6. If required PVVNL can take the help of external /internal auditors/ ISP help at each Division level for this one time backlog clearance. For future, PVVNL should look at computerization of accounting system which should enable automatic IUT reconciliation.
3.	<u>Hierarchy of accounting units and consolidation process - Consolidation of trial balances pending for the year since 2008-09:</u> PVVNL has a hierarchical accounting set up for preparation and consolidation of	Under the manual environment and present organization structure, PVVNL would have no choice but to follow the sequential steps in preparation of accounts from the lowest level to the HO level. It would require strong administrative action at the PVVNL's management level to ensure

S. No.	Description of the Issue / Road Block	Actions Required by PVVNL
	accounts as under: ▪ Sub-divisions report stock positions of all section holders to respective Divisions. Until all Section holders submit their stock positions, Sub-Divisions are not able to submit its accounts to Divisions. ▪ Divisions send Consolidated Monthly Trial Balances to their respective Zones. Until all Sub-divisions submit their accounts to their Divisions, Divisions cannot consolidate and submit accounts to Zones. ▪ Zones prepare and send Consolidated Monthly Trial Balances for such Zones to Head Quarters. Until all Divisions submit their accounts to Zones, Zones are not able to consolidate and submit its accounts to the Head Quarters ▪ Head Quarters is not able to consolidate company accounts until all Zones have submitted their Consolidated MTBs.	adherence to the various time lines by all as instructed / defined to clear the backlog. For future, PVVNL should look at computerization of accounting system which should enable timely preparation of accounts without facing this limitation.
4.	Process of commencement/ completion of Branch Audits of Zonal Accounts, leading to delay ▪ At present the Branch Auditors are appointed on a year to year basis. As of now the branch auditor have been appointed for the year 2008-09. Further the branch audit is commenced only after the preparation of consolidated Monthly Trial Balances (MTB) at the zonal level. ▪ Due to delay in book keeping at accounting units due to non-closure of SJ 4 Register and the consequent delay in receipt of Monthly Trial Balances (MTB) from various accounting units, there is further delay in the consolidation process of MTBs at the zonal level. ▪ Delay in the commencement by some branch auditors due to their other professional engagements. ▪ Further it appears that there is lack of	PVVNL may take up the matter with the Branch auditors to commence the audit based on the consolidated monthly trial balances sent by the Divisions without waiting for the final consolidated annual MTB at the Zonal level. This can help in early commencement of branch audit. Further, PVVNL may request the CAG for appointment of branch auditor for the subsequent years also i.e. 2009-10 and 2010-11 so that the branch audit can be taken up as and when the individual Zones are ready without waiting for the completion of statutory audit of accounts of the prior year.

S. No.	Description of the Issue / Road Block	Actions Required by PVVNL
	monitoring system at the Zone and HO level to ensure that the Branch Audit is commenced / completed in time.	
5.	<u>Other Issues</u> The other main reasons for delay are as under:- ▪ Lack of computerized accounting system ▪ Lack of adequately professionally qualified staff. ▪ Inadequate quality of the accounts rendered for audit - Frequent changes made in accounts during the conduct of audit requiring re-checking. ▪ Inadequate management of Audit - absence of audit coordinator to facilitate audit work and delay in providing responses to auditor's queries. ▪ Delay in adoption of final accounts by Board of Directors ▪ Delay in convening Annual General Meetings to approve the audited accounts ▪ Lack of overall integrated planning and monitoring of the entire process of preparation and compilation of accounts at all levels and across locations, inviting auditors to commence the audit, monitoring audit progress.	All these issues require administrative action and would facilitate the completion of accounts in time, especially computerization of accounts, up gradation of accounting staff etc.

6. WORK PLAN/ROAD MAP FOR CLEARING BACKLOG IN ACCOUNTS UPTO THE YEAR 2009-10

6.1 This chapter provides the Work Plan / Road Map for clearing the baclkog in accounts keeping in view the current status in arrears of accounts, key issue identified and the interventions required by PVVNL as discussed in the previous chapters.

Overall Target

6.2 The overall aim of PVVNL should be to clear the backlog in the preparation of accounts upto the financial year 2009-10 of PVVNL and ideally at the same time creating no further backlog for the current year. Accordingly, the backlog in annual audited accounts for the years upto 2009-10 should be cleared and simultaneously accounts for the year 2010-11 should get audited more or less in time.

6.3 The PVVNL top management as well as the operating team must be committed to the above target and it would require a special effort/ intervention in terms of one time special drive on its part to achieve the same. As mentioned in the previous chapter PVVNL may take the support of its internal auditor and ISP resources in clearing the backlog in stores accounts and inter unit reconciliations. However it should be noted that the prime ownership for clearing of the backlog would continue to be with the PVVNL.

6.4 In order to ensure proper support and monitoring of the work plan, it is suggested that PVVNL should form a Special Task Force headed by the MD. The Task Force should also take decision on taking outside support wherever required for the updation of accounts. The Task Force should meet at least once a month and report the progress to the MD and take remedial measures for any slippages. The Task force may consist of the following members:

Level	Proposed Members
HO level	▪ Managing Director ▪ Head of Finance (also Member Secretary) ▪ Representatives from the Stores and Operations PVVNL may also adopt one consultant from Institute of Public Auditors of India (IPAI) to be part of the Task Force for the initial 6 months.
Zonal Office Level	▪ Zonal Engineer ▪ Zonal Head of Finance (also Member Secretary) ▪ Representatives from the Division Accounts and Operations PVVNL may also adopt one consultant from Institute of Public Auditors of India (IPAI) to be part of the Task Force (for two Zones together) for the initial 6 months.

Suggested Work Plan

6.5 The suggested work plan / road map for each of the year is provided below:

Accounts for the year	2006-07
Present Status	▪ The accounts for the year 2006-07 have been audited and are pending adoption in the AGM. ▪ As on the date of the field visit, PVVNL has not fixed the date of AGM to adopt the accounts.
Suggested Work Plan / Action required by PVVNL	Holding of AGM by December 31, 2010

Accounts for the year	2007-08
Present Status	▪ The stock revaluation is under progress and accounts for the year 2007-08 have not been approved by the Board of PVVNL and the statutory audit is pending, which is expected to be completed by Feb 28, 2011 as planned by PVVNL. ▪ The CAG audit is yet to be commenced and which is expected to be completed by July 31, 2011 as planned by PVVNL. ▪ The subsequent activities for accounts adoption process shall be planned after the completion of CAG audit.
Suggested Work Plan / Action required by PVVNL	▪ Ensuring completion of statutory audit as per the target date i.e. by Feb 28, 2011. ▪ The time frame of CAG audit can be reduced to upto 2 months (i.e. April 30, 2011) by proper coordination and timely response to the audit paras by PVVNL. ▪ The AGM should be planned immediately after completion of CAG audit. The target date for adoption of accounts should be upto May 31, 2011.

Accounts for the year	2008-09
Present Status	▪ The completion of accounts for the year 2008-09 are still at the Zonal level and is expected to be completed by April 30, 2011 as planned (as per the checklist provided) by PVVNL. ▪ The further activities at the HO for consolidation of accounts and

Accounts for the year	2008-09
	preparation of unaudited accounts are expected to be completed by December 15, 2011 as planned by PVVNL. ▪ The statutory audit for year 2008-09 is yet to commence. ▪ Since the CAG audit of the year 2007-08 is expected to be completed by the July 2011, PVVNL has planned to complete the statutory audit for the year 2008-09 by Jan 31, 2012 and CAG audit by June 30, 2012 only.
Suggested Work Plan / Action required by PVVNL	▪ Ensuring completion of revaluation exercise by Jan. 15, 2011 and accounts submission at Zonal Level by Jan 30, 2011. ▪ Ensuring Branch Audit Completion by Feb 28, 2011. ▪ Ensuring completion of unaudited accounts by end of March. 2011. This activity should not be withheld for pending CAG audit of the previous year and any change required in the opening balances can be adjusted during the course of audit for the year 2008-09. ▪ The time frame of statutory audit must be reduced and PVVNL should aim to complete Statutory Audit by June 7, 2011. The statutory audit should be taken up without waiting for the CAG audit completion for the previous year. ▪ PVVNL should aim to complete the CAG audit within next 2 months (i.e. Aug 7, 2011) by proper coordination and timely response to the audit paras by PVVNL. ▪ The AGM should be planned immediately after completion of CAG audit. The target date for adoption of accounts should be upto August 31, 2011.

Accounts for the year	2009-10
Present Status	▪ The preparation of books of accounts for the year 2009-10 is yet not complete. The key accounting activities which are yet to be taken up are: ◆ Submission of Form 1 S (Stores Receipt) and Form 1 S (Stores Issues) by Junior Engineers ◆ Updation of recording stock adjustments and Closure of Adjustment Register (SJ-4) ▪ The further activities at the Zonal Level for consolidation of

Accounts for the year	2009-10
	accounts are planned only by April 30, 2012 by which time the accounts for the year 2008-09 are expected to be completed. The branch audit will be planned only after this activity is done. ▪ The further activities at the HO Level for consolidation of accounts, statutory audit and CAG audit are yet to be planned.
Suggested Work Plan / Action required by PVVNL	▪ The preparation of accounts and passing of adjustments for SJ 4 should be taken up on priority basis and must not be delayed further. This activity should be completed within 11/2 months from the expected date of completion of stock revaluation exercise for 2008-09 i.e. Feb 28, 2011. This activity is not dependent upon the completion of accounts for the previous years. ▪ With the completion of above activity, the accounting units should also aim to submit the monthly accounts for all the months including supplementary trial balance by Mar 15, 2011. ▪ Based on the above, the Zones should aim to complete the branch accounts and branch audit by Apr 30, 2011. ▪ Based on the above, the HO should aim to complete the HO accounts and Statutory Audit by September 7, 2011. The Statutory Audit should be taken up without completion of previous year CAG audit. ▪ PVVNL should aim to complete the CAG audit within next 2 months (i.e. November 7, 2011) by proper coordination and timely response to the audit paras by PVVNL. ▪ The AGM should be planned immediately after completion of CAG audit. The target date for adoption of accounts should be upto November 30, 2011.

Accounts for the year	2010-11
Present Status	The preparation of accounts for the year 2010-11 are still in the stage of preparation of accounts at the field level and is likely to remain in arrear for next 2-3 years going by the above status on the prior year accounts.
Suggested Work Plan / Action required by PVVNL	▪ Ideally, PVVNL's aim should be to complete the accounts for the year 2010-11 within 6 months (i.e. by September 2011). However, this could be challenge considering the backlog. ▪ PVVNL approach should be to prepare and keep the accounts for

Accounts for the year	2010-11
	the year 2010-11 ready for audit without waiting for the completion of audit of the previous years.

6.6 Based on the above suggested work plan / road map, activities and the target dates are sumarised below:

Table 3: Summary of Work Plan - Pashchimanchal Vidyut Vitran Nigam Ltd.

S. No.	Activities	Overall Responsibility	Planned Target Dates for pending years		
			2007-08	2008-09	2009-10
1.	Completion of Primary Books of accounts:				
	Submission of Form 1 S (Stores Receipt) and Form 1 S (Stores Issues) by Junior Engineers	Executive Engineer	NA	NA	10th Feb 2011
	Updation of recording stock adjustments and Closure of Adjustment Register (SJ-4)	Concerned Accounts Officer at Circles/ Divisions/ Stores	NA	NA	28th Feb 2011
	Stock Revaluation exercise	Stock Revaluation Team	NA	15th Jan 2010	NA
2.	Compilation of Monthly Trial Balances:				
	Consolidation Registers and Monthly Trial Balances at accounting units	Concerned Accounts Officer at Circles/ Divisions/ Stores	NA	20th Jan 2011	7th Mar 2011
	Consolidation Registers at Zones	Dy Chief Accounts Officer	NA	30th Jan 2011	15th Mar 2011
3.	Branch Audit of Zonal Accounts	Dy Chief Accounts Officer/ Branch Auditor	NA	28th Feb 2011	30th Apr 2011
4.	Preparation of Un-audited Accounts:				

S.	Activities	Overall	Planned Target Dates for pending years		
	Consolidation Registers at Head Office	GM (Finance & Accounts) / HO accountant	NA	7th Mar 2011	7th May 2011
	Inter-company reconciliation entries and preparation of final accounts	GM (Finance & Accounts) / HO accountant	NA	15th Mar 2011	15nd May 2011
	Preparation of Unaudited Accounts	GM (Finance & Accounts) / HO accountant	NA	31st Mar 2011	31st May 2011
6.	Approval of final accounts by Board of Directors u/s Sec 215 (3) Cos' Act, 1956	Board of Directors	NA	7th April 2011	14th June 2011
7.	Completion of Statutory Audit u/s 619 (3) (a)	GM (Finance & Accounts) / Statutory Auditors	28th Feb 2011	7th June 2011	7th Sep 2011
8.	Completion of CAG Audit u/s 619 (3) (b)	GM (Finance & Accounts) / CAG Auditors	30th April 2011	7th Aug 2011	7th Nov 2011
10.	Approval and adoption of audited accounts at Annual General Meeting	Company Secretary/ PVVNL	31st May 2011	31st Aug 2011	30th Nov 2011

NA – Not Applicable

6.7 Simultaneously with the above, PVVNL should undertake/ complete the following to improve upon the quality of annual accounts:

- Creation of fixed assets register
- Cleaning up and reconcilition of current assets especially Sundry Debtors

7. OTHER ASPECTS

Computerization

7.1 The present overall status of computerisation in Pashchimanchal Vidyut Vitran Nigam Limited can be listed out as below.

- Revenue Billing is outsourced and computerized. Revenue collections are updated in this system.
- Preparation of Monthly Trial Balances and their consolidation at zones have been outsourced and the Consolidation Registers are printed in the computer output reports for the consolidation of monthly trial balances zone-wise, circle-wise, division-wise and unit-wise.
- All other activities including accounts preparation are done manually.
- The decision regarding computerization of financial accounting systems has to be taken and implemented by the holding company, UPPCL.

IFRS Implementation

Applicability of IFRS in India

7.2 On recommendation made by the Core Group, constituted by the Ministry of Corporate Affairs (MCA) for convergence of Indian Accounting Standards with International Financial Reporting Standards, MCA on January 22, 2010, had come out with the roadmap for convergence to IFRS for the Companies other than Banking companies, Insurance companies and Non-Banking Finance Companies.

7.3 The Core Group, in this respect, held its meeting on January 11, 2010 and agreed that in view of the roadmap for achieving convergence, there will be two separate sets of Accounting Standards u/s Section 211(3C) of the Companies Act, 1956.

First set would comprise of the Indian Accounting Standards which are converged with the IFRSs which shall be applicable to the specified class of companies as defined in the roadmap.

The ***second set*** would comprise of the existing Indian Accounting Standards (as notified by the government) and would be applicable to other companies.

7.4 The roadmap issued by MCA defines a phase wise convergence plan. Accordingly, the first set of accounting standards would be applicable to various companies covered under the defined criteria over different phases.

Timelines for Companies other than Banking, Insurance and Non-banking financial companies

7.5 The first set of Accounting Standards (i.e. converged accounting standards) will be applied to specified class of companies in phases as follows:

Particulars	Phase I	Phase II	Phase III
Companies covered	▪ NSE – Nifty 50	▪ whether listed or not, having a net	▪ Listed companies which have a net

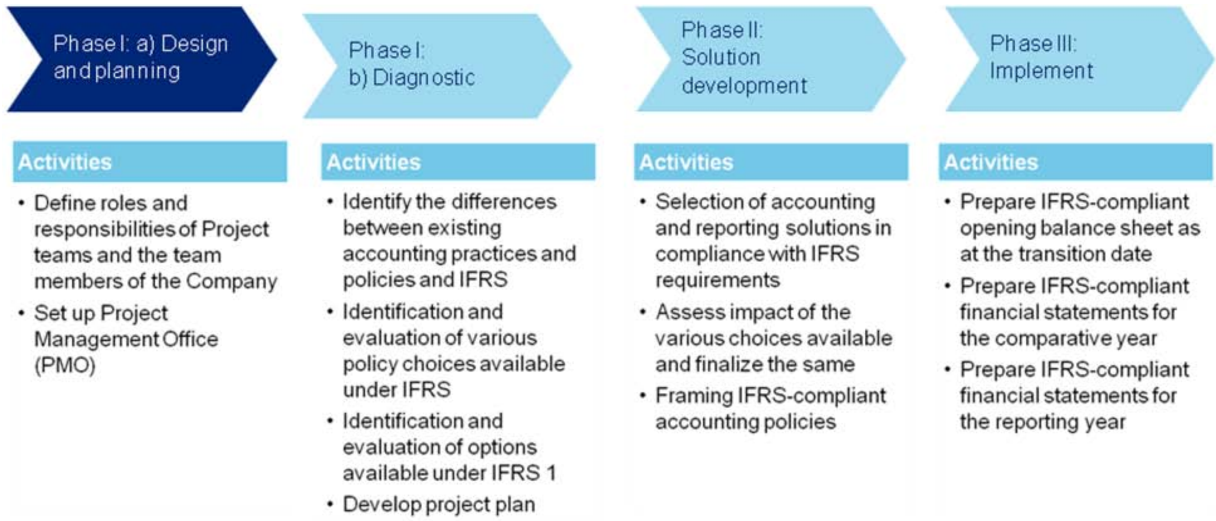
Particulars	Phase I	Phase II	Phase III
	▪ BSE - Sensex 30 ▪ Companies with shares or other securities listed overseas ▪ Companies with net worth in excess of Rs.1,000 crores.	worth exceeding Rs. 500 crores but not exceeding Rs. 1,000 crores	worth of Rs. 500 crores or less
Opening Balance Sheet	1 April 2011	1 April 2013	1 April 2014
Quarterly	June 2011 to Dec 2011	June 2013 to Dec 2013	June 2014 to Dec 2014
Financial year	2011-12	2013-14	2014-2015

The MCA has clarified that **'Net worth'**, for the purpose of the Roadmap shall be computed as the sum of share capital and all the reserves (except revaluation reserve, if any) and reduced by miscellaneous expenses to the extent not written off and the debit balance of profit and loss account, if any. Further, the net worth for this purpose shall be computed as of March 31, 2009.

Typical IFRS Implementation Plan

7.6 Adoption of IFRS is one of the most significant challenges faced by all entities worldwide. IFRS requires disclosure of large amount of information to be reported as part of the financial statements and the notes to accounts. This creates need for new data, changed calculations and changes in reporting requirements. IFRS conversion projects are often viewed as finance and accounts specific projects. However, these projects impact finance, accounting, information system and human resources. Adoption of IFRS can provide opportunities for achieving synergies with other IT projects and strategic initiative.

7.7 Typically, an IFRS Implementation project is divided into the following three phases along with the activities:



To summarize, an IFRS adoption project is much more than just a finance/accounting project. It encompasses a complete business transformation and hence there is a need to have a holistic approach and participation from all stakeholders.

Applicability of IFRS to PVVNL

7.8 As per final accounts for the year 2008-09, the Net Worth of PVVNL as on 31.3.2007 is estimated as negative by Rs. 699 crores. The IFRS timelines as mentioned above are not applicable to companies with negative net worth at present as it is not covered by the current criteria laid down by the government. It is understood that the timelines for applicability of IFRS in respect of companies which may get covered as per the above criteria at future date are awaited.

8. FUTURE AREAS FOR IMPROVEMENT

8.1 This chapter provides the key areas for improvement which are important for enduring solution to the problems faced at present by PVVNL in timely and accurate preparation and closure of accounts

Design of an Integrated Financial Accounting System

8.2 As a permanent solution for the current problems in facing the difficulties in the timely and accurate preparation and finalisation of accounts, it is strongly advised to implement a Computerised Financial Accounting System with integrated stock and inventory management modules to have a dynamic system of accounts preparation. This software has to be developed in lines with the unique needs and requirements of electricity distribution companies.

8.3 Branch auditors are of the opinion that in the manual accounting system currently followed, accounting of inter unit transfers (within divisions and zones) of materials become too complicated leading to delays in finalisation and audit of accounts.

8.4 The decision for developing an computerized Integrated Financial Accounting System may be taken by the holding company, UPPCL without any further delay. This common software, after development and testing, can be implemented in all the four distribution companies including PVVNL after proper training to the proposed users of the system.

8.5 The benefit of computerised financial management system would be the assurance of a uniform accounting process with uniform output reports and final accounts across all the four distribution companies as well as the faster closure of accounts preparation and finalisation with provisions for systematic reconciliation of inter unit accounts, bank accounts and control accounts across various account heads and the automatic updation of fixed assets registers.

Development of Accounting Manual for distribution utilities

8.6 As a supplement to the above integrated financial accounting system, a comprehensive accounting manual may also be designed and implemented to follow uniform accounting practices, principles and policies commensurate with GAAP (Generally Accepted Accounting Principles) and the specific requirements of electricity distribution companies which are to be followed in accordance with the provisions laid down in Electricity Act, 2003.

Installation of a Management Information System for accounts preparation monitoring:

8.7 A robust MIS (Management Information System) may be developed and implemented so that the present status of accounts preparation and the status of submission of monthly returns from all stock holders (JEs) across the entire Sub-divisions can be known at any time by the management with the use of MIS reports.

8.8 This would also be helpful for the management to monitor the key activities needed for the finalisation of accounts, start date, details of audit queries pending, expected completion dates of various audits being conduted within the organisation at any point of time.

Finalisation of Ledger account balances relating to Uttar Pradesh Transfer of Distribution Undertaking Scheme 2003:

8.9 The holding company, UPPCL may take immediate steps to finalise the provisional balances of sundry debtors, stocks and spares, fixed assets, capital work in progress, other current assets and current liabilities and provisions which were transferred and accounted for on gross values as on 11.08.2003. Due to this, fixed assets registers are not updated and maintained properly and the values remain unreconciled with the ledger account balances.

8.10 The details and break up of individual assets and liabilities as on 11.08.2003 have not yet been finalised and reconciled. In the absence of item wise details of aforesaid broad heads of assets and liabilities transferred and pending reconciliation, the correctness of book balances, physical existence of assets and the effect of the same on assets and liabilities and profit and loss account cannot be ascertained at any point of time.

Annexure 1

Format of initial questionnaire to facilitate carrying out diagnostic study

ENTITY NAME:

PLACE:

AREAS/DESCRIPTION	RESPONSIBILITY OF PROVIDING INFORMATION/ COMPLETION OF ACTIVITY	ESTIMATED COMPLETION DATE
1 Accounting Setup		
(i) Head Office – Overall organizational structure of Accounts Deptt., covering departments/sections and the names and contact details of the corresponding Heads of Departments/Heads of Sections.		
(ii) Field Office – Circle/Division/Sub-Division and typical accounting setup of each of these offices.		
(iii) List of accounting units generating trial balance, classified by functions (such as generation, distribution, transmission, central stores, head office accounting units, etc.).		
2 Accounting System		
(i) Copy of Accounting manual/guidelines		
(ii) Final accounts/year end accounts closing circulars/guidelines		
(iii) Chart of accounts/accounts classification		
(iv) Copy of documented Accounts policies		
(v) Format of Trial Balance and final Accounts		
3 Status of Computerization of Accounts		
(i) Extent of implementation of the computerization system in HO / field offices.		

(ii) List of accounting areas which have been computerized at Head office and field offices.		
(iii) List of Account areas where the computerized system and manual systems are still being operated in parallel.		
(iv) A brief overview of the computerization systems covering aspects such as: coverage of each module, batch mode/online system, IT platform, stand-alone /integrated, internally operated/outsourced, developed internally/through external consultants.		
(v) List of outputs / reports generated from the computerized system		
(vi) Level of integration/Interface between billing and accounting software and issues faced if any in passing accounting entries		
(vii) Plan for future computerization, if any		
4 System of internal audit		
(i) What is the internal audit set up – Internal/ External		
(ii) Role, frequency and scope of internal audit function		
(iii) Period upto which the internal audit has been completed		
(iv) Likely target date for audit completion in case of backlog		
(v) Name and contact details of the internal auditor		
(vi) Copy of latest audit report		
(vii) Copy of Internal Audit Program		
5 System of Cost Audit		
(i) Brief description of the system followed for preparation of cost records		

(ii) Status of Cost records and cost audit		
(iii) Copy of Cost Accounts and Cost Audit Report		
6 <u>Copies of Annual Accounts / Other related documents</u>		
(i) Audited Accounts for the last three years (along with schedules)		
(ii) Audited Accounts for the Ist year after unbundling of SEB (showing incorporation of transferred balances)		
(iii) Annual Budget for the last three years		
(iv) ARR filed with the Regulator for the last 3 years		
(v) Latest MIS report showing financial position /financial performance as generated by the management at present		
7 <u>Status on accounts preparation and audit</u>		
(i) Year upto which accounts have been audited by CAG.		
(ii) Year upto which accounts have been audited by the Statuary auditor		
(iii) Year upto which final accounts have been compiled by the Head Office		
8 <u>In respect of the pending accounts, provide status on the following key activities for each year:</u>		
(i) CAG Audit		
(i) Whether audit work has commenced.		
a) Status on completion of audit work as on date		
b) Likely target date for audit completion		
c) Name and contact details of the audit party leader		

d) Copy of Audit paras		
e) In case audit work has not started, the likely date to commence audit		
(ii) Statutory Audit		
a) Whether statutory auditor has been appointed		
b) Name and contact details of the auditor		
c) Whether audit work has been commenced		
d) Status on completion of audit work		
e) Likely target date for audit completion		
f) In case audit work has not started, the likely date to commence audit		
(iii) Compilation/ Consolidation of Annual Accounts at HO		
a) Whether annual accounts have been compiled		
b) Whether annual accounts have been adopted / accepted at the management level		
c) If not yet compiled, provide status on / pending activities, such as (please note these are only illustrative and can be modified / added as relevant):		
o Submission of monthly and year end supplementary Trial balances by the field / accounting units		
o Scrutiny of TBs at the HO		
o Passing of year end accounting/ adjustment entries		
o Consolidation of TBs at the HO		
o Preparation of provisional accounts		

d) Likely target date for accounts compilation and preparation of annual accounts		
e) Likely start date of audit		
(iv) Compilation/ Consolidation of Accounts at Circles		
a) In case compilation/ consolidation is also done at the circle level, provide similar status as above in respect of the HO.		
(v) Preparation of Accounts by Field / Accounting Units		
a) Whether Fields have completed their activities for preparation of accounts and submitted monthly and year end supplementary Trial balances to HO		
b) If not yet completed, provide status on / pending activities, such as (please note these are only illustrative and can be modified / added as relevant):		
o Submission of monthly and year end supplementary Trial balances		
o Scrutiny of TBs at the HO		
o Passing of year end accounting/ adjustment entries		
o Details for provision for doubtful debts		
o Reconciliation of ledgers balances		
o Capitalization of capital works / projects		
o Inter unit reconciliations		
o Bank reconciliations		
o Physical verification reports of inventory and reconciliation		

○ Stores valuation		
○ Interest accounting		
○ Accrual and year end entries		
○ Likely target date for completion of preparation of accounts		
(vi) Status on Fixed Assets Register		
a) Status on preparation / updation of Fixed Assets Register (FAR)		
b) Physical verification of fixed assets and reconciliation thereof with FAR		
9 **Key issues / constraints faced in timely preparation of annual accounts / expediting clearance of backlog in preparation of annual accounts, such as** (please note these are only illustrative and can be modified / added as relevant)**:**		
(i) Opening balances pending finalization (in case of entities created on unbundling of SEB / re-organization of State)		
(ii) Accounting issues pending resolution and brief description of the same		
(iii) Delay in completion of audits and brief reasons thereof		
(iv) Delay in compilation of accounts at the HO / Field Offices and brief reasons thereof		
(v) Additional staff required to clear one time backlog in accounts		
(vi) Any other items, relevant to understand the reasons for pending financial statements		

INSTRUCTIONS FOR COMPLETION (for discussion and may be finalized after taking inputs from members):

- To be completed by:

- To be submitted to:
- Latest date of submission:
- To be authenticated/signed by:

Annexure 2

Existing process of accounting on certain aspects

This section provides an overview of the existing accounting processes / practice relating to the following aspects:-

a) Consolidation of accounts at division, zonal and HO level

b) Accounts consolidation process vis-à-vis stores procurement, assessment billing, stores issues at Division (Stores) and Division (Works)

c) Accounting of stores

Consolidation of accounts at Division, Zonal and HO level

The records and transactions involved at the level of accounting units for consolidation processes can be explained in detail using a data diagram. Table A2.1 below shows the data diagram which describes the records and transactions involved in the consolidation process of accounts preparation.

Table 4: DATA DIAGRAM CONSOLIDATION AT DIVISION LEVEL TRANSACTIONS AND RECORDS

Records						
Cash Book	SJ-1 (Salary and Wages Journal)	SJ-2 (Other Establishment Expenditure Journal)	SJ-3 (Other Payments for Stores & Services etc.)	SJ-4 (Adjustment Journal)	Consolidation Register	Monthly Trial Balance
Description						
To record receipts and payments. Presently all payments are made through cheques. There are three types of cash books:- 1. Main cash book - Expenses 2. Capital cash book (for deposit works and security deposits) 3. Revenue cash book –	To record salary expenses of employees	To record accounting unit expenses other than salary such as TA advance, Pay advance, traveling advance, conveyance and medical reimbursement etc.	To record expenditures towards contractors, suppliers to outside parties for stores and services.	To record adjustments for assessment of revenue, stock receipts and issues accounts, adjustment of inter divisional transfers, correction entries	Consolidation register is maintained for consolidation of accounts of division and all reporting sub-divisions. It is maintained at all accounting units i.e. Divisions, Zones and HO. Consolidation register is maintained at the level sub-head entry level on month to month basis	Monthly Trial Balance has is prepared by all accounting units and be submitted to reporting accounting units by Divisions to zones and by zones to HO for consolidation. Monthly Trial Balance is maintained at head level entries clubbed

Records						
Collections and deposits into bank.					without any opening and closing balances.	through Consolidation Register. It is maintained on Monthly basis by depicting opening and closing balances. It is prepared on yearly basis at FY closing.
Ancillary records						
1. For Main Cash Book – a. Cheque Register 2. For Revenue Cash book – 1. Collection Statement (daily for each collector) 2. Bill Stub register 3. Bill Revision Register 4. Consumer Ledger 5. For Capital Cash Book 1. Security Deposit Register 2. Schedule of Deposit Works	1. Pay Bill Register 2. GPF Register 3. CPF Register 4. LIC Register 5. Post Office Deduction Register 6. Employee Co-op. Society Deduction Register	1. Contingent Advance Register 2. Reimbursements are entered directly through vouchers.	1. Receipt Vouchers 2. Payment Vouchers	1. <u>For Stock Adjustments*</u> Form 5S and 6S record of section holder (JE) and 4S record of Division Accountant (Works). This gives classification of works into Capital works and O&M categories. It further depends on 1S, 2S and 3S records and reconciliation with ATD registers of division and stores. 2. <u>For assessment adjustment**</u> - CS-3 and CS-4 records of Division Accountant (Revenue) is maintained. Entries in CS-4 include collections	SJ-1,2,3,4 and Cash Book	Consolidation Register

Records						
References of cash book vouchers is provided in Sectional Journals				and bill correction adjustment. 3. <u>For correction entries</u> – approval notes. Journal vouchers are prepared for each transaction in SJ-4 e.g. for stock entries vouchers is prepared separately for receipts and issues respectively with supporting documents.		

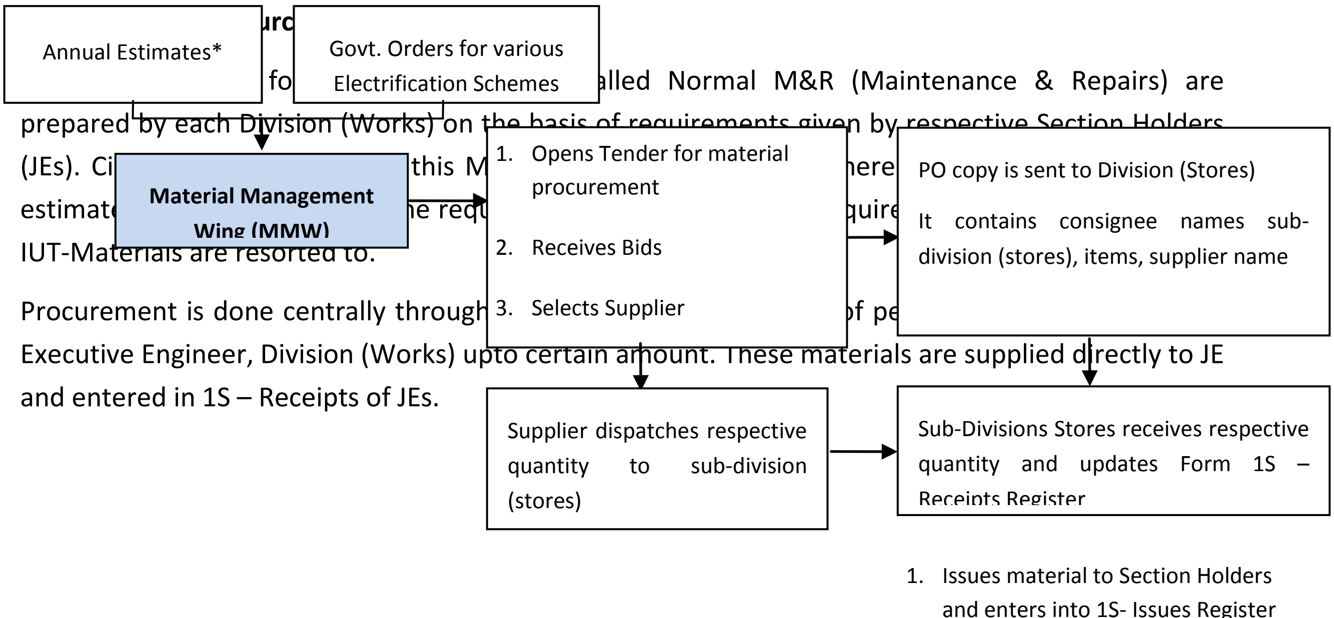
<u>Note:</u> * and ** - Please refer to the process flow charts in Exhibit 4 and 5.

Head Office and Zone prepares same set of records as maintained at Division Level being but it do not deal with the Billing and Stores. Thus HO and Zone require no corresponding entries in its SJ-4 record for Billing and Stores. Other records maintained by HO are for Inter Company Transactions with UPSEB, UPPCL, other DISCOMS and Financial Statements.

Accounts consolidation process vis-à-vis stores procurement, assessment billing, stores issues at Division (Stores) and Division (Works)

The accounts consolidation processes involved at the level of accounting units can be explained in detail using process flow charts to have a comprehensive understanding of the various processes and steps involved therein as shown in the following exhibits:

Exhibit 4: Accounts Consolidation Process Chart vis-à-vis Stores Procurement



...urc... fo... alled Normal M&R (Maintenance & Repairs) are prepared by each Division (Works) on the basis of requirements given by respective Section Holders (JEs). Ci... this M... here... estimat... e requ... quire... IUT-Materials are resorted to.

Procurement is done centrally through ... of pe... Executive Engineer, Division (Works) upto certain amount. These materials are supplied directly to JE and entered in 1S – Receipts of JEs.

Exhibit 5: Accounts Consolidation Process Chart vis-à-vis Assessment Billing

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Exhibit 6: Accounts Consolidation Process Chart vis-à-vis Stores Issues at Division (Stores)

Works

Stores

Sub-Division Level (Central Stores)

Section Holder (JE) submits Goods Indent along with Job Card (or Estimate Approval) approved by Executive Engineer to Sub-Division (Stores)

Sub-Division Level

- Central Stores (Sub-Division) - Issues material to JE on Invoice
- Makes entry in 1S – Issue Register
- 1S – Receipts and 1S- Issues are entered in 2S – Balances Register

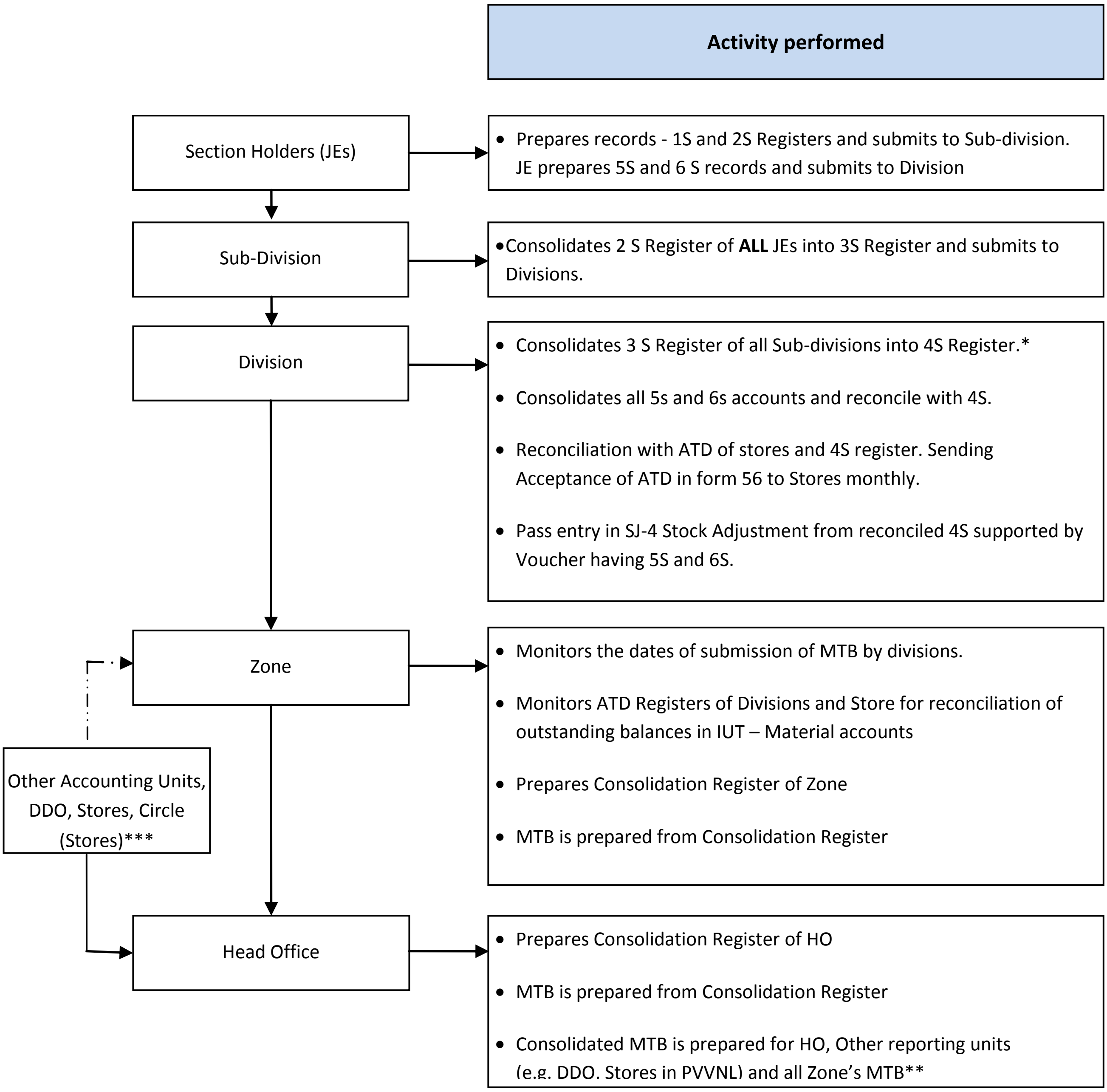
Division Level

- Divisions receives ATD for the month
- Received 1S – Receipt register of JE (or 3S Consolidated Register of sub-division)
- Reconciles quantity receipts

Division Level – Administrative Office

- Prepares monthly ATD in Form 55 from Invoices received
- Submits ATD to Divisions (Works) for acceptance and passes entry in **ATD Register**
- Acceptance received on Form 56 by Division (Works)
- ATD register counter signed by Executive Engineer – Division (Works)
- 5S – Receipts Valuation and 6S – Issues Valuation registers are prepared

Exhibit 7: Accounts Consolidation Process Chart vis-à-vis Stores at Division (Works)



*Inter unit material transfers within divisions, inter-divisions and inter-zones are accounted for in division accounts and are monitored by division and zones respectively.

**In case of PVVNL Stores and Circle (Stores) are reporting to Zone directly.

Since the accounting of receipts, issues and consumption of stores are an integral part of the accounting processes in distribution companies and are critical for the accounts consolidation processes at the level of each accounting unit, it would be advisable to have a comprehensive understanding of the stores accounting procedures which is detailed as below.

Accounting of Stores (with illustrative transaction entries)

<u>At Stores</u> (an accounting unit)

Executive Engineer issues a Job Card to Junior Engineer (JE) specifying the quantity requirement of material for a specific job. This authorizes the JE to indent the specific quantities mentioned in the Job Card from the Stores. Assistant Engineer (Stores keeper) issues the materials to JE against the Indent given by the JE along with an Invoice in Form 7 for material issued. AE (Stores) updates the stock register.

When the AE (Stores) issues materials under an invoice to the Junior Engineer (also called as Section Holder) by issue of a Debit Note:

Debit	IUT (Inter Unit Transactions A/c) – a control account Dr.
Credit	To Stock of materials A/c

<u>At Sub-Division Level (</u>not an accounting unit)

JE enters the quantity received in his record called “1 S – Monthly Receipt Register” against specific works. Format of “1 S – Monthly Receipt Register” is given below:-

Form 1 S – Monthly Receipt Register

S No.	Material Issued	Work1	Work2	Work3	Work N	Total (Qty.)
	Total					

JE issues the materials to the specific works account and enter its quantities in his record called “1 S – Monthly Issues Register”. However the entry in “1 S – Monthly Issues Register” is made only on completion of works at site from the Measurement Book. The format of “1 S – Issues Register” is given below:-

Form 1 S – Monthly Issues Register

S No.	Material Issued	Work1	Work2	Work3	Work n	Total (Qty.)
	Total					

Valuation of Materials received by section holders is made in Form 5 S (Monthly Abstract of Stock Receipts by a Section Holder) and Valuation of Materials issued to works is recorded in Form 6 S (Monthly Abstract of Stock Issues by a Section Holder). The valuation of the materials issued to JEs and consumed into the Works are valued at the item-wise specific rates fixed annually by UPPCL, Lucknow in the document named “Stock Issue Rates for the financial year 20xx – 20xx”.

At the end of each half year, JE prepares Form 2 S – “Item-wise Ledger account of Receipt & Issues by a section holder” which is a six months’ consolidation of Form 5S and 6S and balance of materials against each of the works with him. This is generally prepared by him from the Bin cards maintained at the Stores by the Asst. Stores Keeper.

At the end of each half year, Sub Division prepares Form 3 S – “Item-wise Ledger account of Receipt & Issues for the Sub-Division” which is a six months’ consolidation of Form 5S and 6S of all JEs under the sub-division and balance of materials against each of the works with all JEs under that Sub-Division. All Form 5 S and 6 S are then consolidated into Form 3 S (Valued Receipts and Issues) and submitted to Division.

A six monthly reconciliation of Form 3S is made by the Sub Division with the individual Form 2 S received from all section holders of such Sub Division.

<u>At Division Level</u> (an accounting unit)

Entry for receipt of materials by Junior Engineers from stores where ATD (Advice for Transfer Debit) is the supporting document:

Debit	Stock of materials A/c Dr.
Credit	To Respective Liability A/c *(a control account)*

Entry made by the Division for issue of materials from Stores on receipt of monthly Form 5-S (Monthly Abstract of Stock Receipts by a Section Holder) from the Junior Engineers:

Debit	Respective Liability A/c *(a control account)* Dr.
Credit	To IUT (Inter Unit Transactions A/c) *– a control account*

Entry made by the Division for consumption of materials account head-wise recorded in SJ-4 (Adjustment Register) on receipt of monthly Form 6-S (Monthly Abstract of Stock Issues by a Section Holder) from the Junior Engineers:

Debit	Capital WIP A/c (Works) Dr.
Debit	Operations & Maintenance A/c Dr.
Credit	To Stock of materials A/c

At the end of each half year, the respective Division prepares Form 4 S – “Item-wise Ledger account of Receipt & Issues for the Division” which is a six months’ consolidation of Form 5S and 6S of all sub-divisions under that Division and balance of materials against each of the works with all JEs under that Division. All Form 5 S and 6 S are then consolidated into Form 3 S (Valued Receipts and Issues) and submitted to Division.

A six monthly reconciliation of Form 4S is made by the Division with the Form 3 S received from all Sub- Divisions of such Division.

The closing stock is valued on the balance stock of materials remaining at the stores as well as at the site under the custody of Junior Engineers. No reversal of O & M account is made for the balance of materials in the site/under the control of Junior Engineers which is remaining to be utilized for O & M purposes.

Annexure 3

Status of accounts submission by Divisions

The status on submission of monthly accounts by the Division Accounting Units to the Zones for the year 2009-10 and 2010-11 are provided in the Table A3.1 given below:

Table 5: Status of Accounts Submission by Divisions

S. No.	Name of the Unit	Location Code	Monthly Accounts submitted	
			For the Year 2009-10	For the Year 2010-11
Meerut Zone, Meerut as on 27.10.2010				
1	EUDC, MEERUT	889	Mar 2010	Nil
2	EUDD-I, MEERUT	890	Aug 2009	Nil
3	EUDD-II, MEERUT	891	Sep 2009	Nil
4	EUDD-III, MEERUT	892	Sep 2009	Nil
5	EUDD-IV, MEERUT	892A	Jul 2009	Nil
6	EUCD, MEERUT	894	Feb 2010	Nil
7	EUTD, MEERUT	893	Mar 2010	Nil
8	EDC, MEERUT	881	Mar 2010	Nil
9	EDD-I, MEERUT	882	Sep 2009	Nil
10	EDD-II, MEERUT	883	Oct 2009	Nil
11	ETD, MEERUT	885	Jun 2009	Nil
12	EDD, MAWANA	887	Sep 2009	Nil
13	EDC, BAGHPAT	886A	Feb 2010	Nil
14	EDD-I, BARAUT	884	Sep 2009	Nil
15	EDD-II, BARAUT	884A	Jul 2009	Nil
16	EDD, BAGHPAT	886	Jul 2009	Nil
17	ETD, BAGHPAT	886B	Mar 2010	Nil
18	ESD, MEERUT	310	Dec 2009	Nil
19	EWD, MEERUT	947	Jan 2010	Nil
20	ESWD, MEERUT	948	Mar 2010	Nil
21	ZAO(D), MEERUT	950	Mar 2010	Nil
22	ECDD, MEERUT	952	Nov 2009	Nil

S. No.	Name of the Unit	Location	Monthly Accounts submitted	
23	ECDD, MZN	952A	Sep 2009	Nil
24	CE(D), MEERUT	954	Mar 2010	Nil
25	CBSC, MEERUT	956	Mar 2010	Nil
Saharanpur as on 30.09.2010				
1	C.Z.E.(D), SAHARANPUR	961	Mar 2010 (Final)	Jun 2010
2	ZAO(D), SAHARANPUR	962	Mar 2010 (Final)	Jun 2010
3	EUDC, SAHARANPUR	926	Mar 2010 (Final)	May 2010
4	EUDD-I, SAHARANPUR	927	Nov 2009	Nil
5	EUDD-II, SAHARANPUR	928	Nov 2009	Nil
6	EUTD, SAHARANPUR	930	Oct 2009	Nil
7	EDC, SAHARANPUR	926A	Mar 2010 (Final)	Jun 2010
8	EDD-I, SAHARANPUR	929	Dec 2009	Nil
9	EDD-II, SAHARANPUR	922	Nov 2009	Nil
10	EDD, DEVBAND	929A	Dec 2009	Nil
11	ETD, SAHARANPUR	930A	Dec 2009	Nil
12	EUDC, MUZAFFARNAGAR	940	Mar 2010 (Final)	Aug 2010
13	EUDD-I, MUZAFFARNAGAR	941	Jan 2010	Nil
14	EUDD-II, MUZAFFARNAGAR	942	Dec 2009	Nil
15	EUTD, MUZAFFARNAGAR	943	Oct 2009	Nil
16	EDC, MUZZAFFARNAGAR	933	Feb 2010	Nil
17	EDD-I, MUZZAFFARNAGAR	934	Mar 2010 (Final)	Jun 2010
18	EDD-I, SHAMLI	935	Dec 2009	Nil
19	EDD-II, SHAMLI	936	Oct 2009	Nil
20	ETD, MUZAFFARNAGAR	937	Feb 2010	Nil
21	ESD, SAHARANPUR	316	Dec 2009	Nil
22	EWD, SAHARANPUR	948A	Mar 2010	Nil
Moradabad Zone, Moradabad as on 04.10.2010				

S. No.	Name of the Unit	Location	Monthly Accounts submitted	
1	EUDC, MORADABAD	431	Jun 2010	Nil
2	EUDD-I, MORADABAD	432	Mar 2010 (Final)	May 2010
3	EUDD-II, MORADABAD	433	Mar 2010	Nil
4	EUTD, MORADABAD	434	Mar 2010 (Final)	May 2010
5	EUCD, MORADABAD	435	Mar 2010 (Final)	Jul 2010
6	EDC-I, MORADABAD	437	Mar 2010 (Final)	May 2010
7	EDD-I, MORADABAD	438	Mar 2010 (Final)	Apr 2010
8	EDD-II, MORADABAD	438A	Mar 2010	Nil
9	EDD, CHD	440	Mar 2010	Nil
10	EDD, SBL	440A	Mar 2010	Nil
11	ETD, MORADABAD	441	Mar 2010	Nil
12	EDC, AMR	462	Mar 2010 (Final)	Jun 2010
13	EDD, AMR	439	Mar 2010	Nil
14	EDD, GJL	464	Mar 2010	Nil
15	ETD, AMR	463	Mar 2010	Nil
16	EDC, RMP	444	Mar 2010 (Final)	May 2010
17	EDD-I, RMP	445	Mar 2010	Nil
18	EDD-II, RMP	446	Mar 2010	Nil
19	ETD, RMP	447	Mar 2010	Nil
20	EDC, BJN	450	Mar 2010 (Final)	Jun 2010
21	EDD, BJN	451	Mar 2010	Nil
22	EDD, NJB	452	Mar 2010	Nil
23	EDD, DPR	457	Mar 2010	Nil
24	EDD, CPR	458	Mar 2010	Nil
25	ETD, BJN	453	Mar 2010	Nil
26	EST, DIV, MORADABAD	315	Mar 2010	Nil
27	GM(D) MORADABAD	468	Mar 2010 (Final)	Apr 2010

S. No.	Name of the Unit	Location	Monthly Accounts submitted	
28	ZAO, MORADABAD	469	Mar 2010 (Final)	Jul 2010
29	ZONAL ACCOUNTS,MORADABAD	430	Feb 2010	Nil
Ghaziabad Zone, Ghaziabad as on 27.10.2010				
1	EUDC-I, GHAZIABAD	905	Mar 2010	Nil
2	EUDD-I, GHAZIABAD	906	Feb 2010	Nil
3	EUDD-III, GHAZIABAD	907	Aug 2009	Nil
4	EUDD-V, GHAZIABAD	967	Feb 2010	Nil
5	EUCD, GHAZIABAD	895	Feb 2010	Nil
6	EUTD-I, GHAZIABAD	908	Mar 2010	Nil
7	EUDC-II, GHAZIABAD	905A	Mar 2010	Nil
8	EUDD-II, GHAZIABAD	909	Mar 2010	Nil
9	EUDD-IV, GHAZIABAD	906A	Nov 2009	Nil
10	EUDD-VI, GHAZIABAD	909B	Mar 2010	Nil
11	EUTD-II, GHAZIABAD	910	Feb 2010	Nil
12	EDC, GHAZIABAD	896	Aug 2009	Nil
13	EDD, PILAKHUWA	897	Aug 2009	Nil
14	EDD, MODINAGAR	900	Dec 2009	Nil
15	EDD, LONI	897A	Apr 2009	Nil
16	ETD, GHAZIABAD	901	Feb 2010	Nil
17	ESD, GHAZIABAD	311	Mar 2010	Nil
18	EDC, HAPUR	888	Mar 2010 (Final)	Jul 2010
19	EDD, HAPUR	899	May 2009	Nil
20	EDD, GARH	900A	Dec 2009	Nil
21	ETD, HAPUR	899A	Jul 2009	Nil
22	EDC-I, BULANDSHAR	911	Dec 2009	Nil
23	EDD-II, BULANDSHAR	913	Jun 2009	Nil
24	EDD, KHURJA	915	May 2009	Nil
25	EDD, DEBAI	915A	Apr 2009	Nil
26	ETD-I, BULANDSHAHAR	916	Sep 2009	Nil
27	EDC-II, BULANDSHAHAR	911A	Mar 2010	Nil
28	EDD-I, BULANDSHAR	912	May 2009	Nil

S. No.	Name of the Unit	Location	Monthly Accounts submitted	
29	EDD-III, BULANDSHAR	914	Jun 2009	Nil
30	ETD-II, BULANDSHAR	916A	Not Submitted	Nil
31	EDD, SYNA	914A	May 2009	Nil
32	EUDC, NOIDA	917	Feb 2010	Nil
33	EUDD-I, NOIDA	898	Jan 2010	Nil
34	EUDD-II, NOIDA	903	Dec 2009	Nil
35	EUDD-III, NOIDA	904	Dec 2009	Nil
36	EUDD-IV, NOIDA	904A	Jun 2009	Nil
37	EUTD, NOIDA	902	Sep 2009	Nil
38	EDD, KHORA	968	Dec 2009	Nil
39	CBCC, NOIDA	957	Jan 2010	Nil

Annexure 4

Details of discussions held with branch auditors, statutory and CAG team

The responses by the branch and statutory auditors are provided below: -

Table 6: Responses of the Branch Auditors (Zonal Level)

Sl. No.	Query	Response of the auditor
Name of the Zone: Meerut Mr. Saurabh Goel, M/s Pawan Goel & Associates, Chartered Accountant, Contact: 9313596353		
1.	Year of previous audit done by the same auditor	Nil
2.	Year under current audit	2008-09
3.	Start date of current audit	
4.	Status of Branch audit	Presently under progress
5.	Issues facing while conducting audit	Certain queries are raised but remain answered. Records required are not submitted.
6.	No. of staff deployed in the audit team	5-6 people (including one qualified CA)
7.	Can the Branch auditor perform audit of multiple year accounts simultaneously?	Yes, if accounts are submitted by company in time.
8.	In case of audit of multiple years, no. of extra audit staff who can be deployed.	No problem with staff for multiple year audits. Firm has capacity to enhance staff.
9.	Time taken for completion of audit	
Sl. No.	**Query**	**Response of the auditor**
Name of the Zone: Moradabad Mr. Akhil Agarwal, Chartered Accountant, M/s Shwetabh & Associates, Contact: 9837027560		
1.	Year of previous audit done by the same auditor	Nil
2.	Year under current audit	2007-08 (appointed for 2008-09, 2009-10 and 2010-11 also)
3.	Start date of current audit	> 8 months back approximately
4.	Status of Branch audit	Presently under progress
5.	Issues facing while conducting audit	Though audit is conducted but report cannot be submitted as opening balances for previous year not finalized.

Sl. No.	Query	Response of the auditor
6.	No. of staff deployed in the audit team	3 staff regularly
7.	Can the Branch auditor perform audit of multiple year accounts simultaneously?	Yes, if accounts are submitted by company in time.
8.	In case of audit of multiple years, no. of extra audit staff who can be deployed.	No problem with staff for multiple year audits. Firm has capacity to enhance staff.
9.	Time taken for completion of audit	15-20 days if records are submitted and queries are answered in time
Sl. No.	Query	Response of the auditor
Name of the Zone: Saharanpur Mr. Sanjay Gupta, M/s VAPS & Co., Chartered Accountants		
1.	Year of previous audit done by the same auditor	Nil
2.	Year under current audit	2007-08 (appointed for 2008-09, 2009-10, and 2010-11 also)
3.	Start date of current audit	Around 8-9 months back
4.	Status of Branch audit	Not finalized for 2007-08
5.	Issues facing while conducting audit	Accounts not submitted by company. Stock revaluation pending for submission of report.
6.	No. of staff deployed in the audit team	4 – 5 staff
7.	Can the Branch auditor perform audit of multiple year accounts simultaneously? If not, state the reason.	Yes, subject to accounts submission in time with no changes in accounts during the conduct of audit.
8.	In case of audit of multiple years, no. of extra audit staff who can be deployed.	Can handle multiple year audit
9.	Time taken for completion of audit	15-20 days subject to resolution of all general issues and accounts submission.

Status on CAG Audits

The discussions held with the CAG officials are summarized below:

Table7 – Detail of Discussion with CAG Officials

Sl. No.	Issue	Response / Advice by the CAG Auditor
CAG Officials Mr. S K Saxena, Sr. Audit Officer – SEB Accounts and his team Mr. A K Dubey, IPAI representative		
1.	When does CAG auditor take up work for any year? What all must be done before they come in?	▪ After completion of the statutory audit and on submission of the audited accounts by the company to AG office, AG issues instructions for commencement of supplementary audit of the respective company. ▪ Prior to submission of accounts to AG office, the following should be ensured by the company:- i. Compilation of accounts for respective financial year ii. Approval of accounts by Board of Directors iii. Submission of accounts to Statutory Auditor for audit. iv. Completion of Statutory Audit.
2.	How much time will it take to commence audit after Auditor's appointment? How the audit is being conducted? How many team member deployed? How the work is distributed in sub-division / division / circles / zones and head office? How much time is taken by CAG team?	▪ Generally AG commences the audit within 2-3 days from the submission of accounts along with statutory audit report. ▪ CAG deploys 2-3 members team for audit to meet the company management and Head of Accounts at Head Office. They call for required records from subordinate accounting units in Head Office or else visit the respective subordinate accounting unit if required. ▪ It takes 15 days to 2 months time for completion of statutory audit.
3.	Can audit for multiple years be started at the same time? What are the constraints? How can the constraints be resolved? How the IPAI team can help this out?	▪ Audit of multiple of years cannot be started at the same time. ▪ CAG audit for a year can be started only on submission of statutory audit report to the respective AG office. For completing statutory audit for a year, the following conditions have to be fulfilled:- ◆ Adoption of CAG comments for the previous year in the Annual General Meeting. ◆ Approval of current year accounts by Board of

Sl. No.	Issue	Response / Advice by the CAG Auditor
		Directors under Section 215(3) of the Companies Act, 1956. ◆ However, Statutory Auditor may commence the audit work of the multiple years at the same time at his discretion. As per CAG's standing instructions, statutory auditor for multi years can be appointed at same time. Currently, statutory auditor is appointed for 2007-08, 2008-09 and 2009-10 for the audit of PVVNL.
4.	Reason of delay in process of completion of CAG Audit and Adoption of Accounts in AGM are discussed as under:-	The main reasons are as under:- ▪ Delay in providing accounts by PVVNL after the audit team approaches PVVNL Management ▪ Delay in providing responses to the CAG queries ▪ Delay in approval of accounts by Board of Directors. ▪ Delay in organizing AGM by PVVNL. This is due to the reason that PVVNL does not have any post for Company Secretary on a regular basis. Presently, there is only one Company Secretary, who is handling secretarial work of UPPCL as well as all DISCOMS, RVUNL, KESCO, UPPTC, and UCM Coal Ltd.

Based on discussions with the CAG officials, the time usually taken in conduct of CAG audit and the possibility of expediting the same are provided in the Table below:

Table 7: Time frame for CAG Audit

S No.	Activity	Time Taken Normally (In days)	Way to fasten process	Minimum Time required (in days)
1.	AG issues orders and commences audit of the company.	3 days	In case Statutory Auditor informs AG office about the tentative date of completion of audit in one month advance.	1 day
2.	AG conducts and completes audit of one year accounts.* This excludes time taken by company in responding to queries of AG team during the conduct of audit. In case of	15-60 days*	In case CAG is requested for taking up on priority the audit of the company.	15 days*

S No.	Activity	Time Taken Normally (In days)	Way to fasten process	Minimum Time required (in days)
	PVVNL, it takes a long time and becomes hurdle to complete audit.			
3.	AG team prepares draft comments and sends it to statutory auditor and company for responses.	7 days	Step 3 and 4 can be performed simultaneously in exceptional cases.	7 days
4.	Company is invited for discussion at respective AG office. In case, AG is satisfied with responses, comments are dropped.	7-10 days		
5.	Otherwise these comments are finalized and sent to CAG office, Delhi for approval. Later CAG approved comments are received by AG. (CAG takes just 1-2 days in approving AG comments). CAG approved comments are issued by AG to the management of the company.	15 days	Company shall incorporate the AG comments in Notes to Accounts. Then there is no need to send the AG comments to CAG office, Delhi for approval.	Nil
6.	Company puts forth CAG comments along with Directors' Report for consideration of the Audit Committee and Board of Directors.	10-12 days	Company holds the Audit Committee and BoD meeting on priority.	7 days
	Total Time taken / required for CAG audit of one year accounts	**107 days**		**30 days**

* CAG conducts the audit of the following year on submission of audited accounts and Statutory Audit report for the current year.

Madhyanchal Vidyut Vitran Nigam Limited (MVVNL), Lucknow

Diagnostic Study Report for Updation of Accounts

December 2010

List of Abbreviations

ATC	Advice for Transfer Credit
ATD	Advice for Transfer Debit
DCAO	Deputy Chief Accounts Officer
DISCOM	Distribution Company
DDO	Drawing and Disbursing Officer
DTTIPL	Deloitte Touche Tohmatsu India Private Limited
EDC	Electricity Distribution Circle
EDD	Electricity Distribution Division
EUDC	Electricity Urban Distribution Circle
EUDD	Electricity Urban Distribution Division
ETD	Electricity Test Division
EUTD	Electricity Urban Test Division
EWC	Electricity Works Circle
EWD	Electricity Works Division
ECC	Electricity Construction Circle
ECE	Electricity Construction Division
GOUP	Government of Uttar Pradesh
HO	Head Office
ICAI	The Institute of Chartered Accountants of India
IPAI	Institute of Public Auditors of India
IUT	Inter Unit Transaction
ISP	Institutional Service Provider
JE	Junior Engineer
KESA	Kanpur Electricity Supply Authority
KESCO	Kanpur Electricity Supply Company
M & R	Maintenance & Repairs
MVVNL	Madhyanchal Vidyut Vitran Nigam Limited
O & M	Operations & Maintenance
UPJVNL	Uttar Pradesh Jal Vidyut Nigam Limited.
UPPCL	Uttar Pradesh Power Corporation Limited

UPRVUL	Uttar Pradesh Rajya Vidyut Utpadan Limited
ZAO	Zonal Accounts Office

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1. INTRODUCTION

1.1 A High Level Panel (HLP) has been constituted by the Prime Minister (vide Planning Commission letter F. No. I-22/2/32/2010-P&E dated 28.07.2010) to look into the financial problems of the SEBs/ Distribution utilities. One of the key issues to be addressed by the HLP is the current arrear in finalization of accounts by the Distribution Utilities.

1.2 In the above context, the HLP has appointed Deloitte Touche Tohmatsu India Private Limited (DTTIPL) to conduct a diagnostic study of two utilities namely, Madhyanchal Vidyut Vitran Nigam Limited (Lucknow DISCOM) and Pashchimanchal Vidyut Vitran Nigam Limited (Meerut DISCOM) to look into the current arrear in preparation finalization of accounts and suggest a work plan / road map for updation of their accounts.

Scope of Work

1.3 The scope of work for the study for each utility covers the following aspects:

a) Carrying out a Diagnostic study for updating of accounts till 31st March 2010 involving:
   - Status of accounts
   - Identification of key issues / road blocks in completion of accounts
   - Work plan / Road map for updation of accounts upto the year 2009-10 in consultation with respective utility

b) Preparation of an initial questionnaire to facilitate carrying out diagnostic study

c) Visit the utilities for ensuring the submission of required information by the utilities

d) Visit to utilities periodically to oversee the progress of the work (by telephone, e-mail, etc. and upto 2 visits of upto 2 days each during the entire engagement period upto December 2010/January 2011).

e) Ascertain the overall status of computerization of financial accounting systems in the utilities and the steps being taken by the utilities for preparing the organization for implementation of IFRS applicable from FY 2011-12.

1.4 The deliverables from the study for each utility are as under:

a) A questionnaire to facilitate carrying out the diagnostic study

b) A Diagnostic Report covering the following:-
   1. Status of accounts, issues / road blocks in completion of accounts and work plan / road map for updation of accounts upto the year 2009-10
   2. Status of finalization of accounts
   3. Overall status of computerization in the utilities of financial accounting systems and also a list of preliminary steps to be taken by the utilities for preparing the organization for implementation of IFRS applicable from FY 2011-12.

1.5 The above study is to be carried out in association with Institutional Service Providers (ISP).

Coverage of this Report

1.6 DTTIPL has completed the field visits and diagnostic study for both the utilities. In line with scope of the work, this report covers the following aspects in respect of Madhyanchal Vidyut Vitran Nigam Limited (MVVNL):-

a) An overview of MVVNL

b) Approach and Methodology followed by DTTIPL

c) Current status on accounts

d) Identification of key issues / road blocks in completion of accounts

e) Tentative Work plan / Road map for updation of accounts upto the financial year 2009-10

f) Other aspects – status on computerization and initiatives if any taken for implementation of IFRS

Next Step

1.7 DTTIPL is submitting this Report simultaneously to MVVNL and the HLP. Based on the response received, DTTIPL has finalized this Report.

2. APPROACH & METHODOLOGY

2.1 This chapter provides the approach and methodology followed by DTTIPL to carry out the diagnostic study.

Key objective of the study

2.2 The prime objective of the study is to draw a road map to clear the backlog in the preparation of accounts of MVVNL upto the financial year 2009-10. Accordingly, the backlog in annual audited accounts for the years upto 2009-10 should be cleared and simultaneously the accounts for the year 2010-11 should be audited in time (i.e. by September 2011).

Approach and Methodology

2.3 The approach and methodology adopted by DTTIPL to carry out the study involves the following main steps:

- Preparation of an initial questionnaire
- Field Visit to the utility
- Analysis of existing situation and identifying key issues / road blocks in completion of accounts
- Based on the above, drawing a tentative work plan / road map for updation of accounts upto the year 2009-10
- Closing meeting / discussion with the Head of Finance at the end of the field visit to discuss the DTTIPL observations and recommendations.

2.4 Throughout the field visit, DTTIPL coordinated with the ISP's officials, took their inputs/ support into account while developing the road map.

2.5 DTTIPL prepared an initial questionnaire to gather the primary information regarding the status of accounts preparation as on date (refer to Annexure 1). The questionnaire covered the following aspects:

- Details of the present accounting set up
- Present accounting system
- Status of computerization of accounts
- System of internal audit
- Status on accounts preparation and audit
- Status on compilation / consolidation of annual accounts at HO
- Status on compilation / consolidation of accounts at Zones
- Status on preparation of accounts by field offices/ accounting units
- Key issues / constraints faced in timely preparation of annual accounts / expediting clearance of backlog in preparation of annual accounts
- Reasons for delay in finalization of accounts

2.6 The above initial information was compiled by MVVNL with the assistance of ISP. DTTIPL studied the initial information prior to making the field visit to have focused discussions with MVVNL.

2.7 Thereafter field visit was undertaken and commenced with a kick off meeting with the Head of Accounts function and other key officials at the head office. The objective of this meeting was to obtain an overall understanding of the following aspects:-

- An overview of the organization and accounting set up
- Preliminary discussions of the information provided as per the questionnaire, accounts status and key issues
- Preparation of work plan for the field visits

2.8 Based on the above work plan, DTTIPL met the concerned key officials at select offices as under:-

- Head Office – Compilation and Accounts Department / Section
- Zone - Compilation and Accounts Department / Section
- Circle / Division/ Sub Division
- In addition, DTTIPL met the statutory auditors both at Brach and HO and also then CAG Team

2.9 The main objectives of the above meetings were to:

- Walk through the current accounting process of preparation for books of accounts, compilation of monthly and annual accounts and the audit process, covering the following aspects:
    - Preparation of books of accounts by accounting units
    - Compilation of Accounts by Divisions
    - Compilation of Accounts by Zones
    - Branch Audit
    - Compilation of Accounts by HO
    - Approval of accounts by Board
    - Statutory Audit
    - CAG Audit
    - Adoption of Accounts by AGM
- Understand in detail the current status on the compilation of accounts and audit
- Understand and discuss the key issues involved / constraints faced in timely preparation of accounts and audit thereof

- Conduct of the status analysis. This also covered understanding the target dates already given by MVVNL in the checklist and the assumptions behind it. This helped in re-defining the time frame.
- Arrive at practicable and implementable road map including time frame, responsibility and actions required

2.10 The above discussions also included ascertaining the status on computerization of accounts and IFRS.

List of Officials met

2.11 The list of officers and the auditors of MVVNL met / consulted by DTTIPL for the diagnostic study are provided in the Table 2.1 below.

Table 1: List of Officials met

S No.	Offices/ Stakeholders	People met / consulted
1.	Head Quarters, Madhyanchal	Mr. Parthi Sarthi Sen Sharma, Managing Director Mr. Ram Sajeevam – General Manager (Finance and Accounts) Mr. Anand Kumar Porwal – Accountant Deputy Chief Accounts Officer of LESA, Lucknow and Bareilly zones Mr. Sanjay Sharma – Accountant, Faizabad Zone Mr. B S Goel, Ex-GM(Finance), Madhyanchal and author of Accounting Rules and Procedures for U.P. Power Companies Mr. S K Saxena - Briefed on Computerization of Distribution Utilities
2.	LESA Zone	Mr. Mukesh Gupta, Zonal Accountant
3.	Division (Works), Barabanki	Mr. Sunil Kumar - Executive Engineer Mr. Bilal – Divisional Accountant (Works) Mr. Faheem Ahmed Siddique – Divisional Accountant (Revenue) Mr. P N Sharma – Section Holder (Junior Engineer) Mr. Sanjay Sharma – Div. Accountant, Faizabad Zone
4.	Division, Janakipuram, LESA Zone	Mr. Mukesh Gupta, Divisions Accountant (Revenue) Mr. A K Srivastava, Divisional Accountant, Division – Baksi-Ka-Talab Mr. G P Singh, Junior Engineer
5.	Division, Baksi-Ka-Talab, LESA Zone	Mr. Suresh Chandra, Division Accountant (Works)
6.	Sub – Division Store, Barabanki	Mr. M P Singh – Asst. Engineer, Sub-Store Mr. Lovlesh Gupta (Store -in-charge)

S No.	Offices/ Stakeholders	People met / consulted
7.	Telephonic Discussions with Branch Auditors	Mr. Sharad Mishra , M/s. Sharad Mishra & Co. Mr. Manish Agarwal, M/s. S. K. Associates & Co. Mr. Abhinav Khanna, M/s. Thakkar & Co. Mr. Rahul Gupta, M/s. Nripendra & Co.
8.	Telephonic Discussions with Statutory Auditors	Mr. V. C. Jain, M/s. R. K. Chari & Co., Chartered Accountants
9.	Accountant General's (AG) Office, Kendriya Bhawan, Lucknow	Mr. Saxena and his team at AG Office, Kendriya Bhawan, Lucknow

3. AN OVERVIEW OF MVVNL AND ACCOUNTING FUNCTION

3.1 This chapter provides a brief background of creation of MVVNL, the broad organization structure of MVVNL accounts and an overview of the existing process for preparation of accounts.

Creation of MVVNL

3.2 In pursuance of power sector reforms undertaken by the Government of Uttar Pradesh (GOUP), the Uttar Pradesh State Electricity Board (UPSEB) was unbundled under the first reforms transfer scheme dated 14th January 2000, into three separate legal entities as under:

a) Uttar Pradesh Power Corporation Limited (UPPCL) – vested with the function of Transmission and Distribution within the State.

b) Uttar Pradesh Rajya Vidyut Utpadan Nigam Limited (UPRVUNL) – vested with the function of Thermal Generation within the State

c) Uttar Pradesh Jal Vidyut Nigam Limited (UPJVNL) – vested with the function of Hydro Generation within the State.

3.3 Further through another Transfer Scheme dated 15th January, 2000, the assets, liabilities and personnel of Kanpur Electricity Supply Authority (KESA) under UPSEB were transferred to Kanpur Electricity Supply Company (KESCO), a company registered under the Companies Act, 1956.

3.4 In pursuance of further unbundling of Uttar Pradesh Power Corporation Limited (UPPCL) which was responsible for both Transmission and Distribution functions along functional lines after the enactment of the Electricity Act 2003, the following four distribution companies (“DISCOMS”) were created through Uttar Pradesh Transfer of Distribution Undertaking Scheme 2003 during the month of July 2003 -

a) Madhyanchal Vidyut Vitran Nigam Limited (Lucknow DISCOM)

b) Pashchimanchal Vidyut Vitran Nigam Limited (Meerut DISCOM)

c) Dakshinanchal Vidyut Vitran Nigam Limited (Agra DISCOM) and

d) Poorvanchal Vidyut Vitran Nigam Limited (Varanasi DISCOM)

About MVVNL

3.5 Madhyanchal Vidyut Vitran Nigam Ltd. (MVVNL) is a company incorporated under the Companies Act, 1956 for carrying out the business of distribution of electricity within its defined area of Supply. MVVNL started functioning as an independent distribution company in July 2003 as an undertaking of Uttar Pradesh State Government and a subsidiary company of UPPCL. The area of supply include the districts of Budaun, Bareilly, Pilibhit, Shahjahanpur, Lakhimpur, Hardoi, Sitapur, Unnao, Bahraich, Shrawasti, Balrampur, Gonda, Barabanki, Rae Bareli, Faizabad, Sultanpur, Ambedkarnagar and Lucknow.

3.6 MVVNL catered to 26,97,187 consumers having connected load of 5,437 MW consuming 7,777 MU and had annual turnover of Rs. 2,336 Crores (unaudited) as on 31st March 2009.

3.7 The company has been divided into four distribution zones - LESA zone, Lucknow zone, Faizabad zone and Bareilly zone.

MVVNL's Brief Financials

3.8 A snapshot of Madhyanchal Vidyut Vitran Nigam Ltd.'s financials is given below.

Balance Sheet					
Sources of Funds					**Rs. in lakhs**
	2004-05	**2005-06**	**2006-07***	**2007-08****	**2008-09*****
Shareholders' funds	66,117	87,599	153,995	214,113	207,285
Loan funds	71,761	100,191	116,603	93,910	165,002
Total	**137,878**	**187,780**	**270,598**	**308,023**	**372,287**
Application of Funds					
Fixed Assets	114,045	129,826	207,957	218,602	244,881
Net Current Assets	(19,602)	(40,020)	(109,153)	(159,710)	(209,389)
Preliminary Expenses	120	80	40	0	0
P & L Account –Debit	43,315	97,904	171,754	249,131	336,795
Total	**137,878**	**187,780**	**270,598**	**308,023**	**372,287**
Particulars	**2004-05**	**2005-06**	**2006-07**	**2007-08**	**2008-09**
Revenue Receipts	145,740	164,426	176,198	208,285	233,597
Revenue Expenditure	182,735	218,785	249,650	285,396	310,065
Surplus/ (Deficit)	(36,995)	(54,359)	(73,452)	(77,111)	(76,468)

* Pending approval in AGM

** Unaudited figures approved by Board of Directors

*** Based on Provisional Accounts.

Relationship of MVVNL with UPPCL (Holding Company)

3.9 The key transactions carried out among UPPCL as holding company and its subsidiary distribution companies (including MVVNL) are as under:-

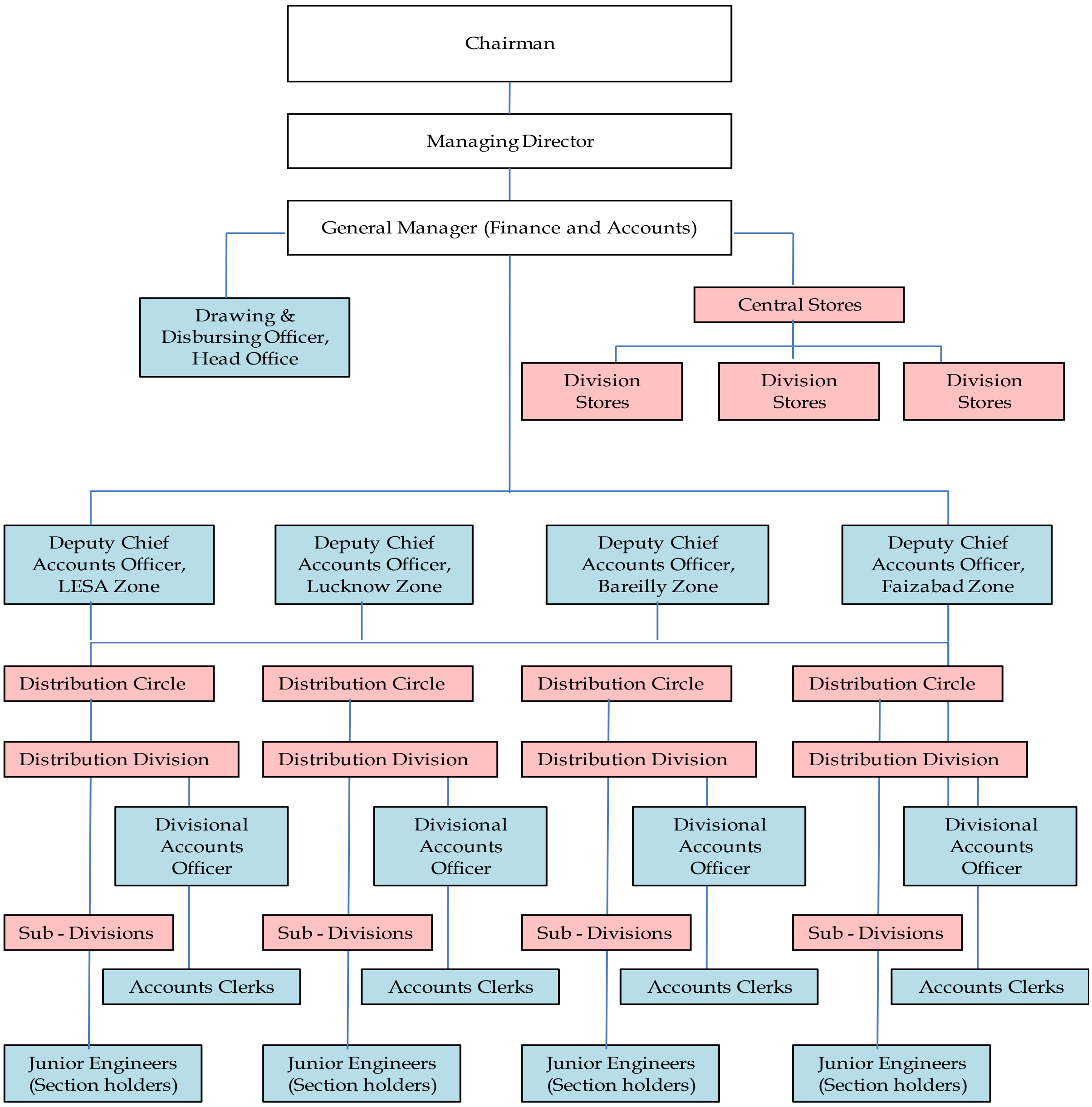
- UPPCL receives funds centrally in respect of the government schemes (both from central government and state government) and other capital receipts. Funds received for the government schemes are allotted as equity (RGGY, APDRP scheme, Dr. Ambedkar Gram Sabha Vikas Yojana etc.), capital grants (PTW and DHS grants etc.) and subsidies (Revenue subsidy, interest assistance etc.) to the DISCOMS.
- UPPCL procures power centrally for its subsidiaries (i.e. DISCOMS).
- MVVNL remits entire revenue from sale of power to UPPCL

- UPPCL disburses salaries and wages, employee loans and advances (for employees belonging to distribution companies) on behalf of the subsidiary companies

Overview of Accounting Function

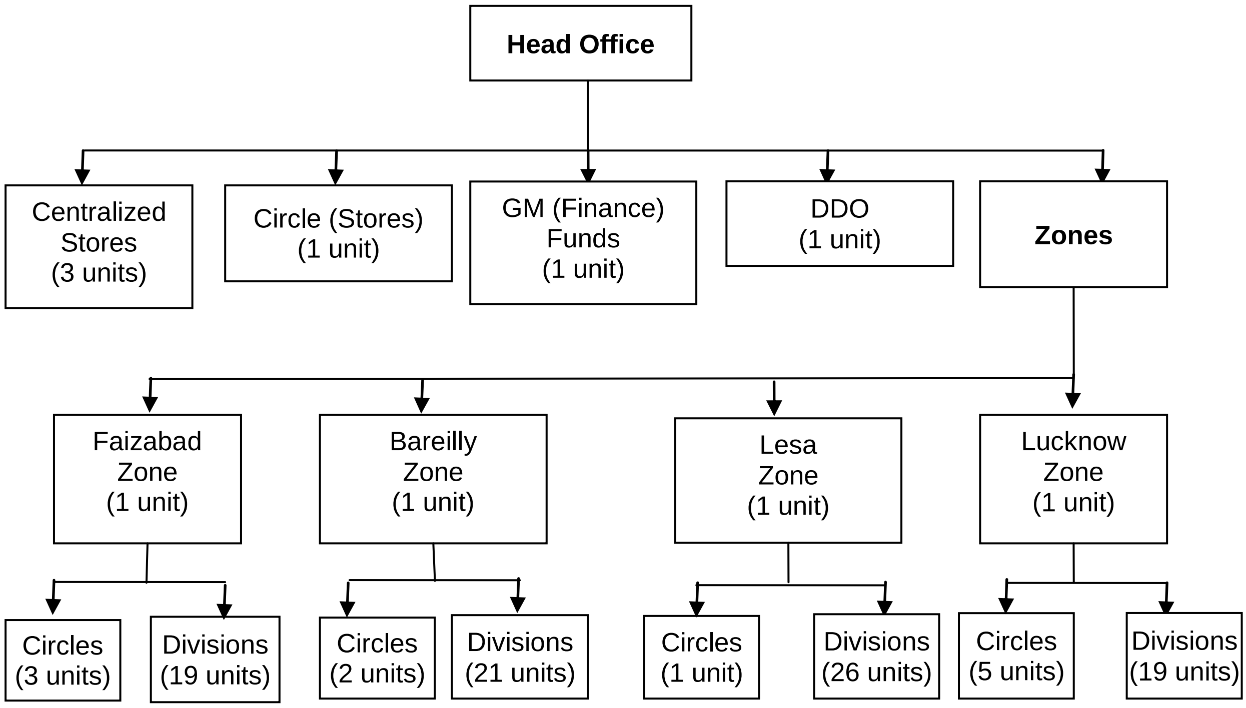
3.10 The General Manager (Finance & Accounts) heads the accounting function of the company. The accounting function in the organization is carried out by various accounting units/ field offices.

Exhibit 1: Organization Structure of MVVNL (Accounting function only)



3.11 The hierarchy of various accounting units in MVVNL is given in Exhibit 3.2 as below.

Exhibit 2: Hierarchy of Accounting Units in Madhyanchal Vidyut Vitran Nigam Ltd. (MVVNL)



3.12 In total there are 106 accounting units in MVVNL comprising of the Head Office, Zonal Offices, Circles (including one Circle Stores) and Divisions (including three Division Stores). The Sub divisions attached to the Division are not a separate accounting unit. However stock register is maintained at the Sub-division level.

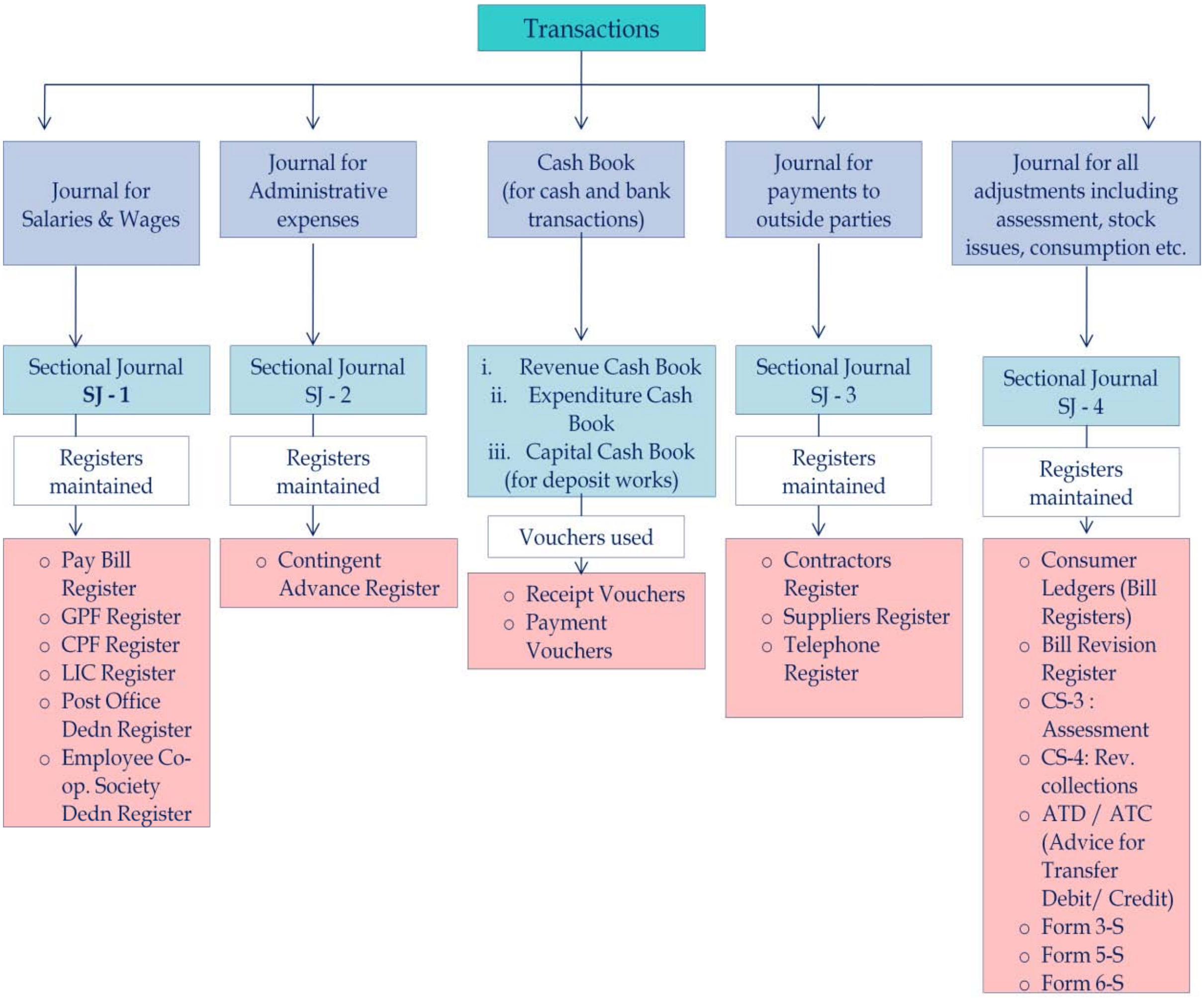
Accounting Process

3.13 The accounting process for preparation of books of accounts and audit includes the following in this order:-

- Preparation of primary books of accounts by accounting units
- Compilation of Accounts by Divisions
- Compilation of Accounts by Zones
- Branch Audit
- Compilation of Accounts by HO
- Approval of accounts by Board
- Statutory Audit
- CAG Audit
- Adoption of Accounts by AGM

3.14 The books of accounts and registers maintained by MVVNL are depicted in Exhibit 3.3 below:-

Exhibit 3: Book of accounts maintained by MVVNL



3.15 The key books of accounts maintain by each of the accounting unit are as follows:

Register	Record for transactions
Sectional Journal 1 (SJ 1)	For keeping records of Establishment expenses
Sectional Journal 2 (SJ 2)	For keeping records of Contingent Advances
Sectional Journal 3 (SJ 3)	For keeping records of transaction related to outside agencies such as suppliers, contractors
Sectional Journal 4 (SJ 4)	For adjustment entries (related to stock issuance and returns, adjustments of wrong bookings and rectifications) There is a requirement of maintenance of Stock Register at the Sub-Division level for recording issuance of materials from Stores and Return of Materials to Stores. Junior Engineer (JE) maintains the Stock Register and submits it to the Executive Engineer of the concerned Division. Accountant at Division level compiles the entries in SJ 4 from the Stock Register.

Register	Record for transactions
Cash Book / Bank Book	For recording cash and bank transactions
Consolidation Register	For consolidation of transactions of SJ1, SJ 2, SJ 3 & SJ 4 and Cash Book
Monthly Trial Balance (MTB)	For submission to their respective Zones

Process of Compilation of Accounts

3.16 The flow of activities and various steps involved in the accounts compilation are as under:

- Division accounts and Circle accounts are prepared and submitted to respective Zones. They submit their monthly trial balances (MTB) to the Zones and in some cases directly to the headquarters (Stores Divisions/Store Circle and headquarters' own drawing and disbursing officer).
- Zonal accounts are prepared by consolidating the MTBs as received above and are then submitted to Branch Auditor for audit. These include the consolidated accounts of accounting units including Divisions/Circles coming under the respective Zone.
- After the Branch Audit is done, Zonal accounts are finalized and submitted to HO. HO receives 4 accounts from four zones, 4 accounts from stores divisions/store circle and one from its own drawing and disbursing officer.
- Head Office maintains its own accounts and all records. It carries out the compilation of overall accounts on a monthly basis for all accounting units. At the end of the financial year, final accounts of the entire company are prepared by HO. This includes the consolidated accounts of HO along with all other accounting units as under:
    - Three centralized stores
    - Circle (Stores)
    - Zonal Accounting Units
    - Drawing & Disbursement Office (DDO) within the HO
- After merging its own transactions (fund transfers to the divisions and from the holding company) therein and making adjustments for interest on loans, power purchase and certain other provisions, the head office prepares the consolidated monthly trial balance. This contains all the figures required for the preparation of the Profit and Loss Account and the Balance Sheet. These are further subject to reconciliation of inter-company transfers between the Holding Company and other DISCOMS, adjustments of power purchase, grants, subsidies and provision for interest payable on loans, if any.
- After the finalization of annual accounts, it is approved by the Board of Directors.

- The Statutory Auditors usually start the work of statutory audit after they have received the Branch Audit Reports but before the accounts are approved by the Board.
- The approved final accounts are submitted to Statutory Auditors before the completion of statutory audit who submit their audit report to the shareholders.
- CAG audit takes places after the Statutory Auditor's report is submitted to CAG's office.
- Finally the adoption and approval of audited accounts is done at the Annual General Meeting of the shareholders.

(Please refer to Annexure 2 for certain aspects of accounting)

Status on Computerization of Accounts

3.17 The present overall status of computerization in MVVNL is as given below:

- Revenue Billing is outsourced and computerized. Revenue collections are updated in this system.
- Preparation of Monthly Trial Balances and their consolidation at zones have been outsourced and the Consolidation Registers are printed in the computer output reports for the consolidation of monthly trial balances zone-wise, circle-wise, division-wise and unit-wise.
- All other activities including accounts preparation are done manually.

4. CURRENT STATUS OF ACCOUNTS PREPARATION

4.1 This chapter discusses the current status of preparation and finalization of accounts as also the target dates as planned by MVVNL for completion of accounts in arrears.

Current status

4.2 The annual audited accounts upto the accounting year 2005-06 have been audited and adopted in the AGM. The accounts for the year 2006-07 are pending adoption in the AGM and the accounts for the subsequent years i.e. 2007-08 onwards are pending at various stages of completion. The overall status of accounts from the year 2006-07 till 2009-10 along with the plan for completion as made by MVVNL (as per the filled checklist provided to DTTIPL) for completion are provided in the Table given below:

Table 2: Present Status of Accounts Preparation

S. No.	Activities	Financial Year			
		2006-07	2007-08	2008-09	2009-10
1.	Completion of Primary Books of accounts:				
	Submission of Form 1 S (Stores Receipt) and Form 1 S (Stores Issues) by Junior Engineers	Complete	Complete	Complete*	In arrears; Not planned
	Updation of recording stock adjustments and Closure of Adjustment Register (SJ-4)	Complete	Complete	Complete*	In arrears; Not planned
2.	Compilation of Monthly Trial Balances:				
	Consolidation Registers and Monthly Trial Balances at accounting units	Complete	Complete	Complete	In arrears; Planned for Jan 31, 2012
	Supplementary Trial Balance at the year end	Complete	Complete	In arrears; Some divisions of Faizabad Zone	In arrears; Not planned
	Consolidation Registers at Zones	Complete	Complete	Complete	Not complete; Planned for Feb 29, 2012
3.	Branch Audit of Zonal Accounts	Complete	Complete	In progress; Planned for Dec. 07, 2010*	Not started; Not planned

S.	Activities	Financial Year			
4.	Preparation of Annual Accounts at HO				
	Consolidation Registers at Head Office	Complete	Complete	Not complete; Planned for Dec. 15, 2010*	Not done; Planned for July 31, 2012
	Inter-company reconciliation entries and preparation of provisional accounts	Complete	Complete	Provisional; Complete by Dec.15, 2010*	Not done; Planned for July 31, 2012
	Preparation of Unaudited Accounts	Complete	Complete	Not complete; Planned for Dec. 25, 2010*	Not complete; Not planned
	Adoption of final accounts by Board of Directors u/s Sec 215 (3) Cos' Act, 1956	Complete	Adopted on 27th Oct 10	Not done; Not planned	Not done; Not planned
5.	Completion of Statutory Audit u/s 619 (3) (a)	Complete	In progress. Expected to complete by 30th Nov 10 / First week of Dec 2010	Planned for Oct.31, 2011	Not done; Not planned
6.	CAG Audit:				
	CAG Supplementary Audit u/s 619 (3) (b)	Complete	Not started; Planned for April 30, 2011 as per checklist	Not done; Planned for March 31, 2012	Not done; Not planned
	Receipt of Draft Comments and Reply	Complete	Not done; Not planned	Not done; Not planned	Not done; Not planned
	Receipt of Final Comments from CAG	Complete	Not done; Not planned	Not done; Not planned	Not done; Not planned
7.	Approval and adoption of audited accounts at Annual General Meeting	Not done **	Not done; Not planned	Not done; Not planned	Not done; Not planned
8.	Completion of Internal Audit	Complete	Complete	Complete	Not started; Not planned

* Target dates as per verbal discussions

** Proposed date for adoption of audited accounts for 2006-07 in Annual General Meeting is 12th Nov. 2010.

*** The preparation of books of accounts for the year 2009-10 is not yet complete. The key accounting activities that are still to be taken up are:

- Submission of Form 1 S (Stores Receipt) and Form 1 S (Stores Issues) by Junior Engineers
- Updation of recording stock adjustments and Closure of Adjustment Register (SJ-4)

As per the accounting process followed by MVVNL, until the updation of recording stock adjustments and closure of Adjustment Register (SJ-4), the stores issued during the year will continue to be shown under the Stock Account and the final Capital Work Account/ Fixed Assets / Operation and Maintenance Accounts would not get debited. Hence in the absence of the SJ-4 adjustment, the accounts will be materially incomplete and will not show a true and fair status. Thus this activity is very important for completion of accounts.

(Please refer to Annexure 3 for details status on preparation and submission of Monthly Accounts by the Divisions/ Zones for the year 2009-10)

4.3 Based on the above it emerges that submission of monthly accounts by the Division Accounting Units to the Zones for the year 2009-10 is in arrear for a period ranging between 1 to 6 months.

Status on Branch and Statutory Audits

4.4 DTTIPL had discussions with the branch auditors, statutory auditors and CAG officials to understand the current status on audit and their views on delay in finalization of accounts. The key issues that emerge during the discussion are as under:-

4.5 The Branch Auditors have been appointed for year 2008-09 and the branch audit is in progress. The branch auditors are appointed by the CAG for each Zone separately. The statutory auditors have been appointed for three years 2007-08, 2008-09 and 2009-10. The statutory auditors are also appointed by the CAG.

4.6 The main reasons cited by the Branch and Statutory Auditors that generally lead to delay in conduct and completion of audit are provided as under:

- Submission of accounts by Zones is generally delayed leading to delay in completion of branch audit.
- Several changes are made by the Zones in the accounts during the conduct of audit requiring re-checking by the auditors.
- Delay in accounting/ reconciliation of inter unit transfers (within divisions and zones) of materials.
- At times late coming of staff delays the auditors work.
- There is need to appoint a coordinator to facilitate the audit work.
- Departmental circular should be issued before the commencement of audit so that staff is prepared for audit work.

4.7 The main reasons for delay in completion of CAG Audit and adoption of accounts in AGM are provided as under:

- Delay in providing accounts by MVVNL after the audit team approaches MVVNL Management
- Delay in providing responses to the CAG queries
- Delay in organizing AGM by MVVNL. This is due to the reason that MVVNL does not have any post for Company Secretary on a regular basis. Presently, there is only one Company Secretary, who is handling secretarial work of UPPCL as well as all DISCOMS, RVUNL, KESCO, UPPTC, and UCM Coal Ltd.

Please refer to Annexure 4 for details of discussion with branch auditors, statutory auditors and CAG team.

Summary of Overall Status / Plan for Completion of Accounts by MVVNL

4.8 Based on the above, the overall current status and plan as per MVVNL for preparation of accounts upto the year 2009-10 emerge as follows:

Year	Overall Status
Accounts for the year 2006-07	▪ The accounts for the year 2006-07 have been audited and are pending adoption in the AGM. ▪ As on the date of the field visit, MVVNL had planned to adopt the accounts in the AGM to be held in November 2010.
Accounts for the year 2007-08	▪ The accounts for the year 2007-08 have been approved by the Board of Directors (BoD) of MVVNL and the statutory audit is still in progress, and is expected to be completed by December 2010. ▪ The CAG audit is yet to commence. It is expected to be completed by April 30, 2011, as planned by MVVNL. ▪ The subsequent activities to finalize the audit and accounts adoption process shall be planned after the completion of CAG audit.
Accounts for the year 2008-09	▪ The completion of accounts for the year 2008-09 are still at the Zonal level and the Branch Audit is still in progress and is expected to be completed by December 7, 2010, as planned (as per the checklist provided) by MVVNL. ▪ The consolidation of accounts and preparation of unaudited accounts at HO level are expected to be completed by December end, 2010 as planned by MVVNL. ▪ The statutory audit for year 2008-09 is yet to commence. ▪ Since the CAG audit of the year 2007-08 is expected to be completed by the April 2011, MVVNL has planned

Year	Overall Status
	to complete the statutory audit for the year 2008-09 by October 2011 and CAG audit by March 2012 only.
Accounts for the year 2009-10	▪ The preparation of books of accounts for the year 2009-10 is not yet complete. The key accounting activities which are still to be taken up are as under:- ◆ Submission of Form 1 S (Stores Receipt) and Form 1 S (Stores Issues) by Junior Engineers ◆ Updation of recording stock adjustments and Closure of Adjustment Register (SJ-4) ▪ As per the accounting process followed by MVVNL, until the updation of recording stock adjustments and Closure of Adjustment Register (SJ-4), the stores issued during the year will continue to show under the Stock Account and the final Capital Work Account/ Fixed Assets / Operation and Maintenance Accounts would not get debited. Hence in the absence of the SJ-4 adjustment, the accounts will be materially incomplete and will not show a true and fair status. Thus this activity is very important for completion of accounts. ▪ The consolidation of accounts at Zonal level is planned only by March 2012, by which time the accounts for the year 2008-09 are expected to be completed. The branch audit will be planned only after this activity is done. ▪ The consolidation of accounts at HO level, statutory audit and CAG audit are yet to be planned.
Accounts for the year 2010-11	▪ The accounts for the year 2010-11 are still in the stage of preparation at the field level and are likely to remain in arrear for next 2-3 years going by the above status on the accounts of previous years.

5. KEY ISSUES / ROAD BLOCKS IN COMPLETION OF ACCOUNTS

5.1 This chapter provides the key issues / road blocks in completion of accounts for the year upto 2009-10 based on the following:

- Study/ review and analysis of the overall accounting structure and accounting process followed in MVVNL
- Current status on preparation of accounts and discussions held with the MVVNL's officials
- Discussions with the Branch/ Statutory and CAG auditors described in the previous chapters.

5.2 The key issues / road blocks in clearing of arrears in accounts are summarized below:

S. No.	Description of the Issue / Road Block	Actions Required by MVVNL
1.	<u>Delay in Preparation of Accounts at Divisions level – monthly stock adjustments in the Adjustment Register (SJ 4), Pending for the year since 2009-10</u> Delay in submission of monthly abstracts by Section holders (Junior Engineers in charge of Sections) in Form 1 S (Stores Receipts) and Form 1 S (Stores Issues) who are required to prepare the monthly Form 5 S (Stores Receipts with values) and Form 6 S (Stores Issues with values) to record the monthly stock adjustments in the Adjustment Register (SJ 4) The above activity is not completed even much after the accounting year is over. At present this activity is yet to be completed since for the year 2009-10. As mentioned earlier, in line with accounting process followed by MVVNL, until the updation of recording stock adjustments and Closure of Adjustment Register (SJ-4), the stores issued during the year will continue to show under the Stock Account and the final Capital Work Account/ Fixed Assets / Operation and Maintenance Accounts would not get debited. Hence in the absence of the SJ-4 adjustment, the accounts will be	This issue requires administrative action at the highest level of MVVNL's management to clear the backlog. MVVNL should attempt to clear the SJ-4 stock adjustment for all the pending years (i.e. 2009-10 till date) simultaneously. Clear directions by the Management (Director /Chief Engineer) should be issued to the Junior Engineers to submit their pending returns for the year 2009-10 say within next 1 month (i.e. December 31, 2010) strictly with no time extensions and for the year 2010-11 by April 30, 2011. In order to facilitate the above one time clearance of arrear, a Task Force / Monitoring Cell may be set up at the Division / Zonal and HO level to monitor this task. The constitution of the above Task Force is explained in Chapter 6 Para 4. If required MVVNL can take the help of external/ internal auditors/ ISP at Division level for this on one time backlog clearance. For future, MVVNL should relook at the current accounting practice and evaluate the option of charging the final head of expenditure based on the stores issues instead of waiting for the concerned JE to render their accounts. The

S. No.	Description of the Issue / Road Block	Actions Required by MVVNL
	materially incomplete and will not show a true and fair status. Thus this activity is very important for completion of accounts. Based on discussions with MVVNL, it is understood that the delay may be attributed to the following factors/ reasons (DTTIPL has not independently verified these reasons) : ▪ Works under various Government Schemes which are recorded as completed projects during the financial year may get carried out even after the reported completion time. Hence, the records of section holders Form 1S and 2S as well as the Adjustment Register (SJ 4) are kept open for recording such works in the previous period. ▪ Urgent field works are completed with the support of contractors. Lengthy tendering processes have to be followed for issuance of work orders in their names. Until the issuance of work orders, accounts are not closed to record such works. This practice results in delays in submission of monthly returns for consumption of stores by Section holders. ▪ There are inadequate number of Junior Engineers due to non replacement of retired JEs and lack of training to newly recruited technical staff. ▪ Technical staff generally gives less priority to submission of monthly returns. The account team does not have administrative control over	control and accounting over the unconsumed stores at sight (in JE's hand) at the year-end may be handled and treated separately.

S. No.	Description of the Issue / Road Block	Actions Required by MVVNL
	Section holders (JEs) as technical staffs are controlled by Divisional Executive Engineers. ▪ There is a practice of updating stock registers only on completion of site works. This results in delay in updation of stock registers. ▪ There is a lack of monitoring/ MIS the timely submission of stock returns at the management level. The Divisions stated that they could compile the monthly trial balances in not more than a week's time, if the Junior Engineers could submit their stock accounts. The Zonal Accounts Officers are also of the opinion that as soon as the accounts from the divisions are received, they could compile the accounts within 7-15 days' time. Similarly, the GM (Finance & Accounts), MVVNL stated that he could get the financial statements ready for statutory audit in a month's time if he receives the zonal accounts from the zones duly audited by the branch auditors.	
2.	<u>Delay in reconciliation of Inter-Unit Transactions (IUT)</u> ▪ IUT balances remain outstanding mainly due to following reasons:- a. IUT - Materials – Non submission of accounts by Zones and Divisions while Store accounts are submitted to HO. b. IUT – Inter-Company Balances – Non-updation of accounts by UPPCL after 2006 while accounts of MVVNL are updated till 2008.	This issue also requires administrative action at the highest level of MVVNL's management to clear the backlog. Regarding reconciliation of IUT Inter-Company balances, holding company, UPPCL and MVVNL need to coordinate this activity in line with the target time frame to complete its accounts. In order to facilitate the above one time clearance of arrear, a Task Force / Monitoring Cell may be set up at the Division / Zonal and HO level to monitor this task. The constitution of the above Task Force is explained in Chapter

S. No.	Description of the Issue / Road Block	Actions Required by MVVNL
	Other reasons for non-reconciliation of IUT Balances can be attributed to the following:- ▪ ATDs (Advice for Transfer Debit) / ATC (Advice for Transfer Credit) are not issued at the same time when the entry is made in the Section Journal. ATDs/ ATCs are at times sent late (time period varying from 1 to 10 months). ▪ Receipt of acceptances of ATDs from responding unit also gets delayed due to late issuance of ATDs in Form 55 by the originating unit. ▪ Delay in receipt of acceptances of Transfer Debits (ATDs) in Form 56 by responding units are also due to delay in submission of Form 1S and 2S by Section holders to such responding units.	6. If required MVVNL can take the help of external /internal auditors/ ISP help at each Division level for this one time backlog clearance. For future, MVVNL should look at computerization of accounting system which should enable automatic IUT reconciliation.
3.	Hierarchy of accounting units and consolidation process - Consolidation of trial balances pending for the year since 2008-09: MVVNL has a hierarchical accounting set up for preparation and consolidation of accounts as under: ▪ Sub-divisions report stock positions of all section holders to respective Divisions. Until all Section holders submit their stock positions, Sub-Divisions are not able to submit its accounts to Divisions. ▪ Divisions send Consolidated Monthly Trial Balances to their respective Zones. Until all Sub-divisions submit their accounts to their Divisions, Divisions cannot consolidate and	Under the manual environment and present organization structure, MVVNL would have no choice but to follow the sequential steps in preparation of accounts from the lowest level to the HO level. It would require strong administrative action at the MVVNLs management level to ensure adherence to the various time lines by all as instructed / defined to clear the backlog. For future, MVVNL should look at computerization of accounting system which should enable timely preparation of accounts without facing this limitation.

<table>
<tr><th>S. No.</th><th>Description of the Issue / Road Block</th><th>Actions Required by MVVNL</th></tr>
<tr><td></td><td>submit accounts to Zones.
▪ Zones prepare and send Consolidated Monthly Trial Balances for such Zones to Head Quarters. Until all Divisions submit their accounts to Zones, Zones are not able to consolidate and submit its accounts to the Head Quarters
▪ Head Quarters is not able to consolidate company accounts until all Zones have submitted their Consolidated MTBs.</td><td></td></tr>
<tr><td>4.</td><td><u>Process of commencement/ completion of Branch Audits of Zonal Accounts, leading to delay</u>
▪ At present the Branch Auditors are appointed on a year to year basis. As of now the branch auditor have been appointed for the year 2008-09. Further the branch audit is commenced only after the preparation of consolidated Monthly Trial Balances (MTB) at the zonal level.
▪ Due to delay in book keeping at accounting units due to non-closure of SJ 4 Register and the consequent delay in receipt of Monthly Trial Balances (MTB) from various accounting units, there is further delay in the consolidation process of MTBs at the zonal level.
▪ Delay in the commencement by some branch auditors due to their other professional engagements.
▪ Further it appears that there is lack of monitoring system at the Zone and HO level to ensure that the Branch Audit is commenced /</td><td>MVVNL may take up the matter with the Branch auditors to commence the audit based on the consolidated monthly trial balances sent by the Divisions without waiting for the final consolidated annual MTB at the Zonal level. This can help in early commencement of branch audit.
Further, MVVNL may request the CAG for appointment of branch auditor for the subsequent years also i.e. 2009-10 and 2010-11 so that the branch audit can be taken up as and when the individual Zones are ready without waiting for the completion of statutory audit of accounts of the prior year.</td></tr>
</table>

S. No.	Description of the Issue / Road Block	Actions Required by MVVNL
	completed in time.	
5.	<u>Other Issues</u> The other main reasons for delay are as under:- ▪ Lack of computerized accounting system ▪ Lack of adequately professionally qualified staff. ▪ Inadequate quality of the accounts rendered for audit - Frequent changes made in accounts during the conduct of audit requiring re-checking. ▪ Inadequate management of Audit - absence of audit coordinator to facilitate audit work and delay in providing responses to auditor's queries. ▪ Delay in adoption of final accounts by Board of Directors ▪ Delay in convening Annual General Meetings to approve the audited accounts ▪ Lack of overall integrated planning and monitoring of the entire process of preparation and compilation of accounts at all levels and across locations, inviting auditors to commence the audit, monitoring audit progress.	All these issues require administrative action and would facilitate the completion of accounts in time, especially computerization of accounts, up gradation of accounting staff etc.

6. WORK PLAN/ROAD MAP FOR CLEARING BACKLOG IN ACCOUNTS UPTO THE YEAR 2009-10

6.1 This chapter provides the Work Plan / Road Map for clearing the baclkog in accounts keeping in view the current status in arrears of accounts, key issue identified and the interventions required by MVVNL as discussed in the previous chapters.

Overall Target

6.2 The overall aim of MVVNL should be to clear the backlog in the preparation of accounts upto the financial year 2009-10 of MVVNL and ideally at the same time creating no further backlog for the current year. Accordingly, the backlog in annual audited accounts for the years upto 2009-10 should be cleared and simultaneously accounts for the year 2010-11 should get audited more or less in time.

6.3 The MVVNL top management as well as the operating team must be committed to the above target and it would require a special effort/ intervention in terms of one time special drive on its part to achieve the same. As mentioned in the previous chapter MVVNL may take the support of its internal auditor and ISP resources in clearing the backlog in stores accounts and inter unit reconciliations. However it should be noted that the prime ownership for clearing of the backlog would continue to be with the MVVNL.

6.4 In order to ensure proper support and monitoring of the work plan, it is suggested that MVVNL should form a Special Task Force headed by the MD. The Task Force should also take decision on taking outside support wherever required for the updation of accounts. The Task Force should meet at least once a month and report the progress to the MD and take remedial measures for any slippages. The Task force may consist of the following members:

Level	Proposed Members
HO level	▪ Managing Director ▪ Head of Finance (also Member Secretary) ▪ Representatives from the Stores and Operations MVVNL may also adopt one consultant from Institute of Public Auditors of India (IPAI) to be part of the Task Force for the initial 6 months.
Zonal Office Level	▪ Zonal Engineer ▪ Zonal Head of Finance (also Member Secretary) ▪ Representatives from the Division Accounts and Operations MVVNL may also adopt one consultant from Institute of Public Auditors of India (IPAI) to be part of the Task Force (for two Zones together) for the initial 6 months.

Suggested Work Plan

6.5 The suggested work plan / road map for each of the year is provided below:

Accounts for the year	2006-07
Present Status	The accounts for the year 2006-07 have been audited and are pending adoption in the AGM. As on the date of the field visit, MVVNL has planned to adopt the accounts in the AGM to be held in November 2010.
Suggested Work Plan / Action required by MVVNL	Holding of AGM as scheduled

Accounts for the year	2007-08
Present Status	▪ The accounts for the year 2007-08 have been approved by the Board of MVVNL and the statutory audit is in progress, which is expected to be completed by Ist Week of December 2010 as planned by MVVNL. ▪ The CAG audit is yet to be commenced and which is expected to be completed by April 30, 2011 as planned by MVVNL. ▪ The subsequent activities for accounts adoption process shall be planned after the completion of CAG audit.
Suggested Work Plan / Action required by MVVNL	▪ Ensuring completion of statutory audit as per the target date i.e. Ist week of December 2010. ▪ The time frame of CAG audit can be reduced to upto 2 months (i.e. February 7, 2011) by proper coordination and timely response to the audit paras by MVVNL. ▪ The AGM should be planned immediately after completion of CAG audit. The target date for adoption of accounts should be upto Feb 28, 2011.

Accounts for the year	2008-09
Present Status	▪ The completion of accounts for the year 2008-09 are still at the Zonal level and the Branch Audit is in progress which is expected to be completed by December 7, 2010 as planned (as per the checklist provided) by MVVNL. ▪ The further activities at the HO for consolidation of accounts and preparation of unaudited accounts are expected to be completed by December 25, 2010 as planned by MVVNL. ▪ The statutory audit for year 2008-09 is yet to commence. ▪ Since the CAG audit of the year 2007-08 is expected to be

Accounts for the year	2008-09
	completed by the April 2011, MVVNL has planned to complete the statutory audit for the year 2008-09 by October 2011 and CAG audit by March 2012 only.
Suggested Work Plan / Action required by MVVNL	▪ Ensuring completion of branch audits as per the target date i.e. Ist week of December 2010. ▪ Ensuring completion of unaudited accounts by end of December 2010. This activity should not be withheld for pending CAG audit of the previous year and any change required in the opening balances can be adjusted during the course of audit for the year 2008-09. ▪ The time frame of statutory audit must be reduced and MVVNL should aim to complete Statutory Audit by March 7, 2011. The statutory audit should be taken up without waiting for the CAG audit completion for the previous year. ▪ MVVNL should aim to complete the CAG audit within next 2 months (i.e. May 7, 2011) by proper coordination and timely response to the audit paras by MVVNL. ▪ The AGM should be planned immediately after completion of CAG audit. The target date for adoption of accounts should be upto May 31, 2011.

Accounts for the year	2009-10
Present Status	▪ The preparation of books of accounts for the year 2009-10 is yet not complete. The key accounting activities which are yet to be taken up are: ◆ Submission of Form 1 S (Stores Receipt) and Form 1 S (Stores Issues) by Junior Engineers ◆ Updation of recording stock adjustments and Closure of Adjustment Register (SJ-4) ▪ The further activities at the Zonal Level for consolidation of accounts are planned only by March 2012, by which time the accounts for the year 2008-09 are expected to be completed. The branch audit will be planned only after this activity is done. ▪ The further activities at the HO Level for consolidation of accounts, statutory audit and CAG audit are yet to be planned.
Suggested Work Plan / Action required by	▪ The preparation of accounts and passing of adjustments for SJ 4

Accounts for the year	2009-10
MVVNL	should be taken up on priority basis and must not be delayed further. This activity should be completed within next 2 months (say December 31, 2010). This activity is not dependent upon the completion of accounts for the previous years. ▪ With the completion of above activity, the accounting units should also aim to submit the monthly accounts for all the months including supplementary trial balance by January 31, 2011. ▪ Based on the above, the Zones should aim to complete the branch accounts and branch audit by March 31, 2011. ▪ Based on the above, the HO should aim to complete the HO accounts and Statutory Audit by June 30, 2011. ▪ MVVNL should aim to complete the CAG audit within next 2 months (i.e. August 31, 2011) by proper coordination and timely response to the audit paras by MVVNL. ▪ The AGM should be planned immediately after completion of CAG audit. The target date for adoption of accounts should be upto September 30, 2011.

Accounts for the year	2010-11
Present Status	The preparation of accounts for the year 2010-11 are still in the stage of preparation of accounts at the field level and is likely to remain in arrear for next 2-3 years going by the above status on the prior year accounts.
Suggested Work Plan / Action required by MVVNL	▪ Ideally, MVVNL's aim should be to complete the accounts for the year 2010-11 within 6 months (i.e. by September 2011). However this could be challenge considering the backlog. ▪ MVVNL approach should be to prepare and keep the accounts for the year 2010-11 ready for audit without waiting for the completion of audit of the previous years.

6.6 Based on the above suggested work plan / road map, activities and the target dates are sumarised below:

Table 3: Summary of Work Plan - Madhyanchal Vidyut Vitran Nigam Ltd

S. No.	Activities	Overall Responsibility	Planned Target Dates for pending years		
			2007-08	2008-09	2009-10

S.	Activities	Overall	Planned Target Dates for pending years		
1.	Completion of Primary Books of accounts:				
	Submission of Form 1 S (Stores Receipt) and Form 1 S (Stores Issues) by Junior Engineers	Executive Engineer	NA	NA	31st Dec 2010
	Updation of recording stock adjustments and Closure of Adjustment Register (SJ-4)	Concerned Accounts Officer at Circles/ Divisions/ Stores	NA	NA	15th Jan 2010
2.	Compilation of Monthly Trial Balances:				
	Consolidation Registers and Monthly Trial Balances at accounting units	Concerned Accounts Officer at Circles/ Divisions/ Stores	NA	NA	31th Jan 2011
	Consolidation Registers at Zones	Dy Chief Accounts Officer	NA	NA	15th Feb 2011
3.	Branch Audit of Zonal Accounts	Dy Chief Accounts Officer/ Branch Auditor	NA	7th Dec 2010	31st March 2011
4.	Preparation of Un-audited Accounts:				
	Consolidation Registers at Head Office	GM (Finance & Accounts) / HO accountant	NA	20th Dec 2010	15th April 2011
	Inter-company reconciliation entries and preparation of final accounts	GM (Finance & Accounts) / HO accountant	NA	25th Dec 2010	22nd April 2011
	Preparation of Unaudited Accounts	GM (Finance & Accounts) / HO accountant	NA	31st Dec 2010	7th May 2011
6.	Approval of final accounts by Board of Directors u/s Sec 215 (3) Cos' Act, 1956	Board of Directors	NA	7th January 2011	15th May 2011

S.	Activities	Overall	Planned Target Dates for pending years		
7.	Completion of Statutory Audit u/s 619 (3) (a)	GM (Finance & Accounts) / Statutory Auditors	7th Dec 2010	7th March 2011	30th June 2011
8.	Completion of CAG Audit u/s 619 (3) (b)	GM (Finance & Accounts) / CAG Auditors	7th Feb 2011	7th May 2011	31st August 2011
10.	Approval and adoption of audited accounts at Annual General Meeting	Company Secretary/ MVVNL	28th Feb 2011	31st May 2011	30th September 2011

NA – Not Applicable

6.7 Simultaneously with the above, MVVNL should undertake/ complete the following to improve upon the quality of annual acounts:

- Creation of fixed assets register
- Cleaning up and reconcilition of current assets especially Sundry Debtors

7. OTHER ASPECTS

Computerization

7.1 The present overall status of computerisation in Madhyanchal Vidyut Vitran Nigam Limited can be listed out as below.

- Revenue Billing is outsourced and computerized. Revenue collections are updated in this system.
- Preparation of Monthly Trial Balances and their consolidation at zones have been outsourced and the Consolidation Registers are printed in the computer output reports for the consolidation of monthly trial balances zone-wise, circle-wise, division-wise and unit-wise.
- All other activities including accounts preparation are done manually.
- The decision regarding computerization of financial accounting systems has to be taken and implemented by the holding company, UPPCL.

IFRS Implementation

Applicability of IFRS in India

7.2 On recommendation made by the Core Group, constituted by the Ministry of Corporate Affairs (MCA) for convergence of Indian Accounting Standards with International Financial Reporting Standards, MCA on January 22, 2010, had come out with the roadmap for convergence to IFRS for the Companies other than Banking companies, Insurance companies and Non-Banking Finance Companies.

7.3 The Core Group, in this respect, held its meeting on January 11, 2010 and agreed that in view of the roadmap for achieving convergence, there will be two separate sets of Accounting Standards u/s Section 211(3C) of the Companies Act, 1956.

First set would comprise of the Indian Accounting Standards which are converged with the IFRSs which shall be applicable to the specified class of companies as defined in the roadmap.

The ***second set*** would comprise of the existing Indian Accounting Standards (as notified by the government) and would be applicable to other companies.

7.4 The roadmap issued by MCA defines a phase wise convergence plan. Accordingly, the first set of accounting standards would be applicable to various companies covered under the defined criteria over different phases.

Timelines for Companies other than Banking, Insurance and Non-banking financial companies

7.5 The first set of Accounting Standards (i.e. converged accounting standards) will be applied to specified class of companies in phases as follows:

Particulars	Phase I	Phase II	Phase III
Companies covered	▪ NSE – Nifty 50 ▪ BSE - Sensex 30	▪ whether listed or not, having a net	▪ Listed companies which have a net

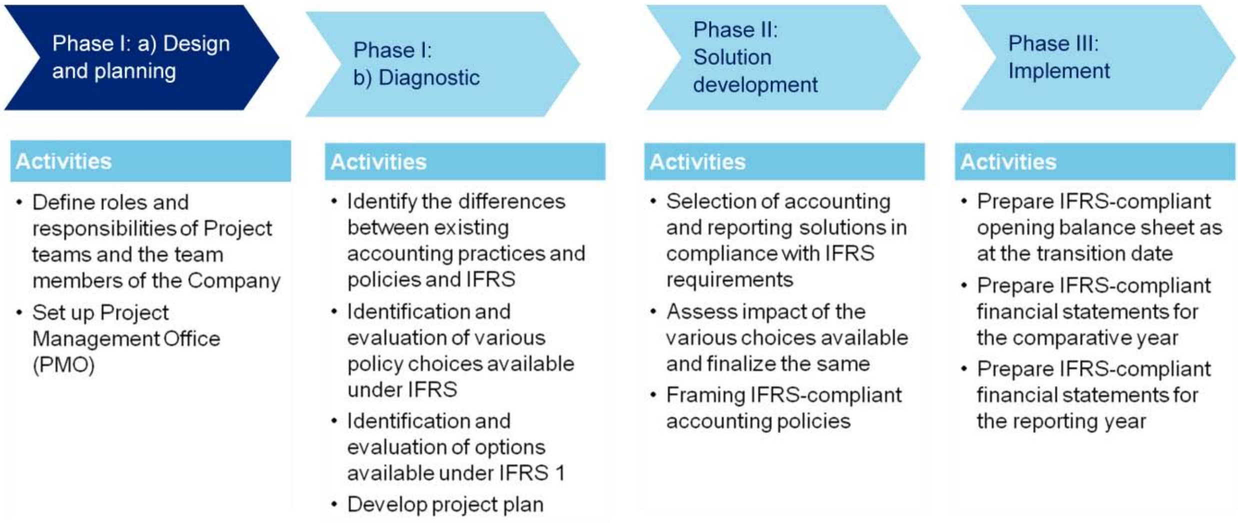
Particulars	Phase I	Phase II	Phase III
	▪ Companies with shares or other securities listed overseas ▪ Companies with net worth in excess of Rs.1,000 crores.	worth exceeding Rs. 500 crores but not exceeding Rs. 1,000 crores	worth of Rs. 500 crores or less
Opening Balance Sheet	1 April 2011	1 April 2013	1 April 2014
Quarterly	June 2011 to Dec 2011	June 2013 to Dec 2013	June 2014 to Dec 2014
Financial year	2011-12	2013-14	2014-2015

*The MCA has clarified that **'Net worth'**, for the purpose of the Roadmap shall be computed as the sum of share capital and all the reserves (except revaluation reserve, if any) and reduced by miscellaneous expenses to the extent not written off and the debit balance of profit and loss account, if any. Further, the net worth for this purpose shall be computed as of March 31, 2009.*

Typical IFRS Implementation Plan

7.6 Adoption of IFRS is one of the most significant challenges faced by all entities worldwide. IFRS requires disclosure of large amount of information to be reported as part of the financial statements and the notes to accounts. This creates need for new data, changed calculations and changes in reporting requirements. IFRS conversion projects are often viewed as finance and accounts specific projects. However, these projects impact finance, accounting, information system and human resources. Adoption of IFRS can provide opportunities for achieving synergies with other IT projects and strategic initiative.

7.7 Typically, an IFRS Implementation project is divided into the following three phases along with the activities:



To summarize, an IFRS adoption project is much more than just a finance/accounting project. It encompasses a complete business transformation and hence there is a need to have a holistic approach and participation from all stakeholders.

Applicability of IFRS to MVVNL

7.8 As per provisional accounts for the year 2008-09, the Net Worth of MVVNL as on 31.3.2009 is estimatd as negative by Rs. 1295 crores. Therefore the IFRS timelines as mentioned above are not applicable at present as it is not covered by the current criteria laid down by the government. It is understood that the timelines for applicability of IFRS in respect of companies which may get covered as per the above criteria at future date are awaited.

8. FUTURE AREAS FOR IMPROVEMENT

8.1 This chapter provides the key areas for improvement which are important for enduring solution to the problems faced at present by MVVNL in timely and accurate preparation and closure of accounts

Design of an Integrated Financial Accounting System

8.2 As a permanent solution for the current problems in facing the difficulties in the timely and accurate preparation and finalisation of accounts, it is strongly advised to implement a Computerised Financial Accounting System with integrated stock and inventory management modules to have a dynamic system of accounts preparation. This software has to be developed in lines with the unique needs and requirements of electricity distribution companies.

8.3 Branch auditors are of the opinion that in the manual accounting system currently followed, accounting of inter unit transfers (within divisions and zones) of materials become too complicated leading to delays in finalisation and audit of accounts.

8.4 The decision for developing an computerized Integrated Financial Accounting System may be taken by the holding company, UPPCL without any further delay. This common software, after development and testing, can be implemented in all the four distribution companies including MVVNL after proper training to the proposed users of the system.

8.5 The benefit of computerised financial management system would be the assurance of a uniform accounting process with uniform output reports and final accounts across all the four distribution companies as well as the faster closure of accounts preparation and finalisation with provisions for systematic reconciliation of inter unit accounts, bank accounts and control accounts across various account heads and the automatic updation of fixed assets registers.

Development of Accounting Manual for distribution utilities

8.6 As a supplement to the above integrated financial accounting system, a comprehensive accounting manual may also be designed and implemented to follow uniform accounting practices, principles and policies commensurate with GAAP (Generally Accepted Accounting Principles) and the specific requirements of eletricity distribution companies which are to be followed in accordance with the provisions laid down in Electricity Act, 2003.

Installation of a Management Information System for accounts preparation monitoring:

8.7 A robust MIS (Management Information System) may be developed and implemented so that the present status of accounts preparation and the status of submission of monthly returns from all stock holders (JEs) across the entire Sub-divisions can be known at any time by the management with the use of MIS reports.

8.8 This would also be helpful for the management to monitor the key activities needed for the finalisation of accounts, start date, details of audit queries pending, expected completion dates of various audits being conduted within the organisation at any point of time.

Finalisation of Ledger account balances relating to Uttar Pradesh Transfer of Distribution Undertaking Scheme 2003:

8.9 The holding company, UPPCL may take immediate steps to finalise the provisional balances of sundry debtors, stocks and spares, fixed assets, capital work in progress, other current assets and current liabilities and provisions which were transferred and accounted for on gross values as on 11.08.2003. Due to this, fixed assets registers are not updated and maintained properly and the values remain unreconciled with the ledger account balances.

8.10 The details and break up of individual assets and liabilities as on 11.08.2003 have not yet been finalised and reconciled. In the absence of item wise details of aforesaid broad heads of assets and liabilities transferred and pending reconciliation, the correctness of book balances, physical existence of assets and the effect of the same on assets and liabilities and profit and loss account cannot be ascertained at any point of time.

Annexure 1

Format of initial questionnaire to facilitate carrying out diagnostic study

ENTITY NAME:

PLACE:

AREAS/DESCRIPTION	RESPONSIBILITY OF PROVIDING INFORMATION/ COMPLETION OF ACTIVITY	ESTIMATED COMPLETION DATE
1 Accounting Setup		
(i) Head Office – Overall organizational structure of Accounts Deptt., covering departments/sections and the names and contact details of the corresponding Heads of Departments/Heads of Sections.		
(ii) Field Office – Circle/Division/Sub-Division and typical accounting setup of each of these offices.		
(iii) List of accounting units generating trial balance, classified by functions (such as generation, distribution, transmission, central stores, head office accounting units, etc.).		
2 Accounting System		
(i) Copy of Accounting manual/guidelines		
(ii) Final accounts/year end accounts closing circulars/guidelines		
(iii) Chart of accounts/accounts classification		
(iv) Copy of documented Accounts policies		
(v) Format of Trial Balance and final Accounts		
3 Status of Computerization of Accounts		

(i) Extent of implementation of the computerization system in HO / field offices.		
(ii) List of accounting areas which have been computerized at Head office and field offices.		
(iii) List of Account areas where the computerized system and manual systems are still being operated in parallel.		
(iv) A brief overview of the computerization systems covering aspects such as: coverage of each module, batch mode/online system, IT platform, stand-alone /integrated, internally operated/outsourced, developed internally/through external consultants.		
(v) List of outputs / reports generated from the computerized system		
(vi) Level of integration/Interface between billing and accounting software and issues faced if any in passing accounting entries		
(vii) Plan for future computerization, if any		
4 <u>System of internal audit</u>		
(i) What is the internal audit set up – Internal/ External		
(ii) Role, frequency and scope of internal audit function		
(iii) Period upto which the internal audit has been completed		
(iv) Likely target date for audit completion in case of backlog		
(v) Name and contact details of the internal auditor		
(vi) Copy of latest audit report		
(vii) Copy of Internal Audit Program		
5 <u>System of Cost Audit</u>		

(i) Brief description of the system followed for preparation of cost records		
(ii) Status of Cost records and cost audit		
(iii) Copy of Cost Accounts and Cost Audit Report		
6 <u>Copies of Annual Accounts / Other related documents</u>		
(i) Audited Accounts for the last three years (along with schedules)		
(ii) Audited Accounts for the Ist year after unbundling of SEB (showing incorporation of transferred balances)		
(iii) Annual Budget for the last three years		
(iv) ARR filed with the Regulator for the last 3 years		
(v) Latest MIS report showing financial position /financial performance as generated by the management at present		
7 <u>Status on accounts preparation and audit</u>		
(i) Year upto which accounts have been audited by CAG.		
(ii) Year upto which accounts have been audited by the Statuary auditor		
(iii) Year upto which final accounts have been compiled by the Head Office		
8 <u>In respect of the pending accounts, provide status on the following key activities for each year:</u>		
(i) CAG Audit		
(i) Whether audit work has commenced.		
a) Status on completion of audit work as on date		
b) Likely target date for audit completion		

c) Name and contact details of the audit party leader		
d) Copy of Audit paras		
e) In case audit work has not started, the likely date to commence audit		
(ii) Statutory Audit		
a) Whether statutory auditor has been appointed		
b) Name and contact details of the auditor		
c) Whether audit work has been commenced		
d) Status on completion of audit work		
e) Likely target date for audit completion		
f) In case audit work has not started, the likely date to commence audit		
(iii) Compilation/ Consolidation of Annual Accounts at HO		
a) Whether annual accounts have been compiled		
b) Whether annual accounts have been adopted / accepted at the management level		
c) If not yet compiled, provide status on / pending activities, such as (please note these are only illustrative and can be modified / added as relevant):		
○ Submission of monthly and year end supplementary Trial balances by the field / accounting units		
○ Scrutiny of TBs at the HO		
○ Passing of year end accounting/ adjustment entries		

○ Consolidation of TBs at the HO		
○ Preparation of provisional accounts		
d) Likely target date for accounts compilation and preparation of annual accounts		
e) Likely start date of audit		
(iv) Compilation/ Consolidation of Accounts at Circles		
a) In case compilation/ consolidation is also done at the circle level, provide similar status as above in respect of the HO.		
(v) Preparation of Accounts by Field / Accounting Units		
a) Whether Fields have completed their activities for preparation of accounts and submitted monthly and year end supplementary Trial balances to HO		
b) If not yet completed, provide status on / pending activities, such as (please note these are only illustrative and can be modified / added as relevant):		
○ Submission of monthly and year end supplementary Trial balances		
○ Scrutiny of TBs at the HO		
○ Passing of year end accounting/ adjustment entries		
○ Details for provision for doubtful debts		
○ Reconciliation of ledgers balances		
○ Capitalization of capital works / projects		
○ Inter unit reconciliations		
○ Bank reconciliations		

o Physical verification reports of inventory and reconciliation		
o Stores valuation		
o Interest accounting		
o Accrual and year end entries		
o Likely target date for completion of preparation of accounts		
(vi) Status on Fixed Assets Register		
a) Status on preparation / updation of Fixed Assets Register (FAR)		
b) Physical verification of fixed assets and reconciliation thereof with FAR		
9 **<u>Key issues / constraints faced in timely preparation of annual accounts / expediting clearance of backlog in preparation of annual accounts, such as</u>** (please note these are only illustrative and can be modified / added as relevant)**:**		
(i) Opening balances pending finalization (in case of entities created on unbundling of SEB / re-organization of State)		
(ii) Accounting issues pending resolution and brief description of the same		
(iii) Delay in completion of audits and brief reasons thereof		
(iv) Delay in compilation of accounts at the HO / Field Offices and brief reasons thereof		
(v) Additional staff required to clear one time backlog in accounts		
(vi) Any other items, relevant to understand the reasons for pending financial statements		

INSTRUCTIONS FOR COMPLETION (for discussion and may be finalized after taking inputs from members):

- To be completed by:
- To be submitted to:
- Latest date of submission:

To be authenticated/signed by:

Annexure 2

Existing process of accounting on certain aspects

This section provides an overview of the existing accounting processes / practice relating to the following aspects:-

a.) Consolidation of accounts at division, zonal and HO level

b.) Accounts consolidation process vis-à-vis stores procurement, assessment billing, stores issues at Division (Stores) and Division (Works)

c.) Accounting of stores

Consolidation of accounts at Division, Zonal and HO level

The records and transactions involved at the level of accounting units for consolidation processes can be explained in detail using a data diagram. Table A2.1 below shows the data diagram which describes the records and transactions involved in the consolidation process of accounts preparation.

Table 4: DATA DIAGRAM CONSOLIDATION AT DIVISION LEVEL TRANSACTIONS AND RECORDS

Records						
Cash Book	SJ-1 (Salary and Wages Journal)	SJ-2 (Other Establishment Expenditure Journal)	SJ-3 (Other Payments for Stores & Services etc.)	SJ-4 (Adjustment Journal)	Consolidation Register	Monthly Trial Balance
Description						
To record receipts and payments. Presently all payments are made through cheques. There are three types of cash books:- 1. Main cash book - Expenses 2. Capital cash book (for deposit works and security deposits) 3. Revenue cash book – Collections and deposits into bank.	To record salary expenses of employees	To record accounting unit expenses other than salary such as TA advance, Pay advance, traveling advance, conveyance and medical reimburseme nt etc.	To record expenditure s towards contractors, suppliers to outside parties for stores and services.	To record adjustments for assessment of revenue, stock receipts and issues accounts, adjustment of inter divisional transfers, correction entries	Consolidation register is maintained for consolidation of accounts of division and all reporting sub-divisions. It is maintained at all accounting units i.e. Divisions, Zones and HO. Consolidation register is maintained at the level sub-head entry level on month to month basis without any opening and	Monthly Trial Balance has is prepared by all accounting units and be submitted to reporting accounting units by Divisions to zones and by zones to HO for consolidation. Monthly Trial Balance is maintained at head level entries clubbed through Consolidation Register. It is maintained on Monthly basis by

Records						
					closing balances.	depicting opening and closing balances. It is prepared on yearly basis at FY closing.
Ancillary records						
1. For Main Cash Book – a. Cheque Register 2. For Revenue Cash book – 1. Collection Statement (daily for each collector) 2. Bill Stub register 3. Bill Revision Register 4. Consumer Ledger 5. For Capital Cash Book 1. Security Deposit Register 2. Schedule of Deposit Works References of cash book vouchers is provided in Sectional Journals	1. Pay Bill Register 2. GPF Register 3. CPF Register 4. LIC Register 5. Post Office Deduction Register 6. Employee Co-op. Society Deduction Register	1. Contingent Advance Register 2. Reimbursements are entered directly through vouchers.	1. Receipt Vouchers 2. Payment Vouchers	1. <u>For Stock Adjustments*</u> Form 5S and 6S record of section holder (JE) and 4S record of Division Accountant (Works). This gives classification of works into Capital works and O&M categories. It further depends on 1S, 2S and 3S records and reconciliation with ATD registers of division and stores. 2. <u>For assessment adjustment **</u> - CS-3 and CS-4 records of Division Accountant (Revenue) is maintained. Entries in CS-4 include collections and bill correction adjustment. 3. <u>For correction entries</u> – approval notes. Journal	SJ-1,2,3,4 and Cash Book	Consolidation Register

Records						
				vouchers are prepared for each transaction in SJ-4 e.g. for stock entries vouchers is prepared separately for receipts and issues respectively with supporting documents.		

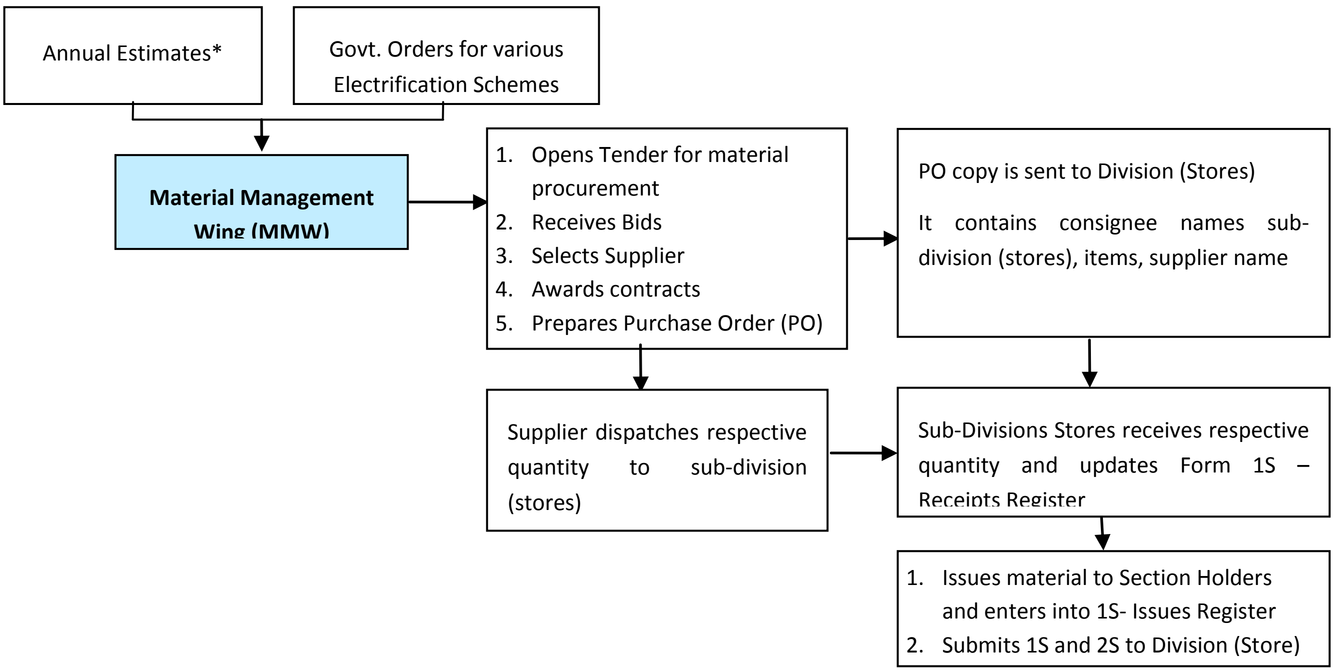
Note: * and ** - Please refer to the process flow charts in Exhibit A2.1 and A2.2.

Head Office and Zone prepares same set of records as maintained at Division Level being but it do not deal with the Billing and Stores. Thus HO and Zone require no corresponding entries in its SJ-4 record for Billing and Stores. Other records maintained by HO are for Inter Company Transactions with UPSEB, UPPCL, other DISCOMS and Financial Statements.

Accounts consolidation process vis-à-vis stores procurement, assessment billing, stores issues at Division (Stores) and Division (Works)

The accounts consolidation processes involved at the level of accounting units can be explained in detail using process flow charts to have a comprehensive understanding of the various processes and steps involved therein as shown in the following exhibits:

Exhibit 4: Accounts Consolidation Process Chart vis-à-vis Stores Procurement



*Annual Estimates for maintenance works called Normal M&R (Maintenance & Repairs) are prepared by each Division (Works) on the basis of requirements given by respective Section Holders (JEs). Circle (Division) approves this M&R and submits to MMW. There are norms for making the estimate e.g. electric pole/km line requirements. In case of works requirement is not met by Stores, IUT-Materials are resorted to.

Procurement is done centrally through MMW except procurement of petty items which is done by Executive Engineer, Division (Works) upto certain amount. These materials are supplied directly to JE and entered in 1S – Receipts of JEs.

Exhibit 5: Accounts Consolidation Process Chart vis-à-vis Assessment Billing

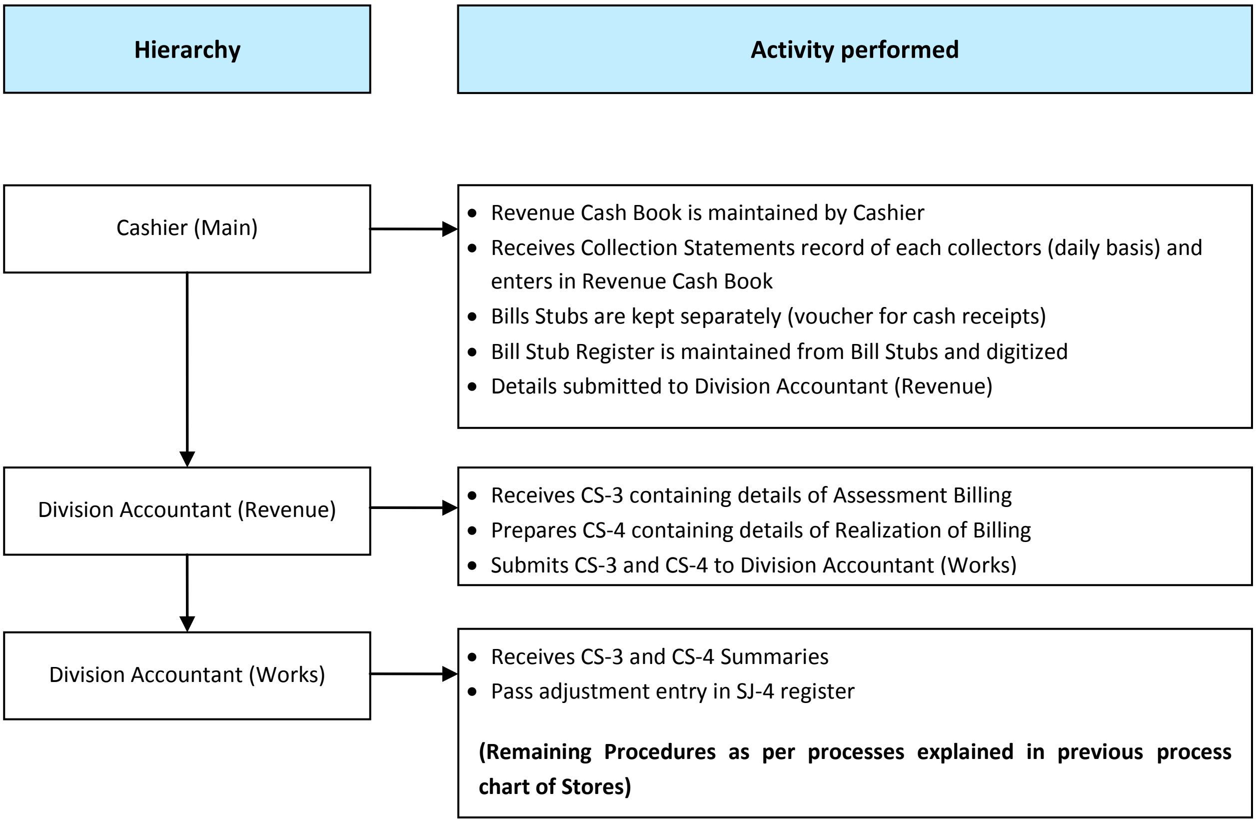


Exhibit 6: Accounts Consolidation Process Chart vis-à-vis Stores Issues at Division (Stores)

Works

Stores

Sub-Division Level (Central Stores)

Section Holder (JE) submits Goods Indent along with Job Card (or Estimate Approval) approved by Executive Engineer to Sub-Division (Stores)

Sub-Division Level

- Central Stores (Sub-Division) - Issues material to JE on Invoice
- Makes entry in 1S – Issue Register
- 1S – Receipts and 1S- Issues are entered in 2S – Balances Register
- All transaction invoices for the month (Carbon copy) and 2S (3S is not prepared) are submitted to Division (Stores) – Admn

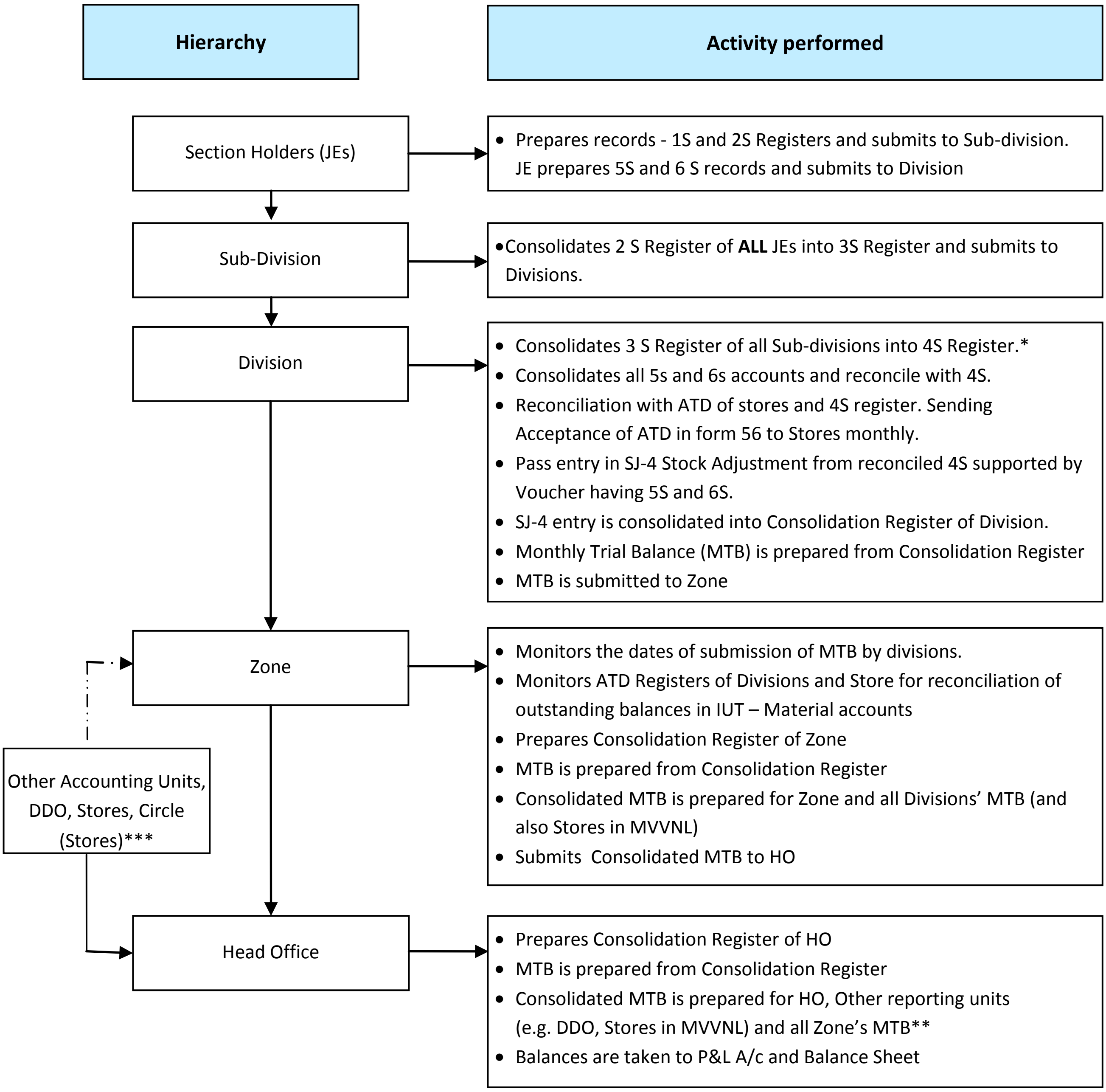
Division Level – Administrative Office

- Prepares monthly ATD in Form 55 from Invoices received
- Submits ATD to Divisions (Works) for acceptance and passes entry in **ATD Register**
- Acceptance received on Form 56 by Division (Works)
- ATD register counter signed by Executive Engineer – Division (Works)
- 5S – Receipts Valuation and 6S – Issues Valuation registers are prepared
- Prepares SJ-1, SJ-2, SJ-3, SJ-4, Cash Book, Consolidation Register, Monthly Trial Balance
- Submits Monthly Trial Balance to HO

Division Level

- Divisions receives ATD for the month
- Received 1S – Receipt register of JE (or 3S Consolidated Register of sub-division)
- Reconciles quantity receipts
- Acceptances are given in Form 56

Exhibit 7: Accounts Consolidation Process Chart vis-à-vis Stores at Division (Works)



*Inter unit material transfers within divisions, inter-divisions and inter-zones are accounted for in division accounts and are monitored by division and zones respectively.

**In case of MVVNL Stores and Circle (Stores) are reporting to HO directly.

***Stores and Circle (Stores) reports to Head Office at Madhyanchal.

Since the accounting of receipts, issues and consumption of stores are an integral part of the accounting processes in distribution companies and are critical for the accounts consolidation processes at the level of each accounting unit, it would be advisable to have a comprehensive understanding of the stores accounting procedures which is detailed as below.

Accounting of Stores (with illustrative transaction entries)

At Stores (an accounting unit)

Executive Engineer issues a Job Card to Junior Engineer (JE) specifying the quantity requirement of material for a specific job. This authorizes the JE to indent the specific quantities mentioned in the Job Card from the Stores. Assistant Engineer (Stores keeper) issues the materials to JE against the Indent given by the JE along with an Invoice in Form 7 for material issued. AE (Stores) updates the stock register.

When the AE (Stores) issues materials under an invoice to the Junior Engineer (also called as Section Holder) by issue of a Debit Note:

Debit	IUT (Inter Unit Transactions A/c) – a control account Dr.
Credit	To Stock of materials A/c

At Sub-Division Level (not an accounting unit)

JE enters the quantity received in his record called “1 S – Monthly Receipt Register” against specific works. Format of “1 S – Monthly Receipt Register” is given below:-

Form 1 S – Monthly Receipt Register

S No.	Material Issued	Work1	Work2	Work3	Work N	Total (Qty.)
	Total					

JE issues the materials to the specific works account and enter its quantities in his record called “1 S – Monthly Issues Register”. However the entry in “1 S – Monthly Issues Register” is made only on completion of works at site from the Measurement Book. The format of “1 S – Issues Register” is given below:-

Form 1 S – Monthly Issues Register

S No.	Material Issued	Work1	Work2	Work3	Work n	Total (Qty.)
	Total					

Valuation of Materials received by section holders is made in Form 5 S (Monthly Abstract of Stock Receipts by a Section Holder) and Valuation of Materials issued to works is recorded in Form 6 S (Monthly Abstract of Stock Issues by a Section Holder). The valuation of the materials issued to JEs and consumed into the Works are valued at the item-wise specific rates fixed annually by UPPCL, Lucknow in the document named “Stock Issue Rates for the financial year 20xx – 20xx”.

At the end of each half year, JE prepares Form 2 S – “Item-wise Ledger account of Receipt & Issues by a section holder” which is a six months’ consolidation of Form 5S and 6S and balance of materials against each of the works with him. This is generally prepared by him from the Bin cards maintained at the Stores by the Asst. Stores Keeper.

At the end of each half year, Sub Division prepares Form 3 S – “Item-wise Ledger account of Receipt & Issues for the Sub-Division” which is a six months’ consolidation of Form 5S and 6S of all JEs under the sub-division and balance of materials against each of the works with all JEs under that Sub-Division. All Form 5 S and 6 S are then consolidated into Form 3 S (Valued Receipts and Issues) and submitted to Division.

A six monthly reconciliation of Form 3S is made by the Sub Division with the individual Form 2 S received from all section holders of such Sub Division.

<u>At Division Level</u> (an accounting unit)

Entry for receipt of materials by Junior Engineers from stores where ATD (Advice for Transfer Debit) is the supporting document:

Debit	Stock of materials A/c Dr.
Credit	To Respective Liability A/c *(a control account)*

Entry made by the Division for issue of materials from Stores on receipt of monthly Form 5-S (Monthly Abstract of Stock Receipts by a Section Holder) from the Junior Engineers:

Debit	Respective Liability A/c *(a control account)* Dr.
Credit	To IUT (Inter Unit Transactions A/c) *– a control account*

Entry made by the Division for consumption of materials account head-wise recorded in SJ-4 (Adjustment Register) on receipt of monthly Form 6-S (Monthly Abstract of Stock Issues by a Section Holder) from the Junior Engineers:

Debit	Capital WIP A/c (Works) Dr.
Debit	Operations & Maintenance A/c Dr.
Credit	To Stock of materials A/c

At the end of each half year, the respective Division prepares Form 4 S – “Item-wise Ledger account of Receipt & Issues for the Division” which is a six months’ consolidation of Form 5S and 6S of all sub-divisions under that Division and balance of materials against each of the works with all JEs under that Division. All Form 5 S and 6 S are then consolidated into Form 3 S (Valued Receipts and Issues) and submitted to Division.

A six monthly reconciliation of Form 4S is made by the Division with the Form 3 S received from all Sub- Divisions of such Division.

The closing stock is valued on the balance stock of materials remaining at the stores as well as at the site under the custody of Junior Engineers. No reversal of O & M account is made for the balance of materials in the site/under the control of Junior Engineers which is remaining to be utilized for O & M purposes.

Annexure 3

Status of accounts submission by Divisions

The status on submission of monthly accounts by the Division Accounting Units to the Zones for the year 2009-10 and 2010-11 are provided in the Table given below:

Table 5: Status of Accounts Submission by Divisions

S. No.	Name of the Unit	Monthly Accounts submitted	
		For the Year 2009-10	For the Year 2010-11
LESA Zone, Lucknow, as on 05.10.2010			
1	RED I, LESA	Not Available	Nil
2	EUDD CHOWK	Feb 2010	Nil
3	EUDD RESIDENCY	Jan 2010	Nil
4	EUDD HUSAINGANJ	Oct 2009	Nil
5	EUDD AMINABAD	Jan 2010	Nil
6	EUDD, THAKURGANJ	Mar 2010 (Final)	Nil
7	EUDD, ALIGANJ	Nov 2009	Nil
8	EUDD, GOMTINAGAR	Dec 2009	Nil
9	EUDD, INDRANAGAR	Nov 2009	Nil
10	EDD, LUCKNOW	Not Available	Nil
11	ECD II, LESA	Not Available	Nil
12	EUDD, ALAMBAGH	Dec 2009	Nil
13	EUDD, KANPUR ROAD	Feb 2010	Nil
14	EUDD, AISHBAGH	Mar 2010	Nil
15	EE ATTACHED TO CE LESA	Mar 2010 (Final)	Jun 2010
16	DY CAO, LESA	Not Available	Nil
17	PA(M), TO CZE, LAAVESU UPPCL LKO	Not Available	Nil
18	EUCD III, LESA	Nov 2009	Nil
19	GENERATION TALKATORA	Not Available	Nil
20	ONLINE BILLING LESA	Mar 2010	Nil
21	ETD IV, LESA	Mar 2010	Nil

S. No.	Name of the Unit	Monthly Accounts submitted	
22	EUWD, LESA	Mar 2010	Nil
23	EDD-II CESS LESA	Dec 2009	Nil
24	EUDD, RAJ BHAWAN	Jan 2010	Nil
25	EUTD II, LESA	Feb 2010	Nil
26	EUDD, RAJAJI PURAM	Apr 2010	Nil
27	EDD, BAKSHI KA TALAB	Oct 2009	Nil
28	EUDD DALIGANJ	Not Available	Nil
Lucknow Zone, as on 5.10.2010			
1	EDC, RAIBAREILLY	Mar 2010 (Final)	Jun 2010
2	EDD-I, RAIBAREILLY	Jun 2009	Nil
3	EDD-II, RAIBAREILLY	Jul 2009	Nil
4	ETD, RAIBAREILLY	Feb 2010	Nil
5	ETDC, SITAPUR	Nov 2009	Nil
6	EDD-I, LAKHIMPUR	Jun 2009	Nil
7	EDD-II, GOLA	Jul 2009	Nil
8	EDD-I, SITAPUR	Mar 2009	Nil
9	EDD-II, SITAPUR	Mar 2009	Nil
10	ETD, SITAPUR	Sep 2009	Nil
11	EDC, UNNAO	Jan 2010	Nil
12	EDD-I, UNNAO	Mar 2009	Nil
13	EDD-II, UNNAO	Mar 2009	Nil
14	ETD, UNNAO	Mar 2010	Nil
15	EDC, HARDOI	Mar 2010 (Final)	Aug 2010
16	EDD-I, HARDOI	Mar 2009	Nil
17	EDD-II, HARDOI	Mar 2009	Nil
18	ETD, HARDOI	Feb 2010	Nil
19	EWC, LUCKNOW	Sep 2009	Nil
20	ESWD, LUCKNOW	Dec 2009	Nil

S. No.	Name of the Unit	Monthly Accounts submitted	
21	EWD, LUCKNOW	Sep 2009	Nil
22	ECD (D), GOMTINAGAR	Feb 2010	Nil
23	ECD (D), LUCKNOW	Jan 2010	Nil
24	GM (LKO, ZONE), LKO	Jan 2010	Nil
25	ZAO (DISTRIBUTION), LUCKNOW	Sep 2009	Nil
Bareilly Zone, as on 03.11.2010			
1	EDC, BAREILLY	Feb 2010	Nil
2	EDD-I, BAREILLY	Nov 2009	Nil
3	EDD-II, BAREILLY	Dec 2009	Nil
4	ETD, BAREILLY	Nov 2009	Nil
5	EUDC, BAREILLY	Nov 2009	Nil
6	EUDD-I, BAREILLY	Nov 2009	Nil
7	EUDD-II, BAREILLY	Dec 2009	Nil
8	EUDD-III, BAREILLY	Dec 2009	Nil
9	EUTD, BAREILLY	Nov 2009	Nil
10	EDC, SHAHJAHANPUR	Nov 2009	Nil
11	EDD-I, SHAHJAHANPUR	Nov 2009	Nil
12	EDD-II, SHAHJAHANPUR	Dec 2009	Nil
13	EDD, PILIBHIT	Nov 2009	Nil
14	ETD, SHAHJAHANPUR	Nov 2009	Nil
15	EDD-I, BADAUN	Nov 2009	Nil
16	EDD-II, BADAUN	Nov 2009	Nil
17	EDD, BISAULI	Nov 2009	Nil
18	ETD, BADAUN	Nov 2009	Nil
19	EWD, BAREILLY	Nov 2009	Nil
20	EWD, BAREILLY (PAYABLE AT BADAUN)	Jan 2010	Nil
21	ESWD, BAREILLY	Mar 2010	Nil
22	ECD (D), BAREILLY	Mar 2010	Nil

S. No.	Name of the Unit	Monthly Accounts submitted	
23	CZE, UPSEB BLY	Nov 2009	Nil
24	ZAO(D), BAREILLY	Nov 2009	Nil
Faizabad Zone, as on 27.10.2010			
1	EDC, FAIZABAD	Mar 2009 (Final)	Nil
2	EDD-I, FAIZABAD	Mar 2009	Nil
3	EDD-II, FAIZABAD	Mar 2009	Nil
4	ETD, FAIZABAD	Mar 2009 (Final)	Nil
5	EDD, AMBEDKAR NAGAR	Mar 2009	Nil
6	EDD, TANDA	Mar 2009	Nil
7	EDC, SULTANPUR	Mar 2009	Nil
8	EDD-I, SULTANPUR	Mar 2009	Nil
9	EDD-II, SULTANPUR	Mar 2009	Nil
10	ETD, SULTANPUR	Mar 2009	Nil
11	EDD, JAGDISHPUR	Mar 2009	Nil
12	EDD, BARABANKI	Mar 2009	Nil
13	EDC, GONDA	Mar 2009	Nil
14	EDD, GONDA	Mar 2009	Nil
15	EDD, BALRAMPUR	Mar 2009 (Final)	Nil
16	EDD, BAHRAICH	Mar 2009	Nil
17	EDD, SHRAWASTI	Mar 2009	Nil
18	ETD, GONDA	Mar 2009	Nil
19	GM (D), FAIZABAD	Mar 2009 (Final)	Nil
20	EWD, FAIZABAD	Mar 2009	Nil
21	ESWD, FAIZABAD	Mar 2009	Nil
22	ZAO(D), FAIZABAD	Mar 2009 (Final)	Nil
23	EDD, RAM SANEHI GHAT	Mar 2009 (Final)	Nil

Annexure 4

Details of discussions held with branch auditors, statutory and CAG team

The responses by the branch and statutory auditors are provided below: -

Table 6: Responses of the Branch Auditors (Zonal level)

Sl. No.	Particulars	Response of the auditor
Name of the Zone: Lesa Sri. Abhinav Khanna, M/s. Thakkar & Co., Chartered Accountants, Contact: (0) 9415001719		
1.	Year of previous audit done by the same auditor	Nil
2.	Year under current audit	2008-09
3.	Start date of current audit	July 2010
4.	Status of Branch audit	Presently under progress. Audit of 12 units out of the total 27 units has been completed. There was a gap of about 1½ months in the audit period due to the auditors attending to other work. Will resume by the first week of November 2010.
5.	Issues facing while conducting audit	No issues are faced during audit. Getting co-operation from accounts staff. Reconciliations are complete and found correct.
6.	No. of staff deployed in the audit team	6 – 8 staff
7.	Can the Branch auditor perform audit of multiple year accounts simultaneously?	Yes, can perform audit of multiple year accounts simultaneously.
8.	In case of audit of multiple years, no. of extra audit staff who can be deployed.	Can deploy more staff in case of multiple year audits.
9.	Time taken for completion of audit	5 months. Can complete the current branch audit by the end of Nov. 2010.
Sl. No.	**Particulars**	**Response of the auditor**
Name of the Zone: Lucknow Sri. Rahul Gupta, M/s. Nripendra & Co., Chartered Accountants, Contact: (0) 9336226295		
1.	Year of previous audit done by the same auditor	2007-08
2.	Year under current audit	2008-09
3.	Start date of current audit	04 August 2010
4.	Status of Branch audit	Presently being done

Sl. No.	Particulars	Response of the auditor
5.	Issues facing while conducting audit	No issues are presently faced during audit. Accounts staffs are usually sent for field collections during the months of Feb and March. There are some operational problems also.
6.	No. of staff deployed in the audit team	4 – 5 staff
7.	Can the Branch auditor perform audit of multiple year accounts simultaneously?	Yes, can perform audit of multiple year accounts simultaneously. Provisional accounts can be audited simultaneously.
8.	In case of audit of multiple years, no. of extra audit staff who can be deployed.	Can deploy more staff in case of multiple year audits.
9.	Time taken for completion of audit	4 months. Can complete the current branch audit by the end of Nov. 2010.
Sl. No.	**Particulars**	**Response of the auditor**
Name of the Zone: Bareilly Sri. Sharad Misra, M/s. Sharad Misra & Co., Chartered Accountants, Contact: (0) 9412293572		
1.	Year of previous audit done by the same auditor	2007-08
2.	Year under current audit	2008-09
3.	Start date of current audit	Will start on 28 October 2010
4.	Status of Branch audit	In progress
5.	Issues facing while conducting audit	Not applicable
6.	No. of staff deployed in the audit team	3 – 4 staff
7.	Can the Branch auditor perform audit of multiple year accounts simultaneously? If not, state the reason.	No, can perform audits only in a sequential order because less number of audit staff with the firm as well as difficulty in getting the required support from the company.
8.	In case of audit of multiple years, no. of extra audit staff who can be deployed.	Not applicable
9.	Time taken for completion of audit	Cannot give a time schedule now.
Sl. No.	**Query**	**Response of the auditor**
Name of the Zone: Faizabad Sri. Manish Agarwal, M/s. S.K. Associates & Co., Chartered Accountants, Contact: (0) 9415048481		
1.	Year of previous audit done by the	2007-08

Sl. No.	Particulars	Response of the auditor
	same auditor	
2.	Year under current audit	2008-09
3.	Start date of current audit	Will start on 27 October 2010
4.	Status of Branch audit	Audit has not been started. The reason stated was that the branch (zone) accounts for 2008-09 were not ready for audit even after the auditor sending numerous reminders.
5.	Issues facing while conducting audit	(i) Non-availability of accounts for the year 2008-09 (ii) Non-cooperation of accounts staff
6.	No. of staff deployed in the audit team	2 – 3 staff
7.	Can the Branch auditor perform audit of multiple year accounts simultaneously? If not, state the reason.	Yes, can perform audit of multiple year accounts simultaneously.
8.	In case of audit of multiple years, no. of extra audit staff who can be deployed.	Can deploy more staff in case of multiple year audits.
9.	Time taken for completion of audit	20 days for one year audit and 30 days for two multiple year audits. Probable completion date is November 2010.

Table 7: Responses from Statutory Auditors

Sl. No.	Particulars	Response of the auditor
M/s. R. K. Chari & Co. Opposite Bansal Plaza, Daliganj, Lucknow. Phone: 0522 – 2740889, 0522 – 2740868		
1.	Years of statutory audits for which the statutory auditor has been appointed	Appointed for three consecutive years viz., 2007-08, 2008-09 and 2009-10.
2.	Year under current statutory audit	2007-08
3.	Start date of current audit	Last week of April 2010
4.	Status of present statutory audit	Statutory Audit for 2007-08 has been in progress since last 6 months.
5.	Issues facing while conducting audit	The internal audit report relating to HO is pending submission by the company. The company is not looking up the statutory audit seriously.
6.	Can the Branch auditor perform audit of multiple year accounts simultaneously?	Yes, can perform audit of multiple year accounts simultaneously provided the

Sl. No.	Particulars	Response of the auditor
	If not, state the reason.	company has the ability to handle the audit queries in time.
7.	In case of audit of multiple years, no. of extra audit staff who can be deployed.	If required, can deploy more audit staff in case of multiple year statutory audits.
8.	Time taken for completion of audit	6 months. Audit for the year 2007-08 can be completed within one week's time subject to the company furnishing the Board approved accounts u/s 215 (2) of Co.'s Act as well as pending submission of internal audit report by the company.

Status on CAG Audits

The discussions held with the CAG officials are summarized below:

Table 8: Detail of Discussion with CAG Officials

Sl. No.	Issue	Response / Advice by the CAG Auditor
CAG Officials Mr. S K Saxena, Sr. Audit Officer – SEB Accounts and his team Mr. A K Dubey, IPAI representative		
1.	When does CAG auditor take up work for any year? What all must be done before they come in?	• After completion of the statutory audit and on submission of the audited accounts by the company to AG office, AG issues instructions for commencement of supplementary audit of the respective company. • Prior to submission of accounts to AG office, the following should be ensured by the company:- i. Compilation of accounts for respective financial year ii. Approval of accounts by Board of Directors iii. Submission of accounts to Statutory Auditor for audit. iv. Completion of Statutory Audit.
2.	How much time will it take to commence audit after Auditor's appointment? How the audit is being conducted? How many team member deployed? How the work is distributed in sub-	• Generally AG commences the audit within 2-3 days from the submission of accounts along with statutory audit report. • CAG deploys 2-3 members team for audit to meet the company management and Head of Accounts at Head Office. They call for required records from subordinate accounting units in Head Office or else visit the respective

Sl. No.	Issue	Response / Advice by the CAG Auditor
	division / division / circles / zones and head office? How much time is taken by CAG team?	subordinate accounting unit if required. • It takes 15 days to 2 months time for completion of statutory audit.
3.	Can audit for multiple years be started at the same time? What are the constraints? How can the constraints be resolved? How the IPAI team can help this out?	• Audit of multiple of years cannot be started at the same time. • CAG audit for a year can be started only on submission of statutory audit report to the respective AG office. For completing statutory audit for a year, the following conditions have to be fulfilled:- ○ Adoption of CAG comments for the previous year in the Annual General Meeting. ○ Approval of current year accounts by Board of Directors under Section 215(3) of the Companies Act, 1956. ○ However, Statutory Auditor may commence the audit work of the multiple years at the same time at his discretion. As per CAG's standing instructions, statutory auditor for multi years can be appointed at same time. Currently, statutory auditor is appointed for 2007-08, 2008-09 and 2009-10 for the audit of MVVNL.
4.	Reason of delay in process of completion of CAG Audit and Adoption of Accounts in AGM are discussed as under:-	The main reasons are as under:- • Delay in providing accounts by MVVNL after the audit team approaches MVVNL Management • Delay in providing responses to the CAG queries • Delay in approval of accounts by Board of Directors. • Delay in organizing AGM by MVVNL. This is due to the reason that MVVNL does not have any post for Company Secretary on a regular basis. Presently, there is only one Company Secretary, who is handling secretarial work of UPPCL as well as all DISCOMS, RVUNL, KESCO, UPPTC, and UCM Coal Ltd.

Based on discussions with the CAG officials, the time usually taken in conduct of CAG audit and the possibility of expediting the same are provided in the Table below:

Table 9: Time frame for CAG Audit

S No.	Activity	Time Taken Normally (In days)	Way to fasten process	Minimum Time required (in days)
1.	AG issues orders and commences audit of the company.	3 days	In case Statutory Auditor informs AG office about the tentative date of completion of audit in one month advance.	1 day
2.	AG conducts and completes audit of one year accounts.* This excludes time taken by company in responding to queries of AG team during the conduct of audit. In case of MVVNL, it takes a long time and becomes hurdle to complete audit.	15-60 days*	In case CAG is requested for taking up on priority the audit of the company.	15 days*
3.	AG team prepares draft comments and sends it to statutory auditor and company for responses.	7 days	Step 3 and 4 can be performed simultaneously in exceptional cases.	7 days
4.	Company is invited for discussion at respective AG office. In case, AG is satisfied with responses, comments are dropped.	7-10 days		
5.	Otherwise these comments are finalized and sent to CAG office, Delhi for approval. Later CAG approved comments are received by AG. (CAG takes just 1-2 days in approving AG comments). CAG approved comments are issued by AG to the management of the company.	15 days	Company shall incorporate the AG comments in Notes to Accounts. Then there is no need to send the AG comments to CAG office, Delhi for approval.	Nil
6.	Company puts forth CAG comments along with Directors' Report for consideration of the Audit Committee and Board of Directors.	10-12 days	Company holds the Audit Committee and BoD meeting on priority.	7 days
	Total Time taken / required for CAG audit of one year accounts	**107 days**		**30 days**

* CAG conducts the audit of the following year on submission of audited accounts and Statutory Audit report for the current year.

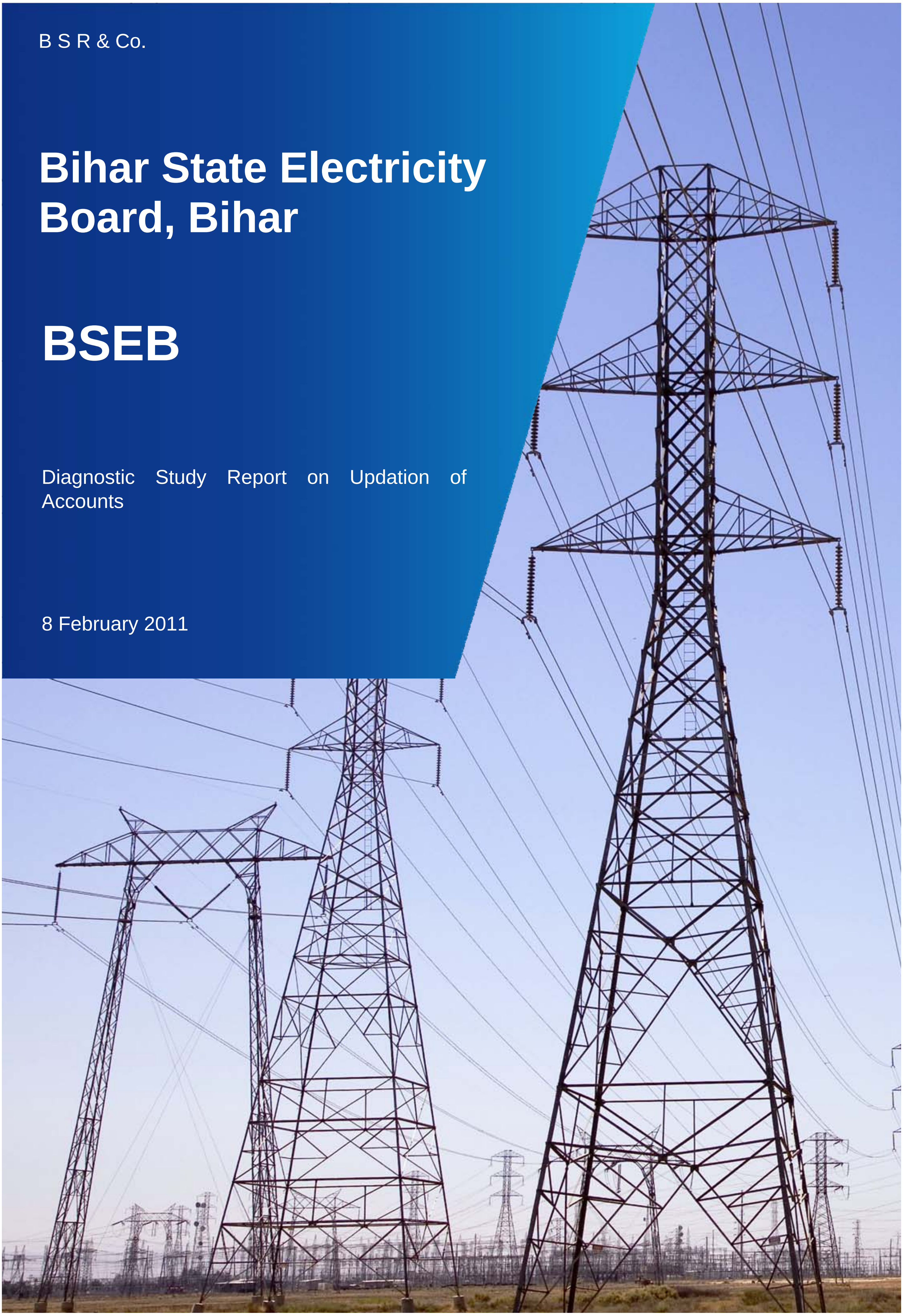
B S R & Co.

Bihar State Electricity Board, Bihar

BSEB

Diagnostic Study Report on Updation of Accounts

8 February 2011



Contents

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1. Purpose and Basis

Prepared for the "HIGH LEVEL PANEL ON FINANCIAL POSITION OF DISTRIBUTION UTILITIES" for the purpose of information on status update and summarising the key issues/road blocks noticed in relation to finalisation of financial statements upto March 31, 2010 of the Board. This is based solely on the discussions with the Board's management and does not constitute an audit/review in accordance with the generally accepted auditing standards.

Restrictions on distribution:

Includes information which has been provided based on preliminary discussions with the Board's management only. It is produced on the basis that it is for your information only and that it will not be quoted or referred to, in whole or in part, without our prior written consent.

2. Coverage

This report covers Bihar State Electricity Board, Bihar (herewith referred to as the 'Board')

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3. Background

Planning Commission (Power & Energy Division) vide its office memorandum ref. F. No. I-22/2/32/2010-P&E dated 28.07.2010 has intimated that Prime Minister has approved a High Level Panel (HLP) on 'Financial Position of Distribution Utilities' to look into the financial problems of the SEBs/Distribution utilities and to identify potential corrective steps particularly in relation to their accounting practices as mentioned in the TOR given therein.

In accordance with the above, we have been appointed to carry out a diagnostic study, covering status of updation of accounts of the Board till 31 March 2010 vide letter no. 4-7/I/HLP/2010 of HLP dated 18 October 2010. The diagnostic study covers the following:

- Status of accounts
- Identification of key issues / road blocks in completion of accounts
- Work plan / road map for updation of accounts upto the year 2009-10, in consultation with the Board

Detailed Scope of Work

Carrying out Diagnostic study for updating of accounts till 31st March 2010 covering the following:

- Preparation of an initial questionnaire to facilitate carrying out diagnostic study
- Visit the Board
- Carrying out Diagnostic study covering
  - ✓ Status of accounts
  - ✓ Identification of key issues / road blocks in completion of accounts
  - ✓ Work plan / road map for updation of accounts upto the year 2009-10 in consultation with the Board
- Visit the Utility periodically to oversee the progress of the work and ensure that the working is going as per the work plan.

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- To make efforts in association with Institutional Service Providers towards the plan to complete the accounts by 31st December 2010.

- Ascertain overall status of computerization of financial accounting systems in the Board and the steps being taken by the Board for implementation of IFRS applicable from FY 2011-12.

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4. Our Approach

This section provides the approach adopted by us to carry out the diagnostic study.

4.1 Key objective of the study

The prime objective of the study is to draw a road map to clear the backlog in the preparation of accounts of the Board upto financial year 2009-10. Accordingly, the backlog in annual audited accounts for the years upto 2009-10 should be cleared and simultaneously the accounts for the year 2010-11 should be audited on time.

4.2 Our Approach

The approach adopted by us to carry out the diagnostic study involves the following key steps:

- Preparation of an initial questionnaire
- Field visit to the Board
- Analysis of the status and indentifying key issues / road blocks in completion of accounts in discussions with the Board's management
- Based on the above and feedback from the Board's management, drawing a tentative work plan /road map for updation of accounts upto the year 2009-2010
- Closing meeting / presentation to the Managing Director and officials of the Board to discuss our findings and obtaining additional observations and recommendations, if any.

During the field visits, we coordinated with the Institutional Service Providers (ISP's) officials, took their inputs/support into the account while developing the road map.

We prepared an initial questionnaire to gather the primary information regarding the status of accounts preparation as on date (refer to Point no. 8). The questionnaire primarily covered the following aspects:

- Status of present accounting system
- Status of Computerisation of accounts
- System of internal audit
- Status of accounts preparation and audit

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- Status on compilation/consolidation of annual accounts:
  - ✓ at Head Office
  - ✓ at Circle Offices
  - ✓ at field offices/accounting units
- Key issues/constraints faced in timely preparation of annual accounts/expediting clearance of backlog in preparation of annual accounts

The above information was compiled by the Board with the assistance of ISP. A study of the information provided by the Board an above was done by us, prior to making field visit to have a focused discussion with Board's personals.

During our field visits, we commenced the diagnostic study with a kick off meeting with the Head of Accounts and other key officials at the Head office of the Board. The objective of the meeting was to obtain an overall understanding of the following aspects:

- An overview of the organisation and accounting set-up
- Preliminary discussions of the information provided as per the questionnaire, status of accounts and key issues
- Preparation of work plan for the field visits

Based on the above, we met the concerned key officials at select offices as under:

- Head office – Compilation and Accounts Department/Section
- Circle/Division/Sub-Division
- In addition, we also had discussions with the representatives from the State Auditor General

The main objectives of the above meetings were:

- To gain understanding of the process of preparation and compilation of accounts, broadly covering the following:
  - ✓ Preparation of books of account by the accounting units
  - ✓ Compilation of Accounts by Circle Offices
  - ✓ Status of accounting information at Divisional Offices
  - ✓ Approval of accounts by Board of Directors
  - ✓ CAG Audit

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- ✓ Adoption of Accounts in the AGM

- Understand in detail the current status on the compilation of accounts and audit

- Understand and discuss the key issues involved/constraints faced in timely preparation of accounts and audit thereof

- Understanding the likely completion dates as provided by the Board in the initial checklist and the assumptions behind it.

- Arrive at practicable and implementable road map, including time frame, responsibility and actions required

The above discussions also included ascertaining the status of computerisation of accounts and implementation plan for IFRS.

List of Officials met

A broad list of officials / consultants interacted with during the diagnostic study is as follows:

- Mr. P.K. Rai (Chairman)
- Mr. Vinayak Chandra Gupta (Member Finance)
- Mr. Rana Awadhesh Singh (Member Administration)
- Mr. S.S.P. Singh (Finance Controller I – Revenue and Finance)
- Mr. Vijay Kumar (Finance Controller II – Finance)
- Mr. Indu Bhushan Prasad (Finance Controller – Revenue)
- Mr. Arvind Kumar (Director – Revenue)
- Mr. N.K. Jha (Director – Finance)
- Mr. Rajiv Ranjan Prasad (Deputy Director – Accounts)
- Mr. P.N. Lal (External consultant)

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5.Broad Structure of the Board

The Board's structure may be divided into the following functional / operational units:

Head Office ('HO'):

HO is primarily responsible for compiling financial information (except revenue) received from COs. Revenue is compiled based on statements received from DOs.

36 Circle Offices ('CO'):

COs are primarily responsible for accounting and compiling the financial information related to expenditure received from DOs.

65 Divisional Offices ('DO'):

Primarily responsible for all activities relating to operations/works and revenue generation, collection, capital projects, etc.

189 Sub Divisional Offices

Not considered as accounting units, maintain only petty cash

Size of BSEB

The size of the Board in terms of revenue, customers and accounting units may be summarised as under:

Revenue – Approx 2,800 crores (as per provisional Financial statements for the year ended 31 March 2010)

Customers – 30 lakhs +

Accounting Units – 37 (approximately) (36 Circle Offices and Head Office)

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6. Financial Reporting and Audit Process

As explained to us, following is the financial reporting and audit process of the Board. As informed to us, the process of the financial reporting is very prolonged and takes substantial period of time to complete due to various processes involved to compile financial information and multiple audits. The following is the summary:

- The accounting policy manual The Electricity (Supply) (Annual Accounts) Rules, 1985, prescribes the accounting treatment of each of the specific accounting items.
- Standard account codification process prescribed by the manual needs to be followed by the Board.
- The Board initially follows cash basis of accounting during the year and provides for expenses as at the year end to ensure that the financial statements are based on the accrual concept.
- DOs provide accounting information (i.e. cash book extract) to the COs for preparation of Division wise journals.
- COs prepare the trial balances for each Division for consolidation at HO.
- HO consolidates trial balances on a line by line basis on an excel spreadsheet for preparation of financial statements.
- Financial statements are adopted at the Board meeting and submitted to the State Auditors General.
- State AG audits financials and discusses its draft report with the Board's management.
- On receipt of management responses, State AG clears financial statements and issues final report.
- It takes approx 4-6 months to complete the audit of accounts

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7. Status of Computerisation

There is largely no computerization of the financial reporting process i.e. initiation, authorization, recording and financial reporting. The Board uses computers for compilation of financial information for consolidation purposes at ZOs and HO. Trail balances received by ZOs from COs and DOs are entered into the computer software (fox-pro). Software systems have limited functionality and essentially apply information compiling procedures. In selected areas, meter reading and bill processing, mainly for domestic customers, is outsourced to external vendors/franchisees.

Following key issues were identified under status of computerisation

- No computerisation for monitoring and tracking of capital projects and revenue expenditure.
- No computerization for monitoring of human resource and related data.
- Billing, collections, customer care and dispute management systems have not been implemented.
- Energy data generated is a mix of manual and system efforts. This lacks a robust reconciliation process.
- Legal cases are updated manually by the various consultants on the basis of advice received from the Divisional Offices and are not system controlled.
- The systems / software used either by the Board or the vendor are outdated. These, lack modern functionality of processing and reporting.
- The system used by the Board is mainly for data consolidation instead of data processing and generation.

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8. Status of Accounts and Board's Plan for Completion

Following is the status of accounts for the years 2008-09 and 2009-10 and Board's plan for completion based on the discussions with the Board's officials:

Particulars	FY 2008-09	FY 2009-10
	Plan	**Plan**
Compilation of financial statements of the Board	Already done	Already done
Submission to State AG office for Audit	Already done	Completed on 19 Nov 10
Completion of Audit	Already done	Yet to commence
Draft report issued by AG office	Already done	Not planned
Reply by Board to Draft report of AG	To be done by Jan 2011	Not planned
Approval from State AG / CAG offices	Planned to be done by Mar 2011	Not planned

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9. Key Issues/Road Blocks Noticed

Key issues/road blocks identified in completion of accounts for the years upto 2009-10 based on the following:

Study/review and analysis of the overall accounting structure and accounting process followed at the Board

Current status on preparation of accounts and discussions held with the Board's officials

Discussions with the auditors of the Board to the extent feasible.

The key issues/road blocks noticed for updation of accounts are summarised below:

SPECIFIC ISSUES

- Liquidity crunch: Huge outstanding receivables
- Pending inter-unit reconciliation ('IUT')
- Preparation of Fixed Assets Register ('FAR')
- Preparation/reconciliation of stock register
- Preparation of provision for expenses
- Substantial distribution losses
- Recoverability of subsidy
- Completion of audit by AG

GENERAL ISSUES

- Lack of appropriate manpower
- Lack of computerization (covered per separate details)
- Lack of coordination between Commercial and Accounting/Finance teams
- Opening balances at the time of unbundling of State Electricity Board ('SEB'), which are still pending reconciliation and finalization
- Non resolution of audit issues

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10. SUMMARY OF FINANCIAL POSITION

Summary of balance sheet as at 31 March 2010

	Rs. crores
Fixed assets	**1,060**
Capital work in progress	**880**
Investments	**830**
Subsidy receivable (since last 4 years)	**4,310**
Current Assets:	
Sundry debtors	**3,290**
Receivable from JSEB	**880**
Cash and Bank	**570**
Stock	**250**
Miscellaneous assets	**340**
	12,410

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Summary of balance sheet as at 31 March 2010

	Rs. crores
Borrowings	**8,400**
Interest accrued and due	**4,210**
Staff related liabilities	**2,190**
Purchase of power	**660**
Subsidy etc. towards capital assets	**650**
Security deposits from customers	**350**
Deficit	**(4,520)**
Miscellaneous liabilities	**470**
	12,410

REVENUE / DEBTORS – KEY ISSUE

Units sourced / generated	**9,800 Mkwh**
Units billed	**6,100 Mkwh**
Loss	**38%**
Receivables (Gross)	**5,600 crores**
Revenue	**1,860 crores**
Collection period	**> 3 years**

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11.Certain critical issues

Based on various discussions with the Board's management, certain critical issues are as under:

ENTITY TO CONSIDER

- Physical verification of fixed assets and preparation of fixed assets register
- Maintenance of stock register and physical verification
- Identify specific un-reconciling items (i.e. Inter Circle Transactions, Vendor advances and payments etc) and conclude, considering the size of un-reconciled items and possibility of misappropriation
- Analysis and ageing of receivables and action for recovery
- Preparation of Input / output analysis and action against losses
- Consider separate project for implementation of IT system.

SEPARATE PROJECT FOR IUT RECONCILIATION

- Entity to consider IUT Reconciliation as a separate project
- To identify specific items and conclude, considering the size of un-reconciled items and possibility of misappropriation
- Need coordination between Engineering and Finance teams (possibly more authority to Finance teams to reach conclusion)
- Robust process to be in place for periodic reconciliation, going forward
- Consider implementing a real time IT system to track IUT transaction status (to be a part of overall level of computerisation)

HLP TO INTERVENE

- To connect with the Entity for expediting compilation of pending information
- To connect with AG to expedite the audit process

MATTERS FOR FURTHER DISCUSSIONS

- Lack of appropriate manpower

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- Separate project on IT system implementation
- Lack of interdepartmental coordination (largely between Engineering and Accounting / Finance teams)
- Opening balances on unbundling
- Entity to prepare a structured plan for implementation of IFRS

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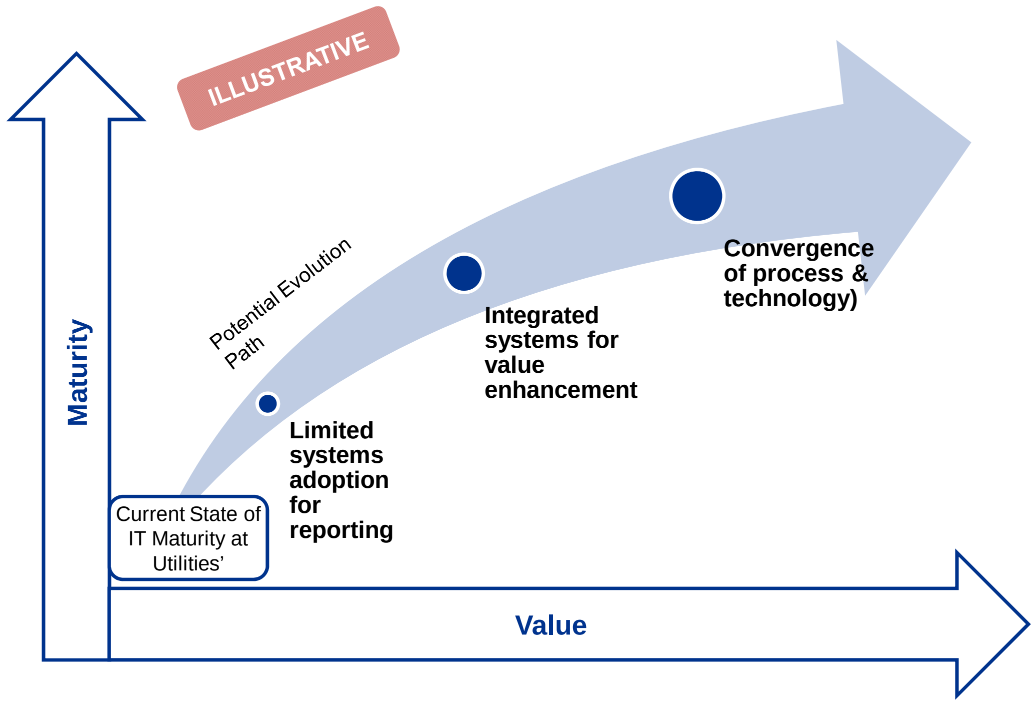
Annexure - 1

POSSIBILITIES FOR I.T. SOLUTIONS

Following maps/charts depicts a suggested approach towards implementation of I.T. solution commensurate with the size and nature of business of the Board:

Value-Maturity Curve



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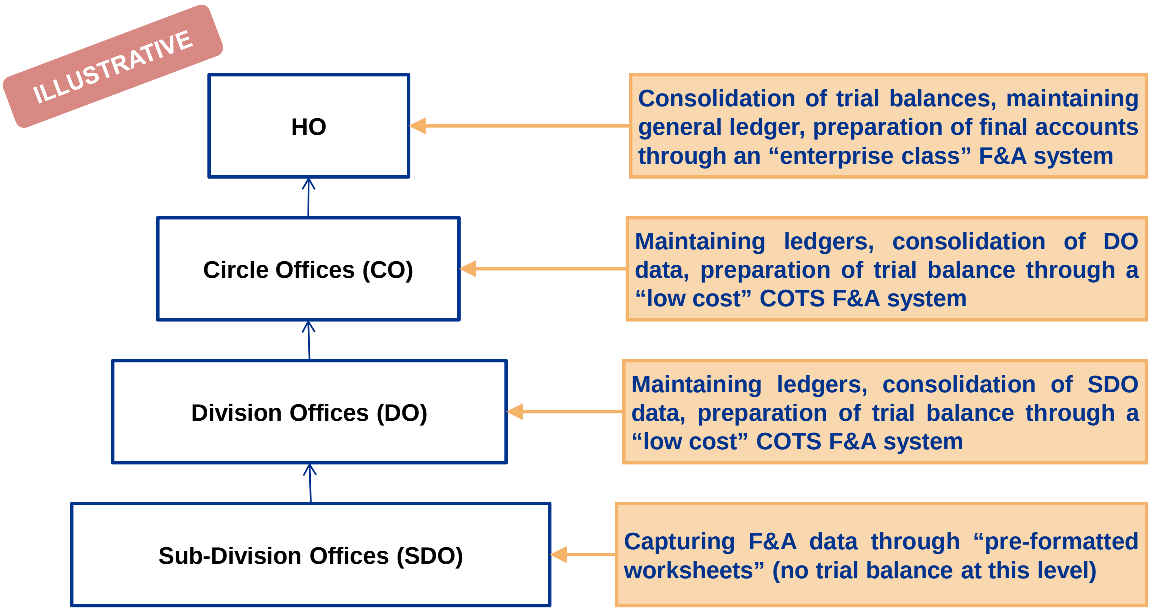
Solution for Limited Adoption



COTS = Commercial Of the Shelf

Implementation Options

Option 1 (Integrated Solution Implementation)

Constituents

- Finance & Accounting (F&A) Consultant
- Tier-1 Integrated Solution
- Tier-1 Systems Integrator

Investment & Adoption

- Higher cost :
  - ✓Hardware and software components
  - ✓Systems Integrator
  - ✓Change management and trainings
- Complex implementation/ adoption cycle
- Expected solution life (post implementation)– 5 years

Option 2 (Hybrid Solution Implementation)

Constituents

- Finance & Accounting (F&A) Consultant
- Tier-2 Hybrid Solution ("low cost" COTS system components)
- Tier-2 Systems Integrator ("low cost" COTS local systems integrator)

Investment & Adoption

- Lower cost:
  - ✓Hardware and software components
  - ✓Systems Integrator
  - ✓Change management and trainings
- Less complex implementation/adoption
- Expected solution life (after implementation) – 3 to 5 years

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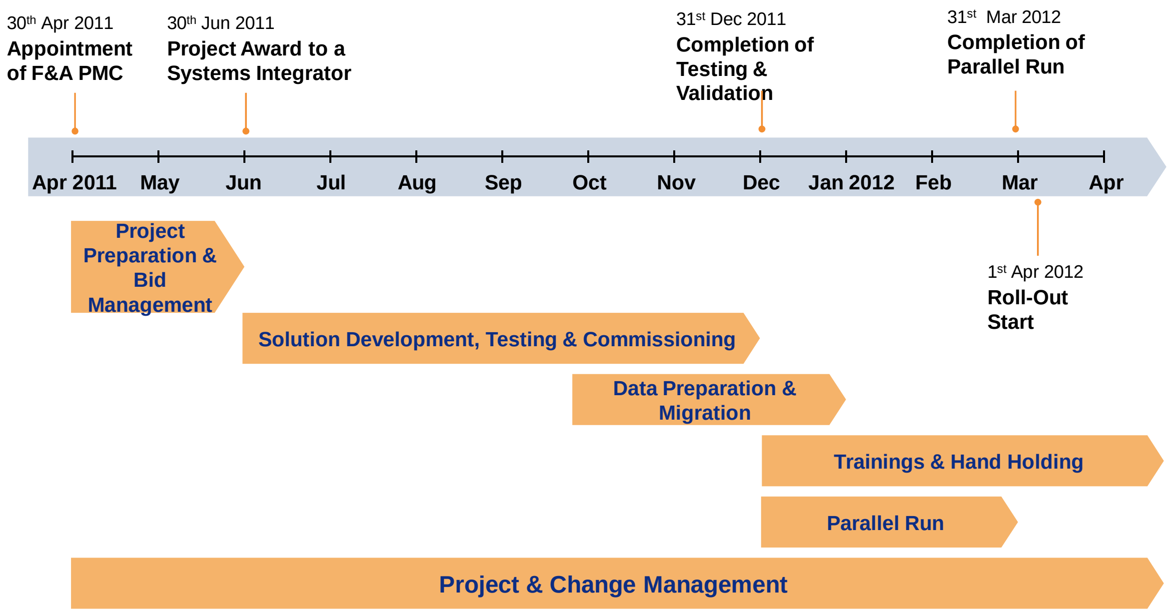
Indicative Timeline



F&A PMC = Finance & Accounting Project Management Consultant

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Annexure - 2

CERTAIN ILLUSTRATIVE PROCEDURES REGARDING:

FIXED ASSETS REGISTER

RECEIVABLES LISTING, AGEING AND RECOVERABILITY

DISTRIBUTION AND OTHER LOSSES

RECONCILIATION OF INTER CIRCLE TRANSACTIONS

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FIXED ASSETS REGISTER

OBSERVATION

- No fixed assets register maintained by the utilities
- No tracking of capital work in progress

RECOMMENDATION

- Preparation of Fixed Assets Register (‘FAR’)
- Reconciliation of Inter Unit Transactions (‘IUT’)

WAY FORWARD

- Classify assets:
  - ✓ Assets that can be identified based on the available records
  - ✓ Rest of the assets for which its not feasible to trace records
- Formation of a team
  - ✓ HO to form a separate team at various levels to monitor physical verification exercise and compilation of data
- External support
  - ✓ HO to engage external support to supervise the exercise
- Fixation of accountability with each team:
  - ✓ Head Office Level
  - ✓ Circle Level
  - ✓ Division and Sub-Division Level
- Physical verification exercise:
  - ✓ Identification of standard categories of assets
  - ✓ Format for physical verification and data capturing (Refer subsequent slide)
  - ✓ Physical survey and recording of existing assets in a serially controlled format

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- ✓ Confirmation by respective Divisional Heads / Technical Heads
- ✓ Supervision by Finance Team
- ✓ Supervision by external agencies

- Compilation of data
  - ✓ Based on serially controlled physical verification sheets
- Allocation of values to assets in existence, based on appropriate method (e.g. replacement value method)
- Tracking of capital work in progress and to identify:
  - ✓ Assets already being used and to be capitalised
  - ✓ Assets ready to use
  - ✓ Reconciliation of ICT to identify additional items for capitalisation (Refer following slides)
- ILLUSTRATIVE FORMAT FOR DATA CAPTURING:
- Description and category of asset
- Identification number
- Make
- Quantity
- Location / area of installation
- Suppliers' name (to the extent feasible)
- Estimated age of asset
- Estimated life of asset (to the extent feasible)
- Responsibility / accountability
  - ✓ Physical verification done by / date
  - ✓ Approved by Divisional / Technical Head
- Any other details considered relevant

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RECEIVABLES

OBSERVATION

- No tracking of receivables per party and Division
- Ageing and other details of outstanding receivables not made available

WAY FORWARD

- Board is required to prepare detailed schedule of receivables, including the following:
  - ✓ Customer name
  - ✓ Connection and area reference
  - ✓ Category
  - ✓ Amount
  - ✓ Overdue amount
  - ✓ Sur charge on late payment not recognised
  - ✓ Outstanding amount with date of bills and ageing, duly matched with the financial records and sub ledgers
  - ✓ Responsible Board official
  - ✓ Reasons for non recovery
  - ✓ Legal cases, if any
  - ✓ Action plan and scheduled timing for recovery
- Prioritize receivables based on:
  - ✓ Category (Industrial, Government, Agriculture, etc.)
  - ✓ Ageing
  - ✓ Amount involved
  - ✓ Legal cases
  - ✓ Area and population

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- Assign responsibility for actual recovery
- Close monitoring on a weekly basis
- Penal action and discontinuation of power supply for defaulters

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DISTRIBUTION AND OTHER LOSSES

OBSERVATION

- No regular monitoring of transmission losses
- No periodic targets set for reduction in transmission losses

WAY FORWARD

- BOARD TO INITIATE STEPS INCLUDING THE FOLLOWING:
  - ✓ To prepare Input/output analysis and setting up of periodic targets
  - ✓ Methods to monitor at the smallest possible distribution units e.g.
    - Grid stations
    - Sub-stations
    - Transformer level
    - Meter line (pole)
    - Any other feasible location for monitoring
  - ✓ Frequent comparison of T&D losses against targets
  - ✓ Identification of areas/locations with maximum losses
  - ✓ Penal action and discontinuation of power supply

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RECONCILIATION OF INTER UNIT/CIRCLE TRANSACTIONS

OBSERVATION

- No regular tracking of stock movements between Circles at Division and Sub-Division level
- No physical verification
- No reconciliation of old unadjusted items lying in ICT

RECOMMENDATION

- Identification of old un-reconciled items lying in ICT
- Regular monitoring of stock movements between Circles
- Physical verification at regular intervals

WAY FORWARD

- Head Office to have a separate project for:
  - ✓ Identification of specific unreconciling items (i.e. Inter Circle Transactions, Vendor advances and payments)
  - ✓ Identification of responsible project in-charge
  - ✓ Conclusion as to whether the project is in process or completed
  - ✓ Identification of reasons for pending "Project Completion Reports"
  - ✓ Appropriate accounting treatment based on above to nullify ICT
  - ✓ This may result in:
    - Expenses/provision for expenses
    - Stores/Capital assets
    - Possible dual payments or payments for nonexistent transactions
    - Any other corrections
    - Possible misappropriation

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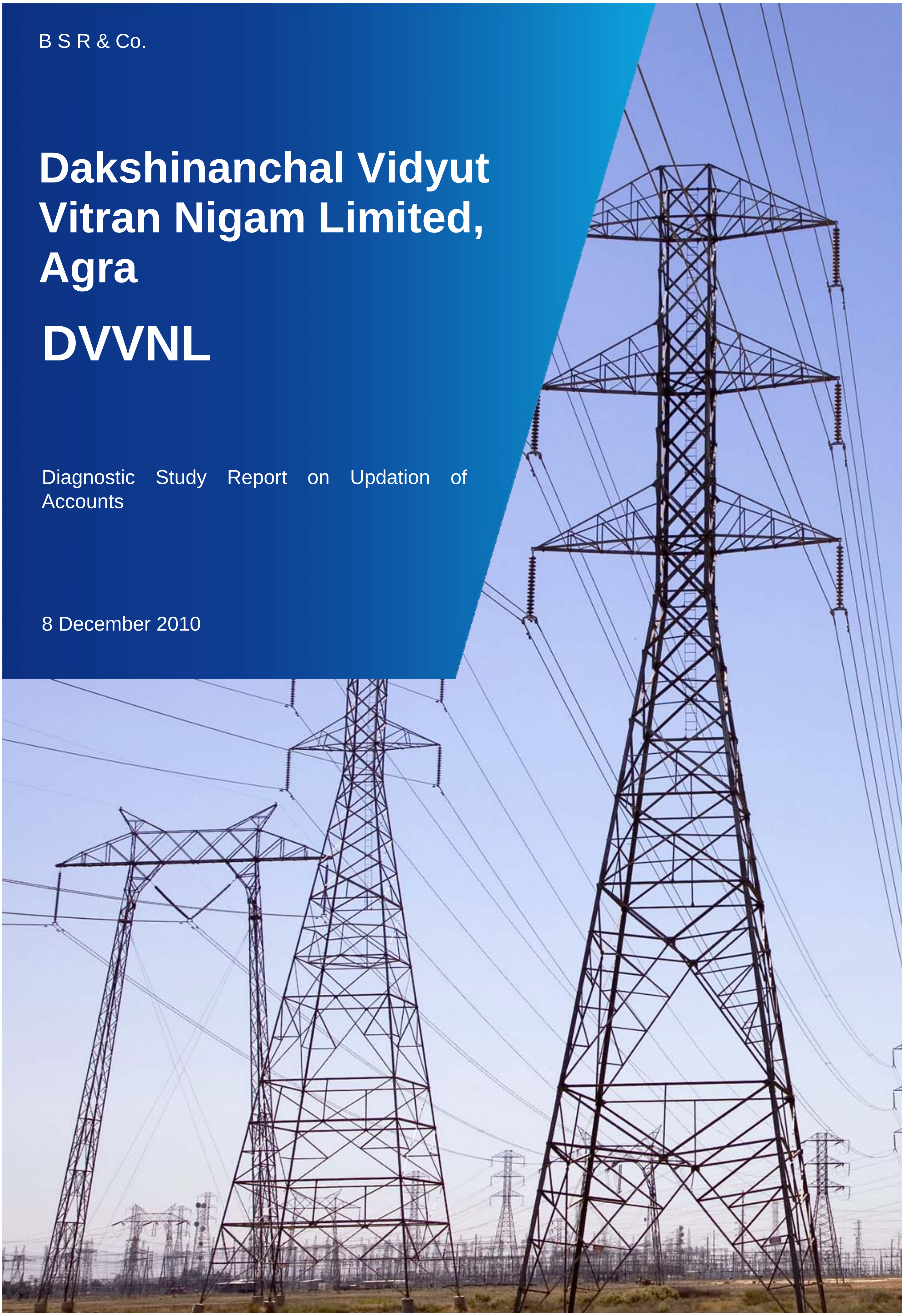
B S R & Co.

Dakshinanchal Vidyut Vitran Nigam Limited, Agra

DVVNL

Diagnostic Study Report on Updation of Accounts

8 December 2010



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1. Purpose and Basis

Prepared for the "HIGH LEVEL PANEL ON FINANCIAL POSITION OF DISTRIBUTION UTILITIES" for the purpose of information on status update and summarising the key issues/road blocks noticed in relation to finalisation of financial statements upto March 31, 2010 of the Utilities'. This is based solely on the discussions with the Utility's management and does not constitute an audit/review in accordance with the generally accepted auditing standards.

Restrictions on distribution:

Includes information which has been provided based on preliminary discussions with the Utility's management only. It is produced on the basis that it is for your information only and that it will not be quoted or referred to, in whole or in part, without our prior written consent.

2. Coverage

This report covers Dakshinanchal Vidyut Vitran Nigam Limited, Agra (herewith referred to as the 'Utility')

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3. Background

Planning Commission (Power & Energy Division) vide its office memorandum ref. F. No. I-22/2/32/2010-P&E dated 28.07.2010 has intimated that Prime Minister has approved a High Level Panel (HLP) on 'Financial Position of Distribution Utilities' to look into the financial problems of the SEBs/Distribution utilities and to identify potential corrective steps particularly in relation to their accounting practices as mentioned in the TOR given therein.

In accordance with the above, we have been appointed to carry out a diagnostic study, covering status of updation of accounts of the utility till 31 March 2010 vide letter no. 4-3/I/HLP/2010 of HLP dated 13 October 2010. The diagnostic study covers the following:

- Status of accounts
- Identification of key issues / road blocks in completion of accounts
- Work plan / road map for updation of accounts upto the year 2009-10, in consultation with the Utility

Detailed Scope of Work

Carrying out Diagnostic study for updating of accounts till 31st March 2010 covering the following:

- Preparation of an initial questionnaire to facilitate carrying out diagnostic study
- Visit the Utility
- Carrying out Diagnostic study covering
  - ✓ Status of accounts
  - ✓ Identification of key issues / road blocks in completion of accounts
  - ✓ Work plan / road map for updation of accounts upto the year 2009-10 in consultation with the Utility
- Visit the Utility periodically to oversee the progress of the work and ensure that the working is going as per the work plan.

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- To make efforts in association with Institutional Service Providers towards the plan to complete the accounts by 31st December 2010.
- Ascertain overall status of computerization of financial accounting systems in the Utility and the steps being taken by the Utility for implementation of IFRS applicable from FY 2011-12.

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4. Our Approach

This section provides the approach adopted by us to carry out the diagnostic study.

4.1 Key objective of the study

The prime objective of the study is to draw a road map to clear the backlog in the preparation of accounts of the Utility upto financial year 2009-10. Accordingly, the backlog in annual audited accounts for the years upto 2009-10 should be cleared and simultaneously the accounts for the year 2010-11 should be audited on time.

4.2 Our Approach

The approach adopted by us to carry out the diagnostic study involves the following key steps:

- Preparation of an initial questionnaire
- Field visit to the Utility
- Analysis of the status and indentifying key issues / road blocks in completion of accounts in discussions with the Utility's management
- Based on the above and feedback from the Utility's management, drawing a tentative work plan /road map for updation of accounts upto the year 2009-2010
- Closing meeting / presentation to the Managing Director and officials of the Utility to discuss our findings and obtaining additional observations and recommendations, if any.

During the field visits, we coordinated with the Institutional Service Providers (ISP's) officials, took their inputs/support into the account while developing the road map.

We prepared an initial questionnaire to gather the primary information regarding the status of accounts preparation as on date (refer to Point no. 8). The questionnaire primarily covered the following aspects:

- Status of present accounting system
- Status of Computerisation of accounts
- System of internal audit
- Status of accounts preparation and audit

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- Status on compilation/consolidation of annual accounts:
  - ✓ at Head Office
  - ✓ at zones
  - ✓ at field offices/accounting units
- Key issues/constraints faced in timely preparation of annual accounts/expediting clearance of backlog in preparation of annual accounts

The above information was compiled by the Utility with the assistance of ISP. A study of the information provided by the Utility an above was done by us, prior to making field visit to have a focused discussion with Utility's personals.

During our field visits, we commenced the diagnostic study with a kick off meeting with the Head of Accounts and other key officials at the Head office of the Utility. The objective of the meeting was to obtain an overall understanding of the following aspects:

- An overview of the organisation and accounting set-up
- Preliminary discussions of the information provided as per the questionnaire, status of accounts and key issues
- Preparation of work plan for the field visits

Based on the above, we met the concerned key officials at select offices as under:

- Head office – Compilation and Accounts Department/Section
- Zone – Compilation and Accounts Department/Section
- Circle/Division/Sub-Division
- In addition, we also had discussions with the statutory auditors of the Utility

The main objectives of the above meetings were:

- To gain understanding of the process of preparation and compilation of accounts, broadly covering the following:
  - ✓ Preparation of books of account by the accounting units
  - ✓ Compilation of Accounts by Divisions
  - ✓ Compilation of Accounts by Zones
  - ✓ Branch audit
  - ✓ Compilation of Accounts by HO

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- ✓ Approval of accounts by Board of Directors
- ✓ Statutory Audit
- ✓ CAG Audit
- ✓ Adoption of Accounts in the AGM

- Understand in detail the current status on the compilation of accounts and audit
- Understand and discuss the key issues involved/constraints faced in timely preparation of accounts and audit thereof
- Understanding the likely completion dates as provided by the Utility in the initial checklist and the assumptions behind it.
- Arrive at practicable and implementable road map, including time frame, responsibility and actions required

The above discussions also included ascertaining the status of computerisation of accounts and implementation plan for IFRS.

List of Officials met

A broad list of officials / consultants interacted with during the diagnostic study is as follows:

- Mr. Dhrupad Prasad – Managing Director
- Mr. A.K. Agarwal – General Manager (Finance)
- Mr. S.S.Prasad – Staff Officer
- Mr. B.B.S. Gaur – Superintendent Engineer (Commercial)
- Mr. Y.S. Raghav – Assistant Engineer (Technical)
- Mr. P.K. Agarwal – Deputy Accounts Officer (Agra Zone)
- Mr. S.C. Gupta – Retainer (Retd. Accounts Officer)
- Mr. Sharma - Accountant (Electricity Distribution Division – I, Agra)
- Mr. Manish Jain – Representation of Statutory Auditors (Kastoor Jain & Co.)
- Mr. Sanjay Agarwal – OPG Consultants team member

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5.Broad Structure of the Utility

The Utility's structure may be divided into the following functional / operational units:

Head Office ('HO'):

HO is primarily responsible for compiling the financial information received from ZO.

5 Zonal Offices ('ZO'):

ZOs are primarily responsible for compiling the financial information received from COs and Dos.

22 Circle Offices ('CO'):

COs are primarily responsible for administrative oversight over DOs.

83 Divisional Offices ('DO'):

All activities relating to operations / works and revenue generation, collection etc. resides with Dos.

Size of DVVNL

The size of the Utility in terms of revenue, customers and accounting units may be summarised as under:

Revenue – Approx 3,200 crores (as per provisional Financial statements for the year ended 31 March 2010)

Customers – 20 lakhs +

Accounting Units – 105 (approximately)

HO, ZO, CO and DO prepare the following books of account

- Section Journal 1 – Staff related payments i.e. salaries
- Section Journal 2 – Staff related payments other than salaries e.g., PF, ESI etc
- Section Journal 3 – Payments made to outside agencies e.g. vendors, suppliers, contractors etc
- Section Journal 4 – Financial adjustment entries e.g. rectification entries, inter-unit reconciliation entries, stock account adjustment entries etc.

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- Cash book – Cash payment (one part of the transaction is recorded in the cash book and the other part is recorded in the respective Section journal).

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6. Financial Reporting and Audit Process

As explained to us, following is the financial reporting and audit process of the Utility. As informed to us, the process of the financial reporting is very prolonged and takes substantial period of time to complete due to various processes involved to compile financial information and multiple audits. The following is the summary:

- The accounting policy manual of Uttar Pradesh Power Corporation Limited (UPPCL), the holding company of PVVNL, prescribes the accounting treatment of each of the specific accounting items.
- Standard account codification process prescribed by UPPCL needs to be followed by the distribution companies.
- The Company initially follows cash basis of accounting during the year and provides for expenses as at the year end to ensure that the financial statements are based on the accrual concept.
- COs and DOs provide accounting information to their respective zonal offices for consolidation.
- The respective ZOs have purchased third party software having certain basic in-built functionalities, e.g., checking the sum totals, checking that the contra entries are matching, etc.
- The Company hires independent consultants, like Dataman, for compiling the data received from CO’s and DO’s for consolidation purposes.
- The compiled information is audited by the respective Zonal office auditors and the audited financial statements along with the audit report, are forwarded by the respective ZOs to the HO.
- HO also has an independent third party software which it uses to consolidate the respective ZO results.
- Consolidated results at HO are audited by the HO auditors. The Statutory Audit takes approximately 4 to 6 weeks to complete.
- Audited financial statements along with the auditors’ report, are sent to the State Auditor General office ('State AG office') for their audit and comments.
- State AG office reviews the audited financials and discusses its findings with the Company's management.

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- State AG office clears the financial statements and forwards them to Comptroller and Auditor General office ('CAG Office') for final clearance.

- CAG office clears the financial statements after discussions with the State AG office and thereafter the financial statements are adopted in the Annual General Meeting of the Company.

- It takes approx 6-8 months to complete the audit of accounts (i.e. commencing from the branch audit till completion of audit by CAG office).

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7. Status of Computerisation

There is largely no computerization of the financial reporting process i.e. initiation, authorization, recording and financial reporting. The Utility uses computers for compilation of financial information for consolidation purposes at ZOs and HO. Trail balances received by ZOs from COs and DOs are entered into the computer software (fox-pro). Software systems have limited functionality and essentially apply information compiling procedures. In selected areas, meter reading and bill processing, mainly for domestic customers, is outsourced to external vendors/franchisees.

Following key issues were identified under status of computerisation

- No computerisation for monitoring and tracking of capital projects and revenue expenditure.
- No computerization for monitoring of human resource and related data.
- Billing, collections, customer care and dispute management systems have not been implemented.
- Energy data generated is a mix of manual and system efforts. This lacks a robust reconciliation process.
- Legal cases are updated manually by the various consultants on the basis of advice received from the Divisional Offices and are not system controlled.
- The systems / software used either by the Utility or the vendor are outdated. These, lack modern functionality of processing and reporting.
- The system used by the Entity is mainly for data consolidation instead of data processing and generation.

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8. Status of Accounts and Utility's Plan for Completion

Following is the status of accounts for the years 2007-08, 2008-09, 2009-10 and Utility's plan for completion based on the discussions with the Utility's officials:

Particulars	**FY 2007-08**	**FY 2008-09**	**FY 2009-10**
	Plan	**Plan**	**Plan**
Compilation of provisional financial statements of the Company	Already done	Already done	Already done
Completion of Branch Audits	30-Nov-2010	30-Apr-11	30-Apr-11
Completion of Statutory Audit	31-Dec-10	31-May-11	31-May-11
Review by State AG office / CAG offices	7-Jan-11	Not planned	Not planned
Approval from State AG / CAG offices	7-May-11	Not planned	Not planned
Annual General Meeting for adoption of account	30-Jun-11	Not planned	Not planned
Completion of Primary Books of account	Completed	Completed	Completed
Compilation of Monthly Trial Balances	Completed	Completed	Completed
Branch Audit of Zonal Accounts	Completed	Completed	Completed
Preparation of Consolidated Accounts	Completed	Completed	Completed
Completion of Statutory Audit	Completed	30-Apr-11	30-May-11
Adoption of final accounts by Board of Directors	Completed	31-Jul-11	No plan
IUT reconciliation	***Entity to advice a separate plan***		
For financial year 2006-07, board meeting and AGM are planned in December 2010			

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9. Key Issues/Road Blocks Noticed

Key issues/road blocks identified in completion of accounts for the years upto 2009-10 based on the following:

Study/review and analysis of the overall accounting structure and accounting process followed at the Utility

Current status on preparation of accounts and discussions held with the Utility's officials

Discussions with the Branch/Statutory auditors of the Utility to the extent feasible.

The key issues/road blocks noticed for updation of accounts are summarised below:

SPECIFIC ISSUES

- Liquidity crunch: Huge outstanding receivables
- Pending inter-unit reconciliation ('IUT')
- Preparation of Fixed Assets Register ('FAR')
- Preparation/reconciliation of stock register
- Preparation of provision for expenses
- Substantial distribution losses
- Completion of audit by Statutory Auditors / Branch Auditors
- Completion of audit by CAG

GENERAL ISSUES

- Lack of appropriate manpower
- Lack of computerization (covered per separate details)
- Lack of coordination between Commercial and Accounting/Finance teams
- Opening balances at the time of unbundling of State Electricity Board ('SEB'), which are still pending reconciliation and finalization
- Numerous qualifications in audit report (refer Annexure 1 for a brief on qualifications in the audit report for the year ended 2006-07)

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10. Major Items Pending Conclusion

Inter-unit reconciliation ('IUT')

- Pending since 2003 (10-20% relating to 2003-2005 and balance for subsequent years)
- Pending for 83 DOs, 22 COs and 5 ZOs;

Major reconciling items:

- Stock transfer adjustments;
- Credit from UPPCL to DO;
- Payment made through IUT.

Amounts involved as per provisional financial statements:

- Rs. 1,615 crores (Asset) for FY 2009-2010;
- Rs. 1,346 crores (Asset) for FY 2008-2009;
- Rs. 1,134 crores (Asset) for FY 2007-2008;
- Rs.650 crores (Asset) for FY 2006-2007; (Audit completed)
  (Auditors appointed for all the above years)

Possible items that may need to be adjusted on conclusion of IUT reconciliations:

- Expenses/provision for expenses
- Stores
- Capital assets
- Possible dual payments or payments for non-existent transactions
- Any other corrections

As explained to us, the Utility has not worked out any plan for reconciliation – Utility would need to consider this as a separate project.

However, pending such reconciliation we believe that the Utility may consider the following:

- Accounts may be concluded subject to IUT reconciliations;
- Possible report by Statutory Auditors subject to reconciliation of IUT and holding AGM;
- Separate project to reconcile and conclude IUT and other balances

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11. Certain critical issues

Based on various discussions with the Utility's management, certain critical issues are as under:

ENTITY TO CONSIDER

- Physical verification of fixed assets and preparation of fixed assets register
- Maintenance of stock register and physical verification
- Identify specific un-reconciling items (i.e. Inter Circle Transactions, Vendor advances and payments etc) and conclude, considering the size of un-reconciled items and possibility of misappropriation
- Analysis and ageing of receivables and action for recovery
- Preparation of Input / output analysis and action against losses
- Consider separate project for implementation of IT system.

BRANCH / STATUTOY AUDITORS TO CONSIDER

- Parallel Statutory Audit for multiple years
- Possible conclusion of audit of financial statements subject to IUT reconciliation and holding of AGM

SEPARATE PROJECT FOR IUT RECONCILIATION

- Entity to consider IUT Reconciliation as a separate project
- To identify specific items and conclude, considering the size of un-reconciled items and possibility of misappropriation
- Need coordination between Engineering and Finance teams (possibly more authority to Finance teams to reach conclusion)
- Robust process to be in place for periodic reconciliation, going forward
- Consider implementing a real time IT system to track IUT transaction status (to be a part of overall level of computerisation)

HLP TO INTERVENE

- To connect with the Entity for expediting compilation of pending information

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- To connect with CAG to expedite the audit process

MATTERS FOR FURTHER DISCUSSIONS

- Lack of appropriate manpower
- Separate project on IT system implementation
- Lack of interdepartmental coordination (largely between Engineering and Accounting / Finance teams)
- Opening balances on unbundling
- Entity to prepare a structured plan for implementation of IFRS

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Annexure - 1

AUDITORS' OBSERVATIONS (PER LATEST AUDITED FINANCIALS STATEMENTS FOR 2006-07)

As mentioned above, below are some of the key observations in the audit report of the Utility in the audit report for the year ended 31 March 2007:

Material observation made by Statutory auditor	Possible conclusion and way forward Plan
Inventory valuation is not in accordance with Accounting Standard 2 "Valuation of Inventories"	Entity to take corrective action and conclude
The Company is not charging depreciation in accordance with Accounting Standard 6 "Depreciation Accounting"	Entity to take corrective action and conclude
Accounting for fixed assets is not in accordance with Accounting Standard 10 "Accounting for Fixed Assets"	Entity to take corrective action and conclude
Fixed Assets Register (FAR) not fully prepared by the entity	The activity has been outsourced to M/s Das Gupta & Associates for financial year 2008-09. Entity to conclude.
Bank accounts are not reconciled properly. Up to date bank statements are not available and even balance confirmation certificates are not available	Possibility of misappropriation may not be ruled out. Entity to take immediate action.
Very old entries continue to remain in the bank reconciliation statements	Possibility of misappropriation may not be ruled out. Entity to take immediate action.
More attention is required to be paid for TDS	Entity to initiate a process
The dues of debtors are not reconciled with balance as per trial balance	Possibility of misappropriation may not be ruled out. Entity to take immediate action.
Cases of embezzlement / theft noticed in current / earlier years.	Possibility of widespread misappropriation may not be ruled out. Entity to take immediate action.

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Annexure - 2

CERTAIN ILLUSTRATIVE PROCEDURES REGARDING:

FIXED ASSETS REGISTER

RECEIVABLES LISTING, AGEING AND RECOVERABILITY

DISTRIBUTION AND OTHER LOSSES

RECONCILIATION OF INTER CIRCLE TRANSACTIONS

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FIXED ASSETS REGISTER

OBSERVATION

- No fixed assets register maintained by the utilities
- No tracking of capital work in progress

RECOMMENDATION

- Preparation of Fixed Assets Register ('FAR')
- Reconciliation of Inter Unit Transactions ('IUT')

WAY FORWARD

- Classify assets:
  - ✓ Assets that can be identified based on the available records
  - ✓ Rest of the assets for which its not feasible to trace records
- Formation of a team
  - ✓ HO to form a separate team at various levels to monitor physical verification exercise and compilation of data
- External support
  - ✓ HO to engage external support to supervise the exercise
- Fixation of accountability with each team:
  - ✓ Head Office Level
  - ✓ Circle Level
  - ✓ Division and Sub-Division Level
- Physical verification exercise:
  - ✓ Identification of standard categories of assets
  - ✓ Format for physical verification and data capturing (Refer subsequent slide)
  - ✓ Physical survey and recording of existing assets in a serially controlled format

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- ✓ Confirmation by respective Divisional Heads / Technical Heads
- ✓ Supervision by Finance Team
- ✓ Supervision by external agencies

▪ Compilation of data

- ✓ Based on serially controlled physical verification sheets

▪ Allocation of values to assets in existence, based on appropriate method (e.g. replacement value method)

▪ Tracking of capital work in progress and to identify:

- ✓ Assets already being used and to be capitalised
- ✓ Assets ready to use
- ✓ Reconciliation of ICT to identify additional items for capitalisation (Refer following slides)

▪ ILLUSTRATIVE FORMAT FOR DATA CAPTURING:

▪ Description and category of asset

▪ Identification number

▪ Make

▪ Quantity

▪ Location / area of installation

▪ Suppliers' name (to the extent feasible)

▪ Estimated age of asset

▪ Estimated life of asset (to the extent feasible)

▪ Responsibility / accountability

  - ✓ Physical verification done by / date
  - ✓ Approved by Divisional / Technical Head

▪ Any other details considered relevant

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RECEIVABLES

OBSERVATION

- No tracking of receivables per party and Division
- Ageing and other details of outstanding receivables not made available

WAY FORWARD

- Utility is required to prepare detailed schedule of receivables, including the following:
  - ✓ Customer name
  - ✓ Connection and area reference
  - ✓ Category
  - ✓ Amount
  - ✓ Overdue amount
  - ✓ Sur charge on late payment not recognised
  - ✓ Outstanding amount with date of bills and ageing, duly matched with the financial records and sub ledgers
  - ✓ Responsible utility official
  - ✓ Reasons for non recovery
  - ✓ Legal cases, if any
  - ✓ Action plan and scheduled timing for recovery
- Prioritize receivables based on:
  - ✓ Category (Industrial, Government, Agriculture, etc.)
  - ✓ Ageing
  - ✓ Amount involved
  - ✓ Legal cases
  - ✓ Area and population

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- Assign responsibility for actual recovery
- Close monitoring on a weekly basis
- Penal action and discontinuation of power supply for defaulters

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DISTRIBUTION AND OTHER LOSSES

OBSERVATION

- No regular monitoring of transmission losses
- No periodic targets set for reduction in transmission losses

WAY FORWARD

- UTILITY TO INITIATE STEPS INCLUDING THE FOLLOWING:
  - ✓ To prepare Input/output analysis and setting up of periodic targets
  - ✓ Methods to monitor at the smallest possible distribution units e.g.
    - Grid stations
    - Sub-stations
    - Transformer level
    - Meter line (pole)
    - Any other feasible location for monitoring
  - ✓ Frequent comparison of T&D losses against targets
  - ✓ Identification of areas/locations with maximum losses
  - ✓ Penal action and discontinuation of power supply

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RECONCILIATION OF INTER UNIT/CIRCLE TRANSACTIONS

OBSERVATION

- No regular tracking of stock movements between Circles at Division and Sub-Division level
- No physical verification
- No reconciliation of old unadjusted items lying in ICT

RECOMMENDATION

- Identification of old un-reconciled items lying in ICT
- Regular monitoring of stock movements between Circles
- Physical verification at regular intervals

WAY FORWARD

- Head Office to have a separate project for:
  - ✓ Identification of specific unreconciling items (i.e. Inter Circle Transactions, Vendor advances and payments)
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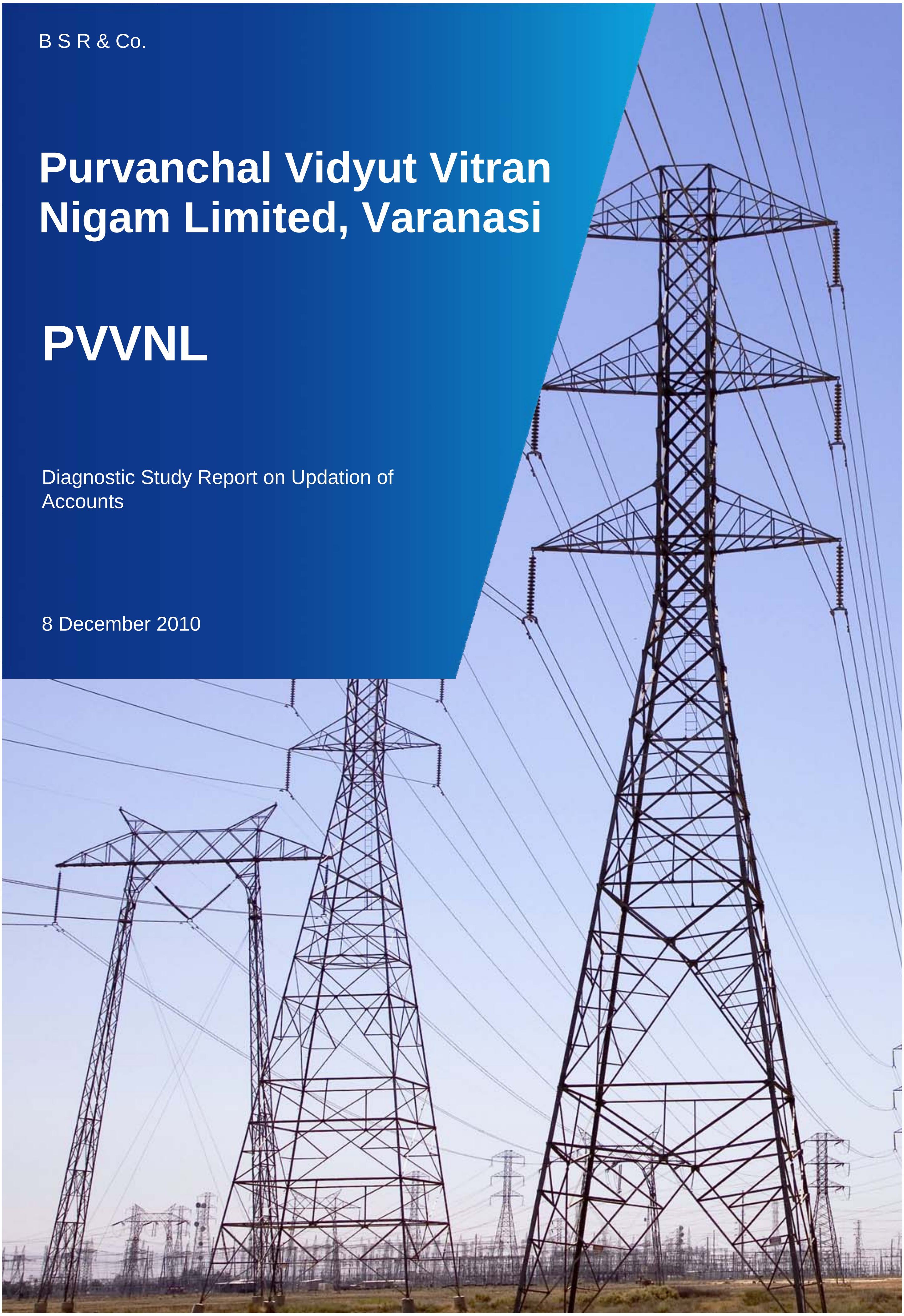
B S R & Co.

Purvanchal Vidyut Vitran Nigam Limited, Varanasi

PVVNL

Diagnostic Study Report on Updation of Accounts

8 December 2010



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3. Background

Planning Commission (Power & Energy Division) vide its office memorandum ref. F. No. I-22/2/32/2010-P&E dated 28.07.2010 has intimated that Prime Minister has approved a High Level Panel (HLP) on 'Financial Position of Distribution Utilities' to look into the financial problems of the SEBs/Distribution Utilities and to identify potential corrective steps particularly in relation to their accounting practices as mentioned in the TOR given therein.

In accordance with the above, we have been appointed to carry out a diagnostic study, covering status of updation of accounts of the utility till 31 March 2010 vide letter no. 4-3/I/HLP/2010 of HLP dated 13 October 2010. The diagnostic study covers the following:

- Status of accounts
- Identification of key issues / road blocks in completion of accounts
- Work plan / road map for updation of accounts upto the year 2009-10, in consultation with the Utility

Detailed Scope of Work

Carrying out Diagnostic study for updating of accounts till 31st March 2010 covering the following:

- Preparation of an initial questionnaire to facilitate carrying out diagnostic study
- Visit the Utility
- Carrying out Diagnostic study covering
  - ✓ Status of accounts
  - ✓ Identification of key issues / road blocks in completion of accounts
  - ✓ Work plan / road map for updation of accounts upto the year 2009-10 in consultation with the Utility
- Visit the Utility periodically to oversee the progress of the work and ensure that the working is going as per the work plan.
- To make efforts in association with Institutional Service Providers towards the plan to complete the accounts by 31st December 2010.

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- Ascertain overall status of computerization of financial accounting systems in the Utility and the steps being taken by the Utility for implementation of IFRS applicable from FY 2011-12.

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4. Our Approach

This section provides the approach adopted by us to carry out the diagnostic study.

4.1 Key objective of the study

The prime objective of the study is to draw a road map to clear the backlog in the preparation of accounts of the Utility upto financial year 2009-10. Accordingly, the backlog in annual audited accounts for the years upto 2009-10 should be cleared and simultaneously the accounts for the year 2010-11 should be audited on time.

4.2 Our Approach

The approach adopted by us to carry out the diagnostic study involves the following key steps:

- Preparation of an initial questionnaire
- Field visit to the Utility
- Analysis of the status and indentifying key issues / road blocks in completion of accounts in discussions with the Utility's management
- Based on the above and feedback from the Utility's management, drawing a tentative work plan /road map for updation of accounts upto the year 2009-2010
- Closing meeting / presentation to the Managing Director and officials of the Utility to discuss our findings and obtaining additional observations and recommendations, if any.

During the field visits, we coordinated with the Institutional Service Providers (ISP's) officials, took their inputs/support into the account while developing the road map.

We prepared an initial questionnaire to gather the primary information regarding the status of accounts preparation as on date (refer to Point no. 8). The questionnaire primarily covered the following aspects:

- Status of present accounting system
- Status of Computerisation of accounts
- System of internal audit
- Status of accounts preparation and audit
- Status on compilation/consolidation of annual accounts:
  - ✓ at Head Office

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- ✓ at zones
- ✓ at field offices/accounting units

- Key issues/constraints faced in timely preparation of annual accounts/expediting clearance of backlog in preparation of annual accounts

The above information was compiled by the Utility with the assistance of ISP. A study of the information provided by the Utility an above was done by us, prior to making field visit to have a focused discussion with Utility's personals.

During our field visits, we commenced the diagnostic study with a kick off meeting with the Head of Accounts and other key officials at the Head office of the Utility. The objective of the meeting was to obtain an overall understanding of the following aspects:

- An overview of the organisation and accounting set-up
- Preliminary discussions of the information provided as per the questionnaire, status of accounts and key issues
- Preparation of work plan for the field visits

Based on the above, we met the concerned key officials at select offices as under:

- Head office – Compilation and Accounts Department/Section
- Zone – Compilation and Accounts Department/Section
- Circle/Division/Sub-Division
- In addition, we also had discussions with the statutory auditors of the Utility

The main objectives of the above meetings were:

- To gain understanding of the process of preparation and compilation of accounts, broadly covering the following:
  - ✓ Preparation of books of account by the accounting units
  - ✓ Compilation of Accounts by Divisions
  - ✓ Compilation of Accounts by Zones
  - ✓ Branch audit
  - ✓ Compilation of Accounts by HO
  - ✓ Approval of accounts by Board of Directors
  - ✓ Statutory Audit
  - ✓ CAG Audit

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- ✓ Adoption of Accounts in the AGM

- Understand in detail the current status on the compilation of accounts and audit

- Understand and discuss the key issues involved/constraints faced in timely preparation of accounts and audit thereof

- Understanding the likely completion dates as provided by the Utility in the initial checklist and the assumptions behind it.

- Arrive at practicable and implementable road map, including time frame, responsibility and actions required

The above discussions also included ascertaining the status of computerisation of accounts and implementation plan for IFRS.

List of Officials met

A broad list of officials / consultants interacted with during the diagnostic study is as follows:

- Mr. Suresh Ram– Managing Director (H.O. Varanasi)
- Mr. S.K. Mishra – Director (Finance) (H.O. Varanasi)
- Mr. P.P. Dixit – Chief Engineer Planning (H.O. Varanasi)
- Mr. Rama Shankar Prasad – Senior Accounts officer (H.O. Varanasi)
- Mr S.N. Vashisth – Deputy Chief Accounts Officer (Varanasi Zone)
- Mr. Sharad Mohan – Assistant Accountant (Varanasi Zone)
- Mr. Nankau – Assistant Accounts Officer (Varanasi Zone)
- Mr. D.S. Trivedi - Accounts Officer (H.O. Varanasi)
- Mr. P.K. Chaudhari – Assistant Accountant (H.O. Varanasi)
- Mr. B.L. Srivastava – Assistant Accountant (Varanasi Zone)
- Mr. A.K. Verma – Assistant Accounts Officer (Varanasi Zone)
- Mr. R.P. Dwivedi – Assistant Accountants Officer (H.O. Varanasi)
- Mr. S.K. Agarwal - Superintendent Commercial (Varanasi Zone)
- Mr. S.P. Trapathi – Staff Officer (H.O. Varanasi)
- Mr. Manoj Rai – Outside Consultant (Dataman)
- Mr. Sandeep Paul – Outside Consultant (Computronics Limited)
- Mr. Prakash Tulani – Representative of Statutory Auditors (Partner - M/s Jaisawal Brijesh & Co.)
- Mr. Rinkoo Maurya – Representative of Statutory Auditors (M/s Jaisawal Brijesh & Co.)

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5.Broad Structure of the Utility

The Utility's structure may be divided into the following functional / operational units:

Head Office ('HO'):

HO is primarily responsible for compiling the financial information received from ZO.

4 Zonal Offices ('ZO'):

ZOs are primarily responsible for compiling the financial information received from COs and Dos.

12 Circle Offices ('CO'):

COs are primarily responsible for administrative oversight over DOs.

93 Divisional Offices ('DO'):

All activities relating to operations / works and revenue generation, collection etc. resides with Dos.

Size of PVVNL

The size of the Utility in terms of revenue, customers and accounting units may be summarised as under:

Revenue – Approx 3,200 crores (as per provisional Financial statements for the year ended 31 March 2010)

Customers – 30 lakhs +

Accounting Units – 109 (approximately)

HO, ZO, CO and DO prepare the following books of account

- Section Journal 1 – Staff related payments i.e. salaries
- Section Journal 2 – Staff related payments other than salaries e.g., PF, ESI etc
- Section Journal 3 – Payments made to outside agencies e.g. vendors, suppliers, contractors etc
- Section Journal 4 – Financial adjustment entries e.g. rectification entries, inter-unit reconciliation entries, stock account adjustment entries etc.

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- Cash book – Cash payment (one part of the transaction is recorded in the cash book and the other part is recorded in the respective Section journal).

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6. Financial Reporting and Audit Process

As explained to us, following is the financial reporting and audit process of the Utility. As informed to us, the process of the financial reporting is very prolonged and takes substantial period of time to complete due to various processes involved to compile financial information and multiple audits. The following is the summary:

- The accounting policy manual of Uttar Pradesh Power Corporation Limited (UPPCL), the holding company of PVVNL, prescribes the accounting treatment of each of the specific accounting items.
- Standard account codification process prescribed by UPPCL needs to be followed by the distribution companies.
- The Company initially follows cash basis of accounting during the year and provides for expenses as at the year end to ensure that the financial statements are based on the accrual concept.
- COs and DOs provide accounting information to their respective zonal offices for consolidation.
- The respective ZOs have purchased third party software having certain basic in-built functionalities, e.g., checking the sum totals, checking that the contra entries are matching, etc.
- The Company hires independent consultants, like Dataman, for compiling the data received from CO’s and DO’s for consolidation purposes.
- The compiled information is audited by the respective Zonal office auditors and the audited financial statements along with the audit report, are forwarded by the respective ZOs to the HO.
- HO also has an independent third party software which it uses to consolidate the respective ZO results.
- Consolidated results at HO are audited by the HO auditors. The Statutory Audit takes approximately 4 to 6 weeks to complete.
- Audited financial statements along with the auditors’ report, are sent to the State Auditor General office ('State AG office') for their audit and comments.
- State AG office reviews the audited financials and discusses its findings with the Company's management.
- State AG office clears the financial statements and forwards them to Comptroller and Auditor General office ('CAG Office') for final clearance.

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- CAG office clears the financial statements after discussions with the State AG office and thereafter the financial statements are adopted in the Annual General Meeting of the Company.

- It takes approx 6-8 months to complete the audit of accounts (i.e.commencing from the branch audit till completion of audit by CAG office).

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7. Status of Computerisation

There is largely no computerization of the financial reporting process i.e. initiation, authorization, recording and financial reporting. The Utility uses computers for compilation of financial information for consolidation purposes at ZOs and HO. Trail balances received by ZOs from COs and DOs are entered into the computer software (fox-pro). Software systems have limited functionality and essentially apply information compiling procedures. In selected areas, meter reading and bill processing, mainly for domestic customers, is outsourced to external vendors/franchisees.

Following key issues were identified under status of computerisation

- No computerisation for monitoring and tracking of capital projects and revenue expenditure.
- No computerization for monitoring of human resource and related data.
- Billing, collections, customer care and dispute management systems have not been implemented.
- Energy data generated is a mix of manual and system efforts. This lacks a robust reconciliation process.
- Legal cases are updated manually by the various consultants on the basis of advice received from the Divisional Offices and are not system controlled.
- The systems / software used either by the Utility or the vendor are outdated. These, lack modern functionality of processing and reporting.
- The system used by the Entity is mainly for data consolidation instead of data processing and generation.

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8. Status of Accounts and Utility's Plan for Completion

Following is the status of accounts for the years 2007-08, 2008-09, 2009-10 and Utility's plan for completion based on the discussions with the Utility's officials:

Particulars	FY 2007-08	FY 2008-09	FY 2009-10
	Plan	**Plan**	**Plan**
Compilation of provisional financial statements of the Company	30-Nov-2010	30-June-2011	30-June-2011
Completion of Branch Audits	Already done	30-June-2011	30-June-2011
Completion of Statutory Audit	31-Dec-10	30-June-2011	30-June-2011
Review by State AG office / CAG offices	Not planned	Not planned	Not planned
Approval from State AG / CAG offices	Not planned	Not planned	Not planned
Annual General Meeting for adoption of account	Not planned	Not planned	Not planned
Completion of Primary Books of account	Completed	ENTITY TO COMMUNICATE THE ACTIVITY WISE PLAN TO COMPLETE THE FINANCIALS BY 30 JUN/31 DEC 2011	
Compilation of Monthly Trial Balances	Completed		
Branch Audit of Zonal Accounts	Completed		
Preparation of Consolidated Accounts	30-Nov-2010		
Completion of Statutory Audit	31-Dec-2010		
Adoption of final accounts by Board of Directors	Not planned		
IUT reconciliation	***Entity to advice a separate plan***		
For financial year 2006-07, board meeting and AGM are planned in December 2010			

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9. Key Issues/Road Blocks Noticed

Key issues/road blocks identified in completion of accounts for the years upto 2009-10 based on the following:

Study/review and analysis of the overall accounting structure and accounting process followed at the Utility

Current status on preparation of accounts and discussions held with the Utility's officials

Discussions with the Branch/Statutory auditors of the Utility to the extent feasible.

The key issues/road blocks noticed for updation of accounts are summarised below:

SPECIFIC ISSUES

- Liquidity crunch: Huge outstanding receivables
- Pending inter-unit reconciliation ('IUT')
- Preparation of Fixed Assets Register ('FAR')
- Preparation/reconciliation of stock register
- Preparation of provision for expenses
- Substantial distribution losses
- Completion of audit by Statutory Auditors / Branch Auditors
- Completion of audit by CAG

GENERAL ISSUES

- Lack of appropriate manpower
- Lack of computerization (covered per separate details)
- Lack of coordination between Commercial and Accounting/Finance teams
- Opening balances at the time of unbundling of State Electricity Board ('SEB'), which are still pending reconciliation and finalization
- Numerous qualifications in audit report (refer Annexure 1 for a brief on qualifications in the audit report for the year ended 2006-07)

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10. Major Items Pending Conclusion

Inter-unit reconciliation ('IUT')

- Pending since 2003;
- Pending for approximately 88 units

Major reconciling items:

- Stock transfer adjustments;
- Credit from UPPCL to DO's;
- Payment made through IUT.

Amounts involved as per provisional financial statements:

- Rs. 1,144 crores (Asset) for FY 2009-2010;
- Rs. 929 crores (Asset) for FY 2008-2009;
- Rs. 393 crores (Asset) for FY 2007-2008;
- Rs. 405 crores (Asset) for FY 2006-2007; (Audit completed)
- Rs. 31 crores (Asset) for FY 2005-06: (Audit completed)
- Rs. 63 crores (Asset) for FY 2004-05: (Audit completed)
  (Auditors appointed for all the above years)

Possible items that may need to be adjusted on conclusion of IUT reconciliations:

- Expenses/provision for expenses
- Stores
- Capital assets
- Possible dual payments or payments for non-existent transactions
- Any other corrections

As explained to us, the Utility has not worked out any plan for reconciliation – Utility would need to consider this as a separate project.

However, pending such reconciliation we believe that the Utility may consider the following:

- Accounts may be concluded subject to IUT reconciliations;
- Possible report by Statutory Auditors subject to reconciliation of IUT and holding AGM;
- Separate project to reconcile and conclude IUT and other balances

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11.Certain critical issues

Based on various discussions with the Utility's management, certain critical issues are as under:

ENTITY TO CONSIDER

- Physical verification of fixed assets and preparation of fixed assets register
- Maintenance of stock register and physical verification
- Identify specific un-reconciling items (i.e. Inter Circle Transactions, Vendor advances and payments etc) and conclude, considering the size of un-reconciled items and possibility of misappropriation
- Analysis and ageing of receivables and action for recovery
- Preparation of Input / output analysis and action against losses
- Consider separate project for implementation of IT system.

BRANCH / STATUTOY AUDITORS TO CONSIDER

- Parallel Statutory Audit for multiple years
- Possible conclusion of audit of financial statements subject to IUT reconciliation and holding of AGM

SEPARATE PROJECT FOR IUT RECONCILIATION

- Entity to consider IUT Reconciliation as a separate project
- To identify specific items and conclude, considering the size of un-reconciled items and possibility of misappropriation
- Need coordination between Engineering and Finance teams (possibly more authority to Finance teams to reach conclusion)
- Robust process to be in place for periodic reconciliation, going forward
- Consider implementing a real time IT system to track IUT transaction status (to be a part of overall level of computerisation)

HLP TO INTERVENE

- To connect with the Entity for expediting compilation of pending information
- To connect with CAG to expedite the audit process

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MATTERS FOR FURTHER DISCUSSIONS

- Lack of appropriate manpower
- Separate project on IT system implementation
- Lack of interdepartmental coordination (largely between Engineering and Accounting / Finance teams)
- Opening balances on unbundling
- Entity to prepare a structured plan for implementation of IFRS

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Annexure - 1

AUDITORS' OBSERVATIONS (PER LATEST AUDITED FINANCIALS STATEMENTS FOR 2006-07)

As mentioned above, below are some of the key observations in the audit report of the Utility in the audit report for the year ended 31 March 2007:

Material observation made by Statutory auditor	Possible conclusion and way forward Plan
Fixed Assets Register (FAR) not fully prepared by the entity	The activity has been outsourced to M/s Dhawan & Madan Co. Entity to conclude.
Internal Audit system needs to be further strengthened	Entity to take initiative and strengthen the internal audit process, considering critical areas for internal audit at regular intervals
Opening balances on unbundling not yet finalised	A report on the opening balances, given to the entity by external consultants for cross verification and finalisation, is pending conclusion. The Company needs to take immediate action and to revert to UPPCL
Depreciation not charged on the additions made during the year by the entity	Entity to correct the policy
Disclosures related to Micro, Small and Medium Enterprises (MSME) as required by Schedule VI of the Companies Act, 1956 not made by the entity	Entity to take initiative in collating the information as required and disclose
Balances under Inter Unit Transfer (IUT) are not reconciled	Entity to consider it as a separate project
Records / Title deeds in respect of property included in Schedule 4 (Fixed Assets) were not made available	The activity has been outsourced to M/s Dhawan & Madan Co. Entity to conclude.
Daily cash / bank balances have not been drawn and hence the balance of cash or bank at a particular date	Possibility of misappropriation may not be ruled out. Entity to

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is not available from cash book. Books of accounts have not been maintained strictly in accordance with double entry system of accounting. They have been maintained on the same pattern as followed earlier by UPPCL.	take immediate corrective action.
Stores and spares, constructions material and other stocks not valued in accordance with Account Standard 2 “Valuation of Inventories”	Entity to take corrective action to follow appropriate accounting.
Material observation made by Branch auditor	Possible conclusion and way forward Plan
Profit and Loss Account and Balance Sheet are not supplied; rather only provided with Trial Balance	Entity to discuss and agree the audit process with the Branch Auditors.
In the absence of Ledger, Ledger scrutiny is almost impossible because ledger accounts are not maintained for individual, real, personal and/or nominal accounts	Entity to discuss and agree the audit process with the Branch Auditors.
The legacy book keeping of U.P.S.E.B. is still continuing	No specific comments
Fixed Assets Register (FAR) is not available	Entity to consider this as a separate project and complete
Bank accounts are not reconciled properly. Up to date bank statements are not available and even balance confirmation certificates are not available	Possibility of misappropriation may not be ruled out. Entity to take immediate corrective action. Entity to review old outstanding entries and take corrective actions immediately.
Very old entries continue to remain in the bank reconciliation statements	Possibility of misappropriation may not be ruled out. Entity to take immediate corrective action. Entity to review old outstanding entries and take corrective actions immediately.
Advances under the head ATD and PC require updating. The balances do not tally with the corresponding figures in trial balance of the respective units. Similarly, temporary imprest, known as TI requires closer scrutiny and adjustments	Entity to take immediate steps to correct the process.

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More attention is required for TDS	Entity to take corrective action immediately
The dues of debtors are not reconciled with balance as per trial balance	Possibility of misappropriation may not be ruled out. Entity to perform reconciliations with significant debtors on a monthly basis.
There are instances of inordinate delay in depositing cash / cheques collected from customers	Possibility of misappropriation may not be ruled out. Entity to take immediate action.
Log book for vehicles are not produced for verification	Possibility of misappropriation may not be ruled out. Entity to take immediate action.
Huge amounts are outstanding against supply of power since several years	Needs separate discussions
Terminated staff are working in an unauthorised way	Possibility of misappropriation may not be ruled out. Entity to correct immediately.

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Annexure - 2

CERTAIN ILLUSTRATIVE PROCEDURES REGARDING:

FIXED ASSETS REGISTER

RECEIVABLES LISTING, AGEING AND RECOVERABILITY

DISTRIBUTION AND OTHER LOSSES

RECONCILIATION OF INTER CIRCLE TRANSACTIONS

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FIXED ASSETS REGISTER

OBSERVATION

- No fixed assets register maintained by the utilities
- No tracking of capital work in progress

RECOMMENDATION

- Preparation of Fixed Assets Register ('FAR')
- Reconciliation of Inter Unit Transactions ('IUT')

WAY FORWARD

- Classify assets:
  - ✓ Assets that can be identified based on the available records
  - ✓ Rest of the assets for which its not feasible to trace records
- Formation of a team
  - ✓ HO to form a separate team at various levels to monitor physical verification exercise and compilation of data
- External support
  - ✓ HO to engage external support to supervise the exercise
- Fixation of accountability with each team:
  - ✓ Head Office Level
  - ✓ Circle Level
  - ✓ Division and Sub-Division Level
- Physical verification exercise:
  - ✓ Identification of standard categories of assets
  - ✓ Format for physical verification and data capturing (Refer subsequent slide)
  - ✓ Physical survey and recording of existing assets in a serially controlled format
  - ✓ Confirmation by respective Divisional Heads / Technical Heads
  - ✓ Supervision by Finance Team
  - ✓ Supervision by external agencies

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- Compilation of data
  - ✓ Based on serially controlled physical verification sheets
- Allocation of values to assets in existence, based on appropriate method (e.g. replacement value method)
- Tracking of capital work in progress and to identify:
  - ✓ Assets already being used and to be capitalised
  - ✓ Assets ready to use
  - ✓ Reconciliation of ICT to identify additional items for capitalisation (Refer following slides)
- ILLUSTRATIVE FORMAT FOR DATA CAPTURING:
- Description and category of asset
- Identification number
- Make
- Quantity
- Location / area of installation
- Suppliers' name (to the extent feasible)
- Estimated age of asset
- Estimated life of asset (to the extent feasible)
- Responsibility / accountability
  - ✓ Physical verification done by / date
  - ✓ Approved by Divisional / Technical Head
- Any other details considered relevant

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RECEIVABLES

OBSERVATION

- No tracking of receivables per party and Division
- Ageing and other details of outstanding receivables not made available

WAY FORWARD

- Utility is required to prepare detailed schedule of receivables, including the following:
  - ✓ Customer name
  - ✓ Connection and area reference
  - ✓ Category
  - ✓ Amount
  - ✓ Overdue amount
  - ✓ Sur charge on late payment not recognised
  - ✓ Outstanding amount with date of bills and ageing, duly matched with the financial records and sub ledgers
  - ✓ Responsible utility official
  - ✓ Reasons for non recovery
  - ✓ Legal cases, if any
  - ✓ Action plan and scheduled timing for recovery
- Prioritize receivables based on:
  - ✓ Category (Industrial, Government, Agriculture, etc.)
  - ✓ Ageing
  - ✓ Amount involved
  - ✓ Legal cases
  - ✓ Area and population
- Assign responsibility for actual recovery
- Close monitoring on a weekly basis
- Penal action and discontinuation of power supply for defaulters

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DISTRIBUTION AND OTHER LOSSES

OBSERVATION

- No regular monitoring of transmission losses
- No periodic targets set for reduction in transmission losses

WAY FORWARD

- UTILITY TO INITIATE STEPS INCLUDING THE FOLLOWING:
  - ✓ To prepare Input/output analysis and setting up of periodic targets
  - ✓ Methods to monitor at the smallest possible distribution units e.g.
    - Grid stations
    - Sub-stations
    - Transformer level
    - Meter line (pole)
    - Any other feasible location for monitoring
  - ✓ Frequent comparison of T&D losses against targets
  - ✓ Identification of areas/locations with maximum losses
  - ✓ Penal action and discontinuation of power supply

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RECONCILIATION OF INTER UNIT/CIRCLE TRANSACTIONS

OBSERVATION

- No regular tracking of stock movements between Circles at Division and Sub-Division level
- No physical verification
- No reconciliation of old unadjusted items lying in ICT

RECOMMENDATION

- Identification of old un-reconciled items lying in ICT
- Regular monitoring of stock movements between Circles
- Physical verification at regular intervals

WAY FORWARD

- Head Office to have a separate project for:
  - ✓ Identification of specific unreconciling items (i.e. Inter Circle Transactions, Vendor advances and payments)
  - ✓ Identification of responsible project in-charge
  - ✓ Conclusion as to whether the project is in process or completed
  - ✓ Identification of reasons for pending “Project Completion Reports”
  - ✓ Appropriate accounting treatment based on above to nullify ICT
  - ✓ This may result in:
    - Expenses/provision for expenses
    - Stores/Capital assets
    - Possible dual payments or payments for nonexistent transactions
    - Any other corrections
    - Possible misappropriation

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Annexure - V

Report

on

“Study on Review Electricity Tariff including the role of (i) State Governments; (ii) State Tariff Regulator; and (iii) SEBs' /State Distribution Companies in periodic tariff revision”

Analysis of tariff order issued by 8 States

State 1: Andhra Pradesh- Analysis of APERC Orders[1] for Central Power Distribution Company of Andhra Pradesh Limited (APCPDCL)

1.1 Facts, analysis and extracts from the order:

1. State Government had granted license to APTRANSCO for "Transmission and Bulk Supply" and "Distribution and Retail Supply of Electricity" under AP Electricity Reform Act, 1998 (APERA) w.e.f. 1.2.99 through the first Transfer Scheme.
2. APERC was constituted on 31.3.99 under the APERA 1998.
3. The Government notified the second Transfer Scheme on 31.03.2000 leaving the transmission business with APTRASCO and vesting the distribution business in four subsidiary companies of APTRANSCO for Northern, Eastern, Southern and Central Zones of AP. The Commission issued all the licenses for a period of 30 years vide its Order dated 29.12.2000 effective from 1.4.2001 and in the interim period, the DISCOMs operated as licensee designates. They were required to file tariff applications by 31st December for each ensuing year.

Tariff Order for 2000-01

4. On 6.4.2000, APTRANSCO filed its first tariff proposals for the year 2000-01 for both Transmission and Retail Supply. Tariff Order was issued by the Commission on 27.05.2000, in a period of only one and a half month.
5. As proposed by licensee, the Commission accepted the transmission loss of 4.5% and target of distribution loss of 30.90% (out of which 13% was commercial loss) for 2000-01 with 1.5% reduction over previous year along with efficiency improvement of Rs. 500 Crore . The relevant extract is as follows:

   "…The only reliable figure we have to go by is the level of billing which is at present 41% of the total energy purchased. Any improvement by way of regulation of agricultural consumption and reduction of losses would automatically be reflected in improved billing. When specifically asked, whether it was possible to improve the billing from 41% to 51% of the generated energy, the licensee frankly replied that it would be a very difficult task. But as we see, the licensee has to make serious efforts to achieve substantial improvement in the billing to be able to collect Rs.500 crores towards efficiency improvements as committed. We therefore direct that while the licensee should strive to improve the billing to 51%, should at least reach the level of 48% before 31.3.2001."

6. Against the proposed ARR (Net of Non-Tariff Income) of Rs. 9018 Crore, the Commission approved an ARR of Rs. 8365 Crore. The main reason for reduction was application of merit order purchase for power requirement.

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[1] *Based on 2000-01 Order for APTRANSCO (combined transmission and distribution) and 2001-02 to 2011-12 Order for DISCOMs-with CPDCL data*

7. The expected revenue from existing charges was Rs. 5448 Crore and the gap was Rs. 2917 Crore.
8. The Gap of Rs 2917 crs was filled by tariff increase of Rs.791 crs, GoAP subsidy of Rs.1626 crs and efficiency gains of Rs.500 crs.
9. The tariffs were annualized so as to recover the entire tariff increase for the whole year over the balance period of 10 months in the year. The Government also conveyed that the subsidy would be made available in equal monthly installments after adjusting monthly plough-back dues which are due from the utilities like Electricity Duty etc.).
10. On metering of agricultural consumption the Commission has recorded in para 2.4 that:

    "A major concern in the Commission is with regard to estimates of agricultural consumption. ***Due to historical policy decisions, agricultural consumers are not metered since 1983****. These consumers have been charged a flat rate based on pumpset rated capacity in HP…"*
11. For agricultural tariffs, the Commission raised the existing flat rates to almost 1.5 times and provided for an optional metered tariff of 35 paise/unit, the Commission has recorded that:

    "…At current charges, the average realisation for this category is 18 Ps per unit while the cost to serve is 236 ps. The Commission considers that the Electricity industry in Andhra Pradesh cannot sustain such low tariffs for the agricultural sector which is claimed to have a consumption of about 36% of the total energy supplied…."

Tariff Order for 2001-02

The newly created distribution companies filed their ARR Petitions on 30.12.2000and the tariff proposals on 17.01.2001. The final order was passed on 24.03.2001 (after little over 2 months).

1. Performance for the previous year ie 2000-01,

   The Commission concluded that:

   1) Agricultural Consumption

   "…The Commission reiterates its views that there is no alternative to metering of the agriculture services. ***In last tariff order the Commission suggested that the agriculture services should be metered within 3 years.*** *The Commission is convinced now that the Licensees should immediately come out with a credible plan for metering all the agriculture services within two years of this Order. The plan should be submitted for the Commission's approval within three months. Meanwhile, they should expedite the program of metering the LT transformers."*

   Efficiency Gains

   "16. At the end of the tariff year however the Licensee expects to be in losses essentially on account of excess agriculture consumption and lower than projected HT sales."

   Collection Efficiency

"… The receivables by end of FY 1999-00 were Rs.1911.69 crores. Though the DISCOMS have reported that by September, 2000 this had come down to Rs.1640.37 crores, the level of outstandings is still alarmingly large. The Commission is also aware that a surge in collections has been reported in December, 2000 but this surge may be attributed to the waiver of surcharge scheme that was ending in December, 2000. There are obvious shortfalls in the billing and collection systems."

2) Subsidy payment by Government

- The Commission on truing up found the actual gap for 2000-01 to be Rs. 1024 Crore out of which Rs. 90 Crore was identified due to uncontrollable factors and allowed in ARR for 2001-02. However, balance gap of Rs. 934 Crore (comprising of Rs. 500 Crore of efficiency improvement, 247 Crore of excess power purchase for agriculture over and above the approved quantum, 147 Crore of foregone return and 30 Crore of other costs) was required to be bridged through GoAP subvention.
- Against the subsidy requirement of Rs. 1626 Crore, the net subsidy payable by Government after adjusting its own dues of Rs. 524 Crore was coming to Rs. 1102 Crore, which was paid by the Government.

2. For the year 2001-02, the Commission accepted licensees proposals on losses and efficiency improvement and recorded that:

   "…The Licensee had last year submitted that they have 30.9% (17.9% technical and 13% commercial) losses in the distribution system. The Commission had given directions for significant reduction in such losses. If we go strictly by the distribution loss figures in the submission (23.8%), the licensees have shown 7.1% reduction in distribution losses. But this has to be viewed alongwith APTRANSCOs submission that the transmission losses have gone up to 8.5% (from 4.5%). Nonetheless, the overall losses are stated to have come down marginally from last year's submission of 35.4% to 33.9% for the year 2000-01 and projected to come down to 32.3% during FY 2001-02.

   …the Licensees have this year also submitted that they will be achieving Rs.501 crores efficiency gains and to that extent the Commission has reduced their revenue requirements for FY 2001-02."

3. Overall ARR For the four DISCOMs was Rs. 8285 Crore and its revenue gap of Rs. 2109 Crore was reduced to Rs. 2062 Crore by tariff increase. Rs. 501 Crore was to come from efficiency gains and the balance gap of Rs. 1561 Crore was the committed subsidy by the Government for subsidizing certain categories of consumers considering the tariffs determined by Commission. It was stated that :

   "457. The government having seen the tariff at Fully Allocated Cost, directed that the tariff in respect of the subsidized categories may be reduced to the level at which the APTRANSCO had submitted its tariff proposals for FY 2001-02. This required an amount of Rs.1561.42 cr. towards subsidy. The Government have conveyed that this amount would be made available to the licensees in twelve equal monthly instalments. The Government subsidy has been

substantially directed towards domestic, agriculture and RESCOs (Rural Energy Co-operatives)."

4. For APCPDCL, the Commission approved purchase requirement of 16777 MU and sales of 11625 MU for 2001-02, i.e. with distribution loss of 30.71%.
5. The Commission determined an ARR of Rs. 3645 Crore at common BST applicable to all DISCOMs. The revenue at existing tariffs was Rs. 2627 Crore and the revenue at approved tariff was Rs. 2649 Crore, i.e. an increase of Rs. 22 Crore (i.e. less than 1%).
6. With approved retail tariffs, allocated subsidy and efficiency gains to each DISCOM, there were individual surpluses/gaps in DISCOM ARRs, which were eliminated by revising the ARRs of all DISCOMs with differential BST as per their paying capacities. Accordingly, the ARR for APCPDPCL was revised to Rs. 3522 Crore. The revenue from approved tariff was Rs. 2649 Crore and the gap of Rs. 873 Crore was met through allocation of Government subsidy (Rs. 607 Crore) and efficiency gain (Rs. 266 Crore).
7. The Commission determined tariffs based on fully allocated costs to various categories and voltages and the requisite cross-subsidies. The resultant tariffs were adjusted for the subsidy paid by Government towards subsidized categories, which were equal to the proposed existing tariffs in line with Government direction. Hence, effectively no tariff increase was there.

Tariff Order 2002-03

8. A consolidated actual shortfall of Rs. 876 Crore was found for the year 2001-02 for APTRANSCO (423 Crore mainly due to increase in power purchase cost) and DISCOMs (453 Crore mainly due to lower revenue on account of change in consumer mix) in spite of the fact that there were savings in other costs. However, no proposal for recovering this shortfall was given to Commission. The Commission also noted that an additional subvention of Rs. 402 Crore was also received by APTRANSCO.
9. The Government stated that apart from committed subsidy it had provided adhoc assistance of Rs. 1053 Crore in 2000-01 to APTRANSCO. The Commission declined to consider this assistance towards regulatory asset.
10. The Commission noted that current collection efficiency is 90% and with past arrears it was 105% and appreciated licensee's efforts towards loss reduction.
11. The Commission fixed an efficiency improvement target of Rs. 300 Crore for all the four DISCOMs out of which APCPDCL's share was Rs. 160 Crore. After accounting for such efficiency gain, the gap at existing tariff was Rs. 1059 Crore.
12. Following the same methodology of tariff fixation as was done for 2001-02, the Commission determined a subsidy of Rs. 1059 Crore to keep the tariffs of subsidized categories at the levels proposed by licensees as per Government direction. Thus, again there was effectively no tariff hike.

Tariff Order 2003-04

13. The Government committed to provide further assistance to DISCOMs by issuing bond of Rs. 875 Crore in 2001-02 and Rs. 350 Crore in 2002-03, which were proposed to be carried forward as regulatory assets till the sector could service them.

14. The Commission found that against target efficiency gain of Rs. 300 Crore the actual gain was Rs. 81 Crore only and fixed a target of Rs. 295 Crore (Rs. 139 Crore for APCPDCL) for 2003-04. It noted the following loss and additional efficiency targets till 2003-04:

	2000-01	2001-02	2002-03	2003-04
System loss (T&D)	35.4%	33.9%	28.4%	24.8%
Efficiency Gain (Rs. Crore)	500	500	300	295

15. The Commission summarized the financial position of licensees as follows (FY01 & FY02 actual and FY03 & FY04 projected)

(All Figures in Rs. Crores)	FY 01	FY 02	FY 03	FY 04
GoAP Subsidy to Sector (Approved)	1626	1561	1509	1513
Financial Profit of licensees	-1073	-876	-819	NA
Financial Profit of licensees reworked by Commission	-1024		-254	
Special Appropriation allowed at beginning of year		90	-163	73
Excess cost of Agriculture to be met by govt.	934	-	-	473
Addl. Govt. Support provided	1133	896	350	NA
Cost Coverage	62.5%	68.4%	80.2%	81.4%
Cross Subsidy / subsidizing unit (Rs. / unit)		2.09	2.07	1.80

The Commission noted that Government support provided on the basis of financial loss shown by licensees was in excess of actual requirement worked out by the Commission and advised Government to make necessary adjustments after CAG audit.

16. Following the same methodology of tariff fixation as was done for 2001-02 and 2002-03, the Commission determined a subsidy of Rs. 1513 Crore to keep the tariffs of subsidized categories at the levels proposed by licensees as per Government direction. Rs. 1513 was also the gap for 2003-04 at the approved tariffs that was filled by Government subsidy. Thus, again there was no tariff hike barring minor changes for simplifying tariff structure and making it closer to Cost of Supply.

Tariff Order 2004-05

17. The Commission has summarized financial position of the sector up till 2004-05 as follows (2003-04 and 2004-05 projected), i.e. after regulatory intervention:

	2000-01	2001-02	2002-03	2003-04	2004-05
Average Cost of Service in Rs.	3.24	3.05	2.96	3.03	2.82
Average Revenue Realization in Rs.	2.09	2.00	2.19	2.34	2.35
Cost coverage	64%	66%	74%	77%	83%
Percentage of Revenue collection	94.84%	100.60%	98.16%	92.33%	100.00
Percentage of Metered sales in (%)	36.89%	38.44%	40.93%	42.49%	46.74%
Overall Tariff increase as a percentage	14.50%	0.76%	0.71%	-0.71%	-1.5%
Cross Subsidy	2177.38	1938.54	1970.93	2109.87	1754.54
Government Subsidy	1626.26	1561.41	1509.38	1513.49	1301.86
Percentage of Cross Subsidy	27.68%	24.90%	24.81%	22.24%	18.76%
Percentage of Subsidy	20.68%	20.06%	19.00%	15.96%	13.92%
Approved T&D loss level	35.4%	33.9%	28.4%	24.8%	23.6%
Actual T & D loss levels	38.91%	35.93%	30.23%	29.83%	27.71%

18. An efficiency gain target of Rs. 300 Crore was set for 2004-05.

19. Following the same methodology of tariff fixation as was done in previous orders, the Commission determined a subsidy of Rs. 1303 Crore to keep the tariffs of subsidized categories at the levels proposed by licensees as per Government direction. Rs. 1303 was also the gap for 2004-05 at the approved tariffs, and the same was to be covered by Government subsidy. Thus, again there was no tariff hike barring minor changes for simplifying tariff structure and making it closer to Cost of Supply for subsidizing categories. There was, accordingly, marginal reduction of 1.5% in tariffs for 2004-05.

20. The Commission also for the first time recorded that it was the time to link subsidy inflows to the level of actual sales to subsided categories and directed DISCOMs to present actual sales data for subsidized categories for subsidy adjustment in the next year.

Tariff Order 2005-06

For the year 2004-05, the Commission has recorded that apart from the subsidy determined in the tariff order, the Government has also paid subsidy for its subsequent direction on free supply to agriculture:

"10. The Government of Andhra Pradesh (GoAP) gave directions to reduce the tariff of certain categories (domestic, cottage industries, local bodies, LT agriculture, RESCOS, HT agriculture, sugarcane crushing and aqua-culture) and agreed to provide Rs.1303.27 crs as subsidy. Thereby the revenue from proposed tariffs after subsidy came to Rs.8051.18 crs. On 14th May, 2004, Government of Andhra Pradesh, announced its policy of free power to agriculture and sought the Commission's direction on the financial impact of the policy. The total subsidy payable on account of this policy during 2004-05 was Rs.433.24 crs including RESCOs, which was duly paid by the Government."

21. An efficiency gain target for 2005-06 was Rs. 125 Crore was set.

22. Following the same methodology of tariff fixation as was done in previous orders, the Commission determined a subsidy of Rs. 1599 Crore to keep the tariffs of subsidized categories at the levels proposed by licensees as per Government direction. Rs. 1599 was also the gap for 2005-06 at the approved tariffs that was filled by Government subsidy. Thus, again there was effectively no tariff hike. The energy charges for HT industry were, however, fixed voltage wise for the first time.

23. The Commission also recorded the following on subsidy from Government:

"GoAP support to regulatory processes

376. The Commission would like to place on record, its appreciation of the unstinted support extended by GoAP to the Commission, the regulatory processes and for regular payments of subsidy amounts to the Utilities, as determined by the Commission from time to time."

24. Regarding regularization of agricultural connections, the Commission has recorded:

"… In this connection, the Commission would like to clarify that supply of power to agriculture is highly subsidized by GoAP. As such, any decision on regularization or otherwise of the unauthorized agricultural connections lies within the domain of GoAP alone."

Tariff Order 2006-07 to 2008-09 dated 23.03.2006 (First MYT Control Period), Tariff Order 2007-08 dated 20.03.2007 and Tariff Order 2008-09 dated 20.03.2008

25. The Commission notified its MYT Regulations on 14.11.2005 and Tariff Policy was issued on 6th February 2006. Accordingly, the Commission determined tariffs with regulations and also in line with the Tariff Policy.

26. The petitions for determination of ARRs and Wheeling Charges for the first control period 2006-07 to 2008-09 and for retail supply tariff for 2006-07 were filed on 31.12.2005.

27. While confirming that it was releasing its committed subsidy of Rs. 1599 Crore for 2005-06, Jt Secretary, Energy Department, GoAP stated that:

"… All key sector performance indicators have shown significant improvements, notable of them being reduction in T&D losses from about 37.90% in 1999-2000 to an estimated level of about 21.36% in 2005-06. It was a matter of pride to the Government, he added, that all the utilities have recorded profit and achieved a combined profit of about Rs.57 crore during the financial year 2004-05 and the sector was rightly ranked number one by the Ministry of Power…"

28. For 2006-07, the Commission approved overall sales of 43563 MUs and purchase of 54481 MUs with overall loss of 20%. The Commission also directed DISCOMs to charge FSA quarterly as per existing formula. FSA is applicable on all categories of consumers except agriculture.

29. Against the proposed loss reduction trajectory for the First Control Period, the trajectory approved by the Commission is as follows:

	2006-07	2007-08	2008-09
CPDCL	18.90%	17.41%	16.29%
APERC	18.90%	16.91%	15.89%
EPDCL	17.08%	16.25%	15.76%
APERC	17.08%	15.83%	15.07%
NPDCL	19.92%	18.80%	17.87%
APERC	19.92%	18.01%	17.08%
SPDCL	17.31%	16.46%	15.68%
APERC	17.31%	15.86%	14.94%

The Commission, however, based on actual losses has subsequently factored in higher loss levels for 2007-08 and 2008-09.

30. Following the same methodology of tariff fixation as was done in previous orders, the Commission determined the gaps for each DISCOM and the Government provided subsidy equal to the gap determined by Commission for each DISCOM for keeping tariffs of subsidized categories same as existing. Thus, again there were effectively no tariff hikes except nominal decreases for subsidizing categories. The Government had also vide its letter dated 18.3.2008 directed the Commission to keep tariffs for all DISCOMs same and committed to provide the requisite subsidy for subsidized categories.

Tariff Order 2009-10 to 2013-14 dated 20.03.2009 (Second MYT Control Period), Tariff Order 2010-11 dated 22.07.2010 and Tariff Order 2011-12 dated 31.03.2011

31. The petitions for determination of ARRs and Wheeling Charges for the period 2009-10 to 2013-14 and for retail supply tariff for 2009-10 were filed on 29.11.2008.

32. On 24.12.2008, the Commission directed licensees to publish proposals. The final order was passed on 20.03.2009, i.e. well within 4 months.

33. On performance of utilities and Government's commitment to subsidy, the Commission has recorded Government's statement as follows:

"174. All the Electricity utilities have performed exceptionally well. The transmission and distribution utilities have reduced T&D losses from 19.06% to 18.10 % up to November, 2008 and reduction is estimated to reach 17.30% by end of 2008-09. The APTRANSCO received 'India Power Award 2008 for overall utility performance from the Council of Power Utilities (CPU). The APGENCO has also performed consistently well maintaining a PLF of about 85% during the year 2008-09, up to January, 2009.

…

178. The Government is committed to the welfare of the farmers and is providing free power to all eligible agricultural consumers since 14.05.2004 and has been providing necessary *subsidy besides amount for purchasing additional power to meet the additional demand in the present Rabi Season*

…

181. The filings made by the utilities for the financial years 2009-14, reflect the key objectives set by the Government of Andhra Pradesh

182. To conclude, the Government is committed to providing necessary financial assistance as needed by the Power Sector and providing subsidy to the utilities in accordance with the provisions of Section 65 of the Electricity Act, 2003"

34. The Commission did not accept the target loss levels for 5 years as proposed by DISCOMs and reduced them suitably. For example, the target loss level proposed for CPDCL for 2009-10 was 17.97% to be reduced to 14.94% by 2013-14. The Commission, however, approved target losses to be reduced from 13.04% to 10.10% in this period. The Commission gave following reasons for the same:

    "197. The clause 5.4.6 of National Electricity Policy (NEP) states that the loss levels shall be specified, so as to bring down loss levels to be in line with the international practices by 2012. The international loss levels are in the range of 10-12 percent for both transmission and distribution.

    198. Considering the normative loss level for Indian Electrical System at 15 percent (5 percent in transmission and 10 percent in distribution), the loss reduction targets are specified as envisaged in National Electricity Policy. As per National Electricity Policy, the Licensees should achieve the loss target of 10 percent by 2012.

    199. While specifying loss trajectory with the consideration of the practical limitations, a grace period of two years is set to achieve the targets envisaged in National Electricity Policy."

35. The loss trajectory was later on revised by the Commission by relaxing the time frame for achieving the target loss level to 2016-17.

36. The licensees sought true up for distribution business for the years 2005-06 to 2008-09 without including its impact on proposed ARRs for control period of 5 years. The DISCOMs had shown a gap of Rs. 1854 Crore and APGENCO Rs. 2820 Crore for the period 2005-06 to 2008-09 to be trued up as per MYT Regulations. However, the gap was not sought to be carried forward in the next control period by DISCOMs as it was expected to be addressed by Government through subsidy although there was no commitment by Government towards this. The Commission decided to take the true up exercise separately and recorded as follows:

    "203. It is appropriate to take up the issue of true up of expenses related to previous years separately after completion of the audited accounts for all years of the Control Period. As such, Licensees may seek the true ups outside the current filings as per the applicable regulations already notified."

37. The Licensees computed and proposed to levy the wheeling charges in the form of Rs./kVA/month at 33 kV and 11 kV voltages and Rs./kWh at LT level. The Licensees did not file the reason for such differential proposal, i.e. on capacity and energy in their filings. The Commission decided to fix the wheeling charges uniformly for all the three voltages on capacity, i.e. Rs./kVA/Month for each year of the Control Period. Accordingly, the wheeling charges for CPDCL were fixed at 27.12, 185.94 and 671.71 (Rs./kVA) for 33 kV, 11 kV and LT levels respectively.

38. The Commission did not provide for any separate incentive/penalty mechanism for the following reason:

"211. It is felt that the approved ARR amount and Loss Reduction Trajectory are sufficient to provide incentives and penalties for the Licensees. Accordingly, no special measures for incentives and penalties have been contemplated for the Control Period."

39. The Net Revenue Requirement for CPDCL was approved at Rs. 8416 Crore for 2009-10 against Rs. 9743 Crore proposed by licensee. Major heads of reduction were (i) power purchase cost approximately Rs. 900 Crore (both due to lower loss level and merit order purchase) (ii) Distribution Cost about Rs. 300 Crore and (iii) Inter-state transmission charges about Rs. 120 Crore. The tariffs were fixed on the basis of fully allocated CoS for each category.

40. Few changes were made in existing tariffs, which are recorded as:

"Tariff Changes

335. Some changes in energy charges and categorization of consumers have been done for FY2009-10 that will have a bearing on revenue from tariff. These changes are as follows;

a) the energy charge for HT I: Industrial and HT V: Railway Traction has been reduced by Rs.0.05/kWh for FY2009-10. This is to progressively achieve the mandatory objective contained in section 42 of the Electricity Act 2003,

b) Rural Horticulture Nurseries have been placed in LT V(A):Agricultural Category with energy charge at Rs.1.00/kWh on request of Government of Andhra Pradesh as submitted by some DISCOMs,

c) Salt Farming Units have been placed in LT V(A): Agricultural Category with energy charge at Rs.1.00/kWh, on request of Government of Andhra Pradesh as submitted by some DISCOMS,

d) cotton seed oil mills are classified as seasonal industry on request of Government of Andhra Pradesh and as recommended by Licensees, and e) A new category has been introduced under LT VII(B):Religious places with connected load up to 1 kW with first 200 units at Rs.2.00/kWh and the balance units at Rs.4.00/kWh in view of continued pubic representations."

41. The approved revenue was Rs. 7389 Crore against the proposed revenue of Rs. 7680 Crore for 2009-10. Corresponding approved gap was Rs. 1028 Crore against the proposed gap of Rs. 2059 Crore. The Government conveyed its commitment to provide subsidy of Rs. 1028

Crore to fund the approved gap. The Commission has directed licensees to get the subsidy trued up for any variation in actual sales to subsidised categories.

42. The Commission keeping in view the direction of State Government to keep tariff of subsidized categories as proposed by licensees, determined a tariff schedule where it kept the tariffs as proposed by licensees for almost all categories and determined subsidy requirement from the Government for covering the projected gaps for 2009-10, 2010-11 and 2011-12.

43. For 2010-11, the sectoral subsidy requirement determined by Commission is Rs. 3653 Crore, which was committed by Government to be provided. For 2011-12, the Government has committed the provision of determined subsidy (gap) of Rs. 4146 Crore. In addition, the Government has given certain directions for not enhancing tariffs for domestic, cottage industry etc. for which Government has committed to provide additional subsidy.

44. By reducing the tariffs for HT Industry the Commission has reduced their cross-subsidy. While the Commission approved reduction in tariffs for some of the subsidized categories, in the absence of requisite data, the Commission has directed the licensees to give revenue implications for the same as Government has committed additional subsidy for the same. The Government has conveyed its acceptance to provide such additional subsidy.

45. The agricultural consumers still remain unmetered in the State. Some of the explanations given by DISCOMs for not metering are (i) metering and regular meter reading of large number of agricultural consumers is uneconomical (ii) there is stiff resistance from farmers and (iii) DISCOMs are following the estimation methodology based on sample meter reading at Distribution Transformers as approved by APERC.

1.2. Key Findings

1. The Commission has always issued tariff orders within the stipulated time frame and well before the beginning of the financial year except the very first order, which was issued about two months after start of year but the utility was compensated for delay by annualizing the tariffs. Also, the tariff order for 2010-11 was issued in July 2010 on request of DISCOMs for late filing of Petitions. The increase in tariff was, however, given effect to only from 1st August 2010 but covered the gap for entire year.

2. The Commission initiated tariff and efficiency reforms right from its first Order and has been issuing Orders each year till now.

3. The Commission issued MYT Regulations in 2005 and first control period was from 2005-06 to 2008-09. The true-up of this period is still to be done as the Commission has asked the Discoms to come separately for true up with audited accounts.

4. The Commission has successfully brought the cross-subsidy of subsidizing consumers down to reasonable level.

5. Collection efficiency has been close to 100% right from beginning.

6. There have been regular but nominal tariff revisions since the likely revenue gap has been covered by Government subsidy. The Government also seems to have been regularly funding the additional losses of the licensees.
7. An important finding is that the subsidy for subsidized categories at tariffs desired by Government has been regularly determined by the Commission and actually paid by the Government.
8. The sectoral distribution losses have come down from 30.90% in 2000-01 to 17.30% in 2008-09.
9. Metering of agricultural consumers has not been successful in the State. Thus, the figure of losses based on estimated agricultural consumption may not represent the correct picture and, hence, the gap for true up sought by the DISCOMs as per Regulations may actually be higher in financial terms due to camouflaged losses. The Commission has directed for scientifically determining agricultural consumption through Indian Statistical Institute.
10. The CPDCL is largest in volume of sales in AP capturing about 40% of State’s consumption. The inefficiencies of the system have been brought down to large extent by various initiatives taken by it.
11. The efficiency level of CPDCL has improved from 30.71% in 2001-02 to 17.97% (proposed) in 2009-10. The Commission has approved loss level of 13.04% for 2009-10, which is to be reduced to 10.10% by 2013-14.

State 2- Analysis of DERC Tariff Orders:

2.1 Facts, analysis and extracts from the order:

1. Prior to privatization, the Commission had issued two Orders (1) Order on the Aggregate Revenue Requirement (ARR) for FY02 and Tariff Determination Principles for DVB for the period FY03 to FY06 on 23 May, 2001 and (2) the first Tariff Order after the notification of the Transfer Scheme and Policy Directions, on 22 February, 2002 based on a Joint Petition for determination of the Bulk Supply Tariff (BST) and opening loss levels for the distribution companies. The Commission determined the BST applicable for sale of power from DTL to the DISCOMs, on the basis of the paying capacity of each distribution company.

2. The period of 2002-03 to 2006-07 was the period of applicability of Policy Directions issued by the Government of NCT of Delhi (Government) for determination of tariff for three privatized DISCOMs. Accordingly, the analysis has been done separately for the policy direction period and subsequent period. The salient features of the Policy Directions were:

    a) AT&C losses for the purpose of computation of tariff shall be based on the values of reduction in AT&C loss each year for the years FY03, FY04, FY05, FY06 and FY07 indicated in the bid submitted by the Petitioner and as finally accepted by the Government, over the opening level of AT&C loss approved by DERC for each distribution company in the Tariff Order dated 22 February, 2002.

    b) The Tariffs shall be determined such that the distribution licensees earn, at least, 16% return on the issued and paid up capital and free reserves provided that such share capital and free reserves have been invested into fixed or any other assets, which have been put into beneficial use for the purpose of electricity distribution and retail supply and provided further that investment of such share capital and free reserves has the approval of the Commission.

    c) Retail Tariffs for the DISCOMs shall be identical till the end of FY07, i.e., consumers of a particular category shall pay the same retail tariff irrespective of their geographical location. The DISCOMs were accordingly, required to pay TRANSCO for power purchase as per their paying capacity after meeting all their legitimate expenses and return. Any remaining gap in TRANSCO's ARR was to be met through Government Loan support of Rs.3450 Crore over a period of 5 years.

    d) Any over-achievement or under- achievement with respect to reducing AT&C losses shall be treated as per the methodology specified in the Policy Directions.

3. After the Transfer Scheme of DVB was made effective (1 July, 2002), the Commission issued a Tariff Order on 26.June, 2003 for approval of ARR of privatized DISCOMs and determination of Retail Supply Tariffs to be charged to different consumer categories for FY03 (9 months) and FY04. This Order adopted the directions laid down in the Policy Directions issued by the GoNCTD for determination of Retail Supply tariffs for all the DISCOMs.

4. The Commission subsequently issued Tariff Orders for DISOMs for FY05, FY06 and FY07 on 9 June, 2004, 7 July, 2005 and 22 September, 2006 respectively. The key highlight of these

Orders was approval of BST based on the principle of "ability to pay" to maintain uniform retail tariffs across all DISCOMs. The total sectoral gap was filled up by Government support in the form of loan to TRANSCO amounting to Rs. 3450 Crore spread over the Policy Direction period of 5 years. After the Policy Direction period, the Commission issued two tariff orders under new MYT Regulations, 2007 on 28 February 2008 (2007-08 to 2010-11) and on 31st May 2009 (2009-10)

5. The summary of tariff orders issued by the Commission after privatization of distribution business for three companies viz. NDPL, BRPL and BYPL is presented below:

Financial Year	Date of Order	NDPL		BRPL		BYPL	
		Date of filing	Date of Admission	Date of filing	Date of Admission	Date of filing	Date of Admission
2002-03 & 2003-04	26.06.2003	02.12.2002 & 1.1.2003	06.03.2003	30.11.2002 & 1.1.2003	06.03.2003	30.11.2002 & 1.1.2003	06.03.2003
2004-05	09.06.2004	17.12.2003	16.01.2004	26.12.2003	16.01.2004	26.12.2003	16.01.2004
2005-06	07.07.2005	31.12.2004	10.05.2005	29.12.2004	10.05.2005	29.12.2004	10.05.2005
2006-07	22.09.2006	14.12.2005	30.03.2006	20.12.2005	30.03.2006	20.12.2005	30.03.2006
2007-08 to 2010-11	23.02.2008	29.09.2007	26.10.2007	01.10.2007	26.10.2007	03.10.2007	26.10.2007
2009-10	31.05.2009	02.12.2010	19.12.2008	02.12.2010	19.12.2008	02.12.2010	19.12.2008

6. Key performance parameters of each DISCOM during Policy Direction period are presented in the following Tables:

NDPL

Parameters	2003-04	2004-05	2005-06	2006-07	2008-09	*2009-10
AT&C loss (%)	44.86%	33.79%	26.52%	23.73%	18.29%	18.68%
Collection Efficiency (%)	95.78%	100.19%	100.75%	104.95%	103.07%	99.50%

*Approved as per MYT Regulations

BRPL

Parameters	2003-04	2004-05	2005-06	2006-07	2008-09	*2009-10
AT&C loss (%)	45.06%	40.64%	35.53%	29.92%	27.51%	20.23%
Collection Efficiency (%)	97.95%	92.58%	105.13%	108.87%	104.89%	99.50%

*Approved as per MYT Regulations

BYPL

Parameters	2003-04	2004-05	2005-06	2006-07	2008-09	*2009-10
AT&C loss (%)	54.29%	50.12%	43.89%	39.03%	30.23%	26.26%
Collection Efficiency (%)	95.80%	116.22%	107.76%	105.58%	104.79%	99.50%

*Approved as per MYT Regulations

Highlights of Tariff Orders for Policy Direction Period:

1. The period of ARR for 2002-03 was last 9 months and entire year for balance period of Policy Directions.
2. The Commission changed the depreciation rated of 6.69% (based on accelerated rates in 1994 MoP notification) used in its BST Order dated 22.02.2002, which was basis of bidding for privatization, to 3.75% (based on straight line rates specified by CERC). The modification was challenged by DISCOMs and they succeeded before Hon'ble ATE and Hon'ble Supreme Court after long litigation.
3. Cost of meters and transformers replaced was considered as capital expenditure rather than revenue expenditure.
4. Commission approved financing and, hence, its servicing cost (i.e. interest and return) for the approved capital expenditure as compared to capitalized/transferred to fixed assets expenditure in some other States.
5. The collection of Arrears of DVB period (prior to privatization) was not permitted to be given to Holding Company as per scheme of the Policy Directions and was utilized to make payment to TRANSCO for reducing its gap. The Commission was of the view that since collection efficiency and hence AT&C loss is calculated considering arrears, the receivable should also be counted as revenues rather than expense and should remain in the sector.
6. The tariffs remaining same for all DISCOMs, the differential BST's were fixed with regard to paying capacity of DISCOMs, the deficit in BST was compensated by Government support.
7. For estimating employee expenses, the Commission instead of taking reduced costs due to Special Voluntary Retirement Scheme (SVRS) and its associated cost of paying terminal benefits, preferred to go by previous employee costs adjusted for normal increase with a rider that net savings and costs of SVRS shall be considered after complete implementation of scheme alongwith amortization of costs.
8. The Commission has been carrying out provisional true up in the ensuing year and final true up in year next to ensuing year based on audited data. The Commission declined to do third time true up except in the year in the Order dated 6th February 2008, where Commission trued up for all the years of Policy Direction Period due to various judgments of Hon'ble ATE.
9. While the costs and revenues were matched with tariff in 2003-04 Order, in the Order for 2004-05 the Commission chose to create Regulatory Asset of Rs. 696 Crore as the hike of 30% (gap of Rs. 1072 Crore) in tariff required was moderated to only 10%. The Commission wrote:

   "In principle, the Commission is of the view that this Option has to be resorted to only as a final measure after exhausting all other practically available measures…"
10. The Commission examined the other two options i.e. efficiency improvement and regulatory asset creation. The Commission found that efficiency improvement is inbuilt in Policy Direction framework and it is bound to adhere to the same and hence the only option available was creation of regulatory asset to be amortised in 2-3 years preferably within the

Policy Direction period. The need for sudden high hike was (i) lower hike(5%) in previous tariff order than envisaged in Policy Directions (10%)and (ii) reduction of Government support amount to a large extent in the third year. The Commission discussed the importance of overachievement benefit of which had to be shared with consumers as an important measure for amortization of regulatory asset in future apart from taking it as a part in future ARRs. The Commission finally decided to raise tariffs by 10% and create Regulatory Asset for balance gap of Rs. 696 Crore. The Commission allocated Regulatory Asset on the basis of Revenues of DISCOMs.

11. After first true up of the 2004-05, the Regulatory Asset of Rs. 696 Crore was revised to Rs. 548 Crore and Rs. 205 Crore out of it was amortised in 2005-06. A hike of Rs. 6.6% (Rs. 320 Crore) was required after amortization in 2005-06. In the year 2006-07 TO, the Commission further revised the Regulatory Asset to Rs. 518 Crore and after accounting for trued-up figures and complete amortization of balance Regulatory Asset, the net sectoral revenue surplus was found to be Rs. 45 Crore.

Period Post Policy Directions

1. In February 2008 the Commission passed the first order after expiry of the period of directions. In this order, the Commission determines ARRs for 2007-08 to 2010-11 and sets retail tariffs for 2008-09. The Commission has also done final true up of Policy Direction Period in this Order. The gap of previous years was set off against the projected surplus for 2007-08 and 2008-09. No change in tariffs were done except for structural adjustments.
2. The next order passed in May 2009 is basically a true up Order for 2007-08 and sets retail tariffs for 2009-10. Here again, the gap for 2007-08 was adjusted against the current surplus and the no revision in tariff was done.
3. The Commission, followed the regulations that no true up of controllable costs shall be done, has trued up uncontrollable costs like power purchase and sales based on targeted loss.
4. The state Government issued a Policy Direction to Commission on 4th May 2010 u/s 108 not to issue the Tariff Order until the issues raised by DISCOMs are answered to Government by the Commission. The Commission, accordingly, did not issue the tariff order. This was challenged before Hon'ble High Court of who quashed the policy directions given by the Government on the ground that the state government's power to give policy directions u/s 108 could not be used for matters that relate to statutory functions of the Commission.

2.2 Key Findings in Delhi's Case

1. The collection efficiencies and AT&C losses of all the three DISCOMs improved impressively over the period of Policy Direction and in fact have crossed the minimum levels stipulated in these Directions.
2. The Companies have by and large met the deadlines for filing the Petitions. However, there have been delays in admission due to incomplete filing/information or the Order was delayed as the information filing continues for a long time. This also reveals that the information being filed before the Regulator after the public process is not made available to

public for making any comments. It is, therefore, proposed that before going public the Regulator may fix a deadline after which no information should be accepted and it may proceed with the available information based on indexed tariffs.

3. The Regulator resorted to Regulatory Asset in the initial years, which increased pressure on tariff in subsequent years, but was finally amortised in subsequent year tariffs.

4. There has been delay in truing up of past expenses particularly the power purchases expenses, which forms a major chunk. On this, the Regulator has also taken a stand before Hon'ble High Court that for speedy recovery of gap in 2008-09 and 2009-10 due to higher power purchase cost, it is soon coming out with Fuel and Power Purchase Adjustment (FPPA) formula for quarterly adjustments. FPPA is, thus, important for speedy cost recovery for a major portion.

5. The regulator is neither bound by the "Code of Conduct" period nor by the Policy Directions of Government while discharging its statutory functions like Tariff Determination.

State 3- Analysis of GERC Orders for Torrent Power Ltd.

<u>3.1 Facts, analysis and extracts from the order:</u>

1. The Commission issued two separate tariff orders for Ahmedabad and Surat Electricity Company Ltd. way back on 5.9.2002 and 1.12.2001 respectively.
2. In 2005, the Torrent Generation Company Ltd., Ahmedabad Electricity Co. Ltd. and Surat Electricity Co. Ltd. were merged into one company viz. Torrent Power Ltd. The amalgamation scheme was also approved by Hon'ble High Court of Gujarat.
3. The Commission has issued three tariff orders after merger of the three companies i.e. for 2007-08, 2008-09 (MYT Order for 2008-09, 2009-10 & 2010-11) and 2009-10.
4. The Commission determines generation ARR for TPL generating stations C, D, E, F at Sabarmati and Vatva Gas having capacities of 60, 120, 110, 110 and 100 MW respectively. The tariff for 1130 MW Sugen plant, which also supplies power to TPL, is determined by CERC. The Commission also determines retail tariffs for the distribution business of the Co.

Tariff Order for 2007-08 (Dated 31.07.2007)

5. The petition for 2007-08 was filed by TPL on 06.02.2007 and was admitted by Commission on 1.05.2007. Final order on this petition was passed by the Commission on 31.7.2007.

Main Features of the ARR.

6. The past losses of Ahmedabad and Surat Areas have been given as (%)

Year	Ahmedabad & Gandhinagar	Surat
2002-03	18.75	14.23
2003-04	16.67	12.98
2004-05	12.62	11.11
2005-06	9.67*	
2006-07	9.34*	

*These figures were not provided separately by TPL to the Commission

7. The profit after tax for the both these areas taken together has steadily gone up with actual figures being Rs. 78, 147 and 179 Crore for the years 2003-04, 2004-05 and 2005-07 (upto September 06). As on 1.4.2007, the combined equity was Rs. 600 Crore with accumulated reserves and surplus as Rs. 1852 Crore, these have been ploughed back in the assets of the System. On past performance the Commission has recorded:

On losses

"The company appears to have taken a number of effective steps to reduce the distribution losses over years. Its performance, as may be seen from above figures, is commendable."

"While appreciating the steps taken by TPL for reducing the T&D losses, the Commission feels that there is scope for further reduction. "

On financial performance

"The financial performance of the AEC and SEC during the financial years 2003-04 and 2004-05 was impressive. Both the companies earned profit individually for the years 2003-04 and 2004-05 i.e prior to amalgamation. Even after amalgamation TPL has earned profit after tax to the extent of Rs. 17927 lakhs for the period ending 30/09/2006 (18 months period)."

On Cost coverage and cross subsidy

"Both AEC and SEC have good consumer mix where almost all the consumers are paying average cost of service. The lowest paying consumers viz Residential and Agricultural consumers pay over 80% of the average cost of supply while other consumers are paying a little higher than the average cost of supply."

On Details of Revenue arrears

"The arrears from the consumers are Rs. 34014 lakhs as on 31/03/2005 and Rs. 40910 lakhs as on 30/09/2006. Out of the arrears of Rs. 40910 lakhs as on 30/09/2006, the doubtful debts are only Rs. 756.90 lakhs and have been provided as provision for doubtful debts. All the other sundry debtors are considered good. The arrears correspond to about 58 days revenue."

8. For Ahmedabad and Surat taken together, the sales was approved at 7410 MUs and revenue at Rs. 2796 Crore. The Commission fixed loss level of 9.26% considering actual loss level of 9.52% in 2006-07. The Commission approved an ARR of 2820 Crore after prudence check (CoS Rs. 3.81/unit) leaving a gap of Rs. 24 Crore. (The gap was subsequently found as surplus of Rs. 11 Crore during truing up for 2007-08 done on 17.01.2009).

9. The Commission did not change the existing tariffs and has recorded the following reason for doing so to be addressed during truing up:

   "The TPL should be able to bridge the gap in revenue by the following measures

   - Effective metering, billing and revenue realization of all consumer installations would also improve the sales and revenue.
   - By reducing certain operational costs which are controllable by efficiency improvement measures.
   - Improve PLF of Vatva and thereby reduce its SHR by ensuring additional gas"

Tariff Order for 2008-09 (Dated 17.01.2009)

10. The first MYT petition for the period 2008-09, 2009-10 and 2010-11 was filed by TPL on 28.05.2008 was admitted by Commission on 29.05.2008.

11. The petition filed was for Truing up for 2007-08 and ARR for a three year control period of 2008-09, 2009-10 and 2010-11. Final order was passed by Commission on 17.01.2009

True up for 2007-08

12. For Ahmedabad (including Gandhinagar) and Surat taken together, the actual sale was 7415 MUs against 7470 MUs approved for 2007-08. Actual combined revenue was Rs. 2935 Crore

against estimate of Rs 2796 Crore. In short the actual values turned to be better than those approved resulting in revenue surplus of Rs. 11 Crore against the gap of Rs. 24 Crore left uncovered in the tariff order. Similarly, against the approved distribution loss of 9.26%, actual loss was 8.75%. The entire savings of loss reduction were, passed on to consumers in true up. The combined updated ARR was Rs. 2924 Crore against Rs. 2820 Crore approved earlier (CoS being 3.94 and 3.78 respectively)..

ARR and Tariffs for 2008-09

13. For Ahmedabad, the sales were approved at 4922 MUs and revenue at Rs. 1881 Crore. The Commission fixed loss level of 10.43% considering actual loss level of 10.48% in 2007-08. The Commission approved an ARR of 1895 Crore of which Rs. 957 Crore was cost of power purchased from its own generating units at average cost of Rs. 2.66/unit after prudence check (CoS Rs. 3.85/unit) leaving a gap of Rs. 14 Crore.

14. For Surat, the sales was approved at 3186 MUs and revenue at Rs. 1216 Crore. The Commission fixed loss level of 6.00% against the actual loss level of 6.01% in 2007-08. The Commission approved an ARR of 1307 Crore after prudence check (CoS Rs. 4.10/unit) leaving a revenue gap of Rs. 91 Crore.

15. The combined sale was approved at 8108 MUs and revenue at Rs. 3097 Crore. The Commission approved an ARR of 8108 Crore after prudence check (CoS Rs. 3.95/unit) leaving a gap of Rs. 105 Crore to be addressed during truing up.(This gap subsequently turned out to be a surplus of Rs. 22 Crore in the truing up order dated 9.12.2009).

16. The Commission did not change the existing tariffs except for nominal increase in energy charges for some categories, and has recorded the following reason for doing so:

    "…Though the Commission determines the tariff to cover the gap during 2008-09, the revised tariff is not to be implemented retrospectively w.e.f. 1st April 2008 as it imposes heavy burden on the consumers. Hence, it shall be implemented with effect from 1st February 2009. The utility can recover only about 40% of the gap on annual basis, and other part of the gap can be recovered during the remaining years of the control period. The actual gap would, however, be arrived at on the performance review and truing up for the year 2008-09.

    …It is seen that the revenue gap for the Ahmedabad / Gandhinagar area is Rs.13.91 crore during 2008-09, which could be covered by a modest increase in energy charges for some categories of consumers.

    For the Surat area the gap is Rs.91.03 crore which is about 7.50% of the revenue. Bulk of consumption and revenue in Surat area comes from LT industry (small industry) – Diamond Polishing and Textiles - which are mostly export oriented and are affected by global economic slow down and recession."

17. The Commission has also allowed Fuel and Power Purchase Adjustment as follows:

    "The FPPPA formula approved by the Commission vide its order dated 31st July 2007 is reproduced below:

    FPPPA = [FOT+PPP1 + PPP2] ÷ [S.E]

Where,

FOT is Adjustment on account of variations in delivered cost of Fuel at TPL's thermal power stations (Rs. Millions).

PPP1 is Adjustment on account of variable cost of power purchased in (Rs. Millions).

PPP2 is Adjustment on account of fixed cost of power purchased in (Rs. Millions).

S.E. (in mU) is [Total sales in MU + Excess T&D loss in MU]

(a) Fuel cost adjustment of own generating stations:

FOT = Sum [(HB X OTDA) X (Fuel/CA – Fuel CB)] for n=1 to k

where,

n 1 to k, the thermal power station in TPL

OTDA is the actual level of delivered energy at the bus bar (net generation) from TPL's thermal plants in million units during the control period.

HB is the base station heat rate in K.Cal./kWh calculated on the net output using permitted auxiliary consumption.

Fuel/CA is the new landed price of fuel at relevant TPL's generating stations, expressed in Rs./K.Cal calculated after allowing increase (or decreases)

in the price of fuel/railway freight, taxes and duties on fuel as well as fuel price increase by fuel suppliers.

Fuel/CB is the base## landed price of fuel at relevant TPL's generating stations, expressed in Rs./K.Cal calculated using the base data. This parameter is constant (frozen) for the various quarters (periods) for which increases in fuel price is being permitted.

Base year for this order is the Financial Year 2006-07.

(b) Power purchase cost adjustment formula:

= [PPP1 + PPP2] ÷ [S.E]"

18. Two main features of the Fuel and Power Purchase Adjustment Formula are:

    a) It divides the entire excess power purchase cost over the actual sales and excess loss

    b) Even FPPA figure for all consumers is same irrespective of their category.

Tariff Order for 2009-10 (Dated 09.12.2009)

19. The petition for 2009-10 was filed by TPL on 12.05.2009 and was admitted by Commission on 6.6.2009. The petition was filed for Annual Performance Review (APR) for 2008-09 and ARR for 2009-10, which was the second year of 3 year Control period 2008-09 to 20010-11. Final order was passed by Commission on 09.12.2009 (6 months after admission).

Annual Performance Review (APR) for 2008-09

20. During APR for 2008-09, the Commission kept the controllable parameters at the same level as were approved irrespective of their actual values (although there were savings in certain heads) while the uncontrollable parameters were trued up to actual values. The Commission has specified the following as controllable and uncontrollable parameters:

Controllable	Uncontrollable
Distribution loss	Power purchase cost
Employee expenses	Depreciation expense
R&M expenses	Interest on loans
A&G expenses	Interest on security deposit
Interest on Working Capital	Return on equity
Provision for bad debts	Income tax
Contingency reserve	Incentive

21. For Ahmedabad, the actual sales was 4737 MUs against 4922 MUs approved (consumer base 15.11 and 14.85 lakh respectively). Actual revenue was Rs. 2145 Crore against estimate of Rs 1881 Crore. Against approved loss of 10.43%, actual loss was 8.69%. The savings from losses and other controllable parameters were shared between consumers and company in the ratio 2:1 giving the consumers additional revenue of Rs. 45 Crore. Power purchase cost was allowed at actual. The trued up ARR was Rs. 2070 Crore against Rs. 1895 Crore approved earlier (CoS being 4.37 and 3.85 respectively). Net surplus after true up was Rs. 121 Crore.

22. For Surat, the actual sales in 2008-09 was 2907 MUs against 3186 MUs approved (consumer base 5.97 and 6.02 lakh respectively). Actual revenue was Rs. 1331 Crore against estimate of Rs 1216 Crore. Against approved loss of 6%, actual loss was 5.51% and corresponding savings in power purchase cost at average rate were shared between consumers and company. The savings from losses and other controllable parameters were shared between consumers and company in the ratio 2:1 giving the consumers additional revenue of Rs. 28 Crore. Power purchase cost was allowed at actual. The trued up ARR was Rs. 1384 Crore against Rs. 1307 Crore approved earlier (CoS being 4.76 and 4.10 respectively). Net deficit after true up was Rs. 25 Crore.

23. For TPL (Combined), the actual sales in 2008-09 was 7644 MUs against 8108 MUs approved. Actual revenue was Rs. 3476 Crore against estimate of Rs 3097 Crore. The trued up ARR was Rs. 3454 Crore against Rs. 3202 Crore approved earlier (CoS being 4.52 and 3.95 respectively). Net surplus after true up was Rs. 22 Crore.

Updated Estimate of ARR for 2009-10

24. For Ahmedabad, the generation ARR for 2009-10 was estimated as Rs. 895 Crore, while the same was approved at Rs. 913 Crore in MYT order. Savings primarily arose from uncontrollable parameters like depreciation, interest on loan and working capital and RoE. However, the Commission observed that if CEA's recommended norms were applied to

these stations, a saving of around Rs. 47 Crore would have accrued. The sales were revised from 5340 MUs to 4996 MUs and revenue from Rs. 2046 Crore to Rs. 1905 Crore. The Commission had fixed loss level of 10.25% for 2009-10 in the MYT Order. The Commission revised the loss level from 10.25% to 8.54% in view of the actual loss level of 8.69% in 2008-09. The ARR was revised from Rs. 2195 Crore to Rs. 1945 Crore (CoS from Rs. 4.11 to Rs. 3.89/unit). The reduction was mainly due to reduction in power purchase cost due to reduced sales estimate.

25. For Surat, the sales was revised from 3411 to 2885 MUs and revenue from Rs. 1271 Crore to Rs. 1091 Crore. The Commission had fixed loss level of 6% for 2009-10 in MYT Order. The Commission revised the loss level from 6% to 5.51%, equal to actual loss level of 5.51% in 2008-09. The ARR was revised from Rs. 1375 Crore to Rs. 1223 Crore (CoS from Rs. 4.03 to Rs. 4.24/unit). The reduction in ARR was mainly due to reduction in power purchase cost due to reduced sales estimate, while CoS went up because %age reduction in sales was more than reduction in ARR.

26. The Commission did not change the existing tariffs and found the following gaps in approved ARRs for Ahmedabad and Surat areas of TPL vis-à-vis that approved in MYT Order 2008-09:

Parameter	Ahmedabad		Surat		Combined	
	MYT order	Approved	MYT order	Approved	MYT order	Approved
Net ARR	2194.95	1945.47	1375.43	1222.70	3570.38	3168.17
Revenue	2045.63	1904.69	1271.27	1090.94	3316.9	2995.63
(Gap) / Surplus (FY 2009-10)	(149.32)	(40.77)	(104.16)	(131.77)	-253.48	-172.54

27. The Commission has left this gap of Rs. 173 Crore (Combined) uncovered citing the following reasons, which are expected to reduce the actual gap:

"… if the CEA recommendations in regard to operating parameters are applied to TPL-G (APP) for FY 2009-10, its aggregate variable cost of generation would decrease by Rs. 47.13 crores."

"The tariff for SUGEN has been provisionally considered at Rs. 3.10 for FY 2008-09 and Rs. 2.98 for FY 2009-10 pending the finalization of its tariff by CERC. If CERC approves a tariff of Rs. 2.98 as estimated by the petitioners for FY 2009-10, the gap for FY 2008-09 would reduce. If CERC approves a tariff lower than Rs. 2.98, the final gap for FY 2008-09 and FY 2009-10 shall reduce further."

28. The Commission has allowed quarterly corrections in retail tariff based on variations in cost of fuel and power purchase as per the prescribed fuel and power purchase adjustment (FPPA) formula, for which TPL has been regularly filing petitions for approval of Commission.

3.2 Key Finding of Gujarat, TPL Study

1. Torrent Power Ltd. has been one of the best performing utilities in the country. However, regulatory intervention has given further impetus to its efforts for efficiency improvement. This is evident from the fact that the losses have sharply gone down from 19% and 14% to

9% and 5.5% respectively for Ahmedabad and Surat areas from 2002-03 to 2008-09. The reserves and surpluses have gone up from Rs. 922 Crore as on 31.3.2004 to Rs. 2632 Crore as on 30.09.2006 for which figures were available.

2. The Commission having acknowledged high performance of TPL has always been impressing upon for further scope for improvement. The efficiency levels of TPL can be gauged from the fact that in spite of gradual increase in CoS, the tariffs are still at the same level as for 2006-07, barring moderate change in energy charges for a few categories. The FPPA mechanism has been able to take care of the cost of power purchase increases.

3. The Commission has always taken 6 or more months for passing orders since 2007-08 for various reasons like late filing of ARR, inadequacy of data given, time extensions given for responses and filing of a case before Hon'ble High Court of Gujarat by consumer association on constitution of the Commission.

4. Cross-subsidy is not an issue in TPL.

5. Although the Commission has been leaving some revenue gap in the ARRs which were generally determined after the due date, the gaps have been adequately covered as actual revenues were higher than estimated revenues.

6. In order to meet steep fuel cost escalations, the recovery in short time is ensured through a fuel and power purchase adjustment (FPPA) mechanism, which does quarterly corrections in power costs.

State 4- Analysis of HERC Orders

4.1 Facts, analysis and extracts from the order:

1. The Commission consists of three members, including the Chairperson. The first Chairman and one member of the Commission were sworn in on 17th August 1998 and the third member joined on 16th September 1998. Currently there is one chairman and two members in the Commission.
2. The Commission issued its first tariff order for HVPN for its Distribution and Retail Supply Business for FY 1999-2000.
3. HERC determined the first revision in tariff for FY 2000-01 which became effective from 01.01.2001. The tariff in the State of Haryana has been revised only twice post the formation of the Commission i.e. FY 2000-01 and FY 2010-11.
4. The tariff for FY 2000-01 was applicable for three months, the Commission had approved the uncovered gap of Rs. 432 Crs to be made up by borrowings (60%) and balance to be met through efficiency gains by the Licensee.
5. Broad parameters of ARR for FY 09-10:
6. Haryana is predominantly an agricultural State therefore has a significant share of unmetered agricultural consumption which is billed on flat rate basis. For Unmetered Agriculture Category, the Commission estimates the energy consumption based on the pattern of the consumption of metered agriculture pump sets. Though Commission had directed the distribution companies to submit credible data to correctly estimate the consumption of unmetered agricultural consumers, the utilities had failed to submit sufficient field data of segregated agricultural feeders and install MDI meters to record energy flow to agriculture pump sets.

Category	Approved Sales (in MUs) for FY 09-10	% Share
Domestic	4055	20%
Non-Domestic/Commercial	1394	7%
HT Industrial	4553	22%
LT Industrial	1169	6%
Agriculture Metered	3163	16%
Agriculture Un-Metered	4311	21%
Bulk Supply	747	4%
Others	1003	5%
Total	20395	100%

7. Post the power sector reforms in Haryana, the Commission had restated the T&D losses from approximately 29% reported by the power utilities to approximately 41% after scrutinizing the power purchase and sales details including power flow to the large un-

metered agriculture consumers. The approach for setting of loss reduction targets by the Commission is primarily based on the reduction in loss level achieved in the past years and capital expenditure planned by the DISCOMs. In the tariff order for FY 09-10 the Commission has stated:

"The Commission has been fixing up distribution losses over the years and also giving road map for reduction. The utilities to some extent have succeeded in showing a downward trend; however, the desired result is yet to be achieved. Considering the example of some states that have done well in this regard the Commission feels that there is ample scope for further bringing down losses in the distribution system in the State of Haryana. It would be relevant to refer in this context the capital expenditure being incurred by the distribution utilities to strengthen their distribution system with prior approval of the Commission but there is a need for improvement in their execution so as to avoid any cost and time over-run. The quality of work also needs to be checked so as to ensure that they serve desired result. The list of capital work to be undertaken for the ensuing season be prepared with great care after prioritizing the needs and preparing a road map for efficient utilization. The Commission has observed over the years that the capex plan submitted by the utilities at their own level is not fully implemented or mid-course changes made by the utilities at their own level without prior information/approval of the Commission. No wonder that the distribution losses have not shown appreciable reduction over the years."

8. Since no true-up has been done for FY 06 to FY 10, the actual losses cannot be ascertained. The Commission in its Tariff Orders have mentioned that the Commission's estimate of sales to the agriculture consumers is lower than the sales estimated by the utilities. This is primarily due to distribution losses which are restated as excess units allocated to the agricultural consumers.

9. The State of Haryana has been an energy deficit state and thus the power procurement has not been demand driven but based on the estimates of power availability from various sources including owned generation, share from CGS, joint ventures, IPPs and other sources like bilateral, banking, UI, etc.

Source	Units Purchased (Mus)	% Share of Total
NTPC	7672	27%
NHPC	2926	10%
NPCIL	358	1%
HPGCL	13203	47%
Shared Projects	3559	13%
Short-term/ Bilateral	200	1%
Total Unit Availability (Mus)	27918	100%

10. The actual per unit power purchase cost therefore has been higher than the approved per unit power purchase cost due to purchase of costlier short-term power purchase.

Power Purchase Cost (Rs. per Unit)	FY06	FY07	FY08	FY09	FY10
Approved	2.09	2.29	2.38	2.49	2.77
Actual*	2.10	2.36	2.79	3.25	

* Actual refers to the actual figures as per the annual accounts of both the Discoms i.e. DHBVN and UHBVN

11. Any increase in power purchase cost for the distribution licensee could be recovered by filing of Fuel Surcharge Adjustment (FSA) application as per the FSA formula prescribed by the Commission. No such proposals were filed year after year. FSA for FY 2003-04, FY 2004-05, FY 2005-06 and first half of FY 2006-07 by the DISCOMs with considerable delay, and the Commission staggered the recovery of the FSA in three years without approving any interest/ holding cost on the same.

12. The Commission approves the O&M expense based on latest available audited annual accounts. In absence of any true-up, the adverse financial impact of the gap in the approved and actual O&M expense is borne by the utilities.

13. The HERC approves interest on working capital, long term and government loans and finance charges. However, there is large variation in actual and approved interest cost primarily on account of interest burden of short-term loans taken by the distribution utilities for meeting the revenue deficit which the regulatory commission has not been approving in the approved interest cost.

14. The tariff regulations provide for return on capital base for adequate return to the utilities. However, no return could be allowed by the Commission in the tariff orders of the utilities for FY 06 to FY 10 as the capital base of both the DISCOMs was negative. The Commission in its FY 09-10 Tariff Order has advised the Government of Haryana to consider re-capitalization of the distribution companies to the extent of the accumulated losses which would also help them in claiming return on equity and also improve their credit rating.

15. In each of the tariff orders, the Commission has tried to meet the revenue deficit for the subsequent year through additional reduction in distribution losses or additional Government subsidy. Further, as seen above true-up exercise has not been done with due regularity. Therefore, the variation in actual and approved cost elements has not been addressed in the subsequent orders leading to accumulation of losses for the distribution utilities. As per the annual accounts of UHBVN and DHBVN, it is observed that the accumulated financial loss of the two entities as on March-2009 is Rs. 2778.32 Crs. and Rs. 1260.98 Crs, respectively. The Commission in its FY 09-10 order has shown concern over the financial health of the distribution companies as well as the slow reduction in the loss levels in the State.

16. The Commission has also issued directive to the distribution companies for submitting a road map for achieving 100% metering in accordance with the provisions of the Electricity Act, 2003. The Commission has taken serious concerns over the efforts taken by the utilities

to achieve 100% metering at the 33/11kV feeders, distribution transformers and consumers and directed the utilities to comply with the directive.

17. Since the State Government declares the subsidy support to be provided in its budget, the same is considered by the Commission at the time of processing of the ARR & Tariff Order. The tariff to be charged by the utilities in absence of receipt of subsidy is not computed in the tariff order. Also, no carrying cost is provided in the Tariff Order for late receipt of subsidy from the State Government.
18. A regulatory asset was created in the FY 09-10 Tariff Order by the HERC as three quarters of the financial year was over and the Discoms had not submitted any tariff proposal to bridge the revenue gap. The untreated gap of FY 08-09 was also included in this regulatory asset. Borrowing charges against this regulatory asset has been provided in the subsequent Tariff Order.
19. The retail tariff in the State of Haryana has not been revised during FY 2001-02 to FY 2009-10 which has resulted in accumulation of losses for both the DISCOMs. Therefore, the tariffs have not been reflective of the approved average cost of supply which has increased from Rs. 3.86 per unit in FY 06-07 to Rs.4.23 per unit in FY 09-10, an increase of approximately 10%.
20. In the FY 10-11 Tariff Order the Commission has revised the retail tariff by approximately 12%. However, a gap of Rs. 1463 Crs is still left untreated for which the Commission has allowed the utilities to cover by the way of borrowings.

4.2. Key Findings of Haryana Study

1. Haryana Electricity Regulatory Commission was established on 17th August 1998 as an independent statutory body corporate as per the provision of the Haryana Electricity Reform Act, 1997. Haryana was the second State in India to initiate the process of Reform & Restructuring of the Power sector in India.
2. HERC has issued ARR orders for retail supply business in each of the past five years i.e. FY 05-06 to FY 09-10. The retail tariff in Haryana had not been revised between FY 2000-01 and FY 2009-10. The distribution licensees in Haryana did not file a petition to the Commission for revision of tariff during this period. The Commission revised the retail tariff by approximately 12% in FY 2010-11. However, a revenue gap of Rs. 1463 Crs was still left untreated for which the Commission allowed the utilities to meet it through short-term borrowings. Also, the HERC created regulatory assets in FY 09-10 as three quarters of the financial year was over and the Discoms had not submitted any tariff proposal to bridge the revenue gap for FY 09-10. The regulatory assets created in FY 2009-10 also included the uncovered gap of FY 08-09.
3. As per the annual accounts of UHBVN and DHBVN, it is observed that the accumulated financial loss of the two entities as on March-2009 is Rs. 2778.32 Crs. and Rs. 1260.98 Crs, respectively. The Commission in its FY 09-10 order has shown concern over the financial health of the distribution companies as well as the slow reduction in the loss levels in the State.

4. The Government of Haryana provides subsidy support to the Discoms against consumption of energy by the agricultural consumers in the State. Every year, the State Government announces the amount of budgetary subsidy it intents to provide to the State consumers. The State Government subsidy is considered for meeting a part of revenue deficit. Between FY 2000-01 and FY 2009-10, balance deficit was either met through creation of regulatory asset, proposed additional reduction in distribution losses or additional Government subsidy by the Commission in the tariff orders. After a gap of nine years, it was only in FY 2010-11 that the Commission revised the retail tariff. The subsidy provided by the Government of Haryana has significantly increased from Rs. 1256 Crs in FY 05-06 to Rs. 2739 Crs in FY 09-10, an increase of 118%. The Government of Haryana had to increase the subsidy amount as the tariff was not revised between FY 2000-01 to FY 2009-10 and Average cost of supply went up. This resulted in lesser cross subsidy from other consumers for subsidized consumers.

5. The Commission approved the ARRs over the period based on the subsidy declared by the State Government. Whereas, the approach adopted by the Commissions of some other states is to approve the ARR and tariff to be charged without considering Government subsidy and reduce the tariff at the later stage based on the subsidy declared by the Government for a particular category. The issues of tariff to be charged in case of non disbursal of subsidy and carrying cost to be considered in case of late receipt of subsidy from State Government were not addressed by the HERC. The Commission always proposed to meet the revenue deficit through further loss reduction, additional Government subsidy and by creation of regulatory assets. Though loss reduction generates additional revenue for the utility, the recovery of increasing average cost of supply can be achieved by tariff revision only. Hence in order to reduce government support to the utilities and to reduce the revenue deficit, tariff revision was essential to meet the ever increasing cost of supply. In the interest of utilities and to improve their financial condition, the Commission could have been more effective and even revised the tariff on suo-motu basis. Electricity Act 2003 Sec 86(a) states that "In discharge of its functions the State Commission shall be guided by the National Electricity Policy, National Electricity Plan and tariff policy published under section 3". In this context, Sec 8 of Tariff Policy states that *"Making the distribution segment of the industry efficient and solvent is the key to success of power sector reforms and provision of services of specified standards. Therefore, the Regulatory Commissions need to strike the right balance between the requirements of the commercial viability of distribution licensees and consumer interests. Loss making utilities need to be transformed into profitable ventures which can raise necessary resources from the capital markets to provide services of international standards to enable India to achieve its full growth potential"*.

6. In the absence of any serious attempts by the utility as well as the Commission to true-up of various cost elements of the ARR (except for power purchase cost which is passed by the way of Fuel Surcharge Adjustment (FSA) to the consumers), the variation in the actual and approved cost parameters of the DISCOMs are not adequately addressed in the subsequent ARR & Tariff orders leading to adverse impact on the financials of the distribution utilities.

7. Any increase in power purchase cost for the distribution licensee could have been recovered by filing of Fuel Surcharge Adjustment (FSA) application as per the FSA formula to

the Commission. However there was considerable delay in filing of the FSA for FY 2003-04, FY 2004-05, FY 2005-06 and first half of FY 2006-07 by the DISCOMs. When such claims were finally made, the Commission staggered the recovery of the FSA in three years but again without approving any interest/ holding cost on the same. The Commission issued similar orders for FY 2008-09, first half of FY 2009-10 and for FY 2007-08 also.

State 5- Analysis of RERC Orders

5.1 Facts, analysis and extracts from the order:

1. RERC is a body incorporated and was fully funded up to the year 2007-08 by the State Government and currently being funded by its own resources. It consists of a Chairperson and two Members one each from the technical and financial discipline. The Commission has a Secretary and other supporting staff to carry out its day-to-day functions.

2. RERC issued its first tariff order for fixation of tariff for retail supply of electricity in March 2001 for the years 2000-01 and 2001-02.

    i) In the order, the Commission directed the petitioners that they should make all efforts to improve recoveries out of its current dues as well as arrears to cover up shortfall in receipt of subsidies from Government. If as a measure of last resort, the petitioner has to take recourse to borrowing, then the Government should consider bearing the burden of cost of borrowing so that it does not fall on the consumers.

    ii) RERC directed that the Discoms shall achieve 5.4% reduction in T&D loss by 31st march 2002. Moreover T&D losses should be brought down to the level of 20% by the end of 5 years starting from 2001-2002. The petitioner was asked to submit an action plan within one month of the order. Petitioners were also directed to release all new connections for agriculture consumers in the metered category only. The existing flat rate agricultural consumers should also be transferred to the metered category within a period of 3 years.

3. In its order on petition for ARR for FY 2002-03 issued in June 2003 the Commission raised a concern about T&D losses and non compliance of directives by Discoms in the following manner:

    "The Commission is of the view that reduction in T&D losses of the Nigam is of paramount importance to its financial health, in fact, to its very survival. The Commission has accepted in its tariff order dated 24.3.2001 the target proposed by Nigam for reduction in T&D losses. The Commission notes that Nigam has totally failed to achieve the target set by Nigam for itself for reduction in T&D losses. On the other hand, the figures furnished show that the actual loss level has increased since the process of reform was initiated in the State. As the exact level of losses could not be determined with any degree of reliability, the Commission had directed a field study to be carried out by the Nigam for ascertaining the existing level of losses. The Nigam has taken this directive in a casual manner and the study has been commissioned only recently and some more time would be required before initial results of the study are available.

    The Commission in its order dated 24.3.2001 had also asked the Nigam to reduce its losses to the level of 20% in five years for which an action plan was to be prepared. The Nigam did prepare a comprehensive long term action plan for reducing T&D losses but the Commission is disappointed to observe that very little has been done for implementing the plan.

Similarly, the Commission had directed energy audit for 11KV feeders. This work was also inordinately delayed and necessary action on the basis of information received by such energy audit is yet to be initiated."

Similarly here is the Commission view on the financial condition of the Nigams with a review of Net Revenue Gap:

Rs. crores

S.No.	Particular	2000-01 (a)	2001-02 As per Tariff Order (b)	2001-02 Actual (c)	2002-03 AS per ARR (d)	2003-04 Commission Estimate (e)
1.	Total Revenue	1083.02	1734.12	1668.19	1720.61	1786.65
2.	Total Expenditure	1326.30	2065.40	2096.05	2164.25	2178.56
3.	Gap	243.29	331.28	427.86	443.64	391.91
4.	Subsidy received from Govt.	46.0	331.28	94.85	163.63 Actually recd.	225.00
5.	Net Gap	197.29		333.01	280.01	166.91

"It will be seen from the above statement that by the end of 2003-04, the cumulative revenue deficit of the Nigam is expected to be about Rs.1507 Crore. This deficit is after tariff increase of nearly 17% with effect from April 1, 2001. The subsidy actually paid by the State Govt. is Rs.304 Crore till 31st March 2003 and Rs.225 Crore is anticipated in 2003-04. The net cumulative revenue gap would be around Rs.978 Crore. This gap has so far been managed by deferring liabilities of RVPN and by resorting to short term borrowings. Heavy borrowing for meeting revenue deficit is untenable and the Nigam has already landed itself in a precarious financial situation. It is all the more imperative for the Nigam to concentrate on measures for improvement in efficiency, including reduction in distribution losses. At the same time, the Nigam would require enhanced financial support from the State Govt. by way of subsidy to clear off the accumulated losses"

4. On December 17th, 2004, the Commission revised the retail tariff in response to the petition filed by Discoms. The tariff was effective from 1.1.2005 and was expected to generate combined additional revenue of Rs 130.54 Crore for all Vitran Nigams in the remaining 3 months of FY 2004-05.

   With a view that tariff should be so designed that the agriculture consumers on unmetered supply have an incentive to get metered supply which is also a mandate of the Act of 2003, RERC decided not to increase the tariff of metered category of general agriculture consumers to the extent of 30 paise/unit sought by the petitioners but to keep it at Rs. 1.10/unit i.e. an increase of 20 paise/unit.

5. The Commission vide its Order dated 21.7.06 determining the ARR for the year FY 07, revised the normative consumption of flat rate agriculture consumers for FY 06 and onwards from 1739 to 1945 Units/kW/year.

6. RERC issued the first MY ARR order for the period FY 2007-08 and FY 2008-09 in March 2007. It was noted that the Discom is treating the balance gap as deferred revenue subvention receivable from the State Government in its books as per Financial Restructuring Plan approved.

   Since Discoms did not seek for RoE in their petitions, the Commission decided to allow the interest on short term borrowing as expenses to the extent of RoE which the Discom is eligible to receive as per Terms and Conditions of Tariff Regulations. The Commission however clarified that partial allowing of interest on short term borrowing should not be construed as approval of such short term borrowing by the Commission. The Discom should endeavor to reduce such borrowings and take up the issue of early payment of subvention by the State Government.

7. RERC issued MYT order for the Annual Revenue Requirement of Discoms for the control period FY 2009-10 to FY 2013-14.

   i) The Discoms in this submitted that as per policy directives received from Government of Rajasthan vide letter no. F1 (18)/Energy/2008 dated 18.01.2008; the Discoms have been directed to give 8 hours power supply to Agriculture consumers. Therefore, the Discoms have decided to increase the power supply for all the agriculture consumers and requested the Commission to increase the norm for flat rate consumer from 1945 units/kw/year to 2400 units/kw/year.

      The commission however rejected the request with a view that

      "The sample data submitted by Discoms cannot be relied upon and the Commission does not want to change the norms at this stage as the Discoms have already been advised to meter all consumers through super transformers. The norm of 1945 kWh/kW/Year has been retained for assessment of consumption by the Agriculture Flat category, in accordance with previous RERC Orders."

   ii) Commission states that the uncovered revenue deficit standing at Rs 15,540 Crore as on 31.03.2009 would further accumulate over the years. During the public hearing, the Discoms submitted that the State Govt. has owned their deficit of Rs.15, 540 Crore as on 31.3.2009 and have decided to liquidate the same over a period of 23 years, which relates to past accumulated deficit.

   iii) Discoms concern over the financial status of Nigams and the suggested way forward in the order.

   "The increasing revenue gap is bound to affect the financial viability of the Discoms and will have adverse implications for the sector and the consumers. The annual deficit, which was Rs.1666 Crore in FY 05-06 (the first year after last tariff revision) would be of the order of Rs.4224 Crore in FY 10-11. This is over and above the accumulated deficit of past years. The Government subsidy in year 05-06 was Rs. 908 Cr., thus the uncovered

revenue deficit (total deficit – Govt. subsidy) of that year was Rs. 758 Cr. Though Govt. subsidy has increased in recent past, being Rs. 1375 Cr. in year 09-10 as against Rs. 908 Cr. in year 05-06; however, the increase in overall deficit is far more than increase in Govt. subsidy.

Considering the mounting revenue gap, the Commission in its previous orders dated 21.7.2006 & dated 31.3.2007 had stated that the Discoms may file tariff petitions based on the ARR approved under these orders. However, no petition for tariff revision has been filed by the Discoms after the year 2004. The Commission is of the considered view that unless additional revenue is generated through tariff revision and/or financial support from the Government, the increasing deficit will jeopardize the financial sustainability of the Discoms.

Since 5 years Annual Revenue Requirement for the Multi Year Tariff control period F.Y. 10 to F.Y. 14 has now been assessed by the Commission – a first exercise of revenue assessment for 5 years – which indicates huge revenue deficit; it is indeed the right juncture to analyze the emerging scenario in the light of likely Government subsidy and tariff adjustment to improve financial health of Discoms and to obviate any future tariff shock. Even the revised Financial Restructuring Plan (FRP) approved by the State Government on 26.11.2005 has envisaged the necessity of tariff increase in F.Y. 9-10 and the annual revenue deficit of Discoms in the past years have been much more than what was assumed in FRP.

The Discoms therefore, should file petition for revision of tariff within a period of two months based on Annual Revenue Requirement determined as per this order without waiting for separate ARR determination for F.Y. 10-11, as updated information has been used in determining ARR of F.Y. 10-11. The tariff petition, inter alia, could include subsidy targeted to specific consumer categories and proposed tariff for consumers, power purchase and fuel cost adjustment, etc. Incentive for energy efficiency could also be considered while filing petition. In case no tariff petition is filed within the stipulated period, Discoms should explain the reason thereof and satisfy the Commission as regards additional revenue generation to meet the deficit."

Year-wise distribution loss trajectory-Approved by Commission

Discom	FY 10	FY 11	FY 12	FY 13	FY 14
Jodhpur	25%	23%	21%	19%	18%
Jaipur	22.50%	20.50%	19.00%	18.00%	17.00%
Ajmer	29.00%	27.00%	25.00%	23.00%	21.00%

Performance of Discoms- T&D Loss approved for each Discom during FY 06 to FY 09

Particulars	FY 05	FY06	FY07	FY 08	FY 09
T&D Loss (Ajmer)					
Approved in the Tariff Order	34.25%	39.14%	34.08%	35%	32.00%
Actual	43.49%	40.07%	37.26%		
T&D Loss (Jaipur)					
Approved in the Tariff Order	32.9%	33.88%	29.51%	28.50%	23.90%
Actual	37.65%	36.21%	33.70%		
T&D Loss (Jodhpur)					
Approved in the Tariff Order	34.25%	34.77%	31.29%	33.00%	30.00%
Actual	42.39%	40.34%	32.47%		

Average Cost of Supply vs Realization

Particulars	FY05	FY 06	FY 07	FY 08	FY 09
Jodhpur					
Average Cost of Supply (Rs/kWh)	3.99	4.17	3.80	4.15	4.71
Total Avg Realization (Rs/kWh)	2.66	3.19	3.13	3.12	3.14
Gap/Surplus	-1.33	-0.97	-0.66	-1.03	-1.57
Jaipur					
Average Cost of Supply (Rs/kWh)	4.05	4.06	3.59	3.85	4.23
Total Avg Realization (Rs/kWh)	3.15	3.59	3.52	3.61	3.6
Gap/Surplus	-0.90	-0.47	-0.07	-0.24	-0.63
Ajmer					
Average Cost of Supply (Rs/kWh)	4.10	4.27	3.67	3.99	4.44
Total Avg Realization (Rs/kWh)	3.51	3.24	3.04	3.24	3.21
Gap/Surplus	-0.58	-1.03	-0.63	-0.75	-1.23

Approved Revenue Gap (Rs Crore) for the period FY 05 to FY 09

Discoms	FY05	FY 06	FY 07	FY 08	FY 09
Ajmer	(322)	(450)	(306)	(543)	(1034)
Jaipur	(540)	(300)	(52)	(203)	(611)
Jodhpur	(640)	(451)	(280)	(583)	(1008)

Approved Revenue Gap for the period FY 05 to FY 09

Particulars	FY05	FY 06	FY 07	FY 08	FY 09
Subsidy announced by State Govt.	1039.00	927.00	1066.00	NA	NA
Subsidy Requirement estimated in the Tariff Order	NA	NA	1652.72	1675	NA
Actual Subsidy Received by DISCOMs	1050.20	NA	NA	NA	NA

5.2 Key Findings from Rajasthan

1. The Rajasthan Electricity Regulatory Commission was established under the provisions of the Electricity Regulatory Commissions Act 1998 (Act 14 of 1998), on 10th December 1999 vide Government of Rajasthan Gazette notification of the same date. The Commission became operational with effect from 2nd January 2000, on appointment of Chairman and a Member. RERC issued its first tariff order for fixation of tariff for retail supply of electricity in March 2001 for the years 2000-01 and 2001-02. Thereafter the Commission revised the retail tariff in response to the petition filed by Discoms on December 17th, 2004.

2. Since 2004, Discoms have been filing the petitions for Annual Revenue Requirement but have not sought any revision of tariffs. Cost of supply has increased over the years owing to increase in power purchase cost and interest on short term borrowings. Tariff in the state has not been revised since 2004 and RERC have also not issued any sou-moto order in this regard. This has resulted in increase in revenue deficit for Discoms. The uncovered revenue deficit of Discoms was Rs 15540 Crore as on 31.03.2009. The Commission issued the first MY ARR order for the three Discoms for the period FY 2007-08 and FY 2008-09. RERC issued the second order for Multi-Year Annual Revenue Requirement for the control period FY 2009-10 to FY 2013-14. The combined revenue gap assessed by the Commission for the Discoms for the MYT Period FY 10-14 is Rs 22519 Crore.

3. Revenue deficit at existing tariff- Approved by the Commission from FY 10 to FY 14

Rs Crore

Description	FY 10	FY 11	FY 12	FY 13	FY 14	Total
Jodhpur	1423	1651	1753	2026	2280	9133
Jaipur	962	861	819	787	964	4393
Ajmer	1474	1712	1718	1959	2130	8993
Total						**22519**

Presently, the revenue gap is partially met by government subsidy and through short term borrowings.

4. The deficit, in FY 05-06 (the first year after last tariff revision) was Rs.1666 Crore and the govt subsidy was only Rs. 908 Cr. It is expected to be of the order of Rs.4224 Crore in FY 10-11. Though Govt. subsidy has increased to Rs. 1375 Cr. in year 09-10, but the deficit for that year had also increased to Rs 3859. It is seen that year after year the overall deficit is far more than the Govt. subsidy.

5. In MY ARR order for Discoms for FY 2007-08 and FY 2008-09, the Commission suggested the Discoms that the approved revenue gap can be bridged or reduced by tariff rise and/or fuel/power purchase adjustment in retail supply tariff or subsidy from State Govt., suitable mechanism of trading and by higher reduction of losses than targeted. The Commission also suggested that the Discom may file tariff petition based on ARR approved under the order which may interalia seek power purchase and fuel cost adjustment, ToD tariff for HT consumers and rationalization of various categories including abolition of minimum charges. The Commission in its order on ARR for the period FY 2009-10 to FY 2013-14 has shown concern over the increasing revenue deficit for the Discoms.

6. Discoms have not been seeking any RoE in their ARRs but the Commission has been approving an amount equivalent to that of RoE for Discoms in the ARR under the head Interest and Finance Charges. This amount is a part of interest on the short term borrowings that the Discoms have to take to meet their unmet revenue deficit.

7. Agriculture consumers in Rajasthan have been segregated into two categories of metered and unmetered consumers. The un-metered consumers are billed on the flat rate norm specified by the Commission. However, there has been no record of actual supply to these un-metered consumers over the years and that could provide an escape route to Discoms on reduction in loss levels. The actual T&D losses were more than 30% for each of the Discoms at the time of truing up of ARR for FY 2007-08. Government of Rajasthan has directed the distribution companies, vide letter no. F1 (18)/ Energy/2008 dated January 18, 2008, to supply power for 8 hours to Agriculture consumers. Therefore, the losses may be on higher side as the sales to Agriculture consumers have been increasing over the years. This has resulted in Commission approving higher specific consumption for flat rate consumers during the MY period FY 2009-10 to FY 2013-14 based on the consumption for FY 2008-09.

Revenue realization from flat rate consumers into metered consumers has been declining every year.

8. As per the approved Financial Restructuring Plan(FRP), GoR has also committed in the revised FRP to provide the entire revenue deficit as revenue subsidy during the transition period till the Utilities turnaround. However, GoR is not able to provide the entire subsidy burden every year. The Discoms are to be provided Rs. 400 Crore per annum as transitional cash support till 2011-12 under the provisions of Financial Restructuring Plan. This is also proposed to be extended till 2016-17 under revised FRP”

   At present, tariff subsidy is being provided by the state government to Discoms under section 65 of Electricity Act 2003 for subsidizing the tariff of agricultural consumers, BPL consumer and small domestic consumers having consumption up to 50 units. The Discoms have been allowed to retain electricity duty collected from the consumers till 2011-12 under the provisions of Financial Restructuring Plan. The retention of ED is proposed to be extended up to 2016-17 under Revised FRP.

9. The Discoms have failed miserably in filing its proposals before the Regulator even though its annual revenue has not been adequate to cover its valid expenses. Instead, the SEB opted for the convenient option of borrowing funds, which made its financial position even worse. Even the Regulator in its approach has always been ‘only suggestive’ on filing a tariff revision petition for the reduction of revenue deficit but did not deem it necessary to take up the tariff revision exercise suo moto, even though, it could have done so under the law.

10. Most recently, i.e. in January 2011 Discoms have filed tariff petitions for revision of ARR and Retail Supply Tariff for FY 2011-12, first time since the tariff was revised in 2004. The Discoms have proposed to cover a part of revenue gap through Transitional support from GoR, Government subsidy towards BPL, Small domestic and Agriculture consumer and through tariff hike.

State 6-Analysis of UPERC Orders

6.1 Facts, analysis and extracts from the order:

1. In terms of sub-section (4) of section 82 of the said Act, the State Commission consists of three Members including the Chairperson. Currently there is one chairman and two members in the Commission.

2. Post the transfer scheme in 2003, the Uttar Pradesh Electricity Regulatory Commission (UPERC) had issued the Tariff Order for approval of ARR of Agra, Meerut, Lucknow and Varanasi DISCOMs and determination of Retail Supply Tariff to be charged to different consumer categories for FY 04-05 through FY 08-09. The tariff order for FY 06 was not issued due to delay in tariff filing by the DISCOMs. Thereafter, the tariff filing for FY 07-08 was again delayed by almost a year (filed on 7th October 2007) and therefore the Commission issued a joint ARR for FY 07-08 and FY 08-09.

3. Broad parameters of ARR for FY 09-10:

4. The domestic category (35%) forms the major chunk of consumers in the overall consumer mix for DISCOMs in Uttar Pradesh followed by Large Industrial (21%) and Agriculture (14%) categories.

Consumer Category	Sales in Mus	% Share
Domestic	15,084	35%
Non-Domestic	2,819	7%
Commercial	1,351	3%
Small Industrial	2,171	5%
Large Industrial	9,013	21%
Agriculture	6,063	14%
Railways	625	1%
PWW/ Irrigation	1430	3%
Bulk Sales	3,130	7%
Others	975	2%
Total Sales	42,661	100%

5. The Commission while approving energy sales for the DISCOMs have considered a reverse method by approving the total power purchase quantum and T&D loss levels to arrive at the net energy available for sale. The sales for each consumer category has been forecasted based on the CAGR method and adjusted for balance power availability.

6. Based on the table below, it is observed that the approved sales have been higher than the actual sales in each of the year. Since the Commission approves energy sales based on power availability, the higher than approved T&D losses contribute to the lower availability of power for sale within the state.

Financial Impact due to over-estimation of Sales

Disallowance	FY 06-07	FY 07-08	FY 08-09
Impact due to over-estimation of sales#	(871)	(1,306)	(976)

Financial impact due to lower sales has been estimated by considering the difference in actual and approved sales and average realization approved by the Commission

7. The Commission had set a loss reduction trajectory starting FY 02 for five years for UPPCL. This trajectory was based on the baseline data for FY 01 and represented a 3% year on year reduction in T&D losses. The Commission had subsequently revised loss reduction trajectory in FY 06 and FY 08 as the DISCOMs were not able to achieve the targets.

8. For all years from FY 05 through FY 09, the Commission decided to keep the T&D loss level at 27.4%, the level that was approved for FY 05 as per the trajectory set earlier. Such a decision had to be taken by the Commission because the DISCOMs had not met the targets set for FY 03 and FY 04 and was unlikely to meet the targets in the following years. Accordingly, the

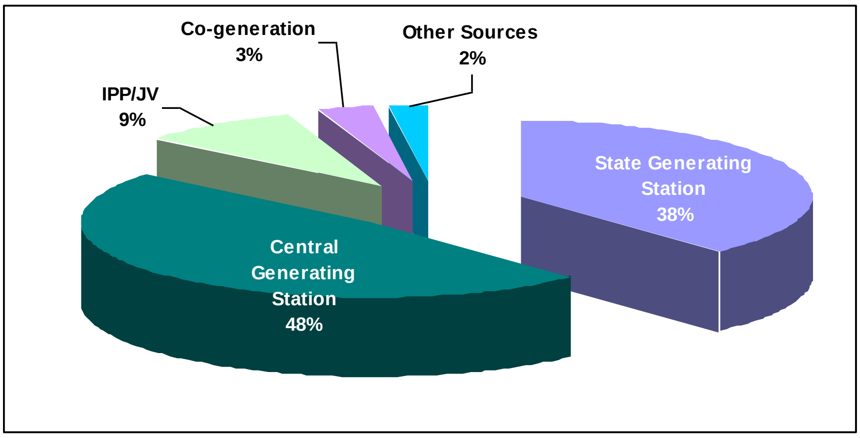
Commission had approved T&D loss of 27.4% for FY 07. Again for FY 08 and FY 09, in the absence of any study being undertaken by the DISCOMs, non-availability of reliable base line information and DISCOMs proposing high T&D losses of 32% and 28%, the Commission had no other option but to set the loss targets for the years on interim basis. Hence the Commission again approved T&D losses on an overall basis at the same level as approved in FY 07 i.e 27.4%.

9. The DISCOMs had neither achieved the proposed nor approved T&D target levels in any of the years. Though the Commission devised policy for incentivizing the DISCOMs of overachievement, the Commission failed to penalize the DISCOMs for not achieving the targets.

10. UPPCL on behalf of the DISCOMs is responsible for the power purchase from various sources. The Commission has repeatedly directed UPPCL to allocate all existing Power Purchase Agreements (PPAs) to the DISCOMs however; the same has not been implemented.

11. The major sources of power purchase for the Uttar Pradesh DISCOMs are CGS (NTPC, NHPC), State Generating Stations (UPRVUNL and UPJVNL) and other plants including Cogeneration plants (obligatory purchase), Independent power producers (IPP), bilateral and banking arrangements with other States.

Constitution of Power Purchase from various sources for FY 09-10



12. The actual power purchase cost in FY 06-07 and FY 08-09 has been higher than the approved power purchase cost. However, for FY 07-08, the actual cost has been lower than the approved due to lower quantum of power purchased and per unit lower cost. Since no true-up order has been issued by the Commission, the variation in power purchase cost has remained un-recovered. The per unit approved and actual power purchase cost is summarized in table below:

Power Purchase Per Unit (Rs/KWh)	FY 06-07	FY 07-08	FY 08-09	FY 09-10
Approved	2.13	2.25	2.35	2.53
Actual	NA	2.15	2.58	NA

13. The Commission approves the employee cost, R&M and A&G cost separately for the distribution companies based on the tariff regulations and past trends. The cost elements for employee expense and Administration & General expense are approved by undertaking the estimations based on the historical trend and further any specific addition in cost item such as the billing expenses etc has been included. The Repair & Maintenance (R&M) expense is approved as a percentage of the opening Gross Fixed Assets (GFA). The actual O&M expense is higher than the approved O&M expense in each of the year excluding FY 07-08. The financial impact of the actual cost being higher than the approved is borne by the utilities in absence of any true-up.

14. The Commission in the tariff approval process has approved capital expenditure based on the investment plan submitted by the distribution utilities. The scheme wise investment plan is scrutinised by the Commission. Based on the past actual and approved capital expenditure, the Commission has observed that the DISCOMs had undertaken significantly lesser amount of capital expenditure as compared with the approved. In view of the same, the Commission had approved a lower amount towards capital expenditure as against the proposed. Also, the depreciation has been approved considering the disallowance in the capitalization.

15. The interest and finance charges consists of interest on borrowed long-term & short-term loans, interest on working capital, interest on consumer security deposits and financing charges. Since the interest on working capital is based on the normative working capital requirement, the DISCOMs had claimed interest charges on account of overdraft (OD) facilities used for long-term loans and working capital. Further, the DISCOMs have claimed for working capital interest and finance charges of UPPCL allocated to the DISCOMs arising due to market borrowing to meet the short-term requirements of funds. However, the Commission has disallowed these interest and finance charges stating that the same cannot be recovered from the consumers as it is an internal mechanism and the DISCOMs are eligible only for interest cost on account of normative working capital.

16. The DISCOMs are entitled to earn 16% return on equity as per the tariff regulations. However, the utilities have not claimed for any return considering the sector is not viable and any return if proposed would put burden the consumers. In view of the same, the Commission has not considered any return while approving the ARR of the DISCOMs.

17. The DISCOMs have been receiving huge subsidy from the Government of UP (GoUP) to meet their revenue deficit. In FY 2005-06, FY 2006-07 & FY 2007-08, there has not been any increase in the tariffs whereas the distribution companies have been meeting the deficit partly through the subsidy provided by the GoUP. During FY 2008-09 & FY 2009-10, the retail tariffs in the state were increased. However, the balance gap after considering the additional revenue from tariff increase was met by subsidy from the GoUP. Therefore, the GoUP has been providing subsidy grant on a consistent basis to bridge the revenue deficit of the utilities. The details of the subsidy are provided in the table below:-

Subsidy (Rs Crs)	FY 06-07	FY 07-08	FY 08-09	FY 09-10
Govt. Subsidy	1012	1822	1532	1832
Additional Govt Subsidy/Loan Support from GoUP	500[2]	0	0	255[3]
Total	1512	1822	1532	2087

18. No tariff increases were approved by the Commission during FY 05-06 to FY 07-08. However, the Commission had approved tariff increase for FY 2008-09 & FY 2009-10 to meet the large revenue deficit. The table below summarises the tariff increase in percentage from FY 05-06 to FY 09-10

Particulars	FY 06-07	FY 07-08	FY 08-09	FY 09-10
Average Tariff increase (%)	No change	No change	13.91%	13.22%

19. The Commission did not revise the retail tariff during FY 2006-07 and FY 2007-08 and resorted to other measures i.e. government support in form of short-term loans, efficiency improvements, savings in power purchase cost, etc. for meeting the revenue gap as claimed by the DISCOMs in their submissions. For FY 2006-07, the Commission had approved revenue deficit to be funded through short-term loans. However, the Commission had considered these as Government support in the form of short-term loans and had not approved any interest cost on these short-term loans in the future ARR of the DISCOMs. Similarly, the Commission considered the institutional loans availed by the DISCOMs for meeting the revenue deficit during FY 2007-08 as subsidy from GoUP and directed that the debt servicing of such loans should be directly funded by the GoUP through budgetary provisions.

20. Also, for FY 09-10, the Commission had mentioned that the DISCOMs should pursue the GoUP for additional subsidy of Rs. 255 Crore (as proposed in the Petition) as a first measure and in case of non-availability of the same, exercise the option of revolving bank guarantee. However, the Commission had clarified that no cost / charges on account of meeting the gap through revolving bank guarantee shall be allowed as pass through in the ARR. Also, savings on account of efficiency improvement and power purchase are not workable considering the underachievement in T&D loss level each year by the DISCOMs.

21. In each of the Tariff Order, the Commission had observed that the distribution companies have not claimed for any true-up as entitled under the provisions of the tariff regulations. Therefore, the Commission in all its tariff order has expressed that the true-up exercise would be undertaken whenever the DISCOMs file a true-up petition along audited annual accounts.

6.2 Key Findings of Uttar Pradesh Study

[2] *Rs 500 Crores is provided as additional government subsidy*
[3] *Rs 255 Crores as loan support from State Government*

1. The Uttar Pradesh Electricity Regulatory Commission (UPERC) was set up by the Government of Uttar Pradesh as per the U.P. Electricity Reform Act 1999.
2. Post the unbundling exercise and transfer scheme dated 15th January 2000 & 14th June 2000, the distribution utilities were formed for the purpose of handling the distribution business in the State of Uttar Pradesh. The state distribution companies include Paschimanchal Vidyut Vitran Nigam Ltd. (PVVNL), Purvanchal Vidyut Vitran Nigam Ltd. (PuVVNL), Dakshinanchal Vidyut Vitran Nigam Ltd. (DVVNL), Madhyanchal Vidyut Vitran Nigam Ltd. (MVVNL) and Kanpur Electric Supply Company Limited (KESCO).
3. The tariff order for FY 06 was not issued due to delay in tariff filing by the DISCOMs. Thereafter, the tariff filing for FY 07-08 was again delayed by almost a year (filed on 7th October 2007) and therefore the Commission issued a joint ARR for FY 07-08 and FY 08-09.
4. The DISCOMs have been receiving subsidy from the Government of UP (GoUP) to meet their revenue deficit. In FY 2005-06, FY 2006-07 & FY 2007-08, there has not been any increase in the tariffs whereas the distribution companies have been meeting the deficit partly through the subsidy provided by the GoUP. During FY 2008-09 & FY 2009-10, the retail tariffs in the state were increased. However, the balance gap after considering the additional revenue from tariff increase was met by subsidy from the GoUP.
5. The SERC had set loss reduction trajectory in FY02 with approved reduction of T&D losses by 3% every year. For FY 05 through FY 09 SERC kept the reduction target at 27.4% (for all the DISCOMs put together) because the DISCOMs were not able to meet the targets for FY 03 and FY 04.
6. The Commission while approving energy sales for the DISCOMs have considered a reverse method by approving the total power purchase quantum and T&D loss levels to arrive at the net energy available for sale. The sales for each consumer category has been forecasted based on the CAGR method and adjusted for balance power availability. Since the T&D loss considered by the Commission is based on the approved numbers which are generally lower than the actual T&D losses of the Discoms, there is significant over-estimation of sales resulting in higher approved revenue as compared with the actual. As the true-up exercise is not being undertaken, the Discoms are incurring financial losses each year resulting in accrual of losses.
7. One of the major reasons for the financial ill health of the Discoms is on account of no true-up exercise carried out by the Commission. The DISCOMs have also not claimed / requested for any true-up of the past years in the absence of audited accounts. However, it has been submitting provisional accounts to the Commission during the processing of the ARR & Tariff petition. However, the Commission has not undertaken any true-up based on provisional accounts of the Discoms. As a company discoms should keep audited accounts and even in the absence of audited accounts the Commission could have taken up true-up exercise on suo-motu basis.
8. The Commission did not revise the retail tariff during FY 2006-07 and FY 2007-08 and resorted to other measures i.e. government support in form of short-term loans, efficiency

improvements, savings in power purchase cost, etc. for meeting the revenue gap as claimed by the DISCOMs in their submissions. For FY 2006-07, the Commission had approved revenue deficit to be funded through short-term loans. However, the Commission had considered these as Government support in the form of short-term loans and had not approved any interest cost on these short-term loans in the future ARR of the DISCOMs. Similarly, the Commission considered the institutional loans availed by the DISCOMs for meeting the revenue deficit during FY 2007-08 as subsidy from GoUP and directed that the debt servicing of such loans should be directly funded by the GoUP through budgetary provisions.

9. For FY 09-10, the Commission had mentioned that the DISCOMs should pursue the GoUP for additional subsidy of Rs. 255 Crore (as proposed in the Petition) as a first measure and in case of non-availability of the same, exercise the option of revolving bank guarantee. However, the Commission had clarified that no cost / charges on account of meeting the gap through revolving bank guarantee shall be allowed as pass through in the ARR. Also, savings on account of efficiency improvement and power purchase are not workable considering the underachievement in T&D loss level each year by the DISCOMs.

10. The approval for bridging of gap through other measures i.e. government support in form of loans, efficiency improvements, saving in power purchase, etc. does not seem workable. Considering that the Discoms are not able to achieve the T&D loss targets as specified by the Commission, efficiency improvement over and above the loss target specified by the Commission may not be possible. Government support in the form of loans or additional subsidy support considered without Government of Uttar Pradesh's approval should be considered post approval/ written commitment by the State Government.

State 7- Analysis of WBSERC Orders

7.1. Facts, analysis and extracts from the order:

1. In terms of sub-section (4) of section 82 of the said Act, the State Commission consists of three Members including the Chairperson. Currently there is one chairman and two members in the Commission.

2. The Commission issued its first combined tariff order for FY 2000-01 & FY 2001-02 for West Bengal State Electricity Board (WBSEB) on 7th December, 2001. The WBSEB was unbundled as per terms of Section 131 of the Electricity Act, 2003 in to West Bengal State Electricity Transmission Company Limited and West Bengal State Electricity Distribution Company Limited (WBSEDCL) w.e.f 1.4.2007 in accordance with a transfer scheme viz., West Bengal Power Sector Reforms Transfer Scheme 2007 notified by Govt. of W.B vide No.12-PO/O/III/3R-29/2006 dated 25.1.2007 Therefore, the first order for FY 2007-08 for determination of retail tariff for WBSEDCL was issued on 1st August, 2007.

3. The Commission has revised retail tariff annually to recover the increased annual revenue requirement of WBSEDCL.

4. Broad parameters of ARR for FY 09-10:

5. WBSEDCL has a favourable sales mix. Agriculture consumption in the state is small and contributes to less than 10% of the consumption while the industrial (HT) consumption is high and contributes more than 40% of the total energy consumption.

6. For each of the year, the Commission has approved sales as proposed by WBSEDCL. The Commission has not disallowed any sales for WBSEDCL in any of the years while undertaking true-up/ APR and has approved sales as per the audited accounts, without any disapproval.

Category	Approved Sales for FY 07-08 (MUs)	% Share
Domestic	4274	33%
Commercial/ Non-Industrial	1609	12%
Industrial	5191	40%
PW Works	92	1%
Irrigation/ Agriculture	950	7%
Public	95	1%
Traction	685	5%
Total Sales	12896	100%

7. The Commission had approved T&D loss for WBSEB for FY 05 as per the reduction trajectory set by the Commission in tariff order for FY03. The Commission for approving baseline T&D loss in FY 03 took into consideration T&D loss as proposed by WBSEB for supply to own consumers (excluding bulk supply). For FY 06 and FY 07 the Commission approved a

reduction of 1% over the approved T&D loss of previous year irrespective of the actual T&D loss and stated that T&D loss excess to that approved will have to be borne by the licensee.

8. For FY 08 after division of WBSEB into WBSETCL & WBSEDCL, the DISCOMs proposed combined loss of 24.7% with transmission loss of 4%, hence the Commission approved Distribution loss of 19.50%.

9. For FY 09 the Commission approved Distribution loss as per the norms specified in the Tariff Regulations, 2007.

T&D Loss	FY06*	FY07*	FY08	FY09	FY10
Approved	24%	23%	19.50%	18.75%	18.25%
Actual#	NA	NA	26.48%	24.91%	26.32%
APR	NA	23%	19.50%	18.75%	18.25%

** Losses for West Bengal State Electricity Board as a whole*

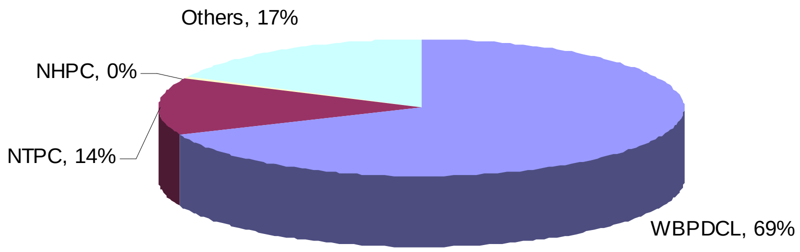
#CRIS Anaylsis (Actual losses have been computed based on the power purchase units disallowed in the FPPCA Order)

10. For the purpose of true-up of the power purchase cost, the Commission has considered T&D losses as approved in the Tariff Order of the respective year. Therefore any underachievement in the T&D loss has been to the account of WBSEDCL. Excess power purchase on account of under-achievement of T&D loss reduction targets has been disapproved.

11. WBSEDCL purchases energy from different sources like Central Generating stations, West Bengal Power Development Corporation Ltd, West Bengal Renewable Energy Development Authority (WBREDA) and other DISCOMs in the state like DPL, DPSC and CESC.

12. Power purchase requirement of WBSEDCL is mostly met with energy production of WBPDCL which account for approx 70% of the total power purchase quantum. The quantum availability and tariff for State Generating Stations is approved separately by the Commission. WBSEDCL also has some hydel generating stations the quantum and cost for which are approved in the same tariff order.

Approved Breakup of Power from Various Sources for FY09



13. The actual per unit power purchase cost has been higher than the approved per unit power purchase cost. The decrease in per unit approved power purchase cost for FY 09 and FY 10 is due to sourcing of power from new power plants at cheaper rates. WBSEDCL is a major power seller in the short term market contributing around 5% of total transaction.

Power Purchase Cost per Unit (Rs./kwh)	FY06	FY07	FY08	FY09	FY10
Approved	1.87	1.85	1.96	1.90	1.79
Trued-up*		1.92	2.01	1.95	2.21

14. The Commission has disallowed power purchase quantum on account of under achievement of T&D loss targets set in the tariff orders for the respective years therefore corresponding power purchase cost w.r.t. disallowed power purchase quantum has been reduced from the actual power purchase cost as claimed by WBSEDCL. The financial impact of disallowance of power purchase cost is summarized in table below:

Power Purchase Cost disapproved	FY07	FY08	FY09	FY10
Disapproved in Power Purchase Cost due to under-achievement of T&D loss (Rs. crore)	-351.98	-229.71	-209.89	-342.64

15. WBERC had approved each of the total O&M under two heads i.e. Employee Cost, O&M cost (comprising of various components like R&M Cost, A&G cost, rents and taxes, audit fee, insurance etc).

16. The employee expense is considered as uncontrollable cost and therefore, the Commission has allowed the actual employee cost as per the audited accounts of WBSEDCL subject to prudent checks. However, the O&M charges (comprising of A&G and R&M cost) are considered to be controllable as per the tariff regulations and therefore any variation in actual and approved O&M expense is to the account of the licensee.

17. For FY 07 – FY 09, the Commission approved interest cost as proposed by WBSEDCL. The Commission, however, disallowed other financing charges relating to fees and expenses for restructuring of loans and interest on capital liabilities. The Commission has considered interest on working capital as uncontrollable expense. In the Tariff Orders for FY 06-07 and FY 07-08, the Commission had approved working capital on normative basis. However, in the APR Orders, interest on working capital was disallowed as no borrowings were undertaken by WBSEDCL for working capital requirement during each year. In the MYT Order for FY 08-09 to FY 10-11, the Commission did not approve any interest towards working capital requirement considering that the WBSEDCL had not undertaken any working capital borrowings in FY 08-09.

18. For FY 07, the Commission has allowed Return on Equity at 14% on closing equity of FY 05 (equity fund was from the State Government) as the Commission noted that no addition to the equity capital will be considered for WBSEDCL till the time the amount of accumulated loss for the previous years were completely negated by the infusion of funds from WBSEDCL's own or outside sources. For FY 08 and FY 09 the Commission approved return on equity at 14% on average equity for the respective year.

19. The Government of West Bengal did not provide any subsidy support to the Discoms during FY 05 through FY 09.

20. The Commission has increased retail tariff in the state of West Bengal annually to recover the increased annual revenue requirement of WBSEDCL each year. Further, the Commission has approved regulatory assets to contain the tariff hike.

21. An amount of Rs. 127.24 Crore which was the revenue deficit for FY 07-08 in the APR of WBSEDCL was to be recovered in the subsequent ARR i.e. FY 09-10. However, the Commission created a regulatory asset in order to contain the tariff hike at a reasonable level. In the FY 10-11 Order, the Commission approved the regulatory asset of Rs. 127.24 Crore to be passed to the consumers in the FY 10-11 ARR but created a new regulatory asset of Rs. 1569.33 Crore on account of power cost variation as approved in the FPPCA Order dated 30 June, 2010.

Particulars	Amount
Regulatory Asset for FY 09-10 (Rs. Crs)	127.24
Regulatory Asset for FY 10-11 (Rs. Crs)	1569.33

22. As per the Annual Report FY 2009-10, the Regulatory Asset for the FY 2008-09 and FY 2009-10 was Rs 1891.07 Crore and Rs 2991.59 Crore respectively. The addition of Rs 1100.52 Crore of Regulatory Asset in FY 2009-10 is on account of FPPCA, loss incurred for taking over distribution assets of Singure Haripal Rural Electric Co-operative Society and employee cost.

23. The Commission follows a two stage approach while doing the true-up of any financial year in all the tariff orders. The Commission first approves the FPPCA Order for a year followed by the Annual Performance Review (APR) Order and the net recoverable/ payable as per the APR Order is charged to the ARR of the subsequent year.

7.2 Key Findings of West Bengal State Electricity Distribution Co. Ltd. Study

1. The West Bengal Electricity Regulatory Commission was constituted by Government of West Bengal under section 17(1) of the Electricity Regulatory Commission Act, 1998 (14 of 1998) vide Notification No 06-Power/III dated 06.1.1999. The first Chairperson joined on 31.3.1999.

2. Post the unbundling of West Bengal State Electricity Distribution Company Limited (WBSEDCL) w.e.f 1.4.2007 from the West Bengal State Electricity Board, the Commission has issued tariff orders each year starting from FY 2007-08. Also, the Fuel & Power Purchase Cost Adjustment (FPPCA) and Annual Performance Review (APR) for each year has been issued by the Commission for true-up of power purchase and other cost elements.

3. State of West Bengal adopted MYT framework in FY 2007-08 and defined first Control Period to be from 1st April 2007 to 31st March 2008. Second MYT control period has been set as 3 years from 1st April 2008 to 31st March 2011.

4. The financial impact on the WBSEDCL is primarily due to non-achievement in T&D loss targets and disallowance of higher than approved controllable cost i.e. O&M expense. The

T&D loss targets approved by the Commission each year have not considered the actual T&D losses of the licensee. The difference in approved vis-à-vis actual loss of 8.07% for FY 09-10 resulted in a financial impact of Rs. 342.6 Crore for the utility.

5. In the APR for FY 06-07, FY 07-08 and FY 08-09, the Commission had disallowed actual cost over and above the approved cost for all the controllable parameters (as defined in the tariff regulations). Further, the power purchase cost on account of non-achievement of target T&D loss levels approved by the Commission in the respective year was disallowed in each APR resulting in accumulation of financial losses for WBSEDCL.

Particulars (Rs. Crore)	FY07	FY08	FY09	FY10
Power purchase cost disallowance	-352.0	-229.7	-209.9	-342.6
R&M disallowance	-26.3	-46.3	-22.4	0.0*
Total Disallowance	-378.3	-276.1	-232.3	-342.6

** APR for FY 09-10 is not available; therefore the disallowance is only on account of FPPCA Order*

6. Though, revision in tariff has been undertaken by the Commission frequently to meet the revenue gap determined in the ARR & Tariff Order for each year from FY 2007-08, the Commission has created regulatory asset to defer the revenue deficit in FY 09-10 & FY 10-11 Tariff Orders. The Commission had determined an amount of Rs. 127.24 Crore as revenue deficit post the APR of FY 07-08 which was to be recovered in the subsequent ARR i.e. FY 09-10. However, considering the hike required for meeting the gap, the Commission had created a regulatory asset which was amortized in the ARR for FY 10-11. However, the Commission created a new regulatory asset in FY 10-11 Order of Rs. 1569.33 Crore on account of power cost variation as approved in the FPPCA Order dated 30 June, 2010. As per the National Tariff Policy Sec 8.2.2, creation of regulatory assets by Regulatory Commission should be done only as exception.

   As per the Annual Report FY 2009-10, the Regulatory Asset for the FY 2008-09 and FY 2009-10 was Rs 1891.07 Crore and Rs 2991.59 Crore respectively. The addition of Rs 1100.52 Crore of Regulatory Asset in FY 2009-10 is on account of FPPCA, loss incurred for taking over distribution assets of Singure Haripal Rural Electric Co-operative Society and employee cost.

   For FY 08, the Commission did not approved interest on working capital since the same has not been proposed by WBSETCL. For FY 09 though WBSETCL had proposed interest on working capital the Commission did not approve any interest on working capital as there was no existing working capital borrowing. Liquidity is one of the most essential part of any business and the prudent value of interest on working capital borrowing could be approved for WBSETCL.

CRISIL
INFRASTRUCTURE
ADVISORY

High-Level Panel

Study of Various Power Distribution Models in India

July 2011

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LIST OF FIGURES

DISCLAIMER

In preparing this report, CRISIL Risk & Infrastructure Solutions Limited (CRIS) has relied on the information available in public domain and data provided by the selected companies. CRIS' role is limited to study of relative strengths and weaknesses of various power distribution models in India by analysing the financial and technical performance of select utilities.

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1 BACKGROUND

1.1 Context

The Electricity Act 2003 and downstream policies have brought about a fundamental change in the power sector with the last decade witnessing a number of headways. Private sector participation and competition are being witnessed across the value chain, albeit of different degrees. Four ultra-mega power projects (UMPP) of 4000 MW capacity each, have been awarded to private entities. A number of distribution licensees have also completed the power procurement process from independent power producers (IPP) under various modes of tariff-based competitive bidding. A number of inter-state transmission projects have been awarded to private entities on an independent power transmission company (IPTC) basis. At the state level too, transmission projects are being commissioned on a competitive bidding basis. Two power exchanges have commenced operations and are offering various day-ahead and term-ahead contracts.

On the distribution side, barring a few states, all the others have unbundled their erstwhile state electricity boards (SEB) and have corporatised their successor entities. The Government of India is facilitating efficiency improvement and expanding distribution networks to rural areas through its flagship programmes of R-APDRP[1] and RGGVY[2] respectively.

However, the financial health of distribution utilities continues to remain critical for the overall success of power sector reforms. The aggregate financial losses of the state utilities were estimated at Rs. 52,623 crores in FY 2008-09 with Aggregate Technical & Commercial (AT&C) losses for the same year being pegged at 28.44%[3]. According to a report released by the 13th Finance Commission, these financial losses may increase to Rs. 116,089 crore by FY 2016-17, assuming tariffs remain at the 2008 level.

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[1] R-APDRP (Restructured Accelerated Power Development and Reforms Program) was launched by the Government of India in 2008 to enable distribution utilities to improve efficiency and reduce system losses. The program has two major components: Part A includes projects for establishment of information technology based energy accounting and audit system leading to finalization of verifiable base-line AT&C loss levels in the project areas. Part B envisages distribution network strengthening investments leading to reduction in loss levels.

[2] RGGVY (Rajiv Gandhi Grameen Vidyutikaran Yojana) is a rural electrification scheme of the Government of India. The policy entails electrifying all villages and habitations and providing access to electricity to all rural households.

[3] "Performance of State Power Utilities for the years 2006-07 to 2008-09", Power Finance Corporation.

Private participation in the distribution sector is limited and exists in different forms. While distribution utilities such as Tata Power Company Limited (TPCL) and Calcutta Electricity Supply Company (CESC) are privately owned and have been in operation for nearly a century, distribution utilities such as North Delhi Power Limited (NDPL) and BSES Rajdhani Power Limited (BRPL) have been privatized rather recently (eight years ago) with part ownership (49%) of these companies residing in the state government. Quite recently, private participation in power distribution has assumed another form, viz., the Distribution Franchisee model. As per this model, a certain area of the distribution unit is handed over to a private entity, and the performance of the private entity is regulated through a contract between the private entity and the distribution licensee of that area. For instance, MSEDCL (a state-owned distribution company in Maharashtra) has appointed Torrent Power Bhiwandi Limited as a distribution franchisee for the Bhiwandi circle in Maharashtra.

The High-Level Panel aims to analyse both such emerging and established models of electricity distribution and evaluate their relative strengths and weakness. This assessment will serve as an input for the Panel to evolve feasible models for electricity distribution in India.

1.2 Outline of approach and Data sources used for analysis

While this study analyses different distribution models by selecting a company representing each such model and assessing its performance against select indicators, the objective is not to benchmark the performance of one company against that of another. Rather, it is to identify the factors responsible for the performance or non-performance of the model being represented by the select company. Accordingly, as a first step, distribution companies (discom) representing different power distribution models in India were selected in consultation with the High-Level Panel. Table 1 depicts the list of discoms chosen for this study.

Table 1: List of Discoms selected for the study

Ownership/ PPP	Discom
State-owned Discom	Jaipur Vidyut Vitran Nigam Limited
Private Discom (in joint venture with the state government)	North Delhi Power Limited, Noida Power Company Limited
Private Discom (full ownership with the private entity)	Reliance Infrastructure Limited- Mumbai Distribution Operation
Public-Private Partnership (Distribution franchisee)	Torrent Power Bhiwandi Limited

A list of indicators, covering different facets of distribution performance (financial, technical and customer service-related) was prepared, taking into account the concerns of the Government as well as consumers. Financial parameters include profit after tax, and operational factors such as distribution losses, collection efficiency, and O&M cost. Technical parameters primarily relate to the extent of metering and quality of supply including such indicators as 11 kV feeder-metering, consumer-metering, and distribution transformer failure. Besides, customer service and energy-efficiency initiatives undertaken by the discoms too have been captured. The list of these indicators is enclosed in Annexure 1.

Further, the performance of each discom has been analysed against the identified indicators, and the efficacy of the distribution model represented by the discom has been judged across the following two dimensions:

- Geographical coverage – This pertains to the size of the distribution area and its composition, i.e., if the area is wholly urban or part urban and part rural.
- Ownership – The distribution unit may be state-owned or privately owned.

The reference period considered for analysing the performance indicators is FY 2005-06 to FY 2009-10. A template for the collection of data was prepared, and best attempts were made to obtain this data from the selected companies. Annual reports, tariff orders, true-up orders, and reports available in the public domain have also been considered for the purpose of this study.

1.3 Structure of the Report

The report has been organized along the following lines:

Section 2: Overview of distribution models in India

Section 3: Profiles of companies selected for the study

Section 4: Assessment of distribution models

Section 5: Conclusions

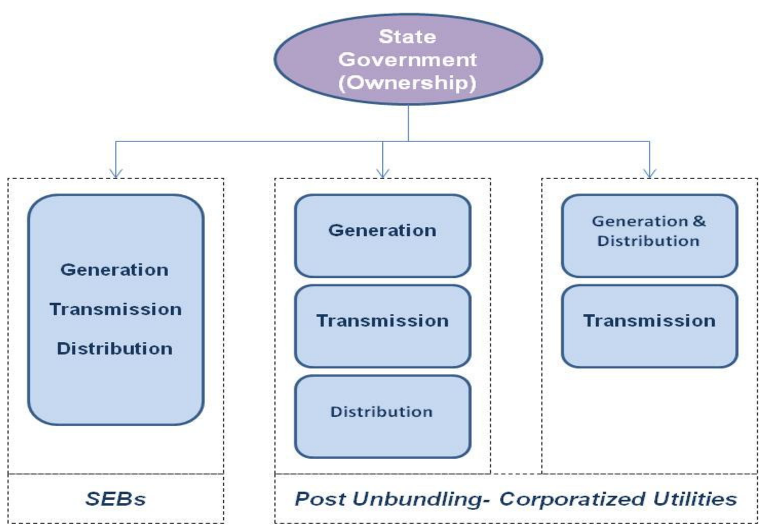
2 OVERVIEW OF DISTRIBUTION MODELS IN INDIA

Power distribution companies (discoms) can be broadly classified into three models, based on their ownership, viz., state-owned discoms, privately owned discoms, and PPP-model based distribution franchisees[4]. An overview of each of these models is presented below.

2.1 Government Ownership

Government-owned distribution utilities can be divided into two categories, viz., state electricity boards (SEB) and unbundled discoms. State electricity boards are bundled entities, which perform all the activities that make the value chain of electricity, including electricity distribution. The ownership of the Boards lies with the state governments. Most of the states are on track in unbundling their respective Boards with few of them following a different approach of unbundling. The SEBs that were unbundled at an early stage of reforms have been segregated into generation, transmission, and distribution companies, and in some cases into multiple distribution companies. Recently, some states have unbundled their Boards into two companies -- one, transmission company, and the other, dedicated to both generation and distribution. A pictorial representation of different forms of government ownership in electricity distribution is presented below.

Figure 1: Forms of government ownership in electricity distribution



[4] Only Input Based Franchisee model has been considered for analysing the Distribution Franchisee Model, as it allows the Franchisee to control the entire gamut of distribution operations on behalf of the distribution licensee.

Barring a few states such as Bihar, Jharkhand and Kerala that are yet to unbundle their SEBs, all other SEBs have been unbundled into separate generation, transmission, and distribution companies. There are exceptions such as Punjab and Tamil Nadu that have restructured their boards into two companies -- one handling generation and power distribution, and the other operating the transmission business.

2.2 Private Ownership

Calcutta Electricity Supply Co. Limited (CESC) and Tata Power Company Limited (TPCL), which are privately held, have been respectively operating in the cities of Kolkata and Mumbai for several decades now. Orissa was the first state to privatise its electricity distribution, disinvesting 51% of the state government's stake in private companies (1999). Subsequently, the Government of National Capital Territory of Delhi (GoNCTD) handed over its distribution business to three private distribution companies, namely North Delhi Power Limited (NDPL), BSES Rajdhani Power Limited (BRPL) and BSES Yamuna Power Limited (BYPL) in July 2002. Like the government in Orissa, GoNCTD too has divested 51% of its stake in these distribution companies. There has been no further privatization in electricity distribution since 2002 in Delhi. Overall, private participation in the distribution business has been limited owing to direct consumer interactions, fixed returns, and high risks entailed by the distribution business. Here is a list of private distribution companies operating in India:

- Calcutta Electricity Supply Co.(CESC) - Kolkata (West Bengal)
- Tata Power Company Limited (TPCL) – Mumbai (Maharashtra)
- Torrent Power Limited - Ahmedabad, Surat (Gujarat)
- Reliance Infrastructure Limited - Mumbai (Maharashtra)
- North-Eastern Electricity Supply Company of Orissa Ltd. (NESCO) – Orissa
- Western Electricity Supply Company of Orissa Ltd. (WESCO) – Orissa
- Southern Electricity Supply Company of Orissa Ltd. (SOUTHCO) – Orissa
- Central Electricity Supply Utility of Orissa (CESU) - Orissa
- Noida Power Co. Ltd (NPCL) - Greater Noida, UP
- North Delhi Power Limited (NDPL) – Delhi
- BSES Yamuna Power Limited (BYPL) - Delhi
- BSES Rajdhani Power Limited (BRPL) - Delhi

2.3 Public-Private Partnership -- Distribution Franchisees

The public-private partnership model has made its way through in the power sector along with other infrastructure segments. Legal and regulatory provisions allow a distribution licensee to authorize a person/entity to distribute electricity on its behalf in a particular area within its area of supply, as a distribution franchisee. The franchisee initiative has enabled private sector participation in the power distribution sector while continuing with government ownership. This model enables greater private sector participation by reducing regulatory and political risk assumed by investors in a full privatization model.

Distribution franchisee models are structured on the basis of activities that are outsourced. The models vary from each other based on the scope of work outsourced and the payment terms of the franchisees. An outline of the key franchisee models, their compensation structures, and their areas of operation is presented in Table 2.

Table 2: Key Franchisee Models

Franchisee Model	Compensation	Area
Outsourcing Outsourcing of one or more functions of operations such as meter reading, bill distribution or revenue collection	Fixed Fee	Rural
Collection-based Revenue Franchisee Franchisee's responsibility -- Meter reading, bill distribution, and revenue collection	Percentage of collection on achievement of target; penalty for not achieving the target and incentives for exceeding the target	Rural
Revenue Collection with O&M Model similar to collection-based Revenue Franchisee with additional responsibility of operation & maintenance of network	Fixed fee and incentive	Rural
Input-based franchisee Distribution Franchisee operates as a distribution licensee and is responsible for all distribution operations from metering, billing, collection, O&M of network, to capital investment. The franchisee buys electricity from the licensee by paying pre-decided input rates.	Right on revenue	Urban

The selection of the franchisee is highly dependent on the area of distribution operations. In rural areas, individuals, Panchayati Raj institutions, self-help groups, non-governmental organizations (NGOs), and users' associations work as franchisees; their involvement is limited usually to meter reading, billing, bill distribution, and revenue collection.

Input-Based Franchisee Model in Urban Areas

There are different distribution franchisee models, based on the nature of the activities performed by a franchisee. Of these, the input-based franchisee model is increasingly being adopted by many distribution licensees for select urban areas. The franchisee undertakes operations and maintenance of the existing distribution network while carrying out the commercial activities of metering, billing, and collection. Besides, the franchisee is allowed to undertake capital expenditure in the supply area. Further, the franchisee buys electricity from the licensee at defined input points at pre-decided input rates. This input rate is arrived at through a competitive bidding process to seek higher revenue for the licensee. The input rate is based on the AT&C loss reduction trajectory considered during the contract period. The franchisee benefits financially if it is able to reduce losses over and above the trajectory and suffers if it fails to do so. This model is adopted to bring in a certain amount of fixed revenue from urban circle(s), which are otherwise marked by poor collection efficiency. The model ensures that a fixed income is generated for the distribution licensee at no additional cost. In sum, except for the transfer of ownership, the franchisee operates as a distribution licensee in the area.

Starting with Bhiwandi, a number of circles/areas have been given out to distribution franchisees. Torrent Power Limited has taken over as distribution franchisee for Agra and it has commenced operations from April 2010. Three urban circles in Nagpur and two in Aurangabad too have been outsourced to distribution franchisees. Distribution franchisees in Bhiwandi, Agra, Nagpur, and Aurangabad have been selected based on the competitive bidding process. The bidders were made to bid for year-wise fixed input rate for power injected by the distribution licensee in the franchisee area. Though the basic approach towards the award of franchisees based on the input rate has remained the same, licensees have made significant changes in terms of Distribution Franchisee Agreements. A comparative picture of the Bhiwandi, Agra, and Nagpur models is presented in Table 3.

Table 3: Key terms of recent Distribution Franchisee Agreements

	Bhiwandi	Agra	Nagpur
Input Rate	The bidder is expected to factor in a certain AT&C loss reduction trajectory. The bidder offering the highest input rate, i.e., the maximum loss reduction won the bid.	The licensee explicitly stated the expected minimum input rate and the bidders offering the highest rates above this trajectory won the bid.	The licensee explicitly stated the expected minimum input rate and the bidders offering the highest rates above this trajectory won the bid.
Contract Period	10 Year	20 Years	15 Years
Payment	Franchisee pays fixed Input rates for the	Franchisee pays fixed Input rates for the	Franchisee pays fixed Input rates for the

	Bhiwandi	Agra	Nagpur
	energy injected by the licensee.	energy injected by the licensee.	energy injected by the licensee.
Performance Improvement Target	No loss reduction target has been specified by the licensee, but the franchisee benefits only if it is able to achieve or exceed the loss reduction trajectory assumed to calculate the Input rates.	The franchisee is expected to achieve an AT&C loss level of 15% within 7 years. Failure to realize the loss reduction target invites a penalty of 10% of the revenue loss.	No loss reduction targets have been specified by the licensee. However, the minimum Input rates stated by the licensee in the Request for Proposal (RfP) were based on a loss reduction trajectory.
Investment by DF	Complete autonomy has been given to the franchisee to implement its capital expenditure. No need for any approval from licensee or the regulator.	The franchisee is to undertake capital expenditure, as per the Infrastructure Roll-Out Plan submitted to the licensee, stating the investment to be carried out for loss reduction. Such investments would be subjected to the approval of the State Electricity Regulatory Commission. Licensee would facilitate such approval. Investments to be made from 16th year onwards would require licensee's approval. Distribution franchisee to make a minimum investment of Rs 200 Crore out of	The franchisee is to undertake capital expenditure, as per the Infrastructure Roll-Out Plan submitted to the licensee stating the investment to be carried out for loss reduction. Such investments would be subjected to the approval of the State Electricity Regulatory Commission. Licensee would facilitate such approval.

	Bhiwandi	Agra	Nagpur
		which Rs 150 Crore has to be invested in the first five years and the remaining Rs 50 Crore in the next five years.	
Transfer of Assets created by Distribution Franchisee during its contract period.	Asset will be transferred to the licensee at the depreciated value of the assets at the end of the contract period.	Asset will be transferred to the licensee at the depreciated value of the assets at the end of the contract period.	Asset will be transferred to the licensee at the depreciated value of the assets at the end of the contract period.

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3 PROFILES OF COMPANIES SELECTED FOR THE STUDY

3.1 North Delhi Power Limited (NDPL)

North Delhi Power Limited (NDPL) formally succeeded the erstwhile Delhi Vidhyut Board w.e.f July 2002. NDPL is a 51:49 joint venture (JV) of Tata Power Company Limited (TPCL) and Government of National Capital Territory of Delhi (GoNCTD) and is engaged in the distribution of power in the Northern and North-Western parts of Delhi. A brief company profile of NDPL is presented in Table 4.

Table 4: Company Profile- NDPL (FY 2009-10)

S.No.	Description	Unit	Value
1	No. of customers	No.	1200000
2	Energy Sales	MUs	5800
a	Domestic	%	42.19%
b	Commercial	%	24.98%
c	Industrial	%	32.48%
d	Agriculture	%	0.34%
3	Average Revenue Realization	Rs./kWh	4.47
4	Service Area	sq.km	510
5	Energy Input (at T-D Interface)	MUs	6955.97
6	Length of the Distribution Network	kms	9952
7	Peak Demand	MW	1350
8	HT:LT Mix	%	0.74

NDPL caters to a city area of approximately 510 sq. km., and supplies power mainly to domestic consumers followed by industrial and commercial consumers. Agriculture sales contribute to less than 1% of the total sales.

3.2 Reliance Infrastructure Limited (Reliance-Infra) - Mumbai Distribution Operations

Reliance Infrastructure Ltd. – Mumbai Distribution Operations (formerly known as BSES Ltd.) has been distributing power in Mumbai for over seven decades now. A brief company profile of Reliance Infra - Mumbai Distribution Operations is presented in Table 5.

Table 5: Company Profile - R-Infra (FY 2009-10)

S.No.	Description	Unit	Value
1	No. of customers	No.	2724758
2	Energy Sales	MU	8320
a	Domestic	%	53.35%
b	Commercial	%	32.66%
c	Industrial	%	11.59%
d	Agriculture	%	0.00%
e	Others	%	2.40%
3	Average Revenue Realization	Rs./kWh	7.11
4	Service Area	sq.km	384
5	Energy Input (at T-D Interface)	MU	9265
6	Length of the Distribution Network	kms	7930
7	Peak Demand	MW	1516
8	HT:LT Mix	%	1.08

3.3 Noida Power Company Limited

Noida Power Company Limited distributes power in Greater Noida, near Delhi in Uttar Pradesh, which is being developed as an industrial hub and urban settlement. The company is a joint venture between the RPG Group and Greater Noida Industrial Development Authority (GNIDA). GNIDA is an autonomous body of the U.P. Government, responsible for town planning and infrastructure development and holds 27% stake in the company. The company started its operations in December 1993 under a 30-year license from the U.P. Government.

The company reaches out to a population of about 7 lakhs, spread across hamlets, villages and a new township spanning an area of 335 sq. km. A brief company profile of NPCL is presented in Table 6.

Table 6: Company Profile- NPCL (FY 2009-10)

S.No.	Description	Unit	Value
1	No. of customers	No.	48261
2	Energy Sales	MU	650
a	Domestic	%	17%
b	Industrial	%	63%
c	Agriculture	%	4%
d	Other Categories	%	16%

S.No.	Description	Unit	Value
3	Average Revenue Realization	Rs./kWh	4.22
4	Service Area	sq.km	335
5	Energy Input (at T-D Interface)	MU	707.38
6	Length of the Distribution Network	kms	2859
7	Peak Demand	MW	110
8	HT:LT Mix	%	0.86

3.4 Jaipur Vidyut Vitran Nigam Limited

Jaipur Vidyut Vitran Limited (Jaipur Discom), a public sector undertaking, is engaged in the business of distribution and supply of electricity in 12 districts of Rajasthan, namely Jaipur, Dausa, Alwar, Bharatpur, Dholpur, Kota, Bundi, Baran, Jhalawar, Sawaimadhopur, Tonk, and Karoli. The area of operation of JVVNL is 72,474 sq. km. A brief company profile of JVVNL is presented in Table 7.

Table 7: Company Profile- JVVNL (FY 2009-10)

S.No.	Description	Unit	Value
1	No. of customers	No.	3209593
2	Energy Sales	MU	12486
a	Domestic	%	21.29%
b	Commercial	%	7.19%
c	Industrial	%	31.16%
d	Agriculture	%	31.48%
e	Others	%	8.88%
3	Average Revenue Realization	Rs./kWh	3.2
4	Service Area	sq.km	72474
5	Energy Input (at T-D Interface)	MU	16136
6	Length of Distribution Network	km	134923
7	Peak Demand	MW	6859
8	HT:LT Mix	%	0.72

3.5 Torrent Power Bhiwandi Limited

Torrent Power entered into the country's first distribution franchisee agreement with Maharashtra State Electricity Distribution Company Limited for Bhiwandi Circle in December 2006. The agreement is valid for an initial term of 10 years.

Bhiwandi has a customer base of about 2 lakh in an area spread over 721 sq. km. Bhiwandi is a major textile hub of Western India and houses one-third of the country's power looms. About 60% of Bhiwandi's total sales accrues from the power loom sector.

A brief company profile of Torrent Power Bhiwandi Limited is presented in Table 8.

Table 8: Company Profile- TPBL FY 2009-10

S.No.	Data	Unit	Value
1	No. of customers	No.	194000
2	Energy Sales	MUs	2449
a	Domestic	%	5%
b	Commercial	%	3%
c	Industrial	%	8%
d	Power Loom	%	60%
e	HT Industry	%	24%
3	Average Revenue Realization	Rs/kWh	NA
4	Service Area	sq.kms.	721
5	Energy Input (at T-D Interface)	MU	3037
6	Length of Distribution Network	Km	NA
7	Peak Demand	MW	525
8	HT:LT Mix	%	0.52

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4 ASSESSMENT OF DISTRIBUTION MODELS

The performance of a distribution company is influenced by a number of external business conditions. Factors such as the number of customers, load mix (HT v/s LT), rural coverage, sales mix, and area of supply, have an impact on the cost/efficiency performance of a discom. Accordingly, to understand the performance of a discom against the different identified indicators, a list of density indicators have been computed. The performance of the selected companies needs to be understood in conjunction with these density indicators.

Table 9: Density Indicators of Short-listed Distribution Companies (FY 2009-10)

S.No.	Density Indicator	Unit	NDPL	Reliance-Infra	NPCL	JVVNL	Torrent
1	Sales per square kilometre of the distribution area	MU/sq. km	11.37	21.67	1.94	0.17	3.4
2	Load density - Sales/Customer/Year	Units	4833	3053	13485	3890	12623
3	Customer density - No. of customers per square kilometre of an area	000' Customers /sq. km	2.35	7.10	0.14	0.044	0.27

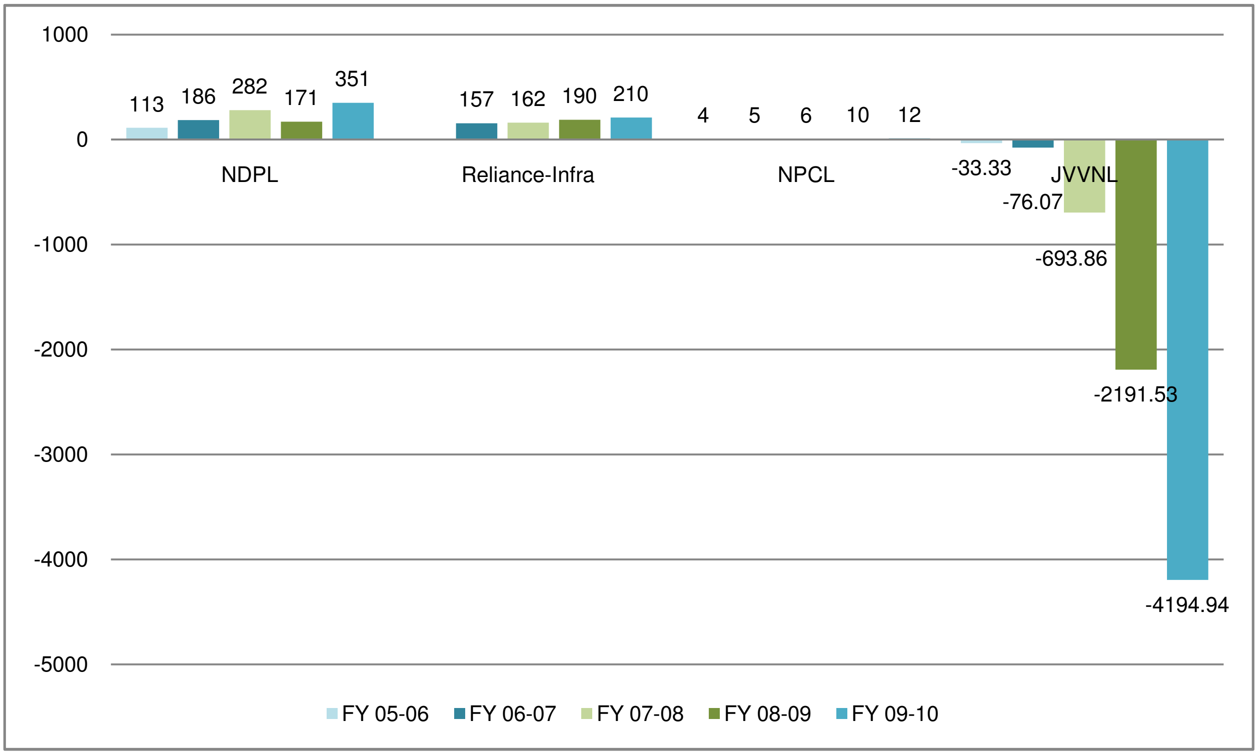
It may be inferred from the higher values for customer density for Reliance-Infra that the company supplies power to a densely populated area in Mumbai. Similarly, higher load density for NPCL and Torrent Power indicates higher weightage of industrial sales in their sales mix; NPCL sells more than 60% of its total power to the High Tension (HT) category and Torrent sells more than 60% of its power to power looms. JVVNL being a state distribution company has a widespread network and a different consumer mix, which is clear from its moderate load density and low customer density.

4.1 Financial Performance

4.1.1 Profit after Tax

Profit after Tax (PAT) has been selected as an indicator to gauge the financial health of the companies. The intent here is not to compare the magnitude of profit or loss of the different companies, but to gauge the consistency of the companies in maintaining their profitability.

Figure 2: Profit after Tax of the select companies (Rs.Crore)

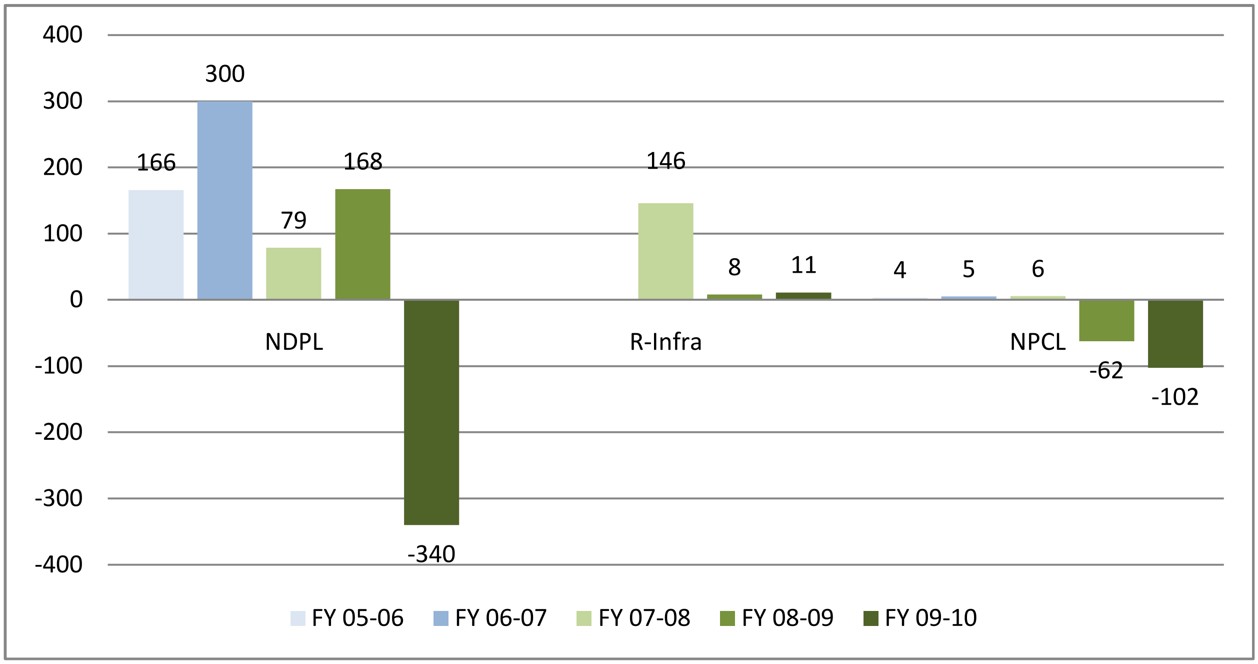


Note: PAT for Reliance-Infra applies to its Mumbai operations only. Further, Torrent Power did not submit any information on its PAT from Bhiwandi Distribution Operations.

While Profit after Tax for NDPL, Reliance-Infra and NPCL[5], as shown above, remained positive, the sales of these companies included the revenue gap/regulatory assets that were expected to be adjusted through future revisions in their tariffs. However, netting the Profit after Tax for such regulatory assets, as may be recovered through future tariff revisions, the resultant profitability of these companies dropped significantly, as presented in Figure 3 below.

[5] Source of PAT: Annual Report of NDPL and NPCL, PAT values provided by JVVNL. In the absence of separate annual accounts for Mumbai distribution operations, RoE value provided by Reliance-Infra has been considered for PAT.

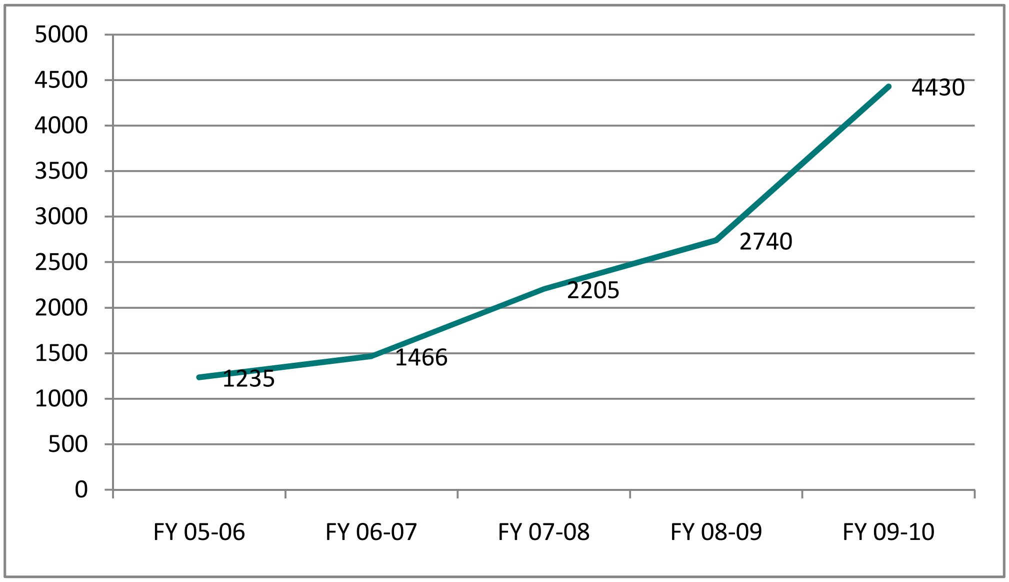
Figure 3: Profit after Tax (Rs. Crore) (Adjusted for Regulatory Assets)



It is clear from the above that the profitability of NDPL and NPCL has turned negative in recent years. Profitability of Reliance-Infra[6] has also reduced considerably in FY 09 and FY 10 adjusting the PAT level for the amount of regulatory assets. This suggests that if private companies have been able to maintain their profitability, it is partly because of the consideration of the regulatory asset/revenue gap as a part of their electricity sales. The foregoing graph shows that JVVNL has been incurring losses, which escalated to Rs. 4194.94 crores in FY 2009-10. One of the key reasons for the financial non-performance of JVVNL is the non-revision of the retail tariff in the state since 2004. JVVNL has been meeting a part of its revenue gap over the years through government subsidy and short-term borrowings. In fact, the amount of short-term loans has grown significantly; this, along with the high cost of short-term borrowings, has led to increasing financial losses of the company.

[6] To adjust PAT against the regulatory assets, PAT/RoE was grossed up by 20% and regulatory assets were deducted to get the revised Profit Before Tax. Tax of 20% was again applied on Profit Before Tax to get the PAT net of regulatory asset.

Figure 4: Increase in short-term loans of JVVNL(Rs. Crore)



Source: JVVNL Budget Estimates FY 2010-11

JVVNL's outstanding short-term loans in FY 2005-06 have increased by 3.5 times to Rs. 4,430 crores in FY 2009-10. Even while JVVNL has been suffering from high financial losses, it did not file any petition for the revision of tariff since 2004. A table depicting the status of the year-wise revision of tariffs, as carried out by the respective State Electricity Regulatory Commissions (SERCs), is presented below.

Table 10: Status of revision of tariffs for the select companies

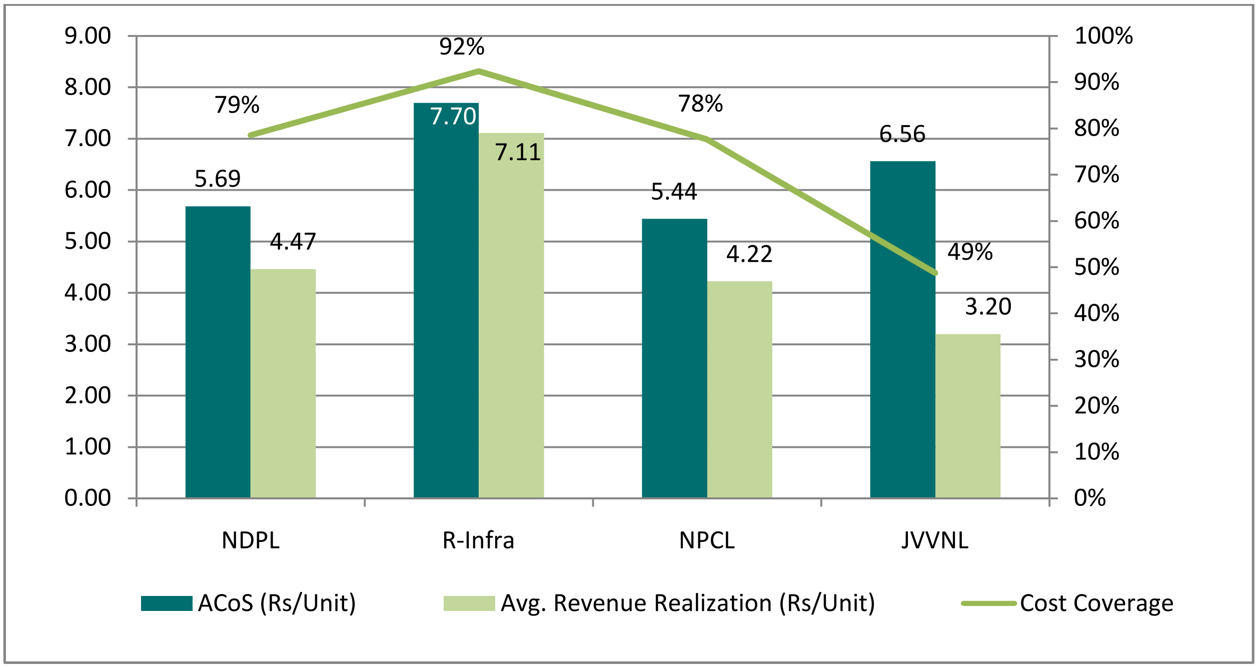
Tariff Revision	NDPL	Reliance-Infra	NPCL	JVVNL
FY 2005-06	Yes	No	No	No
FY 2006-07	No	Yes	No	No
FY 2007-08	No	Yes	No	No
FY 2008-09	No	Yes	Yes	No
FY 2009-10	No*	Yes	Yes	No

* Seasonal tariff for a certain category of consumers was introduced.

Note: Torrent Power does not file tariff petition. In the case of NPCL, the tariff approved for FY 2009-10 is applicable for FY 2010-11 as well.

In the case of JVVNL, after FY 2004-05, there has been no revision of tariffs. While JVVNL has filed for the approval of Annual Revenue Requirement (ARR), it has not filed any tariff petition towards meeting the revenue gap. The Rajasthan Commission has left the revenue deficit untreated in each of the tariff orders that were issued during these years. As a result of this non-revision of tariffs, JVVNL's average revenue realization[7] from the sale of power per unit as a percentage of the average cost of supply per unit is low. A comparison of the cost recovery ratios of the selected companies in FY 2009-10 is given in Figure 5.

Figure 5: Average Cost of Supply vs. Average Revenue Realisation from sale of power (FY 10)[8]



Note: Average Cost of Supply includes Return on Equity claimed by the companies.

The foregoing figure shows that none of the select companies has 100% realization of cost of supply through their existing tariff. Thus, while private companies have remained profitable, even their profitability is subject to timely and prudent revision of tariff as is clear from the increase in the revenue gap/regulatory assets of NDPL, Reliance-Infra, and NPCL.

4.1.2 Distribution Losses and Collection Efficiency

The extent of distribution losses[9] in a distribution system indicates the operational efficiency of the company. Similarly, higher collection efficiency of the company against the amount billed to the

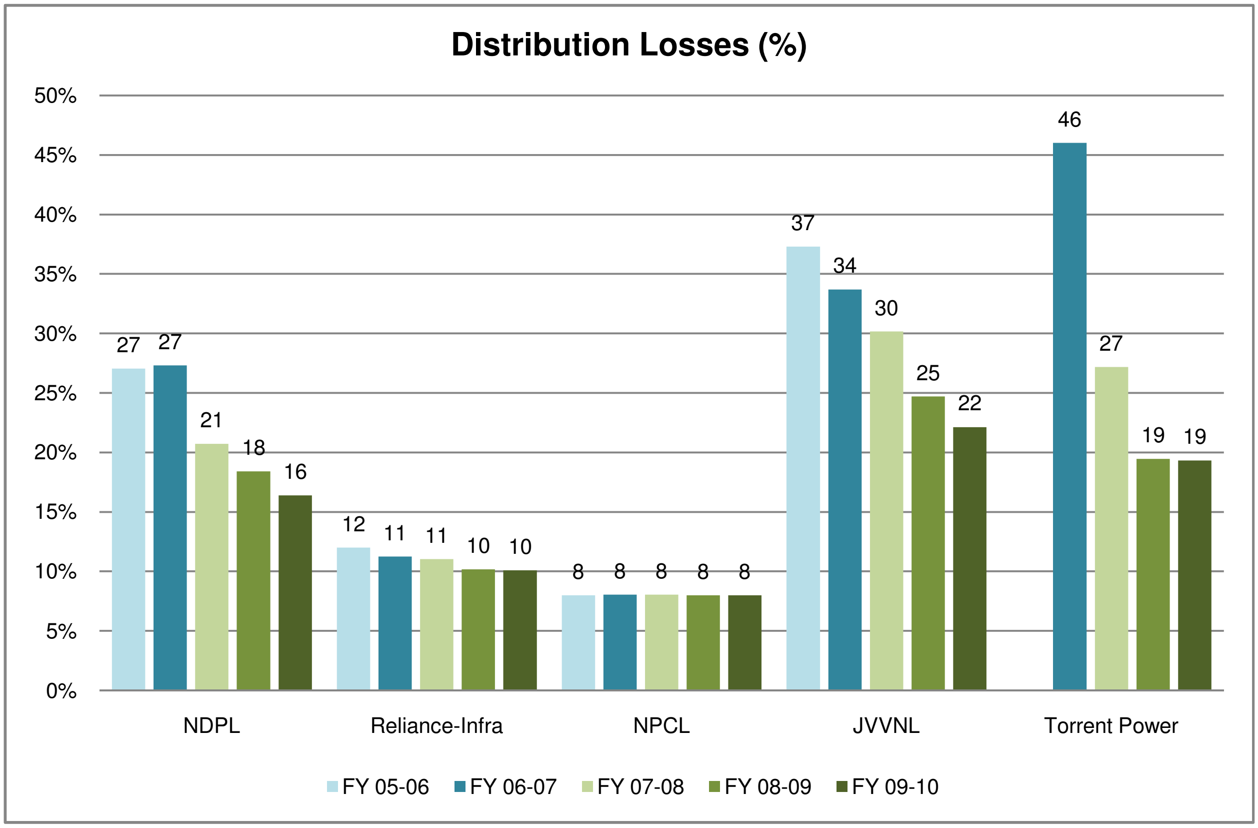
[7] Average Revenue Realization from sale of Power is Average Billing Rate for the company.

[8] Source: NDPL True-up Petition for FY 10, Reliance-Infra Tariff Order for FY 2009-10, NPCL Tariff Order for FY 2009-10, JVVNL revised Budget Estimates for FY 2009-10.

[9] Distribution Losses= (Net Energy Input-Net Energy Billed)/Net Energy Input

consumers is also essential to maintain a company's financial liquidity. The distribution losses incurred by the companies under consideration are captured in Figure 6.

Figure 6: Distribution losses of the select companies (%)



At the time of privatization, NDPL had certain loss reduction target for the first five years by virtue of which the company had an incentive to over achieve the loss reduction target, on the other hand it had to bear losses in case it fails to achieve the loss reduction targets,[10] NDPL was able to bring down its distribution losses by 40% from 27% in FY 2005-06 to 16.4% in FY 2009-10. It undertook a series of measures including an energy audit up to the Distribution Transformer (DT) level; installation of High Voltage Distribution System (HVDS) and Low Tension Aerial Bunched Cables in theft-prone areas; replacement of old erroneous electromechanical meters with accurate electronic meters; Automatic Meter Reading (AMR), public participation through social audit; automation initiatives; and GIS.

Reliance-Infra and NPCL's distribution losses lowered to 10.08% and 8% in FY 2009-10 respectively. Reliance-Infra has achieved lower loss levels due to an underground distribution network, high degree of

[10] It was estimated during the bid process that the cost of under achievement in loss reduction would have amounted to Rs. 20 to 30 Crore for each percentage point of target missed by the discom. Source: A Critical Review of the Performance of Delhi's Privatized Distribution Companies and the Regulatory Process - Prayas (Energy Group)

technology intervention, and automation. The company identifies theft through structure analytics of data generated from meter downloads, billing data, customer survey data, and Energy Accounting System. Low levels of distribution losses (at about 8%) may be attributed to high industrial sales in its sales mix and the smaller service area of NPCL. Moreover, 85% of the tube well connections for agriculture used under NPCL have been covered under HVDS. Increased vigilance drives, periodical inspection, testing of meters, up-gradation of distribution networks, and sub-station automation are some of the initiatives that have been undertaken by NPCL to control distribution losses.

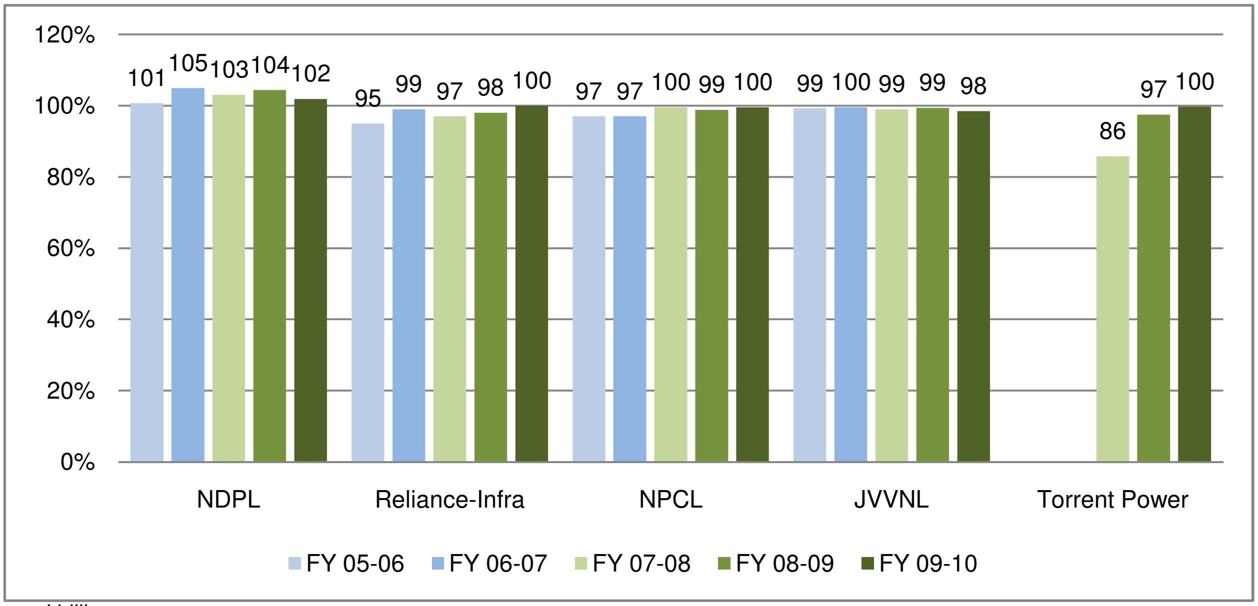
JVVNL has been able to bring down its distribution losses from 37% in FY 06 to 22% in FY 10. However, the loss level of 22% may be viewed as higher considering the fact that JVVNL has achieved about 98% consumer metering. The measures adopted towards loss reduction by JVVNL were initiation of a Feeder Renovation Programme; installation of single-phase transformers for rural domestic consumers; installation of 16/25 kVA transformers for agriculture consumers; segregation of rural and urban feeders; replacement of overhead bare conductors by insulated wires in theft-prone areas; replacement of obsolete service lines with armoured cables; and undertaking of vigilance and anti-theft measures.

Torrent Power managed to bring down the distribution loss level to 19% from a high of 46% when it took over the Bhiwandi circle in 2007. The franchisee launched a number of initiatives including laying down of new distribution lines and improving metering infrastructure; augmentation of the existing system; and investing in repair and maintenance. Torrent Power undertook a capital investment of about Rs. 391 crores from January 2007 to March 2010 towards repair and maintenance, and augmentation of the network.

The collection efficiency is the total amount collected against the total amount billed to the consumers. The company may have a high billing efficiency but it has to be well-supported by high collection efficiency. The collection efficiency of the select companies is represented in Figure 7.

Figure 7: Collection Efficiency of the select companies (%)

Note: The collection efficiency percentages shown above include the amount collected on account of arrears pertaining to previous



years' billing.

All the companies have maintained high collection efficiency, close to 100% by FY 2009-10. Torrent Power also improved the collection efficiency in the Bhiwandi circle to 95% by November 2008. Since collection efficiency also includes collection of arrears for previous years, it has to be observed cautiously. Higher collection of arrears could also result in high collection efficiency. Therefore, a proxy indicator of debtors is selected to get a true picture of the increase or decrease in receivables/arrears of the company.

Table 11: Debtors' level for the select companies (Rs. Crore)

Company	FY 05-06	FY 06-07	FY 07-08	FY 08-09	FY 09-10
NDPL	255	280	258	240	227
Reliance-Infra	NA	NA	NA	NA	NA
NPCL	19	23	24	26	26
JVVNL	675	703	724	854	1028
Torrent Power	NA	NA	NA	NA	NA

Source: Company Annual Reports

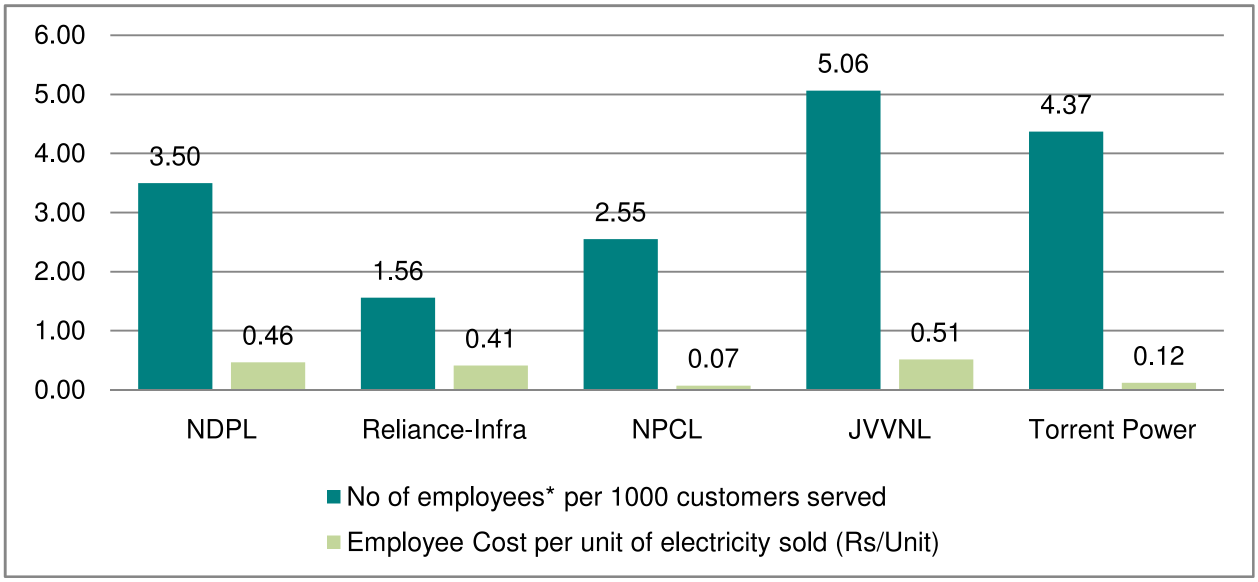
Note: Data for Reliance – Infra and Torrent Power for Bhiwandi not available.

Table 11 highlights that NDPL and NPCL have been able to manage their debtors' level without any consistent increase in the same. However, the debtors for JVVNL have been increasing consistently, which implies that its higher collection efficiency is on account of its collection of arrears.

4.1.3 Employee Productivity/ Costs

Employee productivity/costs have been analyzed on the basis of the number of employees required per 1000 customers served and employee cost per unit of electricity. A comparison of these two parameters across the select companies in FY 2009-10 is presented in Figure 8.

Figure 8: Employee Productivity/Cost Indicators FY 2009-10



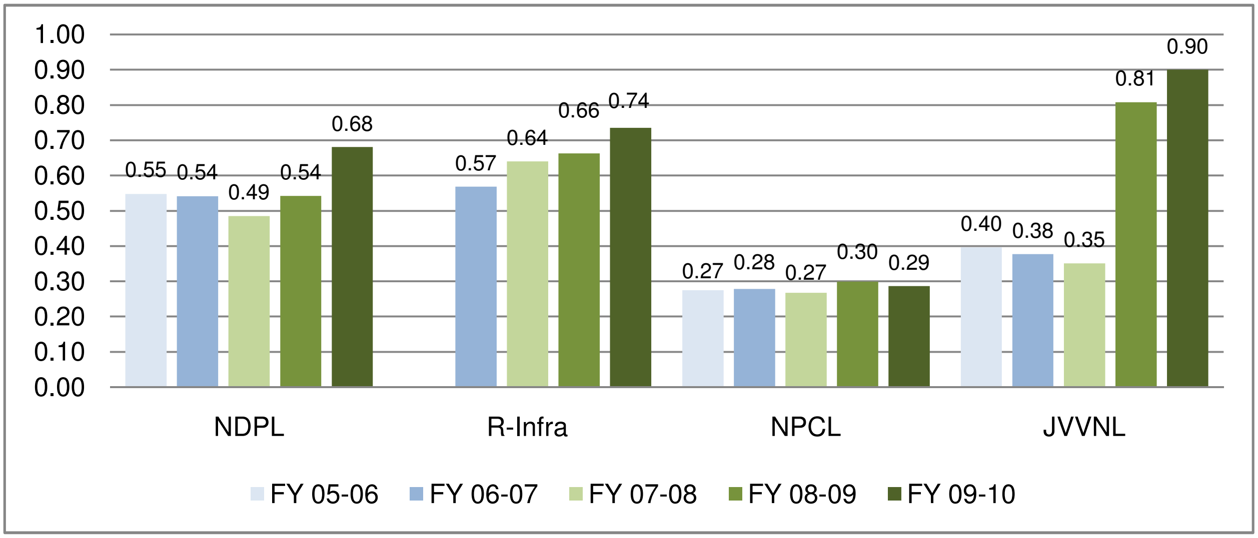
Note: Number of employees, as on payroll of the company

The number of employees required for 1000 customers served is the lowest for Reliance-Infra as it supplies power to highly concentrated areas and has the highest value of 7.1 for the density indicator " '000 customers served/sq km" among the selected utilities. Moreover, an underground distribution network and high automation have reduced the manpower requirement for Reliance-Infra. The case of JVVNL is altogether different. Being a government entity with a large area under its control and a different consumer mix, JVVNL has the highest number of employees and registers the highest employee cost per unit of electricity sold. Although Torrent Power has a high load density with the bulk of its sales going to industrial consumers, its number of employees per 1000 customers served is relatively higher, as compared to NPCL, which has a similar sales mix.

4.1.4 O&M Cost

The O&M cost, which includes repair and maintenance expenses, administrative and general expenses, and employee costs for the select companies is presented in the figure below.

Figure 9: O&M Cost per unit (Rs./Unit)

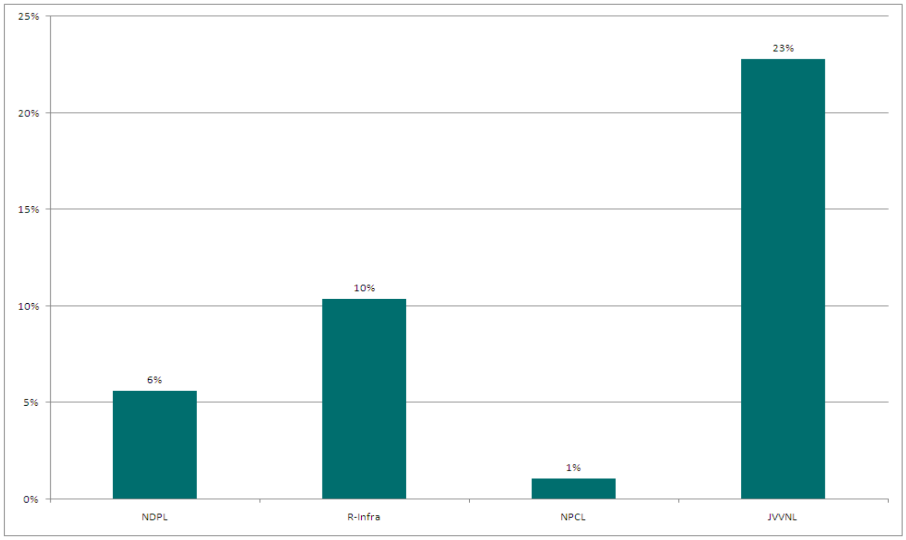


Source: Annual Reports. Data for Torrent Power is not available.

The lowest value for NPCL may be attributed to its high load density. While O&M cost per unit for Reliance-Infra has been increasing over the years, it has not varied significantly for NDPL and JVVNL except in the later years, which is primarily due to the increase in employee cost owing to revisions effected as per the Sixth Pay Commission's dictates. A high level of 'Super Annuation Board's Contribution' also contributed to a significant jump in JVVNL's employee cost.

Notwithstanding the per unit O&M cost, which amongst others, would be reflective of the density factors, it is pertinent to contemplate the increase in the O&M cost per unit, of the select companies over time.

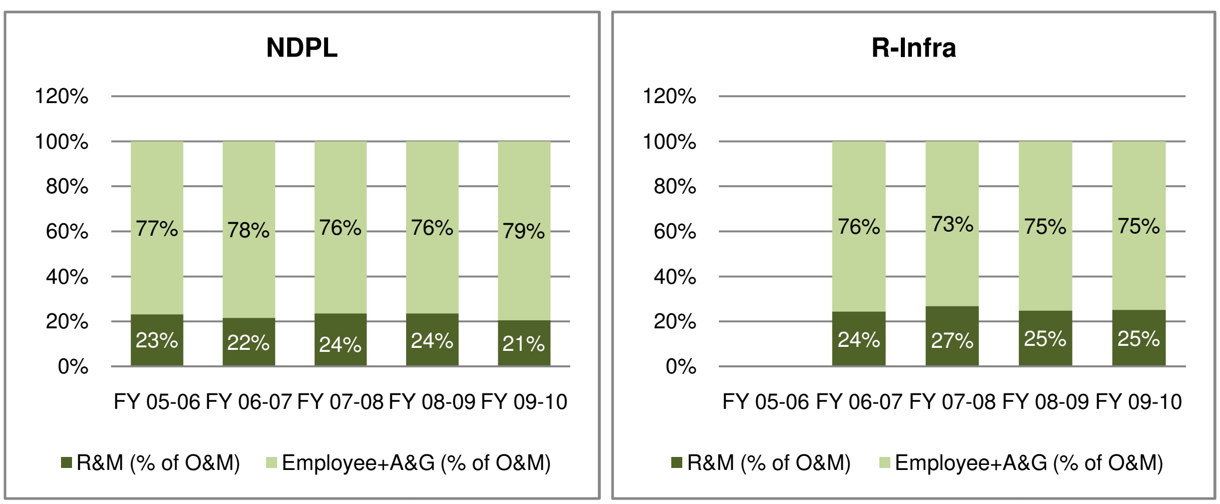
Figure 10: Increase/ (Decrease) in O&M Cost per unit over time (%)

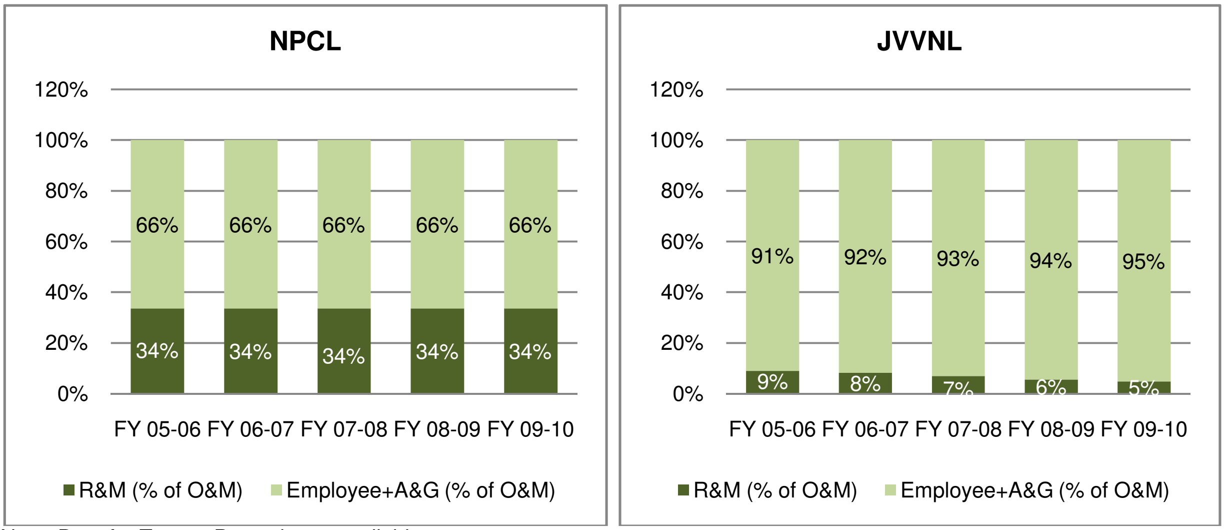


It is clear from the above that the year-on-year increase in O&M cost has been the highest in the case of JVVNL.

A break-up of the contribution of the individual components -- employee cost, Repair & Maintenance (R&M) cost, and Administrative & General (A&G) cost – to the overall O&M cost is presented in Figure 11.

Figure 11: O&M Cost Break-up (%)





Note: Data for Torrent Power is not available.

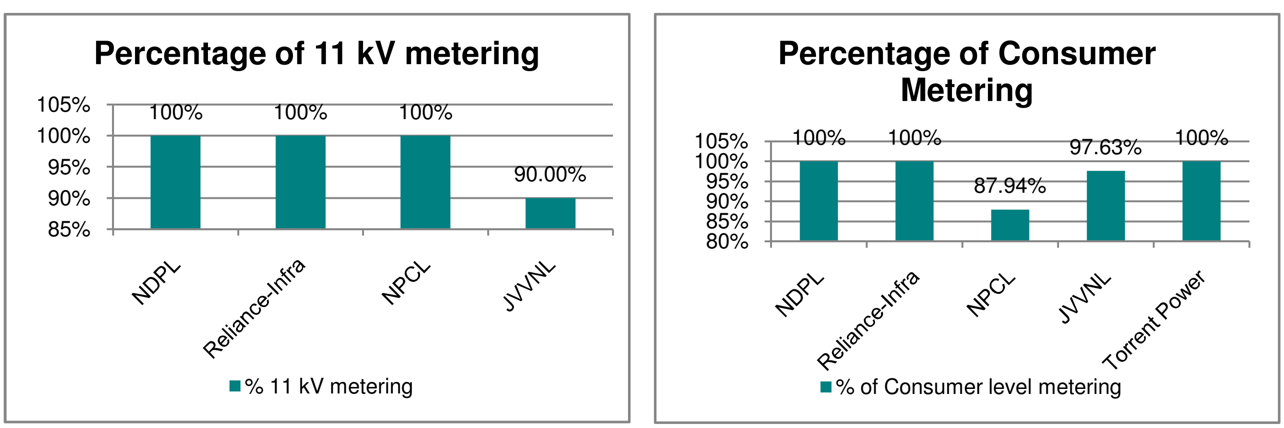
While private discoms have been spending about 25 to 35% of their O&M expense on repair and maintenance of their network, the majority of JVVNL's O&M costs are directed towards employees and administration.

4.2 Technical Performance

4.2.1 Consumer Metering

One of the key factors for reducing distribution losses is ensuring proper metering at different levels of the network as well as at the consumer end. A graphical representation of metering at the 11 kV feeder level and at the consumer level for FY 2009-10 is given in Figure 12.

Figure 12: 11 kV Feeder and Consumer Metering FY 2009-10



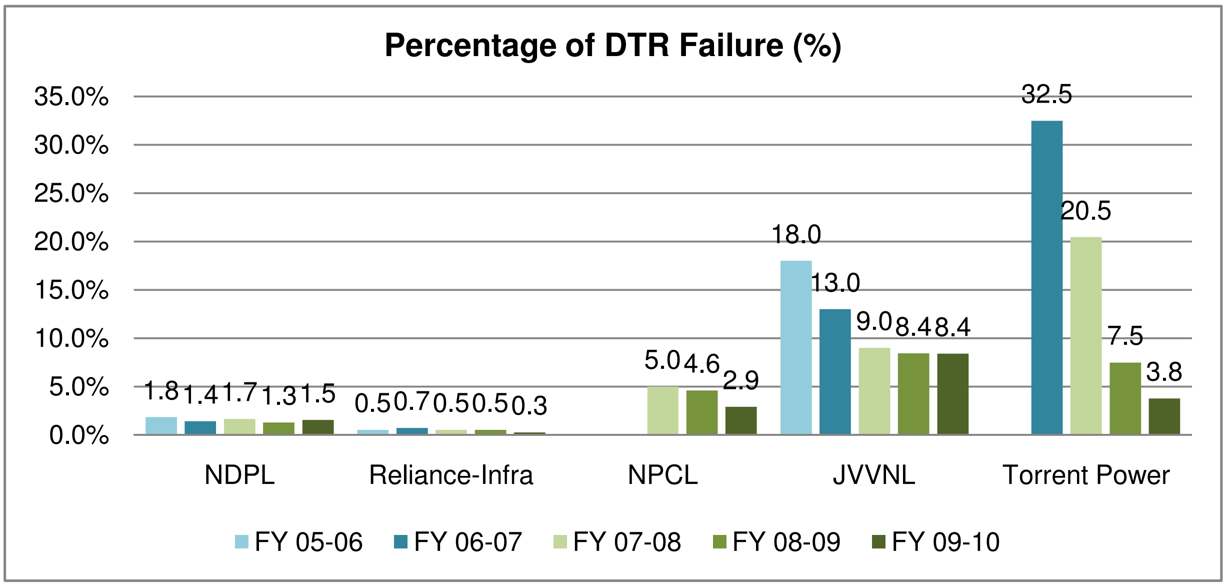
NDPL, Reliance-Infra and NPCL have 100% metering at the 11 kV feeder level whereas JVVNL still has about 10% 11 kV feeders that are not metered. NDPL, Reliance-Infra, and Torrent Power have 100%

metering at the consumer level; JVVNL too belongs to the same bracket with 98% metering at the consumer level; NPCL is yet to achieve 100% consumer metering.

4.2.2 Distribution Transformer Failure

Distribution transformer failure is an indicator of the quality of network maintenance and network reliability. Accordingly, higher the distribution transformer failure rate, lower is the quality of network maintenance and reliability. The performance of discoms with regard to DTR failure is captured in Figure 13.

Figure 13: Percentage of DTR Failure

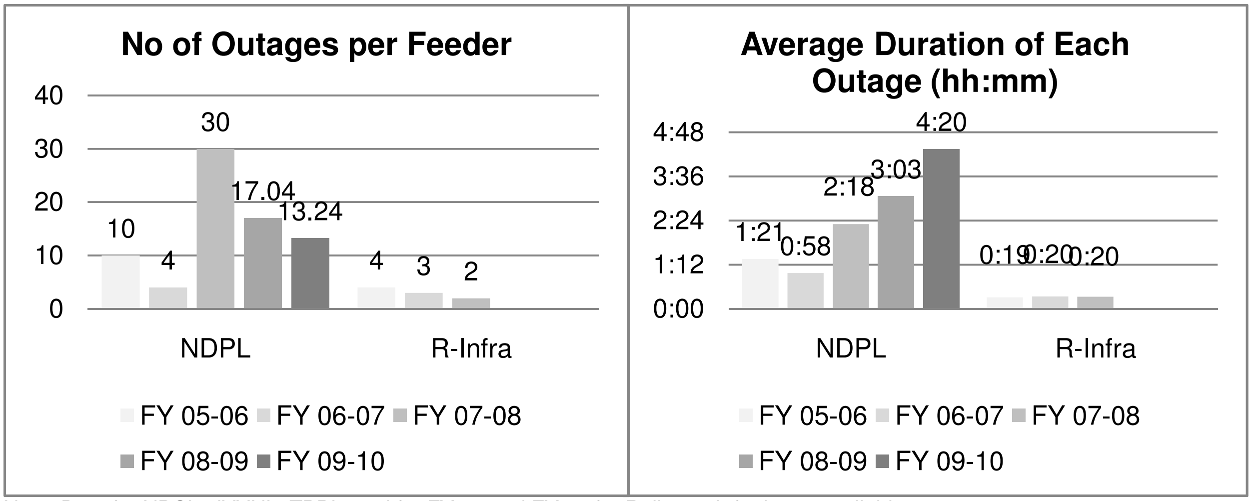


JVVNL recorded the highest DTR failure rate in FY 2009-10 at 8.4%, while Reliance-Infra reduced its DTR failure rate to about 0.3% by FY 2009-10. NDPL has maintained a DTR failure rate of around 1.5% in the past five years and NPCL has reduced DTR failure rate from 5% in FY 2007-08 to 2.9% in FY 2009-10. The Bhiwandi circle actuated a significant lowering of DTR failure rate, from 32.5% in 2006-07 to 3.8% in FY 2009-10. Torrent Power achieved the reduced DTR failure rate by augmenting the capacity of the existing transformers and adding new transformers, as per requirement.

4.2.3 Outage duration per feeder

The number of outages indicates the reliability of supply that a company is providing to its customers. The number of outages per feeder and their duration in the case of NDPL and Reliance-Infra are recorded in Figure 14.

Figure 14: No of Outages and Duration



Note: Data for NPCL, JVVNL, TPBL; and for FY 09 and FY 10 for Reliance-Infra is not available

With a higher level of IT implementation, Reliance-Infra has been able to achieve higher reliability of 99.9%. It is observed that the number of outages per feeder in Reliance-Infra's supply area went down to the level of 2 per feeder in FY 2007-08. Moreover, the average duration of an outage is also in the range of 20 minutes. Reliance-Infra has been able to achieve this feat by implementing a ring-fencing arrangement in its underground network. For instance, if any kind of digging activity is being undertaken by any government or private entity, the company channels the power through a different route to its customers. Some spare capacity is maintained by each transformer for such loading. In the area of supply of NDPL, the number of outages has come down from 30 outages per feeder in FY 2007-08 to about 13 outages per feeder in FY 2009-10. However, the average duration of these outages increased to 4 hours and 20 minutes, which was primarily due to the unprecedented increase in ambient temperatures during the summers of FY10; this led to a sharp hike in energy drawals and severe loading of the network.

The average duration of NPCL's scheduled outages is three to five hours. However, this figure applies to the summer season only. NPCL has a long-term power supply arrangement of only 45 MW from UPPCL; for the remaining demand, it has to purchase short-term power at higher rates from various sources. During FY 2008-09, NPCL experienced a shortfall of 15 MW in meeting its peak demand, which resulted in a higher number of scheduled outages in its supply area in the summer.

4.2.4 Key technological interventions

Key technological interventions undertaken by the companies have been compared in light of the following IT interventions:

- Supervisory Control and Data Acquisition (SCADA),
- Automated Meter Reading Systems (AMR),
- Enterprise Resource Planning (ERP), and
- Common Billing System in the distribution operations.

A snapshot of the implementation of the foregoing systems in the selected companies is presented below.

Company	SCADA	ERP	AMR*	Common Billing System
NDPL	√	√	100%	√
Reliance-Infra	√	√	97%	√
NPCL	√	√	100%	√
JVVNL	√ (Jaipur City only)	×	Under Implementation	√
TPBL	×	×	Nil	×

* AMR column shows the % of Industrial Consumers that are covered by AMR

NDPL, Reliance-Infra, and NPCL have implemented both the SCADA and ERP systems, while Torrent Power has neither implemented SCADA nor ERP for its Bhiwandi operations. NDPL installed the SCADA system for operating and controlling the entire power system network which got operationalized in FY 2006-07. With the implementation of SCADA, Reliance-Infra claims to have reduced its manpower cost and also power interruption time by 60%, thereby ensuring a better quality of supply. JVVNL has implemented SCADA in Jaipur city and is in the process of awarding a contract for the implementation of an ERP system. The SCADA system in Jaipur city covers about twenty-two 33 kV substations.

Reliance-Infra has covered 97% of its industrial customers with AMR, while NDPL and NPCL have covered all their industrial consumers with AMR. NPCL has installed AMR for all customers with a contractual load of more than 15 HP/15 kW. JVVNL is in process of covering all the large industries through AMR under the R-APDRP scheme. Torrent Power has not covered any of its industrial customers in Bhiwandi with AMR.

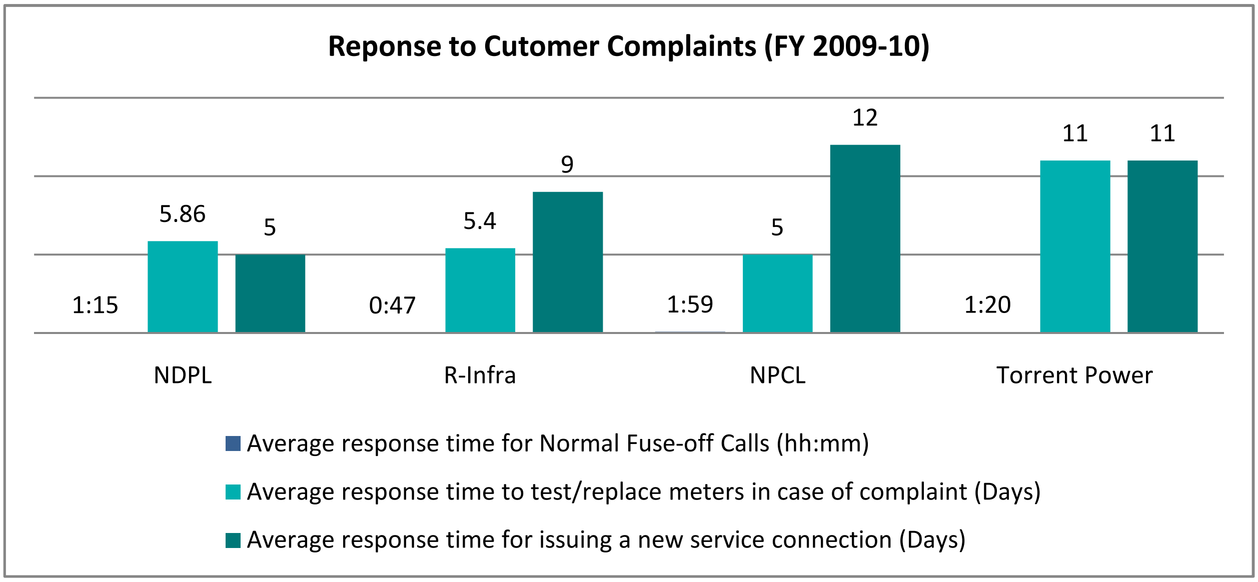
Excepting Torrent Power in Bhiwandi, all the selected companies have implemented common billing systems for their consumers.

4.3 Benefits to Customers

4.3.1 Customer Service

Response to customer complaints/requests/applications for the select companies has been assessed and presented in Figure 15.

Figure 15: Response to Customer Complaints FY 2009-10



Source: NDPL, Reliance-Infra, NPCL and Torrent Power. No data is available from JVVNL.

Reliance-Infra addresses the normal fuse-off calls the quickest, in about 45 minutes, while NPCL takes about two hours to do the same. Except for Torrent Power, which takes about 11 days to test/replace meters, all the discoms take on an average five days to test/replace meters in case of complaints. The companies have improved considerably on account of the response time needed to provide new service connections. While Reliance-Infra would provide a new connection in 31 days in FY 2005-06, it took only nine days to do the same in FY 2009-10. NDPL too has reduced its response time for new service connections from 12 days to 5 days, in the last five years. However, NPCL and Torrent Power, which have more industrial consumers, take on an average 11 to 12 days to provide new service connections to their consumers.

The percentage of consumers covered through spot-billing, hand-held computers, and Meter Reading Instrument (MRI), and availability of online payment options in selected companies is shown below.

Company	Percentage of complaints responded to in a year	Consumers covered through Spot Billing, Hand held computers	Online Payment

Company	Percentage of complaints responded to in a year	Consumers covered through Spot Billing, Hand held computers	Online Payment
NDPL	100%	90%	√
Reliance-Infra	100%	100% (MRI)	√
NPCL	100%	NA	√
JVVNL*	NA	NA	NA
TPBL	100%	NIL	√

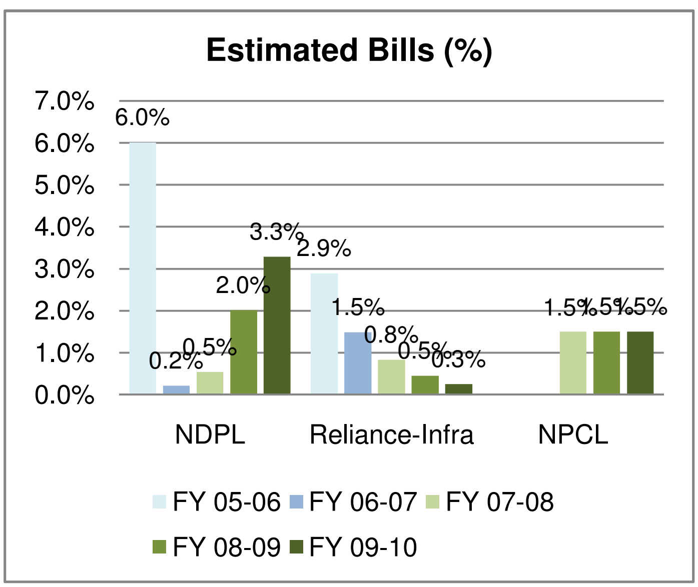
*Data from JVVNL not available

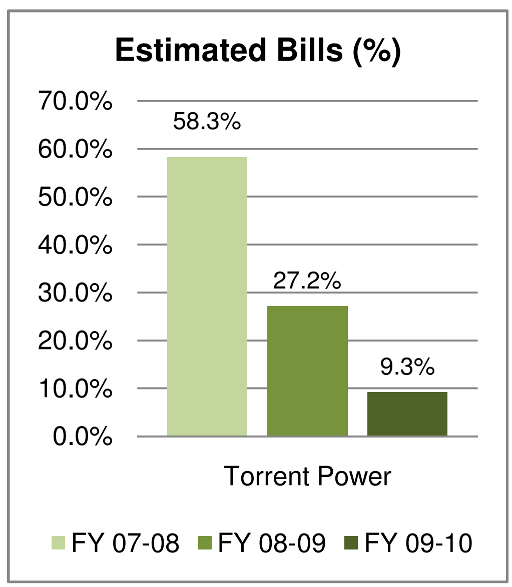
NDPL, Reliance-Infra, NPCL, and TPBL are proactively responding to all consumer complaints received in a year. To improve metering efficiency and avoid human errors, 90% of the consumers in NDPL are covered by spot-billing, hand-held computers, etc. Similarly, all the consumers in Reliance-Infra are covered by MRI. All the companies have provided online payment facility to their consumers.

4.3.2 Estimated Bills

Bills estimated refer to bill generation without meter reading. This is on account of a number of reasons including lack of adequate number of meter readers, faulty meters, and locked premises. The following metric captures the percentage of total bills that are estimated by the companies.

Figure 16: Estimated Bills





Note: Data for JVVNL not available

Reliance-Infra has been able to bring down the percentage of bills estimated to 0.3% in the last five years. Similarly, the percentage of estimated bills has been maintained at 1.5% by NPCL in the last three years. NDPL reported that one of the factors responsible for an increase in the percentage of estimated bills in its service area is resumption in the billing of locked premises, which was discontinued earlier. Torrent Power reduced its percentage of estimated bills from 58.3% to 9.3% in the last three years.

4.4 Demand Side Management

Higher short-term power purchase cost during peak hours has compelled distribution companies to plan their energy requirement effectively and undertake various Demand Side Management (DSM) programmes to minimize the peak and base load gap. Introduction of Time of Day (ToD) tariff and energy efficiency initiatives are some of the key measures adopted by utilities to reduce peak demand and reduce power purchase cost during peak hours.

4.4.1 Time of Day Tariff

Time-of-Day is an important Demand Side Management tool which is being widely used by different states to flatten their load curve. Time-of-Day (ToD) tariff enables shifting load from peak demand period to off-peak hours. ToD is used to provide incentives for consumption during off-peak hours and penalize consumption during peak hours. Table 12 contains the details of customer classes covered under ToD tariff, time slots, and surcharges/rebates applicable to the selected companies.

Table 12: ToD tariff applicable for selected companies

ToD Tariff	Customer Class Covered	Time Slot	**Surcharge/ (Rebate) in Energy Charges**
NDPL	Industrial Consumers	Seasonal	Reduction of 10-30 paise in tariff during October to March i.e. winter season.
Reliance-Infra	Select Industrial and Commercial customer categories	0900 to 1200 hours 1800 to 2200 hours 2200 to 0600 hours	Additional 0.50 Rs/kWh Additional 1.00 Rs/kWh Rebate of 0.75 Rs/kWh
NPCL	Small and Medium Power (Connected load ≥ 20 BHP) Large and Heavy consumers	1700-2300 hrs 2300-0600 hrs 1700-2200 hrs	(+) 30% on Base Rate (-) 10% on Base Rate (+) 25% on Base Rate

ToD Tariff	Customer Class Covered	Time Slot	**Surcharge/ (Rebate) in Energy Charges**
JVVNL (Proposed)	HT consumers having contracted demand above 50 KVA except HT domestic, HT agriculture consumers and supply used for Railway Traction	18:00 Hours to 23:00 Hours (throughout the year) 06 Hours to 09 Hours (October to March) Off-peak Hours	+10% (Surcharge) -10% (Rebate)

JVVNL does not levy ToD tariff as of now. However, the company has filed a supplementary petition with a tariff petition for FY 2011-12 to introduce ToD tariff during peak hours. The discom has proposed to implement the ToD tariff for all HT consumers with a contracted demand above 50 KVA, excepting HT domestic and HT agriculture consumers, and supply used for Railway traction. No ToD tariffs are levied in Delhi. However, in FY 10, the Delhi Electricity Regulatory Commission (DERC) introduced a concept of seasonal tariffs and reduced the tariff of industrial consumers by 10-30 paise during winters between October to March.

The measurable impact of ToD tariffs has not been assessed by the companies to whom it is applicable.

4.4.2 Energy Efficiency Initiatives

With demand outreaching supply in most of the states, distribution licensees have recognized the importance of energy efficiency. The key initiatives undertaken by distribution licensees to reduce peak load are to promote the usage of CFL/LED lighting in the place of the highly inefficient incandescent bulb. Similarly, licensees are also promoting the usage of solar water heaters amongst domestic consumers to reduce peak demand. Initiatives taken by the selected companies for the promotion of CFL/LED lighting and the usage of solar water heaters are presented in the table below.

Table 13: Energy Efficiency Initiatives -- CFL/LED/Solar Water

ToD Tariff	CFL/LED/Solar Water Heating	Benefit
NDPL	➢ Bachat Lamp Yojana (BLY) ➢ Pilot Project: Replacement of metal halide Fixtures (750W/Hoarding) with LED fixtures (140W/ Hoarding) for two of its advertising hoarding.	Pilot Project- Savings of 764.21 kW. 80% energy savings

ToD Tariff	CFL/LED/Solar Water Heating	Benefit
	➢ Pilot Project: Replacement of 250W HPSV lamps with 100W LED fixtures for 18 streetlights.	65% energy savings
Reliance-Infra	➢ CFL distribution programme ➢ Streetlight Retrofit project	Savings- 16.8 MUs in FY 2007-08, additional 15.8 MUs in FY 2008-09 and 4.83 MUs in FY 2009-10. 2696 units in FY 2007-08, additional 3.28 MUs in FY 2008-09 and 4.35 MUs in FY 2009-10.
NPCL	No initiative towards promotion of CFL/LED lighting or solar water heaters	NA
JVVNL	No initiative towards promotion of CFL/LED lighting ➢ Incentive on usage of Solar Water Heater by domestic consumer.	Existing Rebate- 5 paise per unit
TPBL	No initiative towards promotion of CFL/LED lighting or Solar water heater.	

Annexure 2 contains details of DSM and energy efficiency initiatives undertaken by NDPL, Reliance-Infra, NPCL, and JVVNL.

5 CONCLUSIONS

It is apparent from the performance analysis of the companies selected under various distribution models that while Reliance-Infra and NPCL have been able to maintain their technical and financial performance, NDPL and Torrent Power have been able to turn around the distribution business in urban areas in a short span of time. NDPL, especially, has undertaken a number of IT interventions and infrastructure improvement initiatives to bring down its distribution losses and improve its collection efficiency. Overall, the key factors related to the performance of these companies include high levels of consumer metering, system automation, and augmentation of the existing network. Their efforts in the direction of technical efficiency and customer services also resulted in low distribution transformer failure, high reliability, and reduced response time in addressing complaints. Even though JVVNL has been able to perform well on the front of distribution loss reduction, their financial viability is an issue as they face different kinds of challenges on account of ownership, consumer mix, and area of supply which leads to its financial non-performance. However, a common thread across all the select companies is that their financial sustainability, irrespective of their ownership or area of supply, hinges on timely and prudent revision of tariffs by the regulatory commissions.

A snapshot of the relative strengths and weakness of the various distribution models, as represented by the select companies, is presented in Table 14.

Table 14: Relative Strengths and Weaknesses of Distribution Models

	Strengths	Weaknesses
JVVNL	➢ Subsidy support from the State Government ➢ Financial support through Government grants and low-cost loans under various Central Government schemes ➢ Recourse to Government guarantee for mobilizing loans/ finances	➢ Larger area of operations: ▪ Including both urban as well as rural areas ▪ Lower levels of customer and load densities ▪ Significant agriculture consumption ➢ Cost recovery from tariffs low ➢ Higher levels of cross-subsidies in tariffs ➢ Typically longer paybacks for investments made in system improvement/ network expansion

	Strengths	Weaknesses
NDPL, Reliance-Infra and NPCL	➢ Smaller areas of operation ▪ Primarily urban agglomerations ▪ Higher levels of customer and load densities ▪ Minimal agriculture consumption ➢ Cost recovery from tariffs high ➢ Lower levels of cross-subsidies in tariffs ➢ Being a small area, better feasibility for IT implementation with faster paybacks for investments made in system improvement	➢ Non-availability of Government grants or low-cost loans .
Torrent Power Bhiwandi Limited	➢ Smaller area of operation ▪ Primarily urban agglomeration ▪ Higher levels of customer and load densities ▪ Minimal agriculture consumption ➢ Low regulatory risk including no risks related to non-revision of tariffs, as is the case with the other two models	➢ High risk of financial losses in case of non-performance in terms of loss reduction ➢ Risk of termination of contract by the distribution licensee in the event of non-performance

JVVNL

Strengths

Ownership

The strength of a JVVNL lies in its backing by the state government. Despite its financial losses, the company enjoys the state government's support in the form of subsidy to cover a part of its revenue gap and may raise short and long-term debts from the market on government guarantee. Moreover, the company also avails of grants and low-cost loans under a number of Central Government schemes.

Weaknesses

Area of Supply

One of the potential factors affecting the performance of JVVNL is its large area of supply with significant agriculture consumption. A large area of supply and disperse load results in low customer and load densities, which increase the per unit cost of supply. Also, the large number of rural and agriculture consumers with poor paying capacity that the utility needs to serve results in relatively higher cross-subsidization in tariffs as compared to those prevailing in urban areas. Presence of rural areas and agriculture loads render reduction in distribution losses a significant challenge.

Ownership

Being a government-owned company, JVVNL has the universal service obligation to connect rural and agriculture consumers, and supply power to them even though this may be a loss-making proposition. Due to uniform responsibility towards all its consumers, JVVNL is unable to turn around such potential urban areas that are making losses currently.

Private Companies

Strengths

Urban Area of Supply

A key facilitator for performance improvement of NDPL, Reliance-Infra and NPCL is that all of them are operating in urban areas. Such urban pockets are relatively smaller in area, more densely populated, and have high load densities. As compared to rural areas, urban areas have the potential to become financially sustainable in a relatively short span of time and accordingly possess higher potential to attract private ownership. Another significant factor that makes urban areas attractive is better revenue realization against the cost of supply, and relatively lower cross-subsidy prevailing in the tariff.

Ownership

Being private companies, NDPL, Reliance-Infra and NPCL enjoy more managerial autonomy to run their distribution businesses with minimal political interference, and are also more accountable.

Weaknesses

One of the minor drawbacks that NDPL, Reliance-Infra or NPCL face is that they are generally kept out of the ambit of government schemes that provide grants or low-cost loans to public utilities.

Distribution Franchisee

Strengths

Area of Supply

Torrent Power has the same benefit of serving in urban areas as other private companies (NDPL or Reliance-Infra or NPCL) have – high customer and load densities with no agriculture consumption. In addition, being a franchisee, it faces lower regulatory risks like revision or non-revision of tariff, which tends to affect a distribution licensee -- the franchisee generates profit only through improved technical performance in terms of loss reduction and improved collection efficiency.

Weakness

As revenue generation, and therefore, the profitability of a distribution franchisee is linked to the performance efficiency of an operation, the franchisee may have to bear financial losses or a penalty as per the contract in case it fails to achieve the targeted loss level. The franchisee also faces the risk of termination of contract by the distribution licensee.

Way Forward

This analysis brings out the marked difference in performance between privately managed entities and those owned and controlled by the Government against all selected parameters. This difference is not only in absolute values but also in trends in the same over the period of study. The privately owned utilities have continuously improved their position which cannot be said of the Government-owned ones. An obvious explanation for this situation is the difference in the managerial and work cultures of these entities. The Government-owned and controlled distribution utilities have to perform within a rigid framework coupled with low levels of accountability. On the other hand, privately-owned distribution utilities enjoy greater flexibility in their operations, are more focused on their actual business, and have greater individual accountability at all levels.

Another crucial difference is in the nature of their business. All the private entities covered in this study are operating in compact areas with a concentration of consumers and substantial loads and consumption. The Government-owned utilities operate over much larger areas comprising urban/semi urban centres in addition to huge rural areas. The consumer profiles of these utilities are totally different. Private utilities operating only in urban and semi-urban areas have higher customer and load densities. However, Government-owned utilities typically have low customer and load densities because of their spatial distribution coupled with relatively lower per capita consumption. This is a crucial difference between these two categories of distribution utilities and explains to a large extent their relatively poor performance.

However, this situation also provides the Government distribution utilities a cover for their below par performance even in high concentration urban and semi-urban areas. Consequently, such utilities aim at and are satisfied to perform at lower than optimum levels of efficiency even in their high-density areas marked by similar characteristics as the areas of operations of private utilities. It needs to be recognized and accepted that distribution of electricity in urban/semi-urban areas and that in rural areas are substantially different businesses. One has the potential for efficient performance against technical as well as financial parameters; the same cannot be said of the rural business with inherent drawbacks like sparse distribution of consumers, vastly spread distribution network, low demand, etc. These are further accentuated by problems like low metering, meter reading, and related billing and collection issues. These factors are a drain on the financial viability of the distribution business and result in unavoidable but non-transparent cross-subsidization.

To raise the high-density areas to the optimum levels of efficiency and performance, these should be identified and carved out into separate entities. The potential of such areas could then be fully exploited as their characteristics are likely to be similar to those which are serviced by the private distribution utilities covered in the study, and which have shown substantial and continuing improvement. These areas need not be identified on the basis of existing classification norms like into municipal and non-municipal areas; these can be categorized based on their electricity distribution characteristics and potential. A parameter could be the total electricity load of that area and its spatial distribution. These areas should then be privatized for focused attention and a concerted effort made to pull them up to the optimum performance levels. The model of privatization or public-private partnership (PPP) arrangement will depend on the prevailing conditions of each such area. Recently, some states have adopted the input-based franchisee model for this purpose.

An obvious argument against the above proposition is that the residual areas with poor potential will remain with the existing licensee and add to its existing woes. For this, it is proposed that a cess or surcharge be imposed on consumers in the high-density areas. The revenue from such cess should go into a separate fund like the Universal Service Obligation Fund and utilized for subsidizing the operations in these residual areas. This will bring about transparency in cross-subsidy, which exists even today, and will create conditions for the realization of the full potential of the high-density areas. These potential areas could be managed in a way that attracts benefits of managerial efficiency found in private entities.

Annexure 1

List of Indicators

List of performance parameters for study and comparison of various distribution models

1. **Financial Efficiency (From FY 2005-06 to FY 2009-10)**
    a. Turnover
    b. Profit After Tax
    c. Distribution Losses
    d. Collection Efficiency (Total)
        i. Domestic
        ii. Commercial
        iii. Industrial
        iv. Agriculture
    e. Capital Investments (Capitalized per year) per unit of electricity sold
    (Please also provide break-up of capitalization per year and unit of electricity sold.)
    f. Employee Performance and Costs
        i. No. of employees per 1000 customers served (with break-up of No. of employees and No of customers)
        ii. Employee Costs per unit of electricity sold (with break-up)
    g. Total Distribution Cost per unit of electricity sold (with break-up of distribution cost)

2. **Technical Performance (From FY 2005-06 to FY 2009-10)**
    a. % of Metering
        i. 11 kV level
        ii. Consumer level
    b. Peak and Energy Shortage
    c. Out duration per feeder
    d. No. of Outages per feeder
    e. Percentage of failure of Distribution Transformers
    f. Percentage of customers covered under HVDS
    g. IT Interventions
        i. Supervisory Control and Data Acquisition (SCADA) (Y/N)
        ii. Percentage of Industrial Customers covered by Automated Meter Reading (AMR)
        iii. Enterprise Resource Planning (Y/N)

iv. Common Billing System (Y/N)

3. **Demand Management (From FY 2005-06 to FY 2009-10)**
    a. ToD tariffs
        i. Introduction of ToD tariffs (Y/N)
        ii. Customer classes covered by ToD tariffs
        iii. Reduction in Peaking Load due to ToD tariffs (if ToD tariffs have been around for at least two years)
    b. Energy Efficiency Initiatives (Description about the initiatives, if any, undertaken)
        i. CFLs/ LED lighting systems
        ii. Solar Water Heating
    c. Harnessing of captive generation to avoid expensive power purchases, especially during peaking hours
        i. Penalty applied on exceeding the Contract Demand
        ii. Purchase of surplus power from CPPs

4. **Benefit to consumers (From FY 2005-06 to FY 2009-10)**
    a. Percentage of complaints responded to in a year
    b. Average response time for Normal Fuse-Off calls
    c. Average response time to test/ replace meters in case of complaint
    d. % of bills that are estimated
    e. Average time for issuing a new service connection
    f. % of customers covered by Spot billing, hand-held computers
    g. No. of Customer care personnel per 100 customers
    h. Availability of online payment facility (Y/N)

Annexure 2

NDPL- DSM & Energy Efficiency Initiatives

Major initiatives undertaken by NDPL with respect to DSM and energy efficiency are described below.

LED for Advertising Hoardings, Street Lights

Description: NDPL has replaced metal halide fixtures (750W/Hoarding) with LED fixtures (140W/hoarding) for two of its advertising hoardings. The pilot has resulted in 80% energy savings. NDPL has also replaced 250W HPSV lamps with 100W LED fixtures for 18 streetlights on a pilot basis. The performance of these fixtures was analyzed on various aspects like power consumption, harmonics, power factor and illumination level. The energy savings were seen to be to the tune of 65% and illumination level of LEDs was also comparable to HPSV. The results achieved by this project were submitted to the Ministry of Environment & Forest (MoEF); as an outcome, MoEF has issued directives to all the discoms in Delhi to switch over from the existing HPSV lamps to LED fixtures.

Strategic awareness on Enhanced Energy Efficiency

Description: NDPL has prepared energy conservation booklets and leaflets for kids, offices, colleges, and homes, and distributed these amongst its internal and external stakeholders. Consumer outreach programmes on enhanced energy efficiency have been organized at various forums -- RWA, consumer forums, etc.

Energy Efficiency for Large Hospitals, Educational Institutions in NDPL Areas

Description: NDPL has covered 17 large-scale private hospitals through one-to-one interactive sessions where consumers were sensitized about the best energy efficiency practices for hospitals. NDPL also organized a workshop on “Energy Efficiency opportunities for Hospitals.” NDPL sensitized three colleges of the Delhi University on switching over to energy-efficient technologies like T5 tubelights and LEDs.

Bachat Lamp Yojana (BLY)

BLY aims at the large-scale replacement of incandescent bulbs in households by quality long-life CFLs. The scheme seeks to leverage the high cost of the CFLs through the CERs generated out of the project. It seeks to utilize the Clean Development Mechanism (CDM) of the Kyoto Protocol to recover the cost differential between the market price of the CFLs and the price at which they are sold to households. NDPL has signed a tripartite agreement with BEE and C Quest Capital to implement BLY in its service territory on 29th June 2010. As per the scheme, all grid-connected households in the license area of

NDPL will get up to a maximum of four compact fluorescent lamps (CFLs) at Rs. 15 in exchange for equal number of working incandescent lamps (ICLs). A pilot was conducted in September 2010 in Shalimar Bagh District in which 10473 CFLs (11 W & 18 W) were distributed to 4,186 households.

Reliance-Infra- DSM & Energy Efficiency Initiatives

CFL Distribution Program:

Reliance-Infra carried out the 'CFL Distribution Scheme' during April to May 2006 and in January 2007. This scheme was initiated mainly to promote the use of energy-efficient CFL lamps in place of conventional incandescent bulbs. Under this scheme, CFLs were made available to Reliance Infra customers at a discounted price Rs. 82 against the market price of Rs. 165 and the customers were allowed to purchase these on instalment basis, payable through their electricity bills. Around 6.5 lakh lamps were purchased by 2.5 lakh customers under this scheme.

Considering the encouraging response to this scheme, Reliance-Infra decided to take it further with Phase – II of this programme under the 'Bachat Lamp Yojana'.

Streetlights Retrofit Project (HPMV to HPSV)

Reliance Infra has undertaken replacing of HPMV lamps by HPSVs for streetlights in its supply area. Around 37,000 125 W and 80 W HPMV lamps were replaced by 70 W HPSV lamps with higher lumens.

Energy Audit Scheme for Commercial and Industrial Customers

Reliance Infra has established an energy audit scheme for its commercial and industrial customers. Through this scheme, Reliance Infra has tied up with renowned energy auditing firms to carry out energy audits for its customers at competitive rates. Under this scheme, energy auditing companies are selected through the competitive bidding process upon technical and commercial evaluation. These rates are offered to the customers of Reliance Infra opting for energy audit through this scheme.

Customer Awareness Campaign

Reliance Infra, along with other two utilities in the Mumbai region, has carried out a massive consumer awareness campaign. This campaign was targeted to spread awareness regarding the power shortage scenario in Mumbai and all over India, the need for energy conservation, and the measures for energy conservation.

NPCL – DSM & Energy Efficiency Initiatives

NPCL undertook the following energy conservation measures:

- NPCL has installed CFL in all its offices and sub-station buildings.
- NPCL has installed the BEE compliant “Star Rating Transformers” to reduce technical losses.

JVVNL – DSM and Energy-Efficiency Initiatives

Energy conservation measures taken by JVVNL:

- JVVNL spreads the message of energy conservation among its consumers by conducting seminars; persuading the public to save electricity through advertisements; distributing brochures, pamphlets, and slogans; and arranging for demonstrations of energy-saving devices.
- JVVNL officials visit industries and commercial establishments to share with the consumers the benefits of energy conservation and reduction of electricity bills.
- JVVNL has filed a petition with the Regulatory Commission to increase the incentive on solar water heaters for its domestic customers from the earlier rebate of 5 paise per unit to 25 paise per unit with a view to encourage the usage of solar water heaters.

ANNEXURE-VII

Electricity Regulatory Commission – Accounts & Audit

Electricity Regulatory Commission – Accounts & Audit

The paragraphs that follow seek to provide a broad framework for the process of Accounts, financial reporting & Audit for Electricity Regulatory Commissions consistent with the various sections of the Electricity Act, 2003. The words & expressions used in the text shall have the same meaning as defined in the Act.

Grants & Loans by Government

- Pursuant to provisions of Section 98 & 102 of the Act, the Central Government & each of the State Governments after due appropriation by Parliament or State Legislature in this behalf shall make, by way of budgetary support, grants and loans of such sums of money, it may consider necessary, to the Central Commission & the State Commission respectively.
- Provisions for the release of grants and loans shall be made in the Budget of the Appropriate Government under Major Head "2801 – Power" and under "6801 Loans for Power Projects".
- The sanctions to be issued by the Ministry for release of grants and/ or loans will indicate the head of account to which expenditure is debitable in the accounts of the Appropriate Government.
- For regulatory independence of Commission grants by government may be charged on the Consolidated Fund .

Constitution of the Central and the State Electricity Regulatory Commission Fund

- With a view to secure financial autonomy for the Electricity Regulatory Commissions, in accordance with the provisions of Electricity Act, 2003, the Central and the State Electricity Regulatory Commission Fund should be established by the Central Government and each of the State Governments which shall consist of:

i) grants and loans made by the respective Government appropriated from the Consolidated Fund;

ii) all fees received by the Commission under the Act; and

iii) all sums received by the Commission from such other sources as may be decided up on by the Government.

Moneys from the Fund shall be applied for meeting;

a) the salary, allowances and other remuneration of Chairperson, Members, Secretary, Officers and other employees of the Electricity Regulatory Commissions;

b) the expenses of the Central Commission and the State Commissions in discharge of its functions under section 79 and 86 of the Act respectively; and

c) the expenses on objects and for purposes authorized by the Act.

- The ability of the Appropriate Commission to collect and spend money is derived from the Act. The Electricity Regulatory Commission Fund resources are, by Act , restricted to specified uses. Legal and budgetary features assist in monitoring inflows and outflows of financial resources to ensure compliance with the provisions of the Act.

Operation of Fund

- The Fund established under the Act shall be maintained in Public Account in accordance with the directions of Government of India, Ministry of Finance, Department of Economic Affairs (Budget Division) issued under O.M. No. F.1(30)-B(AC)/2004 dated 7th January 2005. The Fund will be non-lapsable.

- For operationalization of Central Regulatory Electricity Commission Fund and State Regulatory Electricity Commission Fund in the Public Account of the Appropriate Government, Minor Heads of Account under the Major Head "8235 – General and Other Reserve Funds" in Section "J – Reserve Funds, (b) Reserve Funds not bearing interest" would need to be opened by Controller General of Accounts on the advice of the Comptroller and Auditor General of India.

- The Commission both Central as well as the State having been established by Acts of Parliament and State Legislature respectively are to be treated as "the State" within the meaning of the expression used in Article 12 of the Constitution of India. Therefore, the moneys collected by these bodies will be credited to the Government Account.

- All moneys which become due to the Commission shall be paid into the Fund Account of the Commission in the Public Account. Grants and/or Loans by government shall be directly transferred by the Appropriate Government to the Fund in the Public Account.

- At the commencement of each financial year the Commission shall be entitled to withdraw a lump sum of money from the Public Account, equivalent to its annual financial requirement. The money withdrawn shall be deposited in an account with a nationalized bank opened for meeting expenses of the Commission. The above captioned withdrawal shall be subject to :

  a) The Commission having passed a tariff order for the current year, prior to the withdrawal, including license fee payable by GENCOs/ DISCOMs/ TRANSCOs so as to meet estimated expenses of the Commission.

  b) In estimating expenditure for the year the amount of cash and bank balances at the close of the previous year shall be taken into account.

- The Bank account shall be operated by the Drawing and Disbursing Officer to be designated by the Secretary to the Commission.

- Expenditure from the Fund for meeting expenses of the Commission in discharge of its functions under the Act and on objects and purposes authorized by the Act shall essentially be regulated by;

  i) *Compliance consideration with the requirement of applicable provisions of the Act in actual disbursement.*

ii) *The expenditure from the Fund conforms to the objectives and purposes as authorized by the Act and is consistent with the prescribed financial rules , regulations and procedures.*

iii) *There is a valid availability of funds in the Commissions' budget, including supplementary grant(s) and re-appropriation.*

iv) *There is delegation of powers by Commission to expend funds.*

v) *All payments shall be properly vouched.*

vi) *Commissions shall maintain proper books of account..*

Accounts and Audit of the Commission

1. Appropriate Commission will establish an annual budget & an accounting system that is adequate to provide budgetary control over revenue & expenses.
2. The annual accounts will comprise: (i) Income & Expenses account, and (ii) Balance Sheet.
3. Accounts shall be maintained on accrual basis in Indian rupees. The accounting standards as set by The Institute of Chartered Accountants of India will be applied.
4. Significant accounting policies as adopted in the preparation of financial statements will be disclosed so as to promote better understanding of these statements.
5. Budgetary comparison shall be included in the appropriate financial statements.
6. Period of accounts will be a financial year, a period of 12 months, ending 31 March in every year. Annual accounts will cover the period from 1 April to 31 March.

The audit of Regulatory Commission will be in accordance with Section 100/ 104 of The Electricity Act 2003.

Budget of the Commission

- At the commencement of each financial year, Central Commission and each State Commission will send to the Appropriate Government its Annual Budget.
- The Budget will show actual receipts and expenditure of the previous year; estimates of receipts and expenditure of the year; and proposals for meeting the requirements of the following year.
- The estimates for expenditure would show object-wise expenditure as per accounts in the previous year; budget and revised estimates for the current year and budget estimates for the ensuing year.
- The estimates for receipts would be by source of funds.
- The model format for Commissions Budget is illustrated below: the model format may be modified according to local requirement in consultation with the local Accountant General (A&E)

Central/ State Electricity Regulatory Commission

(In……. Rupees)

Actuals for the previous year	Budget Estimates for the current year	Revised Estimates for the current year	Revenue heads / Expenditure heads	Budget Estimates for the next year

- The provision shall be made under various revenue sources and object heads of expenditure. Classification codes will be used to identify type of transaction and stocks of assets and liabilities. Codes beginning with 1 refer to revenue, codes beginning with 2 refer to expenses and codes beginning with 3 refer to assets and liabilities. In actual application use of more detailed classification may be needed. This expansion can be done by adding another digit to classification code.

1. Revenue	
11 Grants	
111 Grants from Government of India/ State Government	
112 Grants from Power Finance Corporation	
12 Loans	
121 Loans from Government of India/ State Government	
122 Loans from Power Finance Corporation	
13 Fees received under the Act	
131 Licence Fee	
132 Application/ processing Fee	
14 Repayment of Loans	
15 Other Receipts	
151 Bid Processing Fee	
152 Fines & Penalties	
153 Interest	
2. Expenditure	
21 Salary & Allowances	
211 Salary & Allowances of Chairman	
2111 Traveling Expenses	
2112 Medical Expenses	
2113 Pensionary charges	
212 Salary & Allowances of Members	
213 Salary & Allowances of Staff	
22 Loans and Advances to employees	

221 Advance for purchase of motor conveyance	
2211 Advance for purchase of motor conveyance to Chairman/Members	
222 Advance for purchase of other conveyances	
2221 Advance for purchase of Scooter/ Motor cycle	
2222 Advance for purchase of cycle	
223 House Building Advance	
23 Office Expenses	
231 Postage & Courier charges	
232 Telephone & Fax Charges	
233 Stationary & Computer Consumables	
234 Repairs and Maintenance	
2341 Office machines & Equipment	
2342 Maintenance of Office Vehicles	
235 POL	
236 News Papers & Periodicals	
237 Printing of Forms	
24 Rent, Rates & Taxes	
25 Other Administrative Expenses	
251 Hospitality and entertainment expenses	
252 Seminars, Conferences & Workshops	
253 Training programmes	
254 Publications	
255 Meetings of the Commission & Advisory Committee	
256 Audit Fee	
26 Wages	
261 Wages of staff paid out of contingencies	
262 Wages of Labourers	
27 Professional Services	
271 Legal Services	
272 Consultancy Services	
28 Finance charges	
281 Bank charges	
282 Interest	
29 Other charges	

291 Deprecation	
3 Assets & Liabilities	
31 Assets	
311 Land & Buildings	
312 Vehicles	
313 Office Equipments	
314 Computers	
315 Inventories	
316 Receivables	
317 Investments	
318 Cash & Fund	
32 Liabilities	
321 General Fund	
322 Capital Grants received from Central/ State Government	
323 Payables	

ANNEXURE - VIII

Appellate Tribunal for Electricity

(Appellate Jurisdiction)

Appeal No. 41, 42 and 43 of 2010

Dated: 31st January, 2011

Present: Hon'ble Mr. Justice M. Karpaga Vinayagam, Chairperson

Hon'ble Mr. Rakesh Nath, Technical Member

Hon'ble Mr. Justice P.S. Datta, Judicial Member

Appeal No. 41 of 2010

In the matter of

Polyplex Corporation Limited

Lohia Head Road

Khatima-262308

Uttarakhand

… Appellant(s)

Versus

1. Uttrakhand Electricity Regulatory Commission

   1st Floor of Insitution of Engineers (I) Building

   Near ISBT, Majra,

   Dehradun (UA)

   Pin-248 001…

2. Uttrakhand Power Corporation Ltd.

   Urja Bhawan, Kanwali Road

   Dehradun (UA)

   Pin-248 001

Respondent(s)

Counsel for Appellant(s)	: Mr. Sanjay Sen
	: Ms. Shikha Ohri
	: Ms. Mandakini Ghosh
Counsel for Respondent(s)	:Mr. P. Misra
	: Mr. Suresh Tripathy for R-1
	: Mr. Pradeep Misra
	: Mr. Daleep Kr. Dhyani for R-2

Appeal No. 42 of 2010

In the matter of

Kumaon Garhwal Chamber of Commerce
Chamber House, Industrial Estate
Bazpur Road, Kashipur
Distt: Udham Singh Nagar
Uttarakhand

… Appellant(s)

Versus

1. Uttrakhand Electricity Regulatory Commission
   1st Floor of Institution of Engineers (I) Building
   Near ISBT, Majra,
   Dehradun -248 001…
2. Uttrakhand Power Corporation Ltd.
   Urja Bhawan, Kanwali Road
   Dehradun -248 001

….Respondent(s

Counsel for Appellant(s) : Mr. M.L. Lahoty

: Mr. Pawan K. Sharma

:

Counsel for Respondent(s) :Mr. P. Misra

: Mr. Suresh Tripathy for R-1

Mr. Pradeep Misra

Mr. Daleep Kr. Dhyani for R-2

Appeal No. 43 of 2010

In the matter of

M/s Greenply Industries Limited

Plot No. 2, Sector-9

Integrated Industrial Estate

Pantnagar, Uttarakhand

Appellant(s)

Versus

1. Uttrakhand Electricity Regulatory Commission
   1st Floor of Insitution of Engineers (I) Building
   Near ISBT, Majra,
   Dehradun -248 001
2. Uttrakhand Power Corporation Ltd.
   Urja Bhawan, Kanwali Road
   Dehradun -248 001

Respondent(s)

Counsel for Appellant(s)	: Mr. M.L. Lahoty
	: Mr. Pawan K. Sharma
Counsel for Respondent(s)	:Mr. P. Misra
	Mr. Suresh Tripathy for R-1
	Mr. Pradeep Misra
	Mr. Daleep Kr. Dhyani for R-2

JUDGMENT (ABRIDGED VERSION)

PER HON'BLE MR. JUSTICE M. KARPAGA VINAYAGAM, CHAIRPERSON

The above Appeals, Appeal No. 41 of 2010, Appeal No. 42 of 2010 and appeal No. 43 of 2010 have been filed by (1) Polyplex Corporation Limited, (2) Kumaon Garhwal Chamber of Commerce and (3) M/s Greenply Industries Limited respectively as against the common impugned Tariff Order dated 23.10.2009 passed by Uttarakhand State Electricity Regulatory Commission.

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19. On the basis of these contentions urged by the Learned Counsel for the parties, the following questions may arise for conclusion:

(1) Whether the policy directions issued by the State Government on 25.09.2009 for mere consideration are binding on the State Commission while discharging its statutory finding on the determination of tariff under Section 62 of the Electricity Act, 2003 read with the Regulations framed thereunder?

(2). Whether any credence can be given to ARR, formulated, without adhering to the statutory provisions of the Electricity Act, 2003, National Electricity Policy, National Tariff Policy as also the orders and directions issued by this Tribunal from time to time?

(3). Whether the State Commission is bound to follow the directions of the State Government in relation to the allocation of the power purchase costs to various categories of consumers while determining tariff which is contrary to the provisions of the Electricity Act, 2003 and the Regulations made thereunder?

(4). Whether the State Commission's power to determine the tariff independently in terms of the legislative mandate can at all be curtailed by the State Government in exercise of the power under Section 108 of the Electricity Act, 2003?

(5). Whether the Commission cannot at all segregate the power purchase cost amongst different class of consumers so as to allocate cheaper resources of power to subscribe consumers such as private tube well, domestic etc?

(6). Whether the Commission could have allocated 15% loss at HT level, when it is admitted in Table 8.5 of the Impugned Order that the transmission losses are only to the extent of 1.86%?

(7). Whether the Commission has failed to appreciate that the cross subsidy adjustment cannot be the basis of tariff determination and that the effective cross subsidy has to be factored only after the tariff has been determined in accordance with the principles provided in the Electricity Act, 2003?

20. Let us now analyse each of these issues.

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28. It cannot be debated that the determination of tariff is one of the core functions of the State Commission which is to be done in an independent manner. These functions have to be discharged by the State Commission by following the provisions of the Electricity Act, 2003 and the Regulations made thereunder. It is settled law that the State Commission alone has the powers to determine the tariff. In this context, a reference may be made to the Statement of Objects and Reasons of Electricity Act, 2003 for the purpose of appreciating the legislative scheme. The same is as follows:

"1.3 Over a period of time, however, the performance of the State Electricity Boards has deteriorated substantially on account of various factors. For instance, powers to fix tariffs vest with such Electricity Boards, they have generally been unable to take decisions on tariff in a professional and independent manner and tariff determination in practice has been done by the State Governments. Cross subsidies have reached unsustainable levels. To address this issue and to provide for distancing of Government from determination of tariffs, the Electricity Regulatory Commission Act was enacted in 1998. It created the Central Electricity Regulatory Commission and has an enabling provision through which State Governments can create a State Electricity Regulatory Commission…."

" 3 With the policy of encouraging private sector participation in generation, transmission and distribution and the objective of distancing the Regulatory Commission, the need for harmonising and rationalising the provisions in the Indian Electricity Act, 1910, the Electricity (Supply) Act, 1948 and the Electricity Regulatory Commission Act, 1998, in a new self contained comprehensive legislation arose…."

Thus, the main object and reason of the reform legislation was to distance the role of the Government in fixation of tariff and to allow tariff determination by an independent regulatory authority which will follow a transparent process. This is at the very core of the reform legislation.

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36. Let us now quote those decisions rendered by this Tribunal as well as the Hon'ble Supreme Court. They are as follows.

37. This Tribunal in its judgment dated 18.08.2010 Appeal No. 5/09 has analysed this issue and gave the following findings:

(A) "It is settled law as laid down by this Tribunal as well as by the Hon'ble Supreme Court, that all the policy directions are not binding on the State Commission since the State Government cannot curtail the powers of State Commission in the matter of determination of tariff ".

(B) The next judgment was rendered by the Tribunal in Appeal No. 4, etc. Of 2005 (SIEL Limited Vs. Punjab State Commission).

In this judgment, this Tribunal analysed this issue and held that State Commission is an independent authority and its finding is binding on the State Government and not vice versa. The same is as follows:

“The Appropriate Commission while determining tariff under section 61 of the Act is required to be guided by the factor and parameters enshrined therein. One of the factors on the basis of which tariff is to be determined is the consumer interest. Sub-clause (d) of Section 61 requires the Commission to safeguard the interest of the consumers and ensure that the recovery of the cost of electricity is effected in a reasonable manner. This was also one of the requirements under Section 2(2) of the Act of 1998.

The aforesaid provisions of the Act of 2003 and the Act of 1998 are not hedged in with the limitation that in case the State Government or any other authority has allocated an unwarranted cost to the generator or a licensee, it cannot be interfered with, even when such a cost may be imprudent and unjust and not in the interest of the consumers. Otherwise the cost loaded by the State Government on the Board will have to be allowed by the Commission for the purposes of tariff and the ARR of the Board. In case such a limitation is read into the aforesaid provisions, the purpose of the Act including section 63 will be frustrated. Since the Commission has the power to determine the tariff and the ARR of a utility, it has all the incidental and ancillary powers to effectuate the purpose for which the power is vested in it. Consequently the directions or orders of the Regulatory Commission made for the purpose of determination of tariff and ARR in consonance with the provisions of the Act are binding on all the concerned parties including the State and the Board.

There is nothing in section 61 and 62 of the Act of 2003 to show that orders relating to tariff will not bind the State Government. The State is not above law and it is bound to respect the mandate of the legislature. Otherwise tariff determination will not be in consonance with the various factors and parameters specified in section 61. The Commission is an independent statutory body and its directions being in terms of the Act are definitely binding on the Board whose de jure owner is the State. The ultimate end effect shall be on de jure owner viz. the State of Punjab.”

(C) The next decision is (1995) 3 SCC 295 in Real Food Products Limited Vs. A.P. State Electricity Board, in which it is held as follows:

“Where the direction of the State Government, as in the present case, was to fix a concessional tariff for agricultural pump-sets at a flat rate per H.P., it does relate to a question of policy which the Board must follow. However, in indicating the specific rate in a given case the action of the State Government ,may be in excess of the power of giving a direction on the question of policy which the Board, if its conclusion be different, may not be obliged to be bound by.”

(D) The next decision is 2001 (3) SCC 396 (Chittor Zilla Vyavasayadarula Sangham Vs. A.P. State Electricity Board & Ors. The relevant observation by the Hon’ble Supreme Court is as follows:

“It is clear that the Board would not be bound to follow every policy direction. …… It is for this and other reasons that the statute maintain this Board to maintain the surplus in every year. If it has to perform this statutory obligation, how can it do so, if it follows any such direction which takes it away from it. It is true the Government can (sic has) has to cater to the popular demand in order to earn its legitimate favour, give any such policy direction, but it should have to be within a permissible limit."

(E) The next decision is (1996) 11 SCC 199 (Ester Industries Limited Vs. U.P. State Electricity Board & Ors.) The relevant observation made by the Hon'ble Supreme Court is as follows:

" 4. Section 78-A (1) of the Act postulates that in the discharge of its functions, the Board shall be guided by such directions on questions of policy as may be given to it by the State Government. In other words, the Electricity Board has a statutory function to discharge in determination of the rates of tariff and terms and conditions subject to which the electrical energy be supplied to the consumers and enforcement thereof. This being a legislative policy, while exercising the power under Section 78-A policy directions issued by the Government may also be taken into consideration by the Electricity Board which has a statutory duty to perform. But so long as the policy direction issued by the Government is consistent with the provisions of the Act and the tariff policy laid down by the Board, it may be open to the Board to either accept it or not to accept the directions as such."

(F) The next decision is 2001 (8) SCC 491 (Union of India Vs. Dinesh Engineering Corporation). The relevant observation made by the Hon'ble Supreme Court is as follows:

"The Policy of the Board as contained in the appellant's letter dated 23-10-1992 proceeds on the hypothesis that there was no other supplier competent enough to supply the spares required without taking into consideration the fact that the writ petitioner had been supplying these spare parts for the last over 17 years to various divisions of the Indian Railways which fact has been established by the writ petitioner from the material produced both before the High Court and the Supreme Court and which fact has been accepted by the High Court. This clearly establishes the fact that the decision of the Board suffers from the vice of non-application of mind.

Of course, the Supreme Court has held in more than one case that where the decision of the authority is in regard to a policy matter, the Supreme Court will not ordinarily interfere. But then this does not mean that the courts have to abdicate their right to scrutinise whether the policy in operation is formulated keeping in mind all the relevant facts and whether the said policy can be held to be beyond the pale of discrimination or unreasonableness, on the basis of the material on record. There can be no doubt that the equipment of the nature of a spare part of a governor which is used to control the speed in a diesel locomotive should be a quality product which can adhere to the strict scrutiny/standards of the Railways, but a perusal of the letter dated 23.10.1992 does not show that the Board was either aware of the existence of the writ petitioner or its capacity or otherwise to supply the spare parts required by the Railways, an ignorance which is fatal to the policy decision. Any decision, be it a simple administrative decision or a policy decision, if taken without considering the relevant facts, can only be termed as an arbitrary decision and violative of the mandate of Article 14 of the Constitution."

(G) The next decision is AIR 2002 Andhra Pradesh 210 (APSEB & Ors. Vs. Warangal Municipal Corporation). The Andhra Pradesh High Court has observed as follows:

"The immediate question that arises for consideration is whether the direction contained in the memo dated 21.2.1997 is a direction on any question of policy within the contemplation of sub-section (1) of Section 78-A of the Act. We are afraid that direction cannot be treated as a direction on any question of policy. What we find a direction without being supported by any reasoning that HT Category VI tariff should be applied to Municipal Water Works from 30.07.1996. Even then, it would have been enforced against the Board provided that direction does not violate the categorisation of consumers made by the Board by virtue of the statutory power conferred upon it under Section 49 of the Supply Act. As pointed out supra, supply of electricity to the water works carried on by the Corporations falls under the category I and not HT category VI and if that is so, merely because the Government directs the Board that HT VI category tariff would be applicable to Municipal Water Works from 30.07.1996, that cannot be treated as a policy decision taken by the Government and at any rate that cannot be enforced against the Board. We say this because the power conferred upon the State Government under S. 78-A of the Act is not power to exempt from the provisions of the Act and the Regulations made thereunder. Therefore, any direction that may be issued by the State Government by virtue of the power conferred upon it under sub-section (1) of S. 78-A of the Supply Act on any question of policy should be in consonance with the statutory provisions and the State Government by issuing such a direction cannot supplant the statutory provisions. The categorisation of consumers by the Board is a statutory action and that cannot be whittled down by the State Government by issuing directions under Section 78-A of the Act."

(H) The next decision is [(AIR 2008 (NOC) 1546 (All.)] (Maa Wind Vasini Industries Vs. Puranchal Vidyut Vitran Nigam Ltd.). The relevant observation made by Allahabad High Court is quoted below:

"Before the enactment of 1998 Act, the power to frame tariff was solely possessed by concerned State Electricity Board in accordance with Section 49 of 1948 Act. The said statutory power could not have been diluted in any manner even by the State Government though it possessed powers to issue directions on question of policy under Section 78-A of 1948 Act. The directions issued by State Government neither could be treated to be a part and parcel of the tariff framed by State Electricity Board under Section 49 of 1948 Act nor could have force of law on its own but required to be considered by the concerned State Electricity Board while framing its tariff and only when it resolves and decided to implement such directions in a particular manner, the same could have been enforced and not otherwise. After the enforcement of Reforms Act, 1999 and Act 2002 the only change which has taken place in the situation is that the tariff has to be determined and approved by UPERC but in discharge of its functions, UPERC shall be guided by such directions in matter of policy involving public interest as the State Government may give to it in writing. Consequently, under Act, 2001, read with Reform Act, 1999, in the matter of framing of tariff and realisation of charges from the consumers, the final authority lay with UPERC and neither any supplier or the State Government, nor any one else has any jurisdiction or authority to make any alteration, modification, etc. in the aforesaid matter".

(I) The next decision is (2008) 3 SCC 128 (LML vs. State of U.P. and Others.)

The relevant observation made by the Hon'ble Supreme Court is as under:

"58. Having carefully considered the provisions of the Act as also the arguments advanced in this regard, we are of the opinion that under the 1998 Act, it is the Commission concerned and in the instant case the State Commission of West Bengal, which is the sole authority to determine the tariff, of course, as per the procedure in the said Act." The Regulations referred to earlier show that generating companies and utilities have to first approach the Commission for approval of their tariff whether for generation, transmission, distribution or supply and also for terms and conditions of supply. They can charge from their customers only such tariff which has been approved by the Commission. Charging of a tariff which has not been approved by the Commission is an offence which is punishable under Section 45 of the Act. The provisions of the Act and Regulations show that the Commission has the exclusive power to determine the tariff. The tariff approved by the Commission is final and binding and it is not permitted for the licensees, utility or anyone else to charge a different tariff."

38. The legal propositions that emanate from the above various decisions with regard to this point as referred to above are given below:

1. The State Commission is an independent statutory body. Therefore, the policy directions issued by the State Government are not binding on the State Commission. The State Government by issuing direction to State Commission cannot curtail the power of the State Commission in the matter of determination of tariff.

2. The State Commission has the powers to determine the tariff and to pass orders under Sections 61 and 62 of the Act relating to the tariff. These orders are binding on the State Government.

3. Since the State Commission has the power to determine the tariff and the ARR of utility, it has all the incidental and auxiliary power to effectuate the purpose for which the power is vested in it. Consequently, the directions or orders of the State Commission made for the purpose of determination of tariff and ARR are binding on all concerned parties including the State Government.

4. The State Government is not above the law. It is bound to respect the mandate of the legislature. Otherwise, the tariff determination will not be in consonance with the various factors and parameters specified in Section 61.

5. The State Commission is not powerless to issue orders and directions relating to the matters having a bearing on and nexus with the determination of the fixation of tariff and as such its directions shall be binding on all persons and authorities including the State Government.

6. It is true that the Government has to cater to the popular demands in order to earn its legitimate favour giving any such policy direction but it should be under permissible limit. While exercising the power of determination of tariff, the policy directions issued by the Government may also be taken into consideration by the State Commission which has statutory duty to perform under the Act but so long as the policy directions issued by the Government are consistent with the provisions of the Act, it may be open to the State Commission to either to accept them or not. Thus it is purely discretionary on the part of the State Commission with regard to the acceptability of the directions issued by the State Government in the matter of determination of tariff.

7. The State Commission shall determine the tariff for electricity (wholesale, bulk, or retail) and also for use of transmission facilities. It has also the power to regulate power purchase of the distribution utilities including the price at which the power shall be procured from the generating companies or licensees or from other sources for distribution and supply in the state. The reading of the provisions would make it clear that the terms and conditions for fixation of tariff shall be determined by the Regulations and while doing so the Commission shall be guided by the Regulations and the provisions of the Act but provisions of the Act and Regulation show that the Commission alone has the power to determine the tariff. The tariff approved by the State Commission is final and binding. The directions issued by the State Government is not binding on the State Commission. On the other hand, determination of tariff by State Commission for the various categories will be binding on the State Government.

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58. As stated above, the entire order which has been passed by the State Commission determining the tariff for the Appellant category was purely based upon the policy direction purported to have been issued under section 108 of the Act, 2003 and not on independent consideration. Hence the conclusion arrived at by the State Commission entirely based upon the policy direction which is not binding on the State Commission, cannot be said to have any legal basis.

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60. We have categorically given our findings in the above paragraphs that the State Government directions are not binding on the State Commission since the State Commission is expected to decide the issue independently on the basis of the various criteria.

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Summary of our findings:

62. (1) The State Commission is independent statutory body. Therefore the policy directions issued by the State Government are not binding on the State Commission, as those directions

cannot curtail the power of the State Government in the matter of determination of tariff. The State Government may given any such policy direction in order to cater to the popular demand made by the public but while determining tariff the State Commission may take those directions or suggestions for consideration but it is for the State Commission which has statutory duty to perform either to accept the suggestion or reject those directions taking note of the various circumstances. It is purely discretionary on the part of the State Commission on acceptability of the directions issued by the State Government in the matter of determination of tariff.

(2) From the perusal of the impugned order it is evident that the State Commission has fully accepted and acted upon the state Government's policy directions in the light of the legal expert's opinion holding that the State Government's directions is binding. Therefore, the finding given by the State Commission that the directions of the State Government under Section 108 of the Act is binding on the State Commission is wrong.

(3) The State Commission impugned order for determination of tariff by segregating the Power Purchase Cost for different categories of consumers is wrong. The Regulations, the Tariff Policy and National Electricity Policy would indicate that they do not recognise segregation of Power Purchase Cost for the purpose of allocation to different categories. In the present case the State Commission did not refer to these relevant regulations to justify that the determination of tariff made by the State Commission was consistent with the Regulations.

(4) In the impugned order while the power purchase cost has been segregated, the State Commission has not segregated all costs on voltage-wise basis. The reduction of loss level to an ad-hoc figure of 15% for HT Industrial Consumers and also liability of other costs such as O&M on average basis with segregation of power purchase cost is not proper.

(5) Thus the State Commission is not justified to only allocate high cost of power to the Appellant category without adjusting the other costs which will admittedly lower in case of the Appellant.

(6) It is clear from the order of the Government as well as the impugned order, the State Government in order to ensure increase in tariff of industrial consumers without affecting the agricultural, domestic and Government installation, devised the scheme of policy direction which was issued on 25.09.2009. This is mainly intended to strengthen the hands of the State Commission to insulate the order from any challenge since the same was purportedly based on the cost allocation principle determined under Section 108 of the Electricity Act, 2003.

(7) Thus, the entire impugned order determining the tariff for the Appellant category was purely based upon the policy directions purported to have been issued under Section 108 of the Act and not on independent consideration. Therefore, the conclusion arrived at by the State Commission in the matter of determination of tariff has no legal basis.

63. In view of our above findings, we deem it fit to set aside the entire tariff order and to remand the matter to the State Commission with a direction to re-determine the tariff on the basis of the existing Regulations and regulatory principles and the judicial pronouncement including those laid down by this Tribunal from time to time, without being influenced by any directions issued by the State Government. The State Commission may also consider the submissions of the Appellants regarding cost of supply, cross subsidy and increase in tariff with respect to the previous year. Accordingly ordered.

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* **HIGH COURT OF DELHI AT NEW DELHI**

Judgment Reserved on : 11th February, 2011
% Judgment Pronounced on: 18th February, 2011

\+ **WP(C) No.4821/2010**

SHRI NAND KISHORE GARG & ANR. ..... Petitioners
Through: Mr.Laliet Kumar with Mr.Deepak Vohra, Advocates
Mr.Jayant Bhushan, Sr. Advocate with Ms.Pyoli, Advocate for the Intervenor.

Versus

GOVERNMENT OF NCT OF DELHI & ORS. ....Respondents
Through: Mr.Goolam E. Vahanvati, Attorney General along with Mr.Atul Nanda, Advocate for Union of India.
Mr.Dushyant Dave, Sr. Advocate with Mr.N.Waziri and Ms.Neha Kapoor, Advocates for the Respondent No.1.
Mr.Parag P. Tripathi, ASG with Mr.H.S. Chandhoke and Mr.Kunal Bahri, Ms.Purnima Sapra, Advocates for the Respondent No.2.
Mr.V.P. Singh with Mr.Aashish Gupta, Advocates for the Respondent No.3.
Mr.Sudhir Nandrajog, Sr. Advocate with Mr.Amit Kumar and Mr.Anupam Varma, Advocates for the Respondent No.4.
Dr.A.M.Singhvi, Sr.Advocate with Mr.V.P. Singh, Mr.Anuj Berry and Mr.Jaiveer Shergil, Advocates for the Respondent No.5.

CORAM:
HON'BLE THE CHIEF JUSTICE
HON'BLE MR. JUSTICE MANMOHAN

1. Whether reporters of the local papers be allowed to see the judgment? Yes
2. To be referred to the Reporter or not? Yes
3. Whether the judgment should be reported in the Digest? Yes

DIPAK MISRA, CJ

In this public interest litigation the petitioner describing himself as *pro bono publico* has prayed for issue of a writ of mandamus commanding the respondent No.2, Delhi Electricity Regulatory Commission (for short 'the Commission'), to issue the tariff approved by it on 28/29.4.2010 and pass such other order / orders as may be deemed fit in the facts and circumstances of the case.

2. At the very outset, we may state with profit that various assertions and asseverations have been made with regard to the issues relating to finalization of the tariff by the Commission under the provisions of The Electricity Act, 2003 (for brevity 'the 2003 Act'), the illegality committed by the Government of National Capital Territory of Delhi in asking the Commission not to issue the tariff and further how the consumers have been affected by non-issuance of the tariff order. But after impleadment of certain respondents, namely, BSES Yamuna Power Ltd., BSES Rajdhani Power Ltd. and North Delhi Power Ltd. the question, apart from other issues, that fundamentally cropped up whether the State Government could have passed the order in the manner it has done in exercise of power under Section 108 of the 2003 Act.

3. In this regard, we think it apposite to reproduce the relevant submissions advanced on 9.9.2010:

> "The submission of Mr. Laliet Kumar, learned counsel for petitioner, is that the State Government could not

have intervened after the tariff was determined by the Commission as the same is not permissible under any of the provisions of the statute. The learned counsel for the petitioner further submitted that the tariff fixation does not come within the ambit and sweep of a policy decision and further after a decision has been taken by the Commission, the State Government has no authority to issue any direction or intervene in the matter.

Quite apart from that, it has been submitted by Mr. Laliet Kumar that the letter dated 4th May, 2010 issued by the State Government does not meet the requisite criteria of a policy decision, though the same has been couched in a different language. To bolster the said aspect, the learned counsel for the petitioner has commended us to the provisions contained in Sections 61, 62, 64 and 92 of the Electricity Act, 2003 (for brevity "the Act").

Mr.Harish N. Salve, learned senior counsel appearing for NDPL, and Mr.Neeraj Kishan Kaul, learned senior counsel appearing for BSES Rajdhani Power Ltd., contended that the State Government has the power to issue directions as is evincible from Section 108 of the Act. Section 108 reads as under:-

> "***108. Directions by State Government***:---(1) In the discharge of its functions, the State Commission shall be guided by such directions in matters of policy involving public interest as the State Government may give to it in writing.
>
> (2) If any question arises as to whether any such direction relates to a matter of policy involving public interest, the decision of the State Government thereon shall be final."

The learned senior counsel have also drawn inspiration from Section 86(4) of the Act which reads as under:-

> "***86. Functions of State Commission***:
> xxxx xxxx xxxx xxxx
>
> (4) In discharge of its functions, the State Commission shall be guided by the National

> Electricity Policy, National Electricity Plan and Tariff Policy published under section 3."
>
> It is submitted by Mr. Salve that if both the provisions are read in a purposeful and harmonious manner, it would convey that the State Government has the authority to issue such directions which fall in the realm of policy decision involving public interest and fixation of tariff or determination of tariff in accordance with National Electricity Policy, National Electricity Plan and Tariff Policy as published under Section 3 of the Act do come within the concept of policy.
>
> The learned senior counsel would further submit that the 'public interest' cannot be narrowly construed in the conceptual canvas of the Act inasmuch as in a democratic body polity, the State Government has a role to see that there is electricity supply regard being had to the industrial growth as well as protection of the consumers.
>
> Mr. Najmi Waziri, learned standing counsel for GNCT of Delhi, would contend that if the communication of the State Government is read in an apposite manner, it is clear as crystal that the State Government was seeking clarification from the Commission and pending clarification had directed not to issue the tariff order."

4. Thereafter, this Court by order dated 27.10.2010 sought the assistance of the learned Attorney General to address the Court on the first issue. It is appropriate to note that learned Attorney General only addressed this Court with regard to the first issue and the matter was adjourned for adjudication on other issues.

5. When the matter was listed on the adjourned dates arguments were heard on other issues but finally it was felt while hearing the matter on 11.2.2011 that the first issue should be decided and thereafter the other

issues should be taken up. We may note with profit learned counsel for the parties very fairly acceded to the same.

6. At this juncture, it is obligatory on our part to mention that Mr.Dushyant Dave, learned senior counsel along with Mr.N. Waziri, learned standing counsel appearing for the GNCTD submitted that the State Government has taken a decision to withdraw the communication sent to the Commission. Had the same been stated at the very initial stage the matter would have been absolutely different. As a colossal grievance was made and arguments were canvassed at length and we had sought the assistance of the learned Attorney General who addressed us at length, we have thought it seemly to delve into the said issue and answer the same. We may also note with profit that we had indicated it to Mr.Dave and Mr.Waziri and, therefore, learned counsel for the GNCTD while reiterating the stand of withdrawal of the communication also addressed the Court on merits on the said score.

7. Mr. Goolam E. Vahanvati, learned Attorney General being assisted by Mr.Atul Nanda, submitted that the nature of communication that has been made does not come within the ambit and sweep of Section 108 of the 2003 Act. It is urged by him that if Section 108 of the 2003 Act is appropriately and appositely interpreted it would clearly convey that the State Government has no jurisdiction to pass such an order as that would tantamount to interference in the statutory functioning of the Commission. It is contended by him the words used under Section 108 of the 2003 Act

are that “the State Commission shall be guided by such directions in matters of policy involving public interest” and, therefore, the State Government can only issue guidelines which would relate to a larger public interest in the field of social structuralism or any kind of benefit to a class but by no stretch of imagination can issue a command to the Commission not to issue a tariff order. It is his further submission that policy and public interest are inseparably connected and the policy must reflect such larger public interest by which the Commission shall be guided. It is urged by him that Section 86 of the Act sets the guidance / guidelines for functioning of the Commission and the said provision does not confer any power on the State Government to interdict. Learned Attorney General further proponed that the Section 108 of the 2003 Act is almost similar to Section 78A of the Electricity (Supply) Act, 1948 (for short ‘the 1948 Act’) and the interpretation placed on the said provision in many an authority would have application for understanding the contour and sweep of the present provision. To buttress the said submission, he has taken us through the scheme of the Act and commended to the authorities in ***Indian Metal & Ferro Alloys Ltd. v. State of Orissa & Ors.*****, (1987) 3 SCC 189,** ***M/s.Real Food Products Ltd. and others v. Andhra Pradesh State Electricity Board and others,*** **(1995) 3 SCC 295,** ***Ester Industries Ltd. v. U.P. State Electricity Board & Ors.,*** **(1996) 11 SCC 199,** ***Pawan Alloys and Casting Pvt. Ltd. v. U.P. State Electricity Board & Ors.*****, (1997) 7 SCC 251** and ***Chittoor Zilla Vyavasay Adarula Sangham v. A.P. State Electricity Board & Ors.*****, (2001) 1 SCC 396**. He has also drawn inspiration from a passage in ***Laker Airways Ltd. v. Department of Trade*, (1979) 2 WLR 234** especially wherein Lord Denning M.R. has adverted to the concept of guidance and directions.

8. Mr.Dave, learned senior counsel along with Mr.Waziri, learned standing counsel for the GNCTD submitted that Section 108(1) has been broadly couched and, therefore, the authorities under Section 78A would not be applicable and deserve to be distinguished. Learned senior counsel has submitted that Section 108 of the 2003 Act uses the words "involving public interest" and, hence, it has a dynamic concept which has to be understood regard being had to the purpose / action / interest which would subserve the interest of the public at large at the relevant time. What would constitute public interest would depend on the facts and circumstances of the case obtaining at the time when it is determined and the same has to be left to the executive. It is urged that if sub-section (2) of 108 of 2003 Act is purposively understood it would be clear as day that the Parliament has wisely left the decision of defining and determining public interest to the State Government and whether a direction relates to a matter of policy involving public interest is in the domain of the State Government and the said decision is final. Learned senior counsel has commended us to the decisions in ***Kusumam Hotels v. Kerala SEB*, (2008) 13 SCC 213**, ***A.P. State Electricity Board Vidyut Soudha & Ors. v. Gowthami Solvent Oils & Anr.*, AIR 1991 A.P. 141**, ***Management of Fertilizer Corp. of India v. The Workmen*, (1969) 2 SCR 706, *Food Corporation of India and Ors. v.***

Bhanu Lodh and Ors. **(2005) 3 SCC 618*, G.D. Zalani and another etc. v. Union of India and others*, 1995 Supp (2) SCC 512*, Pure Helium India Pvt. Ltd. v. Oil and Natural Gas Commission,* (2003) 8 SCC 593,** ***M/s.Real Food Products Ltd.*** (supra)***, Hotel Venus International v. State of Andhra Pradesh and others*, AIR 1998 AP 78** and ***Hindustan Zinc Ltd. v. APSEB,*** **1991 (3) SCC 299** and also placed reliance on certain paragraphs of the decisions which have been placed reliance upon by the learned Attorney General.

9. Mr.Dave, learned senior counsel has also drawn inspiration from the statements of objects and reasons of 2003 Act. It is also contended by him that the basic purpose of the GNCTD while issuing the communication in question was to ensure that in the public interest, the National Tariff Policy should be duly adhered to by the DERC in fixing power tariff. It was the intention of the State that DERC should be guided by the National Tariff Policy.

10. The question that emerges for consideration is whether the communication dated 4.5.2010 could have been made in exercise of power vested in the State Government under Section 108 of the 2003 Act. Section 108 of the 2003 Act reads as under:

> "***108. Directions by State Government***:---(1) In the discharge of its functions, the State Commission shall be guided by such directions in matters of policy involving public interest as the State Government may give to it in writing.

> (2) If any question arises as to whether any such direction relates to a matter of policy involving public interest, the decision of the State Government thereon shall be final."

11. Section 78A of the 1948 Act reads thus:

> 78A. **Directions by the State Government** - (1) in the discharge of its functions, the Board shall be guided by such directions on questions of policy as may be given to it by the State Government.
>
> (2) If any dispute arises between the Board and the State Government as to whether a question is or is not a question of policy, it shall be referred to the Authority whose decision thereon shall be final."

12. In ***Indian Metal & Ferro Alloys Ltd.*** (supra), while interpreting Section 22-B of the Electricity Act, 1910, the Apex Court has held thus:

> "It appears to us to be clear on a reading of Section 22-B of the Act that what is contemplated by it is that the State Government should only lay down policy guidelines to be adopted by the Board for regulating supply, jurisdiction (*sic* distribution), consumption or use of energy. The implementation of the policy after working out the details is a matter to be carried out by the Board. It is therefore somewhat strange that the State Government has taken upon itself the task of allocating the quantum of power that may be consumed by the different industrial units mentioned in the Annexures to the Government Orders passed in respect of the years 1984-85, 1985-86 and 1986-87 under Section 22-B of the Act. However, the High Court is in our opinion right in holding that under the aforesaid section, the Government may for the purposes of securing equitable distribution of energy regulate its consumption or use and decide as a matter of policy whether the benefit of clubbing should be allowed to the consumers of energy…."

13. In ***Chittoor Zilla Vyavasay Adarula Sangham*** (supra), the Apex Court came to hold as follows:

> "22. It is necessary first to examine the periphery of the statutory fields within which the Board and the State Government have to function. Admittedly both are statutory functionaries under the Central Act. They have to perform their obligations within the limits they have been entrusted with. Section 78-A empowers the State Government to issue directions to the Board on the question of policy, on the other hand the Board has to perform its statutory obligations under the said Act and with reference to the fixation of tariff it has to act in terms of what is contained in Sections 49 and 50. But this field of policy direction is not unlimited. There cannot be any policy direction which pushes the Board to perform its obligations beyond the limits of the said two sections. Any policy direction, which in its due performance keeps the Board within its permissible statutory limitations would be binding on the Board. So, both the State and the Board have to maintain their cordiality and coordination in terms of the statutory sanctions. If any policy direction pushes the Board in its compliance beyond statutory limitations, it cannot be a direction within the meaning of Section 78-A. It is significant that the opening words of Section 78-A are, "in the discharge of its functions, the Board shall be guided by such directions". So, the direction of the State is for the guidance to the Board, in the discharge of its functions. Thus this direction has also limitation to give such direction which will subserve in performing its statutory obligation. We would be returning later to test, if direction to charge tariff at the rate of Rs.50 per HP per annum would have been followed by the Board, whether it would have travelled beyond Section 59.
>
> xxx
>
> xxx
>
> 25. Now, we proceed to examine what this Court held in the Real Food Products Ltd.[1] This Court examined the nature and effect of the direction given by the State Government under Section 78-A. It was examined in the context of charging a flat rate per H.P. for agricultural pumpsets. It holds the view expressed

by the State on a question of policy to be followed by the Board in the context of Board's function under Sections 49 and 59 and other provisions of the Act. This Court held that the flat rate per HP for the agricultural pumpset was found acceptable by the Board. What does acceptable to the Board means? It only means it to be within the parameters of Sections 49 and 59 of the Act. In other words, the Board has not to travel outside its obligations under Section 59. This decision records:

> "However, in indicating the specific rate in a given case the action of the State Government may be in excess of the power of giving a direction on the question of policy, which the Board, if its conclusion be different, may not be obliged to be bound by... If the view expressed by the State Government in its direction exceeds the area of policy, the Board may not be bound by it unless it takes the same view on merits itself.
>
> *** *** *** *** *** ***
>
> At any rate, there is no material in the present case to indicate that the flat rate indicated by the State Government for the agricultural pumpsets was so unreasonable that it could not have been considered appropriate by the Board."

Thus it is clear that the Board would not be bound to follow every policy direction. According to the Board, if tariff was charged at the rate of Rs. 50 per HP per annum, as per the direction in question, loss to the Board would have been to the extent of Rs. 1,553 crores for the year 1996-97. This would have gone contrary to the obligation cast on the Board under Section 59. Section 59 mandates the Board to leave such surplus not less than 3% of the revenue, after meeting all its expenses referred to therein. Thus Board has not to supply electricity at such rate to be in deficit, leaving no hope for its extensions for the benefit of persons living in an uncovered area. It is for this and other reason statute mandates Board to maintain this surplus in every year. If it has to perform this statutory obligation, how can it do so, if it follows any such direction which takes it away from it. It is true the Government can (*sic* has)

> to cater to the popular demand in order to earn its legitimate favour, give any such policy direction, but it should have to be within permissible limit."
>
> [Emphasis supplied]

14. In ***Real Food Products Ltd. & Ors.*** (supra), a three-Judge Bench of the Apex Court has observed thus:

> "8. The only surviving question is with regard to the nature and effect of the direction given by the State Government under Section 78-A of the Act. The question has to be examined in the context of the facts of the present case which is confined to the charging of a flat rate per H.P. for agricultural pump-sets. The nature of the function of the board in fixing the tariffs and the manner of its exercise has been considered at length in the earlier decisions of this Court and it does not require any further elaboration in the present case. Section 78-A uses the expression "the Board shall be guided by such directions on questions of policy as may be given to it by the State Government". It does appear that the view expressed by the State Government on a question of policy is in the nature of a direction to be followed by the Board in the area of the policy to which it relates. In the context of the function of the Board of fixing the tariffs in accordance with Section 49 read with Section 59 and other provisions of the Act, the Board is to be guided by any such direction of the State Government. Where the direction of the State Government, as in the present case, was to fix a concessional tariff for agricultural pump-sets at a flat rate per H.P., it does relate to a question of policy which the Board must follow. However, in indicating the specific rate in a given case, the action of the State Government may be in excess of the power of giving a direction on the question of policy, which the Board, if its conclusion be different, may not be obliged to be bound by. But where the Board considers even the rate suggested by the State Government and finds it to be acceptable in the discharge of its function of fixing the tariffs, the ultimate decision of the Board would not be vitiated merely because it has accepted the opinion of the State Government even about the specific rate. In such a case the Board accepts the suggested rate

> because that appears to be appropriate on its own view. <u>If the view expressed by the State Government in its direction exceeds the area of policy, the Board may not be bound by it unless it takes the same view on merits itself</u>."
>
> [Underlining is ours]

15. In ***Pawan Alloys and Casting Pvt. Ltd.*** (supra), their Lordships of the Apex Court have observed thus:

> "For the purpose of the present discussion we may proceed on the basis that <u>while fixing general tariffs and making them subject to schemes of rebate, the Board exercises delegated legislative function flowing from the Statute. However once incentive rebate is granted in the general rate of tariffs on directions by State under Section 78A, the said incentive rebate offered by the Board would remain in the realm of exercise of statutory power-cum-duty</u>. In the exercise of the same power the Board in its discretion can grant rebate in appropriate cases within the fore corners of Sections 49 and 78A of the Act. Of course this exercise will be subject to legally permissible limits and subject to the said concessional rates being found reasonable on the touchstone of Article 14 of the Constitution of India. It is, therefore, not possible to countenance the submission of Shri Dave that there cannot be any promissory estoppel against the Board when it exercises its powers under Section 49(1) of the Act whatever may be the settings for exercise of this power and even if it is exercised as a part of a scheme of incentive package: required to be offered to new industries as enjoined on the Board as per statutorily binding directions issued by the State to the Board under Section 78A of the Act."
>
> [Underlining is ours]

16. In this context, we may fruitfully refer to the decision in ***Ester Industries Ltd.*** (supra), wherein their Lordships of the Apex Court have held thus:

> "4. Section 78A(1) of the Act postulates that in the discharge of its functions, the Board shall be guided by such directions on questions of policy as may be given to it by the State Government. <u>In other words, the Electricity Board has a statutory function to discharge in determination of the rates of tariff and terms and conditions subject to which the electrical energy be supplied to the consumers and enforcement thereof. This being a legislative policy, while exercising the power under Section 78A policy directions issued by the Government may also be taken into consideration by the Electricity Board which has a statutory duty to perform. But so long as the policy direction issued by the Government is consistent with the provisions of the Act and the tariff policy laid down by the Board, it may be open to the Board to either accept it or may not accept the directions as such</u>. It is for the State Government to consider whether the Board has laid down the policy or whether the direction issued by the State Government has not been properly implemented."
>
> [Emphasis added]

17. In ***Hindustan Zinc Ltd. Etc. Etc.*** (supra), a three-Judge Bench of the Apex Court while interpreting the provisions under the Electricity (Supply) Act, 1948 has opined thus:

> "16. … The question, therefore, reduces itself to this: Whether the failure of the Board to place the matter before and seek the advice of the Consultative Council on this question renders the revision of tariffs made by it invalid? The common premise for the purpose of this case that revision of tariffs by the Board is a question of policy may indicate that it would be open to the Consultative Council to advise the Board also on the question of revision of tariffs, and if such advice is given, then the Board must consider the same before taking the final decision. That, however, does not necessarily mean that where no such advice was taken from the Consultative Council or was rendered on account of the absence of any meeting of the Consultative Council during the relevant period, it would necessarily render invalid the revision of tariffs made by the Board."

18. In ***Kusumam Hotels Pvt. Ltd.*** (supra), the Apex Court interpreted Section 78-A(1) and (2) and held as under:

> "37. The State of Kerala in this case did not grant any concession by itself. The Central Government took a larger policy of treating tourism as an industry. A wide range of concessions were to be granted by way of one-time measure; some of them, however, had a recurring effect. So far as grant of benefits which were to be recurring in nature is concerned, the State exercises its statutory power in the case of grant of exemption from payment of building tax wherefor it amended the statute. It issued directions which were binding upon the Board having regard to the provisions contained in Section 78-A of the 1948 Act. The Board was bound thereby. The Board, having regard to its financial constraints, could have brought its financial stringency to the notice of the State. It did so. But the State could not have taken a unilateral decision to take away the accrued or vested right. The Board's order dated 11.10.1999 in law could not have been given effect to. The Board itself kept the said notification in abeyance by reason of the order dated 8.11.1999."

19. In this regard, we may fruitfully reproduce a passage from ***Laker Airways Limited*** (supra). It is as follows:

> "The word "direction" in section 4 is in stark contrast with the word "guidance" in section 3. It is used again in section 24(2) and (6)(b) and section 28(2). It denotes an order or command which must be obeyed, even though it may be contrary to the general objectives and provisions of the statute. But the word "guidance" in section 3 does not denote an order or command. It cannot be used so as to reverse or contradict the general objectives or provisions of the statute….."

20. Regard being had to the aforesaid pronouncement of law in the field, the justifiability and the legal substantiality of the communication made by

the State has to be tested. As is demonstrable the State is entitled to change or alter economic policies and the said decision has to be in public interest. In the case at hand, the nature of directions issued by the State Government has a different contour. To appreciate the controversy in proper perspective it is necessitous to reproduce the communication sent by the State Government to the Commission:

> "The Secretary,
> Delhi Electricity Regulatory Commission,
> Viniyamak Bhawan,
> Shivalik, Malviya Nagar,
> New Delhi - 10 017
>
> Sir,
>
> Through separate representations to the Government, the three distribution companies, BRPL, NDPL and BYPL have raised the issue of severe cash flow constraints affecting their ability to purchase power in 2010-11. A copy of this representation is enclosed. They have broadly drawn the attention of the Government on the following issues:
>
> 1. Ability to supply power contingent on Cost Reflective Tariff.
> 2. Precarious Financial Position on Discoms.
> 3. Accumulation of revenue gaps beyond sustainable levels.
> 4. Continuation of the practice of assuming higher surplus for tariff fixation.
> 5. Power purchase cost/quantum.
> 6. Continuous recourse to addition debt to finance operations, and
> 7. Critical need to additional financing.
>
> The issues raised by the Discoms are very serious and needs to be examined thoroughly so that the sustainable model of tariff setting as prescribed under section 61 and 62 of the Electricity Act is not jeopardized. Further, the National Tariff Policy at clause No. 5.3(h)-4 has prescribed that uncontrollable costs should be recovered speedily to ensure that the future consumers are

> not burdened with the past costs. It is felt that non-true-up of the account of the year 2009-2010 where quantum of uncontrollable costs were very high, would mean that future consumers would be burdened with the interest cost of the year 2009- 2010 which goes against the above quoted clause of National Tariff Policy.
>
> As the issues raised by the Distribution Companies as well as the issue of burdening future consumers with past liabilities are issues which are very serious in nature, the Government in exercise of its power under section 86(2)(iv) directs the DERC to give statutory advise and clarification to the Government on the issue raised by the Distribution companies in the enclosed representations as well as on the issues covered under clause 5.3(h)-4 of the National Tariff Policy. <u>The Government further directs under section 108 of the Electricity Act, 2003 that the Delhi Electricity Regulatory Commission will not issue the tariff order till the statutory advice given by the Commission as asked for, is thoroughly examined by the Government and the Government gives a go ahead for passing of tariff orders</u>."
>
> [emphasis supplied]

21. On a close scrutiny of the aforesaid directions, it is clear as noon day that there has been an order of prohibition to the Commission not to pass the tariff order. Mr. Dave, learned senior counsel for the respondent would contend that it was issued keeping in view the public interest. The same is not discernible. It is neither evident nor demonstrable. It was an unwarranted interdiction. It is understandable that the State Government could have suggested some kind of a matter relating to policy having nexus with public interest, but unfortunately that is not so. By the impugned communication contained in Annexure P-7, the State Government could not have prevented the Commission from exercising its statutory powers. In any event, under Section 108, the State Government could have only

issued policy direction, not pre-emptory directions, like it did. As submitted by the learned Attorney General for the Union of India, the interpretations placed by the Apex Court on Section 78-A in the decisions which we have quoted in extenso would clearly convey that the State Government as well as the Board functions in different fields within the statutory limits. Any encroachment is not permissible. The case at hand projects that no iota of policy, any way, is discernible and the concept of public interest appears to be a subterfuge, in fact, totally divorced from the arena of public interest. Quite apart from that the communication is in the form of injunction, which we are absolutely indubitable, the State Government cannot issue. This interdiction is decidedly beyond the scope of language employed in Section 108 of the 2003 Act and, in fact, contrary to the legislative intent. Thus, we are disposed to think that the submissions canvassed by learned Attorney General deserve acceptation and, accordingly, we hold that the communication of the present nature made by the State Government is absolutely unjustified, unwarranted and untenable and, accordingly, the same stands quashed.

22. We will be failing in our duty if we do not mention that Mr. Salve, learned senior counsel though had initially supported the order passed by the State, yet later on conceded to the proponement canvassed by the learned Attorney General for the Union of India.

23. In view of our aforesaid analysis, the instruction given by the State vide Annexure-P7 is quashed.

24. The writ petition be listed on 23rd February, 2011 for hearing on other issues before regular DB-1.

CHIEF JUSTICE

MANMOHAN, J.

FEBRUARY 18, 2011
Dk/pk

Annexure - X

Report on the
Tasks -(d) to (f) of HLP Terms of Reference

1) Assess system improvement measures accomplished in distribution of power in particular urban areas as well as future needs/plans.

2) Examine geographical and spatial compulsions and determine their operational impact.

3) Review organization and managerial structure, man power employed and future requirement/ plan."

Submitted to

High Level Panel on Financial Position of Distribution Utilities

Contents

1. BACKGROUND

High Level Panel (HLP) on "Financial Position of Distribution Utilities" has been constituted to look into financial problems of State Electricity Boards (SEBs) and to identify potential corrective steps to be taken in this regards. In this report the scope is Terms of Reference (TOR) numbers (d to f) of the panel i.e.

- Assess system improvement measures accomplished in distribution of power in particular urban areas as well as future needs/plans
- Examine geographical and spatial compulsions and determine their operational impact
- Review organization and managerial structure, man power employed and future requirement/ plan".

A team, under Shri. R.K Narayan Ex. CMD PGCIL&UPPCL, was asked to examine above TOR. Shri R.K Narayan was supported by Shri. A Velayutham, Ex.Member MERC, Shri A.K.Pradhan Ex.Director PVVNL(U.P)& Shri M.K.Gupta Ex.Member (Tech) DVB .

1.1 Outline of the approach and data sources applied

The report has been prepared on the basis of visits made by the team to the utilities /states, presentations made by the utilities, interactions with them , information furnished by them in reference to our letter no 3/1/HLP /2010 dated 22/11/2010. A notice was also issued in news papers requesting public to come forward for suggestions. A copy of the advertisement is placed in Annexure I (However no response has been received)

The following states were visited for interaction with utility/states 1) Gujarat 2) West Bengal 3) Maharashtra 4) Andhra Pradesh 5)Karnataka 6)Tamil Nadu 7) Rajasthan 8) Punjab 9) Haryana 10) Uttarakhand 11) Uttar Pradesh 12) Meghalaya 13) Assam. The presentations and the documents submitted by the utilities are at Annexure II. Discussions were also held with concerned officials of CEA, PFC, BEE and REC. Interaction also held with RAPDRP consultants of IT ,IT Implementation agencies, Third Party Implementation Agency(NPC).

The report can be grouped into following broad areas:-

- Measures to be adopted to bring down AT&C losses, i.e. RAPDRP scheme, energy accounting and auditing, agriculture feeder separation, and metering & billing.
- RGGVY, 24X 7 hrs Power supply for non agriculture consumers and subsidy disbursal.
- Energy conservation
- Human Resources Management.
- Geographical and Spatial compulsion.
- Anti Theft Measures, Subsidy disbursal , Power purchase
- Open Access

1.2 The focus of this study is not on finding faults or criticizing the functioning of the Utility, but on identifying problematic areas that have hampered the operation of utility and suggest possible corrective actions for their improvement so as to ensure efficient functioning of the Utilities.

2. SUMMARY OF KEY FINDINGS AND RECOMMENDATIONS

2.1 Recommendations/suggestions on Task- Assess system improvement measures accomplished in distribution of power in particular urban areas as well as future needs/plans

2.1.1 RAPDRP Programme is right approach for introduction of IT based platform to manage all functions of distribution sector in the country, to start with, in urban areas. However, on examining the status, it is found that the progress in most of the states is slow, particularly in the areas of installation of Central Server, GIS consumer Survey, asset mapping and base level loss determination. It is also noted that Distribution Transformer metering is not progressing as per schedule (As annexed). It was also envisaged that the utility has completed metering of all their 11kV feeders. The following is therefore suggested:-

a. Most of the states have confirmed installation of energy meters on 11 KV feeders. However, Energy Accounting of these 11 KV feeders is not being done by the utilities on regular cyclic basis. Some of them are waiting for GPS based consumer mapping as well as for operationalising of RAPDRP programme Part (A). It is recommended that Energy accounting and auditing of 11Kv feeders be started on the basis of present consumer indexing, which in most states, indicates 33KV substation and 11KV feeder on which a consumer is connected. A 12 month rolling accounting and audit report be prepared and submitted to Utility Top Management every month. Action for loss reduction need not wait for completion of RAPDRP Part .

b. RAPDRP programme is limited to towns having population above 30,000 (10,000 for Special Category States) and covering an area of 40% of energy consumed in the country. Considering that 12%of energy is supplied thru private utilities, and further if we take an average 20% agriculture consumption countrywide, small towns/villages, which consume 28% of energy consumption are left over by the present RAPDRP scheme. It is to inform that rest of the system left over is not complicated as is the case with large town feeders. It is necessary for states to give equal importance to small towns &villages which are not covered in the present scheme of APDRP. With very little effort APDRP can be extended to other areas since the IT backbone is already being built under APDRP Project. Further, GOI is emphasizing development of small towns and villages to minimize the migration of population to towns. Therefore, energy consumption in these areas is bound to increase much faster than as envisaged so far.

   It is, therefore recommended that most elements of RAPDRP programme should be applied to all areas uniformly, except to agriculture, which is being discussed separately (Para 2.1.4).

2.1.2 RGGVY Scheme:- RGGVY, being implemented in most of the states, is progressing satisfactorily. However, there is need to regularly monitor the position of power supply in these villages post commissioning. It has been past experience that in case the power supply is not properly managed and maintained, it may result in consumers not paying for electricity. Some time it was seen that even transformer and conductor were stolen and village was finally declared de-electrified. Proper Management of power supply is a must.

It is asserted that RGGY Scheme cannot be treated differently as a rural scheme. Assets created under this Scheme need be treated at par with towns identified under RAPDRP for supply of power as well as maintenance management..

b) It is also reported by many utilities that under RGGVY they are allowed to build up/ augment capacity of the distribution network taking into account 60 watt load from each BPL family. However, after commissioning of the system, BPL consumer find above load as very low and want to use TV and electric appliances which can go upto a minimum 1 kW. It is pertinent in view of the fact that some APL consumers living in the area also like to get electricity connection by which system can get over loaded and therefore denied connection. Such consumers try to illegally tap the system resulting in overloading. During the discussions with REC, it was conveyed that in such cases, state utility can increase the capacity of the system through their own funds. It is recommended that basic infrastructure such as transformer capacity needs to be built in the village keeping into account of future growth of next 5 years. Any additional expenditure on above can be given as loan by REC, 50% of which can be converted as grant in case the load level in the system is satisfactorily maintained in the level of 15-20% in the concerned village for next five years after commissioning or otherwise, the very purpose of giving grant / assistance by REC/GOI shall not serve the purpose it is expected to serve.

2.1.3 24X7 hrs Electric Supply:- In the order issued for RGGVY in 2005, it was envisaged that

"that states must make adequate arrangements for power supply and that there should not be any discrimination between power supply between rural and urban consumers". But the same was modified in 2008 order wherein it is mentioned that a minimum supply of 6-8 hrs of electricity in RGGVY shall be ensured. In this regards, it is strongly felt that it is necessary that villages are also supplied 24X7 hrs supply as their counterpart in towns for non agriculture consumers. Though, power supply to agriculture pump sets need be regulated in order to ensure efficient water and energy management. For this purpose it is essential to separate feeders for village power supply and power supply to Agriculture pump sets. Government of India may provide incentive/ interest subsidy / grant for meeting the cost of feeder separation schemes. Even feeders supplying power to pump sets be provided with Special Designed Transformer (SDT) as introduced by Gujarat, AP, Karnataka and Maharashtra so that non agriculture load even on such feeders is ensured 24X7 hrs for domestic light and fan use.

2.1.4 Agriculture Feeders

a. In case separation of feeder is not needed in states like West Bengal and Orissa and in North East States in view of less number of pump sets, 24X7 hrs supply to all consumers need to be ensured including metering of all agriculture consumers.

b. All 11KV agriculture feeders are expected to be provided with input meter with remote/automated reading so that energy supplied to agriculture consumers can be computed. Power supply to these feeders need proper regulation for economising water consumption. It is also expected that all new agriculture pumps are provided with energy meters and these are being read regularly. Attempts need be made to arrange that at least 5% agriculture pumps are metered on each feeder so that billing can be done for all pumps on basis of reading of these meters. It is recommended that sample meters are provided in cluster of pump sets having a similar geological feature. It is very important that billing is done only on actual meter readings of these pumps provided with energy meters.

2.1.5 Metering & Billing

a. It has been seen that at present, in some states most of the energy billing is outsourced for bill preparations and distribution of bills and that energy consumption data is also allowed to be stored in Service Provider Server. This need be avoided as manipulation of consumer energy consumption data is possible and utility is left completely at mercy of service provider. It is recommended above practice needs be avoided and meter readings need be down loaded in server owned by Utility. It was noticed that monthly data of energy consumption of the utility and billing is computerised thru service provider covering most of the consumers, however a very few bills are still being prepared manually. These bills are relating to Agriculture pump sets and street lighting and traffic signaling etc. which in some utilities even by now are not provided with meters. Street lights and traffic signaling need be provided with separate meters immediately. It is also recommended that computation of the energy consumption and billing for these consumers be also computerized, for which a very simple software programme shall be needed. In short all energy accounting needs computerization to avoid manual manipulation.

b. Existing Electro mechanical meters need to be changed to Electronic meters expeditiously as old electro-mechanical meters have tendency to become slower with time because of friction in bearings as well they might have already been tempered with. State Utilities have informed that billing have increased even up to 20-30% by change of meters to electronic type with inbuilt anti-temper features. It was also reported that all new consumers are being supplied with electronic meters as per CEA approved specification. However, it is noticed that progress on replacement of old electro mechanical meters is slow. There are more than 20 millions such meters which need replacement. There need for time bound plan for changing such old meters There is need to continuously monitor feeder wise & DT losses and in case of increase in tempering is deducted, utility may even think for mass replacement. However, task of changing all old electro-mechanical meters is enormous as it has been found that even in one progressive state namely Maharashtra, the number of such old meters is about 2 million. Total in whole country can be of the order of 20 million. It can make a very large impact on present level of AT&C losses in case replacement of electromechanical meter with Electronic meters is expedited. It is estimated that country will need annually about 10 million new electronic meters keeping in view of providing meters for new consumers and as well as replacement of old meters. It was also reported by Utilities that there are not many reputed meter manufacturers in the country. It is desired that CEA may look into manufacturing requirement in the country on long term basis.

c. It has been reported that most of the H.T & high value consumers have been provided with electronic meter with remote reading feature. It is desired that these consumers energy consumption is measured and monitored with immediate effect.

d. New meters need be provided so as to enable them to suit future requirement of smart grid which shall be introduced progressively in the country

e. Prepaid meters need be introduced progressively after implementation of R-APDRP as it reduces the work load of meter reading and revenue collection. Suitable rebate need be given to consumers opting for Prepaid Meters. However, it needs a proper marketing network to be established for availability of Prepaid Meter cards as well as for communication with the Utility Server, continuous remote sensing of consumption for close watch required to be kept in case a consumer is not getting his card recharged within a reasonable time. Prepaid meters can also be provided for agriculture pump sets as meter reading is very time consuming and therefore costly. Intelligence needs to be built up in meter for communication with CPU etc & easy availability of prepaid cards or their re-charging.

f. As per Electricity Supply Act 2003, all power consumers are to be metered & regularly read. It is difficult to arrange readings of agriculture pump sets in view of location etc. For this purpose, as discussed under metering in the report, State level negotiations need be held with Telecom companies and other such companies having base in the area such as banks, post offices, franchisees, etc. to get more reasonable rates for providing for remote operation and meter reading arrangements on agriculture pump sets. These companies can also be entrusted with services like billing, bill distribution & revenue collection.

g. Consumer meter board need be brought outside the premises of consumer as far as possible to minimize chances of tempering as well for ease of taking meter reading. Meter reading display can be provided in consumer premises.

h. TOD meters need be encouraged for high value consumers say, 10 kW or above connected load, in order to encourage a culture of load management by the consumers. With introduction of smart grid consumer shall be playing a very important role by participation in grid management

i. Meter reading need be taken by Automatic Hand held Meter Reading Instrument and the readings need be downloaded direct in the Utility server without any manual intervention to obviate any manipulation. CEA should finalise specifications for a common protocol for all types of meter reading instruments.

j. It is noted that earlier there was a failure on part of the utilities in taking meter readings especially in rural areas. As now it has been reported that meters are being provided to all new consumers including agriculture pump sets, it need be monitored whether meter readings is being taken regularly. Otherwise very purpose of providing meters will be defeated. It is suggested that in case a Utility is not in position of taking meter reading by its own staff the same may be done outsourcing but arrangement need be put in place that regular audit of the same is done departmentally or thru an independent third party.

k. It is also desired that accuracy of meters is checked at manufacturing works during final testing, if required thru an independent agency and finally sealed. As far as possible testing/ calibration of meters in the departmental laboratories should be dispensed with, to obviate any malpractices. It is desired that these laboratories now be used as depository of meters received from manufacturers and issued to various consumers and also for tracing a meter history. All above work need be carried now electronically for which system is being worked out under R- APDRP. Meter labs may be used only for random accuracy checking of meters before installation as well as during operation. Allocation of meter to a consumer needs be done thru computerized system so that manual interference is minimized. It is also recommended that repair of meter be avoided in departmental labs. Meter damaged or found faulty need to be returned to manufacturer’s work for repair and resealing.

2.2 Recommendation /suggestion on task:- Examine geographical and spatial compulsions and determine their operational impact

a. In villages and areas far away from Grid, electrification by Solar PV need be encouraged. Even use of biomass, bio-fuel and wind energy will be beneficial. Wind energy is a good source for supplying power to grid connected as well as to non-grid connected locations. As discussed in the report power generation using a DG set with bio-fuel or kerosene may be cheaper when considered with the subsidy given by GOI on providing kerosene in the villages for lighting.

b. Areas such as Sunderban in West Bengal, Kutch in Gujarat, Thar Desert in Rajasthan need be treated at par with Special category states like North East and Hilly states for electrification and be given 90% grant for electrification and building distribution back bone.

c. Solar power can be a good option for agriculture pumps as well as for telecom towers in rural India. Studies have revealed that in near future solar power shall have parity with grid energy as cost of electricity generation.

2.3 Recommendations /suggestions on task:- Review organization and managerial structure, man power employed and future requirement/ plan.

At present except for few states most of the distribution utilities are state government owned. This study and discussions are limited to Public sector distribution utilities only The following are the recommendations:-

a. There is need to have in house core team of IT experts in the organization who can work along with IT Consultants appointed under R APDRP Project. By this not only utility can get their Project implementation successfully completed but also fully take care of IT system during its maintenance phase and also can make its own plan for its future expansion or improvement from time to time. It will be better if the multi functional team of Engineers, finance, HRD etc is kept along with the Core team who will gain experience in the IT and understand both hardware as well as software aspects of IT in addition to its interaction with their respective functions. Under R-APDRP Project there is a provision that IT Consultant as well as IT Implementation agency shall be holding hand with Utility for next five years after commissioning but there is need to build up for utility its own team from the very beginning.

b. Engineers and employees working in Operation and Maintenance, Revenue management and Finance and HRD areas need to be trained to work on computers to fulfill functional need. It is necessary that all new recruitment is done keeping in view above need. The present staff needs a properly developed orientation course to become familiar with the new system and get fully conversant on its operation. If required they should be given incentives to get conversant and operational on new system. All future selection, promotion as well as even increment in pay be made subject to employee passing necessary pro efficiency test on computer.

c. It is necessary that organization structure as well as Human resources required to handle the requirement of new system be modified keeping in view of R-APDRP Project as well as future vision of organization needs arising out of market competition.

d. The new structure needs to be lean with less tiers needed in making decision in view of multiple layers of information which sell be available on line with RAPDRP Project.

e. The corporate structure also needs to be reviewed for future requirement of International Financial Reporting Standard.

f. There is need of proper HRD department with persons having professional experience in dealing with Changed Management and new working culture and training needs. Similar is need for changes in Finance Department and requirement of professional having MBA, ICWA or C.A. Qualification.

g. During visits to various state utilities it has been observed that staff strength is very much on larger side and also average age of employee is above 50 years. It was also observed a large force of employees have no basic qualification and may not fit in new working environment. There is need that such states examine whether some of these employees can be made use of in some other state departments. Scheme like voluntary retirement need be examined as was done in Delhi after privatization. Scheme adopted in Maharashtra, where retiree employee’s relation was allowed preference for new employment, need be examined.

h. In most of the states the service condition provides for pension related benefits. These states are facing difficulties in meeting these liabilities. In order to reduce the financial burden of utilities, it is suggested that distribution utilities need changes in service conditions of new employees on the lines of contributory pension scheme adopted in Central PSU’s.

i. There is need to have transparent and all India based selection of Chief Executive of the Utility. Following selection committee is recommended for the selection :-

- Chief Secretary of the state –Chairman
- Chairman CEA/Member CEA
- Director of an IIT for technical posts/ Director IIM for financial and account post/ P&A posts
- One representative from Public Enterprises Selection Board, GOI

For the Board Members of the Utility, instead of the Chief Secretary, Principal Secretary Energy may chair the Selection Committee with CEO as one of the members. The other members shall remain the same.

j. Utility should have a full time CEO competent to take and implement all executive decisions. Further, the CEO of the utility, under no circumstances should be the Chief Secretary of the State

k. Term for posting be for a period of five years. Govt. officials who are interested / selected in joining the utility have to agree to serve full term of five year service, so that persons selected can be made responsible and answerable for the results. Termination or removal from the service of such executive(s) shall also need to be cleared by the above committee.

l. There is a need for at least 2 non executive independent directors from amongst the persons who have served in the power sector at Central level or in any other states.

m. There is need that utility is prepared to have at least 26% public share holding in 5 year period.

2.4 Other Recommendations

2.4.1 Anti Theft Measures

a. It is necessary that continuous measures are taken by the Utility to keep T&D loss level to a minimum level. Sometimes certain consumers adopt novel means for dishonest abstraction of electricity. It is necessary that functional working is coordinated not only at Board level but at zonal as well as circle level. For this purpose utility be made functionally strong at zone and circle level and finance, personal and administration personnel and police staff deputed for ensuring anti theft measures report to circle and zonal chief as well.

b. Group incentive scheme need be declared so that staff working at different level work in close coordination among themselves.

c. Police staff/home guards deputed should have full police power as they had in active police service so that they can take effective action in lodging theft FIR etc. State Government needs special notification to ensure above delegation of power. It is necessary that special police thanas are established at district level where FIR against theft of electricity can be lodged exclusively and such thanas are under administrative control of Police officials posted in the Utility. It is also seen that special courts are not established in numbers of states, resulting cases lodged for theft of cases takes long time and proper message is not gone in public that any dishonest consumer of electricity shall not go unpunished. It is necessary that local staff is made responsible for any theft of electricity in their areas and that they keep proper check on the same regularly. Side by side Utility wise squad be organized and deputed after scrutiny of consumer data. However, a message should go to local staff that detection of large theft by centre team shall bring negative marking while deciding on their incentive as well as promotion etc. There is a need that legal staff is also posted at district level who can pursue cases against theft in courts without much involvement of technical staff. Such staff can be outsourced but need be paid based on increase in revenue collection by adopting antitheft drives.

2.4.2 Disbursal of Subsidy

a. It is recommended that Distribution utility do the billing based on actual meter reading and cost of supply as fixed by state regulator for all consumers including agriculture. The state government needs to make arrangement for disbursing subsidy to these consumers directly, instead of paying to utility (which is most cases paid partially or not paid at all). Subsidy should be based on land holding rather than per pump set.

b. Domestic consumers with consumption less than 300 units per month should be covered under the cross-subsidization.

2.4.3 Power Purchase

It is observed that many utilities have large components of short term power purchase. Since this is an expensive niche and power procurement constituting about 80-85% of the cost reflected in ARR, efforts should be made that the utilities plan for next 5 years or more, for procuring power by bidding process under case 1 or case 2 routes. It has also become obligatory for all utilities now to do so as per CERC notification as well as National Tariff Policy.

There is a also a need to organize a special planning cell in the utility so as to look after day to day scheduling of power requirement and to do short term purchase or sale of power on basis of day to day fluctuations of load in most economical manner.

2.4.4 Open Access

With the completion of R-APDRP Projects in states including a Utility level LD&C centre, it will be possible to facilitate open access upto 11 KV feeder and 100 Kw load. It is necessary that recommendation of FOR be implemented by states in order to promote open access as provided in Act so as to bring competition and efficiency in Electricity Market.

However, SERC should decide proper TOD tariff for open access consumers or decide additional surcharge by SERC suitably keeping in view the obligation of state utility to supply power so as to cover up the fixed cost of such power.

Intention should be to make available additional power to state system to meet power shortage at most economical cost.

3. DETAILED REPORT

As per Constitution of India, Electricity is a concurrent subject, wherein Government of India (GOI) has mandate for doing long term planning, taking long term policy decisions and enacting Acts concerning electricity supply in consultation with states, while states are responsible for supply, transmission and distribution within a state. The first Electricity Act regarding the electricity supply and business was enacted by GOI in 1910, popularly known as ''The Indian Electricity Act 1910''. It deals with the supply and use of electricity energy and rights and obligations of persons licensed to supply electricity. Later on after independence, The Electricity (Supply) Act 1948 was enacted by GOI dealing with the statuary power and functions of the Central Electricity Authority (CEA), State Electricity Boards (SEBs) and Generating Companies, providing for rationalization of the production and supply of electricity and for taking measures conducive to electrical development. Main responsibility of policy decisions and long term planning was with GOI which was to be taken in consultation with CEA while its implementation especially regarding distribution and supply of power to ultimate consumers was left entirely with SEBs, under control of state governments. Time to time amendments in these acts had been carried out to meet needs of the time.

The Electricity Act 2003 was enacted in 2003, in order to consolidate all amendments in Electricity laws as well as to bring in measures conducive to development of electricity industry promoting competition there in, protecting interest of consumers and supply of electricity to all areas, rationalization of electricity tariff, ensuring transparent policies. Constitution of Central and State Electricity Regulatory Commissions and establishment of Appellate Tribunal and for matters connected therewith and incidental thereto.

In late sixties India faced heavy shortage of food grains with increasing large population growth, bringing country on brink of famine condition and large dependence on food grain import. It was at this stage that GOI decided to increase agriculture production by bringing in more land area under agriculture production thru irrigation canals system as well as by allowing installation of large number of irrigation tube wells. This resulted in internal food sufficiency in the country, popularly known as First Green Revolution. However, this has also resulted in SEBs going in for rural electrification in big way by laying transmission as well as distribution lines to electrify Irrigation Tube wells. Not much care perhaps had been taken regarding increased technical losses as well as commercial issues such as tariff to be charged as well as other associated issues like metering, billing and revenue collection etc.

For gaining popularity among farmers, states started announcing cheap electricity to agriculture pump sets and some time announcing free electricity to these consumers. Slowly, SEBs started suffering financial losses. This resulted in under investment in strengthening transmission and distribution network in the country, thereby resulting in increase in technical as well as commercial losses and also in poor quality of power and frequent supply breakdown. Electricity blackout and brownout had become very common.

This had resulted in non- payment of dues to central generation and transmission companies by states/ SEBs. Not much new investment was possible in transmission and distribution system until and unless health of distribution companies is improved. International Development Agencies like World Bank, ADB as well as private investors were reluctant in investing money in power sector, which is the backbone and most important of all the infrastructure needed for fast economic development in the country. Therefore, GOI in early 2000, based on recommendation of Ahluwalia Committee Report, came out with Reform Plan to bail out the states and SEBs financially and at the same time pleading SEBs for improving their performance. This has resulted in signing MOUs by states with MOP GOI for carrying out time bound Reforms in their working as well as allowing them to raise bonds for making payment of arrears to Central Utilities including Indian Railways.

Two major projects at present under implementation with GOI support are:

a. Restructured Accelerated Power Development Program (R-APDRP) with Power Finance Corporation as nodal agency.

b. Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) with Rural Electric Corporation as nodal Agency

3.1 Evolution of R-APDRP

Power Distribution Sector has always been identified as a significant link in chain of power generation & supply as financial viability of entire power sector depends on financial viability of this sector as it is solely responsible for collecting energy charges from consumers. However, high commercial & technical losses in this sector have always placed enormous financial burden on state and central governments.

Aiming financial turnaround in the sector, MOP, GOI launched Accelerated Power Development Program (APDP) in 2000-2001 wherein additional central plan assistance was made available to states undertaking distribution reforms in a time bound manner by signing MOU with MOP. The funds were for 63 distribution circles identified as Centers of Excellence by adopting various interventions.

In March 2002, APDP was rechristened as APDRP with urban focus & introduction of reforms element. Incentive scheme was introduced for utilities achieving cash loss reduction. The AT&C losses during this program were reduced from 38.86% in 2001-02 to 29.24% in 2007-08. During 2009-10 the loss reduction has been below 1%. Therefore, the absolute level of losses were still at a higher level and needed further efforts for achieving lower loss levels. Also reliable & verifiable baseline data for revenue & energy were required for verifying exact AT&C losses in an area and further detection of commercial and technical loss pockets.

In order to achieve the above objective, the need for adoption of integrated IT system by utilities was recognized and hence, MOP, GOI launched restructured APDRP (R-APDRP) in July 2008 as a central sector scheme for XI Plan

FEATURES OF R-APDRP

Power Distribution Sector:

- Financial viability of entire power sector depends on financial viability of distribution sector as it is solely responsible for collecting energy charges from consumers

- Burgeoning commercial & technical losses in this sector have always placed enormous financial burden on state and central governments

IN THE BEGINNING as APDP in 2000-2001:

- Aiming financial turnaround in the sector, MOP, GOI launched Accelerated Power Development & Reforms Program (APDP) in 2000-2001 wherein additional central plan assistance was made available to states undertaking distribution reforms in a time bound manner by signing MOU with MOP
- Scheme was for 63 distribution circles identified as Centers of Excellence

MODIFIED AS APDRP FROM 2002:

- In March 2002, APDP was rechristened as APDRP with urban focus & introduction of reforms element. Incentive scheme was introduced to incentivize utilities achieving cash loss reduction.
- The program continued in tenth plan and was officially closed on 31-03-09
- Although AT&C losses reduced from 38.86% in 2001-02 to 29.24% in 2007-08, reduction to desired 15% targeted level was not achieved.
- The loss reduction too was not on sustainable basis.
- Reliable & verifiable baseline data for revenue & energy was not available.

R-APDRP SINCE 2008:

Since reliable & verifiable baseline data of revenue and energy was not possible without adoption of integrated IT system by utilities, MOP, GOI launched restructured APDRP (R-APDRP) in July 2008 as a central sector scheme for XI Plan.

The project provides for an IT Consultant to help Utility to modify the standard specifications to certain extent to suit Utility specific requirement as well as help it to implement the project. It provides for an Implementing Service Provider selected thru bidding process from eligible experienced IT Companies to implement the project both providing hardware as well as software. As scope may require more than one special expert company Implementation Agency shall be responsible to coordinate and integrate all activities and shall be single point Responsibility Centre to finally delivering the goods as per scope. The scope also provides for hand holding by Implementing Agency after commissioning of the project for 5 years, by which time it is expected that Distribution Agency shall be in position to self manage the total management.

Project also provides for appointment of third party Independent evaluation agency (TPIEA) by PFC to independently assess the work completed and results derived by Utility in system improvement enabling it to claim grant and other incentives from GOI. The Project also provides for suitable training of Utility employees which is very necessary for successful implementation as well as later on to utilize the systems built under the project.

The scheme comprises of two parts-Part-A, Part-B & Part-C:

R-APDRP (Part-A):

- Part-A of the scheme being dedicated to establishment of IT enabled system for achieving reliable & verifiable baseline data system.
- Installation of SCADA/DMS for towns with population greater than 4 lakhs & annual input energy greater than 350MU is also envisaged under Part-A.
- All towns with population greater than 30,000 as per 2001 census eligible (10,000 for Special Category States).
- 100% loan is provided under R-APDRP for Part-A projects & shall be converted to grant on completion of same.
- MOP GOI has earmarked Rs.10000 Cr for R-APDRP Part-A.

R-APDRP (Part-B):

- Part-B deals with regular Sub Transmission &Distribution system strengthening & up gradation projects
- The focus for Part-B shall be loss reduction on sustainable basis
- 25% loan (90% for special category states) is provided under Part-B projects and up to 50% of scheme cost (90% for special category states) is convertible to grant depending on extent of maintaining AT&C loss level at 15% level for five years.
- These five years shall start one year after year in which Baseline Data Acquisition System (Part-A) of project area has been completed & verified by independent evaluating agencies
- Up to 10% scheme cost for Part-B can be converted to grant each financial year for normal category states and up to 18% of scheme cost can be converted to grant each financial year for special category states on attaining 15% AT&C loss level for that financial year
- MOP GOI has earmarked Rs.40000 Cr as loan for R-APDRP Part-B

R-APDRP (Part-C):

- R-APDRP Part-C has provision of Capacity Building of Utility personnel and development of franchisees.
- Pilot projects adopting innovations are also envisaged under Part-C
- MOP GOI has earmarked Rs. 1,177 Cr under Part-C
- Of above, Rs.850 Cr as services rendered by Nodal Agency,

Third Party Independent Evaluating Agencies, Advisors and Project Management Consultants:

- Rs. 200 Cr earmarked for Capacity Building and Franchisee Development
- Rs.50 Cr earmarked for Pilots Projects
- Rs.77 Cr earmarked for miscellaneous activities like best practices workshops etc.

R-APDRP (Incentive Scheme)

Scheme envisages incentive scheme for utility employees in towns where AT&C losses have been bought below 15%.

- 2% of annual grant converted for Part-B for a particular town where AT&C losses have been brought below 15% shall be allocated by MOP for this purpose. Utility too shall match the funds and disburse to such employees.
- Model Incentive Scheme shall be formulated by MOP on basis of which each utility to submit such incentive scheme for approval from steering committee prior to disbursements under Part-B.

MOP GOI has earmarked Rs. 400 Cr for said scheme.

R-APDRP (Eligibility Criterion for states)

- Constitute SERC
- Achieve AT&C loss reductions at utility level every year starting one year after first project under Part-A is completed. The targets are 3% reduction per year for utilities having AT&C loss levels above 30% and 1.5% reduction per year for utilities having AT&C loss levels below 30%.
- Devise suitable incentive scheme for staff linking to achievements of AT&C loss reduction in project area.
- Submit previous year's AT&C loss figures of project areas as verified by independent evaluation agencies every year by 30th June every year.
- Commit time frame for introduction of measures for better accountability at all levels.

Third Party Independent Evaluating Agencies-IT (TPIEA-IT)

- To be appointed by Nodal Agency
- Shall verify completion of Part-A Projects by Utilities
- Successful Completion by Utilities shall enable conversion of entire loan for Part-A projects to Grant.

Third Party Independent Evaluating Agencies-Energy Audit (TPIEA-EA)

- To be appointed by Nodal Agency i.e. PFC
- To certify initial AT&C losses in project areas as per methodology
- Annual Verification of AT&C loss levels in project areas using baseline data acquisition system installed.
- Annual Verification of AT&C loss levels of Utility
- Submitting Quarterly Reports on AT&C loss levels in project areas to Nodal Agency

KEY MILESTONES ACHIEVED AS ON 31.3.2011 under RAPDRP is given as per annexure

The main technical feature of RAPDRP Project formulated for states by PFC have been worked after large deliberation with states by Ministry of Power and also on recommendation made by Task Force for restructuring of Accelerated Development and Reforms Program (R- APDRP) under Sri P Abraham 2006 and updation of IT Task Force 2002 r-ecommendation by its chairman, Sri Nandan Nilekeni in 2008.

Salient Technical Features of The System Review Specification (SRS) are as follows

Part A Required for setting up an IT backbone for collection of baseline data, Energy Accounting/Auditing and establishment of Customer Care Centers

1) Module - Meter data acquisition
2) Module - Energy Audit
3) Module - New Connection
4) Module - Disconnection and dismantling
5) Module - GIS based Consumer Indexing and asset mapping
6) Module - GIS based integrated network analysis module
7) Module - Centralized Customer Care services
8) Module - Management Information System (MIS)
9) Module - Web Self Service
10) Module Identity and access Management System
11) Module -System Security Requirement

PART B – Requirement based implementation of commercial Processes like metering, billing and collection for utilities, who have not implemented such IT enabled system so far consisting of:

1) Development of commercial based database of consumers
2) Module - Metering
3) Module - Billing
4) Module - Collection

PART C Other Optional Application Packages

1) Module - Asset Management
2) Module - Maintenance Management

Discussions

It can be seen that implementation of above Project shall result in complete Change in Management of Distribution Business of the Utility, making available all required information to Utility as well as consumer on line, facilitating better and quality service as well as utility performance. This action by GOI is most commendable initiative. However, it is felt by Panel that Utility need to own the project and should not consider it as GOI or PFC initiative and need be totally involved in successful implementation of the project. The project also need be driven by Utility Management. IT Consultant and IT Implementing Agency need not be looked as mere contractor but as associates in driving Change Management in the Utility. The present progress on RAPDRP is enclosed at annexure.

It was informed by PFC that in most of the utilities that metering for all 11 Kv feeders has been accomplished. The ring fencing of targeted towns is also progressing satisfactorily in most of the states. However, metering on DTs is not keeping pace with desired target. It was also felt during discussions that most time consuming module in implementation of R-APDRP Project is of building GIS based consumer database and is lagging behind. The other area in which there is delay is DT metering . Metering to be done on LT side of DT is cumbersome and temper prone. Some states have suggested metering done on 11 kV side of DT the same need consideration. The above module shall be foundation for getting Feeder or DT base consumer data, essential for energy accounting and auditing. Energy accounting is most important indicator for pinpointing the location having theft or high loss of energy and to enable utility to take immediate measures. It is agreed that GIS base consumer data is essential but energy audit need not wait for completion of above module or completion of DT metering. It was informed that in most of the Utilities the present consumer indexing give reasonable feeder wise data about consumers and the same need be used for controlling theft and losses. Energy accounting and audit needs not wait for R-APDRP Project but need be continued or started at least on basis of 11 KV feeder metering and with existing consumer data. A 12 month rolling report be prepared and submitted to Utility Top Management every month.

It has been reported by PFC , that under APDRP program me 1401 towns/ cities towns with population greater than 30,000 as per 2001 census (10,000 for Special Category States) are being targeted . RAPDRP programme is limited to towns having population above 30,000 that means covering this area of about 40% of energy consumed, considering that 12%of energy is supplied thru private utilities, Further if we take an average 20%agriculture consumption countrywide, small towns/villages which consume 28% of energy consumption are left over by the present scheme. It is to inform that rest of the system is not complicated as is the case with town feeders. It is necessary for state to give equal importance to small towns &villages which are not covered in the present scheme of R-APDRP and with very little effort R-APDRP can be expanded to these areas since the system is already being built under R-APDRP. Further, GOI is emphasizing development of small towns and villages to minimize the migration of population to towns .Therefore energy consumption is bound to increase much faster than as envisaged so far. It is recommended that Utilities need not limit their scope to above towns only but should take up the same in rest of the area as well.

3.2 RURAL ELECTRIFICATION PROGRAMME: RAJIV GANDHI GRAMEEN VIDHUITKARAN YOJNA

GOI felt that the electricity infrastructure improvement not only limits to large utilities or towns covered under RAPDRP also to be executed to rural areas. For this purpose input meters are also being provided on11K.V feeders also . This is needed also for the reason that more than 7 crore new consumers are expected to be added under Rajiv Gandhi Grameen Vidyutikaran Yojna all over the country as discussed later on Rural Electrification Programme.

India used to be predominately an agriculture based society. Even today more than 60% of the population lives in villages and depends on agriculture. India in late sixties and early seventies took major efforts to take electricity to rural India but main aim was to install agriculture irrigation pump sets to increase irrigation areas and increase agriculture production. Today we can proudly say that despite of its very large population, the country is self sufficient in food production not only for feeding its masses but also exporting the same sometime. By year 2000, we had more than 12.5 millions pump sets working mostly in rural belt. However, not much emphasis was given to electric supply to households in rural areas with the result not more than 44% house hold in rural India enjoyed benefit of electricity.

As per first National Electricity Policy formulated in 2005 as required by Electricity Act 2003 Clause 3, the following are aims and objectives:

i) Access to Electricity –available for all households in next five years

ii) Availability of power- Demand to be fully met by 2012. Energy and peaking shortages to be overcome and adequate spinning reserve to be available

iii) Supply of reliable and quality power of specified standards in an efficient manner and at reasonable rate

iv) Per capita availability of electricity to be increased to over 1000 units by year 2012

v) Minimum consumption of one unit/household as a merit good by the year 2012

vi) Financial Turn around and commercial viability of Electricity sector

vii) Protection of consumer's interest

Also above policy laid out the plan for Rural Electrification and aimed for creating following:-

a. Rural Electrification Distribution Backbone (REDB) with at least one 33/11 KV or 66/11 KV substation in every block and more if required as per load, networked and connected appropriately to the state transmission system.

b. Emanating from REDB would be supply feeders and one distribution transformer at least in every village settlement.

c. Household electrification from distribution transformer to connect every household on demand.

d. Where above is not feasible (it is neither cost effective nor optimal solution to provide grid connectivity) decentralized distribution generation facilities together with local distribution network would be provided so that every household gets access to Electricity. This would be done either through conventional or non conventional methods of electricity generation whichever is more suitable and economical. Non conventional sources of energy could be utilized even when grid connectivity exists provided it is found cost effective.

e. Development of infrastructure would also cater for requirement of agriculture and other economic activities including pump sets. Small and medium industries, khadi and village industries, cold chain and social services like health and education.

The policy also talks about special emphasis on electrification of dalit basties, tribal areas and other weaker sections. It emphasizes also on recovery of cost of supply by distribution licensee but support to lifeline to household below poverty line who would be adequately subsidized. Subsidies should be properly targeted at the intended beneficiaries in most efficient manner.

Under RGGVY following infrastructure is to be developed:

- Rural Electricity Distribution Backbone (REDB) with 33/11 KV (or 66/11 KV) sub-station of adequate capacity in blocks where these do not exist.
- Village Electrification Infrastructure (VEI) with provision of distribution transformer of appropriate capacity in villages/habitations.
- Decentralized Distributed Generation (DDG) Systems based on conventional & non conventional energy sources where grid supply is not feasible or cost-effective

The scheme provides 90% grant from central government on capital expenditure for which a provision was kept for Rs 5000 Cr in X plan &Rs 28000 Cr in XI plan for capital expenditure by GOI. Rural Electrification Corporation was made the nodal agency for implementation. Provision was also made for proper training of employees as well franchisee to be employed by distribution licensee for management of electrified villages under the scheme. Ministry of Power also made services of central public sector undertakings, like NTPC, NHPC, DVC and POWERGRID, available for implementation of the projects approved by REC/MOP. CPSUs were supposed to hand over the completed projects to state distribution utilities after its completion. For better quality control independent agencies were appointed by REC for checking quality of plant and equipment of the projects such completed. The fixation of Meter Board within premises of BPL consumers as per norms of Kutir Jyoti Programme was kept in the scope of projects for which 100% subsidy has been provided.

It will be interesting to know that definition of electrification of a village has gone changed. Prior to Oct 97, while a village was considered as electrified earlier if electricity is being used within its revenue area for any purpose what so ever. With this, if a Tube well is energized in revenue area of a village, it was qualified as electrified. As per definition after 2004-05, a village would be declared as electrified if

i) Basic structure such as distribution transformer and distribution lines are provided in the inhabited locality as well as the Dalit Basti / hamlet where it exists

ii) Electricity is provided to public places such as schools, panchayat offices, health centers, dispensaries, community centers etc and

iii) The number of households electrified should be at least 10% of the total number of household in the village

In February 2008, the RGGVY was extended for the XI Plan with an estimated investment of Rs 28000 Cr to cover up all the villages numbering 1.15 lakhs and covering approximately 2.34 Cr BPL households. Subsidy up to 90% as provided earlier was continued.

As it stands till 15th March 2011, achievement so far on the scheme is as follows:-

Electrification achievements:

Villages	**Numbers**	**Total RHH**	**BPL**
Un Electrified	96815		
Electrified	191444		
Total	288259	17532533	16060656

Franchisee system in the states

States	Villages
16	110790

Funds released by REC

Cost of the projects sanctioned	Rs 26349.03 Cr
Awarded/Revised cost of the projects approved	Rs 32333.59 Cr

Funds released by REC to the states

Loan	subsidy	Total
Rs 2454.66 Crs	Rs 22883.39 Crs.	Rs. 25338 Cr

It was also provided that a minimum supply of 6-8 hrs of electricity in the RGGVY network shall be ensured with an assurance to meeting any deficit in this context by supplying electricity at subsidized tariff as required under Electricity Act 2003. This is reducing minimum power supply hours which was provided under orders issued earlier 2005, which mention of

“” states must make adequate arrangements for power supply and there should not be any discrimination in the hours of supply between rural and urban consumer””

Discussions on the issue

During discussions on the subject with the states, it was informed that they are not properly monitoring supply hours to rural consumers specifically to new rural consumers added up during RGGVY schemes as well as satisfaction level services provided by the Utilities. During discussions with Rural Electrification Corporation it was found that they are also not insisting with states for keeping such records. It is strongly felt that in case the electricity is not provided for sufficient hours specially during evening hours, there are chances that consumer become dissatisfied and may resort to non payment of electricity dues which in long run may result in consumers opting for disconnection or resorting to theft. In past it has been found that villages declared electrified are found to be un-electrified and even infrastructure built earlier had been stolen. Such villages are being taken up for electrification again under RGGVY scheme in name of re-electrification of villages. It is observed that in some States, the BPL families are not able to pay their electricity bills leading to dis-connection. As such 50 Units per month per BPL family for a period of 2 years may be included in the cost of RGGVY scheme.

It is strongly felt that in order to supply sufficient hours of power supply to village area, 11 KV village feeders need be separated, one for village non agriculture consumers and other for supply to Irrigation pump sets. It is strongly felt that Irrigation pumps do not need power for more than 8hrs supply and time for supply can be regulated say in three batches supplying power for maximum 8 hrs supply each. This will help in saving in wastage of water which in my opinion is as much important as saving in Electricity as water table in majority of the states has gone down, with the result farmers are resorting to bore deeper tube wells resulting in higher horse power capacity pump sets. It is strongly felt that separation of feeders is must so as to properly manage the power supply to rural areas. Separation of Irrigation feeder can be remotely controlled at 33/11 KV substation along with proper metering system, which help us in determining realistic consumption of irrigation pump sets on a particular feeder and help us in carrying more reliable energy audit of distribution system & determining subsidy at State Government level. As regards meter reading of pump sets is concerned, the same can be done from time to time so as to see that at least meters are working. Discussions with some telecom companies including Tata Telecom were also held who had done pilot projects in Gujarat to enable a farmer to remotely switch on and off after getting indication of position of availability of power at the pump house by installation of a modem along with meter with a provision of starter also part of the metering panel. This ensures proper starting of the pump set as well as control on running of the pump or otherwise it has been seen that farmer normally leaves the pump set in on position as he is not aware as when power will be available and pump runs sometime even when water is not needed in the field thus wasting water as well as Electricity on getting power. This result in starting of all such pumps, thus drawing very large current and which sometime trips the entire feeder on overload. The telecom modem can also be used for remote meter reading. This was informed that fixing of modem shall cost extra of about Rs 2000 and recurring expenditure of Rs 20 per month. This does not include cost of three phase meter which even today Distribution Company is supposed to install. By fixing up above smart panel not only gives information on energy consumption but also of running hours of pump sets. It also helps us in minimizing running of pumps. It is desired that GOI should take up with State Government on issue of conserving water which perhaps today has become very important on account of scarcity of ground water. State governments can also make arrangement for electricity as well as water used thru smart metering system or directly thru UID schemes.

From above, it is clear that separation of feeders for agriculture purpose and for use in village for other uses is a must. There is no provision of any GOI incentive scheme for separation of feeders. The importance of separation of feeders has been recognized by all state Governments and utilities. Some states like Gujarat, Maharashtra, AP, Punjab etc are taking up above scheme on priority but during discussions they have desired that funding of above scheme by GOI at nominal interest be provided. It is felt that improvement in power supply to villages is a must in case we want development and prosperity of the country rural area. This will improve life & there by satisfaction level of rural consumer. Even in villages small and medium industries, khadi and village industries, cold chain and social services like health and education can be developed there by checking the population flow from villages to cities.

During discussions Gujarat had conveyed that by separation of feeders and ensuring 24x7 hrs supply to villages they have found that satisfaction of rural consumers has increased and they are ready to pay for electricity charges regularly. It has also been reported that migration of population from villages to big cities has slowed. As such the Committee feels that the Government of India may provide incentive/ interest subsidy / grant for meeting the cost of feeder separation schemes.

Of course village development has to be seen bringing other infrastructure such as easy accessibility by road. Communication, hospitals, schools and water supply are also needed but need not say that regular power is basic and very important to start with. RGGVY scheme envisages more than 7 Cr consumers ultimately to be added up. We should not leave these consumers for second stage reform and should include improvement in power supply, metering, billing and realization of electricity charges as well, as proper customer services in rural area also along with towns being taken up under present R- APDRP scheme. Needless to say that Energy audit of rural consumers is much easier as compared to in towns and cities as chances of change of feeder supplying power is very remote in villages.

Gujarat has also provided for SDT (Special design transformers) even on agriculture feeders so that even house hold consumers living on their farms which are connected on these feeders can also get 24x7 hrs single phase power supply for light and fans while restricting three phase supply to agriculture pumps for maximum 8 hrs. During discussions Maharashtra, AP, Karnataka and Punjab has also informed about adopting similar system.

Of course in case of state like West Bengal, Orissa and North East States, where Agriculture consumption is very low there is a possibility not to go for separation of rural feeder, however it is recommended that no discrimination be made in power supply in rural non agriculture and urban consumers. It is also desired to examine means to restrict power supply to limited hours to Agriculture pump sets in these states be also resorted to by adopting IT application in order to conserve water as well electricity.

It is also reported by many utilities that under RGGVY they are allowed to build up/ augment capacity of the distribution network taking into account 60 watt load from each BPL family. However, after commissioning of the system, BPL consumer find above load as very low and want to use TV and electricity appliances which minimum goes upto atleast 1000 watts. Some APL consumers living in the area also. like to get electricity connection by which system can get over loaded and therefore denied connection. Such consumers try to illegally tap the system resulting in overloading. During the discussions with REC it was conveyed that in such case, state utility can increase the capacity of the system through their own funds.

It is recommended that basic infrastructure such as transformer capacity need to be built in the village keeping into account of the future growth of next 5 years. Any additional expenditure on above can be given as loan by REC, 50% of which can be converted as grant in case the load level in the system is satisfactorily maintained in the level of 15-20% in the concerned village for next five years after commissioning or otherwise, the purpose of giving grant / assistance by REC/GOI shall not serve the purpose it is expected to serve.

3.3 METERING SYSTEM

Metering System is most important area in power distribution sector and includes not only meter but also its associated equipment such as PT and CTs. Its accuracy should meet a minimum accuracy level as provided in CEA regulation on Installation and Operation of Meters dated 17th March 2006. It is interesting to note that above regulations provides for installation of only electronic meters for all interface meters, consumer meters as well as Energy Accounting and Audit meters. Thus to great extent issue of installation of electromechanical meters vs. Electronic meters is over as use of electronic meters is recognized better in view of ease of provision, its interactive features and remote meter reading capability. State Power Distribution Utilities have by and large recognized the same and are providing electronic meters on all new registered consumers. It has also been informed by all utilities that they are providing meters on all new consumers as provided in Electricity Act 2003 including agriculture consumers.

However, the following points need to be taken carefully:

- Existing Electro mechanical meters need to be changed to new Electronic meters expeditiously as old electro-mechanical meters have tendency to become slower with time because of friction in bearings as well might have been tempered with. The state Utilities have informed that billing have increased even up to 20-30% by change of meters to electronic type with inbuilt anti temper features. It was reported that all new consumers are supplied with electronic meters. However, it is noticed that progress on replacement of old electro mechanical meters is very slow. There are more than 20 millions such meters which need replacement. There, is a need prepare a plan for changing such old meters There is need to continuously monitor feeder wise & DT losses and in case increase in tempering is detected, utility may even think for mass replacement of meters. However, task of changing all old electro-mechanical meters is enormous as it has been found that even in progressive state namely Maharashtra, the number of such old meters is about 2 million. Total in whole country can be about 20 million. It can make a very large impact on present level of AT&C losses in case replacement of electromechanical meter with Electronic meters is expedited. It is estimated that country will need annually about 10 million meters keeping in view of providing meters for new consumers and replacement of old meters. It was also reported by Utilities that there are not many reputed meter manufacturers in the country. It is desired that CEA may look into manufacturing requirement in the country on long term basis.
- It has been seen that at present, in some states most of the energy billing is outsourced for bill preparations and distribution and that energy consumption data is allowed to be stored in service provider Server. This need be avoided as manipulation of consumer energy data is possible and utility is left completely at mercy of service provider. It is recommended above practice need be completely

avoided and meter readings need be down loaded in server owned by Utility, till software which is being prepared under RAPDRP is completed. It was noticed that monthly data of energy consumption of utility is prepared mostly thru service provider covering most of the consumers; however a few bills are still being prepared manually. These bills are relating to Agriculture pump sets and street lighting and traffic signaling etc. which are even now not provided with meters. Street lights and traffic signaling need be provided with meters immediately. It is also recommended that computation of the energy consumption be also computerized for which a very simple programme is needed. In short all energy accounting need computerization to avoid manual manipulation.

- It is also desired that meters need to be brought at the front of the premises of the consumer or even meters can be provided on nearby electric pole and consumer may be provided with meter repeat display for his information. Utilities during discussions have recognized the importance of above action in order to facilitate meter reading without disturbing consumer to the extent possible as well as tempering of the meter by dishonest consumers.
- Meter reading need be taken by Automatic Hand held Meter Reading Instrument and the readings need be downloaded direct in the Utility server without any manual interference and manipulation. For this purpose it is necessary to have an open protocol for all types of meter reading instruments and these should not be manufacturer-specific. It is therefore necessary that CEA should finalise specifications for a common protocol for all types and makes of meter reading instruments.
- TOD meters need be encouraged even for light and fan load in order to encourage a culture of load management by consumer. With introduction of smart grid consumer shall be playing a very important role by participation in grid management
- It is noted that earlier there was a failure on part of the utilities in taking meter readings especially in rural areas. As now it has been reported that meters are being provided in all new consumers including agriculture pump set, it need be monitored whether meter readings is being taken regularly. Otherwise very purpose of providing meters will be defeated in case meter readings are not taken regularly. It is suggested that in case a Utility is not in position of taking meter reading by its own staff the same may be done thru outsourcing but arrangement need be put in place that regular audit of the same is done departmentally or thru an independent third party.
- With R-APDRP program under implementation and integration of IT in system and process, it is worth increasing the use of Prepaid Meters, which eliminate efforts needed in taking metering and collection of revenue collection. However, it needs a proper network to be established for availability of prepaid meter cards as well as an inter communication to Utility Server, as the new card is inserted in consumer meter

panel continuous remote sensing of consumption as well so that a close watch is kept on consumer in case he is not getting his meter recharged within a reasonable time. Suitable rebate in tariff need to be given to these consumers. Prepaid meters can also be provided for agriculture pump sets as meter reading is very time consuming and therefore costly. However intelligence needs to be built up in meter for communication with CPU etc & easy availability of prepaid cards or their charging.

- With initiative being taken under R- APDRP scheme. System is already being taken to build up a program to carry out GIS based consumer indexing down right up to DT level so that energy audit is done regularly and action is initiated to bring down leakages in energy supply.
- It has been reported by many utilities that GIS based indexing system is time consuming as information need to be asked from individual consumer which takes time. It was also reported that there are limited number of service providers who are having experience in GIS mapping. However it is suggested that we need not wait for indexing to be completed on GIS mapping up to DT level as during discussions with utilities it has been found that even with present indexing system they are in position to carry out energy audit up to 11 KV feeders except for in towns when feeders are interchanged in case of a fault in particular feeder
- It is also desired that accuracy of meters is carried out at manufacturing works if required thru an independent inspection agency and meter be sealed at manufacturing works. As far as possible testing/ calibration of meters in the departmental laboratories should be dispensed with, to obviate any malpractices. It is desired that this department now be used as depository of meters received from manufacturers and issued to various consumers and also for tracing a meter history. All above work need be carried now electronically for which system shall be worked out under R- APDRP. Meter labs may be used only for random accuracy checking of meter before installation. For allocation of meter to a consumer the same should need be selected thru computerized system so as manual interference is minimized. It is also recommended that repair of meter be avoided in departmental labs. Meters damaged either disposed or returned to manufacturer work for repair and resealing
- Needless to say that revenue collection system need be properly organized so that consumers are in position to make payment especially in rural areas. There need a tying up with IT centers which are being built up in rural areas by Government of India initiative practically in all villages for revenue collection . Possibility need be checked up of using local Post office as revenue collection centers. Automatic money collection machines which can collect money against electricity bill in cheque or cash are now available. The same need be installed at suitable locations for convenience of the consumers

3.4 System Improvements:-

- It can be said that with GOI making funds available, distribution system has been strengthened to good extent. Also it is a continuous process as load on feeders shall go on increasing with addition of new consumers as well as consumers opting for new house hold electrical gadgets. Utility should take all measures for continuous strengthening and augmenting of infra- structure by:-

  a. Increasing the number of feeders or by reconductoring with higher size conductor.

  b. HVDS distribution need be adopted along with small DTs of 10, 16 and 25 KVA capacities on long feeders in rural areas. It need be adopted also in towns especially for high load and revenue consumers. Single phase HVDS system need be adopted to economize at places where most of the loads are for domestic and small commercial and industrial consumers.

  c. Maintaining higher HT/ LT ratio, as far as possible near to 1:1. High load consumers say above 50 KVA be supplied connection on 11 kV

  d. Capacitors be installed at all voltage level substations to minimize flow of inductive current and thus reduce T&D losses. Switch-able capacitor be introduced at 11/0.4 kV substation as well as consumer premises

  e. Length of a LT feeder should not be more than 300 Meters

  f. Installation of auto re-closers on 11 kV feeders is also recommended to avoid tripping of feeders on transient faults. Installation of Fault passage indicators is found helpful in determining of location of fault which otherwise need time consuming patrolling.

  g. ABC conductor be used in place of necked conductor to avoid direct tapping specially on 400/220 volts lines

- Demand side Management is MOST IMPORTANT and schemes introduced by BEE such as Bachat Lamp Yojana, efficient agriculture pumps etc need be given full encouragement. Utility should take a leadership role for encouraging such schemes. Further, there is need for staff well trained in managing efficiency as well as in auditing for efficient use of the system.

- It is always better to improve power factor at consumer level itself. Most of state regulators have provided incentives as well penalty in tariff of various type of consumers. It is normally an incentive above 90% pf and penalty below 85%.

- It is interesting to know that IT based equipment like computers with UPS etc have very low power factor until and unless they install capacitor in their premises to improve pf. It may also be seen that agriculture pump sets normally used in India are reported with pf as low as 50%. Some of the Utilities are insisting on agriculture consumers to install better and efficient pumps fitted with proper capacitor as well as starters to maintain proper voltage as well to control losses. As in most of the states agriculture tariff is very low there is not much of initiative to go for better pumps. Recently many NGOs and companies are coming who are ready to work along with distribution Utilities for installation of these pumps and to recover their cost on basis of loss reduction. Bureau of Energy Efficiency is coordinating number of initiatives in this regards. Details are further elaborated in next chapter

- Central Power utilities like NTPC, POWERGRD are using quality assurance not only in purchase new equipment but for carrying out field level quality audits regularly. It has been seen that some distribution Utilities such as Eastern Andhra Distribution Company, NDPL Delhi are also carrying out technical audits of new constructed works as well as works under operation to verify quality measures taken by utility and same is paying in improvement of reliability in supply, reduction in down time as well as maintenance cost. It is recommended that all utilities adopt such technical audits regularly.

3.5 DEMAND SIDE MANAGEMENT (DSM)

In view of demand outstripping the availability of power in the country in short and medium term say in next five year DSM measures need to be taken in order to reduce energy consumption and peak power requirement. This is also be considered important in view of increasing input cost of fuel sources in generation of power thereby increasing cost of power purchase by a distribution Utility which forms about 85% of ARR requirement of the Utility.

It is considered that all measures taken to reduce power consumption be considered under this head including reduction of T&D losses as well as commercial losses properly known today as AT&C losses.

1) Proper metering is first important issue. As discussed earlier Electro mechanical meters are bound to slow down with time and regular replacement as well as there is difficulty in implanting IT based intelligence in these meters. In view of above that CEA has recognized that all new consumers be provided with Electronic meters. Detailed discussion on accurate metering discussed separately. It is emphasized again that priority be given in replacement of all old EM Meters. Privatization in Delhi had shown that in first few years of privatization demand had not increased but billing improved substantially and in 50% AT&C loss, commercial loss was more than 30 to 35% as compared to T&D Tech loss of the order of 15 to 20%. In commercial loss 30% was on account of poor metering and 30% was on account of poor billing, distribution of bills and collection issues i.e. poor Revenue Management and rest on account of direct theft. All these aspect are being taken care by introducing IT based system under R-APDRP including feeder and DT metering and Energy audit.

2) As regards Technical issues are concerned since beginning of APDRP program in early 2000 states are taking action in strengthening the distribution network which was badly suffering earlier on account of funds shortage. Good engineering practices are well known to field engineers. The same has also has been elaborated in details in CEA Document published recently on ‘’ Discussion paper on commercial viability of

Distribution Sector'' as well as in '' Electrical Power distribution'' case studies published by USAID under its DRUM programme

Some of these are as follows:

a. HT/LT ratio should be near to 1:1 as far as possible as the tech losses are directly proportional to square of the current flowing in the conductor. Therefore, losses shall be low 0.13% of the losses at 11Kv as compared to the losses at 400 volts. High voltage also has advantage as possibility of un-authorized tapping of these lines is much less as compared to at lower voltage. It has been observed that even states like Tamilnadu has HT/LT ratio as low as 1:5. There is urgent need to correct the above position

   It is also recommended that High Voltage Distribution system (HVDS) system be introduced in rural long feeders so to reduce T&D loss instead of LT distribution system. It makes direct tapping of lines difficult and also improves voltage profile to consumers. This also improve consumer satisfaction who at present is not satisfied by quality of supply. Life of his electric appliances including agriculture pump sets is enhanced.

b. As and when the load on a feeder increases beyond optimum level, it is better to construct either a new feeder or carry out strengthening with higher size conductor.

   Better if ABC (Aerial Bunch Conductor) is used so that direct tapping is avoided to certain extent

c. Use of amorphous core Transformers be examined. It has advantage of low iron losses. As iron losses are there whether a transformer is partially or fully loaded, it has very high impact on total losses of the transformer. Eastern Distribution Company, AP has reported that it takes hardly two years in recovering the difference in higher cost of amorphous core transformers. It is necessary to inform that above company has reported losses below 10% in spite of very large agriculture consumers.

d. Capacitor should be used at consumer level as well as at substations at various voltage levels. Utilities like NDPL Delhi are using switching capacitors which are switched in and out to desired level depending on necessity and voltage condition. These Switching capacitor panels are IT based intelligence which monitor the load as well Power factor continuously. Above data made available used for knowing loading of the line as well losses etc.

   Of course, it is always better to improve power factor at consumer level itself. Most of state regulators have provided incentives as well penalty in tariff of various type of consumers. It is normally an incentive above 90% pf and penalty below 85%.

   As discussed earlier that IT based equipment like computers with UPS etc have very low power factor until and unless they install capacitor in their premises to improve pf. It may also be seen that agriculture pump sets normally used in India are reported pf as low as 50%. Some of the Utilities are insisting on agriculture consumers to install better and efficient pumps fitted with proper capacitor as well as starters to maintain proper voltage as well to control losses. As in most of the states agriculture tariff is very low there is not much of initiative to go for better pumps. Recently many NGOs and companies are coming who are ready to work along with distribution Utilities for installation of these pumps and to recover their cost on basis of loss reduction. Bureau of Energy Efficiency is coordinating number of initiatives in this regards. The same is discussed below under Energy Conservation head.

e. Installation of auto re-closers on 11 kV feeders is also recommended to avoid tripping of feeders on transient faults. Installation of Fault passage indicators is found helpful in determining of location of fault which otherwise need time consuming patrolling.

3.6 ENERGY CONSERVATION

It is most important aspect of Demand Side Management. Government of India was one of a few countries who has enacted a separate Act in this regards as early as 2001 properly known as Energy Conservation Act, 2001,setting of Bureau of Energy efficiency & the National Mission for enhanced energy efficiency was carried out.

Energy Conservation Act, 2001 (52 0f 2001) providing the legal, institutional and Regulatory frame work at Central and State level to increase energy efficiency in various sectors of Indian economy The Act empowers GOI and state Governments to take following steps

- Notify energy intensive industries, other establishments and commercial buildings as designated consumers.
- To establish and prescribe energy consumption norms and standards for above consumers.

Direct designated consumers to:-

- Designate or appoint certified energy manager in charge of activities for efficient use of energy and its conservation.
- Get energy audit conducted by an accredited energy auditor in the specified manner and at regular intervals of time
- Furnish information with regard to energy consumed and action taken on the recommendation of the accredited energy auditor to the designated agency.
- Comply with energy consumption norms and standards, and if not so, to prepare and implement schemes for efficient use of energy and its conservation.

Buildings

- Prescribe energy conservation building codes for efficient use of energy and its conservation in commercial buildings.
- State Governments to amend the energy conservation building codes to suit regional and local climatic conditions.

- Direct owners or occupiers of commercial buildings to comply with the provisions of energy conservation building codes.

Appliances

- Direct mandatory display of label on notified equipment and appliances.
- Specify energy consumption standards and norms for notified equipment & appliances.
- Prohibit manufacture, sale, purchase and import of notified equipment and appliances not conforming to standards and norms.

ESTABLISMENT OF BUREAU OF ENERGY (BEE)

Under energy conservation act BEE was established on 1st March 2002 as nodal agency, with a mission to develop appropriate policies and strategies with a thrust on self regulation and market principles. The prime objective is to stimulate reduction of energy intensity in Indian Economy.

Broad functions of BEE are as follows:

- To be advisor to the central and state governments on energy conservation.
- To coordinate policies and programs on efficiency use of energy and its conservation with the involvement of stakeholders
- To plan, manage and implement energy conservation as envisaged in EC Act
- To assume leadership and provide policy framework & direction to national energy efficiency and conservation efforts.
- To demonstrate energy efficiency delivered mechanism, as envisaged in the Act thru Private- Public partnership
- To establish systems and procedures to measure, monitor and verify energy efficiency and conservation efforts and programs.
- To leverage multi-lateral, bi-lateral and private sector support in implementation of programs and projects on energy efficient use of energy and conservation.

Act also envisages the state Governments to notify an agency in consultation with BEE as State Designated Agency (SDA). SDA has regulatory, promotional and enforcement roles under the EC Act. So far, 31 states/UTs have notified SDAs for their states

SCHEMES FOR PROMOTING ENERGY EFFICIENCY DURING 2007-12

A target of reducing consumption by 5%, equivalent to about 10,000 MW of avoided capacity, had been kept by GOI by energy conservation measures. BEE has taken large numbers of initiatives to achieve above targets in following areas:

- House hold lighting,
- Commercial buildings,

- Standards and Labeling of appliances,
- Demand side management in Agriculture/ Municipality
- SMEs and large industries,
- Capacity building in SDAs

Brief summary of these initiatives are as follows:

(A) BACHAT LAMP YOJANA

In India, incandescent bulb(ICL) are normally used on account of their being cheap as compared to CFL lamps which has long life of about 6000 hrs and are more efficient. CFL bulbs consume about one fourth to one fifth of energy as compared to ICL bulbs to provide same level of light. Above scheme on implementation is expected to save 6000 MW of electricity generation translating into a potential saving of Rs 30,000 Cr in new investment. This will also result in saving of 20 million tons of CO2 from power plants considering replacement of about 400 million ICLs with CFLs. On the other hand consumer shall be benefited by paying less for electricity. It is expected that this saving itself means in recovering the high cost within a short period of maximum two years. However, in India it is not mandatory to use only CFLs. Therefore BEE has prepared a project design where three players namely BEE, the investors and Distribution companies come together and supply the households with CFL voluntarily. To bridge the gap of cost differential between market price of CFLs and the price of ICLs, the investor recovers the same by claiming Carbon credit thru clean development Mechanism (CDM). States are reported to have taken keen interest in encouraging the projects under above schemes. There is growing awareness in general public about the advantages in using CFLs. It is to be noted that lighting load is maximum at peak hours and above scheme helps in cutting the peak load and need encouragement by all stakeholders. Price of CFL has been kept for distribution to consumers at Rs 15 against market price of about Rs 100 per lamp and rest thru CDM and fast depreciation allowed by GOI.

(B) ENERGY EFFICIENCY IN DESIGNATED CONSUMERS

The major industries recognized as designated consumers are as follows:

(a) Aluminum (b) Fertilizers (c) Iron and steel (d) Cement (e) Pulp and paper (f) Chlor-Alkali (g) Sugar (h) Textile (I) Chemical (j) Railways (k) Port Trust (l) Transport sector including services (m) Petro chemical, Gas Crackers and Refineries (n) Thermal power plant (o) Common Commercial Buildings having load above 500 KW.

In India it has been observed that we have very lower energy efficiency even in large industries as earlier to 1990s there was no pressure to go for better and efficient plant machineries, but the things have changed and entrepreneurs, in view of competitors from other countries have realized the importance of the same. BEE is doing yeomen service by deliberating with the parties concerned and prescribing energy consumption norms for these industries. It is necessary for these industries to nominate one qualified manager, who has good knowledge of the subject as well as who is answerable to BEE and all other concerned at central and states.

BEE has also carried out 7 National Certification Examinations across the country and has certified about 5500 Energy Managers out of which about 3500 are Energy Auditors. These examinations are held twice a year in May and November throughout the country. Energy audit is also mandatory for these industries from agencies that are certified as Authorized Auditor. Industries/Companies are required to furnish all data need by BEE or state designated agencies as well as to comply with points raised by Auditors.

(C) SMALL AND MEDIUM ENTERPRISES (SMEs)

These units are not much aware about the importance of energy efficiency measures. After deliberations with all stake holders, worked out plan to stimulate measures to be taken for these clusters. 25 State Designated Agencies developed cluster specific action plan and made manuals available to these units. Bankable DPRs shall be prepared so that funding can be arranged. Already work in 7 clusters is going on. Attempts are being made to involve investors who can provide expertise as well as fund and payment to be made on basis of future saving in energy use. The investor can also get other benefits such as CDM etc.

BEE is also encouraging promotion of ENERGY SERVICE COMPANIES (ESCOs) to help in providing and implementing of various projects. They are also accredited for taking energy audit of designated and other consumers.

(D) Energy Conservation / Agricultural pumps

In India share of ground water irrigation is 70% against 30% through canal system. The ground water use is increasing at alarming pace in view of increasing demand of food grains in the country as well as for the increase in canal irrigation is stagnant for various reasons and also as use of ground water is more convenient for farmers and does not depend on mercy of weather. However this is resulting in extensive exploitation of ground and lowering of water table. This means need of use of higher capacity pumps for lifting water and thereby increases in energy consumption. Lower energy agriculture tariff by most of the States also result in use of low efficiency but cheap pumps being used by farmers. Thus there is a case of misuse of both electricity as well as water.

On Agriculture Demand Side Management studies have been conducted under Water Energy Nexus Activity (WENEXA) project compiled by M/Tetra Tech with USAID assistance. The studies were conducted in association of Bangalore Electricity Supply Company (BESCOM) in Doddabalapur taluk and Solapur District in Maharashtra by MERC.

The studies shows that along with efforts on electricity side such as separation of feeders for agriculture supply of power at 11 KV voltage to every pump to the extent possible, replacement of present low efficiency agriculture pumps by efficient pumps, providing switching capacitors on 11 KV feeders etc. it is necessary to carry out improvement on water side as well. These improvement include by switching over to micro irrigation (sprinkle water system), creating check dams to store rain water, growing right crops keeping in view of water, tree plantation and horticulture plantation etc. can help in optimize use of water and therefore energy consumption as well.

As ultimately it is affecting financially Distribution Utility as well as State Governments which have to provide for subsidies for lower tariff. It is recommended that distribution utilities can take lead role in whole scheme of agriculture system improvement.

Pilot schemes have shown the following improvements:

S. No.	Measures	Potential savings
1.	Efficient pumps sets	15%-20%
2.	Suction pipes and footvalves	5%-15%
3.	Efficient irrigation methods	15%-25%
	Total saving potential	35%-65%

It has been seen even if state present level of subsidy on use of electricity in agriculture is used as one time investment in replacement of low efficiency pumps by better efficiency pumps the scheme shall be viable. State Government has to insist on compulsory use of more efficient pumps in case farmers are to be provided any future subsidy. It has been seen that utilizing services of Energy supply companies (ESCOS) and NGOs for such projects where ESCOs shall be paid for savings from baseline data in use of energy consumption. NGOs are used for motivation and teaching farmers on various aspects of efficient farming. Pilot scheme in Karnataka have shown that such projects can be financially viable resulting in all round benefits to farmers, distribution utilities, state governments and country as a whole by conserving water as well as power thereby less requirement of additional power generation and thereby saving in CO_2 emission etc.

It is also suggested that payment of state subsidy be made directly to farmers. With intelligent metering as well UID scheme launched by GOI, it is possible that a fixed subsidy per pump is paid to the farmer taking into account the measures to be taken under Energy Efficient Agriculture Pump Scheme discussed above.

(E) Under Municipal scheme wastes generated in urban areas are to be used for generation of electricity thru PPP model. The investor recover its investment by sale of GREEN HOUSE GAS (CGS) as well as other initiatives offered by GOI such as accelerated depreciation.

(F) As provided states are required under section of the Act to establish a State Energy Conservation Fund (SECF). BEE has supported above funds by contributing Rs 70 Cr as its contribution to meet administrative costs as well as to take up activities like training etc.

It has been reported that so far following savings had been achieved:

2007-08	2008-09
623 MW	1505MW

One of the aspects, which panel has been asked to examine was impact of geographical and spatial compulsions and determine their operational effect. Such areas in the country are hilly states in Northern and North-Eastern regions of the country as well as the desert area in Rajasthan and Kutch, Gujarat and islands of Andaman and Nicobar. However, there may be some areas in other states such as Sunderbans in West Bengal, Ravines in states of UP and MP and isolated pockets in heart of forests. Through RGGVY, it has been provided for special treatment by providing 90% grant for village electrification and therefore, it is expected that most of the villages will be covered up and get connected to state grid and there shall not much effect on finances of the state utility except there is chances of higher T&D losses as well slightly higher running cost for maintaining the consumer operationally as well as commercially. The impact of the same can be assessed by Utility /Regulator by getting special study carried out for this purpose and additional expenses allowed pass thru as expenses.

However, there shall still be isolated pockets left such as at hill top, desert and forest where still it would be uneconomical to provide connection with state Grid. In such places it shall be better that electricity is provided by Decentralized Distributed Generation (DDG). As per RGGY upto 90% grant is allowed for generation from non conventional energy sources as well as laying of distribution network in such in household pockets. Serving of BPL consumers including laying service line and meter board with CFL lamps is also provided. During discussions with Uttrakhand Renewable Energy Development Agency (UREDA) it was found that it has successfully electrified hilly remote places by SPV technology. UREDA during discussion also informed as how they have encouraged the development of water mills and micro hydro plants in remote hilly areas. So far 710 traditional water mills have been up graded with better efficiency impeller and another 500 water mills are under up gradation and shall be completed shortly. It was also informed that 37 nos. mini and micro hydel plants with composite capacity of 3.635 MW have been commissioned and are being operated by User Energy Committees/ Mandir Samities. More than 250 villages have been electrified so far in remote areas. Other technologies as biogas and biomass and windmills are also used under the above scheme.

It is pertinent to observe that today the wind installed capacity in the country is 14158 MW (March 2011). Most of the wind mills are located in coastal areas of Gujarat, Maharastra, Karnataka, Tamilnadu, AP and Orissa where high speed wind density is available. Some wind mills are also located in hilly areas of Himalayas as well as in Thar desert area of Rajasthan. Total potential in India is about 65000 MW. Therefore, wind energy can be a good source of power for supplying power to non grid connected as well as grid connected locations. Capital cost of Wind energy project approved by CERC was INR 5.15 cr/ MW for the year 2009-10. The Capacity utilization factor is about 20-30%. However the timing of availability of wind energy is uncertain and there is a battery backup for non. grid connected locations. However, wind mills are installed in big cluster in areas where suitable wind is available popularly known as wind farms. Some times wind energy can not be consumed locally and need be grid connected. For example, in South Tamilnadu Region generation of wind energy is of the order of 5000 MW and can not be locally utilized. Even some time this energy need to be transmitted to other states thru inter-state and inter-regional transmission system. However, as it is difficult to envisage about timing of availability of wind power, power in such area need supply from the grid during the times when wind power is not available. The dynamics of power flow needs proper system study for stability of the grid. Recently, CERC has notified rates (REC) for trading in non conventional as well as solar power, while state regulators are notifying percentage of energy which a distribution utility or captive generator has to meet from these sources. This will encourage installation of solar power as well as wind power plants at more suitable locations. Thus wind power emerge a source of power at competitive rates but need utilsation as and when produced.

Solar power driven agriculture pumps are also a proven reality in India and are available in the range upto 22.5 HP thus meeting capacity requirement at most of the places. These pumps are DC brushless type are available in Indian market . Both submersible and centrifugal pumps are available. As solar energy is available only in day time for more than 8 hrs in most of the location in India for more than 300 days in a year, the pumps can operate without battery backup during day time. Therefore capital investment shall be less. Also as agriculture pumps are located in rural area there shall be less constraints for installation of solar PV panel for these pumps. Thus, solar pumps can become very attractive option for agriculture pumps. As per a recent study carried out by KPMG, solar pumps shall have parity with grid energy by 2017-18 as cost of electricity generation by PV panel is going down. CERC has fixed a rate of Rs. 17.91/ kwh for the year 2009-10, but as per open bids in August 2010 by NTPC Vidyut Vyapar Nigam Limited, the minimum prices offered were INR 10.95- Rs 12.76. According to study the rates are expected to be about INR 5.5-6.0 by 2017-18. As per the study, if encouraged, solar pumps shall be supplying more than 16,000 Mw load by 2021-22

Solar Power is quite competitive for powering Telecom Towers in rural India even today. Most of these towers are most of the time run on diesel DG sets even if connected with Grid as power supply in rural area is very unreliable. As 24x7 hrs reliable operation of telecom equipment in such towers which also need air-conditioned chamber for location of equipment, DG sets are must. Cost of power is therefore more than INR 15. There are about 3.1 lacs telecom towers in the country and same shall be about 5.5 lacs by 2012. The energy consumption of the telecom tower is more than 76% of energy consumption of telecom industry. PV Solar based DC power can be used to power these towers and can be competitive even today. Industry is upbeat for using solar energy in telecom towers especially in rural areas where may not be a big constraint for location of Solar panels. As per study, solar power can replace about 30% of energy consumption of telecom sector (2,286 MW).

Solar water heating (SWH) system has vast potential and becoming very popular as saves electricity energy as would have been required in case solar power is not utilized. As solar heating system is generally composed of solar thermal collectors, a water storage tank and inter connecting pipes is very cost effective and pay back period can be of six month to 12 months depending upon climatic condition. GOI thru Ministry of Renewable Energy is encouraging the scheme and provide subsidy on the same. It is expected that by 2022 about

24 million house holds will utilize SWH. Even if we consider use of 2 kW load per household it will result in a saving of 24000 MW of Electricity Capacity. It is desired that GOI need it compulsory of use of SWH for all i.e. Industrial, commercial as well as large household in urban areas. China for example has already made it mandatory on all new r rebuild buildings in Shengzhen, eastern Nanjing and Shiijiazhuang. China today boast of above system utilized by its 10% households.

Based on the above scenario, the committee feels that solar electricity based distributed generation has a lot of potential for electrifying the remote villages as it is the only energy source which is distributed all across the country and level of irradiance intensity is good for economic use of the solar power generation. Few highlights of the Committee are noted below:

- Technology for Solar PV is matured. Its system integration is fairly easy and a lot of vendors are available now. All equipment is freely available. The life of equipment is 25 years (minimum), though there would be light induced degradation @ 0.5% per year Equipments are suitable for remote application as they need hardly any maintenance. They are silent power generators. Moreover their performance can be remotely monitored by installation of inexpensive SCADA system
- Equipment cost has also come down drastically in recent past. Recent market trend shows that the same can be built at a cost of Rs 1.2 lakh/KW or Rs 1.2 Crore for electrifying a village with installation of 100 KWp solar PV systems.
- Each Solar 100 KWp system can generate approximately 450 units per day.
- Since it is day time power, it would need storage battery for meeting the evening load. The capacity of such battery will be 300 Kwh so that it can be operated with daily cycle mode (one discharge per day) with 60% depth of discharge.
- The cost of battery for the village with 100 KWp Solar PV system shall be Rs 20 lakh. But this would need replacement in every five years. So battery replacement cost will be additional Rs 80 lakh which will have to be counted in initial Capex.
- Total system cost for 100 KWp system with battery initial and replacement cost = Rs 210 lakh.
- Additional distribution inside the village shall be Rs 20 lakh.
- With the above capex of Rs 230 lakh for each village with 100 KWp system and 90% subsidy under RGVVY scheme the cost of electricity shall be Rs 3.55/kwh (Levelized) which is an affordable cost and a scheme where the villagers can get power in day/evening for at least 330 days on a year. The cost of electricity without any 90% grant is at Rs 17.65/kwh (on Levelized basis).
- Each such installation will generate 450 units per day and which can electrify around 200-300 families depending upon their use. This also shall increase their economic activities apart from other intangible benefits are because of distributed generation.

- Under this schemes the subsidy / grant which is to be provided is much lesser than the present subsidy being provided for kerosene which is explained below.
- It is strongly recommended to implement such remote solar projects with battery back-up a means for rural electrification.

Comparison of solar electricity with present kerosene use for lighting by direct burning:

- A Kerosene lamp needs 20 ml of kerosene in 1 hour. Suppose 1 house uses 3 lamps for 7 hours, 1 house shall consume per month : 12.5 ltr of kerosene
- Consider – 1000 villages with 500 houses in a village, it shall consume 75 Million litres per year
- At present

  BPL men pay for above Rs 100 crs @ subsidized rate

  Government pays Rs 126crs appprox. Rs 16.85 per ltr
- One kerosene lamp is equivalent to 1 LED of 2 watts in terms of lumens
- 10000 villages shall need energy thru LED lamps 2 (watt) X 3 (lamps) X 7 (hours/day) X 365 (days/year) X 500 (houses/village) X 1000 (villages) equal to 7.6 MU per year.
- @ Rs 226 crs generates lighting worth 0.76 Cr units of electricity, Its works out a rate of Rs 294 per Kwh; Or about Rs 164 per Kwh for government as subsidy.
- On the other hand, In case of power generation through Micro turbine / DG sets using kerosene , say available @ Rs 27/ltr, It is equivalent to about Rs 17 per Kwh (Around 1.58 kwh/litre). Further through solar its cost of generation is Rs 17.65/kwh.
- For 1000 villages we would need about 4.8 Million Ltrs of ethanol/ kerosene (7.6 MU / 1.58 litre/kwh) As against consumption of 76 Mil Ltr Kerosene every year at present.

Thus, it can be seen that for same lumen, as given by Kerosene lamps, same can be produced by generating electricity thru DG sets from 6% of kerosene, thus large saving in outflow of subsidy as well as import of crude oil. This will also reduce emission of CO_2 to that extent the Project as a whole can get benefit of CDM. This shall further reduce with solar based electricity.

Not only for remote places, decentralized Distributed generation thru non conventional method such mini and micro hydel, Wind, SPV, Solar Thermal or bio-fuel or biomass is useful from environment point of view but also help in generation level nearer to consumer in case inter connected with state grid and therefore need much less transmission and distribution system strengthening. It helps in improving voltage profile and thus reduction in losses. Initiative under Jawaharlal Nehru National Solar Mission (JNNSM), it has come out with scheme for roof top and other small Solar power Plants connected to distribution network for 100 MW capacity addition in first phase where incentive is payable to distribution agency for power purchased under the scheme beyond base rate which shall be Rs 5.4 per unit in first fiscal year of commissioning (this also be passed on to consumers in

ARR). Similarly for other non conventional generation of power GOI has announced incentive scheme.

This distributed generation shall definitely make energy measuring and accounting for this and hence it calls for IT based intelligent metering system measuring not only on line energy generated, but also import and export of energy for designated consumers. Therefore evolvement of smart metering as well as Grid need immediate planning. Meters provided now onward should be suitable for such need. Smart grid shall be able to communicate both ways to Grid Load dispatch Center as well as with consumer and also with intelligent apparatus and appliances which can be switched on remotely depending upon availability of power and tariff prevailing at a particular time. In future it shall bring in more challenges to distribution utility but more convenience to consumers by making available more information to him on line.

During deliberation with states such as Rajasthan, Gujarat it was felt that remote hamlets/ pockets in areas as Kutch in Gujarat and Thar desert in Rajasthan and Sunderban in West Bengal need be given benefit upto 90% grant for electrification as given for Northern and North Eastern States .

3.7 Power Distribution Sector: Organization and Human Resources

From above it can be seen that with most of states agreeing to implement R-APDRP project, Power Distribution Sector has decided to introduce Information and Communication Technology in all important functional areas of its Business such as commercial, operation, maintenance, consumer services, Store inventory, procurement, finance, HRD, Project implementation etc. Final integration of all such activities shall be attempted by introducing overall ERP Solution. This shall mean complete change in working of the utilities, as this will bring vast data/ information about business near to the decision makers. This will result in improving overall efficiency in business management as well as transparency in its working. Next step shall be to increase automation and implement smart distribution grid, bringing in two way communication between Distribution Company and ultimate consumer enabling him to make his own choice in deciding to select generator option, time for switching on and off his house appliances etc. This will also enable Utility to improve reliability, efficiency and quality in its service.

However, if we look at human resources available with most of the utilities, their core competence is limited to project execution and operation and maintenance of power. Till some time back, except of use of computerization in consumer bill preparation, there was hardly any use of computerization in their working. Most of the records were being kept manually. Meter readings were taken only manually and then consumption data punched manually, there by leaving a lot of scope for manipulation and harassment of consumers. It is a fact that Power Sector was perhaps one of the last sectors to take advantage of advancement made in Information Technology. To make this changed management possible, a change in work culture shall be needed in the Utility and this will require a lot of changes in Human Resource Management by the utility. In this study discussions are limited to Public sector distribution utilities only. Following are the recommendations:-

- There is need to have in house core team of IT experts in the organization who can along with IT Consultants appointed under R APDRP Project not only can get Project implementation successfully completed but fully take care of IT system during its maintenance phase and also can make its own plan for its future expansion or improvement from time to time. It will be better if the multi functional team of Engineers, finance, HRD etc is kept along with the Core team who will gain experience in the IT use and understand both hardware as well as software aspects of IT in addition to its interaction with their respective functions.
- Under R-APDRP Project there is a provision that IT Consultant as well as IT Implementation agency shall be holding hand with Utility for next five years after commissioning but there is need to build up for utility its own team from the very beginning.
- Engineers as well employees working in Operation and Maintenance, Revenue management, Metering system, Finance, HRD areas need to be trained to work on computers to fulfill functional need. It is necessary that all new recruitment is done keeping in view above need. The present staff needs a properly developed orientation course to become familiar with the new system and get fully conversant on its operation. If required they should be given incentives to get conversant and operational on new system. All future selection, promotion as well as even increment in pay be made subject to employee passing necessary test in this regard.
- It is necessary that organization structure need be got examined as well as Human resources required to handle the requirement of new system keeping in view of R-APDRP Project and future vision as well as attend to consumer’s facilities/ services and new developments in arising out of market competition.
- The new structure need to be lean with less tiers needed in making decision in view of multiple layers of information available on line .
- The corporate structure also needs to be reviewed for future requirement of International Financial Reporting system.
- This will require induction of a few Independent Directors on Board. Full time Directors also need be selected keeping in view of functional requirement thru an Independent selection process and consideration with main criteria should only be merit. If required, competent person be selected from private sector as has been done by West Bengal recently. There should not be any political interference in the selection.
- There is need to have transparent and all India base selection of Chief Executive of the Utility. Following selection committee is recommended for the selection :-
- Chief Secretary of the state –Chairman
- Chairman CEA/Member CEA

- Director of an IIT for technical posts/ Director IIM for financial and account post/ P&A posts
- One representative from Public Enterprises Selection Board, GOI

For selection of the Board Members of the Utility, instead of the Chief Secretary, Principal Secretary Energy should chair the Selection Committee with CEO as one of the members. The other members shall remain the same.

- Utility should have a full time CEO, competent to take and implement all executive decisions. Further, the CEO of the utility, under no circumstances should be the Chief Secretary of the State.
- Term for posting be for a period of five years. Govt. officials who are interested /selected in joining the utility have to agree serve full term of five year service, so that persons selected can be made responsible and answerable for the results. Termination or removal from service of such executive(s) shall also need to be cleared by the same committee.
- There is a need of at least 2 non executive independent directors from amongst the persons who have served in the power sector at Central level or in any other states.
- The utilities need be given proper delegation of power and should not function as for name sake as is happening at present working.
- There is need that utility is prepared to have at least 26% public share holding in next 5 year period.
- There is need of proper HR Department with persons having professional experience in dealing with Changed Management and new working culture and training needs. Similar is need for Finance Department as well as for induction of MBAs and ICWAs qualified personnel.
- During visits to various state utilities it has been observed that staff strength is very much on larger side and also perhaps average age of employee is above 50 years. It was also observed a large force of employees have no basic qualification and may not fit in new working environment. There is need that such states examine whether some of these employees can be made use of in some other state departments
- Scheme like voluntary retirement need be examined as was done in Delhi after privatization. Scheme adopted in Maharashtra where retiree employee's relation was allowed preference for new employment need be examined.
- There is need for function responsible for Quality and Safety in the company. All equipment and all material purchased should have quality built up. All work need be inspected for quality before any equipment or work is put in operation. Similarly all safety measures need be taken while carrying out plant operation
- Similarly as Demand Side Management is going to play very important role in functioning of the company, there is need for staff well trained in Managing Efficiency as well as in Auditing for efficient use of the system.

- To handle on the scale provided under R-APDRP scheme, Utilities need to completely change their day to day working i.e. it will need change in working culture. GOI has recognized the task involved in this direction. On one side there is a provision in R-APDRP of utilizing services of an expert IT Company as IT consultant to work out the road map of computerization in different areas in the organization and help Utility to prepare final specification from model specs prepared by PFC in consultation with all stakeholders enabling Utility float open bids and select Implementing Agency to cover up all aspect of the project which may require a number of specific service providers. PFC has in advance short listed competent and experienced IT companies thru an elaborate bidding process, who were allowed to bid for tenders to be floated by Utility. To select IT consultant, GOI has allowed states to decide the scope of the project on basis of present level of computerization already done as well as expertise available within Utility. Some Utilities like Maharashtra and AP distribution agencies were allowed to do their in house consultancy in view of in house strength of IT expertise within a Utility.
- However such expertise is missing in large number of distribution Utilities in the states. Some of these companies had gone for large induction of employees in seventies and early eighties to implement large scale of electrification especially in rural areas. At that time there was no concept of out sourcing and each and every activity needed by a Utility was to be done departmentally by employing labor including activities such as watch and ward, housekeeping etc. Even activities which can be done thru open tenders like purchase of poles or fabrication of tower had been under taken by establishing departmental fabrication shops. Of course it helped to some extent in achieving goal of fast electrification of rural feeders to energize Tube wells and helped the country overcoming worst food crisis but Utilities just forgot functioning on commercial lines as well as for adopting prudential good engineering practices.
- To be successful with adoption of IT in its working, Utilities need complete reorientation in its approach. It needs to decide in advance as how it will like to carry on future business. In case they want to carry out future business they need recruit proper and experienced man power or think of other alternative model such as privatization or Franchisee system in advance so that IT based process once completed, is continuously up dated. For example consumer data base needs updating DT wise as and when new consumer is added up, will have no meaning if not done on line and whole exercise shall need repetition again as experience of ADPRP has shown when number of Utilities made an attempt to prepare data base half heartedly without automatic updating, no useful purpose was served. Therefore it needs be emphasized on Utilities to have long term thinking on organization restructuring, suitable business model and suitable man power required in order to adopt new process and system which shall be implemented under R-APDRP to make it a success.

3.8 DISBURSAL OF SUBSIDY

- It is recommended that Distribution utility do the billing based on actual meter reading and cost of supply as fixed by state regulator for all consumers including agriculture. The state government needs to make arrangement for disbursing subsidy to these consumers directly, instead of paying to utility (which is most cases paid partially or not paid at all). Subsidy should be based on land holding rather than per pump set.
- Domestic consumers with consumption less than 300 units per month should be covered under cross-subsidization with a view to reducing the burden on State Exchequer.

3.9 POWER PURCHASE

Power purchase costs constitute the largest cost element for the distribution utilities. Timely and competitive procurement is expected to go a long way in reducing the overall cost of procurement as well as development of power market, the very objective of Indian Electricity Act 2003 and the National Tariff Policy.

The guidelines issued under Section 63 of Indian Electricity Act 2003 stipulate procurement of power through competitive bidding under case 1 and case 2 mechanisms. Case 1 is open and not specific to any location, technology or fuel. Competitive cost of power is the sole criteria. Case 2 is applicable for hydro projects, load centre projects and is specific to location and fuel such as captive mines, etc.

It has been observed that many utilities do not carry out timely, medium and long term planning, leading to excessive short term procurements. Power on short term is generally expensive. This leads to higher power procurement costs in the ARR. As such there is a need for every distribution utility to focus on planned procurement based on their CAGR of demand. Short term procurement should be resorted to as a contingent and unforeseen measure.

There is a need to organize a planning cell in the utility so as to look after day to day scheduling of power requirement and to do short term purchase or sale of power on basis of day to day fluctuations of load in most economical manner

3.10 CONSUMER CARE SERVICES

It had been in the past that consumers are very badly handled by the employees. With RAPDRP Project implementation it is expected that above issues shall be very well taken off. There is immediate need for implementing Call Centers where consumer can register his no current complaint. With software available, it is possible for call center to answer the query in case a planned shutdown has been taken or otherwise to communicate the fault to concerned maintenance gang. In case complaint is rectified within a given time the same is automatically upgraded to senior officer concerned. After rectification of fault a message is sent about the same to Call Center, who again checks up the position from consumer before closing the complaint. Daily reports are also computerized generated and made available to all concerned for close monitoring. Such call centers are to be large town wise as well as Company wise.

Similarly consumer care centers need organized where consumer interact for getting a new connection, for increase or decrease in his sanctioned load, on billing issues etc. It has been observed that in states like Gujarat, AP, West Bengal, etc above facilities have been already commissioned. There is need that other states should also expedite the same without linking it with completion of RAPDRP Project.

4.0 OPEN ACCESS

Provision of non discriminatory open access for use in transmission and distribution system is a very significant feature of Electricity Act 2003.

National Electricity Policy and tariff Policy also lay emphasis on proper implementation of this competitive framework which has the potential of (i) desired market signal (ii) inducing improved service from existing utilities (iii) enabling consumers to get power from any source of their choice (iv) enable / permit captive generation and cogeneration units to freely sell surplus energy available to meet power shortage which most of the state distribution utilities are facing.

CERC had notified open access in inter- state transmission system since 2004. There had been large numbers of transactions involving the generating companies, traders and distribution companies. Most of the State Electricity Regulatory Commissions have also framed regulations for introducing open access up to 100 KW in phased manner in intra state transmission and distribution system. Transmission charges, wheeling charges and surcharge have also been determined by SERCs. However, implementation of open access at distribution level has not been encouraging so far. Keeping in view of importance of open access, Forum of Regulators (FOR) constituted a working group for detailed examination of the operational constraint in implementation of open access. The report was discussed by FOR in January 2009 at Chennai.

Main recommendations as adopted by Forum concerning the following issues :

i) Legal and policy provisions and status of their implementation
ii) Identification of problem areas with the conclusion, inter alia that weakest link is the state load dispatch Centre (SLDC), which unless made truly independent will frustrate all efforts at open access
iii) Measures for ring fencing of SLDC
iv) Structural and financing remodeling, including technological upgradation
v) Staffing pattern
vi) Incentives and disincentives scheme
vii) Fees and charges for SLDCs

Report also emphasizes the need for :

i) Rationalization of various open access charges including surcharge
ii) Uniform stand- by arrangement for back up supply to make open a reality
iii) Monitoring of open access transaction by the state commission
iv) Display of illustrative examples of charges for open access to help the potential consumer take an informed decision on open access option.

It has been informed that the work of up-gradation of SLDCs was taken up by POWERGRID under World Bank Funding in late 90's along with Unified Load Dispatch Centers at Regional level. All present activities of trading and open access had been possible on account of above initiatives. Now above system need up-gradation both at National, Regional and state levels. At national level and state level POWERGRID is carrying out the up-gradation. However, at state level it was left to the states to do the job. It was informed that under NREB forum all states of northern region have agreed for POWERGRID to manage above work for their state load dispatch centers, It was also informed some states such as Jharkhand, Orissa, AP, Kerala and Puducherry have agreed to appoint POWERGRID as their consultants for above job. Some states like Maharashtra, Karnataka and Tamilnadu perhaps want to implement the scheme of their own. There is nothing wrong in above approach but it needs be kept in mind that compatibility between various technology and hardware adopted by various vendors selected by states need to be there. It is suggested that in case states are not in position to fund such scheme, they can approach POWERGRID so that a unified approach can be adopted and up-gradation can be completed in a more systematic manner as well as in time.

However, it is to be noted that in SLDCs information will be available up to 132 KV system and may also give loading details about outgoing 66 kv, 33 Kv. However, in case open access is to be provided on 33and 11 Kv and 0.400 Kv distribution system, then perhaps every distribution utility needs a centralized load dispatch centre for demand projection as well as for managing its operation and maintenance functions including managing open access and energy accounting.

Under APDRP Project all IT and communication infrastructure is been provided down up to DTs level. SCADA system in large town having 4,00,000 population and energy consumption of 350 mus is also envisaged. Main Server along with stand by server for disaster management is also provided. It is hoped that every utility is also planning for Central LD&C Center facilitating open access is available up to 11 KV system to cater open access up to a load of 100 KW (There is no mention of utility based LD&C centre in RAPDRP Project)

However recently some State Electricity Regulatory commissions like Punjab and Uttrakhand had allowed open access to Industrial Consumers for certain time block basis(during night time). This has resulted in monetary losses to state utilizes. Analysis has shown that tariff in these states were for such consumers was per unit for all time slots. It means that there is no difference in tariff for peak hours and non peak hours. This resulted in consumers opting for power import for non peak hours when power in open market was available at cheaper rate, though power was available in the concerned states which have to back down their own generation. This was not intended as per Act. Section 42(4) reads as follows

''Where the state Commission permits a consumer or class of consumers to receive supply of electricity from a person other than the distribution licensee of his area of supply, such consumer shall be liable to pay an additional surcharge on the charges of wheeling, as may be specified by the state commission, to meet the fixed cost of such distribution licensee arising out of his obligation to supply.''

It is, therefore, felt that SERC should fix up additional surcharge keeping in view long term power agreement entered by state utility has entered for long term power purchase agreement which has a fixed cost component. Better SERC fix up TOD tariff for such consumers reflecting cost of highest marginal cost for peak hours. Main intention should be able to get additional power to the state utility as most competitive rates to meet shortage of power.

There is an issue that number of states such as Karnataka, Tamilnadu are have issued orders under section 11 which had the effect of

i) Requiring private generators to compulsorily sell power to state distribution utilities
ii) Fixing the price at which power can be sold through executive dikat which is contrary to the provisions of the Act
iii) Imposing restriction on the third part sale
iv) Denial of open access

Section 11 Directions to generating companies read as follows

'' i) The Appropriate Government may specify that a generating company shall in extraordinary circumstances operate and maintain any generating station in accordance with direction of that Government

2) The above commission may offset the adverse financial impact of the direction referred to in subsection 1 on any generating company in such manner as considers appropriate'.'

The CERC and Appellate Tribunal for Electricity (APTEL) which are pre-eminent forum for adjudication of electricity related disputes (second only to the Supreme Court of India) have consistently upheld the objectives and principles of the Act and right to open access. A Task Force created by Planning Commission has stated in its report on "Report of the task Force on measures for open access in the power sector'' as follows :

" The task Force, therefore, felt that it would be e highly desirable to create appropriate price signals by opening the market for open access under which there would be no restriction on sale of electricity at an unregulated price to the final consumer. Once open access is effectively operationalised, it would provide a legitimate window for market forces in which knowledgeable consumers can choose between supply from the utility at regulated prices and unregulated supplies at negotiated prices…. It was agreed that the introduction of competition would only be achieved when bulk consumers are able to avail of open access."

It also upheld that

'' It was agreed that the introduction of competition would only be achieved when bulk consumers are able to avail open access under section 42 of the Act, and the Task Force, therefore decided to focus on operationalization of open access to consumers under section 42 as distinct from open access to transmission lines for transporting supplies to licensees.''

The above issue is very important and clarity on application of Section 11 needs clarity to prevent regulatory uncertainty.

The Ministry of Power, Government of India is aware of the issue but as the orders of APTEL on the issue pending before Supreme Court for decision, appropriate further action can only be taken after award of judgment by Supreme Court.

RECOMMENDATION

With the completion of RAPDRP Projects in states including a Utility level LD&C centre, it will be possible to facilitate open access upto 11 KV feeder and 100 Kw load. It is necessary that recommendation of FOR be implemented by states in order to promote *open access as provided in Act so as to bring competition and efficiency in Electricity Market.*

However, SERC should decide proper TOD tariff for open access consumers or decided additional surcharge by SERC suitably keeping in view the obligation of state utility to supply power so as to cover up the fixed cost of such power.

Intention should be to make available additional power to state system to meet power shortage at most economical cost.

Annexure - XI

R-APDRP Part A Towns- Input energy more than 100MU or more than 3 lakh population

S. No.	State	Name of Town	Population Nos	Consumers Nos.	Energy Input MU
1	Andhra Pradesh	Hydrabad City	5,742,036	1,360,975	5207
2	Andhra Pradesh	Lucknow*	2,245,509	544,021	2699
3	Andhra Pradesh	Ghaziabad	968,256	285,952	2313
4	Andhra Pradesh	Allahabad	1,042,229	173,890	1338
5	Andhra Pradesh	Meerut	1,161,716	241,116	1288
6	Andhra Pradesh	Varanasi*	1,203,961	215,620	1186
7	Andhra Pradesh	Visakhapatnam	1,345,938	459,954	895
8	Andhra Pradesh	Gorakhpur	622,701	124,849	670
9	Andhra Pradesh	Muzaffarnagar	331,668	71,744	659
10	Andhra Pradesh	Vijayawada	1,039,518	236,368	595
11	Andhra Pradesh	Moradabad	641,583	114,387	575
12	Andhra Pradesh	Saharanpur	455,754	93,173	429
13	Andhra Pradesh	Guntur	514,461	157,665	367
14	Andhra Pradesh	Warangal	579,216	192,750	356
15	Andhra Pradesh	Rajahmundry	413,616	132,738	313
16	Andhra Pradesh	Nellore	404,775	139,178	259
17	Andhra Pradesh	Kakinada	376,861	109,419	252
18	Andhra Pradesh	Rampur	281,494	39,136	227
19	Andhra Pradesh	Tirupati	303,521	135,156	226
20	Andhra Pradesh	Gudur	68,782	23,834	197
21	Andhra Pradesh	Maunath Bhanjan	212,657	29,602	188
22	Andhra Pradesh	Ongole	153,829	59,302	172
23	Andhra Pradesh	Raibareilli	169,333	33,270	165
24	Andhra Pradesh	Kurnool	342,973	109,667	164
25	Andhra Pradesh	Hapur	211,983	39,086	146
26	Andhra Pradesh	Mirzapur cum Vindhyachal	205,053	30,696	140
27	Andhra Pradesh	Shahjahanpur	321,885	44,068	139
28	Andhra Pradesh	Anantapur	243,143	92,069	139
29	Andhra Pradesh	Eluru	215,804	78,375	138
30	Andhra Pradesh	Nizamabad	288,722	78,631	136
31	Andhra Pradesh	Faizabad	208,162	44,693	134
32	Andhra Pradesh	Khammam	198,620	62,885	133
33	Andhra Pradesh	Modinagar	139,929	28,677	128
34	Andhra Pradesh	Karimnagar	218,302	79,906	128

S. No.	State	Name of Town	Population Nos	Consumers Nos.	Energy Input MU
35	Andhra Pradesh	Kadapa	262,506	89,741	123
36	Andhra Pradesh	Barabanki	146,281	32,539	122
37	Andhra Pradesh	Azamgarh	93,521	24,805	114
38	Andhra Pradesh	Amroha	165,129	20547+66	114
39	Andhra Pradesh	Jaunpur	160,055	29,890	108
40	Andhra Pradesh	Adilabad	129,403	32,829	106
41	Andhra Pradesh	Bahraich	168,323	25,278	105
42	Andhra Pradesh	Bulandsahar	176,425	28,469	102
43	Andhra Pradesh	Sambhal	182,478	22,355	101
44	Assam	Guwahati *	911,942	160,002	678
45	Assam	North Guwahati	16,286	4,836	199
46	Assam	Silchar	142,199	31,901	110
47	Assam	Jorhat	92,588	27,545	99
48	Assam	Dibrugarh	374,965	23,922	92
49	BIHAR	Patna	1,697,976	298,903	1858
50	BIHAR	Lakhisarai	77,875	5,028	325
51	BIHAR	Barh	48,442	6,426	304
52	BIHAR	Biharsarif	232,071	26,557	201
53	BIHAR	Bakhtiarpur	32,293	2,788	184
54	BIHAR	Bhagalpur	350,133	41,608	146
55	BIHAR	Fatuha	38,672	6,555	125
56	BIHAR	Gaya	394,945	40,657	114
57	BIHAR	Muzaffarpur	305,525	62,704	36
58	CHHATTISGARH	Raipur Town	700,113	194,756	2169
59	CHHATTISGARH	Durg Bhilai Nagar	927,864	157,376	644
60	CHHATTISGARH	Bilaspur Town	335,293	83,369	416
61	CHHATTISGARH	Korba	315,690	36,227	283
62	CHHATTISGARH	Chirmiri	93,373	2,737	128
63	CHHATTISGARH	Raigarh	115,908	21,765	127
64	CHHATTISGARH	Rajnandgaon	143,770	29,436	104
65	GUJARAT	BARODA CITY	1,491,045	500,977	1130
66	GUJARAT	RAJKOT	1,267,119	375,338	1107
67	GUJARAT	SURAT	2,811,614	309,313	664
68	GUJARAT	JAMNAGAR - Navagam Ghed	498,344	119,921	422
69	GUJARAT	AHMEDABAD	4,525,013	107,976	371
70	GUJARAT	BHAVNAGAR	517,708	133,038	309

S. No.	State	Name of Town	Population Nos	Consumers Nos.	Energy Input MU
71	GUJARAT	BHARUCH	176,364	74,530	203
72	GUJARAT	WANKANER	40,191	12,398	178
73	GUJARAT	MEHSANA CITY	141,453	51,629	167
74	GUJARAT	JUNAGADH	223,341	84,661	160
75	GUJARAT	PORBANDAR + Chhaya	197,382	44,504	159
76	GUJARAT	VERAVAL - PATAN	158,032	34,654	158
77	GUJARAT	VAPI	71,406	52,126	157
78	GUJARAT	NADIAD	196,793	59,118	155
79	GUJARAT	MORVI	178,055	39,977	146
80	GUJARAT	GANDHIDHAM	152,000	49,076	134
81	GUJARAT	NAVSARI	232,411	78,418	129
82	GUJARAT	ANAND CITY	218,486	52,967	127
83	GUJARAT	Wadhwan	517,708	62,690	125
84	GUJARAT	JETPUR NAVAGADH	104,312	22,208	111
85	GUJARAT	KADI	60,026	20,333	103
86	Haryana	Sonipat	386,294	54,672	2760
87	Haryana	Gurgaon	228,820	175,878	1915
88	Haryana	Faridabad	1,055,938	300,066	1380
89	Haryana	YAMUNANAGAR	290,986	110,668	566
90	Haryana	ROHTAK	311,430	89,143	417
91	Haryana	JHAJJAR	39,002	10,449	314
92	Haryana	KARNAL	231,846	65,187	310
93	Haryana	BAHADURGHAR	139,933	36,706	278
94	Haryana	AMBALA CITY	139,279	52,527	236
95	Haryana	Hisar	263,070	64,649	230
96	Haryana	Bhiwani	169,581	31,422	211
97	Haryana	Ambala cantt	61,748	41,128	164
98	Haryana	Sirsa	160,735	41,363	163
99	Haryana	PANCHKULA	101,290	30,990	140
100	Haryana	THANESWAR	144,658	35,550	140
101	Haryana	Rewari	100,684	34,352	123
102	Haryana	Panipat	362,214	70,259	57
103	HIMACHAL PRADESH	Baddi	22,601	10,888	805
104	HIMACHAL PRADESH	Shimla ##	144,975	94,111	323
105	HIMACHAL PRADESH	Paonta Sahib**	19,090	17,761	219
106	JHARKHAND	Ranchi	863,495	188,088	1309

S. No.	State	Name of Town	Population Nos	Consumers Nos.	Energy Input MU
107	JHARKHAND	Jamshedpur	1,104,713	97,383	736
108	JHARKHAND	Dhanbad	1,065,327	92,710	650
109	JHARKHAND	Chirkunda	106,227	8,147	242
110	JHARKHAND	Deoghar	112,525	34,056	136
111	JHARKHAND	Bokaro Steel City	497,780	20,994	126
112	Karnataka	BANGALORE	6,583,192	3,120,544	5250
113	Karnataka	Mangalore	416,262	132,405	439
114	Karnataka	Hubli	562,000	154,821	268
115	Karnataka	Belgaum	422,600	128,507	267
116	Karnataka	Gulbarga	430,000	115,280	220
117	Karnataka	Bellary	316,766	86,727	188
118	Karnataka	DAVANGERE	364,523	123,330	156
119	Karnataka	Udupi	113,700	46,295	154
120	Karnataka	Raichur	351,024	50,154	138
121	Karnataka	Shimoga	274,352	85,899	133
122	Karnataka	Hospet	192,000	48,172	113
123	Karnataka	Dharwad	2,80,129.	73,986	112
124	Karnataka	Bijapur	495,946	77,253	104
125	Karnataka	Bidar	174,257	39,686	103
126	Karnataka	Mysore	799,228	282,844	47
127	Kerala	Ernakulam/Kochi	1,355,972	512,968	1299
128	Kerala	Thiruvananthapuram	889,635	377,246	771
129	Kerala	Kozhikode	880,247	350,027	642
130	Kerala	Kollam	380,091	177,795	332
131	Kerala	Thrissur	330,122	139,992	248
132	Kerala	PALAKKAD	197,369	94,503	217
133	Kerala	Kottayam	172,878	67,147	198
134	Kerala	Alappuzha	282,675	95,944	167
135	Kerala	Aroor	35,283	18,744	164
136	Kerala	Kannur	498,207	126,510	149
137	Madhya Pradeh	Indore city	1,516,918	372,834	1542
138	Madhya Pradeh	Jabalpur	10,22,606	207,034	758
139	Madhya Pradeh	Dewas	231,672	43,305	426
140	Madhya Pradeh	Ujjain	431,162	88,362	332
141	Madhya Pradeh	Katni	1,87,029	40,043	270
142	Madhya Pradeh	Ratlam	234,419	56,221	213
143	Madhya Pradeh	Satna	229,307	47,661	180
144	Madhya Pradeh	Sagar	2,75,553	49,474	141
145	Madhya Pradeh	Rewa	1,83,274	38,185	131

S. No.	State	Name of Town	Population Nos	Consumers Nos.	Energy Input MU
146	Maharastra	Khopoli	58,664	16,083	744
147	Maharastra	Paithan	34,518	9,787	635
148	Maharastra	Chandrapur	289,450	62,313	568
149	Maharastra	Ichalkaranji	285,860	62,401	486
150	Maharastra	Ahmadnagar	347,549	82,787	449
151	Maharastra	Sinnar	31,630	9,904	349
152	Maharastra	Solapur	872,478	145,393	349
153	Maharastra	Amravati	549,510	109,101	318
154	Maharastra	Jalgoan	368,618	78,097	303
155	Maharastra	Baramati	51,334	19,763	270
156	Maharastra	Daund	42,204	6,369	248
157	Maharastra	Dhule	341,755	66,095	236
158	Maharastra	Palghar	52,677	14,014	209
159	Maharastra	Nandura	37,469	10,993	206
160	Maharastra	Satara	108,048	41,848	197
161	Maharastra	Dharangaon	33,625	7,814	171
162	Maharastra	Akkalkot	38,213	23,764	170
163	Maharastra	Shirpur-Warwade	61,694	14,847	160
164	Maharastra	Ausa	30,876	6,768	157
165	Maharastra	Yavatmal	139,835	32,106	149
166	Maharastra	Bid	138,196	28,984	144
167	Maharastra	Wardha	111,118	26,283	132
168	Maharastra	Hingoli	69,432	16,595	132
169	Maharastra	Warora	41,971	9,852	116
170	Maharastra	Malkapur	61,012	14,023	114
171	Maharastra	Wani	52,834	14,007	107
172	Maharastra	Parbhani	259,329	42,369	105
173	Maharastra	Ratnagiri	70,383	35,146	104
174	Maharastra	Shahade	49,696	9,774	103
175	Maharastra	Sangli	447,774	57,872	98
176	Punjab	Ludhiana	1,398,467	403,431	1839
177	Punjab	Gobindgarh	60,677	26,678	1585
178	Punjab	Amritsar	1,003,917	269,219	1370
179	Punjab	Jalandhar (DR)	714,077	234,254	1312
180	Punjab	Mohali (S.A.S Nagar)	123,484	51,547	471
181	Punjab	Patiala (DC)	323,884	112,270	435
182	Punjab	Bhatinda	217,256	66,348	271
183	Punjab	Khanna	103,099	32,830	170
184	Punjab	Moga	135,279	40,520	167

S. No.	State	Name of Town	Population Nos	Consumers Nos.	Energy Input MU
185	Punjab	Batala	147,872	39,386	150
186	Punjab	Hoshiarpur	149,668	51,677	141
187	Punjab	Pathankot	168,485	40,722	113
188	Punjab	Phagwara	102,253	34,612	109
189	Punjab	Muktsar	83,655	24,265	106
190	Punjab	Abohar	124,339	31,796	105
191	Punjab	Kapurthula	85,686	25,613	103
192	Rajasthan	Jaipur (M Corp.)	2,322,575	610,732	2798
193	Rajasthan	Kota UA	703,150	134,328	1020
194	Rajasthan	JODHPUR	860,818	181,417	927
195	Rajasthan	BIKANER	529,690	108,206	515
196	Rajasthan	Udaipur (Raj)	389,438	107,878	489
197	Rajasthan	Karauli (M)	66,239	6,758	387
198	Rajasthan	Bhilwara (Raj)	280,128	59,633	341
199	Rajasthan	Ajmer	490,520	110,201	329
200	Rajasthan	Kishangarh	116,222	25,473	253
201	Rajasthan	SRI -GANGA NAGAR	222,858	47,427	241
202	Rajasthan	Alwar UA	266,203	66,150	225
203	Rajasthan	Bharatpur UA	205,235	22,795	214
204	Rajasthan	PALI	187,641	37,321	202
205	Rajasthan	Ramganj Mandi	30,973	13,838	158
206	Rajasthan	Dhaulpur UA	97,795	13,579	146
207	Rajasthan	Beawar	125,981	29,361	125
208	Rajasthan	Banswara	87,308	19,234	122
209	Rajasthan	HANUMAN GARH	129,556	25,582	106
210	Rajasthan	Lakheri	32,183	11,399	101
211	Rajasthan	Sikar (Raj)	185000	36,693	100
212	TAMILNADU	Chennai town**	6,560,242	2,389,617	10348
213	TAMILNADU	COIMBATORE	1,461,139	281,680	1111
214	TAMILNADU	Salem	696,760	288,175	817
215	TAMILNADU	Madurai town**	1,203,095	421,598	762
216	TAMILNADU	Pudukottai	109,217	46,631	639
217	TAMILNADU	TIRUPUR	550,826	139,206	623
218	TAMILNADU	MUTHIAHPURAM	31,813	8,669	358
219	TAMILNADU	NAGERCOIL	208,179	78,343	331
220	TAMILNADU	Erode	314,994	128,188	322
221	TAMILNADU	TIRUNELVELI	433,352	158,555	282
222	TAMILNADU	Chinnamanur	38,360	12,846	282
223	TAMILNADU	Tiruchirapalli	866,354	226,565	274

S. No.	State	Name of Town	Population Nos	Consumers Nos.	Energy Input MU
224	TAMILNADU	RAJAPALAYAM	122,307	45,966	228
225	TAMILNADU	Maraimalainagar	48,463	19,106	197
226	TAMILNADU	Vellore	451,000	64,640	154
227	TAMILNADU	Hosur	84,394	41,306	138
228	TAMILNADU	Dindigul	196,955	65,759	128
229	TAMILNADU	Kanchipuram	198,170	50,154	124
230	TAMILNADU	Thanjavur	215,314	63,641	123
231	TAMILNADU	Villupuram	95,455	33,874	121
232	TAMILNADU	Karur	153,365	56,818	119
233	TAMILNADU	Tiruchengode	80,187	32,882	114
234	TAMILNADU	Cuddalore	158,634	61,564	108
235	TAMILNADU	KOVILPATTI	87,450	38,898	102
236	Uttar Pradesh	Aligarh	669,087	134,271	628
237	Uttar Pradesh	Jhansi	460,278	76,769	450
238	Uttar Pradesh	Mathura	323,315	64,365	357
239	Uttar Pradesh	Firozabad	432,866	56,015	316
240	Uttar Pradesh	Etawah	210,453	32,915	178
241	Uttar Pradesh	Hathras	126,355	34,654	176
242	Uttar Pradesh	Farukhabad	242,997	39,880	135
243	Uttar Pradesh	Shikohabad	88,161	13,202	119
244	Uttar Pradesh	Mainpuri	104,851	28,364	110
245	UTTRAKHAND	Dehradun*	530,263	141,218	626
246	UTTRAKHAND	Haridwar	220,767	42,033	419
247	UTTRAKHAND	Roorkee	115,278	18,133	148
248	UTTRAKHAND	Haldwani**	158,896	28,936	109
249	West Bengal	Kolkata UA	13,205,697	357,368	749
250	West Bengal	Haldia	170,673	26,080	336
251	West Bengal	Siliguri	472,374	99,455	280
252	West Bengal	Bardhaman	285,602	74,034	188
253	West Bengal	Asansole	1,067,369	69,738	151
254	West Bengal	Kharagpur	272,865	33,385	140
255	West Bengal	Durgapur	493,405	32,921	50

Note

1)The source of data is from Part A DPR submitted by utility .

2)Population indicated are as per 2001 Census.

3)The year of data for input energy and AT&C losses figure vary from utility to utility sine the DPR submission and

the figure availability at the time of preparation of DPR vary from utility to utility

ANNEXURE - XII

STATE-WISE AGRICULTURE CONSUMPTION

State /UT	No. Of Pumps			Agri Consumption-CEA			Consumption per pump - CEA (kwh)			AT&C Losses (%)
	31.3.07	**31.3.08**	**31.3.09**	**31.3.07**	**31.3.08**	**31.3.09**	**31.3.07**	**31.3.08**	**31.3.09**	
J & K	9714	9714	9714	201.91	271.42	271.42	20785	27941	27941	69.05
Uttarakhand	18915	20119	21040	359.00	300.20	300.20	18980	14921	14268	35.37
Haryana	474296	515869	526390	6871.92	7335.37	7365.40	14489	14219	13992	33.29
Gujarat	839676	873977	910965	11262.02	10946.44	11729.71	13412	12525	12876	22.04
Rajasthan	800941	830705	909976	6658.21	8144.56	9790.86	8313	9804	10759	29.83
Chhattisgarh	159662	162783	209917	1408.11	1458.80	2049.93	8819	8962	9765	32.73
Punjab	966073	966073	1032616	8229.49	10022.20	9325.42	8518	10374	9031	18.51
Uttar Pradesh	874966	896475	898212	6965.33	6200.04	6860.36	7961	6916	7638	40.12
Jharkhand	9453	9453	9453	68.41	66.85	69.62	7237	7072	7365	54.01
West Bengal	114490	115462	116129	940.81	1110.07	843.28	8217	9614	7262	25.81
Puducherry	10657	10720	10766	101.05	81.63	73.48	9482	7615	6825	18.47
Karnataka	1705225	1723224	1729295	11208.08	10844.02	11314.43	6573	6293	6543	24.94
Andhra	2440823	2440823	2680671	16327.92	15241.05	16604.57	6690	6244	6194	12.99
Assam	3675	3675	3675	16.78	19.54	20.86	4566	5317	5676	32.68
Tamil Nadu	1920472	1955114	1990259	10358.00	10717.00	10529.00	5393	5482	5290	14.39
M.P.	1349570	1351075	1355079	7028.24	7535.59	6217.50	5208	5577	4588	46.61
Maharashtra	2777832	2897155	3013183	9748.60	12675.64	13066.12	3509	4375	4336	31.19
Bihar	272331	273102	273772	787.73	659.12	798.00	2893	2413	2915	34.37
All India	14748771	15055518	15701112	98542	103630	107230	6681	6883	6829	
%of Total				**21.10%**	**23.17%**	**22.82%**				

Annexure - XIII

No. 23/1/2008-R&R (Vol-IV)
Government of India
Ministry of Power
***

Shram Shakti Bhawan, Rafi Marg,
New Delhi, 30th November, 2011

To

1. Chairperson, Central Electricity Authority, New Delhi.
2. Principal Secretary/Secretary(Energy) of State Governments/UTs.
3. Registrar, Appellate Tribunal for Electricity, New Delhi.
4. Secretary, Central Electricity Regulatory Commission, New Delhi.
5. Secretary, State Electricity Regulatory Commissions/JERCs.
6. Chairmen, State Power Utilities/SEBs.
7. Chairmen, CPSUs under Ministry of Power.
8. Adviser to Dy. Chairman, Planning Commission, New Delhi.
9. CEO, POSOCO, New Delhi.
10. DG, BEE, New Delhi.

Subject: **Opinion from M/o Law & Justice on the Operationalization of Open Access in Power Sector.**

Sir,

The concept of open access in the electricity sector was introduced in the Electricity Act, 2003 with a view to promoting competition and providing the consumers a choice and was clearly perceived as a critical feature of power market development and competition.

2. An issue arose regarding the interpretation of several clauses pertaining to Open Access, such as section 42, 45, 49, 62 & 86 of the Electricity Act, 2003. The question was whether as per the provisions of the Electricity Act, bulk consumers (above 1 MW) shall be deemed to be open access consumers w.e.f. January 2009 in terms of the proviso of section 42(2) or whether the Act provides that Open Access shall be given to consumers who exercise a choice. It is quite clear that once a consumer becomes an Open Access consumer, the State Commission shall no longer fix the energy charges to be paid by him but will continue to fix the wheeling charges and surcharges in accordance with the provisions of the Act. Due to ambiguity in the interpretation of these provisions the matter was referred to the Ministry of Law & Justice by the Ministry of Power.

3. Ministry of Law & Justice in consultation with Ld. Attorney General of India on 13.4.2011 opined ***that Section 42(ii) read with the first and fifth proviso is a self-contained code with regard to consumers who required the supply of electricity of 1MW and above and accordingly the State Electricity Regulatory Commissions cannot continue to regulate the tariff for supply of electricity to any consumer of 1 MW and above.***

4. Further, on the issue of Universal Service Obligation (USO) of distribution licensee as per the provisions of Section 43(1) of the Act and on the issue of serving of notice under

..contd...2/-

section 42(3) of the Act the M/o Law & Justice in consultation with the Ld. Attorney General of India vide note dated 4.11.2011 has clarified that ***"The provisions of section 42 need to be analyzed in relation to the duties of the distribution licensees and open access. While sub-section (2) requires the State Commission to introduce open access within one year of the appointed date the fifth proviso makes it mandatory for the State Commission to provide open access to all consumers who require supply of electricity where the maximum power to be made available at any time exceeds 1MW. The fifth proviso was introduced by Act 57 of 2003 with effect from 27th January, 2004.*** **The first issue is if open access is made obligatory whether the distribution licensees will continue to have the responsibility of universal service obligations with regard to consumers whose requirements are in excess of 1MW. An analysis of the various provisions (particularly section 49 of the Act) shows that if certain consumers want to have the benefit of the option to buy power from competing sources, then it is logical that DISCOMS do not have an obligation to compulsorily supply power to such consumers. If such consumers want power from the DISCOM then the terms and conditions of the supply would be determined in terms of section 49 of DISCOM also, Such an interpretation is logical and is in conformity with the Statement of Objects and Reasons of the Electricity Act, which encourages open access. Para 3 of the Statement of Objects and Reasons states that the Act recognizes the need to provide newer concepts like power trading and open access".**

5. **Ministry of Law & Justice** has further opined that **"There is no conflict between the aforesaid conclusion and the provisions of section 42(3) of the Act which provides that a person requiring supply of electricity has to give notice in respect thereof. If the consumer intends to use the network of the DISCOMS, he has to give notice and upon such notice to DISCOM *(it)* is duty bound to provide non-discriminatory open access to its network. Section 42(3) cannot be construed to mean that giving of a notice is a pre-condition for the implementation of open access."** It would thus mean that the requirement of notice is only to communicate the open access consumer's intention of using the DISCOM's network as per the relevant regulations and not to seek its permission for the same.

6. In view of the above stated opinion of M/o Law & Justice in consultation with Ld. Attorney General of India, all concerned may note that all 1 MW and above consumers are deemed to be open access consumers and that the regulator has no jurisdiction over fixing the energy charges for them. It is requested that necessary steps for immediately implementing the provisions relating to open access in the Electricity Act, 2003 may be taken in the light of the above opinion.

Yours faithfully,

Pranay
~~(Pranay Kumar)~~
So. Director
Tel: 2371 5250