



सत्यमेव जयते

**GUJARAT ELECTRICITY REGULATORY COMMISSION  
(GERC)**

**AHMEDABAD**

**TARIFF ORDER  
FOR  
Paschim Gujarat Vij Company Limited (PGVCL)**

**Case No. 948 of 2008**

**17 January 2009**



# C O N T E N T S

<b>Chapter</b>	<b>Title</b>	<b>Page</b>
1	Introduction	
2	Summary of PGVCL's Tariff Petition	
3	Brief outline of objections raised, response from PGVCL and Commission's comments	
4	Analysis of ARR and Commission's Decisions	
5	Capital Expenditure Plan	
6	Compliance to Directives and Fresh Directives	
7	Fuel and Power Purchase Cost Adjustment	
8	Open Access – Transmission Charges, Wheeling charges and cross subsidy surcharge	
9	Tariff Philosophy and Design	
	ORDER	
	Tariff Schedule	

## List of Tables

Table	Title	Page
4.1	Historical trend in category-wise energy sales	
4.2	Category-wise growth rates of energy sales	
4.3	Projected Energy sales for the control period	
4.4	BPL Households proposed to be connected and energy consumption	
4.5	Pending Agricultural Connections	
4.6	Consumption of Agricultural connections (Irrigation Pumpsets)	
4.7	Total Energy Sales	
4.8	Distribution loss levels	
4.9	Energy Requirement during the control period	
4.10	Summary of Energy Balance projected by PGVCL	
4.11	Energy Balance approved by the Commission	
4.12	Energy Requirement approved by the Commission	
4.13	Expenses projected for the control period	
4.14	Regional Network	
4.15	Details of PPA Allocated	
4.16	Power Purchase for FY 2008-09	
4.17	Power Purchase for FY 2009-10	
4.18	Power Purchase for FY 2010-11	
4.19	Transmission Charges of GETCO and PGCIL	
4.20	Projections of GUVNL's sale to licensees and trading	
4.21	Table 34: GUVNL Cost Allocation for the control period	
4.22	GUVNL cost allocation of DISCOMs	
4.23	Annual recurring cost of E-Urja	
4.24	Total cost of power purchase	
4.25	Capacities / PPA allocated to PGVCL	
4.26	Merit Order of Stations	
4.27	Power Purchase costs of PGVCL - Approved by the Commission for the year 2008-09	
4.28	Power Purchase costs of PGVCL - Approved by the Commission for the year 2009-10	
4.29	Power Purchase costs of PGVCL - Approved by the Commission for the year 2010-11	
4.30	Energy available and despatchable – 2008-09	
4.31	Power purchase cost 2008-09	
4.32	Power purchase cost 2009-10	
4.33	Power purchase cost 2010-11	
4.34	Transmission Charges	
4.35	GUVNL Cost Allocation	
4.36	GUVNL Cost Allocation	
4.37	Total power purchase costs during control period	
4.38	O&M expenses projected for the control period 2008-11	
4.39	Break up of O&M cost as per PGVCL	

<b>Table</b>	<b>Title</b>	<b>Page</b>
4.40	R&M Expenses	
4.41	Provision for bad and doubtful debts projected for the control period 2008-11	
4.42	Provision for bad and doubtful debts approved for the control period 2008-11	
4.43	Depreciation charges projected for the control period 2008-11	
4.44	Capital expenditure projected for the control period	
4.45	Proposed funding of capital expenditure during the control period 2008-11	
4.46	Sources of funding the capital expenditure approved for the control period 2008-11	
4.47	Interest and finance charges projected for the control period 2008-11	
4.48	Interest and finance charges approved for the control period 2008-11	
4.49	Interest on security deposits projected by PGVCL	
4.50	Consumer security deposit and interest approved	
4.51	Interest on working capital projected for the control period 2008-11	
4.52	Interest on working capital approved for the control period 2008-11	
4.53	Return on equity projected for the control period	
4.54	Other expenses projected for the control period 2008-11	
4.55	Capitalization of O&M expenses approved for the control period	
4.56	Provision for tax projected by PGVCL for the control period 2008-11	
4.57	Income tax approved by the Commission for the control period 2008-11	
4.58	Other income consumer related projected by PGVCL	
4.59	Other income consumer related approved for the control period 2008-11	
4.60	Non – Tariff income projected by PGVCL for the control period	
4.61	Non-tariff income approved for the control period 2008-11	
4.62	Revenue from existing tariff projected by the control period 2008-11	
4.63	Category-wise Sales and Revenue at current tariffs approved by the Commission for the control period 2008-11	
4.64	Summary of Revenue Requirement approved	
4.65	Revenue requirement as projected by PGVCL and as approved by the Commission for the control period 2008-11	
5.1	Capital Expenditure Proposed during the Control Period	
5.2	Break up of Capex under Normal Development Scheme	
5.3	Break up of expenditure under system improvement schemes	
5.4	Pending Agriculture Connections - Estimates and Assumptions	
5.5	Phasing of release of agricultural connections	
5.6	BPL Household Connections - Estimates and Assumptions	
5.7	Phasing of release of BPL Household connections	
5.8	Funding of Capital Expenditure	

# BEFORE THE GUJARAT ELECTRICITY REGULATORY COMMISSION AT AHMEDABAD

Case No.948 / 2008

Date of Order: 17.01.2009

## CORAM

**Dr. P K Mishra, Chairman**

**Shri K P Gupta, Member**

**Dr. Man Mohan, Member**

## ORDER

### 1. INTRODUCTION

#### 1.1 Background

The Government of Gujarat unbundled and restructured the Gujarat Electricity Board (GEB) with effect from 01.04.2005. The Generation, Transmission & Distribution businesses of the erstwhile Gujarat Electricity Board were transferred to seven successor companies. The seven successor companies are listed below:

i) Gujarat State Electricity Corporation Limited (GSECL)  
(A Generation Company)

ii) Gujarat Energy Transmission Corporation Limited (GETCO)  
(A Transmission Company)

Four Distribution Companies:

iii) Dakshin Gujarat Vij Company Limited (DGVCL)

iv) Madhya Gujarat Vij Company Limited (MGVCL)

v) Uttar Gujarat Vij Company Limited (UGVCL)

vi) **Paschim Gujarat Vij Company Limited (PGVCL)**

and

vii) Gujarat Urja Vikas Nigam Limited (GUVNL) – A Holding Company responsible for purchase of electricity from various sources and supply to Distribution Companies.



1.1.2 The Government of Gujarat, vide notification dated 3<sup>rd</sup> October 2006, notified the final opening balance sheets as on 1<sup>st</sup> April 2005, containing the value of assets and liabilities, which stand transferred from the erstwhile Gujarat Electricity Board to the transferee companies including Paschim Gujarat Vij Company Limited (PGVCL). Assets and Liabilities (gross block, loans and equity) have been considered by the Commission in line with the Financial Restructuring Plan (FRP) as approved by Government of Gujarat.

### 1.1.3 **Commission's order for 2007-08**

PGVCL had filed its ARR petition for the FY 2007-08 on 28.12.2006 in accordance with the Regulation notified by GERC on Terms and Conditions of Tariff. The Commission, in exercise of the powers vested under section 61 and 62 of the Electricity Act, 2003 and other powers enabling it in this behalf and after taking into consideration the submissions made by PGVCL, the objections by various stakeholders, response of PGVCL, issues raised during the public hearing and other relevant material, issued the order for the year 2007-08 on 31<sup>st</sup> March 2007.

## 1.2 **Multi Year Tariff (MYT) Regulations**

The Commission issued Multi Year Tariff (MYT) Framework Regulations for generation, transmission and distribution vide notification dated 20<sup>th</sup> December 2007 specifying the Terms and Conditions for Determination of Tariff for generation, transmission and distribution of electricity under MYT Framework after due process of consultation and public hearing.

### 1.3 **MYT Tariff petition for control period FY 2008-09 to 2010-11.**

PGVCL filed the MYT petition for approval of Aggregate Revenue Requirement and determination of Wheeling charges and Retail Supply Tariff for the control period (2008-09 to 2010-11) on 31<sup>st</sup> July 2008.

### 1.4 **Admission of petition and public hearing process**

1.4.1 The Commission conducted a preliminary analysis of the petition submitted by PGVCL and admitted the MYT petition of PGVCL for the control period (Case No.948 of 2008) on 14<sup>th</sup> August 2008.

In accordance with section 64 of the Electricity Act, 2003 the Commission directed PGVCL to publish its application in the abridged form and manner to ensure public participation.

A public notice was issued by the PGVCL inviting objections / suggestions from stakeholders on or before 22.09.2008, which was published in the following newspapers on 22.08.2008.

<b>Sr.No.</b>	<b>Name of the newspaper</b>	<b>Language</b>
1.	Indian Express	English
2.	Gujarat Samachar	Gujarati
3.	Sandesh	Gujarati

Meanwhile, the Commission received requests for extending the time limit for filing objections/ suggestions from some consumer / consumer organizations. With a view to giving some time for obtaining views of the stakeholders, the Commission positively considered the request and extended the time limit upto 13.10.2008. The PGVCL was



asked to give public notice to this effect, which was published in the same newspapers on 20.09.2008.

- 1.4.2 The Commission has received 46 objections / suggestions to the petition filed by PGVCL. The Commission considered the objections received and sent communication to the objectors inviting them to take part in the public hearing process for presenting their views in person before the Commission. Each objector was provided with a time slot on the days of public hearing from 10<sup>th</sup> November 2008 to 20<sup>th</sup> November 2008 for presenting his /her views on PGVCL petition before the Commission in the Commission's office in Ahmedabad. The names of persons and organizations who filed their objections are listed in Annexure-1. The objectors who attended the public hearing and presented their objections are listed in Annexure-2.

A gist on the main issues raised by the objectors at the public hearings in respect of this petition along with the response of the DISCOM is briefly given in Chapter-3.

- 1.4.3 The Commission obtained further information and clarification from PGVCL. PGVCL has also furnished supplementary information / data as required by the Commission.
- 1.4.3 Taking into consideration and the provisions of the MYT Framework Regulations by the Commission in December 2007 and the time required for PGVCL to prepare the MYT petition for the first time with projections for a three-years time frame, the Commission condones the delay in filing the MYT petition.

#### **1.4.4 State Advisory Committee Meeting**

A meeting of the State Advisory Committee (Constituted under Section 67 of the Electricity Act, 2003) was convened on 7<sup>th</sup> October 2008 and the members were briefed about tariff petitions received from unbundled licensees for the control period 2008-09 to 2010-11.





## List of objectors who filed objections

1. Shri M. S. Dharodia, Wankaner
2. Shri Surendra B. Mehta, Bhavnagar
3. Gujarat Krushi Vij Grahak Suraksha Sangh.
4. Shri Rameshbhai J. Fuletra, Valsad
5. Consumer Education and Research Society, Ahmedabad
6. BAPS, Gondal
7. Gujarat Hi Tension Consumer Association, Bhavnagar
8. Akhil Bharatiya Grahak Panchayat, Rajkot
9. Gujarat Chamber of Commerce and Industry, Ahmedabad
10. Bhavnagar District Small Industries Association, Bhavnagar
11. Shri J. M. Mori, Veraval
12. Shri Maldebhai V. Odedara, Ranavav
13. Shri D.G. Parmar, Veraval
14. Borsad Industries Association, Borsad
15. Central South Gujarat Salt Manufacturers Association, Bharuch
16. Hotel Indraprastha, Porbandar
17. Krishna Laundry, Porbandar
18. Shri Jyantilal Gokaldas Madlani, Porbandar
19. Shri Hemant N Gohil, Jamnagar
20. Shri N P Vithaldas and Co., Porbandar
21. Shri Devkaran Ramji Gadhiya, Porbandar
22. Shri Vimal J Gadhiya, Porbandar
23. Silver Palace Hotel, Porbandar
24. New Kandla Salt and Chemical Co. P Ltd., Gandhidham
25. Gujarat Pradesh Nationalist Youth Congress, Rajkot
26. General Secretary, Mahagujarat Janta Party and Shri Siddharth Parmar
27. Hotel Sheetal, Porbandar
28. Factory Owner's Association, Junagadh
29. Saurashtra Plastic Manufactures Association, Rajkot.
30. Laghu Udhog Bharati, Ahmedabad
31. Akhil Gujarat Grahak Sewa Kendra, Ahmedabad
32. Dr. S.M. Rana, Vadodara
33. Shri Ghanshyam Ukabhai, Gondal
34. Shri Bipinchandra Harilal Bhatt, Gondal
35. Shri K. J. Pathak, Dhoraji
36. Shri Vipul Hirabhai Raiyani, Gondal
37. Mahuva Chamber of Commerce & Industries, Mahuva
38. Shri Ghanshyam R. Darji, Vadodara
39. Er. M.M. Dave, Chartered Engineer (India), Bhavnagar
40. Sihor Steel Rerolling Mills Association, Sihor
41. Gujarat Cold Storage Association, Ahmedabad
42. Sachin Industries Co-operative Society Limited, Surat
43. Shri Dinesh Parshottamdas Rathod, Jetpur
44. Shri Babubhai Dhanabhai Zhalavadia, Rajkot
45. Southern Gujarat Chamber of Commerce & Industry and Surat Citizen's Council Trust, Surat
46. Tax Payers' – Users Consumers Association, Jamnagar



## Annexure 2

### **List of objectors who appeared at the public hearing and presented their objections**

1. Shri Surendra B. Mehta, Bhavnagar
2. Shri Kanubhai Patel, General Secretary, Gujarat Krushi Vij Grahak Suraksha Sangh.
3. Shri K. K. Bajaj, Consumer Education and Research Society, Ahmedabad
4. Administrator, BAPS, Gondal
5. Gujarat Hi Tension Consumer Association, Bhavnagar
6. Akhil Bhartiya Grahak Panchayat, Rajkot
7. Gujarat Chamber of Commerce and Industry, Ahmedabad
8. Bhavnagar District Small Industries Association, Bhavnagar
9. Borsad Industries Association, Borsad
10. Central South Gujarat Salt Manufacturers Association, Bharuch
11. Factory Owner's Association, Junagadh
12. Saurashtra Plastic Manufactures, Association, Rajkot.
13. Laghu Udhog Bharati, Ahmedabad
14. Shri Vipul Hirabhai Raiyani, Gondal
15. Shri Ghanshyam Darji, Vadodara
16. Er. M.M. Dave, Chartered Engineer (India), Bhavnagar
17. Sihor Steel Rerolling Mills Association, Sihor
18. Gujarat Cold Storage Association, Ahmedabad
19. Sachin Industries Co-op Society Limited, Surat
20. Southern Gujarat Chamber of Commerce & Industry and Surat Citizen's Council Trust, Surat



## Chapter 2

### Summary of PGVCL's Tariff Petition

#### 2.1 Aggregate Revenue Requirement (ARR)

The Paschim Gujarat Vij Company Limited (PGVCL) in its Petition has submitted the Aggregate Revenue Requirement for the control period (FY 2008-09 to 2010-11) showing the expenditure and the estimated revenue with the proposed tariff for the control period. The details of ARR and the revenue gap are given below:

#### Aggregate Revenue Requirement and Gap (2008-09 to 2010-11)

(Rs. Lakhs)

Particulars	FY 2006-07 Actuals	FY 2007-08 Projected at current tariffs	FY 2008-09 Projected at Proposed tariffs	FY 2009-10 Projected at Proposed tariffs	FY 2010-11 Projected at Proposed tariffs
Total cost of power purchase	33134	386352	414647	481773	528609
O&M Expenses	40493	44542	48996	53896	59285
Depreciation	9934	11235	13391	16473	19763
Interest on loans and finance charges	14519	15725	17295	20205	23143
Interest on working capital	1762	4049	4594	5123	5639
Other debits	294	308	324	340	357
Extraordinary items	-105	-105	-105	-105	-105
Provision for bad debts	3246	1548	1772	1986	2191
Less Interest and expenses capitalized	3647	3647	3647	3647	3647
Sub total	397843	460007	497266	576043	635235
Return on equity	0	6874	15383	17850	20491
Provision for Tax	336	223	245	269	296
Total expenditure	398180	467104	512893	594162	656022
Less: Non tariff income	17989	5793	5793	5793	5793
<b>Aggregate Revenue Requirement</b>	<b>380191</b>	<b>461312</b>	<b>507101</b>	<b>588369</b>	<b>650230</b>
Revenue from sale of power		369890	425223	478184	529034
Other income consumer related		11420	11902	12404	12928
Total revenue before subsidy		381310	437125	490588	541962
Subsidy		40115	43017	45943	48436
Other subsidies		5341	6469	7596	8685
Total revenue after subsidy		426766	486610	544127	599083
<b>Gap</b>		<b>34545</b>	<b>20490</b>	<b>44242</b>	<b>51147</b>



### **PGVCL has requested the Commission -**

1. To consider the aggregate revenue requirements for the first control period of FY 2008-09 to FY 2010-11 as proposed in this petition and for approval of the same.
2. To consider the proposal for revision in the tariff structure and to approve the same.
3. To recognize the revenue gap between the aggregate revenue requirement and the total revenues from the proposed tariff as “Regulatory Asset” to be recovered through tariffs in future.
4. To approve the capital expenditure plan for the Control Period as well as the revised plan for FY 2007-08.
5. To approve the merging of the existing FPPPA charges, being collected by the company at Rs. 0.12/- per unit, with the energy charges of each of the tariff slabs or alternatively, its continuation as FPPPA charge levied on all consumers apart from BPL consumers. In the latter case, any FPPPA charge per unit due to the Discom over the new base approved by the Commission shall be over and above the current amount.
6. To approve the pooling of the approved aggregate gains/losses of the four Discoms i.e., DGVCL, MGVCL, UGVCL and PGVCL, on account of controllable factors, which shall be dealt with in the following manner:
  - a. One-third of the amount shall be passed on as a rebate in tariff to all consumers of the four Discoms over such period as may be specified by the Commission under Regulation 9.7;
  - b. The balance two-third may be allocated equitably to the four Discoms or as may be decided by the Commission.
7. Pass any other order as the Commission may deem fit and appropriate under the circumstances of the case and in the interest of justice.



## Chapter 3

### Brief outline of objections raised, response from PGVCL and Commission's comments

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#### 3.0 PUBLIC RESPONSE TO THE PETITION

This chapter deals with the objections received in response to the public notice, the response of PGVCL to the objections and the views of the Commission thereon.

It is observed that the objections / suggestions filed are by and large repetitive in nature. Some of the objections / suggestions are general in nature and some are specific to the proposal submitted by PGVCL for approval of ARR and tariff revision. The Commission, has, therefore, addressed the objections / suggestions issue-wise rather than objector-wise.

#### 3.1. DELAY IN FILING THE PETITION

##### List of Objectors:

1. Consumer Education and Research Society, Ahmedabad
2. Gujarat Chamber of Commerce & Industry, Ahmedabad
3. Southern Gujarat Chamber of Commerce & Industry, Surat
4. Sachin Industries Cooperative Society Ltd., Surat

The above consumers / consumer organizations represented that the petition was not admissible as it was not filed within extension of time upto 31/03/2008 after the Regulations for MYT were notified on 20/12/2007. But the application was filed in the 1<sup>st</sup> week of August 2008 and admitted on 21/08/2008.

##### **Response of Licensee**

The MYT Regulations reached the licensee around 23/12/2007. Keeping in view the volume of work, the Commission was requested to extend date for submission of petition upto the end of March 2008. The Commission agreed to this. Consultations with the GoG on subsidy and capital expenditure took time and consequently the ARR was filed on 30/07/2008. The Commission was requested to condone the delay in the filing the MYT petition as per Conduct of Business Regulations.

##### **Commission's view**

*The MYT Regulations are newly introduced and the ARR/Tariff Petitions under the MYT Regulations are filed for the first time. The reasons put forth by the licensee are considered reasonable and hence the delay in filing the petition is condoned under Regulation No. 85 of the 'Conduct of Business' Regulations (Notification 2 of 2004) and the petition is admitted for processing on 14<sup>th</sup> August, 2008. The implementation of the tariff will, however, be with the prospective date.*

#### 3.2 TARIFFS DURING CONTROL PERIOD

##### List of Objectors:

1. Shri Surendra B. Mehta, Bhavnagar

2. Consumer Education and Research Society, Ahmedabad
3. Akhil Bharatiya Grahak Panchayat
4. Gujarat Chamber of Commerce & Industry, Ahmedabad
5. Bhavnagar District Small Industries Association, Bhavnagar
6. Southern Gujarat Chamber of Commerce & Industry, Surat
7. Sachin Industries Cooperative Society Ltd., Surat
8. Shri Dinesh Parshottamdas Rathod, Jetpur
9. Shri Babubhai Dhanabhai Zhalavadia, Rajkot
10. Sihor Steel Rerolling Mills Association, Sihor

The above consumers / consumer organizations complained against the proposed tariff increase. No. 2 objector above stated that the projected revenue increase of 6.8% in 2008-09 over 2007-08 was due to the past tariff hike. Besides this, the proposed tariff hike imposes additional burden of 6.3% making a total burden of 13.1% due to ARR increase from 2007-08 to 2008-09.

#### **Response of Licensee**

There has been no tariff increase for the past seven years. The Company is trying to absorb increases in costs, through performance improvement. The steady increase in power purchase cost is not being fully compensated by FPPPA. Other costs have also risen by 70% since 2001-02. The 6<sup>th</sup> Pay Commission and enhanced needs for O&M, & reliability requirements also have an impact on the O&M costs. Expanding asset base and high interest rates also have impact on depreciation and interest costs considerably.

The proposed hike is necessitated due to increased ARR during the control period. The hike is staggered to avoid tariff shock. The revenue increase in 2008-09 over 2007-08 is not entirely owing to tariff increase but also due to increase in sales.

#### **Commission's view**

*The ARR and tariff determination in this order have been done taking into consideration the relevant factors.*

### **3.3 BASIS FOR PROJECTIONS MADE IN THE PETITION**

#### List of Objectors:

1. Gujarat Krushi Vij Grahak Suraksha Sangh
2. Gujarat Hi Tension Consumers Association
3. Bhavnagar District Small Industries Association, Bhavnagar
4. Shri Hemant Gohil, Jamnagar
5. Mahagujarat Janta Party, Ahmedabad
6. Factory Owners Association , Junagadh
7. Saurashtra Plastics Manufacturers Association, Rajkot
8. Shri K.J Pathak, Dhoraji



9. Southern Gujarat Chambers of Commerce & Industry, Surat.

10. Shri Siddharth Parmar, Rajkot

11. Sihor Steel Rerolling Mills Association, Sihor

The above consumers / consumer organizations contended that projections in tables 5 to 9, 12 to 14 and 16 & 17 of the petition are not accurate. Some felt that the agricultural consumption estimate should not exceed 4278 MU per annum on the basis of average 7 HP per connection, 7.5 hours of supply per day and use for 250 days per year. Others objected on adopting 2006-07 as base year for projections. Objectors considered that audited final accounts were not given for FY 06, 07 and 08 and expressed that there was disparity in the statistics published in the advertisement & those in the petition.

#### Response of Licensee

The trend analysis of various consumer categories is based on actual historical data and the projections are based on the growth rates and the historical trends in respect of various factors besides the "Golden Goals" stipulated by GoG.

Audited accounts for FY 2006-07 were submitted to the Commission and are available on website. The year 2006-07 was taken as base year, as audited figures were available only for 06-07 & not 07-08. Provisional figures for 07-08 have been included in the petition wherever available at the time of filing. All projections have been made prudently based on established methods & assumptions and as per Tariff Regulations. There is no disparity in the statistics furnished in the advertisement and in the petition. This seeming disparity is due to a misconception in regard to non-tariff income & other income. Also the objectors do not take R.O.E into consideration.

#### **Commission's view**

*The tariff is determined based on a review of the projections considering their reasonableness.*

### **3.4 BASIS FOR TARIFF FIXATION AMONG CATEGORIES**

#### List of Objectors:

1. Akhil Bharatiya Grahak Panchayat, Rajkot
2. Gujarat Chamber of Commerce & Industry, Ahmedabad
3. Central South Gujarat Salt Manufacturers Association, Bharuch
4. Laghu Udyog Bharti, Ahmedabad
5. Shri K.J Pathak, Dhoraji
6. Shri G.R Darji, Vadodara

The above consumers / consumer organizations expressed reservations on the fixation of tariffs inter se among various categories.

#### **Response of Licensee**

Tariffs have been calculated as per the provisions of Section 62 (3) of Electricity Act, 2003. Also, it is necessary to give a tariff signal to enable large consumers to use electricity

prudently. So an increasing telescopic rate is proposed for increase in consumption. There is also need to provide cross subsidy to certain classes of consumers.

**Commission's view**

*Noted.*

**3.5 FIXED CHARGES, ENERGY CHARGES AND REACTIVE POWER CHARGES**

List of Objectors:

1. The Sihor Steel Rerolling Mills Association, Sihor
2. The Consumer Education and Research Society, Ahmedabad
3. The Akhil Bharatiya Grahak Panchayat, Rajkot
4. The Gujarat Chamber of Commerce and Industry, Ahmedabad
5. The Bhavnagar Small Industries Association, Bhavnagar
6. The Factory Owners Association, Junagadh
7. The Saurashtra Plastics Manufacturers Association, Rajkot
8. Shri K.J Pathak, Dhoraji
9. Shri G.R Darji, Vadodara
10. Laghu Udyog Bharati, Gujarat, Ahemdabad

The above consumers / consumer organizations objected to the increase in fixed and energy charges across all categories, as the last increase was made only two years ago. They felt that no increase would be necessary if expenses are reduced. They also felt that the reactive energy charges should not be levied for upto 10HP slab and the 50 HP slab has to be reduced to 40HP and that the reactive power charge shall be extended to all categories of consumers on demand based tariff.

**Response of Licensee**

Fixed charges shall normally be commensurate with fixed expenses which is not so at present. This necessitated the increase in fixed charges.

The overall increase in the fixed charges proposed works out to be 6%, 4% & 2% in the control period. Increase in various slabs may vary from category to category. The increase in fixed charges is not to be viewed in isolation but in terms of the average overall PU cost. The increase in energy charges is less than 7% in the cases mentioned.

In view of the need for grid discipline, in the context of the ABT regime, it is necessary to impose reactive charges even on LT motive power consumers. The incremental additional revenue due to reactive charges on LT motive power consumers may amount to only a few lakhs and is not projected as it is not assessable accurately.

**Commission's View**

*The tariff determination is done taking all the relevant factors into consideration*





### 3.6 REDUCTION IN CROSS SUBSIDY

#### List of Objectors:

1. Sihor Steel Re-rolling mills, Association, Sihor
2. Consumer Education & Research Society, Ahmedabad
3. Shri Maldevbhai Odedara, Ranavav
4. Factory Owner's Association, Junagadh
5. Saurashtra Plastics Manufacturers Association, Rajkot
6. Shri Ghanshyam Ukabhai, Gondal
7. Mahuva Chamber of Commerce & Industry, Mahuva
8. Shri Bipin Chandra Harilal Bhatt, Gonda
9. Southern Gujarat Chamber of Commerce & Industry, Surat
10. Sachin Industries Cooperative Society Ltd., Sachin, Surat
11. Shri Dinesh Parshottamdas Rathod, Jetpur

The above consumers / consumer organizations pointed out that as per the Tariff Policy the cross subsidy should be eliminated by 2012, by progressive reduction. The licensee seems to be doing nothing in this regard, except passing on the burden due to lower tariff to agricultural consumers to the other consumers.

#### **Response of Licensee**

It is true that there is need to bring the tariffs nearer to the average cost of supply at least with a margin of  $\pm 20\%$ . But due to power shortage, power has to be purchased at high cost to meet peak demand but such high cost power is supplied to industrial and commercial consumers whose tariff is higher.

Supply to agricultural consumers is limited to 8 hours during off-peak hours to reduce the cost of supply to them. In the short run, it is difficult to reduce cross subsidy drastically or eliminate it.

#### **Commission's view**

*There should be a progressive reduction in cross subsidy.*

### 3.7 POWER PURCHASE COST

Gujarat Hi-Tension Consumers Association & Shri G.R. Darji felt that the difference between the Power Purchase Cost of Rs.2 per Unit & the average realization of Rs.3.21 Per Unit was excessive which cannot be allowable as it is indicative of inefficiency of the licensee. A similar view was expressed by Akhil Bharatiya Grahak Panchayat.

#### **Response of the Licensee**

Besides Power Purchase Cost, the DISCOM has a number of other costs which it has to bear and recover in the Tariff. In fact while the average cost Per Unit in 2008-09 comes to Rs.3.83 Per Unit, the average realization would be Rs.3.21 Per Unit (i.e.) a loss of 62 Paise Per Unit.



### **Commissions View**

*All relevant factors are taken into consideration while finalizing the ARR.*

### **3.8 O&M COSTS**

#### List of Objectors:

1. President, Sihor Steel Re-rolling Mills, Association, Sihor
2. Consumer Education and Research Society, Ahmedabad
3. Bhavnagar District Small Industries Association, Bhavnagar

The above consumers / consumer organizations pointed out that there was abnormal increase in O&M expenses from Rs 328.52 crores in 2005-06 to Rs 404.93 for 2006-07 & to Rs 445.42 for 2007-08. A further 10% increase is proposed year to year henceforth

#### **Response of Licensee**

The increase in O&M expenses have been explained in the petition.

#### **Commission's View**

*The licensee needs to take vigorous steps to reduce its O&M expenditure to the approved limit.*

### **3.9 SHARING OF P&L UNDER MYT – T&D Loss as pass through**

#### List of Objectors:

1. Consumer Education & Research Society, Ahmedabad.
2. Shri Ramesh Bhai J. Fuletra, Valsad
3. Krishna Laundry, Porbandar
4. Shri Jyantilal Gokaldas Madlani, Porbandar
5. Shri N. P. Vitthaldas & Co, Porbandar
6. Shri Devkaran Ramji Gadhiya, Porbandar
7. Shri Vimal J. Gadhiya, Porbandar
8. Shri Maldevbhai Odedara, Ranavav
9. Shri D.G Parmar, Veraval
10. Silver Palace Hotel, Porbandar
11. Hotel Sheetal, Porbandar
12. Saurashtra Plastics Manufacturers Association, Rajkot
13. Shri Ghan Shyam Ukabhai, Gondal
14. Shri Bipin Chandra Harilal Bhatt, Gondal
15. Shri K.J Pathak, Dhoraji

The above consumers / consumer organizations felt that tariff should be fixed year to year and not at one time for several years. Tariff shall be based on the review of performance of



past year against criteria fixed for the year. Annual performance hearings shall be held and the benefit of good performance should reach the consumers.

### **Response of Licensee**

Any profit realised due to achieving Benchmark of distribution losses is shared with the consumers in the ratio of 1/3 to consumer, 1/3 to DISCOM, 1/3 to pool for future. Likewise any loss due to under achievements is shared with in the ratio of 1/3 to the consumer, rest to the licensee. Thus MYT provides for accountability, incentive and equity.

### **Commission View**

*The basic idea behind MYT is performance based regulation and to reduce the need for annual tariff fixation exercise. There is a compulsion on the licensee to limit its costs and raise its productivity in the face of continuously raising costs and pre-determined tariffs.*

## **3.10 PILFERAGE AND DIRECT HOOKING**

### List of Objectors:

1. Shri M.S. Dharodia, Wankaner
2. Gujarat Hi Tension Consumers Association.

The above consumers / consumer organizations have mentioned about prevalence of direct hooking etc and the failure of the licensee to curb theft. They felt deterrent action is needed to be taken. It was also opined that invoking of Sections 126 & 136 of EA 2003 indiscriminately may result in corruption. They felt the pricing structure should be so designed to discourage pilferage

### **Response of the licensee**

More than 5 lakhs installations of various categories are checked by PGVCL. Action is taken on receipt of complaints of theft. Large area of operations and the vulnerability of the overhead network in remote areas make it difficult to solve the problem LT less or HVDS and small capacity transformers is also planned. Action is being taken according to the statutory provisions & Regulations and recoveries against theft are accounted under "other income".

### **Commission's view**

*The Commission directs that the company should make greater efforts to reduce the theft of energy.*

## **3.11 T&D LOSSES**

### List of Objectors:

1. Sihor Steel Re-rolling Mills Association, Sihor
2. Shri Rameshbhai Fuletra, Valsad
3. Consumer Education & Research Society, Ahmedabad
4. Gujarat Hi Tension Consumers Association
5. Akhil Bharatiya Grahak Panchayat, Rajkot

6. Shri J.M Mori, Veraval
7. Shri Vipul Hirabhai Raiyani, Gondal
8. Shri G.R Darji, Vadodara
9. Southern Gujarat Chambers of Commerce & Industry, Surat
10. Sachin Industries Cooperative Society Ltd., Surat
11. Shri Dinesh Parshottamdas Rathod, Jetpur
12. Shri Babubhai Dhanabhai Zhalavadia, Rajkot
13. Laghu Udyog Bharati, Ahemadabad

The above consumers / consumer organizations have expressed alarm over the high level of T&D losses and the need to contain losses to reasonable levels. They felt that the investments made under APDRP for 2005-06 & 2006-07 had not yielded any results by way of reduction in loss. The company should be made accountable for failure to reduce losses during the annual performance reviews in the Multi Year Tariff Regime. It was also felt that energy audit shall not be construed as only T&D Losses.

#### **Response of Licensee**

There is a certain amount of inevitable loss in transmission and distribution, which is natural during transmission. Besides this, loss occurs due to pilferage, faults in meters and inaccuracies. The extensive network, which is overloaded, is vulnerable for losses and theft. Steps are being taken to reduce losses, like use of AB cables, HVDS, energy accounting, metering of transformers, preventive and punitive steps to curb theft etc.

Also distribution losses, for categories other than agriculture, had reduced in 2007-08. The increase in losses in agricultural category was due increase in consumption by consumers which is mainly unmetered.

#### **Commission's view**

*There is need for taking vigorous steps to reduce losses. The level of losses is approved taking into consideration the relevant factors and the feasibility. The licensee needs to ensure that investments in T&D are well spent.*

### **3.12 SUBSIDY TO NEEDY CLASSES OF CONSUMERS**

Shri Surendra B. Mehta, Bhavnagar expressed the view that needy classes of consumers like middle class etc needed subsidies.

#### **Response of the licensee**

This is within the purview of the Commission.

#### **Commission's view**

*The Commission has taken all relevant factors, statutory provisions, regulations and the volume of support extended by GoG in determining the subsidy and cross subsidy to the various needy classes of consumers.*



### 3.13 PRICE OF THE PETITION

Sihor Steel Re-rolling Mills Association and Gujarat Pradesh Nationalist Youth Congress, Rajkot felt that the petition was priced high.

#### **Response of the licensee**

The price of the copy of the petition is fixed by the Commission. However a soft copy of the same is available on the company's website. [www.pgvcl.com](http://www.pgvcl.com) and [www.gseb.com](http://www.gseb.com).

#### **Commission View**

*Noted.*

### 3.14 MECHANISM FOR REDRESSING CONSUMER GRIEVANCES

#### List of Objectors:

1. Shri Surendra B. Mehta, Bhavnagar
2. Consumer Education and Research Society, Ahmedabad
3. Shri M.M Dave, Chartered Engineer (India), Bhavnagar

The above consumers / consumer organizations stressed the need for an effective mechanism for redressal of consumer grievances.

#### **Response of the licensee**

As per the provisions of the Regulations, the licensee holds redressal meetings regularly at the sub-division level with the consumers on 10<sup>th</sup> of every month. Similar meetings are held at the circle level on 20<sup>th</sup> of each month. Three forums are set up since 1-8-05 in the DISCOM area for solving problems of consumers. All orders relating to consumers will be supplied to consumer service organizations on request.

#### **Commission's view**

*The licensee needs to ensure that its organisation functions to the satisfaction of consumers.*

### 3.15 METER RENT

Shri Surendra B. Mehta, Bhavnagar felt that meter rent shall not be increased. He also pleaded that recovery of meter rent needs to be stopped.

#### **Response of Licensee**

No increase is proposed. Meter rent is recovered as per the "Licensee's Power to Recover Expenditure Incurred in providing supply and other miscellaneous charges" Regulations 2005.

#### **Commission's view**

*Noted*

### 3.16 BPL CONSUMERS

#### List of Objectors:

1. Shri Surendra B. Mehta, Bhavnagar
2. Consumer Education and Research Society, Ahmedabad

3. Bhavnagar District Small Industries Association, Bhavnagar
4. Shri Hemant N. Gohil, Jamnagar
5. Factory Owners Association, Junagadh
6. Shri Pravinbhai Patel, Saurashtra plastics Association
7. Shri K.J Pathak, Dhoraji
8. Shri G.R Darji, Vadodara

The above consumers / consumer organizations raised objections regarding creation of BPL category. Some objectors opined that the maximum consumption limit of 30 units to BPL consumer was too low. Other objectors felt that the minimum benefit to a BPL consumer would amount to only Rs. 21 per month but this will breed corruption while determining the eligible BPL consumers and hence it is undesirable to create this category. This will also increase cross subsidy.

#### **Response of Licensee**

The creation of BPL category and the 30 unit limit on consumption to BPL consumers is in line with the Tariff Policy. Other residential consumers have a lowest slab of 50 Units etc with a reasonably low energy charge.

#### **Commission's view**

*Noted*

### **3.17 REBATE FOR PROMPT PAYMENT ETC.**

Shri Surendra B Mehta, Bhavnagar expressed the need for rebate for prompt and advance payment.

#### **Response of Licensee**

It is the duty of a consumer to pay in time. Rebates and discounts will affect the ARR.

#### **Commission's view**

*Noted.*

### **3.18 QUALITY OF SUPPLY**

#### List of Objectors:

1. Gujarat Krushi Vij Grahak Suraksha Sangh
2. Consumer Education and Research Society, Ahmedabad
3. Central South Gujarat Salt Manufacturers Association, Bharuch
4. Shri Vipul Hirabhai Raiyani, Gondal

The above consumers / consumer organizations felt that the quality of supply was poor.

Some objectors felt that the quantum and quality of supply provided to agricultural consumers were inadequate. Some objectors felt that the supply conditions in rural areas were discriminatory. Others felt load shedding and power cuts on consumers of all categories were reflective of the poor response of the DISCOM and should be penalized by way of (1) linking the ROE with average hours of supply per connection (2) linking fixed / demand charges with average hours of supply per month.



### **Response of Licensee**

Minimum of 8 hours of supply is given to agricultural consumers, as per the stipulated policy. When requirements for crops are higher, more usage hours are also allowed even by purchasing power at high cost. Whenever acute power shortage existed resulting in less than 8 hours of supply it is compensated on improvement in power position. As per GOG policy, supply to agriculture is ensured uniformly across all DISCOMs.

On implementation of Jyotigram Yojana, three phase power supply is available round the clock in rural areas and as such there is no discrimination in supply the rural areas.

Company is endeavouring for reliable power supply. During 07-08, 25 new 66 KV substations have been installed to reduce feeder length, 208 new 11 KV lines have been laid and 756 Distribution Transformers have been installed. Ambitious CAPEX is planned during the control period to improve quality in supply of power.

As regards load shedding in general, it is resorted to only when system conditions are critical.

### **Commission's view**

*There is scope to improve the quality of supply in general.*

## **3.19 BASIS FOR VARIOUS MISCELLANEOUS CHARGES LEVIED ON CONSUMERS**

Shri Dinesh Parshottamdas Rathod, Jetpur & Shri M.N. Trivedi, Gandhinagar questioned the basis for levy of various charges like, Service wire, reconnection charges, resealing charges, meter rent, recovery of burnt meter charges, charges for excess connected load etc.

Shri Pravinbhai Patel, Saurashtra Plastics Manufactures Association and Shri. K.J Pathak, Dhoraji and others also wished to know the basis in erection of new sub stations and expressed the need for more sub-stations to improve the supply conditions.

Shri Laljibhai Mavani, Factory Owners Association felt that it was unjust to levy belated payment charges at a rate more than the short term interest rates.

### **Response of Licensee**

Various charges are recovered in line with regulations or as per the tariff order.

Service wire of adequate capacity to meet the demanded load is utilized. If the wire burns out due to overload appropriate charges are recovered for replacement. Reconnection charges, resealing charges and meter rent are charged in accordance with regulations.

In case meter burns out due to consumer's fault, the resultant charges incurred are recovered from the security deposit lying with the DISCOM and supply is restored on replenishing the security deposit as per the Regulations. New sub stations are erected as per load requirement of the areas and the need to maintain voltage profile as per Regulations.

Belated payment charges are a penalty. It is intended to ward off serious cash flow problems of the licensee. Hence they need to be higher than short-term interest rate.

### **Commission's view**

*Noted.*

### 3.20 NEW TARIFF SHALL HAVE PROSPECTIVE EFFECT ONLY

Consumer Education and Research Society, Ahmedabad stressed that the Tariff order shall not take effect retrospectively from 1<sup>st</sup> April 08. They quoted the Clause. 8.1 sub clauses 7.7 of Tariff Policy and Clause 65 (b) of GERC “Terms & Conditions of Tariff” regulations.

#### **Response of Licensee**

No Response

#### **Commission’s View**

*Tariff revision will be prospective.*

### 3.21 TRUING UP OF ARR FOR 2007-08 & ARR GAP FOR 07-08

#### List of Objectors:

1. Consumer Education & Guidance Society, Ahmedabad
2. Southern Gujarat Chamber of Commerce & Industry, Surat
3. Sachin Industries Cooperative Society Ltd., Surat

The above consumers / consumer organizations pointed out that the actual expenditure figures for 2007-08, have exceeded the limits approved by the Commission. For example the limit of Rs 3920.27 crores in its Tariff order for 2007-08 has been exceeded by Rs 692.85 crores and requested that the amount should not be admitted

They also pointed out that the actual gap for 2007-08 of Rs 345.45 crores was far in excess of the Rs 177.23 crores approved by GERC despite recovery of FPPPA. There is an effort to over state the gap by showing increase in expenses & reduction in income.

#### **Response of Licensee**

The licensee admitted that there was an excess expenditure of Rs 607.47 crores in 2007-08 over that approved by the Commission in its order. PGVCL explained that, this was due to the substantial increases in price of coal & liquid fuels and consequent increase in power purchase cost. PGVCL also stated that there was increase in O&M expenditure which was explained in the petition.

The recoveries under FPPPA are accounted under revenue from sale of power. Only fuel cost etc in respect of approved power stations is allowed as FPPPA. A short-term power purchase to meet peak demand is also not recoverable under present mechanism. This causes a gap. This past gap is however not loaded in the petition. It is not correct to say that the gap is intentionally inflated.

#### **Commission’s View**

*All relevant factors have been taken into consideration while fixing the current MYT tariff.*

### 3.22 METERING OF AGRICULTURAL SERVICES

#### List of Objectors:

1. Akhil Bharatiya Grahak Panchayat, Rajkot
2. Consumer Education & Research Society, Ahmedabad





3. Gujarat Chamber of Commerce and Industry, Ahmedabad
4. Factory Owner's Association, Junagadh
5. Saurashtra Plastics Manufacturers Association, Rajkot
6. Shri K.J Pathak, Dhoraji
7. Shri G.R Darji, Vadodara

The above consumers / consumer organizations pointed out that though all the agricultural services were required to be metered by 12/07, only 42% are metered as on 31.3.08. The agricultural consumption was 37.5% while revenue recovered amounted to 7.8%. The GoG ought to give Rs. 1073 crores subsidy for the 4055 MUs of agriculture consumption so that other categories are not burdened with cross subsidy. Objector under Sr. no 3 above enquired about the status of the EQDC survey of connected load of agricultural services.

#### **Response of Licensee**

About 2.55 lakhs agricultural consumers are unmetered out of 3.81 lakhs by 31.3.08. Despite efforts the DISCOM is unable to install meters due to resistance from consumers. New connections are released with meters. New electronic meters are being installed in place of old mechanical meters for accuracy. The EQDC survey is not completed in the company area. A voluntary disclosure and regularization scheme is introduced in the DISCOM for agricultural consumers to tackle unauthorized excess load.

#### **Commission's View**

*The Commission does not approve of the feeble attempts of the licensee on this important matter. PGVCL should take assistance of law enforcement agencies of the State Govt to over come the resistance, besides educating the consumers on the need for metering.*

### **3.23 GUVNL COSTS**

#### List of Objectors:

1. Sihor Steel Re-rolling Mills Association, Sihor
2. Consumer Education and Research Society, Ahmedabad
3. Gujarat Chamber of Commerce and Industry, Ahmedabad
4. Bhavnagar District Small Industries Association, Bhavnagar
5. Laghu Udyog Bharati, Ahmedabad

The above consumers / consumer organizations questioned the need for a holding company, GUVNL as a Trading Company, which adds to the burden on the consumers by way of the Trading margin of 4P/Unit. Also its costs are passed on to the DISCOMs. They also wished to know the cost allocation among Discoms. M/s Laghu Udyog Bharti, Gujarat felt that the PUC share be charged by GUVNL for all DISCOMS.

#### **Response of the Licensee**

The GUVNL does not charge any trading margin to the DISCOMs. GUVNL is a coordinating body between the DISCOMs and manages their loan requirements. Any surplus which it generates beyond sales to bulk licensees is passed on to DISCOMs. The

expenditure of GUVNL is not on account of any loss made by GUVNL in supplying to bulk licensees. In fact there is a profit from this, which goes to reduce the expenditure debited to Discoms. The allocation of GUVNL cost is on the basis of power purchase of the respective Discom.

**Commission's View**

*The role of GUVNL is well recognized.*

**3.24 UNJUST ENRICHMENT**

Consumer Education & Research Society, Ahmedabad felt that the licensees are enriching themselves unjustifiably at the expense of consumers. By not reading the meters promptly, the bills are inflated due to the enhanced record of consumption. Also instead of consumer related information, on the spare space in the bills, advertisements are being printed.

**Response of Licensee**

Billing is done regularly. On the reverse side of the bills, details of tariff are provided.

**Commission's view**

*The response addresses the objection only partially. There is a need to see that meter reading and billing is done promptly on the due date, so that slab overlap does not put the consumer to loss. Alternatively, the billing software should be modified to adjust the slabs for actual number of days of consumption. Providing relevant and cogent information to consumers is more important than obtaining revenue through advertisements.*

**3.25 BAD AND DOUBTFUL DEBTS & GOVERNMENT DUES**

List of Objectors:

1. Consumer Education & Research Society, Ahmedabad
2. Southern Gujarat Chamber of Commerce & Industry, Surat
3. Sachin Industries Cooperative Society Ltd., Surat

The above consumers / consumer organizations took exception to bad debts & dues from government. While residential consumers are being disconnected for non payment of bills in time, it was not being done in the case of bigger consumers resulting in debts which are sought to be waived off.

**Response of Licensee**

Unrecoverable debts are part of any business, and reasonable provision needs to be made for writing off. The provision of Rs. 32.46 crore in 2006-07 was less than 1% of the revenue excluding subsidy. For the control period only 0.4% provision is made. Unrecoverable debts which are waived by the company will be charged to P and L, A/C of the company. In 2007-08, Rs. 83.43 lacs towards energy charges and Rs. 1134.85 lakhs towards delayed payment charges were waived. Government is paying its dues regularly.

**Commission's view**

*Bad and doubtful debts are allowed in line with the Regulations notified by the Commission.*



### 3.26 FPPPA CHARGES

#### List of Objectors:

1. Consumer Education & Research Society, Ahmedabad
2. Gujarat Chamber of Commerce and Industry, Ahmedabad
3. Bhavnagar District Small Industries Association, Bhavnagar
4. Sachin Industries Cooperative Society Ltd., Surat
5. Laghu Udyog Bharati, (Gujarat) , Ahmedabad

The above consumers / consumer organizations questioned the need for a tariff hike in the MYT petition even after elaborate FPPPA was allowed by the Commission. Some objectors felt that the proposal of the licensee to merge 12 Ps/unit as FPPPA charges into the energy charges is not acceptable. They also felt that there should be a separate formula for fuel cost adjustment and for power purchase adjustments. The FPPPA charges are being contemplated for frequent increase in fuel cost.

M/s Laghu Udyog Bharati, Gujarat felt that as the FPPPA charges were not audited by the Commission. Further rise in FPPPA charges shall be stayed until they are reviewed by a 3<sup>rd</sup> party. They further contended that the charges were levied at 75 ps/Unit & not at 12 ps/Unit.

#### **Response of Licensee**

FPPPA relates only to variation in fixed and variable charges in respect of approved power-stations and does not cover short term purchases and increases in various other important expenditure items. The 12ps/Unit as FPPPA is included in the revenue from sale of power. Projection of power purchase is based on the actual power purchase cost of the 1<sup>st</sup> six months period of 2007-08. The FPPPA charge and power purchase cost for this period was 12 ps/Unit and it has been merged in the proposed tariff. A more equitable FPPPA formula is proposed to the Commission to protect the interest of the utility and also the consumers.

FPPPA recovery for a quarter is meant to be done in the immediately succeeding quarter as per the formula approved.

The increase in fuel surcharge to consumers is a result of the steep rise in fuel prices, royalty, freight etc and consequent rise in cost of generation of GSECL etc. To reduce the burden on the consumers, the State Government has been absorbing a part of the increase occurring since Jan 08.

#### **Commission's view**

*All relevant factors have been considered in determination of ARR.*

### 3.27 BILLING & COLLECTION EFFICIENCY

Consumer Education & Research Society, Ahmedabad felt that the Billing and Collection efficiency of PGVCL & UGVCL was poor as compared to other Discoms. They based their observations on the reports on Standards of Performance (SOP).

#### **Response of Licensee**

The definitions in the Standards of Performance formats do not accurately depict the performance in respect of Billing and Collection efficiency.

### **Commissions View**

*The said definitions apply to all DISCOMs alike. So the contention of the licensee does not seem valid. Even if certain adjustments may distort the position in a month or a quarter due to overlaps, the position evens out over the longer period. The licensee may suggest a more accurate way of assessing Billing & Collection efficiency than that laid down in Standards Of Performance.*

### **3.28 HT TARIFF TO TEMPLE**

Shri Rohitbhai Joshi of Swaminarayan Temple, Gondal pleaded for application of HTP-B Tariff to the temple instead of the present HTP – II (A) tariff.

#### **Response of the Licensee**

HTP(B) applies to manufacturing Industry. Hence it is not applicable in the present case which is covered under non-manufacturing & lighting load (HTP – II (A)).

#### **Commissions View**

*Noted*

### **3.29 RETURN ON EQUITY**

Gujarat Hi Tension Consumers Association objected to claiming the return on equity as well as reserves and surplus.

#### **Response of the Licensee**

Return on Equity is proposed in accordance with the Tariff Regulations.

#### **Commissions View**

*Noted.*

### **3.30 FRINGE BENEFIT TAX & MAT**

Gujarat Hi Tension Consumers Association felt that the claim of Fringe Benefit Tax at 0.5% & the MAT at 11.33% was without basis.

#### **Response of the Licensee**

Past data indicates relationship between FBT and employee cost. So 0.5% of employee cost is taken as FBT as per past data. MAT is charged as per provisions of Tax. Both are allowable pass through as per regulations.

#### **Commissions View**

*Noted*

### **3.31 NIGHT SUPPLY BENEFIT & T.O.U CHARGES**

#### List of Objectors:

1. Sihor Steel Re-rolling mills, Association, Sihor
2. Gujarat Hi Tension Consumers Association
3. Shri B. N Agrawal

The above consumers / consumer organizations observed that while peak load rates are applied to all units consumed during peak hours, the concessional rate for night consumption is applicable to night hours consumption after deducting 1/3<sup>rd</sup> of the total consumption during the month. Also the increase of T.O.U charges from 0.25 to 1 Re./Unit



& making it applicable even to HTP-I consumers of load less than 500 KVA is burdensome. Some objectors felt that the benefit of concessional night tariff be extended for LT consumers.

### **Response of Licensee**

The Night supply benefit is meant to shift consumption in the lean hours by providing incentive. Both peak load penalty and Night Supply benefit are meant to flatten the load curve and benefit the grid. But where the base load extends all through the day and night, the night usage out of this cannot be treated as the result of any special effort by the consumer to benefit the grid. Hence the night concession is reckoned after reducing the total monthly consumption by about 1/3<sup>rd</sup>.

As regards extending of Night supply concession to LT (LTP - IV) category, it is pointed out that in the Tariff Order dt. 10.10.2000, a special category was introduced for LT consumers for exclusive use during night hours. However as it did not find favour with consumers, this was discontinued in T.O dt. 06.05.06. It is felt that it is difficult for LT consumers to shift their demand to night hours.

It is necessary to apply TOU charges to as many consumer categories as possible in view of the high costs associated with the peak load supply

### **Commissions View**

*The Commissions feels that the peak load poses more problems than off-peak use in conditions of general shortage. The Commission proposes to reintroduce LTP –IV category of tariff for the exclusive night use.*

## **3.32 HTP - IV**

Shri Haresh K. Patel, President, Sihor Steel Re-rolling Mills Association and Gujarat Hi Tension Consumers Association felt that the concessional HTP – IV tariff (for night hour use) is not being applied to continuous process Industries or Consumers using power during day time also in addition to night use. So if such consumers use power exclusively during several months continuously they will not be eligible for HTP – IV benefit.

### **Response of the Licensee**

HTP – IV is a special category with reduced energy charges exclusively for night use. This is not applicable for continuous users or shift users having day shifts.

### **Commissions View**

*Noted.*

## **3.33 ONION DEHYDRATION PLANTS AND SALT INDUSTRY AS SEASONAL INDUSTRIES**

Gujarat Hi Tension Consumers Association felt the seasonal tariff shall be made applicable for Onion dehydration plants.

Similar request in respect of salt industry was made by Shri Rajesh Shah, Bharuch. It was also requested to consider salt industry as continuous process industry.

President, Gujarat Cold Storage Association pleaded for extension of agricultural tariff to cold storage plants.

### **Response of the Licensee**

These are not seasonal activities. Hence the seasonal tariff is not applicable. Individual salt manufactures may approach Energy Department and Government of Gujarat for qualifying as continues process industry. Agricultural Tariff is for irrigation purpose and cannot be extended to cold storage plants.

#### ***Commissions View***

*Noted.*

### **3.34 DISTRIBUTION TRANSFORMER FAILURE**

Akhil Bharatiya Grahak Panchayat and Shri G.R. Darji, Vadodara complained about the high rate of failure of distribution transformers.

#### **Response of Licensee**

The rate of failure has reduced by more than 3% in 2006-07 to 2007-08. The failures are mostly on Agricultural feeders. Steps like HVDS are being adopted to reduce failures.

#### ***Commissions View***

*Transformers are stationary plant, so large number of failures are a reflection on the poor construction & O&M. The licensees need to ensure that failures are reduced to the minimum.*

### **3.35 CAPITAL EXPENDITURE & GOLDEN GOALS**

Gujarat Chamber of Commerce and Industry, Ahmedabad, Bhavnagar District Small Industries Association and Mahuva Chamber of Commerce & Industries raised objections relating to the high capital expenditure proposed.

#### **Response of Licensee**

The ambitious programme of release of new agricultural connections & BPL Household connections has been taken up as part of the Golden Jubilee Celebrations of the State. But this needs large capital expenditure & support from GOG and other agencies, and adequate tariff hike. The DISCOMs assume 100% grant for BPL and 10% grant for release of agricultural connections.

#### ***Commission's View***

*Noted*

### **3.36 BURDEN ON CPPS**

Gujarat Chamber of Commerce & Industry, Ahmedabad and Bhavnagar Small Industries Association felt that the penal charges for exceeding C.D on consumers having CPPS were excessive and unwarranted.

#### **Response of Licensee**

These charges are necessary in the interest of grid discipline and also because the DISCOMs have an adverse impact of overdrawal as well as monitoring.

#### ***Commission's View***

*Noted*



**3.37 HIGHER DEMAND CHARGES ON LTP –1 CONSUMERS HAVING ACTUAL BILLING DEMAND MORE THAN CONTRACTED DEMAND**

Gujarat Chamber of Commerce & Industry Bhavnagar District Small Industries Association objected to the imposition of higher demand charges for billed MD exceeding C.D

**Response of Licensee**

This is necessary to maintain grid discipline.

**Commission's View**

*Noted*

**3.38 PPAs**

Shri K.C Vyas, Gujarat Pradesh Nationalist Youth Congress and Shri Siddharth Parmar, Rajkot opined that PPAs were not approved properly.

**Response of Licensee**

All PPAs are approved by the Commission. Power purchase cost is also sanctioned by the Commission during the ARR exercise.

**Commission View**

*Noted*

**3.39 U.G. NETWORK IN PLACE OF O.H NETWORK**

Dr. S.M Rana, Vadodara desired that UG network may be installed in place of OH network within their society.

**Response of Licensee**

The suggestion is appreciated, but the proposal is quite expensive

**Commission View**

*Noted*

**3.40 SOLAR CELL TO INDIVIDUAL SOCIETY**

Dr. S.M Rana, Vadodara suggested that Solar cells may be provided for individual societies.

**Response of Licensee**

Suggestion is welcome, but the proposal is expensive especially on stand alone basis.

**Commission View**

*Noted*

**3.41 INTEREST ON WORKING CAPITAL**

Shri K.J Pathak, Dhoraji, Shri Pravinbhai Patel, Rajkot and Shri Laljibhai Mavani representing Factory Owners Association desired to know how the working capital needs are worked out & the rate of interest on it

**Response of the Licensee:**

The interest on working capital is expected to be about 10.5% during the control period. The working of capital needs is given in the petition.

**Commission View:**

*Noted*



### 3.42 NOTICE TO CONSUMER

Shri Chandravadan Pandey, Tax Payers Users Association Jamnagar, contended that no notice was given to the consumer regarding the petition.

Response of Licensee

The Notice inviting objections/suggestions was published for information of general public as required in the regulations. The petition was also made available on website.

**Commission View**

*Noted*

### 3.43 STATE SUBSIDY

Shri Siddharth Parmar, Rajkot desired to know the basis & the level of State Subsidy.

**Response of Licensee**

Subsidy allocation is based on proportion of agricultural consumption. The Company has assumed the same level of subsidy from GoG in the absence of any contrary instruction.

**Commission View**

*Noted*



# Chapter 4

## Analysis of ARR and Commission's Decisions

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### 4.1 Energy Sales

Proper estimation of category-wise energy sales for the control period is essential to arrive at the quantum of power to be purchased and the likely revenue to be collected through sale of energy. This chapter examines in detail the category-wise energy sales projected by the PGVCL in its Multi Year Tariff petition for the control period 2008-09 to 2010-11.

### 4.2 Consumer Categories

PGVCL serves over 33 lakh consumers within its licensed area and the consumers are categorised as under:

#### LT Category:

- Residential
- Non-residential (Commercial)
- Educational Institutions
- Industrial – LT
  - Motive power
  - Laboratories and Research Institutions
  
- Agricultural (Irrigation pumpsets)
- Water works and sewerage pumping
- Public lighting

#### HT Category

- Industries and consumers which are not covered by other HT categories
- Commercial services
- Colonies, towns, shops etc., having predominantly lighting load
- Railway traction and workshops.

The DISCOM serves the consumers at different voltages at which the consumers avail supply.

All the consumers other than agriculture are metered. Even the agricultural consumers who are connected since the last two to three years are being metered. However, majority of agricultural consumers (who were connected earlier) are un-metered and their consumption is assessed based on normative consumption approved by the Commission.

#### 4.2.1 Overall Approach to sales projection

PGVCL has projected the energy sales for the control period based on actual sales during the year 2006-07 which is taken as a base. The revenue forecast is based on the Audited Annual Accounts for the year 2006-07. It is stated that the historical trend method has proved to be reasonably accurate and a well accepted method to estimate the number of consumers, the connected load and the energy consumption.

PGVCL has, therefore, estimated the consumers connected load and energy sales based on cumulative annual growth (CAGR) trends during the past years.

Where the past data is fairly accurate and the trends are well established, the trends based on past data is a well established method for energy forecast. **As such the trend method adopted by the DISCOM is accepted by the Commission.**

#### 4.3 Category-wise projected energy sales for the control period 2008-11

PGVCL has furnished the category-wise energy sales over the last six years (2003-2008) and the projected sales for the control period 2008-11 and also the CAGR for 5 years and 3 years thereof. Category-wise sales, over the last 6 years as furnished by PGVCL are shown in Table 4.1 below:

**Table 4.1**  
**Historical trend in category-wise energy sales**

MU

Tariff Category	2003	2004	2005	2006	2007	2008
<b>LT consumers</b>						
Residential	1115	1299	1407	1505	1657	1826
Commercial	333	394	442	494	561	646
Industrial LT	718	794	876	960	1064	1140
Public Lighting	43	48	49	53	58	62
Agriculture	3885	3551	3672	3897	4062	4072
Public Water works	160	187	203	210	219	236
<b>LT Total</b>	<b>6255</b>	<b>6273</b>	<b>6649</b>	<b>7119</b>	<b>7621</b>	<b>7982</b>
<b>HT consumers</b>						
Industrial HT	1351	1451	1551	1993	3271	3738
Railway traction	3	0	0	0	0	0
<b>HT Total</b>	<b>1354</b>	<b>1451</b>	<b>1551</b>	<b>1993</b>	<b>3271</b>	<b>3738</b>
<b>Total</b>	<b>7609</b>	<b>7724</b>	<b>8200</b>	<b>9111</b>	<b>10892</b>	<b>11720</b>

The category-wise growth rates as furnished by PGVCL are given in Table 4.2 below:



**Table 4.2**  
**Category-wise growth rates of energy sales**

Tariff Category	CAGR (5 years)	CAGR (3 years)	YoY 2007	YoY 2008
<b>LT consumers</b>				
Residential	12.5%	8.5%	10.1%	10.2%
Commercial	17.1%	12.7%	13.6%	15.1%
Industrial LT	14.0%	10.2%	10.8%	7.2%
Public Lighting	8.2%	8.4%	8.6%	7.7%
Agriculture	1.1%	5.1%	4.1%	0.4%
Public Water works	12.2%	3.9%	4.3%	7.7%
<b>LT Total</b>	<b>6.0%</b>	<b>7.0%</b>	<b>7.0%</b>	<b>4.8%</b>
<b>HT consumers</b>				
Industrial HT	26.2%	43.6%	60.6%	16.8%
Railway traction	100.0%	0.0%	0.0%	0.0%
<b>HT Total</b>	<b>26.1%</b>	<b>43.6%</b>	<b>60.6%</b>	<b>16.8%</b>
<b>Total</b>	<b>10.4%</b>	<b>14.8%</b>	<b>18.7%</b>	<b>8.4%</b>

Based on the above growth rates of energy sold PGVCL has projected the category-wise energy sales for the control period 2008-09 to 2010-11 as given in table 4.3 below:

**Table 4.3**  
**Projected Energy sales for the control period**

(MU)

Tariff Category	2008-2009 (Projected)	2009-2010 (Projected)	2010-2011 (Projected)
<b>LT consumers</b>			
Residential	1999	2178	2372
Commercial	728	821	925
Industrial LT	1256	1384	1526
Public Lighting	67	73	79
Agriculture	4842	5610	6380
Public Water works	245	255	265
<b>LT Total</b>	<b>9137</b>	<b>10321</b>	<b>11546</b>
<b>HT consumers</b>			
Industrial HT	4112	4400	4708
Railway traction	0	0	0
<b>HT Total</b>	<b>4112</b>	<b>4400</b>	<b>4708</b>
<b>Total</b>	<b>13249</b>	<b>14721</b>	<b>16254</b>

#### 4.4 Detailed analysis of energy sales projected

The category-wise energy sales given for the years 2003 to 2008 in Table 4.1 are the actuals. The energy sales for the control period 2008-09 to 2010-11 are projected based on 3 years CAGR between the period 2005-07 and year on year (YoY) sales for the period between 2006 and 2007.



PGVCL has projected the sales for the control period mostly based on past trend considering 3 year CAGR.

**Commission's view**

The category-wise energy sales, projected by PGVCL for the control period as given in Table 4.3 are discussed below:

**4.4.1 Residential**

The sales to this category constitutes about 15.6% of total energy sales of the company. PGVCL has projected the energy sales to residential category at 1999 MU for 2008-09, 2178 MU for 2009-10 and 2372 MU for 2010-11. A growth of 8.5% (3 years CAGR) has been considered by the company over the energy sales for 2007-08. In addition, the company has added the consumption by BPL households proposed to be connected during the control period. The BPL households proposed to be connected and the estimated consumption is as given in Table 4.4 below:

**Table 4.4**

**BPL Households proposed to be connected and energy consumption**

Sl.No.	Particulars	2008-09	2009-10	2010-11
1	Number of new household connections (Nos.)	49200	30980	30886
2	Cumulative number of connections (Nos.)	49200	80180	111066
3	Total additional energy supplied (MUs)	18	29	40
4	Additional load added (MW)	5	8	11

As seen from Table 4.2 the growth rates witnessed over a 5-year and 3-year periods are 12.5% and 8.5% respectively, and the growth during 2006-07 over 2005-06 was 10.1% and that of 2007-08 over 2006-07 is 10.2%. PGVCL has considered a mid-term growth of 8.5% (3 year CAGR) which it expects to continue during the control period.

Though the YOY growth 2007-08 was 10.2%, such growth may not sustain over the control period and the growth of 8.5% estimated by PGVCL is considered reasonable and approved. The projected consumption by BPL households as given in Table 4.4 is added to arrive at total consumption by residential category of consumers. PGVCL has estimated the energy consumption by BPL households at 30 units / month per household which is also reasonable.

**The Commission approves the energy sales to the residential category during the control period as below:**

Year	Energy (MU)	Growth Rate (%) (Includes sales to BPL households)
2008-09	1999	9.5
2009-10	2178	9.0
2010-11	2372	8.9

**4.4.2 Commercial**

The sale to this category constitutes about 5.5% of total sales of the company.



PGVCL has projected the energy sales to this category during the control period as under:

2008-09	728 MU
2009-10	821 MU
2010-11	925 MU

The company has considered a growth of 12.7% which is midterm growth between 2004-05 and 2006-07 (3-year CAGR) and it expects the same level of growth during the first control period.

As seen from Table 4.2, there has been a growth of 17.1% during the 5 year period 2003-07, 12.7% during the 3 -year period 2005 – 2007, and YOY growth of 13.6% during 2007 and 15.1% during 2008. The high growth of 17.1% (5 year growth) may not sustain. It is reasonable to consider the 3-year CAGR (2005-2007), midterm growth during the control period as projected by the company.

**The Commission, therefore, approves the energy sales to the commercial category during the control period as below:**

Year	Energy (MU)
2008-09	728
2009-10	821
2010-11	925

#### 4.4.3 Industrial (LT)

The consumption of this category accounts for about 9.7% of total energy sales of the company.

PGVCL has projected the sales of this category during the control period as below:

2008-09	1256 MU
2009-10	1384 MU
2010-11	1526 MU

The company has considered a growth of 10.2% based on the three year CAGR (2004-05 to 2006-07) and projected the sales for the control period at this growth. The YOY growth rate during 2007 and 2008 were 10.8% and 7.2% respectively. The growth rate has come down over the last 5 years, the midterm growth of 10.2% is considered by the company and projected the sales for the control period.

Looking at the growth rates during 5 year and 3 year periods and YOY during 2006-07 and 2007-08, the growth rate of 10.2% is considered reasonable.

**The Commission approves the energy sales to the industrial (LT) category during the control period as under:**

Year	Energy (MU)
2008-09	1256
2009-10	1384
2010-11	1526



#### 4.4.4 Public Lighting

The consumption of public lighting accounts to about 0.5% of total energy sales of the company. PGVCL has projected the sales for the control period for this category as below:

2008-09	-	67 MU
2009-10	-	73 MU
2010-11	-	79 MU

The company has considered a growth rate of 8.4% based on the growth during the period 2004-05 to 2006-07 (3 year CAGR).

The growth of this category over a five year period (2003 to 2007) and 3 year period (2005-07) were 8.2% and 8.4% respectively. Even the YOY growth during 2006-07 and 2007-08 were 8.6% and 7.7%. The growth of this category is steady over the years and the growth of 8.4% is considered reasonable.

The Commission approves the sales to the public lighting during the control period as under:

2008-09	–	67 MU
2009-10	–	73 MU
2010-11	–	79 MU

#### 4.4.5 Agricultural (Irrigation Pumpsets)

The consumption by agricultural (irrigation pumpsets) accounts for about 35% of total sales by the company. The consumption by irrigation pumpsets connected during recent years only are metered and those related to earlier years are not metered. PGVCL has projected the energy sales to this category during the control period as below:

2008-09	-	4842 MU
2009-10	-	5610 MU
2010-11	-	6380 MU

The company has considered a growth of 5.1% based on the growth during this period 2005-07 (3 year CAGR). The growth rate is applied for the metered category and for the un-metered category, the consumption is arrived at 1700 kWh/HP/ annum as per norm prescribed by the Commission.

In addition to normal growth of consumers, it is stated that the State Government has set target for release of all pending agricultural connections under “Golden Goals” programme. The estimated release of additional connections would be as in Table 4.5 below:

**Table 4.5**  
**Programme for release of Agricultural Connections**

Release of pending Agriculture Connections	Unit	FY 2008-09	FY 2009-10	FY 2010-11
Number of New Agriculture Connections	Nos.	51667	51667	51667
Cumulative number of Connections	Nos.	51667	103333	155000
Additional sales	MUs	747	1493	2240
Additional Load Added	HP	439167	878333	1317500
Additional Load Added	MW	328	655	983



As mentioned the growth approved is only for metered connections which are varying between 10,000 to 18,000 / annum during the last 5 years. The other connections are un-metered which are 2.58 lakh and no more un-metered connections are being added.

The 3 year (2005-07) growth rate is about 5.1% which the company has considered for projection during the control period is reasonable as the number of connections being released every year are only few thousands. The consumption by unmetered connections is assessed at 1700 kWh/HP/annum as specified by the Commission. The Commission approves the growth of 5.1% for metered connections and the norm of 1700 kWh/HP/annum for un-metered connections. The Commission also approved the release of additional connections during the control period.

A directive is again issued to obtain a realistic assessment of agricultural consumption. Pending the energy audit to arrive at realistic consumption by agricultural pumpsets the consumption of unmetered connections is approved at normative level of 1700 kWh/HP/year. For metered services PGVCL has furnished the consumption of different categories in the MYT Petition. The consumption varies from 139 to 798 units/HP/year. It is submitted by PGVCL that metered consumption recorded does not reflect the correct consumption level for various reasons including theft of energy, tampering of meters etc. In view of this average consumption of the metered categories of pumpsets in the four distribution companies is considered to arrive at the energy consumption by the additional agricultural connections under "Golden Goal" programme which works out to about 650 units /HP/year.

The average consumption of 650 units/HP/year is adopted for new connections – which have to be metered connection – to be released under "Golden Goal" programme. The consumption by agricultural category is given below in Table 4.6.

**Table 4.6**  
**Consumption of Agricultural connections (Irrigation Pumpsets)**

MU)				
Sl. N.	Metered / Unmetered	Number of Consumers	Connected load (HP)	Energy Consumed (MU)
<b>Year 2008-09</b>				
1.	Unmetered	257846	2155458	3664
2.	Metered	127461	895553	431
3.	New connection (metered).	51667	439167	285
<b>4.</b>	<b>Total</b>	<b>436974</b>	<b>3490178</b>	<b>4380</b>
<b>2009-10</b>				
1	Un-metered	257846	2155458	3664
2	Metered	132822	947747	439
3	New connection (meterd)	103333	878333	571
<b>4</b>	<b>Total</b>	<b>493501</b>	<b>3981538</b>	<b>4674</b>
<b>2010-11</b>				
1	Un-metered	257846	2155458	3664
2	Metered	138407	1002982	477
3	New connection (metered)	155000	1317500	856
<b>4</b>	<b>Total</b>	<b>551253</b>	<b>4475940</b>	<b>4997</b>



The Commission approves the energy sales by agricultural consumers (irrigation pump sets) during the control period as below:

Year	Energy (MU)
2008-09	4380
2009-10	4674
2010-11	4997

#### Public Water Works

The energy sales to this category accounts for about 2% of total energy sales of the company. PGVCL has projected the sales to this category during the control period as below:

Year	Energy (MU)
2008-09	245 MU
2009-10	255 MU
2010-11	265 MU

The company assumed a growth of 3.9% based on the growth rate (CAGR) for the three-year period between 2004-05 and 2006-07.

The 5 year CAGR (2003-07) of this category was 12.2%, which has come down to 3.9% during the three year period between 2004-05 and 2006-07 and increased to 4.3% during 2006-07. Hence it is considered that the growth rate of 3.9% assumed by the PGVCL to assess the sales to this category is appropriate and is approved by the Commission.

**The Commission approves the sales to public water works during the control period as below:**

Year	Energy (MU)
2008-09	245
2009-10	255
2010-11	265

#### 4.4.7 Industrial HT

The sales to this category accounts to about 32% of the total sales of the company.

PGVCL has projected the sales to this category during the control period as below:

2008-09	4112 MU
2009-10	4400 MU
2010-11	4708 MU

The consumption is assessed by the company at a growth rate of 10% for the year 2008-09 and at 7% for the years 2009-10 and 2010-11 as against the CAGR of 26.2% for the 5 year period and 43.6% for the 3 year period

It is submitted by PGVCL that there has been huge increase in industrial activity in PGVCL area leading to very high growth rates in demand from this category, a growth of 43% was recorded during 2006-07. In 2007-08 the growth was lower, but still was very robust at 16.8%. It is stated that this upswing in industrial activity is attributable to the tax holiday / benefits announced by the Government of Gujarat for industrial projects in certain areas in





PGVCL area. Registration of this has been stopped in December 2005. Hence the growth in demand is expected to stabilize as the new capacity has already been added during 2006-07 and some residual demand has also been added during the first half of 2007-08 at a much lower rate as evidenced by the dropping growth rate in the consumption by this category.

The PGVCL has mentioned that, in view of the withdrawal of incentives the growth of HT industry may not be at the level of 2005-06, 2006-07 and 2007-08. The growth during the year between 2003 and 2005, prior to providing incentives by the State Government was in the order of 7%. PGVCL therefore, assumed the growth rate of 10% for the year 2008-09 and 7% for the years 2009-10 and 2010-11 during the control period. The Commission considers that the growth rates 10% and 7% during the control period assumed by PGVCL is considered reasonable, particularly in view of global recession that has set in.

The Commission therefore approves the energy sales to HT industry during the control period as below:

2008-09	4112 MU
2009-10	4400 MU
2010-11	4708 MU

#### 4.4.8 Railway Traction

There are no energy sales to Railway traction during the years 2003-04 to 2007-08. Hence the PGVCL did not submit any proposal for this category for the control period 2008-09, 2009-10 and 2010-11.

#### 4.4.9 Total Energy Sales

Total energy sales as projected by PGVCL and as approved by the Commission during the control period is given in Table 4.7 below:

**Table 4.7  
Total Energy Sales**

Sl. No.	Consumer category	Energy sales projected by PGVCL			Energy Sales approved by the Commission		
		2008-09	2009-10	2010-11	2008-09	2009-10	2010-11
	<b>LT consumers</b>						
1.	Residential	1999	2178	2372	1999	2178	2372
2.	Commercial	728	821	925	728	821	925
3.	Industrial LT	1256	1384	1526	1256	1384	1526
4.	Public Lighting	67	73	79	67	73	79
5.	Agriculture	4842	5610	6380	4380	4674	4997
6.	Public waterworks	245	255	265	245	255	265
	<b>LT Total</b>	<b>9137</b>	<b>10321</b>	<b>11546</b>	<b>8675</b>	<b>9385</b>	<b>10164</b>
	<b>H.T Consumers</b>						
7.	Industrial HT	4112	4400	4708	4112	4400	4708
8.	Railway Traction	0	0	0	0	0	0
9.	<b>HT Total</b>	<b>4112</b>	<b>4400</b>	<b>4708</b>	<b>4112</b>	<b>4400</b>	<b>4708</b>
10.	<b>Grand Total</b>	<b>13249</b>	<b>14721</b>	<b>16254</b>	<b>12787</b>	<b>13785</b>	<b>14872</b>



#### 4.5 Distribution Losses

The PGVCL has projected the distribution losses for the year 2007-08 (revised) and the control period 2008-09 to 2010-11 as under:

	2007-08 (Revised)	2008-09 (Projected)	2009-10 (Projected)	2010-11 (Projected)
Distribution Loss (%)	32.80	30.30	28.30	26.30

The loss trajectory projected by PGVCL in the tariff petition for 2007-08 and approved by the Commission is as follows:

Year	Losses Projected by PGVCL	Approved by the Commission	Actual now furnished
2005-06	38.72	38.72	38.72
2006-07	34.22	34.22	32.54
2007-08	30.22	30.22	32.80

It is submitted by PGVCL that the increase in losses is attributed to the increased hours of supply to agricultural category during the year, which has resulted in more off take without any corresponding increase in the sales, as the consumption being unmetered.

The PGVCL has improved the loss levels during 2005-06 and 2006-07 compared to targets fixed by the Commission during the year at 41.0% and 36.50%.

The losses have increased during 2007-08 to 32.80% compared to the loss level of 30.22% approved by the Commission. The increase in loss by about 2.58% during 2007-08 cannot be attributed to increase in supply hours to agricultural sector as the norm of 1700 kWh/HP/annum has margin to absorb the additional energy consumption due to increased hours of supply. Further the total sales during the years 2005-06, 2006-07 and 2007-08 and the percentage of consumption by agriculture and HT as shown below also do not justify the increase in loss as given below:

Year	Total Sales (MU)	Consumption by Agricultural sector (MU)	Percentage of total sales (%)	Sales to HT (MU)	Percentage total sales (%)
2005-06	9111	3672	(40.3)	1993	21.87
2006-07	10892	4062	(37.29)	3271	30.00
2007-08	11720	4072	(34.74)	3738	31.89

There is only marginal increase in sales by agricultural sector during 2007-08 over consumption of 2006-07 (10 MU) and moreover the percentage of consumption by agricultural sector has come down from 40.3% to 34.74% and the sales to HT category has gone up from 21.87 to 31.89%. The increase in HT consumption should reduce the losses. Under the circumstances there is no justification for increase in distribution loss from 30.22% to 32.80% during 2007-08. Having considered that the DISCOM could not achieve the loss level, the Commission approves the loss level of 32% for the year 2007-08 and the loss trajectory for the control period 2008-09 to 2010-11 is as shown below in Table 4.8.

**Table 4.8**  
**Distribution loss levels**

Year	Loss levels approved by the Commission (%)
2007-08	32.00
2008-09	30.00
2009-10	28.00
2010-11	26.00

The Commission therefore directs that the PGVCL shall maintain the commendable work it has done during the earlier years in reducing the distribution losses and improve further to achieve the loss levels fixed above.

#### 4.6 Energy Requirement

The total energy requirement of the PGVCL to meet the total demand of all the consumers would be the sum of estimated energy sales and the system losses (Distribution loss) as approved by the Commission. The estimated energy sales, the distribution loss and estimated energy requirement for control period (2008-09 to 2010-11) would be as given in Table 4.9 below:

**Table 4.9**  
**Energy Requirement during the control period**

(MU)

Sl. No.	Particulars	As projected by PGVCL			Approved by the Commission		
		2008-09	2009-10	2010-11	2008-09	2009-10	2010-11
1	Estimated Energy Sales	13249	14721	16254	12787	13785	14872
2	Distribution loss (%)	5759 (30.30)	5809 (28.30)	5799 (26.30)	5480 (30.00)	5361 (28.00)	5225 (26.00)
3	Energy input required to the distribution system	19009	20530	22053	18267	19146	20097

#### 4.7 Energy Balance

The summary of Energy balance projected by PGVCL

**Table 4.10**  
**Summary of Energy Balance projected by PGVCL**

(MU)

Sl.No.	Particulars	2008-09	2009-10	2010-11
1.	Energy Demand	13249	14721	16254
2.	Distribution loss (%)	30.30	28.30	26.30
3.	Energy Requirement	19009	20530	22053
4.	Transmission loss (%)	4.09	4.04	3.99
5.	Total units to be input to the Tr. System	19819	21395	22970
6.	Pooled losses	358	358	383
7.	Total input for power	20177	21753	23353
8.	Energy drawn and billed by GUVNL	20177	21753	23353



**Commission's view:**

The Commission has examined the energy balance worked out by PGVCL. The company has considered the transmission loss as projected by GETCO in the MYT petition for 2008-09 to 2010-11 and the pooled loss (Regional power loss) as determined by the RLDC/WREB. The transmission loss in GETCO system and pooled losses are accepted as projected by PGVCL subject to review in the true up of 2008-09. The energy balance is worked out in accordance with the energy sales and distribution losses approved by the Commission in Table 4.7 and Table 4.8 above and given in Table 4.11 below:

**Table 4.11**  
**Energy Balance approved by the Commission**

(MU)				
Sl.No.	Particulars	2008-09	2009-10	2010-11
1.	Energy demand	12787	13785	14872
2.	Distribution loss (%)	5480	5361	5225
3.	Energy requirement	18277	19146	20097
4.	Transmission loss	779	806	835
5.	Loss (%)	(4.09)	(4.04)	(3.99)
6.	Energy input to transmission system	19056	19952	20932
7.	Pooled loss	358	358	383
<b>8.</b>	<b>Total energy requirement</b>	<b>19414</b>	<b>20310</b>	<b>21315</b>

The energy requirement as projected by PGVCL and as approved by the Commission during the control period are given in Table 4.12 below:

**Table 4.12**  
**Energy Requirement approved by the Commission**

(MU)		
Year	As projected by PGVCL	Approved by the Commission
2008-09	20177	19414
2009-10	21753	20310
2010-11	23353	21315

The energy requirements approved by the Commission have to be met by energy drawal / purchase from GUVNL.

The quantum of purchase from various generating stations and the costs of drawal are discussed in para 4.9.1.3.

#### 4.8 Revenue Requirement – 2008-9 to 2010-11

PGVCL has projected the Aggregate Revenue Requirement for the control period at Rs.507101 lakh, Rs.588369 lakhs and Rs.650230 lakhs for the years 2008-09, 2009-10 and 2010-11 respectively. The expenses under each head are given in Table 4.13 below:



**Table 4.13**  
**Expenses projected for the control period**

(Rs. lakhs)

Sl. No.	Aggregate Revenue Requirement	FY 2008-09	FY 2009-10	FY2010-11
1.	Total Cost of Power Purchase	414647	481773	528609
2.	O & M Costs	48996	53896	59285
3.	Depreciation	13391	16473	19763
4.	Interest on Loans & Finance Charges	17295	20205	23143
5.	Interest on Working Capital	4594	5123	5639
6.	Other Debits	324	340	357
7.	Extraordinary Items	-105	-105	-105
8.	Provision for bad debts	1772	1986	2191
9.	<i>Less Interest &amp; Expenses Capitalised</i>	3647	3647	3647
10.	Sub Total	497266	576043	635235
11.	Return on Equity	15383	17850	20491
12.	Provision for Tax	245	269	296
13.	Total Expenditure	512893	594162	656022
14.	Less: non tariff income	5793	5793	5793
15.	<b>Aggregate revenue requirement</b>	<b>507101</b>	<b>588369</b>	<b>650230</b>

**4.9 The expenses projected by PGVCL and Decisions of the Commission**

The expenses projected by PGVCL under each head and the analysis and decisions of the Commission are discussed below:

**4.9.1 Power Purchase Cost**

As discussed in para 4.7 and Table 4.11 above, the energy requirement of PGVCL at the interface point with GETCO and at the generation bus after considering approved transmission loss and pooled loss in the Regional network would be as in Table 4.14 below:

**Table 4.14**  
**Regional Network**

Year	Energy at Interface point	Energy at Generation Bus
2008-09	18267	19414
2009-10	19146	20310
2010-11	20097	21315

The cost of power purchase estimated by PGVCL includes transmission charges of GETCO and PGCIL and GUVNL costs. The energy has to be purchased from various sources as allotted in the bulk power purchase agreement by all the companies entered into with GUVNL.



#### 4.9.1.1 Allocation of Capacities / PPAs

It is submitted by the PGVCL in the MYT petition that the company has been currently allocated the PPAs as given in Table 4.15 below. Some of the stations listed are expected online during the control period.

**Table 4.15**  
**Details of PPAs/Stations Allocated to PGVCL**

Allocated Generation Capacity from Stations	MW
Ukai TPS	374
Ukai Hydro	77
Gandhinagar 1 to IV	594
Gandhinagar-V	95
Wanakbori I to VI	504
Wanakbori VII	53
Kutch Lignite-IV	19
Utran Extension	188
GIPCL-SLPP	188
GMDC - Akrimota	188
GSEG Expansion	175
GSPC-Pipavav	90
NPC - Tarapur- 1&2	80
NPC - Kakrapar	94
NTPC – KORBA	180
NTPC - VINDHYACHAL - I	173
NTPC - VINDHYACHAL - II	184
NTPC - VINDHYACHAL - III	200
NTPC - Sipat Stage - II	205
SSNNL - Hydro	58
NTPC Barh	65
NTPC North Karanpura	19
Sipat Stage-I	54
Wind Farms (Old Policy)	9
Wind Farms (New Policy)	273
Bagasse	6
Adani Power	300
Aryan	120

#### 4.9.1.2 Merit Order Dispatch

It is submitted by PGVCL that in order to minimize the power purchase cost, it has worked out a comprehensive merit order dispatch (MOD) following the same principles as approved in the previous tariff order of the Commission.

The Nuclear Power Corporation (NPC) power plants and hydro power plants viz., SSNL hydro, NPC Tarapore and Kakrapar and Ukai hydro have been considered as must run power plants, and hence they have been excluded from merit order dispatch. The dispatch from individual generating stations is worked out following the merit order based on the variable cost of each generating unit / station.

#### 4.9.1.3 Power Purchase Costs for the control period

Based on the allocated capacities and the merit order as described above, the station-wise power purchase quantum and costs projected by PGVCL are depicted below in Tables- 4.16, 4.17 and 4.18 for each year of the control period.

**Table 4.16**  
**Projected Power Purchase for FY 2008-09**

Station	Capacity allocated to Discom (MW)	Units Available (MU)	Units Dispatched (MU)	Fixed Cost (Rs Laks)	Variable Cost (Rs. Lakhs)	Transmission Charges (Rs. Lakhs)	PGCIL Charges (Rs. Lakhs)	Incentive (Rs. Lacs)	Total Cost (Rs .Lakhs)	Per Unit Cost (Rs./ Unit)
Ukai TPS	374	2027	2027	7589	29623	3153	0	0	40365	1.99
Ukai Hydro	77	131	131	667	0	705	0	0	1372	1.04
Gandhinagar I to IV	594	3006	2858	16759	52640	4891	0	0	74290	2.60
Gandhinagar V	95	606	606	3501	9963	801	0	0	14265	2.35
Wanakbori I to VI	504	3214	3214	11823	53268	4249	0	0	69340	2.16
Wanakbori I to VII	53	340	340	1979	5596	449	0	0	8024	2.36
Kutch Lignite IV	19	109	109	1075	1165	154	0	0	2394	2.20
GIPCL -SLPP	188	1186	1186	13589	11294	1567	0	185	26635	2.25
GMDC - Akrimota	188	1186	1186	17929	7277	1567	0	185	26958	2.27
NPC - Tarapur -1&2	80	505	505	0	4750	667	260	181	5858	1.16
NPC -Kakrapar	94	601	601	0	12198	794	310	216	13512	2.25
NTPC -KORBA	180	1237	1237	4507	7092	1635	637	0	13871	1.12
NTPC -VINDHYACHAL - I	173	1181	1181	5598	12136	1561	608	0	19903	1.69
NTPC -VINDHYACHAL - II	184	1260	1260	8265	12393	1666	649	0	22973	1.82
NTPC-VINDHYACHAL - III	200	1431	1431	8987	13397	1891	737	0	25012	1.75
NTPC- Sipat Stage -II	205	1327	1327	0	7167	1754	684	0	9605	0.72
SSNNL -Hydro	58	72	72	0	1471	535	37	0	2043	2.85
Sipat Stage -I	54	350	350	2523	5951	463	180	0	9117	2.60
Wind Farms (Old Policy)	9	19	19	9	330	12	0	0	351	1.87
Wind Farms (New Policy)	195	394	394	0	13265	258	0	0	13523	3.44
Bagasse	6	29	29	5	877	6	0	0	888	3.04
RELIANCE INDUSTRIES LTD. NARODA		57	57	0	1323	75	0	0	1398	2.47
UNITED PHOSPHOROUS LTD. JHAGADAI		0	0	0	0	0	0	0	0	0.13
GUJARAT ALKALIS & CHEML.LTD.BARUCH		19	19	0	370	25	0	0	395	2.10
ONGC Anlkeswar		15	15	0	293	20	0	0	313	2.03
ONGS, Hazira		6	6	0	105	7	0	0	112	2.03
M/S ADANI EXPORT (PHILIPS CARBON)		19	19	0	380	25	0	0	405	2.14
Aravind Mills LTD		0	0	0	0	0	0	0	0	0.13
<b>Total</b>	<b>3985</b>	<b>20325</b>	<b>20177</b>	<b>104805</b>	<b>264324</b>	<b>28930</b>	<b>4102</b>	<b>767</b>	<b>402932</b>	<b>2.00</b>



**Table 4.17**  
**Projected Power Purchase for FY 2009-10**

Station	Capacity allocated to Discom (MW)	Units Available (MU)	Units Dispatched (MU)	Fixed Cost (Rs. Lakhs)	Variable Cost (Rs. Lakh)	Transmission Charges (Rs. Lacs)	PGCIL Charges (Rs.Lakhs)	Incentive (Rs. Lakhs)	Total Cost (Rs. Lakhs)	Per Unit Cost (Rs./ Unit)
Ukai TPS	374	2027	2027	7589	29623	3225	0	0	40437	1.99
Ukai Hydro	77	131	131	667	0	721	0	0	1388	1.06
Gandhinagar I to IV	594	3006	1801	16759	33166	5003	0	0	54928	3.05
Gandhinagar V	95	606	606	3501	9963	819	0	0	14283	2.36
Wanakbori I to VI	504	3214	3214	11823	53268	4346	0	0	69437	2.16
Wanakbori I to VII	53	340	340	1979	5596	460	0	0	8035	2.36
Kutch Lignite IV	19	109	109	1076	1165	157	0	0	2392	2.20
Ultran Extension	188	921	276	9299	5834	1723	0	0	16855	6.10
GIPCL -SLPP	188	1186	1186	13589	11294	1603	0	185	26671	0.25
GMDC - Akrimota	188	1186	1186	17929	7277	1603	0	185	26994	2.27
NPC - Tarapur -1&2	80	505	505	0	4750	682	273	181	5886	1.17
NPC -Kakrapar	94	601	601	0	12198	802	325	216	13551	2.26
NTPC -KORBA	180	1237	1237	4507	7092	1672	637	445	14357	1.16
NTPC -VINDHYACHAL - I	173	1181	1181	5598	12136	1596	639	424	20393	1.73
NTPC -VINDHYACHAL - II	184	1260	1260	8265	12393	1764	682	453	23557	1.86
NTPC-VINDHYACHAL - III	200	1431	1431	8987	13397	1934	774	0	25092	1.75
NTPC- Sipat Stage -II	205	1327	1327	0	7167	1795	718	0	9680	0.73
SSNNL -Hydro	58	72	72	0	1471	547	39	0	2057	2.87
Sipal Stage -I	54	350	350	3784	5951	473	189	0	10397	2.97
Wind Farms (Old Policy)	9	16	16	0	287	13	0	0	300	1.83
Wind Farms (New Policy)	234	411	411	0	13839	317	0	0	14156	3.45
Bagasse	6	38	38	0	1142	8	0	0	1150	3.02
APPL	300	1945	1945	27983	28760	375	0	0	57118	2.94
Aryan	120	389	389	6791	811	75	0	0	7677	1.97
RELIANCE INDUSTRIES LTD. NARODA		57	57	0	1323	76	0	0	1399	2.48
UNITED PHOSPHOROUS LTD. JHAGADAI		0	0	0	0	0	0	0	0	0.14
GUJARAT ALKALIS & CHEML.LTD.BARUCH		19	19	0	370	25	0	0	395	2.10
ONGC Anlkeshwar		15	15	0	293	21	0	0	314	2.04
ONGS, Hazira		6	6	0	105	8	0	0	113	2.04
M/S ADANI EXPORT (PHILIPS CARBON)		19	19	0	380	26	0	0	406	2.14
M/Saravind Mills LTD		0	0	0	0	0	0	0	0	0.14
<b>Total</b>	<b>4345</b>	<b>23604</b>	<b>21753</b>	<b>150126</b>	<b>281051</b>	<b>31869</b>	<b>4276</b>	<b>2089</b>	<b>469395</b>	<b>2.16</b>





**Table 4.18**  
**Projected Power Purchase for FY 2010-11**

Station	Capacity allocated to Discom (MW)	Units Available (MU)	Units Dispatched (MU)	Fixed Cost (Rs.Lacs)	Variable Cost (Rs. Lakhs)	Transmission Charges (Rs. Lakhs)	PGCIL Charges (Rs. Lakhs)	Incentive (Rs. Lakhs)	Total Cost (Rs. Lakhs)	Per Unit Cost (Rs./Unit)
Ukai TPS	374	2027	2027	7589	29623	3784	0	0	40996	2.02
Ukai Hydro	77	131	131	667	0	846	0	0	1513	1.15
Gandhinagar I to IV	594	3006	2272	16759	41859	5870	0	0	64488	2.84
Gandhinagar V	95	606	606	3501	9963	961	0	0	14425	2.38
Wanakbori I to VI	504	3214	3214	11823	53268	5099	0	0	70190	2.18
Wanakbori I to VII	53	340	340	1979	5596	539	0	0	8114	2.39
Kutch Lignite IV	19	109	109	1075	1165	185	0	0	2425	2.22
Ultran Extension	188	1275	382	12907	8074	2022	0	0	23003	6.**
GIPCL -SLPP	188	1186	1186	13589	11294	1881	0	185	26949	2.27
GMDC - Akrimota	188	1186	1186	17929	7277	1881	0	185	27272	2.30
GSEG Expansion	175	58	18	479	375	1800	0	0	2654	**
GSPC -Pipavav	90*		9	246	193	926	0	0	1365	**
NPC - Tarapur -1&2	80	505	505	0	4750	800	259	181	5990	1.19
NPC -Kakrapar	94	601	601	0	12198	953	309	216	13676	2.28
NTPC -KORBA	180	1237	1237	4507	7092	1962	636	445	14642	1.18
NTPC -VINDHYACHAL -I	173	1181	1181	5598	12136	1873	607	424	20638	1.75
NTPC -VINDHYACHAL -II	184	1260	1260	8265	12393	2000	648	453	23759	1.88
NTPC-VINDHYACHAL -III	200	1431	1431	8987	13397	2270	736	0	25390	1.77
NTPC- Sipat Stage -II	205	1327	1327	0	7167	2106	683	0	9956	0.75
SSNNL -Hydro	58	72	72	0	1471	642	37	0	2150	3.00
NTPC Barth	65	421	421	4555	7163	668	217	0	12603	2.99
NTPC North Karanpura	19	125	125	1349	2121	198	64	0	3732	2.99
Sipal Stage -I	54	350	350	3784	5951	555	180	0	10470	2.99
Wind Farms (Old Policy)	9	16	16	0	287	15	0	0	302	1.84
Wind Farms (New Policy)	273	479	479	0	16144	434	0	0	16578	3.46
Bagasse	6	29	29	0	877	8	0	0	885	3.03
APPL	300	1945	1945	27363	28760	440	0	0	56563	2.91
Aryan	120	778	778	13120	1621	176	0	0	14917	1.92
RELIANCE INDUSTRIES LTD. NARODA		57	57	0	1323	90	0	0	1413	2.50
UNITED PHOSPHOROUS LTD. JHAGADAI		0	0	0	0	0	0	0	0	0.16
GUJARAT ALKALIS & CHEML.LTD.BARUCH		19	19	0	370	30	0	0	400	2.13
ONGC Anlkeshwar		15	15	0	293	24	0	0	317	2.06
ONGS, Hazira		6	6	0	105	9	0	0	114	2.06
M/S ADANI EXPORT (PHILIPS CARBON)		19	19	0	380	30	0	0	410	2.16
M/Saravind Mills LTD		0	0	0	0	0	0	0	0	0.16
<b>Total</b>	<b>4563</b>	<b>25041</b>	<b>23353</b>	<b>166071</b>	<b>304686</b>	<b>41131</b>	<b>4376</b>	<b>2089</b>	<b>518301</b>	<b>2.22</b>

#### 4.9.1.4 Transmission Charges

The transmission charges payable to GETCO and PGCIL as projected by PGVCL are given in Table 4.19 below. It is stated that the transmission charges to GETCO are proposed as calculated by GETCO in its Multi Year Tariff petition for the control period.



**Table 4.19****Transmission Charges of GETCO and PGCIL**

(Rs. lakhs)

<b>Transmission charges</b>	<b>2008-09</b>	<b>2009-10</b>	<b>2010-11</b>
GETCO charges	28931	31821	41076
PGCIL charges	4103	4309	4376
<b>Total Transmission charges</b>	<b>33035</b>	<b>36129</b>	<b>45452</b>

**4.9.1.5 GUVNL Cost**

It is submitted that GUVNL is entrusted with the responsibility of supplying power to bulk licensees and the overall coordination between its subsidizing companies. It also undertakes the function of raising and managing the loans of GUVNL and its subsidiaries.

The revenue gap, if any, of GUVNL is also to be recovered through the four DISCOMs.

It is stated that for projecting GUVNL revenue for the control period, the existing GERC approved tariff for the three licensees namely KPT, TPL (Surat), TPL (Ahmedabad) has been considered. Since TPL is likely to have additional generation, TPL may reduce their off-take from GUVNL from FY 2008-09. Based on this, the energy likely to be sold to them is reduced proportionately. However it has been assumed that GUVNL will be able to find a suitable alternative for the quantum of energy not purchased by TPL for the projected level of 2007-08. The sale of this energy has been assumed to be at the cost plus a trading margin of 4 paise per unit. The power purchase cost has been calculated as per the parameters proposed by GSECL in its tariff petition for the stations allocated to GUVNL. The employees expenses of GUVNL have been escalated by 10% while the A&G expenses have been escalated at 5% year per year.

It is also stated that as per the current projection of demand and supply, the four DISCOMs would have some surplus energy during each year of the control period during off peak hours only. It can be assumed that 10% of surplus being projected for a particular year will be traded at a marginal cost plus a Rs.0.04 per unit towards trading margin. This has been included in the projection of GUVNL's expenses and revenues. Thus the DISCOMs would be able to recover some of the fixed costs they pay for the allocated capacity from the trading charges. The projections of GUVNL sale of power to licensees and trading and GUVNL's cost allocation for the control period and the revenue from sale of power are given in Tables-4.20 and 4.21 below:

**Table 4.20****Projections of GUVNL's sale to licensees and trading**

<b>Sale of Licensees-</b>	<b>Unit Rate</b>	<b>2007-08</b>	<b>2008-09</b>	<b>2009-10</b>	<b>2010-11</b>
Total MUs Sold to AEC & SEC	Rs. 2.78/ unit	4530	4530	2619	0
Total MUs Sold to KPT	Rs. 3.20/ unit	15	15	15	15
Total MUs Sold to others	Rs. 3.24/ unit	0	0	1912	4530
Total MUs traded of Discom's Surplus			1387	950	972
Per Unit Rate for Trade (including trading margin)			3.13	2.67	2.58
<b>Total Mus Sold</b>		<b>4545</b>	<b>5932</b>	<b>5495</b>	<b>5517</b>



**Table 4.21****Table 34: GUVNL Cost Allocation for the control period**

GUVNL Cost Allocation (Rs. Lacs)	2007-08	2008-09	2009-10	2010-11
<b>Revenues</b>				
Revenue from sale of power to AECO	38390	55749	32225	0
Revenue from sale of power to SLCO	94259	76368	44143	0
Revenue from sale of power to KPT	569	569	569	569
Revenue from sale of power to others	7353	0	61264	146646
Revenue from trade of Discom's surplus		43436	25354	25116
Other Income	14603	14603	14603	14603
<b>Total Revenue from sale of power (A)</b>	<b>155174</b>	<b>190725</b>	<b>178158</b>	<b>186933</b>
<b>Expenditure</b>				
Power purchase cost as per PPA allocation	149370	149293	149459	150922
Average Variable cost of Discom's surplus Traded Power		29270	16801	17558
Employee Costs	1688	1856	2042	2246
Admin & General Expenses	17735	18621	19552	20530
Depreciation	655	655	655	655
Interest and financial charges	18325	18325	18325	18325
Share of E- Urja Utilization Charge		97	97	97
<b>Total Expenses (B)</b>	<b>187772</b>	<b>218118</b>	<b>206931</b>	<b>210333</b>
<b>Amount of Cost allocation (C=B-A)</b>	<b>32599</b>	<b>27393</b>	<b>28773</b>	<b>23400</b>

The gap between revenue and expenditure calculated above has been allocated to the four DISCOMs, based on the power purchase allocation for the particular year as given in Table 4.22 below:

**Table 4.22****GUVNL cost allocation of DISCOMs**

Cost allocation (Rs. Lacs)	PGVCL	UGVCL	MGVCL	DGVCL	Total
2007-08	12646	8929	4212	6811	<b>32599</b>
2008-09	10692	7324	3592	5785	<b>27393</b>
2009-10	11355	7504	3839	6075	<b>28773</b>
2010-11	9285	5979	3174	4963	<b>23400</b>

It is also submitted by PGVCL that GUVNL has taken the assets created for the end to end ERP solutions E-Urja being implemented across all companies of GUVNL on its books. The revenue costs, such as depreciation, interest payment on the loans for the project and the annual maintenance charges shall be allocated to the seven companies including GUVNL in the percentage of number of licenses provided to each company for usage of the ERP package. The estimated annual recurring cost and the company's share of the same payable every year are given below:

**Table 4.23****Annual recurring cost of E-Urja**

Annual Recurring Cost of E-Urja	Rs. Lakhs
Depreciation	2826
Interest Cost	2136
AMC	960
<b>Total Annual Expenditure</b>	<b>5922</b>
Percentage of total licensees with Company	17.30%
Allocation to the company	1023



The total cost of power purchase for the company for the control period comes through merit order plus the DISCOM's allocation of GUVNL's revenue gap as shown below

**Table 4.24**  
**Total cost of power purchase**

(Rs. Lakhs)

<b>Total Cost of power purchase PGVCL</b>	<b>2007-08</b>	<b>2008-09</b>	<b>2009-10</b>	<b>2010-11</b>
Power purchase cost from merit order	372683	402932	469395	518301
GUVNL Cost + E-Urja charge	13669	11715	12378	10308
<b>Total</b>	<b>386352</b>	<b>414647</b>	<b>481773</b>	<b>528609</b>

#### **4.10 Power Purchase Cost – Commission's Analysis**

##### **4.10.1 Allocation of Capacities / PPAs**

GUVNL is a holding company of the restructured successor companies, and is also entrusted with trading of electricity. It purchases power from various sources and supplies to the four distribution companies and also to the bulk distribution licensees in Gujarat. GUVNL is a wholly owned company of the Government of Gujarat and entered into bulk supply agreements, with the four distribution companies. The supply agreement is approved by the Board of Directors of GUVNL and the Managing Directors of the four Distribution Companies. It is not known whether the State Government has approved the allocation. The DISCOMs with adverse load mix may request State Government support and the allocation is to minimize such support. Under clause-3 of the Bulk Supply agreement, the contracted generation capacities of GUVNL have been allocated to the four DISCOMs. Certain generating capacity is retained with GUVNL from which it supplies power to the three licensees in emergencies.

The tariff for GUVNL's sale of power to DISCOMs shall be same as that of purchase of power by GUVNL from the respective generating stations.

Apart from the tariff payment to the GUVNL will include transmission charges and a margin to cover its own operating expenses and reasonable return. GUVNL proposes an Aggregate Revenue Requirement (ARR) based on projections for the control period, other than power purchase and sales.

The ARR as approved by the Apex Coordination Committee shall be payable by the DISCOMs and shall form part of the power purchase cost.

Prior to unbundling, the utilities in the State were receiving supply from the pool of energy in the State grid. The cost of the pooled energy is the weighted average of the generation costs of individual stations feeding the grid. After restructuring, the Distribution areas of erstwhile GEB, which covered whole of the State, excluding the distribution areas of the three licensees. The newly created DISCOMs do not have uniform consumer load mix. PGVCL and UGVCL have higher percentage of Agricultural load compared to the other two.

The two DISCOMs with high agricultural loads may face revenue deficit. To get over this problem, GUVNL has allocated low cost PPAs (Stations) to PGVCL and UGVCL. The high cost PPAs (Stations) are allocated to MGVCL and DGVCL.

The intent and purpose of the allocation of PPAs as above is to see that the retail consumers of various categories will be charged on an average the same rates all over the State. There is marginal change in the allocation of PPAs/stations to PGVCL during the

control period compared to allocation during 2007-08. Certain additional stations are included for the control period to meet the additional demand, other-wise most of the earlier stations are retained.

**Para 8.4.2 of Tariff Policy states –**

*“The National Electricity Policy states that existing PPAs with the generating companies would need to be suitably assigned to the successor distribution companies. The State Government may make such arrangements for taking care of different load profiles of the distribution companies so that retail tariff are uniform in the state for different categories of consumers. Thereafter the retail tariff would reflect the relative efficiency of distribution companies in procuring power at competition costs, controlling theft and reducing other distribution losses”*

The Commission considers that such allocation of PPAs based on consumer load mix of the distribution companies is required during the transition period and approves the allocation as under below:

**Table 4.25  
Capacities / PPA allocated to PGVCL**

<b>Allocated Generation Capacity from Stations</b>	<b>PGVCL</b>
Ukai TPS	374
Ukai Hydro	77
Gandhinagar I to IV	594
Gandhinagar V	95
Wanakbori I to VI	504
Wanakbori VII	53
Kutch Lignite IV	19
Utran Extension	188
GIPCL-SLPP	188
GMDC - Akrimota	188
GSEG Expansion	175
GSPC-Pipavav	90
NPC - Tarapur- 1&2	80
NPC - Kakrapar	94
NTPC - KORBA	180
NTPC - VINDHYACHAL - I	173
NTPC - VINDHYACHAL - II	184
NTPC - VINDHYACHAL - III	200
NTPC - Sipat Stage - II	205
SSNNL - Hydro	58
NTPC Barh	65
NTPC North Karanpura	19
Sipat Stage-I	54
Wind Farms (Old Policy)	9
Wind Farms (New Policy)	273
Bagasse	6
APPL	300
Aryan	120



The total allocation in MW works out to 4565 MW and the company has worked out the merit order dispatch based on variable cost of these stations to minimize the costs. The Commission has analysed the quantum of energy proposed to be purchased from each source and the costs projected by PGVCL. The energy required to be purchased by PGVCL is discussed in para 4. 6 (Table 4.6). The quantum of energy required to be purchased by PGVCL as approved by the Commission is given in Table 4.11.

### Merit Order of Stations

The generating stations are organized in merit order based on variable cost of each station. The stations of NPC and Hydro Stations are treated as must run stations. The fixed and variable costs of GSECL stations are considered as approved in the GSECL Tariff Order for the control period. The fixed and variable costs during the period April to September 2007 (2007-08) are adopted to arrive at the total fixed and variable costs of, Central and IPP stations. For a new generating units / stations now added in the PPAs allocated, the quantum and costs as provided by PGVCL / GUVNL are considered. The merit order based on variable cost is given in Table 4.26 below.

**Table 4.26**  
**Merit Order of Stations**

S.N	Station	Variable cost (Rs. / kWh)
1.	GIPCL-SLPP	0.95
2.	GMDC - Akrimota	0.61
3.	NPC - Tarapur- 1&2	0.94
4.	NTPC - VINDHYACHAL - II	0.98
5.	NTPC - VINDHYACHAL - III	0.94
6.	APPL *	1.474
7.	Aryan *	2.084
8.	Gandhinagar V	1.64
9.	Wanakbori VII	1.65
10.	Wanakbori I to VI	1.66
11.	NTPC Barh *	1.70
12.	NTPC North Karanpura *	1.70
13.	Sipat Stage-I *	1.70
14.	Wind Farms (Old Policy)	1.75
15.	Gandhinagar I to IV	1.84
16.	Ukai Hydro	0.00
17.	NTPC - Sipat Stage - II	0.54
18.	NTPC - KORBA	0.57
19.	NTPC - VINDHYACHAL - I	1.03
20.	Kutch Lignite IV	1.07
21.	Ukai TPS	1.46
22.	GSEG Expansion	2.1
23.	NPC - Kakrapar	2.03
24.	SSNNL - Hydro	2.05
25.	Utran Extension *	2.11
26.	GSPC-Pipavav*	2.12
27.	Bagasse	3.00
28.	Wind Farms (New Policy)	3.37

\*Stations to be Commissioned.



**Power Purchase for the control period - 2008-09 to 2010-11**

Power purchase for the control period (2008-09 to 2010-11) is based on energy requirement of PGVCL as approved by the Commission. The fixed and variable costs of GSECL stations are as approved by the Commission in the Tariff order for the control period. The fixed and variable costs of IPPs and central stations considered for the control period are as per the average of the bills for the first half (April – September 2007) of 2007-08. For other stations / purchases the fixed and variable costs are taken as proposed by PGVCL / GUVNL in MYT petition. Based on the above, the power purchase costs for the control period have been calculated and approved as given in Tables 4.27, 4.28 and 4.29.

**Table 4.27  
Power Purchase costs of PGVCL**

S.N	Station	Allocated capacity	Energy Available (MU)	Energy Despatchable (MU)	Shared fixed cost (Rs. Lakhs)	Unit Variable cost (Rs. / kWh)	Total variable cost (Rs. lakhs)	Incentive
<b>GSECL Plants</b>								
1	Ukai TPS	374	2147	2147	10770	1.50	32205	
2	Ukai Hydro	77	160	160	619	0	0	
3	Gandhinagar I to IV	594	3006	2126	22752	1.75	37205	
4	Gandhinagar V	95	697	697	4111	1.47	10246	
5	Wanakbori I to VI	504	3415	3000	14798	1.73	51900	
6	Wanakbori VII	53	389	389	2276	1.64	6380	
7	Kutch Lignite IV	19	117	117	2083	0.98	1147	
	Tax				1264			
	<b>Sub Total</b>	<b>1716</b>	<b>9931</b>	<b>8636</b>	<b>58673</b>		<b>139082</b>	<b>0</b>
<b>IPPS</b>								
8	GIPCL - SLPP	188	1186	1186	13879	0.95	11267	185
9	GMDC - Akrimota	188	1186	1186	15973	0.61	7235	185
	<b>Sub Total</b>	<b>376</b>	<b>2372</b>	<b>2372</b>	<b>29852</b>		<b>18502</b>	<b>370</b>
<b>Central Sector</b>								
10	NPC - Tarapur	80	505	505	0	0.94	4747	181
11	NPC - Kakarpara	94	601	601	0	2.03	12200	216
12	NTPC - Korba	180	1237	1237	3005	0.57	7051	
13	NTPC- Vindhyachal I	173	1181	1181	3469	1.03	12164	
14	NTPC- Vindhyachal II	184	1260	1260	7342	0.98	12348	
15	NTPC- Vindhyachal III	200	1431	1431	8987	0.94	13451	
16	NTPC -Sipat - II	205	1327	1327	0	0.54	7166	
17	NTPC -Sipat - I	54	350	350	2523	1.70	5950	
	<b>Sub Total</b>	<b>1170</b>	<b>7892</b>	<b>7892</b>	<b>25326</b>		<b>75078</b>	<b>397</b>
<b>Other sources</b>								
18	SSNL - Hydro	58	72	72	0	2.05	1476	
19	Wind Farm (Old Policy)	9	19	19	9	1.75	333	
20	Wind Farm (New Policy)	195	394	394	0	3.37	13278	
21	Bagasse	6	29	29	5	3.00	870	
	<b>Sub Total</b>	<b>268</b>	<b>514</b>	<b>514</b>	<b>14</b>		<b>15956</b>	<b>0</b>
	<b>Total</b>	<b>3530</b>	<b>20709</b>	<b>19414</b>	<b>113865</b>		<b>248618</b>	<b>767</b>



**Table 4.28**

**Power Purchase costs of PGVCL**

PGVCL - Power Purchase for FY 2009-10	Capacity allocated to Discom	Units Available (MU)	Units Dispatchable (MU)	Fixed Cost (Rs.lakhs)	Unit Variable Cost (Rs.lakhs)	Total Variable cost (Rs.lakhs)	Incentive
<b>GSECL</b>							
Ukai TPS	374	2206	2206	11796	1.50	33090	
Ukai Hydro	77	160	160	625	0	0	
Gandhinagar I to IV	594	3237	1028	25011	1.75	17990	
Gandhinagar V	95	697	697	4135	1.47	10246	
Wanakbori I to VI	504	3415	3000	15932	1.73	51900	
Wanakbori VII	53	389	389	2270	1.64	6380	
Kutch Lignite IV	19	117	117	1762	0.98	1147	
Utran Extension	188	917	200	8886	1.86	3720	
Tax				1610			
<b>Sub-total</b>	<b>1904</b>	<b>11138</b>	<b>7797</b>	<b>72027</b>		<b>124472</b>	<b>0</b>
<b>IPPs</b>							
GIPCL-SLPP	188	1186	1186	13589	0.95	11267	185
GMDC - Akrimota	188	1186	1186	17929	0.61	7235	185
<b>Sub-Total</b>	<b>376</b>	<b>2372</b>	<b>2372</b>	<b>31518</b>		<b>18502</b>	<b>370</b>
<b>Central Stations</b>							
NPC - Tarapur - 1 & 2	80	505	505	0	0.94	4747	181
NPC - Kakrapar	94	601	601	0	2.03	12200	216
NTPC - KORBA	180	1237	1237	4507	0.57	7051	445
NTPC - VINDHYACHAL - I	173	1181	1181	5598	1.03	12164	424
NTPC - VINDHYACHAL - II	184	1260	1260	8265	0.98	12348	453
NTPC - VINDHYACHAL - III	200	1431	1431	8987	0.94	13451	
NTPC - Sipat Stage - II	205	1327	1327	0	0.54	7166	
SSNNL - Hydro	58	72	72	0	2.05	1476	
Sipat Stage - I	54	350	117	3784	1.70	1989	
<b>Sub-total</b>	<b>1228</b>	<b>7964</b>	<b>7731</b>	<b>31141</b>		<b>72593</b>	<b>1719</b>
<b>Others</b>							
Wind Farms (Old Policy)	9	16	16	0	1.75	280	
Wind Farms (New Policy)	234	411	411	0	3.37	13851	
Bagasse	6	38	38	0	3.00	1140	
APPL	300	1945	1945	27983	1.479	28767	
Aryan	120	389	0	0	2.084	0	
<b>Sub-total</b>	<b>669</b>	<b>2799</b>	<b>2410</b>	<b>27983</b>		<b>44037</b>	<b>0</b>
<b>Total</b>	<b>4177</b>	<b>24273</b>	<b>20310</b>	<b>162669</b>		<b>259604</b>	<b>2089</b>





**Table 4.29**  
**Power Purchase costs of PGVCL**

PGVCL - Power Purchase for FY 2009-10	Capacity allocated to Discom	Units Available (MU)	Units Dispatchable (MU)	Fixed Cost (Rs.Lakhs)	Unit Variable Cost (Rs/KWh)	Total Variable Cost (Rs/KWh)	Incentives
<b>GSECL</b>							
Ukai TPS	374	2206	2206	13383	1.50	33090	
Ukai Hydro	77	160	160	634	0	0	
Gandhinagar I to IV	594	3469	1900	25690	1.75	33250	
Gandhinagar V	95	697	697	4179	1.47	10246	
Wanakbori I to VI	504	3415	3200	17512	1.73	55360	
Wanakbori VII	53	389	389	2284	1.64	6380	
Kutch Lignite IV	19	117	117	1715	0.98	1147	
Utran Extension	188	1265	191	12421	1.86	3553	
Tax				1736			
<b>Sub-total</b>	<b>1904</b>	<b>11718</b>	<b>8860</b>	<b>79554</b>		<b>143025</b>	
<b>IPPs</b>							
GIPCL-SLPP	188	1186	1186	13589	0.95	11267	185
GMDC - Akrimota	188	1186	1186	17929	0.61	7235	185
GSEG Expansion	175	59	0	0	2.12	0	
GSPC - Pipavav	90	30	0	0	2.12	0	
<b>Sub-total</b>	<b>641</b>	<b>2461</b>	<b>2372</b>	<b>31518</b>		<b>18502</b>	<b>370</b>
<b>Central Stations</b>							
NPC - Tarapur - 1 & 2	80	505	505	0	0.94	4747	181
NPC - Kakrapar	94	601	601	0	0.57	3426	216
NTPC - KORBA	180	1237	1237	4507	1.03	12741	445
NTPC - VINDHYACHAL - I	173	1181	1181	5598	0.98	11574	424
NTPC - VINDHYACHAL - II	184	1260	1260	8265	0.94	11844	453
NTPC - VINDHYACHAL - III	200	1431	1431	8987	0.94	13451	
NTPC - Sipat Stage - II	205	1327	1327	0	0.54	7166	
SSNNL - Hydro	58	72	72	0	2.05	1476	
NTPC Barh	65	421	0	4555	1.70	0	
NTPC North Karanpura	19	125	0	1349	1.70	0	
Sipat Stage - I	54	350	0	3784	1.70	0	
<b>Sub-total</b>	<b>1312</b>	<b>8510</b>	<b>7614</b>	<b>37045</b>		<b>66425</b>	<b>1719</b>
<b>Others</b>							
Wind Farms (Old Policy)	9	16	16	0	1.75	280	
Wind Farms (New Policy)	273	479	479	0	3.37	16142	
Bagasse	6	29	29	0	3.00	870	
APPL	300	1945	1945	27363	1.497	29117	
Aryan	120	778	0	0	2.084	0	
<b>Sub-total</b>	<b>708</b>	<b>3247</b>	<b>2469</b>	<b>27363</b>		<b>46409</b>	<b>0</b>
<b>Total</b>	<b>4565</b>	<b>25936</b>	<b>21315</b>	<b>175480</b>		<b>274361</b>	<b>2089</b>

The energy from Wind farms and Bagasse plant does not come under merit order. However, the energy is considered as it is obligatory on the part of the utilities to purchase certain quantum of power from Renewable energy sources.

The energy available as estimated by the Commission and energy despatchable based on merit order sector-wise are given in Table 4.30.

**Table 4.30**  
**Energy available and despatchable – 2008-09**

(MU)

Sl.No.	Source	Energy Available	Energy Despatchable
<b>2008-09</b>			
1.	Central Sector	7892	7892
2.	IPPs	2372	2372
3.	GSECL	9931	8636
4.	Others	514	514
<b>5.</b>	<b>Total</b>	<b>20709</b>	<b>19414</b>
<b>2009-10</b>			
6.	Central Sector	7964	7731
7.	IPPs	2372	2372
8.	GSECL	11138	7797
9.	Others	2799	2410
<b>10.</b>	<b>Total</b>	<b>24273</b>	<b>20310</b>
<b>2010-11</b>			
11.	Central Sector	8510	7614
12.	IPPs	2461	2372
13.	GSECL	11718	8860
14.	Others	3247	2469
<b>15.</b>	<b>Total</b>	<b>25936</b>	<b>21315</b>

The despatchable energy based on merit order over a year is only an estimate, it may depend on the demand on a day-to-day basis. In actual operations it is possible it could be more or less. While estimating the available and despatchable energy certain sources are not considered as the energy required is limited to the demand. If energy is required to be drawn in case of necessity and system conditions, PGVCL may draw power from these sources under intimation to the Commission explaining the circumstances under which the energy to be drawn from these sources.

Sector-wise power purchase and cost for the control period 2008-09 to 2010-11 are given in Tables-4.31, 4.32 and 4.33 below:

**Table 4.31**  
**Power purchase cost 2008-09**

Sl. No.	Source	Energy (MU)	Fixed Cost (Rs.lakhs)	Variable cost (Rs. lakhs)	FC+VCTotal Cost (Rs. lakhs)	Incentive (Rs. lakhs)	Total Cost	Cost per kWh (Rs. lakhs)
1.	Central Sector	7892	25326	75078	100404	397	100801	1.28
2.	IPPS	2372	29852	18502	48354	370	48724	2.05
3.	GSECL	8636	58673	139082	197755	0	197755	2.29
4.	Others	514	14	15956	15970	0	15970	3.11
<b>5.</b>	<b>Total</b>	<b>19414</b>	<b>113865</b>	<b>248618</b>	<b>362483</b>	<b>767</b>	<b>363250</b>	<b>1.87</b>



**Table 4.32****Power purchase cost 2009-10**

Sl. No.	Source	Energy (MU)	Fixed Cost (Rs.lakhs)	Variable cost (Rs. lakhs)	FC+VC Total Cost (Rs. lakhs)	Incentive (Rs. lakhs)	Total Cost	Cost per kWh (Rs. lakhs)
1.	Central Sector	7731	31141	72593	103734	1719	105453	1.36
2.	IPPs	2372	31518	18502	50020	370	50390	2.12
3.	GSECL	7797	72027	124472	196499	0	196499	2.52
4.	Others	2410	27983	44037	72020	0	72020	2.99
<b>5.</b>	<b>Total</b>	<b>20310</b>	<b>162669</b>	<b>259604</b>	<b>422273</b>	<b>2089</b>	<b>424362</b>	<b>2.09</b>

**Table 4.33****Power purchase cost 2010-11**

Sl. No.	Source	Energy (MU)	Fixed Cost (Rs.lakhs)	Variable cost (Rs. lakhs)	FC+VC Total Cost (Rs. lakhs)	Incentive (Rs. lakhs)	Total Cost	Cost per kWh (Rs. lakhs)
1.	Central Sector	7614	37045	66425	103470	1719	105189	1.38
2.	IPPs	2372	31518	18502	50020	370	50390	2.12
3.	GSECL	8860	79553	143025	222578	0	222578	2.51
4.	Others	2469	27363	46409	73772	0	73772	2.99
<b>5.</b>	<b>Total</b>	<b>21315</b>	<b>175479</b>	<b>274361</b>	<b>449840</b>	<b>2089</b>	<b>451929</b>	<b>2.12</b>

**Transmission Costs**

The transmission costs include the costs to be paid to PGCIL for regional transmission and GETCO.

The transmission charges of PGCIL are approved by CERC and to be paid by GUVNL on the basis of calculations in the Regional Energy Account of WREB. Hence the Commission accepts the projection of PGVCL.

The transmission charges of GETCO are as approved by the Commission in the GETCO's order of 2007. The transmission charges payable to PGCIL and GETCO are as in Table 4.34.

**Table 4.34****Transmission Charges**

Sl. No.	Details	Charges		
		2008-09	2009-10	2010-11
1.	Transmission charges of PGCIL	4103	4309	4376
2.	Transmission charges of GETCO	27485	29434	39022
3.	Total transmission charges	31588	33743	43398

**GUVNL Costs**

As discussed in para 4.9.1.5 above, GUVNL a holding company of all unbundled entities of erstwhile GEB is also entrusted with the business of purchase of power from various



sources for sale in bulk to the four distribution companies and also three distribution licensees in Gujarat. In addition to purchase and sale of power GUVNL as a holding company coordinates the working of the subsidiary companies. In accordance with the bulk supply agreement, the distribution companies have to share the operating expenses and reasonable return to GUVNL.

GUVNL prepares the Aggregate Revenue Requirement (ARR) for the ensuing year. The ARR is approved by the Apex Committee / Coordination Committee. Such ARR shall be payable by the DISCOMs and forms part of the power purchase cost.

As discussed in para 4.9.1.5 PGVCL has projected the GUVNL costs which have to be shared by the four DISCOMs during the control period at Rs.27,393 lakhs, Rs.28,733 lakhs and Rs.23,400 lakhs during the years 2008-09, 2009-10 and 2010-11 respectively. This is the gap between the revenue by sale of power to the four DISCOMs of GUVNL, TPL and KPT and the expenditure including the power purchase cost from the stations allocated to GUVNL to supply power to the TPL and KPT and other expenses of GUVNL. The details are given in Table 4.35.

**Table 4.35**  
**GUVNL Cost Allocation**

Sl. No.	Particulars	2008-09	2009-10	2010-11
1.	Revenue from sale of power to TPL, KPT and others and surplus power and other income	190725	178158	186933
2.	Expenditure			
	(i) Power purchase cost	178563	166260	168480
	(ii) Operational expenses of GUVNL	39555	40671	41853
	Total expenses	218118	206931	210333
<b>3.</b>	<b>Gap</b>	<b>27393</b>	<b>28773</b>	<b>23400</b>

It is stated that the revenue is arrived at based on grid tariff approved by the Commission for supply of power to TPL and KPT. The revenue is arrived at about Rs.292/kWh for supply to TPL and Rs.3.79/unit to KPT. The sales to TPL is reduced from 4530 MU by 2008-09 to 2619 MU and nil during 2010-11 as TPL is going to have its own generation.

As shown in Table 4-35 above, a gap of Rs.79566 lakhs in GUVNL operations during the control period is proposed to be distributed to the four DISCOMs.

It is stated that the GUVNL cost of power purchase from various sources to supply power to TPL and KPT is said to be Rs.1,49,293 lakhs during 2008-09, Rs.1,49,459 lakhs during 2009-10 and Rs.1,50,922 lakhs during 2010-11, but has not mentioned the source of purchase and the price at which it is proposed to purchase the power. But it is seen from the total cost of power and energy sales that the average cost per unit worked out to Rs.3.28 / kWh. This is considered reasonable compared to the cost of power at which GUVNL is supplying to PGVCL. It is about Rs.3.20 to 3.54 /kWh. Hence the cost of purchase of power by GUVNL for sale to TPL and KPT is considered reasonable.

The other operating expenses of GUVNL are as below:



Particulars	2007-08	2008-09	2009-10	2010-11
Employees cost	1688	1856	2042	2246
Administrative and General Expenses	17735	18621	19552	20530
Depreciation	655	655	655	655
Interest and finance charges	18325	18325	18325	18325
Share of E-Urja utilization charges	0	97	97	97
	38403	39554	40671	41853

The GUVNL expenses for 2007-08 are not actual but estimates. The employee cost is estimated at Rs.1688 lakhs for 2007-08 and projected for the control period with an annual increase of 10% per annum while the Administrative and General expenses are estimated at Rs.17735 lakhs for 2007-08 and projected for the control period with an annual increase of 5% per annum. The Commission has obtained the annual accounts for 2007-08, according to which the actuals for 2007-08 are as detailed below:

Rs. lakhs

Employee cost	1550
Administrative and General charges	986
Depreciation	862
Interest and Finance charges	13123

There is a huge difference in the estimates and actuals for 2007-08 in respect of Administrative and general charges and Interest and Finance charges.

In reply to a query the PGVCL clarified on 28.11.2008 that during FY 2006-07 the company reviewed various accounts showing receivables / payables outstanding since long. These balances appearing in GUVNL Balance Sheet was a result of inheritance from GEB under FRP approved by Government of Gujarat. After detailed examination and scrutiny, it was established and recommended by the outside experts (two firms of Chartered Accountants) who were engaged for reconciliation and liquidation of such old balances that such old balances may be written off / written back once and for all. Accordingly, as a one time measure, the net amount of Rs. 15322 lakhs was written off from the books of accounts by debit to Sundry balances written off under Admn. Expenses. As a result, there was sudden jump in Admn. Expenses during 2006-07 (Rs. 16890 lakhs) as compared to 2005-06 (Rs. 1627 lakhs). Since such extra ordinary expenditure is not there in 2007-08, the actual Admin. Expenditure has come down to Rs. 986 lakhs. However, at the time of preparation of MYT petitions, the accounts of 2007-08 were not available. Hence, the MYT petitions were finalized based on 2006-07 actual expenditure, as a result the Admn. Expenditure was projected at Rs. 17735 lakhs.

Accordingly the actuals as per accounts for 2007-08 (Provisional) are taken into consideration for projection during the control period and the expenses of GUVNL are worked out with 6% annual increase in respect of Employee cost and 5% increase in Administration and General charges as detailed below:

(Rs. lakhs)

Particulars	2008-09	2009-10	2010-11
Employees cost	1643	1742	1846
Administrative and General Expenses	1035	1087	1141
Depreciation	862	862	862
Interest and finance charges	13123	13123	13123
Share of E-Urja utilization charges	97	97	97
Total	16760	16911	17069

The operating expenses as above are approved as GUVNL has to handle the entire power purchase from various sources and supply to DISCOMs and other licensees. It also has to discharge the functions of holding company with certain liabilities transferred to it.

The GUVNL cost allocation as approved by the Commission is detailed below:

### GUVNL Cost Allocation approved

S.N	Particulars	2008-09	2009-10	2010-11
1	Revenue from sale of power to TPL, KPT and others and surplus power and other income	190725	178158	186933
2	Expenditure			
	(i) Power purchase cost	178563	166260	168480
	(ii) Operational expenses of GUVNL	16760	16911	17069
3	Total expenses	195323	183171	185549
	<b>Gap (3-1)</b>	<b>4598</b>	<b>5013</b>	<b>(1384)</b>

In accordance with the provisions of bulk power purchase agreement the expenses of GUVNL have to be paid by the four DISCOMs as part of power purchase costs. It is submitted by MGVCL that the expenses of GUVNL are allocated in proportion to power purchase by each of the DISCOMs. The allocation of DISCOMs is given table 4.36 below:

**Table 4.36**  
**GUVNL Cost Allocation**

(Rs. lakhs)

Cost Allocation (Rs. lakhs)	PGVCL	UGVCL	MGVCL	DGVCL	Total
2008-09	1795	1230	603	970	4598
2009-10	1979	1307	669	1058	5013
2010-11	-	-	-	-	<b>(1384)</b>

The estimated annual recurring cost of E-Urja as detailed below and the company's share as detailed in Table 4.36 are payable every year.

### Annual recurring cost of E-Urja

Particulars	Rs. Lakhs
Depreciation	2826
Interest cost	2136
AMC	960
Total annual expenditure	5923
Percentage of total licenses with the company	17.3%
Allocation to the company	1023



### Total power purchase costs

The total cost of power purchase from various sources, transmission costs to be paid to PGCIL and GETCO and GUVNL expenses are aggregated to arrive at power purchase cost of PGVCL as shown in Table 4.37

**Table 4.37**

### Total power purchase costs during control period

(Rs. Lakhs)

SI.No.	Details	2008-09	2009-10	2010-11
1	Power purchase costs	363250	424362	451929
2	Transmission costs PGCIL & GETCO	31588	33743	43398
3	GUVNL costs	1795	1979	-*
4	E-Urja charge	1023	1023	1023
5	Total power purchase cost	397656	461107	496350

\*Observed surplus during 2010-11

The Commission approves the total power purchase costs to PGVCL for the control period as below:

Year	Power purchase cost (Rs. lakhs)
2008-09	397656
2009-10	461107
2010-11	496350

The quantum of power purchase and their cost may change depending on actual situation that may come to prevail. All such contingencies cannot be envisaged. Additional power purchases (over and above approved levels) may become necessary due to factor such as aberrant monsoon, unanticipated outage of units or other similar factors. DISCOMs may meet such contingencies appropriately under intimation to the Commission.

#### 4.11 Operation and Maintenance (O&M) expenses

The O&M expenses include Employee expenses, Repair and Maintenance (R&M) expenses and Administrative and General (A&G) expenses. Employee expenses comprise salaries, dearness allowance, bonus, terminal benefits, leave encashment and staff welfare expenses. The R&M expenses include expenses on repairs and maintenance of plant and machinery, vehicles, furniture and fixtures, office equipment, lines and cables, transformers and related equipment, meters and metering equipment etc.

The A&G expenses include rents, rates and taxes, legal expenses, professional fees, insurance, travel expenses, training expenses, printing and stationery etc.

The PGVCL has clubbed all the above three expenses under the head O&M expenses stating that these are essential to the functioning of a distribution utility. It is further stated by PGVCL that it is in line with the methodology specified by the Commission for generation and transmission utilities.

The PGVCL has projected the O&M expenses as detailed in the Table 4.38 below for the control period.

**Table 4.38****O&M expenses projected for the control period 2008-11**

(Rs. Lakhs)

Particulars	2006-07 (Actuals)	2007-08 (Estimated)	Projection		
			2008-09	2009-10	2010-11
O&M expenses	40493	44542	48996	53896	59285

The O&M expenses for the year 2006-07 (actuals) were higher by about 32% over the actuals for the year 2005-06. Taking 2006-07 as base, the PGVCL has estimated with 10% increase for the year 2007-08 and also every year during the control period. PGVCL has furnished the following reasons for increase in O&M expenses during 2006-07 over 2005-06.

1. Merger of 50% dearness allowance with basic pay as per the decision of the Government of Gujarat in line with 5<sup>th</sup> Central Pay Commission impact additional commitment amounting to Rs. 1862 lakhs.
2. Additional provision of Rs.7376 lakhs towards payment of arrears on implementation of the 6<sup>th</sup> Pay Commission Recommendations for which final clearance is awaited.
3. Increase in R&M expenditure in 2006-07 on account of huge jump in electricity demand and new connections, especially in the HT industrial category and major expansion in the distribution network.
4. Resultant increase in A&G expenses and increased customer care and computerization. The PGVCL has requested for approval of O&M expenses as projected for the control period.

PGVCL has not furnished the component wise details either for actuals or projections for the O&M expenses. Even the annual accounts for 2006-07 and 2007-08 have not been submitted by the PGVCL. Instead of furnishing the full details under each head the PGVCL has furnished the lumpsum figures, thus making it difficult to analyse the past trend under each component. PGVCL has clubbed the three heads of expenditure and claimed that it is in line with the methodology adopted for the generation and transmission utilities by the GERC.

The PGVCL in reply to a query from the Commission has submitted the break up of O&M expenses actuals for the years 2005-06 to 2007-08 and projections for the control period 2008-11 as detailed in the Table 4.39 below.

**Table 4.39**  
**Break up of O&M cost as per PGVCL**

(Rs. lakhs)

Particulars	Actuals			Projections		
	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Employee cost	22246	28075	29020	33971	37368	41104
R&M expenses	5637	7700	8192	9317	10249	11274
A&G expenses	4969	4718	5499	5708	6279	6907
Total	32852	40493	42711	48996	53896	59285





The Commission has obtained the annual accounts for the years 2005-06, 2006-07 and 2007-08 (Pro). The actuals under O&M expenses for the years 2006-07 and 2007-08 furnished by PGVCL are the same as per annual accounts. However for the year 2005-06 the O&M expenses are Rs. 28896 lakhs as per annual accounts against Rs. 32852 lakhs furnished by PGVCL.

The O&M expenses proposed by the PGVCL for the control period are analyzed as under.

**Employee cost**

PGVCL has projected the employees cost at Rs. 33971 lakhs for the year 2008-09, Rs. 37368 lakhs for the year 2009-10 and Rs. 41104 lakhs for the year 2010-11. This is based on 17% increase over the projected figure of Rs. 29020 lakhs for the year 2007-08 and 10% increase P.A. in 2009-10 and 2010-11.

It is submitted by PGVCL that an amount of Rs. 7376 lakhs had been provided in the employees cost in 2006-07 Accounts towards the estimated arrears payable due to wage revision awaiting final decision of the 6<sup>th</sup> Pay Commission. As per annual accounts the employee cost for 2007-08 is Rs. 29020 lakhs which includes Rs. 7376 lakhs towards payment of arrears. The actual employee cost without the provision for arrears would be Rs. 21644 lakhs. It is observed that the increase in employee cost projected by the DISCOM and approved by the Commission was 5% during 2006-07 & 2007-08. The Commission considers that an increase of 6% per year is reasonable as the increase in most of the utilities is in the order of 5 to 6% P.A.

The employee cost during 2008-09 would be Rs. 22943 lakhs with 6% increase over the cost of 2007-08 without making provision for payment of arrears of 6<sup>th</sup> Pay Commission. The Commission considers that the payment of entire arrears may not materialize during 2008-09. It has considered to provide 60% of the amount during 2008-09 (4426 lakhs) and balance 40% (Rs. 2950 lakhs) during 2009-10. The employee cost as above is approved by the Commission with an increase of 6% per annum.

2008-09	Rs. 27369 lakhs (22943 + 4426)
2009-10	Rs. 27270 lakhs (22943X1.06+2950)
2010-11	Rs. 25779 lakhs

The Commission approves the employee cost at Rs. 27369 lakhs during 2008-09, Rs. 27270 lakhs during 2009-10 and Rs. 25779 lakhs during 2010-11. Any variation due to payment of arrears on the recommendations of 6<sup>th</sup> Pay Commission will be considered during the true up for 2008-09.

**R&M Expenses**

PGVCL has projected the Repair and Maintenance expenses for the control period as under

2008-09	Rs. 9317 lakhs
2009-10	Rs. 10249 lakhs
2010-11	Rs. 11274 lakhs

The Commission has obtained the R&M expenses incurred for earlier years. The expenses are given in Table 4.40 below.



**Table 4.40**

(Rs. Lakhs)

Particulars	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
	(Actuals)			(Projected)		
Repair & Maintenance expenses	5367	7700	8192	9317	10249	11274

It is seen that there is abnormal increase in the R&M costs during the year 2006-07 & 2007-08. It is submitted by PGVCL that R&M expenses of Rs. 5367 lakhs during 2005-06 increased to Rs. 7700 lakhs during 2006-07. This is due to release of over one lakh new connections leading to major expansion in the Distribution network and replacement of aging equipment.

Implementation of Jyoti Gram Yojana has increased the network. In order to maintain quality power supply to the consumers it requires regular maintenance and replacement.

In view of the above and also due to various other factors, the R&M costs have gone up during 2006-07 & 2007-08.

It is seen from the Annual Accounts that the R&M expenses for the year 2007-08 are Rs. 8192 lakhs. The major part of the expenses is R&M of lines, cable Network etc accounting to Rs. 5241 lakhs and the balance is on maintenance of plant and machinery etc.

The expenditure is actually incurred, probably major part might be one time.

PGVCL has projected an amount of Rs. 9317 lakhs during 2008-09 which is more than the expenditure during 2007-08 by 13.73%. The company has requested for an annual increase of 10%.

In view of actual expenditure of Rs. 8192 lakhs during 2007-08, the Commission approves the R&M expenditure with 6% annual increase during the control period. The Commission approves the R&M expenses for the control period as under

(Rs. lakhs)

Particulars	2008-09	2009-10	2010-11
Repair & Maintenance expenses	8684	9205	9757

**A&G expenses**

PGVCL has projected the Administration and General Expenses for the control period as below.

2008-09	Rs. 5708 lakhs
2009-10	Rs. 6279 lakhs
2010-11	Rs. 6907 lakhs

The expenses actuals for the earlier years are as under.

(Rs. Lakhs)

Particulars	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
	(Actuals)			(Projected)		
A&G expenses	4969	4718	5499	5708	6279	6907



The actuals for the earlier years are as per Annual Accounts of the respective years. The company requested for 10% increase per year during the control period.

The Commission has observed that 5% increase was projected by the company during the previous years and the Commission approved the 5% increase.

The Commission considered that 6% increase during the control period as reasonable and approves the A&G expenses for the control period as under.

2007-08 (Actuals)	Rs. 5499 lakhs
2008-09	Rs. 5829 lakhs
2009-10	Rs. 6179 lakhs
2010-11	Rs. 6549 lakhs

#### Summing up

**The Commission approves the O&M expenses for the control period as under.**

(Rs. Lakhs)

S.N	Particulars	2008-09	2009-10	2010-11
1.	Employee cost	27369	27270	25779
2.	R&M expenses	8684	9205	9757
3.	A&G expenses	5829	6179	6549
	Total O&M expenses	41882	42654	42085

#### 4.12 Provision for bad and doubtful debts

The PGVCL has projected the provision for bad and doubtful debts as detailed in the Table 4.41 below.

**Table 4.41**

#### **Provision for bad and doubtful debts projected for the control period 2008-11**

(Rs. Lakhs)

Particulars	2006-07	2007-08	2008-09	2009-10	2010-11
Provision for bad debts	3246	1548	1772	1986	2191
% of sales revenue		0.40%	0.40%	0.40%	0.40%

PGVCL has mentioned that it is a very legitimate expenditure which is associated with the business risk and is a consumer related expense. PGVCL has projected the provision at 0.4% of the projected revenue from sale of power.

The PGVCL has a consumer base of about Rs. 33.5 lakhs by the end of March 2008 and about 72% of them are LT residential consumers.

The area of operations of PGVCL covers about 99771 Sq. Kms spreading over 9 circles in 8 districts. As such the Commission considers 0.20% of the revenue as reasonable towards provision for bad and doubtful debts. The provision is accordingly worked out as detailed in the Table 4.42 below.

**Table 4.42****Provision for bad and doubtful debts approved for the control period 2008-11**

(Rs. Lakhs)

Particulars	2008-09	2009-10	2010-11
Provision for bad debts	886	993	1096

The Commission approves the provision for bad debts at Rs. 886 lakhs for 2008-09, Rs. 993 lakhs for 2009-10 and Rs. 1096 lakhs for 2010-11.

**4.13 Depreciation**

The PGVCL has claimed Rs. 49627 Lakhs towards depreciation charges for the control period 2008-11 as detailed in the Table 4.43 below.

**Table 4.43****Depreciation charges projected for the control period 2008-11**

(Rs. Lakhs)

Particulars	2006-07	2007-08	2008-09	2009-10	2010-11
Gross block at the beginning of the year	256,348	289,898	327,880	408,412	497,359
Additions during year (Net)	33550	37,982	80,532	88,948	91,995
Cumulative Depreciation at the beginning of the year	40,385	50,320	61,555	74,945	91,418
Depreciation for the year	9934	11,235	13,391	16,473	19,763
Cumulative Depreciation at the end of the year	50,320	61,555	74,945	91,418	111,181
Average rate of depreciation	3.64%	3.64%	3.64%	3.64%	3.64%
Net Block at the beginning of the year	215,963	239,578	266,325	333,466	4 05,941
Net Block at the close of the year	239,578	266,325	333,466	405,941	478,173

PGVCL has mentioned that depreciation has been calculated based on the rates specified by CERC for various assets in the power sector including distribution assets.

It is found that depreciation has been calculated taking into consideration the opening balance of assets at the beginning of the year and proposed capitalisation i.e additional assets proposed to be brought into use during the control period. The actual average rate of depreciation worked out to 3.64% and the same rate has been adopted for projections during the control period.

The depreciation charges claimed are as per the rates specified by the CERC. The depreciation charges have been examined and found to be in order.

**The Commission approves the depreciation charges at Rs. 13391 lakhs for 2008-09, Rs. 16473 lakhs for 2009-10 and Rs. 19763 lakhs for 2010-11.**



#### 4.14 Capital expenditure

The PGVCL has projected a capital expenditure of Rs. 261475 lakhs for the control period 2008-11. The broad details of the capital expenditure for the year 2007-08 and projection for the control period are given in the Table 4.44 below.

**Table 4.44  
Capital expenditure projected for the control period**

(Rs. lakhs)

	Capital Expenditure Plan	2007-08	Control Period		
			2008-09	2009-10	2010-11
<b>A</b>	<b>Distribution Schemes</b>				
	Normal Development Scheme	10200	9000	10500	11500
	System Improvement Scheme	6000	6500	8000	9000
	Jyoti Gram Yojna	200	0	0	0
	Electrification of hutments	50	909	955	1002
	Scheme of meters	2000	4000	5000	6000
	<b>Total</b>	<b>18450</b>	<b>20409</b>	<b>24455</b>	<b>27502</b>
<b>B</b>	<b>Rural Electrification Scheme</b>				
	Special Component Plan	015	864	234	234
	REC Normal	7450	0	0	0
	BADP	100	160	160	160
	<b>Total</b>	<b>7565</b>	<b>1024</b>	<b>394</b>	<b>394</b>
<b>C</b>	<b>Others</b>				
	Energy Efficient Pumps	0	1800	1800	1800
	Energy Conservation	10	10	10	10
	Independent Certification Agency	3	3	3	3
	<b>Total</b>	<b>13</b>	<b>1813</b>	<b>1813</b>	<b>1813</b>
<b>D</b>	<b>Non Plan Scheme</b>				
	RE Non Plan (Tatkal)	8840	0	0	0
	RGVY	500	1500	3500	35.00
	<b>Total</b>	<b>9340</b>	<b>1500</b>	<b>3500</b>	<b>35.00</b>
<b>E</b>	<b>Other New Schemes</b>				
	Civil Works	500	1500	1000	1000
	Automatic PF Control panels	700	1000	1500	1500
	Ring Main Unit	120	100		
	Aerial Bunch Conductors	100	700	1000	1000
	HVDS in selected sub-division	0	2000	5000	5000
	Hand held instruments	0	100	0	0
	Automatic meter reading	100	100	100	100
	GIS in cities	400	700	700	700
	Fault Passage Indicator	4	70	70	70
	Rural Load Management Scheme	90			
	Load Shedding Transformers	0	200	100	100
	Marine Cable for Dwaraka	600			
	<b>Total</b>	<b>2614</b>	<b>6470</b>	<b>9470</b>	<b>9470</b>
<b>F</b>	<b>Golden Goal Scheme</b>				
	Pending Agriculture Connections	0	49316	49316	49316
<b>I</b>	<b>Capital Expenditure Total</b>	<b>37982</b>	<b>80532</b>	<b>88948</b>	<b>91995</b>



The distribution schemes include normal development schemes and system improvement schemes Jyotigram Yojana, electrification of hamlets. About 350000 new connections are proposed to be released during the control period. PGVCL has mentioned that as a part of the Golden Goals targets set by Government of Gujarat, the DISCOMs have to release all pending agriculture connections amounting to over 2.1 lakh applications across the State of Gujarat in the next three years. This golden goal scheme involves 10% of the total expenditure as a grant, about 20% by way of consumer contribution and the balance amount for the capital expenditure shall be through a mix of debt and equity. The capital expenditure proposed towards release of new agriculture connections, is about Rs. 49316 lakhs per annum during the control period.

It is further mentioned by the PGVCL that it plans to issue over 1.1 lakh connections to BPL household as part of the 'Golden Goals' targets set by Government of Gujarat. This involves 100% grant for funding the capital expenditure under this programme.

Release of services to BPL households and all pending agriculture connections is a part of socio-economic policy of Government of Gujarat. While release of service connections under BPL scheme is covered with 100% grants, the agricultural connections are covered with 10% grant and 20% consumer contribution. Release of agriculture connections are actually un-remunerative from the utility point of view and this needs to be covered by more grants from State Government. The capital expenditure envisaged needs to be viewed in the overall perspective of agriculture sector contribution to the gross domestic product and provides employment to a vast majority of the population. As such the Commission approves the capital expenditure as proposed by PGVCL for the control period. The utility should however impress upon the State Government to provide 100% grants for this scheme.

The details of capital expenditure under various schemes are given separately.

The Commission approves the capital expenditure for the control period as projected by PGVCL with a stipulation that all BPL connections are funded through 100% grants and pending agricultural connections are funded through 10% grants.

The Commission also feels that with a significant increase in the number of Agricultural connections, the government subsidy for compensating the utility because of increased loss will be correspondingly enhanced.

The sources of funding the proposed capital expenditure is detailed in the Table 4.45 below:

**Table 4.45**

**Proposed funding of capital expenditure during the control period 2008-11**

(Rs. Lakhs)

Source of Capex	2007-08	2008-09	2009-10	2010-11
Consumer contribution	15025	16613	17738	18488
Grant	823	8223	9439	9486
Equity	9837	22050	25075	26575
Debt	12297	33646	36696	37446
<b>Total capital expenditure</b>	<b>37982</b>	<b>80532</b>	<b>88948</b>	<b>91995</b>



Regarding sources of funding the capital expenditure, PGVCL has projected equity at about 40% and debt at about 60% of the Capex other than consumer contribution and grants. As per GERC Regulations the accepted debt-equity ratio is 70:30. Accordingly the sources of funding are worked out as detailed in the Table 4.46 below.

**Table 4.46**

**Sources of funding the capital expenditure approved for the control period 2008-11**

(Rs. lakhs)

Particulars	2007-08	2008-09	2009-10	2010-11
Capital expenditure	37982	80532	88948	91995
Less: Consumer Contribution	15025	16613	17738	18488
Grant	823	8223	9439	9486
Balance Capex	22134	55696	61771	64021
Equity (30%)	6640	16709	18531	19206
Debt	15494	38987	43240	44815

The Commission observes that the above equity and debt are correctly taken by the PGVCL in calculation for return on equity and interest on loans. The debt-equity figures are wrongly exhibited in table 53 of the petition.

**4.15 Interest and Finance charges**

The PGVCL has projected the interest and finance charges at Rs. 60643 lakhs for the control period 2008-11 as detailed in the Table 4.47 below.

**Table 4.47**

**Interest and finance charges projected for the control period 2008-11**

(Rs. lakhs)

Particulars	2007-08	2008-09	2009-10	2010-11
Opening balance of loans	128785	131400	157248	184763
Additions	15494	38987	43240	44815
Repayment	12879	13140	15725	18476
Interest during the year	13985	15515	18383	21278
Interest on security deposit	1259	1299	1340	1384
Guarantee charges	482	482	482	482
Total interest and finance charges	15725	17295	20205	23143
Closing balance of loans	131400	157248	184763	211101
Average rate of interest	10.75%	10.75%	10.75%	10.75%
Average tenure of loans year	10	10	10	10

The PGVCL has mentioned that the interest expenses include interest paid to consumers on their security deposits and an escalation equal to the overall growth of consumers as indicated in Table 13 of ARR has been taken for the interest costs for the control period. The rate of interest considered for the projection is 10.75% P.A.



The drawal of loans is in accordance with the sources of funding approved in Table 4.46 above. The PGVCL has not furnished any details in respect of security deposits. The PGVCL has included the loans for working capital in the opening balance as well as closing balance of loan and also claimed interest on working capital separately as per norms under GERC (Terms and Conditions of Tariff) Regulations. It is clarified by the DISOCM that the working capital loans are actually short term loans availed at competitive rates of interest and this is not cash credit facility to be treated as working capital loans. The guarantee charges are projected at Rs. 482 lakhs P.A. during the control period 2008-11 based on the actuals for 2006-07. Since the actuals for 2007-08 are available the guarantee charges are considered at Rs. 299 lakhs the actuals for 2007-08. The PGVCL has projected the interest charges estimating the interest at 10.75% P.A. The actual interest charges other than State Government loans and consumer security deposits worked out to about 9.5% for the year 2007-08 (The average loan was Rs. 98788 lakhs and the interest was Rs. 9465 lakhs). Considering a 0.5% margin towards market fluctuations the Commission approves the interest charges on term loans at 10% for the control period. The interest and finance charges are worked out as detailed in the Table 4.48 below. The interest on security deposits is discussed in para 4.16 below.

**Table 4.48**

**Interest and finance charges approved for the control period 2008-11**

(Rs. Lakhs)

Particulars	2007-08	2008-09	2009-10	2010-11
Opening balance of loans	128785	128238	147661	168721
Additions		32247	35826	36660
Repayments		12824	14766	16872
Closing balance of loans	128238	147661	168721	155509
Interest charges @ 10%		13795	15819	16212
Interest on security deposits		1299	1340	1384
Guarantee charges		299	299	299
<b>Total interest and finance charges</b>		<b>15393</b>	<b>17458</b>	<b>17895</b>
Average tenure of loan (years)		10	10	10

The Commission approves the interest and finance charges at Rs. 15393 lakhs for 2008-09, Rs. 17458 lakhs for 2009-10 and Rs. 17895 lakhs for 2010-11.

**4.16 Interest on security deposits**

The PGVCL has projected interest on security deposits at Rs. 4023 lakhs for the control period 2008-11 @ 6% rate of interest as detailed in the Table 4.49 below.

**Table 4.49**

**Interest on security deposits projected by PGVCL**

(Rs. Lakhs)

Particulars	2007-08	2008-09	2009-10	2010-11
Interest on security deposits	1259	1299	1340	1384





The PGVCL has not furnished the details of security deposit and the receipts expected during the control period. The opening balance of security deposits from consumers as on 01/04/2008 as per the annual accounts for 2007-08 is Rs. 67400 lakhs. The consumer security deposits relate to the growth in sales and revenue. The compounded annual growth rate for the 5 years period 2003 to 2008 is 10%. The consumer security deposits with annual increase of 10% and the interest thereon is worked out as detailed in the Table 4.50 below.

**Table 4.50**

**Consumer security deposit and interest for the control period 2008-11**

(Rs. Lakhs)

Particulars	2007-08	2008-09	2009-10	2010-11
Consumer security deposits	67400	74140	81554	89709
Interest @ 6%	2911	4246	4671	5138

The interest on security deposits @ 6% P.A. worked out to more than what the DISCOM has projected. To a query from the Commission the DISCOM has mentioned that the interest on security deposit does not match with 6% because for many of the deposits exact details are not available, interest payments cannot be made, and the DISCOMs are trying to rectify this by constantly updating this. In view of this the Commission accepts the interest on security deposits as projected by PGVCL.

The Commission approves the interest on security deposits at Rs. 1299 lakhs for 2008-09 and Rs. 1340 lakhs for 2009-10 and Rs. 1384 lakhs for the year 2010-11 as projected by PGVCL.

**4.17 Interest on working capital**

The PGVCL has claimed Rs. 15356 lakhs towards interest on working capital for the control period 2008-11. The year-wise details projected by PGVCL are given in the Table 4.51 below.

**Table 4.51**

**Interest on working capital projected for the control period 2008-11**

(Rs. lakhs)

Particulars	2007-08	2008-09	2009-10	2010-11
Operating expenses for one month	3858	4249	4676	5144
Maintenance spares escalated at 6% P.A.	2444	2590	2746	2911
Receivables	32259	36910	41365	45646
Total working capital	38560	43749	48787	53701
Rate of interest for working capital	10.50%	10.50%	10.50%	10.50%
Interest on working capital	4049	4594	5123	5639

The PGVCL has submitted that interest on working capital has been calculated based on normative working formula as per Terms and Conditions of Tariff Regulations except in respect of receivables. Regarding receivables the PGVCL has taken into consideration one month revenue instead of 2 months revenue for the control period. Interest on working capital has been claimed at 10.50% P.A.



Regulation 20 (v) (b) specified that the rate of interest on working capital shall be on a normative basis and shall be equal to the short- term prime lending rate of SBI as on 01/04/2004 or on 1<sup>st</sup> April of the year in which the generating station or a unit thereof is declared under commercial operation whichever is later. The short-term PLR as on 01/04/2004 is applicable and this was 10.25%. The interest on working capital, is accordingly worked out for the control period as detailed in the Table 4.52 below:

**Table 4.52**  
**Interest on working capital approved for the control period 2008-11**

(Rs. lakhs)

Particulars	2008-09	2009-10	2010-11
O&M expenses	3490	3555	3507
Spares	2590	2746	2911
Receivables	39920	45916	48951
Working capital	46000	52217	55369
Interest on working capital @ 10.25%	4715	5352	5675

The Commission, therefore approves the interest on working capital at Rs. 4715 lakhs for the year 2008-09, Rs. 5352 lakhs for 2009-10 and Rs. 5675 lakhs for the year 2010-11.

#### 4.18 Return on equity

The PGVCL has projected the return on equity at Rs. 53724 lakhs for the control period as detailed in the Table 4.53 below.

**Table 4.53**  
**Return on equity projected for the control period**

(Rs. lakhs)

Particulars	2007-08	2008-09	2009-10	2010-11
Opening equity capital	94882	101522	118231	136762
Addition during the year	6640	16709	18531	19206
Closing equity	101522	118231	136762	155969
Average equity	98202	109877	127497	146365
Opening free reserves	47360	47594	46267	45586
Addition during the year	6874	15383	17850	20491
Less: Reserves transferred to equity	6640	16709	18531	19206
Closing free reserves	47594	46267	45586	46870
Average reserves	47477	46930	45927	46228
Reserves considered for ROE	6640	16709	18531	19206
Equity for Capex	6640	16709	18531	19206
Rate of ROE	7%	14%	14%	14%
Return on average equity	6874	15383	17850	20491

The PGVCL has prayed to approve the full amount of return on equity claimed at the rate of 14% as enshrined in the GERC(Terms and Conditions of Tariff) Regulations, 2005. In this regard PGVCL has referred to a letter from the Union Minister of Power, wherein Government of India asked the State Government to ensure full returns on equity to power utilities vide letter No. 45/2/206 R&R / (P1) / 1039-70 / VIP dated 8<sup>th</sup> February 2008.

The addition of equity projected for the control period is in accordance with the sources of funding the capital expenditure. The rate of return of equity projected is 14% which is as per the GERC Regulations.



The Commission, accordingly, approves the return on equity at Rs. 15383 lakhs for 2008-09, Rs. 17850 lakhs for 2009-10 and Rs. 20491 lakhs for 2010-11.

#### 4.19 Other expenses

The PGVCL has projected the other debits and extra – ordinary items under other expenses as detailed in the Table 4.54 below.

**Table 4.54**

**Other expenses projected for the control period 2008-11**

(Rs. Lakhs)

Other expenses	2007-08	2008-09	2009-10	2010-11
Other debits	308	324	340	357
Extra ordinary items	(105)	(105)	(105)	(105)

PGVCL has submitted that other debits have been projected with an annual escalation of 5% over 2006-07 actuals while the extraordinary items have been considered at the level of actuals for 2006-07.

Extraordinary items are defined as those which arise from events or transactions outside the ordinary activities of the utility and which are material and expected not to recur frequently or regularly. The extraordinary item projected is a minus figure. Other debits primarily include material cost variance and other miscellaneous losses.

The Commission approves the other debits at Rs. 324 lakhs for 2008-09, Rs. 340 lakhs for 2009-10 and Rs. 357 lakhs for 2010-11 for the control period.

#### 4.20 Capitalization of expenses

The PGVCL has projected Rs. 3647 lakhs P.A. during the control period towards interest and expenses capitalized at the level of expenses capitalized during 2006-07. On verification from the annual accounts it is found that the amount projected is towards capitalization of O&M expenses viz., Employee cost, Repairs and Maintenance expenses and A&G expenses. This does not include capitalization of interest charges. The Commission obtained the annual accounts for 2007-08 (Pro) and the expenses capitalized were Rs. 4247 lakhs during 2007-08.

For O&M expenses the annual increase considered is 6% during the control period. It is reasonable to assume that capitalization of O&M charges would also increase by 6% P.A. The Commission, therefore, considers annual increase of 6% over the actuals for 2007-08 as detailed in the Table 4.55 below.

**Table 4.55**

**Capitalization of O&M expenses approved for the control period**

(Rs. lakhs)

Particulars	2007-08	2008-09	2009-10	2010-11
Expenses capitalized	4247	4502	4772	5058

The Commission, accordingly approves the capitalization of O&M expenses at Rs. 4502 lakhs for 2008-09, Rs. 4772 lakhs for 2009-10 and Rs. 5058 lakhs for 2010-11.



#### 4.21 Taxes

The PGVCL has projected the tax on income for the control period as detailed in the Table below:

**Table 4.56**  
**Provision for tax projected by PGVCL for the control period 2008-11**  
(Rs. lakhs)

Particulars	2007-08	2008-09	2009-10	2010-11
Provision for tax	223	245	269	296

PGVCL has assumed the Fringe Benefit Tax at 0.5% of the total employee cost and the income tax at the MAT rate of 11.33% on the surplus, if any, including the ROE component.

On verification it is found that FBT is projected at 0.5% on the total O&M expenses instead of employee cost and the tax at MAT rate has not been projected by the PGVCL.

As per Regulation 66 of GERC (Terms and Conditions of Tariff) Regulations, 2005 tax is allowable on the approved return. The tax is worked out as detailed in the Table 4.57 below.

**Table 4.57**  
**Income tax approved by the Commission for the control period 2008-11**  
(Rs. Lakhs)

Particulars	2008-09	2009-10	2010-11
ROE approved	15383	17850	20491
Income tax at the MAT rate of 11.33%	1743	2022	2322
Fringe Benefit Tax @ 0.5% of E.C	137	136	129

Since PGVCL has claimed Fringe Benefit Tax only the claim is limited to the Fringe Benefit Tax on Employee cost.

**The Commission, accordingly approves the provision of tax at Rs. 137 lakhs for 2008-09, Rs. 136 lakhs for 2009-10 and Rs. 129 lakhs for 2010-11.**

#### 4.22 Other consumer related income

The other income comprises of revenue on account of charges imposed other than the basic charges applicable to the consumers. These charges include meter rent, wheeling charges, inspection charges and other miscellaneous charges.

The PGVCL has projected the other consumer related income as detailed in the Table 4.58 below for the control period.

**Table 4.58**  
**Other consumer related income projected by PGVCL**  
(Rs. Lakhs)

Particulars	2006-07 (A)	2007-08	2008-09	2009-10	2010-11
Rental for metered service lines	4212	4390	4575	4768	4969
Recoveries for theft of power	4466	4654	4851	5055	5269
Wheeling charges	002	002	002	002	002
Miscellaneous charges	2278	2375	2475	2579	2688
<b>Total</b>	<b>10958</b>	<b>11421</b>	<b>11903</b>	<b>12404</b>	<b>12928</b>



PGVCL has stated that the other income has been projected to grow at the same rate as the overall growth in the number of consumers during the control period. The annual increase projected is 4.22% per annum.

The Commission has obtained the annual accounts for 2007-08 (Pro). The other income for 2007-08 as per accounts was Rs. 10157 lakhs. The category-wise growth rates of consumers for the control period projected by PGVCL are 6.2% in 2008-09, 5.5% in 2009-10 and 5.3% in 2010-11. The Commission accepts these growth rates and the other consumer related income is worked out taking the actuals for 2007-08 as base as detailed in the Table 4.59 below.

**Table 4.59**  
**Other consumer related income approved for the control period 2008-11**  
(Rs. lakhs)

Particulars	2007-08 (A)	2008-09	2009-10	2010-11
Other income	10157	10787	11380	11983

The Commission, accordingly, approves the other consumer related income at Rs. 10787 lakhs for 2008-09, Rs. 11380 lakhs for 2009-10 and Rs. 11983 lakhs for 2010-11.

#### 4.23 Non-Tariff Income

The non-tariff income comprises of interest on loans and advances to employees / contractors, income from investments with banks, delayed payment surcharges from consumers etc.

The PGVCL has projected the non-tariff income as detailed in the Table 4.60 below for the control period.

**Table 4.60**  
**Non - Tariff income projected by PGVCL for the control period**  
(Rs. lakhs)

Particulars	2006-07 (A)	2007-08	2008-09	2009-10	2010-11
Interest on staff loans and advances	98	98	98	98	98
DPC charges HT & LT	4438	4438	4438	4438	4438
Income from trading	216	216	216	216	216
Gain on sale of fixed assets	122	122	122	122	122
APDRP interest	12196	-	-	-	-
Miscellaneous receipts	920	920	920	920	920
<b>Total</b>	<b>17989</b>	<b>5793</b>	<b>5793</b>	<b>5793</b>	<b>5793</b>

PGVCL has stated that the non-tariff income has been projected at the same level as in FY 2006-07 but the income from subsidies and APDRP incentives has not been considered for projections.

The non-tariff income other than subsidies and incentives for the control period has been projected at Rs. 5793 lakhs at the level of actuals for 2006-07 for the entire control period without any escalation.

The non-tariff income other than APDRP incentive which was Rs. 5207 lakhs in 2005-06 increased to Rs. 5870 lakhs in 2007-08 (actuals) and the growth is about 6% P.A. Further PGVCL accounted for Rs. 4594 lakhs in 2005-06, Rs. 12196 lakhs in 2006-07 and Rs.



9708 lakhs during 2007-08 towards APDRP incentive. This scheme is closed in 2007-08 and as such this incentive cannot be projected for the control period. The non tariff income taking the actual of 2007-08 as base applying 6% annual increase the non-tariff income is worked out as detailed in the Table 4.61 below.

**Table 4.61**  
**Non-tariff income approved for the control period 2008-11**

(Rs. Lakhs)

Particulars	2007-08 (A)	2008-09	2009-10	2010-11
Non-tariff income	5871	6223	6597	6992

The Commission, accordingly approves the non-tariff income at Rs. 6223 lakhs for 2008-09, Rs. 6597 lakhs for 2009-10 and Rs. 6992 lakhs for 2010-11.

#### 4.24 Revenue from existing tariff

The PGVCL has projected the revenue from existing tariff as detailed in the Table 4.62 below for the control period 2008-11.

**Table 4.62**  
**Revenue from existing tariff projected by the control period 2008-11**

(Rs. lakhs)

Particulars	2008-09	2009-10	2010-11
Sales revenue	375712	409356	445516
Agriculture (compensation)	26164	27091	28019
Total	401876	436446	473534

The expected revenue from existing tariff on the basis of sales approved by the Commission is worked out at rates given in Form –D-4 of MYT petition detailed in the Table 4.63 below:

**Table 4.63**  
**PGVCL: Category-wise Sales and Revenue at current tariffs approved by the Commission for the control period 2008-11**

Sl. No	Category	2008-09			2009-10			2010-11		
		Sales (MU)	Average Rate (Rs.)Kwh	Revenue Rs.lakhs	Sales (MU)	Average Rate (Rs.)Kwh	Revenue Rs. Lakhs	Sales (MU)	Average Rate (Rs.)Kwh	Revenue Rs. Lakhs
<b>I</b>	<b>LT Consumers:</b>									
1	Residential	1999	3.06	61169	2178	3.07	66865	2372	3.07	72820
2	Commercial	728	4.84	35235	821	4.82	39572	925	4.80	44400
3	Industrial LT	1256	4.39	55138	1384	4.37	60481	1526	4.36	66534
4	Public Lighting	67	3.42	2291	73	3.42	2497	79	3.42	2702
5	Agriculture (With Tariff Compensation)	4380	1.03	45114	4674	0.99	46273	4997	0.95	47472
6	Public Water Works	245	2.75	6738	255	2.75	7013	265	2.75	7288
7	<b>Total LT</b>	<b>8675</b>		<b>205686</b>	<b>9385</b>		<b>222699</b>	<b>10164</b>		<b>241215</b>
<b>II</b>	<b>HT Consumers:</b>									
8	Industrial HT	4112	4.65	191208	4400	4.65	204600	4708	4.65	218922
9	Railway Traction	0	0	0	0	0	0	0	0	0
10	<b>Total HT</b>	<b>4112</b>		<b>191208</b>	<b>4400</b>		<b>204600</b>	<b>4708</b>		<b>218922</b>
11	<b>Total Revenue with Agricultural Compensation (7+10)</b>	<b>12787</b>		<b>396894</b>	<b>13785</b>		<b>427299</b>	<b>14872</b>		<b>460137</b>

The revenue from existing tariff approved is summarized in the Table 4.64 below.



**Table 4.64****Summary of Revenue Requirement approved**

(Rs. Lakhs)

Particulars	2008-09	2009-10	2010-11
Sales revenue with agricultural compensation	396894	427299	460137
Agriculture (compensation)	-	-	-
Total	396894	427299	460137

4.25 The summary of revenue requirement for the control period 2008-11 as projected by PGVCL and as analysed and approved in the preceding paragraphs is given in Table 4.65 below:

**Table 4.65****Revenue requirement as projected by PGVCL and as approved by the Commission for the control period 2008-11**

Rs.lakhs

S. No.	Particulars	As projected by PGVCL (With proposed tariff)				Approved by the Commission (With existing tariff)		
		FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2008-09	FY 2009-10	FY 2010-11
1	Cost of Power Purchase	386352	414647	481773	528609	397656	461107	496350
2	O & M Expenses	44542	48996	53896	59285	41882	42654	42085
3	Depreciation	11235	13391	16473	19763	13391	16473	19763
4	Interest on Loans & Finance Charges	15725	17295	20205	23143	15393	17458	17895
5	Interest on Working Capital	4049	4594	5123	5639	4715	5352	5675
6	Other Debits	308	324	340	357	324	340	357
7	Extraordinary items	-105	-105	-105	-105			
8	Provision for bad debts	1548	1772	1986	2191	886	993	1096
9	Less : Interest & Expenses Capitalised	3647	3647	3647	3647	4502	4772	5058
10	<b>Sub Total [ (1 to 8)-(9) ]</b>	<b>460007</b>	<b>497267</b>	<b>576044</b>	<b>635235</b>	<b>469745</b>	<b>539605</b>	<b>578163</b>
11	Return on equity	6874	15383	17850	20491	15383	17850	20491
12	Provision for Tax	223	245	269	296	137	136	129
13	<b>Total Expenditure (10 to 12)</b>	<b>467104</b>	<b>512895</b>	<b>594163</b>	<b>656022</b>	<b>485265</b>	<b>557591</b>	<b>598783</b>
14	Less : non tariff income	5793	5793	5793	5793	6223	6597	6992
15	<b>Aggregate revenue requirement (13-14)</b>	<b>461311</b>	<b>507102</b>	<b>588370</b>	<b>650229</b>	<b>479042</b>	<b>550994</b>	<b>591791</b>
16	Revenue with existing tariff	369890	425223*	478184*	529034*	396894	427299	460137
17	Other Income consumer related	11420	11902	12404	12928	10787	11380	11983
18	<b>Total revenue before subsidy (16+17)</b>	<b>381310</b>	<b>437125</b>	<b>490588</b>	<b>541962</b>	<b>407681</b>	<b>438679</b>	<b>472120</b>
19	Subsidy	40115	43017	45943	48436	43017	45943	48436
20	Other Subsidies	5341	6469	7596	8685	6469	7596	8685
21	<b>Total revenue after subsidy (18 to 20)</b>	<b>426766</b>	<b>486611</b>	<b>544127</b>	<b>599083</b>	<b>457167</b>	<b>492218</b>	<b>529241</b>
22	<b>Gap (15-21)</b>	<b>34545</b>	<b>20491</b>	<b>44243</b>	<b>51146</b>	<b>21875</b>	<b>58776</b>	<b>62550</b>

\* The revenue projected by PGVCL in the MYT petition is with proposed tariff.



## Chapter 5

### Capital Expenditure Plan

5.1 The PGVCL proposed Capital Expenditure under various schemes i.e., Distribution Schemes, Rural Electrification Scheme and centrally Sponsored Schemes. The details of estimates for Capital Expenditure for the year 2007-08 under each of the above scheme are detailed in this chapter.

#### 5.2 Scheme – Wise Capital Expenditure for the Control Period

**Table 5.1**  
**Capital Expenditure Proposed during the Control Period**

(Rs; Lakhs)

	Capital Expenditure Plan	Control Period		
		2008-09	2009-10	2010-11
<b>A</b>	<b>Distribution Schemes</b>			
	Normal Development Scheme	9000	10500	11500
	System Improvement Scheme	6500	8000	9000
	Jyoti Gram Yojna	0	0	0
	Electrifications of Hutments	909	955	1002
	Scheme for Meters	4000	5000	6000
	<b>Total</b>	<b>20409</b>	<b>24455</b>	<b>27502</b>
<b>B</b>	<b>Rural Electrification Scheme</b>			
	<b>Special Component Plan</b>	864	234	234
	<b>REC Normal</b>	0	0	0
	<b>BADP</b>	160	160	160
	<b>Total</b>	<b>1024</b>	<b>394</b>	<b>394</b>
<b>C</b>	<b>Others</b>			
	<b>Energy Efficient Pumps</b>	1800	1800	1800
	<b>Energy Conservation</b>	10	10	10
	<b>Independent Certification agency</b>	3	3	3
	<b>Total</b>	<b>1813</b>	<b>1813</b>	<b>1813</b>
<b>D</b>	<b>Non Plan Schemes</b>			
	<b>RE Non Plan (Tatkal)</b>	0	0	0
	<b>RGVY</b>	1500	3500	3500
	<b>Total</b>	<b>1500</b>	<b>3500</b>	<b>3500</b>
<b>E</b>	<b>Other New Schemes</b>			
	<b>Civil Works</b>	1500	1000	1000
	<b>Automatic PF control panels</b>	1000	1500	1500
	<b>Ring Main Unit</b>	100		
	<b>Aerial Bunch Conductors</b>	700	1000	1000
	<b>HVDS in selected sub division</b>	2000	5000	5000
	<b>Hand held instruments</b>	100	0	0
	<b>Automatic meter reading</b>	100	100	100
	<b>GIS in Cities</b>	700	700	700
	<b>Fault Passage Indicator</b>	70	70	70
	<b>Rural Load Management Scheme</b>			
	<b>Load Shedding Transformers</b>	200	100	100
	<b>Marine Cable for Dwarka</b>			
	<b>Total</b>	<b>6470</b>	<b>9470</b>	<b>9470</b>
<b>F</b>	<b>Golden Goal Scheme</b>			
	<b>Pending Agriculture Connections</b>	49316	49316	49316
<b>I</b>	<b>Capital Expenditure Total</b>	<b>80532</b>	<b>88948</b>	<b>91995</b>

A brief description of the funding of the above mentioned schemes is given below:





### 5.2.1 Normal Development Scheme (Deposit Work)

The company has to lay distribution lines up to installations of LT/HT consumers. This requires considerable investment for laying LT/HT lines, service connection lines, meters, etc. This also requires for expansion of existing distribution system and strengthening of sub-transmission lines and sub-stations.

**Table 5.2**

#### **Breakup of Capex under Normal Development Scheme**

Sr. No	NORMAL DEVELOPMENT SCHEME	Phy Nos.	Rs. Lkhs	Phy Nos.	Rs. Lakhs	Phy Nos.	Rs. Lakhs
		2008-09		2009-10		2010-11	
1	Lighting & Domestic Connection	85000	3400	100000	4400	100000	4840
2	L.T Industrial Connections	5000	750	5000	825	4500	816.8
3	H.T Industrial Connections	200	400	200	440	175	423.5
4	H.T L.E	150	75	150	82.5	150	90.75
5	Agri Shifting Connection	2500	625	2000	685	2000	605
6	Agri. PDC to Reconnection	2000	1000	1800	990	1800	1089
7	Agri. Extension of load	10000	1500	10000	1650	10000	1815
8	Water Works	300	150	300	165	250	151.3
9	Shifting H.T, L.T line etc	400	1000	400	1100	500	1513
10	Other Works		100		165		165
	<b>Total</b>		9000		10503		11509

### 5.2.2 REC Wells

To expedite the releasing of Pending Agricultural Applications the Company has decided to have intensive programme for the same as a part of Golden Goals Scheme which is described separately.

### 5.2.3 System Improvement Schemes (Own Scheme)

Every year new consumers are added to the existing consumers. Hence the system expansion is a must based on the consumer requirements rather than technical requirements. This leads to increase in distribution losses in the system. Due to aging of distribution system, it requires replacement/improvement. For this purpose, System Improvement Schemes are devised separately based on requirements. Such schemes include renovation / replacement of old sub-transmission and distribution system, bifurcation of feeders, installation / upgradation of distribution transformers, installation of capacitors, etc.

Under the head of System Improvement Rs. 6500 lakhs, Rs. 8000 lakhs and Rs. 9000 lakhs are proposed, for 2008-09, 2009-10 and 2010- of control period respectively, mainly for carrying out the System improvement works on account of Ag. VDS Scheme, lighting VDS scheme, bifurcation of overloaded/ poor voltage regulation feeders, replacement of deteriorated conductor and Distribution Transformer Review.

A detailed break up is as under Table 5.3



**Table 5.3**  
**Break up of expenditure under system improvement schemes**

Sr. No	Work Proposed	Amount Rs. in Lakhs		
		2008-09	2009-10	2010-11
1	Feeder Bifurcation Work	1500	2500	3000
2	DTC Review	1000	1500	2000
3	Conductor Replacement	2500	3000	3000
4	Other Miscellaneous	500	1000	1000
5	Coastal area development (Link Line to new S/S and Feeders)	1000	0	0
	<b>Total</b>	<b>6500</b>	<b>8000</b>	<b>9000</b>

#### 5.2.4 Rajiv Gandhi Gramin Vidyutikaran Yojana (RGGVY)

Govt. of India has launched the scheme for rural electricity infrastructure and household electrification for providing access to electricity to all households in 5 years. The scheme envisages providing 66/11KV Substations in Rural areas, electrification for all rural households, electrification of un-electrified villages and habitations, additional distribution transformer centers, etc.

Of the total outlay, capital subsidy component is provided at 90%. However, for the projects to be eligible for capital subsidy under the scheme, prior commitment of the states is required for deployment for franchisees for the management of rural distribution under the projects. Under such arrangement, Non-Governmental Organisations (NGOs), Users Association, Co- Operatives or Individual Entrepreneurs, the Panchayat Institutions have to be associated as rural distribution franchisees. The franchisees arrangement could be for system beyond and including feeders from sub-stations or from and including Distribution Transformers. The underlying basic purpose is to prevent the pilferage of power.

#### 5.2.5 Load shedding Transformers (LST)

LSTs are meant for providing continuous Power Supply to the residents of the villages located in the interior part of rural areas particularly in Agricultural category. To extend the Jyoti Gram feeder to cover such residents is not only an economical but also technically difficult. Rs. 200 lakhs is estimated for covering left out Ag. Dominant feeders for providing of specially designed Load Shedding Transformers to such consumers for the first year of control period and Rs. 100 lakhs each for the rest of year of control period i.e. 2009-10 and 2010-11.

#### 5.2.6 Electrification of Hutment

The scheme is for electrification of hutments in certain slum areas situated in and around urban and rural areas with a view to help socially, economically and educationally weaker sections of society, who are living in the above hutments. The scheme involves energisation of single point power supply to the identified beneficiaries in consultation with Local Bodies.

It has been estimated that for a target of 25000 Nos. of hutments under the jurisdiction of 9 Circles of PGVCL, an expenditure of Rs.909 lakhs, Rs. 955 lakhs and Rs. 1002 lakhs has been estimated for each year i. e 2008-09, 2009-10 and 2010-11 of control period respectively. An equal amount of grant shall be given by Govt. of Gujarat.



### 5.2.7 Scheme for replacement of Meters

The scheme involves replacement of Meters at exiting consumers' premises by high precision and /or electronics meters.

Rs. 3000 lakhs are proposed for replacement of Single Phase meters and 1000 lakhs for replacement of three phase meters for the year 2008-09. Similarly Rs. 3500 lakhs and Rs. 1500 for the year 2009-10 and Rs. 4000 lakhs and Rs. 2000 lakhs for the 2010-11 for replacement of single phase and three phase meters respectively have been proposed.

### 5.2.8 SPECIAL COMPONENT SUB PLAN (SCSP) :

Rs. 864 lakhs, Rs. 234 lakhs and Rs. 234 lakhs have been estimated for each year of control period for electrification under this scheme. State Government is allocating grant every year for implementing the Programme under SCSP.

### 5.2.9 OTHER NEW SCHEMES

As an effort to reduce the gap and serve the consumers at the most economic cost various activities are envisaged in energy conservation. These activities include:

#### 1. Automatic P.F. Control Panels:

The Automatic P.F. Control Panels introduced capacitance in the System as per the requirement of the system by switching on to the capacitors. This improves the Power Factor of the System. This is an effective measure for reducing technical loss. Feeders are identified for providing APFC Panels. The system has given good results, wherever it is provided and it is expected to derive financial benefits from the system. Rs 1000 lakhs have been proposed for first year of Control period i.e 2008-09 and Rs. 1500 Lakhs have been proposed for the balance two years of the control period i.e. 2009-10 and 2010-11.

#### 2. Aerial Bunched Conductors:

The Aerial Bunched Conductors (A.B.C.) are insulated conductors and for replacement of overhead LT lines in theft-prone and fault-prone areas. This System will prove to be beneficial to the company as it will control the commercial losses in the areas, where consumers are habituated to take direct supply by tapping from LT lines. Rs. 700 lakhs have been proposed for the year 2008-09 and Rs. 1000 lakhs for the years 2009-10 and 2010-11.

#### 3. Hand-held Instruments:

The hand-held instruments are introduced for meter reading and quick billing to avoid human errors. These instruments can be carried to the site of meter reading. The instruments will help for quick billing and realization of revenues. Rs. 100 lakhs been proposed for the year 2008-09 for introduction of handheld Instruments.

#### 4. Automatic Meter Reading:

In this scheme, GSM Communication System is used for taking automatic meter readings without visiting the sites of consumers. The complete metering data becomes available on the main server and the system also provides signals for any tampering with meters or

meter data. It is proposed to provide this system to various high valued HT / LT consumers. The system will help in avoiding errors in meter reading and for better energy accounting. Rs.100 lakhs have been proposed for each year of control period for implementation of Automatic Meter Reading.

#### **5. GIS in towns:**

This Scheme is related to drawing of HT / LT network on Geographical map of the Town / City by conducting Global Positioning Surveys. The indexing of the consumers is done as per the exact Geographical location of the consumer and it provides better control over the System and provides efficient services to the consumers.

Rs. 700 lakhs been proposed for each year of control period for covering 10 towns under GIS.

#### **6. Renovation works by providing Ring Main Units (RMU):**

The Ring Main Units (RMUs) are a combination of circuit breakers and fuse system. This facilitates easy change-over of the system and provides better protection against the faults and also reduces the interruptions of power supply. They also help in aesthetic look of the network, as the overhead 11 KV switches and fuses are avoided. The RMUs are proposed to be provided for renovation of the system at the identified locations.

#### **7. Civil Work:-**

Provisions for Civil Works for construction of new office buildings for Corporate Office Rajkot, Amreli Circle Office and Division Office Building under Porbandar and Surendranagar Circle and Sub division offices under various circles of PGVCL for the year 2008-09 Rs. 1500 lakhs have been proposed while for the year 2009-10 and 2010-11 Rs. 1000 lakhs for each year have been proposed.

#### **8. High Voltage Distribution System:**

Company is having large nos. of Low Tension category consumers. At present power supply to all such consumers is catered by extending Low Tension lines. To eliminate low voltage distribution and to have better voltage profile as well as for reduction of technical loss and associated commercial losses the company has proposed, in phased manner, to shift over to High Voltage Distribution by erecting small capacity Transformer matching with the connected load of individual consumer or very small group of consumers. Company has proposed Rs. 2000 lakhs for the first year of control period and Rs. 5000 lakhs has been proposed for every year of rest of control period i.e. 2009-10 and 2010-11 for High Voltage Distribution System.

#### **9. Fault Passage Indicator:**

Fault Passage Indicator is a device, which indicates the faulty section of a feeder in the Distribution Line. Thus, this is a good device to expeditious by attending to the fault on line and restoration of Power Supply. We have decided to provide at the feeders supplying a power to High Valued Consumers.

Company has proposed Rs. 70 lakhs for each of the control period for installing Fault Passage Indicators.



### 5.2.10 Release of pending Agriculture Connections

As part of the “Golden Goals” targets set by the GoG, the Discoms shall release all pending agriculture connections, over 2.1 lakhs applications across the state of Gujarat in the next three years.

Towards that end, the company has drawn out a strategic plan to provide the connections to all pending Agricultural applicants within the span of three years.

With this, every year about 50000 farmers would get electrical connection and thereby would be able to irrigate their farms and contribute to the growth and development of the State. This initiative shall also enable these farmers to switch over from the use of “dirty” technologies/ sources of energy such as Diesel pumps etc and be able to utilize a cleaner and more efficient source of energy.

It has been assumed that GoG shall provide for about 10 % of the total expenditure as a grant and the company shall be able to obtain consumer contribution upto 20%. The balance amount for the capital expenditure shall be through a mix of debt and equity by the company itself.

The number of connections to be issued, the cost of the project as well as their revenue implications are depicted below:

**Table 5.4**

**Pending Agriculture Connections - Estimates and Assumptions**

Number of Agriculture Connections to be released	Nos.	155000
Phasing of the Project	Years	3
<u>Assumptions:</u>		
Load per Connection	HP	8.5
Consumption per HP	Kwh	1700
Estimated Material Cost per Connection	Rs.	85905
Labour cost	Rs.	9545
Total Cost	<b>Rs.</b>	<b>95450</b>
Total Project Cost	<b>Rs. Lkhs</b>	<b>147948</b>

**Table 5.5**

**Phasing of release of agricultural connections**

Phasing		2008-09	2009-10	2010-11
Number of New Agriculture Connections	Nos.	51667	51667	51667
Cumulative Number of Connections	Nos.	51667	103333	155000
Total Additional Units Supplied	MUs.	747	1493	2240
Additional Load Added	HP	439167	878333	1317500
Additional Load Added	MW	328	655	983
Capital Expenditure	Rs. lakhs	49316	49316	49316



## BPL Household Connections

As part of the “Golden Goals” targets set by the GoG, the Discoms shall issue new connections to all BPL households in the coming years at the rate of about 2.5 connections per year across Gujarat.

The company plans to issue over 1.1 lakh connections to these consumers over the control period. It has been assumed that the GoG shall provide a 100 % grant for funding the capital expenditure required for this programme under various schemes such as Electrification of Hutments, SCSP, Kutir Jyoti and TASP (Petaparas). The expenses under this programme have already been included in the projections under the various schemes mentioned above.

The number of connections to be issued, the cost of the project as well as their revenue implications are depicted below:

**Table 5.6**

### BPL Household Connections - Estimates and Assumptions

Number of Household Connections	Nos.	111066
Phasing of the Project	Years	3
<u>Assumptions:</u>		
Consumption per Month	Kwh	30
Connected Load	Kw	0.1

**Table 5.7**

### Phasing of release of BPL Household connections

Phasing		2008-09	2009-10	2010-11
Number of New Household Connections	Nos.	49200	30980	30886
Cumulative number of connections	No.s	49200	80180	111066
Total Additional Units Supplied	Mus.	18	29	40
Additional Load Added	MW	5	8	11

## 5.3 Funding

The above mentioned capital expenditure would be funded as follows:

**Table 5.8**

### Funding of Capital Expenditure

(Rs. in lakhs)

Sl. No.	Source of Capex	2007-08	2008-09	2009-10	2010-11
1	Consumer Contribution	15025	16613	17738	18488
2	Grants	823	8223	9439	9486
3	Equity	9837	22050	25075	26575
4	Additional Equity	0	0	0	0
5	Loans	12297	33646	36696	37446
6	GoG Loans	0	0	0	0
	<b>Total Capital Expenditure</b>	<b>37982</b>	<b>80532</b>	<b>88948</b>	<b>91995</b>



#### 5.4 Commission's view:

PGVCL has outlined the works they proposed to implement during the control period 2008-09 to 2010-11 only with estimated costs. The works include:

- Normal development schemes.
- Tribal area sub plan.
- Electrification of wells under REC programme.
- System improvement scheme.
- Rajiv Gandhi Grameen Vidyuthikaran Yojna (RGGVY)
- Release of pending agricultural connections.

Some of the schemes are funded through consumer contribution, grants from State and Central Government, equity and loans. One major scheme taken up by the company is "Release of pending agricultural connections" under "Golden Goal" programme of State Government with 10% grant. The utility would impress upon the State Government to fund the entire amount as grant.

# Chapter 6

## Compliance of Directives

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### 6.1 Compliance of earlier Directives

The Commission in its Tariff Order dated 31<sup>st</sup> March 2007 for the year 2007-08 had issued various Directives to PGVCL.

PGVCL has submitted the compliance of the Directives issued earlier.

Commission's comments on the status of Compliance of the Directives by PGVCL are given below. The Commission has also given specific directives to the licensee wherever required.

#### Directive-1: Consumption by Agricultural Pumpsets

A number of agricultural services are still unmetered. It is reported by all the DISCOMs that they have stopped releasing unmetered connections. The connections currently being released under normal and tatkal are metered and some of the unmetered services also are being metered. It is reported that the feeders feeding agricultural pumpsets are now separated and are being metered. By studying the metered agricultural services, both under normal and tatkal scheme and the feeders feeding agricultural loads exclusively, it should be possible to have more realistic assessment of consumption of unmetered pumpsets.

The DISCOM should evolve a methodology for assessing realistic consumption for unmetered agricultural pumpsets and submit a report by November 2007 to arrive at a revised norm for consumption of unmetered agricultural services. Otherwise the Commission may adopt a revised norm based on the data available with the Commission or get a separate study conducted to arrive at a realistic norm.

#### Compliance:

The company regrets that it has been unable to submit a detailed report on agricultural consumption by unmetered consumers asked for by the Commission in its last tariff order.

However, the company requested the Commission to consider the following facts regarding the company's inability to furnish the above report:

1. The company has started installing meters on distribution transformers particularly on those Distribution Transformers supplying power exclusively to Agricultural Category. However, due to heavy, intensive and prolonged rainy season, the work couldn't be carried out as desired. We have again taken up the work on hand.
2. With the complete implementation of the Jyotigram Yojana (JGY) in Gujarat, which resulted in the separation of feeders supplying power to Agriculture and other categories, the company has been able to undertake feeder level energy accounting and compile information on the total energy sent to Agriculture dominated (Ag. Dom) feeders. However, in the absence of complete metering at the consumer end, the amount of energy reaching the agriculture consumer can only be estimated.



3. The company is endeavoring to achieve in first phase of metering at the DTC level and has made progress in the recent past.
4. The consumption pattern of metered and unmetered category will most likely differ due to the nature of the tariff among other things. The impact of this also needs to be considered.
5. It may be noted that installation of meters on these feeders at the consumer end has also been resisted by consumers and this remains a significant challenge for the company in achieving the 100% metering target.

Hence, the company requests the Commission to allow it more time in studying the consumption pattern of unmetered consumers. A report based on a detailed study will be submitted to the Commission at the earliest.

### **Status on DTC Metering**

<b>DTC Transformers Metering FY 2006-07</b>		
Total Number of Transformers in	Nos.	113451
Number of Transformers with Meters	Nos.	19643
Unmetered Transformers	%	82.69
Number of meters installed on transformers in FY 2006-07	Nos	9327
Number of meters installed on transformers in FY 2005-06	Nos	10316

### **Current status of metering in Agriculture consumers**

Metering of Agriculture feeder transformers		
Number of Unmetered Agriculture Consumers	Nos.	257846
Number of Agriculture dominated feeders	Nos.	1674
Number of Transformers on Ag. Dom. Feeders	Nos.	71644
Number of transformers metered	Nos	4867

Given the above, an assessment of the consumption of unmetered agriculture consumers has been done using three different scenarios for the distribution losses on the Ag. Dom feeders to understand the likely range of unmetered agriculture consumption:

### **Scenario Analysis: Estimation of Ag. Consumption**

<b>Scenario 1</b>	<b>Unit</b>	
Total Units Sent on Agricultural dominated feeders	MUs	6299
Technical Losses on Agricultural dominated feeders	%	10.38%
Energy available for sale	MUs	5645.1638
Units billed to consumers other than unmetered agriculture	MUs	363.47
Energy available for sale to unmetered agriculture	MUs	5281.6938
Connected Load of unmetered Agriculture on Agricultural dominated feeders.	HP	2085016
Energy Sent out per HP of load to unmetered Agriculture	Units	2533

<b>Scenario 2</b>	<b>Unit</b>	
Total Units Sent on Agricultural dominated feeders	MUs	6299
Technical Losses on (Agricultural dominated) + Commercial losses (Overall)	%	34.21%
Energy available for sale	MUs	4144
Units billed to consumers other than unmetered agriculture	MUs	363.47
Energy available for sale to unmetered agriculture	MUs	3780.53
Connected Load of unmetered Agriculture on Agricultural dominated feeders	HP	2085016
Energy Sent out per HP of load to unmetered Agriculture	Units	1813

<b>Scenario 3</b>	<b>Unit</b>	
Total Units Sent on Agricultural dominated feeders	MUs	6299
Distribution losses on Non-Agricultural dominated feeders	%	30.45%
Energy available for sale	MUs	4380.95
Units billed to consumers other than unmetered agriculture	MUs	363.47
Energy available for sale to unmetered agriculture	MUs	4017.4845
Connected Load of unmetered Agriculture on Agricultural dominated feeders	HP	2085016
Energy Sent out per HP of load of unmetered agriculture	Units	1927

**Scenario 1** indicates the pre-commercial losses for unmetered agriculture consumption, i.e. the energy that the company has to procure per HP of agriculture consumption.

**Scenario 2** takes into account the Technical Losses of only Agricultural dominated feeders and the overall commercial losses of the company in the energy accounting thus indicating the possible power requirement of the category.

**Scenario 3** assumes distribution losses at Non Agricultural dominated levels for assessing the consumption of the category.

Thus, in all three scenarios the consumption of unmetered agriculture is comparable to the current norm of 1700 units/HP/ annum.

### **Comparison of metered and unmetered agriculture consumption**

The consumption per HP of connected load in metered agriculture connections is often projected as an indicative benchmark for consumption per HP in unmetered agriculture. For the Discom, the Units/ HP for metered agriculture works out as below:

#### **Metered Agriculture Consumption**

<b>Metered Consumption</b>	<b>Units Billed</b>	<b>Connected Load</b>	<b>Units/ HP</b>
Year	MUs	HP	
FY 2005-06	298.24	705627	423
FY 2006-07	363.47	799630	455

As can be seen above, the per HP consumption of metered consumers is much lower than the current norm of 1700 units/HP/annum followed by the Discoms. This is so because of the following reasons:



1. Nature of tariff: Since the consumption is measured and billing is done based on the total units consumed, the metered consumers have an incentive in being careful about their consumption. On the other hand, it is common practice of unmetered agriculture consumers to keep their motors on for the entire duration of power supply. This leads to more consumption by unmetered agriculture consumers.
2. The consumption recorded in metered category is also lowered because of considerable instances of theft as well as meter tampering noticed in this category.

It may also be noted that the assessment of actual consumption in unmetered agriculture is subject to many parameters such as the amount of rainfall during a particular season, geographical disparities, type of crop, number of hours of supply etc. So the actual consumption would vary season-to-season, year-to-year.

**Commission's comments:**

*It is observed from the compliance submitted by PGVCL that the consumption by unmetered pumpsets (kWh/HP) depends on the assumed technical losses on the agricultural feeders. There is a wide variation between the three scenarios based on the assumed losses on feeder and the consumption figures widely differ from the consumption recorded by metered connection.*

*This study does not give satisfactory results as the feeder losses are metered. A realistic consumption by agricultural pumpsets could be obtained only by providing meters at distribution transformers and properly noting LT losses on the LT network below distribution transformers.*

*The progress on this is very poor. Only 4867 transformers are metered out of the target of 71644 transformers. The metering of distribution transformers should be expedited.*

*Wherever meters are provided at the distribution transformers, the consumption by the pumpsets under these transformers may be assessed and furnished to the Commission by reading the meters regularly. A report for the year 2008-09 may be furnished by May 2009.*

**Directive No. 2: Energy Audit**

**Compliance:**

PGVCL is in the process of providing meters at Distribution Transformer level to Urban Category. Out of about 15000 nos. of Urban Category Transformers, 4800 nos. have been provided with the meters.

Geographical Information System (GIS) is an effective and important tool for carrying out Energy Audit. Bhavnagar and Rajkot areas have already been covered under GIS before 2006-07. PGVCL has also planned to cover all towns under GIS in the phased manner. As a result, Urban Category losses in Bhavnagar City has been reduced from 26% for the year 2005-06 to 22.58% for the year 2006-07. Similarly, losses in Rajkot City has also been reduced from 28.27 % to 23.59%.

In other places with the conventional manner it is very difficult to carry out effective Energy Audit. However on the basis of available data, the company has initiated action for curbing the losses in the Urban Category and as a result Urban Category losses have been reduced by 1.85% at the end of year 2006-07 compared with 2005-06.



**Commission's comments:**

*PGVCL shall intensify the energy audit in urban areas where there is scope for reduction and the results could be obtained quickly. The loss reduction in Bhavanagar and Rajkot is very marginal. Even without GIS, Energy Audit has given good results elsewhere. Considering distribution transformers and the services fed by transformers, the company shall take up Energy Audit in all urban areas without waiting for GIS.*

**Directive No. 3: Distribution Losses**

**Compliance:**

For reduction in Distribution Losses, various measures have been taken by the Company and as a result more than 4.5% reduction has been observed at the end of year 2006-07 compared with the year 2005-06. The company has prepared three years loss reduction trajectory and submitted in the petition. System Improvement work to be undertaken for the three years period and investment required thereof and also for replacement of old meters of various metered category consumers is proposed in the petition for reducing the technical losses and also to reduce the commercial losses due to inefficient metering system.

Under APDRP phase II, which is mainly for integration of IT enabled services in Power Sector, company has proposed to utilize various IT enabled services like Automatic Meter Reading at Distribution Transformer Level, GIS Mapping of entire Distribution Network, implementation of SCADA in Distribution Utility etc.

This will help the company in reducing Distribution Losses further.

**Commission's comments**

*Though losses during 2006-07 are considerably reduced, the same level of achievement is not there during 2007-08. The PGVCL shall concentrate on changing all old electro magnetic meters with static meters, which will give good results. At the same time, the DISCOM shall concentrate on curbing theft/ pilferage of energy.*

*The company shall draw out a programme to reduce the losses upto 15%.*

**Directive No. 4: Jyotigram Feeder Loss**

**Compliance:**

Rural Category feeders have been converted into Ag. Dominant and Jyotigram Feeders Agricultural Dominant feeders are meant for supplying power supply to Ag. Consumers only while Jyotigram Feeders are meant for supplying power supply to all other category consumers in Rural area for all twenty four hours. The entire exercise of separating Ag. Dominant feeders and Jyotigram feeders has been completed at the beginning of the year 2006-07. Therefore, the correct loss level of Jyotigram feeders have been established in the year 2006-07. The Company has planned to reduce the high loss level of Jyotigram Category feeder by providing Insulated / Aerial Bunch Conductor on theft prone areas. Stringent Vigilance activity has also been planned for curbing the energy leakage. High Voltage Distribution System implementation would also be one of the measures for reduction in technical as well as commercial losses in this segment.



**Commission's comments:**

*Jyotigram is a laudable scheme. All possible measures such as providing Arial bunched cables, implementing high voltage distribution etc., to curb tapping of lines, replacement of old meters etc. shall be undertaken in a planned manner to reduce losses.*

**Directive No. 5: Effective metering, billing and revenue collection**

**Compliance:**

As per the provisions of Regulations notified by the CEA, now only static meters are procured and provided. We have planned to replace 3 Lacs Single Phase Meters and 25000 nos. Three phase meters in the current year. Similar exercise shall continue in the coming years also and for that a special provision under CAPEX has been made.

**Commission's comments:**

*Acton taken is noted on replacing old meters with static meters. Handheld meter reading instruments shall be introduced, if not already done, to take meter readings, generate bills and deliver to the consumer on the spot. This will eliminate human errors to some extent and also improves revenue realization. Spot billing with hand held machines is to be implemented. A report may be submitted to the Commission by June 2009.*

**Directive No. 6: Consumer Services**

**Compliance:**

Consumer Grievances Redressal Forums are functioning at three places under PGVCL. Quarterly Reports are submitted to The Commission. Further, for better consumer services, Company has established well-equipped Consumer Care Centers at 14 town places. The company has adopted ERP solution under its e-urja project. Customer Relationship Management (CRM) is one of ERP modules. CRM provides uniform and standardize services anywhere within PGVCL area. With this, the consumer can review instantaneous status of his/her service request at any of the PGVCL offices. Integration of CRM with Enterprise Asset Management (EAM) module will be helpful in better Power Supply reliability and prompt resolution of no power complaints. Integration of CRM, with billing details and would facilitate reduction in billing related complaints. Thus, with the help of CRM more consumers related services would be provided with the work transparency.

**Commission's comments:**

*Acton taken is noted. Working of consumer forums need to be substantially improved.*

**Directive No. 7: Cent percent metering**

**Compliance:**

Out of about 31 lakhs consumers, except 2.58 lakhs consumers, are metered. From the year 2008-09 onwards, the company has planned to intensify efforts for releasing pending Agricultural Applications. No new connection is released without meter. However, constraint for providing meters to unmetered Agricultural Installations are known. Presently our endeavour is being made to replace the existing old and aged meters with precision/electronic meter.

**Commission's comments:**

*Consumers may be convinced on the need for energy accounting by the utility and providing metering for balance un-metered services may be expedited.*

**Directive No. 8: Business Plan**

**Compliance:**

Business plan for the next five years is under preparation and will be submitted on finalization.

**Commission's comments:**

*Preparation of Business Plan including techno-economic justifications of the proposed schemes shall be got expedited.*

**Directive No. 9: Filing of ARR Petition**

**Compliance:**

This year ARR petition is filed under MYT Regulation for a three years control period.

**Commission's comments:**

*The MYT filing for the control period 2008-2011 is delayed. Review petition on annual performance should be filed in time.*

**Directive No. 10: Allocation of PPAs**

**Compliance:**

The PPA allocation is reviewed from time to time by GUVNL and the Discoms. It is a dynamic activity in view of the fact that the consumer mix, load growth and revenue realization is different from company to company and varies from year to year. To maintain parity in revenues among the Discoms, PPAs have to be reallocated periodically as the energy requirements and the load profile of companies vary. The issue of cross-subsidy amongst the Discoms is being addressed, through PPA reallocation so as to maintain uniform retail tariff. This exercise will be confirmed unless The Commission addresses the issue of cross subsidy amongst various Discoms through some other methodology. Accordingly, PPAs have been reallocated while preparing the MYT.

**Commission's comments:**

*The allocation of PPAs shall be firmed up at the earliest.*

**Directive No. 11: Distribution Transformer Failures**

**Compliance:**

For the year 2006-07, Distribution Transformer failure rate was 24.18%. During the current year the company has planned to reduce Distribution Transformer Failure rate by 10% as per the Directive of The Commission by adopting stringent maintenance, review of loading of existing Distribution Transformer Center under System Improvement and also expediting the release of supply in all cases for which applications received under Ag VDS. But during this year there was a good rain and prolonged monsoon season, Therefore, the desired target couldn't be achieved. However, at the end of year the Distribution Transformer failure rate has come down to 21.56%.



It is noticed that Distribution Transformer failure rate is high on Ag. Dominant feeders. The company has planned to convert existing Distribution system into High Voltage Distribution system and thereby a Distribution Transformer can supply to each individual consumer or to a group of consumers. This will further help in the reduction of Distribution Transformer.

**Commission's comments:**

*The distribution transformers failure rate is still high. Efforts should be made to bring down the transformer failures to less than 10%.*

**FRESH DIRECTIVES**

**Directive 1: Purchase of Power from Renewable Energy Sources (RES)**

PGVCL is at present purchasing about 442 MU, about 2% of total energy purchase, from Renewable Energy Sources mainly wind energy. The Distribution licensee has to purchase power from renewable sources in accordance with the Regulations in force from time to time.

**Directive 2: Timely Meter Reading and Billing**

There is a need for timely reading of meter promptly on the due date so that slab overlap does not put the consumer to loss. All the licensees to provide relevant consumer related information on the spare space in the bill or alongwith the bill.

## Chapter 7

### Fuel and Power Purchase Cost Adjustment

7.1 The Commission approved on 25<sup>th</sup> June 2004 the Price Adjustment Formula for claiming the increase in Fuel Price and Power Purchase cost. The order gives the methodology for claiming /billing the increase in fuel and power purchase costs based on base prices of fuel, power purchase etc., of the year 2003-04. In the last order (dated 6<sup>th</sup> May 2006) the base year was changed to 2005-06 and a few minor changes were made in the formula.

For arriving at the power purchase cost in this order, for Central Generating Stations and IPPs, the fixed and the variable costs are based on the rates billed during the period April-September 2007. In the case of GSECL generating stations the weighted average fuel costs (coal, lignite, furnace oil, gas and secondary fuel oil) are adopted as detailed in GSECL order for 2007-08 and the fixed costs are as approved in the GSECL tariff order for the control period. The operating parameters for the control period 2008-09, 2009-10 and 2010-11 in the case of GSECL generating stations have been dealt with in the GSECL order.

The quantum of power purchase from each station / source, the variable cost (per kWh) and the total fixed costs for central generating stations, IPPs, GSECL and others for the year 2008-09 are given below:

#### Power Purchase Prices

GSECL PLANTS	Capacity (MW)	Fixed Cost (Rs. Lakhs)	Energy Purchase (MU)	Variable Cost (Rs. KWh)
Ukai TPS	850	24478	4879	1.50
Ukai Hydro	305	2461	637	0
Gandhinagar I to IV	660	25280	3340	1.75
Gandhinagar V	210	9087	1540	1.47
Wanakbori I to VI	1260	36996	8538	1.73
Wanakbori VII	210	9018	1540	1.64
Sikka TPS	240	10396	1408	1.99
Kutch Lignite I to III	215	16115	1190	1.07
Kutch Lignite IV	75	8224	461	0.98
Dhuvaran oil	220	7501	1313	3.76
Kadana Hydro	242	5187	190	0
Utran Gas Based	135	5206	1044	2.16
Dhuvaran Gas Based - Stage-I	107	5187	815	2.21
Dhuvaran Gas Based - Stage-II	112	7124	860	2.21
Utran Extension	375	17771	0	1.86
Sikka Extension	0	0	0	0
<b>Total of GSEC plants</b>	<b>5691</b>	<b>177714</b>		





GSECL PLANTS	Capacity (MW)	Fixed Cost (Rs. Lakhs)	Energy Purchase (MU)	Variable Cost (Rs. KWh)
<b>IPPs</b>				
ESSAR	300	11106	1224	2.01
GPEC	655	45919	2556	2.47
GIPCL II (160)	160	5136	953	1.72
GIPCL-SLPP	250	18071	1577	0.95
GSEG	156.1	11522	722	1.48
GIPCL - I (145)	41.6	922	0	2.17
GMDC - Akrimota	250	23841	1388	0.61
GSEG Expansion	350	958	18	2.12
GIPCL, Expansion	250	17520	1377	1.75
GSPC-Pipavav	360	986	23	2.12
<b>Total of IPPs</b>	<b>2772.7</b>	<b>135980</b>		
<b>SHARE FROM CENTRAL SECTOR</b>				
NPC - Tarapur- 1&2	160	0	1010	0.94
NPC - Kakrapar	125	0	803	2.03
NPC - Tarapur- 3&4	274	0	1822	2.73
NTPC - KORBA	360	9014	2474	0.57
NTPC - VINDHYACHAL - I	230	7464	1575	1.03
NTPC - VINDHYACHAL - II	239	10733	1636	0.98
NTPC - VINDHYACHAL - III	266	11982	1908	0.94
NTPC - KAWAS	187	10417	350	3.09
NTPC - JHANOR	237	11965	1544	1.73
NTPC - Kahalgoan	166	10005	1076	1.21
NTPC - Sipat Stage - II	273	0	1769	0.54
SSNNL - Hydro	231	0	288	2.05
NTPC Barh	260	18221	1264	1.70
NTPC North Karanpura	77	5396	375	1.70
Sipat Stage-I	540	37843	3500	1.70
<b>Total from central Sector</b>	<b>3625</b>	<b>133040</b>		
<b>OTHERS</b>		<b>MU</b>		
RELIANCE INDUSTRIES LTD.NARODA		161.49	105	2.34
(II) UNITED PHOSPHOROUS LTD. JHAGADIA		0.00	0	0.00
(IV) GUJARAT ALKALIS & CHEMI. LTD. BARUCH		53.76	35	1.97
(V) ONGC Anlkeshwar		44.04	23	1.90
(VI) ONGC, Hazira		15.85	5	1.90
(VIII) M/S ADANI EXPORT (PHILIPS CARBON)		54.24	16	2.00
(IX) M/S Arvind Mills LTD		0.00	0	0.00

GSECL PLANTS	Capacity (MW)	Fixed Cost (Rs. Lakhs)	Energy Purchase (MU)	Variable Cost (Rs. KWh)
<b>Wind Farms</b>				
Wind Farms (Old Policy)	24	24	48	1.75
Wind Farms (New Policy)	700.5	0	1227	3.37
<b>Bagasse Plants</b>				
Bagasse	15.9	15.9	98	3
<b>Competitive Bidding</b>				
APPL	1000	91209	6482	1.479
Aryan	200	21866	519	0.2084

GUVNL / DISCOMs may claim the increase in the power purchase cost in accordance with the formula approved by the Commission in June 2004 and minor changes made in the order (dated 6<sup>th</sup> May 2006).

Information regarding FPPPA recovery and the FPPPA calculations submitted to the Commission for approval shall be kept on website of Licensee as and when such proposal is submitted by the Licensee.

For any increase in FPPPA beyond ten (10) paise per kWh in a quarter, prior approval of the Commission shall be necessary, and only on approval of such increase by the Commission, the FPPPA can be billed to the consumers.

**7.2** The Commission approved the formula for Fuel and Power Purchase Price adjustment which is being adopted by the Distribution Companies/GUVNL, which is given below:

$$\text{FPPPA} = [\text{F}_{\text{OG}} + \text{PPP}_1 + \text{PPP}_2] / [\text{S.E}]$$

The DISCOM has submitted as follows requesting for a change in the formula.

The formula approved by the Commission does not take into account the impact on the actual power purchase cost paid by the company due to the variation in the quantum of power supplied by the various generating stations vis a vis the quantum estimated by the Commission in its calculations of the approved power purchase cost for the company. For example, if the Commission has considered that a particular station shall generate 100 MUs of energy in the calculation of the power purchase cost of the company and that station generates only 80 MUs of energy during the specified time period, then the company has to procure the balance 20 MUs from another power station. The power purchase cost of these 20 MUs would obviously not be the same as from the original source. This difference in the power purchase cost on account of the variation in the source of power procurement has been missed out under the current mechanism of calculating FPPPA charges and has to be borne by the company.

Clearly, the principle behind the levy of FPPPA charges is to safeguard the Discom from any increase in its power purchase cost by factors uncontrollable by it. Thus, in the case where a generator is unable to generate energy as estimated by the Commission while calculating the power purchase cost of the company, the Discom should not have to bear any additional burden due to it.

It may be noted that the power purchase cost of the company accounts for over 85% of the company's aggregate revenue requirement and hence any variation therein has a significant impact on the company's financials. A sharp jump in the power purchase cost on account of fuel prices or any other reason results in a cash crunch for the company where



in the short term, the company has to borrow large amounts to pay its power purchase bills as the revenue inflow is not sufficient to make all the payments. This results in higher interest costs being paid by the company and ultimately borne by the consumer. Hence, it is financially prudent to have quick and full adjustments of the incremental power purchase costs as this ultimately leads to savings for the company and the consumer.

To incorporate the impact of the source variation on the power purchase cost, the following formula is proposed:

For GSECL plants, the existing formula, reproduced below, approved by the Commission for claiming the increase in the fuel costs by GSECL has been retained unchanged to calculate the Fuel price adjustment on account of fuel price increase of GSECL Plants.

$$FOG = \sum_{n=1}^k [(HB \times OGD_A) \times (Fuel\ C_A - Fuel\ C_B)]$$

Where,

$F_{OG}$	Adjustment on account of variations in delivered cost of Fuel at GSECL's Thermal Power Stations Rs. in millions
$N$	1 to $k$ , the thermal power stations in GSECL.
$OGD_A$	is the actual level of delivered energy at the bus bar (net generation) from GSECL's thermal plants in million units during the quarter.
$H_B$	is the base station heat rate in K.Cal./ Kwh calculated on the net output using permitted auxiliary consumption.
$FuelC_A$	is the new landed price of fuel at relevant GSECL's generating stations, expressed in Rs. / Kcal calculated after <b>allowing only statutory / notified increases (or decreases) in the price of fuel/railway freight, taxes and duties on fuel as well as fuel price increase by central/state Government PSUs.</b>
$FuelC_B$	is the base landed price of fuel at relevant GSECL's generating stations, expressed in Rs. / Kcal calculated using the base data. This parameter is constant (frozen) for the various quarters (periods) for which increases in fuel prices is being permitted.

The FPPPA so calculated becomes part of the power purchase bill for the Discoms.

The incremental cost paid by the distribution companies (GUVNL for the all DISCOMs) on its power purchase bill which is to be recovered through the FPPPA mechanism, in per unit terms is proposed to be calculated as follows:

$$FPPPA = [(PPCA - PPCB)] / [1-LA]$$

Where,

$PPC_A$	Is the average power purchase cost per unit of delivered energy, computed based on the operational parameters approved by the Commission or principles laid down in the power purchase agreements in Rs. / KWh for all the generating stations who have supplied power in the given quarter, calculated as total power purchase cost billed in Rs. Million divided by the total quantum of power purchase in million units made during the quarter.
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PPC <sub>B</sub>	Is the average base power purchase cost per unit of delivered energy for all the generating stations considered by the Commission for supplying power to the company while approving the ARR in Rs. / KWh, calculated as the total power purchase cost approved by the Commission in Rs. Million divided by the total quantum of power purchase in million units considered by the Commission for estimating the power purchase cost in the ARR of all the companies.
L <sub>A</sub>	Is the weighted average of the approved level of Transmission and Distribution losses for the four Discoms applicable for a particular quarter

**Commission's view:**

*Specific generating stations have been allocated to each of the DISCOMs. The fuel cost adjustment shall be specific to the stations allocated. The cost increase in all generating stations of GSECL cannot be pooled to claim the fuel adjustment for the specific stations allocated. The proposal is not approved by the Commission.*

*In a contingency where a station could not deliver the quantum of energy approved and the DISCOM has to draw power from some other stations, the DISCOM may approach the Commission explaining the circumstances for drawing power from some other stations and obtain fuel price adjustment for energy so drawn from other stations.*



In addition the applicable system losses and other charges as in Commission's open access Regulations will also be charged. The long and short term open access are as defined in the Regulations of the Commission.

### 8.3 Wheeling Charges

The wheeling charges for the four Distribution companies – DGVCL, MGVCL, PGVCL and UGVCL for the year 2008-09, first year of the control period (2008-09 to 2010-11), as given below are applicable for use of the distribution system of a licensee by other licensees or generating companies or captive power plants or users who are permitted open access under section 42 (2) of the Electricity Act 2003.

1	The Aggregate Revenue Requirement of the four Distribution companies for the year 2008-09	Rs. Lakhs	1429957
2	Less: The power purchase cost of the four distribution companies	Rs. Lakhs	1218311
3	Distribution costs of the four distribution companies (1-2)	Rs. Lakhs	211646
4	Distribution costs of the four distribution companies at 11 kV (Assumed at 30% of total distribution cost)	Rs. Lakhs	63494
5	Energy input to the four distribution companies at 11 kV	MU	47105
6	Wheeling charges at 11 kV (4/5)	Ps / kWh	13.48
7	Wheeling charges at 400 V (LT) (3/5)	Ps/kWh	44.93

Plus

Point of injection	Point of energy delivered	
	11 kV	400 Volts
11 kV, 22 kV and 33 kV	10.01%	18.57%
400 volts	-	9.51%

The losses in HT and LT Network are 10.01% and 9.51%, respectively, with respect to energy input to that segment of the system. In case injection at HT level and drawal at LT level envisages use of both the networks i.e HT and LT, in that case, the combined loss works out to 18.57% of the energy injected at HT Network.

The above wheeling charges payable shall be uniform in all the four distribution companies – DGVCL, MGVCL, PGVCL and UGVCL.

### 8.4 Cross Subsidy Surcharge

The Commission, in its order dated 28.2.2006, determined the Cross-subsidy surcharge, as payable by any consumers opting for open access, at Rs. 1.80. It was further reduced to Rs. 1.35 per kWh vide its order dated 6.5.2006. Thereafter, the Commission vide its order dated 31.3.2007 reduced the Cross-subsidy surcharge at Rs.1.00 per kWh based on the Average Cost of Supply.

The Appellate Tribunal for Electricity in an Appeal No. 171 of 2005 has also directed that the State Regulatory Commissions should follow the methodology for determining the Cross-subsidy surcharge as specified in the Tariff Policy, which are notified by the Government of India under the Electricity Act, 2003. Earlier, the Commission had determined the Cross-subsidy surcharge based on the average cost of supply which requires re-consideration in the light of the judgment of the Appellate Tribunal and need for



reducing the Cross-subsidy surcharge with a view to facilitating open access for consumers.

The relevant clause of the Tariff Policy is reproduced as under:

**“8.5 Cross-subsidy surcharge and additional surcharge for open access**

**8.5.1** *National Electricity Policy lays down that the amount of cross-subsidy surcharge and the additional surcharge to be levied from consumers who are permitted open access should not be so onerous that it eliminates competition which is intended to be fostered in generation and supply of power directly to the consumers through open access.*

*A consumer who is permitted open access will have to make payment to the generator, the transmission licensee whose transmission systems are used, distribution utility for the wheeling charges and, in addition, the Cross-subsidy surcharge. The computation of Cross-subsidy surcharge, therefore, needs to be done in a manner that while it compensates the distribution licensee, it does not constrain introduction of competition through open access. A consumer would avail of open access only if the payment of all the charges leads to a benefit to him. While the interest of distribution licensee needs to be protected it would be essential that this provision of the Act, which requires the open access to be introduced in a time-bound manner, is used to bring about competition in the larger interest of consumers.*

*Accordingly, when open access is allowed the surcharge for the purpose of sections 38, 39, 40 and sub-section 2 of section 42 would be computed as the difference between (i) the tariff applicable to the relevant category of consumers and (ii) the cost of the distribution licensee to supply electricity to the consumers of the applicable class. In case of a consumer opting for open access, the distribution licensee could be in a position to discontinue purchase of power at the margin in the merit order. Accordingly, the cost of supply to the consumer for this purpose may be computed as the aggregate of (a) the weighted average of power purchase costs (inclusive of fixed and variable charges) of top 5% power at the margin, excluding liquid fuel based generation, in the merit order approved by the SERC adjusted for average loss compensation of the relevant voltage level and (b) the distribution charges determined on the principles as laid down for intra-state transmission charges.*

**Surcharge formula:**

$$S = T - [C (1 + L / 100) + D]$$

Where

**S** is the surcharge

**T** is the Tariff payable by the relevant category of consumers;

**C** is the Weighted average cost of power purchase of top 5% at the margin excluding liquid fuel based generation and renewable power

**D** is the Wheeling charge

**L** is the system Losses for the applicable voltage level, expressed as a percentage

*The cross-subsidy surcharge should be brought down progressively and, as far as possible, at a linear rate to a maximum of 20% of its opening level by the year 2010-11.”*



The Commission has examined the provisions of the National Electricity Policy and Tariff Policy which are notified by the Govt. of India under the provisions of the Electricity Act, 2003. The Commission has also considered various provisions of the Electricity Act, 2003 relating to open access in distribution and transmission and has come to the conclusion that if open access is to be encouraged, then such cross-subsidy surcharge has to be reduced so that the ultimate cost of power to the consumer is affordable. Harnessing of captive generation is also very important to reduce the gap between demand and supply (by using the sunk investment). The State Government earlier followed a forward looking policy for promotion of captive generation and as a result, Gujarat State is one of the front-runner States to have a large capacity of captive power plants.

Accordingly, for the licensees of the unbundled GEB, cross-subsidy surcharge has been worked out by the Commission considering the power purchase by GUVNL on behalf of distribution licensees which, projected for the year 2008-09, was 50486 MUs. While considering the power purchase of top 5% at the margin viz 2524 MUs, the price of liquid fuel based power generation and from renewable sources of power have been excluded.

### Estimation of 'C': Weighted Average Cost of Power

While adopting the formula as prescribed in the Tariff Policy, (wherein the weighted average power generation/purchase cost of top 5% power at the margin is to be considered), the weighted average power purchase cost of top 5% works out as in Table 8.1, below.

**Table 8.1**

Sl. No.	Source	Energy Purchase in MUs	Total Cost (Rs./kWh)
	GPEC	2928	3.93

### Estimation of 'T': Tariff payable by the relevant category of consumers

The average realization of various HT consumer categories (which are eligible for open access at present) for the year 2008-09 has been shown in Table 8.2, below.

**Table 8.2**

Particulars	Overall Average realisation in Rs./Kwh Projected for FY 2008-09
H.T./EHT Industrial	4.73
Railway Traction	5.18

The Cross-subsidy surcharge based on the above-mentioned formula works out as in the following table 8.3

**Table 8.3**

Category	T	L	D	C	Surcharge $S = T - [C(1 + L/100) + D]$
EHT Industrial	Rs.4.73/kWh	4.09%#	Rs.0.13/kWh \$	3.93	0.51
Railway traction	Rs.5.18/kWh	4.09%#	Rs.0.13/kWh \$	3.93	0.96

# Transmission loss as approved for FY 2008-09

\$ Considering transmission charge of Rs. 2410 /MW/Day as approved for GETCO in the last transmission tariff order with 80% Load factor, the transmission charge works out to Rs. 0.13 /kWh.





As shown in the above table, the Cross-subsidy surcharge for HT-EHT Category works out to Rs. 0.51 per Kwh, (which is 28% of the opening level of Cross-Subsidy surcharge) and Rs.0.96 per Kwh for Railway traction based on the methodology provided in the Tariff Policy. As per the provisions made in the Electricity Act, 2003 and the National Electricity Policy, it is essential to encourage open access and reduce the cross-subsidy surcharge in gradual manner to facilitate consumers to adopt open access. Therefore, the Commission has decided that cross-subsidy surcharge for both the HT/EHT industrial category as well as for the Railway Tractions be the same amount Rs. 0.51 per Kwh.

# Chapter 9

## Tariff Philosophy and Design

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### 9.1 Introduction – Tariff Philosophy

The Commission has been guided by the provisions of the Electricity Act, 2003, the National Electricity Policy (NEP), the Tariff Policy, the Regulations on Terms and Conditions of Tariff issued by the Central Electricity Regulatory Commission and the Regulations on Terms and Conditions of tariff and MYT Regulations notified by the Commission.

Section 61 of the Act lays down the broad principles, which should guide determination of retail tariff. These principles are that the tariff should 'progressively reflect cost of supply of electricity and also reduce the cross subsidies within a period to be specified by the Commission.

The Commission has notified the "Multi-Year Tariff (MYT) framework for determination of tariff from 1<sup>st</sup> April 2008. The ARR approved in this order is for the control period of 2008-09 to 2010-11 and retail tariffs are determined for the year 2008-09, the first year of the control period.

The Commission has carried forward the process of rationalization of tariff in order to ensure that the tariffs reflect, as far as practicable, the cost of supply. The mandate of the Tariff Policy that the tariff should be within plus or minus 20% of the average cost of supply by 2010-11 has been the guiding principle.

In working out the cost of supply the Commission has gone on the basis of average cost of supply, in the absence of relevant data for working out consumer category-wise cost of supply.

### 9.2 Proposal of PGVCL for structural changes in tariff categories and increase in tariff

PGVCL proposed an increase in tariff for all categories except agriculture, for the year 2008-09, primarily with an increase in the fixed / demand charges with some marginal increase in energy charges.

Apart from the above stated revision in the tariff rates, a few other structural changes are also proposed by PGVCL as follows:

1. A new residential consumer category has been proposed for BPL consumers having monthly consumption of upto 30 kWh with lower fixed and energy charges. The BPL consumer shall have to provide a copy of the BPL Card issued by the authorities concerned for availing the subsidized tariff.
2. The clauses explaining the applicability of a particular tariff are now more focused so as to remove ambiguities as far as possible based on the field level experience of the Discoms.

3. In LTP-1 category, a separate rate for fixed charges for billing demand greater than contracted demand has been introduced to encourage demand side discipline among these category of consumers as required under the ABT regime
4. Reactive energy charges have been proposed to be introduced for all consumers having contracted load over 10 BHP instead of the earlier threshold of 50 BHP.
5. In streetlights category, fixed charges are proposed to be applied on a per connection basis as opposed to per fixture basis as is currently the case as it is not practically possible to count the number of fixtures on every connection.
6. In HTP-1 category, wherever actual demand exceeds the contract demand, it is proposed that the actual demand shall be considered for determining the applicable slab of energy charges.
7. In HTP-IV category, it has been clarified that this tariff shall not be applicable to those categories of consumers who are otherwise of continuous nature of industry or normally operating shifts during day time also as there have been cases of misuse of this discounted category by certain consumers.
8. The current tariff schedule provides for a discount (of 70% over HTP 1) on the demand charges to HTP-IV category apart from the much lower energy charges applicable to this category. This is proposed to be dispensed with.
9. A new category, namely – HTP V, has been proposed for HT supply to agricultural consumers applicable specifically for High Tension Agricultural Pumping loads of Farmer Co-operative Societies, HT Lift Irrigation Scheme (for lifting water from canal/river/dam etc to supply water directly to the fields of farmers for agricultural purpose only).
10. In HTP-I and HTP II-(A) categories, a separate demand charge for billing demand being greater than contract demand, has been introduced for consumers with a captive power plant (CPP) to introduce discipline in the drawl by large consumers.

### **9.3 Proposal of some consumers / consumers organizations**

Some of the consumers and consumers organizations, requested for extending the benefit of lower tariff for night hours supply to LT industry also.

### **9.4 Commission's decisions**

The Commission, after examining the above proposals, approves the following changes in tariff structure of PGVCL.

1. A separate tariff category for BPL consumers having monthly consumption upto 30 units, with lower tariff.
2. A separate category for HT supply for agricultural consumers specifically applicable for high tension agricultural pumping loads of farmers' co-operative societies, HT lift irrigation schemes (for lifting water from canal/river/dam etc to supply water directly to the fields of farmers for agricultural purpose only) etc.
3. Extension of the benefit of lower tariff for night hour supply to both HT and LT industry, with certain stipulations.

4. In the LT commercial category (LFD-2), the existing three slabs are increased to four as follows:

- (i) 0-50 kWh
- (ii) 51-150 kWh
- (iii) 151-300 kWh
- (iv) Above 300 kWh

The approved tariff schedule for different categories of consumers is annexed.

## 9.5 Roadmap for Cross-subsidy Reduction

The Commission through the Order dated 31.03.2007 (for the Review petition No.1, 2 and 3 of 2007) had directed that –“the data for cost of service are required to be updated to the current year so as to evaluate the amount of cross-subsidy prevailing in the tariff. GUVNL which is co-petitioner with the distribution companies are therefore directed to carry out a cost of service study within a period of six months from the date of this order and submit it to the Commission...”

Subsequently, the GUVNL submitted a report on ‘cost of service’ for the FY 2005-06 vide letter dated 06.09.2007. The study report was placed on the website and comments / suggestions were invited from the stakeholders.

The main issues relating to cost of service as pointed out by the stakeholders are -

- It is necessary to consider latest cost data.
- It is necessary to consider separate cost for each DISCOM.
- Assessment of Agricultural consumption needs improvement, 100% metering of Agricultural consumers.
- Allocation of T&D losses is not proper.

The GUVNL submitted a copy of detailed reply provided to each stakeholder during April, 2008. However, the details submitted by GUVNL are based on past data and not the latest position. As directed earlier, the GUVNL is again requested to undertake the study on cost of supply to different categories of consumers expeditiously.

It may worthwhile to note that the tariff for agricultural consumers is a complex issue in the context of the provisions of the Tariff Policy that tariff will to be within  $\pm 20\%$  of the cost of supply by FY 2010-11. The need for food security, inclusive growth and quality of power supply to agriculture are important aspects which are relevant in this context.

On the suggestion of the Working Group of the ‘Forum of Regulators’ (FOR), it is decided by FOR that a study should be commissioned to examine the issues relating to determination of the cost of service for agricultural consumers taking into account the hours of supply, and also the feasible options for reducing cross-subsidy in agricultural tariff.

In view of the above, the Commission would like to keep in view the study report to be submitted by the GUVNL and also recommendations of the Working Group of the FOR while finalizing a roadmap for reduction of cross subsidy.



## 9.6 Retail Tariffs proposed by PGVCL and decision of the Commission

PGVCL in the MYT petition for the control period 2008-09 to 2010-11 has proposed the Retail supply tariff on the basis of a net revenue gap of Rs.438.36 crore for the year 2008-09, Rs.859.80 crore for the year 2009-10 and Rs.1066.46 crore for the year 2010-11 and proposed an increase in tariff by about 6.0% during 2008-09, about 10.0% during 2009-10 and about 12.0% during 2010-11.

However, on detailed scrutiny of the revenue requirement filed by PGVCL for the control period, the Commission has arrived at a revenue gap of Rs.218.75 crore during 2008-09, Rs. 587.76 crore during 2009-10 and Rs.625.50 crore during 2010-11.

Under clause 12.1 of MYT Regulation 2007, the Commission is to determine the tariff for the year 2008-09, the first year of the control period. 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. 1<sup>st</sup> April 2008 as it imposes a heavy burden on the consumers. Hence, it shall be implemented with effect from 1<sup>st</sup> February 2009. The utility can recover about 28% of the gap on an annual basis, and the other part of the gap, if any, 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. The Regulation 65 (b) of the "Terms and Conditions of Tariff" Regulations of GERC stipulates prospective implementation of revised tariffs as mentioned below:

"The tariff shall normally be revised from the prospective date with due notice except for adjustment of FPPPA unless there is a compelling reason to review the same from the retrospective date in which case detailed justification will be given in writing by the Commission".

The Commission does not see any compelling reason to implement the tariffs retrospectively, particularly, when the filing of the ARR and Tariff Petition is delayed and nine months of the year have already passed.

Though the Commission recognizes the need for increase in the tariffs and some restructuring to meet the gap either fully or partly, it may not be desirable to do any major exercise to revise the tariff structure at the fag end of the year. It is the considered view of the Commission that the existing tariff structure may continue with a few changes and modest increase in energy charges for some categories of consumers covering about 28% of the gap on an annual basis. The actual gap for 2008-09 would, however, be arrived at based on the performance review of the year 2008-09 and truing up. The gap on truing up for 2008-09 and the likely gap to be arrived at by the Commission for the year 2009-10 on due scrutiny of the proposal of the utility for the year 2009-10, will enable the Commission to take appropriate decision for determination of the tariff for the year 2009-10 taking into consideration the present ARR proposal of the utility and changes, if any, proposed for the year 2009-10.

The Commission has, therefore, decided to continue the existing retail supply tariff structure for the year 2008-09 with a few changes and modest increase in tariffs for some categories of consumers. The changes approved are indicated in para 9.4 above. The revised tariff schedule issued including the above changes is Annexed.



## COMMISSION'S ORDER

Having considered the petition of PGVCL for approval of Aggregate Revenue Requirement (ARR) and determination of retail supply tariffs, the Commission approves the Aggregate Revenue Requirement for Paschim Gujarat Vij Company Limited (PGVCL) for the control period 2008-09 to 2010-11 as shown in the following table:

(Rs. Lakhs)

S.No.	Particulars	Approved by the Commission (With existing tariff)		
		FY 2008-09	FY 2009-10	FY 2010-11
1	Cost of Power Purchase	397656	461107	496350
2	O & M Expenses	41882	42654	42085
3	Depreciation	13391	16473	19763
4	Interest on Loans & Finance Charges	15393	17458	17895
5	Interest on Working Capital	4715	5352	5675
6	Other Debits	324	340	357
7	Extraordinary items			
8	Provision for bad debts	886	993	1096
9	Less : Interest & Expenses Capitalised	4502	4772	5058
10	<b>Sub Total</b>	<b>469745</b>	<b>539605</b>	<b>578163</b>
11	Return on equity	15383	17850	20491
12	Provision for Tax	137	136	129
13	<b>Total Expenditure</b>	<b>485265</b>	<b>557591</b>	<b>598783</b>
14	Less : non tariff income	6223	6597	6992
15	<b>Aggregate Revenue Requirement</b>	<b>479042</b>	<b>550994</b>	<b>591791</b>

The approved retail supply tariff will be in accordance with the Tariff Schedule Annexed to this order.

The order shall come into force with effect from 1<sup>st</sup> February 2009.

Sd/-

\_\_\_\_\_  
**DR. P K MISHRA**  
Chairman

Sd/-

\_\_\_\_\_  
**K P GUPTA**  
Member

Sd/-

\_\_\_\_\_  
**DR. MANMOHAN**  
Member

Date: 17 January 2009

Ahmedabad



# TARIFF SCHEDULE

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## TARIFF FOR SUPPLY OF ELECTRICITY AT LOW TENSION, HIGH TENSION, AND EXTRA HIGH TENSION

Effective from 1<sup>st</sup> February 2009

### GENERAL

1. The tariff figures indicated in this tariff schedule are the tariff rates payable by the consumers of unbundled Distribution Licensees of the erstwhile GEB.
2. These tariffs are exclusive of Electricity Duty, tax on sale of electricity, taxes and other charges levied by the Government or other competent authorities from time to time which are payable by the consumers, in addition to the charges levied as per the tariff.
3. All these tariffs for power supply are applicable to only one point of supply.
4. The charges specified are on monthly basis. Distribution Licensee may decide the period of billing and adjust the tariff rate accordingly.
5. The energy supplied under these tariffs can be utilised only within the compact area of the premises not intervened by any area/road belonging to any person or authority other than the consumer.
6. Except in cases where the supply is used for the purpose for which the Distribution Licensee has permitted lower tariff, the power supplied to any consumer shall be utilised only for the purpose for which supply is taken and as provided for in the tariff.
7. The above is without prejudice to the rights of the GERC to determine different tariffs for such consumers as it may consider it expedient under the provisions of Section 61 and Section 62 of the Electricity Act, 2003.
8. The meter charges shall be applicable as prescribed under 'GERC (Licensee's Power to Recover Expenditure incurred in providing supply and other Miscellaneous Charges) Regulations, 2005 as in force from time to time.
9. The Fuel Cost and Power Purchase Adjustment Charges shall be applicable in accordance with the Formula approved by the Gujarat Electricity Regulatory Commission from time to time.
10. Payment of penal charges for usage in excess of contract demand / load for any billing period does not entitle the consumer to draw in excess of contract demand / load as a matter of right.





## **PART - I**

### **SCHEDULE OF TARIFF FOR SUPPLY OF ELECTRICITY AT LOW AND MEDIUM VOLTAGE**

#### **1.0 RATE LFD-I (FOR RESIDENTIAL PREMISES):**

This tariff will apply to services for lights, fans and small electrical appliances such as refrigerators, cookers, heaters and small motors having individual capacity not exceeding two BHP attached to domestic appliances in the residential premises.

Single-phase supply (aggregate load upto 6 kW)

Three-phase supply (aggregate load above 6 kW including small motive power load up to 10 kW).

#### **1.1 Fixed Charges/Month:**

Range of Connected Load: (Other than BPL Consumers)

(a)	Upto and including 2 kW	Rs.5/- per month
(b)	Above 2 to 4 kW	Rs. 15/- per month
(c)	Above 4 to 6 kW	Rs.30/- per month
(d)	Above 6 kW	Rs.45/- per month

For BPL Household Consumers:

Fixed charges	Rs.5/- per month
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### **PLUS**

#### **1.2 Energy Charges: For the total monthly consumption: (Other than BPL consumers)**

(a)	First 50 units	270 Paise per Unit
(b)	Next 50 units	300 Paise per Unit
(c)	Next 100 units	360 Paise per Unit
(d)	Next 100 units	420 Paise per Unit
(e)	Above 300 units	470 Paise per Unit

#### **1.3 Energy charges: For the total monthly consumption – For the consumer below poverty line (BPL)\*\***

(a)	First 30 units	150 Paise per Unit
(b)	For remaining units	Rate as per LFD-I

**\*\*The consumer who wants to avail the benefit of the above tariff has to produce a copy of the Card issued by the authority concerned at the sub-division office of the Distribution Licensee. The concessional tariff is only for 30 units per month.**

#### **1.4 Minimum bill (excluding meter charges)**

Payment of fixed charges as specified in 1.1 above.

#### **2.0 RATE LFD-I (Rural):**

This tariff will apply to services for residential premises located in areas within gram panchayat as defined in the Gujarat Panchayats Act.

However this will not apply to villages which are located within the geographical jurisdiction of Urban Development Authority.

Single-phase supply (aggregate load upto 6 kW)

Three-phase supply (aggregate load above 6 kW including small motive power load up to 10 kW)

2.1 Fixed Charges/Month:

Range of Connected Load: (Other than BPL consumers)

(a)	Upto and including 2 kW	Rs.5/- per month
(b)	Above 2 to 4 kW	Rs. 15/- per month
(c)	Above 4 to 6 kW	Rs.30/- per month
(d)	Above 6 kW	Rs.45/- per month

For BPL Household Consumers:

Fixed charges	Rs.5/- per month
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**PLUS**

2.2 Energy Charges: For the total monthly consumption: (Other than BPL consumers)

(a)	First 50 units	220 Paise per Unit
(b)	Next 50 units	250 Paise per Unit
(c)	Next 100 units	310 Paise per Unit
(d)	Next 100 units	370 Paise per Unit
(e)	Above 300 units	430 Paise per Unit

2.3 Energy charges: For the total monthly consumption – For the consumer below poverty line (BPL)\*\*

(a)	First 30 units	150 Paise per Unit
(b)	For remaining units	Rate as per LFD-I (Rural)

**\*\*The consumer who wants to avail the benefit of the above tariff has to produce a copy of the Card issued by the authority concerned at the sub-division office of the Distribution Licensee. The concessional tariff is only for 30 units per month.**

2.4 Minimum bill (excluding meter charges):

Payment of fixed charges as specified in 2.1 above.

**Note:** If the part of the residential premises is used for non-residential (commercial) purposes by the consumers located in rural area with population upto 10,000 as per Census- 2001, entire consumption will be charged under this tariff.

**3.0 RATE LFD-II (FOR COMMERCIAL PREMISES)**

This tariff will apply to the services for the purposes specified in the rate LFD-I in respect of commercial premises, such as shops, workshop, hotels, restaurants, showrooms, offices, etc., etc.

3.1 Fixed Charges:

Range of Connected Load:

(a)	Upto and including 2 kW	Rs.50/- per month
(b)	Above 2 to 4 kW	Rs.100/- per month
(c)	Above 4 kW to 6 kW	Rs.150/- per month
(d)	Above 6 kW	Rs.200/- per month



**PLUS**

3.2 Energy charges:

(a)	For the first 50 units per month	360 Paise per unit
(b)	For the next 100 units per month	420 Paise per unit
(c)	For the next 150 units per month	480 Paise per unit
(d)	For the remaining units per month	490 Paise per unit

3.3 Minimum Bill (excluding meter charges):

Payment of fixed charges as specified in 3.1 above.

**4.0 RATE LFD-III**

This tariff is applicable to the educational and other institutions registered with the Charity Commissioner.

(a)	Fixed charges	Rs.45/- per month
(b)	Energy charges	310 Paise per Unit

**5.0 RATE-LTP**

This tariff shall be applicable for motive power services

5.1 RATE LTP-I

This tariff is applicable for aggregate motive power load not exceeding 125 BHP.

5.1.1. Fixed charges per month:

<b>For an installation having the contracted load upto 10 BHP</b>	Rs.22/- per BHP
<b>For installation having contracted load exceeding 10 BHP:</b>	
(i) For first 10 BHP of contracted load	Rs.22/- per BHP
(ii) For next 40 BHP of contracted load	Rs.40/- per BHP
(iii) For next 25 BHP of contracted load	Rs.65/- per BHP
(iv) For next 25 BHP of contracted load	Rs.100/- per BHP
(v) Balance BHP of contracted load	Rs.155/- per BHP

**PLUS**

5.1.2 Energy charges:

(a)	For installation having contracted load upto and including 10 BHP: For entire consumption during the month	360 Paise per Unit
(b)	For installation having contracted load exceeding 10 BHP: For entire consumption during the month	385 Paise per Unit

**PLUS**

5.1.3 Reactive Energy Charges:

For installation having contracted load of 50 BHP and above for all reactive units (KVARH) drawn during the month	10 Paise per KVARH
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5.1.4 Minimum bill per installation per month for consumers other than Seasonal Consumers:

(a)	When contracted load is upto 75 BHP	Rs.105 per BHP
(b)	When contracted load exceeds 75 BHP	Rs.180 per BHP



5.1.5 Minimum Bill Per Installation for Seasonal Consumers

- (a) "Seasonal Consumer", shall mean a consumer who takes and uses power supply for ice factory, ice candy machines, ginning and pressing factory, oil mill, rice mill, huller, salt industry, sugar factory, khandsari, cold storage plants (including such plants in fisheries industry), tapioca industries manufacturing starch, etc.
- (b) Any consumer, who desires to be billed for the minimum charges on annual basis shall intimate to that effect in writing in advance about the off-season period during which energy consumption, if any, shall be mainly for overhauling of the plant and machinery. The total period of the off-season so declared and observed shall be not less than three calendar months in a calendar year.
- (c) The total minimum amount under the head "Fixed and Energy Charges" payable by the seasonal consumer satisfying the eligibility criteria under sub-clause (a) above and complying with the provision stipulated under sub-clause (b) above shall be Rs.1200/- per annum per BHP of the contracted load for the installation having the contracted load upto 75 BHP, and Rs.2000/- per annum per BHP when contracted load is exceeding 75 BHP.
- (d) The units consumed during the off-season period shall be charged for at a flat rate of 400 Paise per unit.
- (e) The electricity bills related to the off-season period shall not be taken into account towards the amount payable against the annual minimum bill. The amount paid by the consumer towards the electricity bills related to the seasonal period only under the heads "Fixed Charges" and "Energy Charges", shall be taken into account while determining the amount of short-fall payable towards the annual minimum bill as specified under sub-clause (c) above.

5.2 RATE LTP-II

This tariff shall be applicable to educational institutions and research and development laboratories for motive power services where machines and appliances are primarily used for demonstration/research purposes only.

5.2.1 Energy Charges

For all units consumed during the month	400 Paise per Unit
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**NOTE:**

*The educational institutions and research laboratories will have an option to either select of the rate LTP-I with minimum charges or rate LTP-II without minimum charges. The option can be exercised to switch over from LTP-I tariff to LTP-II and vice versa twice in a calendar year by giving not less than one month's notice in writing.*

5.3 **RATE LTP-III**

This tariff shall be applicable to consumers using electricity for motive power services for minimum contract demand of 20 kW and up to 100 kW at low voltage.

5.3.1 Fixed charges:

	<b>For billing demand upto the contract demand</b>	
<b>(a)</b>	(i) For first 20 to 40 kW of billing demand	Rs.65/- per kW per month
	(ii) Next 20 kW of billing demand	Rs.100/- per kW per month
	(iii) Above 60 kW of billing demand	Rs.165/- per kW per month
<b>(b)</b>	<b>For billing demand in excess of the contract demand</b>	Rs.210/- per kW

**PLUS**

5.3.2 Energy charges:

For the entire consumption during the month	405 Paise per Unit
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**PLUS**



5.3.3 Reactive Energy Charges:

For all the reactive units (KVARH) drawn during the month	10 Paise per KVARH
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5.3.4 Billing Demand

The billing demand shall be highest of the following, rounded to the next full kW:

- (a) Eighty-five percent of the contract demand
- (b) Actual maximum demand registered during the month
- (c) 20 kW

5.3.5 Minimum Bill

Payment of demand charges every month based on the billing demand.

**NOTE:**

- (i) This tariff shall be applicable if the consumer so opts to be charged in place of LTP-I Tariff.
- (ii) The option can be exercised to switch over from LTP-I tariff to LTP-III tariff and vice versa twice in a calendar year by giving not less than one month's notice in writing.
- (iii) Consumer has to provide metering system in the event when proper metering system is not provided by Distribution Licensee..
- (iv) In the event of actual maximum demand exceeds 100 kW more than three occasions during the period of six months, the consumer has to provide his distribution transformer at his cost and maintain at his cost.

5.4 RATE LTP-IV

This tariff is applicable for aggregate motive power load not exceeding 125 BHP and using electricity **exclusively during night hours** from 10.00 PM to 06.00 AM next day. (The supply hours shall be regulated through time switch to be provided by the consumer at his cost.)

5.4.1 Fixed Charges per month:

Fixed charges specified in RATE LTP-I above.
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**PLUS**

5.4.2 Energy Charges:

For entire consumption during the month	200 Paise per Unit
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5.4.3 Reactive Energy Charges:

For contract load of 50 BHP and above: For all reactive units (KVARH) drawn during the month	10 Paise per KVARH
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**NOTE:**

- (i) 10% of total units consumed and 15% of the contract load can be availed beyond the prescribed hours for the purpose of maintenance.
- (ii) For the purpose of office lighting, fans etc. the consumer may apply for a separate connection.
- (iii) This tariff shall be applicable if the consumer so opts to be charged in place of LTP-I tariff by using electricity exclusively during night hours as above.
- (iv) The option can be exercised to switch over from LTP-I tariff to LTP-IV tariff and vice versa twice in a calendar year by giving not less than one month's notice in writing.
- (v) In case the consumer is not fulfilling the conditions of this tariff category, then such consumer for the relevant billing period will be billed under tariff category LTP-I



## 5.5 RATE LTP-IV (A)

This tariff is applicable to consumers using electricity for motive power services for minimum contract demand of 20 kW and upto 100 kW at low voltage and using electricity exclusively during night hours from 10.00 PM to 06.00 AM next day. The supply hours shall be regulated through time switch to be provided by the consumer at his cost.

### 5.5.1 Fixed Charges per month:

Fixed charges specified in RATE LTP-III above.
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**PLUS**

### 5.5.2 Energy Charges:

For entire consumption during the month	200 Paise per Unit
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### 5.5.3 Reactive Energy Charges:

For all reactive units (KVARH) drawn during the month	10 Paise per KVARH
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#### NOTE:

- (i) 10% of total units consumed and 15% of the contract demand can be availed beyond the prescribed hours for the purpose of maintenance.
- (ii) For the purpose of office lighting, fans etc. the consumer may apply for a separate connection.
- (iii) This tariff shall be applicable if the consumer so opts to be charged in place of LTP-III tariff by using electricity exclusively during night hours as above.
- (iv) The option can be exercised to switch over from LTP-III tariff to LTP-IV(A) tariff and vice versa twice in a calendar year by giving not less than one month's notice in writing.
- (v) In case the consumer is not fulfilling the conditions of this tariff category, then such consumer for the relevant billing period will be billed under tariff category LTP-III.

## 6.0 RATE WW (Water Works)

This tariff shall be applicable to motive power services used for water works and sewerage pumping purposes.

### 6.1 Type I – Water works and sewerage pumps operated by other than local authority:

(a)	Fixed charges per month	Rs.15/- per BHP
<b>PLUS</b>		
(b)	Energy charges per month: For entire consumption during the month	350 Paise per Unit

### 6.2 Type II – Water works and sewerage pumps operated by local authority such as Municipal Corporation. Gujarat Water Supply & Sewerage Board located outside Gram Panchayat Area will also attract this tariff:

(a)	Fixed charges per month	Rs.9 per BHP
<b>PLUS</b>		
(b)	Energy charges per month: For entire consumption during the month	330 Paise per Unit

### 6.3 Type III – Water works and sewerage pumps operated by Gram Panchayat or Gujarat Water Supply & Sewerage Board for its installations located in Gram Panchayats:

Energy charges per month: For entire consumption during the month	240 Paise/Unit
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### 6.4 Type IV - Water works and sewerage pumps operated by Municipalities / Nagarpalikas:

Energy charges per month: For entire consumption during the month	270 Paise/Unit
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6.5 Time of Use Discount:

Applicable to all the water works consumers having connected load of 50 HP and above for the Energy consumption during the Off-Peak Load Hours of the Day.

For energy consumption during the off-peak period, viz., 1100 Hrs to 1800 Hrs.	30 Paise per Unit
For energy consumption during night hours, viz., 2200 Hrs to 0600 Hrs. next day	75 Paise per Unit

7.0 **RATE-AG (AGRICULTURAL)**

This tariff is applicable to motive power services used for irrigation purposes only.

7.1 The rates for following group are as under:

7.1.1 HP Based Tariff:

For entire contracted load	Rs.140/BHP/month
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**ALTERNATIVELY**

7.1.2 Metered Tariff:

Fixed Charges	Rs.10 per BHP per month
Energy Charges: For entire consumption	50 Paise per Unit per month

7.1.3 Tatkai Scheme:

Fixed Charges	Rs.10 per BHP per month
Energy Charges: For entire consumption	70 Paise per Unit per month

*NOTE: The consumers under Tatkai Scheme shall be eligible for normal metered tariff as above, on completion of five years period from the date of commencement of supply.*

7.2 No machinery other than pump water for irrigation will be permitted under this tariff. Any other machinery connected in the installation governed under this tariff shall be charged separately at appropriate tariff for which consumers shall have to take separate connection.

7.3 Agricultural consumers who desire to supply water to brick manufacturing units shall have to pay Rs. 100/HP per annum subject to minimum of Rs. 2000/- per year for each brick Mfg. Unit to which water is supplied in addition to existing rate of HP based / metered agricultural tariff.

Such Agricultural consumers shall have to pay the above charges for a full financial year irrespective of whether they supply water to the brick manufacturing unit for full or part of the Financial Year.

Agricultural consumers shall have to declare their intension for supply of the water to such brick manufacturing units in advance and pay charges accordingly before commencement of the financial year (i.e. in March every year).

8.0 **RATE SL (STREET LIGHTS)**

8.1 **Tariff for Street Light for Local Authorities and Industrial Estates:**

This tariff includes the provision of maintenance, operation and control of the street lighting system.

8.1.1 Energy Charges:

For all the units consumed during the month: For streetlights operated by industrial estates and local authority	330 Paise per Unit
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8.1.2 Minimum Charges:

The minimum energy consumption is prescribed for consumer with more than 50 street lights within a village or an industrial estate, as the case may be, as equivalent to 2200 units per annum per kilo watt of connected load during the year.



### 8.1.3 Renewal and Replacements of Lamps:

The consumer shall arrange for renewal and replacement of lamp at his cost by person authorised by him in this behalf under Rule-3 of the Indian Electricity Rules, 1956 / Rules issued by CEA under the Electricity Act, 2003.

## 8.2 **Tariff for power supply for street lighting purposes to consumers other than the local authorities and industrial estates:**

### 8.2.1 Energy charges:

For all units consumed during the month	330 Paise per kWh
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### 8.2.2 Minimum Charges:

Rs.3 per month per fixture
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### 8.2.3 Renewal and Replacement of Lamps:

The consumer shall arrange for renewal and replacement of lamp at his cost by person authorised by him in this behalf under Rule-3 of the Indian Electricity Rules, 1956 / Rules issued by CEA under the Electricity Act, 2003.

### 8.2.4 Maintenance other than Replacement of Lamps:

Maintenance of the street lighting system shall be carried out by Distribution Licensee.

## 9.0 **RATE TMP (TEMPORARY):**

This tariff is applicable to services for temporary supply at the low voltage.

### 9.1 Energy Charges:

For the supply used for the purposes stipulated in respective tariff for permanent supply:

(a)	Rate LFD-I (for residential premises) & LFD-I (Rural)	435 Paise/Unit
(b)	Rate LFD-II (for non-residential premises)	480 Paise/Unit
(c)	Rate LFD-III (for educational and other institutions)	480 Paise/Unit
(d)	Rate LTP-I, LTP-II and LTP-III	640 Paise/Unit

### 9.1.2 Minimum charges:

(a)	For the purpose stipulated in LFD:	Rs.20/- per day
(b)	For the purpose stipulated in Rate LTP-I	Rs.200/- per BHP per month
(c)	For the purpose stipulated in Rate LTP-III	Rs.225/- per kW per month

*NOTE: Payment of bill is to be made within seven days from the date of issue of the bill. Supply would be disconnected for non-payment of dues on 24 hours notice.*

## 10.0 **DELAYED PAYMENT CHARGES FOR LT CONSUMERS:**

### 10.1 No delayed payment charges shall be levied if the bill is paid within ten days from the date of billing (excluding the date of billing).

Delayed payment charges will be levied at the rate of 1.5% per month or part thereof (upto the time of ultimate disconnection of supply) in case of all LT consumers except Agricultural category and for the period from the date of permanent disconnection, the delayed payment charges will be levied at the rate of 1.25%. Delayed payment charges will be levied at the rate of 1% per month or part thereof for the consumer governed under Rate AG from the date of billing till the date of payment if the bill is paid after ten days from the date of billing.

For Government dues, the delayed payment charges will be levied at the rate provided under the relevant Electricity Duty Act.





## PART-II

### TARIFFS FOR SUPPLY OF ELECTRICITY AT HIGH TENSION (3.3 KV AND ABOVE, 3-PHASE 50 C/S), AND EXTRA HIGH TENSION

The following tariffs are available for supply at high tension for large power services for contract demand not less than 100 kVA

**11. RATE HTP-I**

**For regular power supply for larger power service purposes not specified in rate HTP-II (A) and II (B)**

**12. RATE HTP-II (A)**

**For the purpose specified therein.**

**13. RATE HTP-II (B)**

**For the purposes specified therein.**

**14. RATE HTP-III**

**For supplying at high tension for temporary purposes and for contract load of not less than 100 kVA.**

**15. RATE HTP-IV**

**For using electricity exclusively during night hours.**

**16. RATE HTP-V**

**17. RATE RAILWAY TRACTION**

**11.0 RATE HTP-I:**

This tariff will be applicable for supply of electricity to HT consumers contracted for 100 kVA and above for regular power supply and requiring the power supply for the purposes not specified in Rate HTP-II(A) and HTP-II(B). Research & Development Units recognised by the Ministry of Science and Technology, Department of Scientific and Industrial Research and Government, shall pay at HTP-I rates. Water Works and Sewerage pumping stations run by Local Authorities and GW & SB, GIDC Water Works, Jetty which is an integrated part of main plant of industries and water works connection which is an integrated part of main plant of industries having the Contracted Demand 100 kVA and above shall pay at HTP-I rates.

**11.1 Demand Charges ; (other than Public Water Works)**

**11.1.1 For billing demand upto contract demand.**

(a)	For first 500 kVA of billing demand	Rs.98/- per kVA per month
(b)	For next 500 kVA of billing demand	Rs.139/- per kVA per month
(c)	For next 1500 kVA of billing demand	Rs.208/- per kVA per month
(d)	For billing demand in excess of 2500 kVA	Rs.237/- per kVA per month

**11.1.1a For billing demand upto contract demand for Public Water Works of Gujarat Water and Sewage Board, Municipal Corporations, Municipalities and other local authorities.**

(a)	For first 500 kVA of billing demand	Rs.89.25/- per kVA per month
(b)	For next 500 kVA of billing demand	Rs.126/- per kVA per month
(c)	For next 1500 kVA of billing demand	Rs.189/- per kVA per month
(d)	For billing demand in excess of 2500 kVA	Rs.215.25/- per kVA per month

11.1.2 For Billing Demand in Excess of Contract Demand (other than Public Water Works)

For billing demand in excess over the contract demand	Rs.369 per kVA per month
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11.1.2a For billing demand in excess of contract demand for Public Water Works of Gujarat Water and Sewage Board, Municipal Coporations, Municipalities and other local authorities.

For billing demand in excess over the contract demand	Rs.335 per kVA per month
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**PLUS**

11.2 Energy Charges for all HTP-I consumers including Public Water Works.

For entire consumption during the month		
(a)	Upto 1000 kVA contract demand	385 Paise per Unit
(b)	For 1001 kVA to 2500 kVA contract demand	405 paise per Unit
(c)	Above 2500 kVA contract demand	415 Paise per Unit

**PLUS**

11.3 Time of Use Charges:

(These charges shall be levied from a consumer having contract demand or actual demand of 500 kVA and above):

For energy consumption during the two peak periods, viz., 0700 Hrs to 1100 Hrs and 1800 Hrs to 2200 Hrs	75 Paise per Unit
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11.4 Billing Demand:

The billing demand shall be the highest of the following:

- (a) Actual maximum demand established during the month
- (b) Eighty-five percent of the contract demand
- (c) One hundred kVA

11.5 Minimum Bills:

Payment of "demand charges" based on kVA of billing demand.

11.6 Lighting and Non-Industrial Loads:

The consumption of lights and fans and other non-industrial loads of the factory building as also the consumption of creche, laboratory, stores, time keeper's office, yards, watch and ward, first aid centres, and dispensaries during a month registered at the main meter on HT side shall be charged at the energy charges specified above.

11.7 Power Factor:

11.7.1 Power Factor Adjustment Charges:

- (a) The power factor adjustment charges shall be levied at the rate of 1% on the total amount of electricity bills for the month under the head "Demand Charges" and "Energy Charges" for every 1% drop or part thereof in the average power factor during the month below 90% upto 85%.
- (b) In addition to the above clause, for every 1% drop or part thereof in average power factor during the month below 85% at the rate of 2% on the total amount of electricity bill for that month under the head "Demand Charges" and "Energy Charges", will be charged.



#### 11.7.2 Power Factor Rebate:

If the power factor of the consumer's installation in any month is above 95%, the consumer will be entitled to a rebate at the rate of 0.5% (half percent) in excess of 95% power factor on the total amount of electricity bill for that month under the head "Demand Charges" and "Energy Charges" for every 1% rise or part thereof in the average power factor during the month above 95%.

#### 11.8 Meter Charges:

The meter charges per month are chargeable as prescribed under 'GERC (Licensee's Power to Recover Expenditure incurred in providing supply and other Miscellaneous Charges) Regulations, 2005 as in force from time to time.

#### 11.9 Electricity Duty and Tax on Sale of Electricity:

Electricity Duty and tax on sales of electricity will be collected in accordance with the rates prescribed by the Government from time to time. The consumer shall make separate metering arrangement for segregation of energy consumption wherever necessary for the purpose of levying electricity duty at different rate.

#### 11.10 Maximum Demand and its Measurement:

The maximum demand in kW or kVA, as the case may be, shall mean an average KW/KVA supplied during consecutive 30 minutes period of maximum use where such meter reading directly the maximum demand in KW/KVA have been provided.

#### 11.11 Contract Demand:

The contract demand shall mean the maximum KW/KVA for the supply, of which the supplier undertakes to provide facilities from time to time.

#### 11.12 Rebate for Supply at EHV:

On Energy charges:		Rebate @
(a)	If supply is availed at 33/66 kV	0.5%
(b)	If supply is availed at 132 kV and above	1.0%

#### 11.13 Concession for Use of Electricity during Night Hours:

For the consumer eligible for using supply at any time during 24 hours, entire consumption shall be billed at the energy charges specified above. However, the energy consumed during night hours of 10.00 PM to 06.00 AM next morning (recorded by a polyphase meter operated through time-switch) as is in excess of one third of the total energy consumed during the month, shall be eligible for concession at the rate of 75 Paise per unit. The polyphase meter and time switch shall be procured and installed by the consumer at his cost and sealed by the Distribution Licensee.

#### 11.14 Seasonal Consumers taking HT Supply:

11.14.1 The expression, "Seasonal Consumer", shall mean a consumer who takes and uses power supply for ice factory, ice-candy machines, ginning and pressing factory, oil mill, rice mill, salt industry, sugar factory, khandsari, cold storage plants (including such plants in fishery industry), tapioca industries manufacturing starch, pumping load or irrigation, white coal manufacturers etc.

11.14.2 A consumer, who desires to be billed for minimum charges on annual basis, shall intimate in writing in advance about the off-season during which energy consumption, if any, shall be mainly for overhauling of the plant and machinery. The off-season period at any time shall be a full calendar month/months. The total period of off-season so declared and observed shall be not less than three calendar months in a calendar year.

11.14.3 The total minimum amount under the head “Demand and Energy Charges” payable by a seasonal consumer satisfying the eligibility criteria under sub clause 10.14.1 above and complying with provisions stipulated under sub clauses 10.14.2 above shall be Rs.4000/- per annum per kVA of the billing demand.

11.14.4 The billing demand shall be the highest of the following:

- (a) The highest of the actual maximum demand registered during the calendar year.
- (b) Eighty-five percent of the arithmetic average of contract demand during the year.
- (c) One hundred kVA.

11.14.5 Units consumed during the off-season period shall be charged for at the flat rate of 415 Paise per unit.

11.14.6 Electricity bills paid during off-season period shall not be taken into account towards the amount payable against the annual minimum bill. The amount paid by the consumer towards the electricity bills for seasonal period only under the heads “Demand Charges” and “Energy Charges” shall be taken into account while determining the amount payable towards the annual minimum bill.

11.15 Delayed Payment Charges:

No delayed payment charges if the bill is paid within ten days from the date of billing.

Delayed payment charges are payable at the rate of 1.5% per month on Distribution Licensees’ charges upto the time of ultimate disconnection of supply and at the rate of 1.25% per month from the date of permanent disconnection.

For Government dues, the delayed payment charges will be levied at the rate provided under the relevant Electricity Duty Act.

## 12.0 **RATE HTP-II(A)**

**Applicability:** This tariff shall be applicable for supply of energy to HT consumers contracting for 100 KVA and above, requiring power supply for Railways (other than Railway Workshops chargeable under Rate HTP-I and Railway Traction), hotels, amusement parks, resorts, water parks, aerodromes, cinemas, auditoriums, banks, studios, offices, film production, etc., requiring and given separate point of supply and such other establishments as may be approved from time to time by the Commission.

12.1 Demand Charges:

<b>(a) For billing demand upto contract demand:</b>		
(i)	For first 1000 kVA of billing demand	Rs.173/- per kVA per month
(ii)	For billing demand in excess of 1000 kVA	Rs.260/- per kVA per month
<b>(b)</b>	<b>For billing demand in excess of contract demand</b>	Rs.396 per kVA per month for billing demand in excess over the contract demand

**PLUS**

12.2 Energy Charges:

For all units consumed during the month	420 Paise per Unit
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**PLUS**

12.3 Time of Use Charges:

(These charges shall be levied from a consumer having contract demand or actual demand of 500 kVA and above):

For energy consumption during the two peak periods, viz., 0700 Hrs to 1100 Hrs and 1800 Hrs to 2200 Hrs	75 Paise per Unit
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- 12.4 Billing demand
- 12.5 Minimum bill
- 12.6 Power factor
- 12.7 Meter charges
- 12.8 Electricity Duty and tax on sale of electricity
- 12.9 Maximum demand and its measurement
- 12.10 Contract demand
- 12.11 Rebate for supply at EHV
- 12.12 Delayed payment charges

} Same  
as per  
HTP-I  
Tariff

**13.0 RATE HTP-II(B):**

**Applicability:** This tariff shall be applicable for supply of energy to HT consumers contracting for 100 kVA and above, requiring power supply for residential colonies, townships, educational institutions governed by the government, and Defence Establishments (Establishments under the Armed Forces and the Ministry of Defence, other than the units of public sector undertakings under the Ministry of Defence), requiring and given separate point of supply.

13.1 Demand Charges:

(a) For entire billing demand	Rs.127/- per kVA per month
(b) For billing demand in excess of contract demand	Rs.385 per kVA per month

**PLUS**

13.2 Energy Charges:

For all units consumed during the month	370 Paise/Unit
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**PLUS**

13.3 Time of Use Charges:

These charges shall be levied on a consumer having contract demand or actual demand of 500 kVA and above:

For energy consumption during the two peak periods, viz., 0700 Hrs to 1100 Hrs and 1800 Hrs to 2200 Hrs	75 Paise per Unit
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- 13.4 Billing Demand
- 13.5 Minimum Bill
- 13.6 Power Factor
- 13.7 Meter Charges
- 13.8 Electricity Duty and Tax on Sale of Electricity
- 13.9 Maximum Demand and its Measurement
- 13.10 Contract Demand
- 13.11 Rebate for supply at EHV
- 13.12 Delayed Payment Charges

} Same as  
per HTP-I  
Tariff

**14.0 RATE HTP-III:**

This tariff shall be applicable to a consumer taking supply of electricity at high voltage, contracting for not less than 100 kVA for temporary period. A consumer not taking supply on regular basis under a proper agreement shall be deemed to be taking supply for temporary period.



14.1 Demand Charges:

For billing demand upto contract demand	Rs.462/- per kVA per month
For billing demand in excess of contract demand	Rs.550/- per kVA per month

**PLUS**

14.2 Energy Charges:

For all units consumed during the month	630 Paise per Unit
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**PLUS**

14.3 Time of use charges:

(These charges be levied from the consumer who is having contracted demand or actual demand of 500 kVA and above).

Additional charge for the energy consumption during two peak periods, i.e., 07.00 Hrs to 11.00 Hrs and 18.00 Hrs to 22.00 Hrs.	75 Paise per Unit
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14.4 Billing Demand:

14.5 Minimum Bill:

14.6 Maximum demand and its measurement.

14.7 Meter Charges:

14.8 Electricity duty and tax on sale of electricity

14.9 Contract demand

14.10 Delayed payment charges

**Same as per  
HTP-I  
Tariff**

**15.0 RATE HTP-IV**

This tariff shall be applicable for supply of electricity to HT consumers contracted for 100 kVA and above for regular power supply and requiring the power supply for the purposes not specified in Rate HTP-II(A) and HTP-II(B); and consumer opting to use electricity exclusively during night hours from 10.00 PM to 06.00 AM next day.

15.1 Demand Charges:

Same rates as specified in Rate HTP-I
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**PLUS**

15.2 Energy Charges:

For all units consumed during the month	200 Paise per Unit
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15.3 Billing demand

15.4 Minimum bill

15.5 Power factor

15.6 Meter charges

15.7 Electricity duty and tax on sale of Electricity

15.8 Maximum demand and its measurement

15.9 Contract demand

15.10 Rebate for supply at EHV

**As per  
Rate  
HTP-I**



15.11 Delayed payment charges

**NOTE:**

- (i) 10% of total units consumed and 15% of the contract demand can be availed beyond the prescribed hours for the purpose of maintenance.
- (ii) For the purpose of office lighting, fans etc. the consumer may apply for a separate connection.
- (iii) This tariff shall be applicable if the consumer so opts to be charged in place of HTP-I tariff by using electricity exclusively during night hours as above.
- (iv) The option can be exercised to switch over from HTP-I tariff to HTP-IV tariff and vice versa twice in a calendar year by giving not less than one month's notice in writing.
- (v) In case the consumer is not fulfilling the conditions of this tariff category, then such consumer for the relevant billing period will be billed under tariff category HTP-I.

**16.0 RATE HTP- V**

**HT - Agricultural (for HT Lift Irrigation scheme only)**

**This tariff shall be applicable for supply of electricity to High Tension Agricultural consumers contracting for 100 kVA and above, requiring power supply for lifting water from surface water sources such as canal, river and dam, and supplying water directly to the fields of farmers for agricultural irrigation only.**

16.1 Demand Charges:

Demand Charges Rs. 25 per kVA per Month
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**PLUS**

16.2 Energy Charges:

For all units consumed during the month	160 Paise per Unit
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16.3 Power Factor Adjustment Charges

16.4 Meter charge

16.5 Billing Demand

16.6 Contract demand

16.7 Minimum bill

16.8 Maximum demand

16.9 Delayed Payment Charges

16.10 Rebate for supply at EHV

**As per HTP-I Tariff**

**17.0 RATE – RAILWAY TRACTION:**

This tariff is applicable for power supply to Railway Traction at 132 kV/66 kV.

17.1 Demand Charges:

(a) For billing demand upto the contract demand	Rs.160 per kVA per month
(b) For billing demand in excess of contract demand	Rs.400 per kVA per month

**NOTE:** In case of the load transfer for traction supply due to non-availability of power supply at preceding or succeeding point of supply or maintenance at Discom's level, excess demand over the contract demand shall be charged at normal rate at appropriate point of supply.



Normal Demand Charges will also apply in case of bunching of trains. However, Discoms shall charge excess demand charges while raising the bills and Railways have to give convincing details and documentary proof of bunching of trains if they want to be charged at the normal demand charges. If satisfactory proof of bunching of trains is provided, Discom shall consider that occasion for normal demand charges, otherwise excess demand charges will be applicable specified as above at 17.1(b).

**PLUS**

17.2 Energy Charges:

For all units consumed during the month	455 Paise per Unit
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- 17.3 Power Factor Adjustment Charges
  - 17.4 Meter charge
  - 17.5 Billing Demand
  - 17.6 Contract demand
  - 17.7 Minimum bill
  - 17.8 Maximum demand
  - 17.9 Delayed Payment Charges
  - 17.10 Rebate for supply at EHV
- As per HTP-I Tariff**

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