



सत्यमेव जयते

**GUJARAT ELECTRICITY REGULATORY COMMISSION  
(GERC)**

**AHMEDABAD**

**TARIFF ORDER  
FOR  
Madhya Gujarat Vij Company Limited (MGVCL)**

**Case No. 947 of 2008**

**17 January 2009**



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# BEFORE THE GUJARAT ELECTRICITY REGULATORY COMMISSION AT AHMEDABAD

Case No.947 / 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 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 and is also 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 of the transferee companies 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 Madhya Gujarat Vij Company Limited (MGVCL). 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**

MGVCL had filed its ARR petition for the FY 2007-08 on 28.12.2006 in accordance with the Regulations 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 MGVCL, the objections by various stakeholders, response of MGVCL, 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.**

MGVCL 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 MGVCL and admitted the MYT petition of MGVCL for the control period (Case No.947 of 2008) on 14<sup>th</sup> August 2008.

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

A public notice was issued by the MGVCL 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 consumers / 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 MGVCCL 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 30 objections / suggestions to the petition filed by MGVCCL. 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 their views on the MGVCCL petition before the Commission in the Commission's office in Ahmedabad. The names of persons and organizations who filed their objection are listed in Annexure-1. The objectors who appeared at the public hearing and presented their objections are listed in Annexure-2.

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

- 1.4.3 The Commission obtained further information and clarifications from MGVCCL. MGVCCL has also furnished supplementary information / data as required by the Commission.

MGVCCL gave a presentation on its proposal to the Commission on 5<sup>th</sup> November 2008.

- 1.4.3 Taking into account the issue of MYT framework Regulations by the Commission in December 2007 and the time required for MGVCCL 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

SI.No.	Name of the Objector
1.	Shri M.S. Dharodia, Wankaner
2.	Shri Surendra B. Mehta, Bhavnagar
3.	Gujarat Krushi Vij Grahak Sangh
4.	Shri M.N. Trivedi and Shri V.R. Patel, Gandhinagar
5.	Shri Rameshbhai J. Fuletra, Valsad
6.	Gujarat Hi Tension Consumer Association, Bhavnagar
7.	Federation of Gujarat Industries, Vadodara
8.	Gujarat Chamber of Commerce and Industry
9.	Shri J.M. Mori, Veraval
10.	Shri Maldevbhai V Odedara, Ranavav
11.	Shri D.G. Parmar, Veraval
12.	V care Right and Duty, NGO, Vadodara
13.	Borsad Industries Association
14.	Central South Gujarat Salt Manufacturer's Association, Bharuch
15.	Dy. CEE/TRD, Western Railway, Mumbai.
16.	Halol Vepari Mahamandal, Halol
17.	General Secretary, Mahagujarat Janta Party and Shri Ratansinh Ramsinh Padhiar
18.	Laghu Udhayog Bharati , Ahmedabad
19.	Dr. S M Rana, Vadodara
20.	Mahuva Chamber of Commerce and Industries, Mahuva
21.	Shri Ghanshyam R. Darji, Vadodara
22.	Sandeep Chemicals, Vadodara
23.	The Gujarat Cold Storage Association, Ahmedabad
24.	Sachin Industries Co-Operative Society Limited, Surat
25.	Shri Dinesh Parshottamdas Rathod, Jetpur
26.	Shri Babubhai Dhanabhai Zhalavadia
27.	Southern Gujarat Chamber of Commerce & Industry and Surat Citizen's Council Trust, Surat
28.	Tax Payers' Users Consumers Association, Jamnagar.
29.	Shri Amarsingh Chavda
30.	Consumer Education and Research Society, Ahmedabad



## Annexure 2

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

Sl.No.	Name of the Objector
1.	Shri Surendra B. Mehta, Bhavnagar
2.	Shri Kanubhai Patel, Gujarat Krushi Vij Grahak Sangh, Visnagar
3.	Shri Rameshbhai J. Fuletra, Valsad
4.	Gujarat Hi Tension Consumer Association, Bhavnagar
5.	Federation of Gujarat Industries, Vadodara
6.	Gujarat Chamber of Commerce and Industry, Ahmedabad
7.	Shri V K Thakkar, V care Right and Duty, NGO, Vadodara
8.	Shri B.N. Agrawal, Borsad Industries Association, Borsad
9.	Central South Gujarat Salt Manufacturer's Association, Bharuch
10.	Shri P S Meena, Dy. CEE/TRD, Western Railway, Mumbai
11.	Laghu Udhog Bharati , Ahmedabad
12.	Shri Ghanshyam R. Darji, Vadodara
13.	Sandeep Chemicals, Vadodara
14.	Gujarat Cold Storage Association, Ahmedabad
15.	Sachin Industries Co-Operative Society Limited, Surat
16.	Southern Gujarat Chamber of Commerce and Industry and Surat Citizen's Council Trust, Surat
17.	Shri Amarsingh Chavda
18.	Shri K K Bajaj, Consumer Education and Research Society, Ahmedabad



## Chapter 2

### Summary of DGVCL's Tariff Petition

#### 2.1 Aggregate Revenue Requirement (ARR)

The Madhya Gujarat Vij Company Limited (MGVCL) in its Petition has submitted the Aggregate Revenue Requirement for the control period (FY 2008-09 to 2010-11) for meeting its expenses and the estimated revenue with the proposed tariff for the control period. The 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	151593	172961	183563	217015	233815
O&M Expenses	27438	30182	33201	36521	40173
Depreciation	3890	4703	5923	7421	8756
Interest on loans	5152	7041	7959	9246	10261
Interest on working capital	1032	2057	2320	2595	2862
Other debits	102	107	113	118	124
Extraordinary items	4	4	4	4	4
Provision for bad debts	0	195	221	248	275
Less Interest and expenses capitalized	4463	4463	4463	4463	4463
Sub total	184749	212786	228840	258705	291807
Return on equity	0	2662	6103	7133	8077
Provision for Tax	996	151	166	183	201
Total expenditure	185745	215599	235109	276021	300085
Less: Non tariff income	8306	2771	2771	2771	2771
Aggregate Revenue Requirement	177439	212828	232338	273250	297314
Revenue from sale of power		185856	211850	238878	264676
Other income consumer related		5890	6257	6647	7062
Total revenue before subsidy		191746	218107	245525	271738
Subsidy		7284	7323	7425	7511
Other subsidies		2509	2779	3008	3207
Total revenue after subsidy		201539	228209	255959	282456
Gap		11289	4129	17291	14858



**The DGVCL 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 give approval for the same.
2. To consider the proposal for revision in the tariff structure and 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, it's 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 in the order of the Commission under Regulation 9.7;
  - b. The balance two-third may be allocated equitably to the four Discoms based on mutual agreement.
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 MGVCL 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 MGVCL 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 MGVCL for approval of ARR and tariff revision. The Commission, has, therefore, addressed the objections / suggestions issue-wise rather than objection-wise.

#### 3.1 DELAYS IN FILING OF THE PETITION

The delay in filing the ARR and tariff petition was objected to by the following consumers / consumer organizations

1. Shri Surendra B. Mehta, Bhavnagar
2. The Southern Gujarat Chamber of Commerce & Industry and Surat Citizens Council Trust, Surat

The main contention of the objection is that, "the licensee is required to file the petition before Commission for ARR for the ensuing year on or before 30<sup>th</sup> November every year as per GERC Regulations. The Commission has extended time for the purpose of filing the petition upto 31/03/2008. The licensee has filed the petition in the 1<sup>st</sup> week of August 2008. This filing of MYT Petition is in violation of Terms and Conditions of Tariff Regulations 2005 and MYT Regulations 2007. Hence the petition should have been rejected." Further, they also requested that Tariff Order be implemented with prospective date, in case the petition is admitted.

#### Response of Licensee

The licensee is required to file the petition before the GERC for its Aggregate Revenue Requirement (ARR) for the ensuing financial year before the 30<sup>th</sup> November every year. The work of preparation of ARR/Tariff Petition had been started in June 2007, so that the licensee could file the ARR/Tariff Petition before 30<sup>th</sup> November 2007. Subsequently, the Commission released the draft Multi Year Tariff Regulation 2007 on "Website" in August 2007 and called for comments before 31<sup>st</sup> August 2007. According to the draft regulations, the Commission shall determine the tariff under the Multi Year Framework with effect from 1<sup>st</sup> April 2008. Hence the licensee had to wait for finalization of regulations to proceed further in filing the ARR/Tariff Petitions under MYT Framework. The regulations were notified by the Commission on the 20<sup>th</sup> December 2007. As per the regulations, the filing for the first control period was to be done by 31<sup>st</sup> January 2008. Since the filing of ARR / Tariff Petition under MYT involved considerable data and projections for a three-year period, the Commission has granted the extension of time for filing upto 31<sup>st</sup> March 2008 on the request of the licensee. The GOG was consulted on the issues relating the subsidy and

capital expenditure schemes which had significant impact on the revenues. The licensee had filed the petition on 30<sup>th</sup> July 2008 after obtaining approval of the Government. The Commission is requested to condone the delay in filing under Regulation No. 85 of 'Conduct of Business Regulations' of GERC.

*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 the 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. The implementation of the tariff will, however, be with the prospective date.*

### **3.3 DISTRIBUTION LOSSES**

The distribution loss projections in the MYT Petition filed by the licensee are objected by the following consumers / consumer organizations.

1. The Federation of Gujarat Industries, Vadodara
2. Shri Rameshbhai J. Fuletra, Valsad
3. Shri J.M. Mori, Veraval
4. Shri Maldevbhai Odedara, Ranavav
5. Shri D. G. Parmar, Veraval

The main contents of the objections are:

The T&D losses are projected with improper accounting of energy. The inefficiencies of the licensee are getting passed on to the consumers which are burdening consumers. The loss reduction benefit shall be passed on to the consumers as per GERC MYT Regulations. The projected T&D loss figures for control period are high and they require prudent check.

#### **Response of Licensee**

More than 19 lakh consumers are being served by the company with 31900 Km of HT lines and 45700 Km of LT lines. Therefore, there are technical losses in transmitting power through the distribution network. Additionally there would be commercial losses due to direct hooking of the lines, tampering of meters etc. Sometimes meters also become inaccurate due to wear and tear or for other reasons. The company is endeavoring its best to reduce the losses. The measures proposed for reduction of distribution losses are:

- Enhancement of distribution network by implementation of HVDS, use of AB cables, etc.
- Improving the energy accounting with spot billing by providing handheld meters/reading instruments
- Reduction of transformer failure rate
- Metering the load on the transformers for energy audit
- Putting in a number of preventive and punitive measures to curb and control power theft



The company has been able to achieve significant progress in the reduction of distribution losses over the past years due to its concerted efforts.

**Commission's view**

*The Commission has noted the objections and the petitioner's response. Action is taken to fix the targets for distribution losses to the permissible level.*

**3.4 SUBSIDY MECHANISM**

**a) Government subsidy**

The objections on the Government subsidy are filed by the following consumers / consumer groups or organizations.

1. Shri Surendra B Mehta, Bhavnagar
2. Mahagujarat Janata Party & Ratansinh Ramsinh Padhiar
3. The Gujarat Cold Storage Association, Ahmedabad

The main contentions of the objections are that the subsidy proposed to cover the cost of Agricultural consumption is not properly assessed. One objector suggested providing the subsidy to middle class people instead of increasing the tariff.

**Response of Licensee**

Subsidy support from the Government forms a significant part of the revenues of the DISCOMs. The Government is consulted on the issues of the subsidy and the ARR/Tariff petitions of all companies are submitted to GOG and clearance obtained before filing. Subsidy allocation is based on proportion of agricultural consumption.

As regards giving the subsidy to any class of people, the matter is within the purview of the Government to provide the subsidy to cover the gap.

**Commission's view**

*The objector's concern and the response of the licensee are noted.*

**b) Cross Subsidy**

The following consumers / consumer groups / organizations raised objections on the efforts being made to eliminate / reduce the cross subsidization as required under the Tariff Policy.

1. The Federation of Gujarat Industries, Vadodara
2. Shri Maldevbhai Odedara, Ranavav
3. The Mahuva Chamber of Commerce & Industries, Mahuva

**Response of licensee**

The Tariff Policy stipulates that there is a need for rationalization of tariff to various categories such that it shall be aligned to the cost of supply in a band of  $\pm 20\%$  but the ground realities have made it difficult to implement this.

In a situation where the state is facing a peak power deficit, the utility have to buy significantly more expensive power to meet the peak demand of the state. To further augment the supply at peak times, the companies also buy power on the short-term basis



at very high rates. For example, in FY 2007-08 the average rate of short-term power purchase was Rs. 5.95/ unit. This is expected to go up further in FY 2008-09. One of the primary beneficiaries of the State's efforts of supply of good quality, uninterrupted power are the Industries and commercial entities in the State.

On the other hand, consumers under the Agriculture category are being supplied power for a limited period of 8 hours per day. Further, most of this power is supplied to them during off-peak hours, when the average cost of power purchase from various generating stations is much lower due to the merit order stacking mechanism for power off-take. In effect, the cost of supply to Agriculture category would be much lower than to other categories enjoying power during the entire day including peak hours. Thus, it is natural that the tariff rates for Agriculture category are significantly lower than for other categories of consumers.

While, in the long run it would be desirable to have some rationalization of tariff across consumer categories, the socio-economic situation of power consumers cannot be neglected as supplying power at affordable rates to all classes of consumers is a primary responsibility of a power utility.

Under the circumstances, it is not possible to fix the tariff solely on the basis of cost of supply without any cross subsidization at this stage.

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

*The issues raised by the objectors and the petitioner's response are noted. The element of cross subsidization cannot be eliminated totally at this stage. The Commission has taken a realistic view in determining the level of cross subsidization.*

### **3.5 REVENUE AND EXPENDITURE PROJECTIONS IN ARR PETITION AND ROE**

The following consumers / consumer organizations have objected to the revenue and expenditure projections in the ARR petition and the ROE.

1. The Gujarat Krushi Vij Grahak Suraksha Sangh
2. The Mahagujarat Janta Party and Shri Ratansinh Ram Singh, Padhiar
3. The Southern Gujarat Chamber of Commerce & Industry and Surat Citizen's Council Trust, Surat

The main contention of the objectors is that the expenditure and revenue projections in the ARR are not realistic and that the rate of return on equity (ROE) sought (at 14%) is high.

#### **Response of licensee**

The company has projected revenue from various categories of consumers mainly based on historical trend related to category-wise number of consumers, connected load, units sold and growth rate. Similarly the expenditure has been projected based on the past data of pattern of expenditure. Specific reasons like the full impact of the 6<sup>th</sup> Pay Commission, intensive efforts undertaken by the company to upgrade its aging system and thrust on improving the consumer services have also been considered in the expenditure projections. All assumptions and methodology used for projections have been described in the petition. The procedure followed is as per the Tariff Regulations notified by the Commission.



The Return on Equity (ROE) projections are given in Table 44 and explained in para 5.8 of the petition. ROE at 14% is claimed as per the provisions in the Tariff Regulations.

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

Commission has considered the views and submissions of the objectors and has objectively reviewed both expenditure and revenue projections. Only prudent expenditure and the reasonable revenue projections are allowed in assessing Aggregate Revenue Requirement.

### **3.6 INTEREST ON WORKING CAPITAL AND FINANCE CHARGES**

The following objectors have raised the issues relating to the working capital interest and finance charges.

1. The Gujarat Krushi Vij Grahak Suraksha Sangh, Visnagar
2. The Federation of Gujarat Industries, Vadodara
3. The Laghu Udyog Bharati, Ahmedabad & Federation of Panchamaharaj Industries, Godhra

The main contents of the objections are

- Whether loan and equity components are not part of working capital
- During 2007-08, more than Rs. 100 crores deposits collected from consumers should reduce the working capital substantially making it negligible.
- Interest on loans and finance charges are projected about two times.

#### **Response of licensee**

Loan and equity components are not part of working capital, which is required for day to day operations for a short period as per business cycle. Long-term loans are required for the capital requirement to implement new projects and CAPEX schemes along with internal resources and equity. Hence loan and equity components are quite separate from working capital.

Working capital required for MGVL is worked out on normative basis as per the terms and conditions of tariff. Norms allow receivables for 2 months but MGVL has calculated working capital based on one month receivables. Thus, MGVL has asked for less working capital requirement. Further, due to increase in power purchase cost and operational expenses, as well as to meet the incremental fixed working capital requirement due to operational growth, the requirement of working capital is increased. Even the rate of interest is also increased. Over and above, the increase in working capital requirement, company also has the fund requirement for implementing its project capital schemes, till its long-term finance is tied up. Also, company does not have sufficient internal accruals to meet all such funding requirement. In such huge cash flow requirement cycle, accretion in security deposit from consumers is only a small source of fund, which is insufficient.

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

*The views of the objectors and the petitioner's response are noted. The projections of interest and finance charges and interest on working capital are reviewed by the Commission and allowed only to the extent justified.*



### 3.7 O&M EXPENSES

The following objectors raised issue of abnormal increase in the O&M expenses.

1. The Federation of Gujarat Industries, Vadodara
2. The Southern Gujarat Chamber of Commerce & Industry and Surat Citizen's Council Trust, Surat.

#### **Response of licensee**

MGVCL expects that its O&M expenses shall see a sharper rise due to the impact of the 6<sup>th</sup> Pay Commission on its salary bill as well as its increased focus on the preventive maintenance and network upgradation in order to curtail losses and improve the quality of supply. O&M expenses increases but simultaneously the T&D losses are also reduced compared to the past and projected loss reduction of 0.5% already shown in the ARR.

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

*The expenses considered reasonable are allowed.*

### 3.8 TARIFF RELATED ISSUES

The following consumers / consumer organizations raised objections on tariff related matters.

1. Shri Surendra B. Mehta, Bhavnagar
2. Shri M.N. Trivedi & V.R. Patel, Gandhinagar
3. Shri Rameshbhai J. Fuletra, Valsad
4. The Federation of Gujarat Industries, Vadodara
5. Akhil Gujarat Grahak Seva Kendra, Ahmedabad
6. Shri J.M. Mori, Veraval
7. Shri Sunil Balakrishna Oza, Ahmedabad
8. M/s Sandeep Chemicals, Vadodara
9. The Southern Gujarat Chamber of Commerce & Industry and Surat Citizen's Council Trust, Surat
10. Shri Dinesh Parshottamdas Rathod, Jetpur
11. Shri Babubhai Dhanabhai Zhalavadia
12. Gujarat Cold Storage Association, Ahmedabad
13. Tax Payers, Users Consumers Association, Jamnagar

The main contents of the objections are:

- There is abnormal increase in the proposed tariff for Multi Year Tariff Period 2008-09 to 2010-11
- MGVCL should improve the internal efficiency to absorb the rise in the cost inputs
- Tariff increase to be considered only after the company presents the audited accounts of the past years



- Not to apply the commercial tariff to the rural consumers
- Large consumers, although having lower cost to serve are being penalized
- Proposed tariff rates of HT consumers are higher in Gujarat seriously hampering the competitiveness of industries of the state
- Is there financial burden of tariff hike on industrial category?
- Concessional rate to agricultural consumers and very high rate to common man

### **Response of licensee**

The audited accounts for the years 2005-06 and 2006-07 have been provided to the Commission and are available in the company's website. Accounts of the year 2007-08 are not yet audited.

For the rural category consumers, the tariff as notified by the Commission is applied. Every state has its geographical effects on costs of fuel such as coal. The cost of transportation of fuel from the coal mine to Gujarat is comparatively more. Moreover, Gujarat does not have adequate hydro power sources. Looking to these factors, cost to serve argument is justified.

It must be understood that the state as also the country is facing an acute shortage of all forms of energy, especially electricity. The sourcing / generation of energy is becoming increasingly more expensive as one sees a depletion of energy resources and increasing difficulty in accessing and finding new sources of energy.

Under these circumstances, it is important to give a tariff signal to large consumers of energy to use energy prudently and also appreciate the higher cost associated with the generation of the same. Thus, an increasing trajectory in electricity tariff for higher slabs of energy consumption is appropriate in the present times.

The tariff hike is applicable to all the categories excluding agricultural category. Hence there is no question of financial burden on industrial category alone.

Agricultural category is being supplied only limited power per day of about 8 hours. Further, mostly this power is supplied to them during off-peak hours, during night time, when the average cost of power purchase from various generating stations is much lower due to the merit order stacking mechanism for power offtake. In effect, the cost of supply to agriculture category would be much lower than to other categories enjoying power during peak hours also. Thus, it is natural that the tariff rates for agriculture are significantly lower than other consumer categories.

Agricultural tariff is for irrigation purpose only and the same cannot be applied to cold storage industry.

### **Commission's view**

*All issues are taken into consideration in finalizing the tariffs for different categories.*

## **3.9 NIGHT HOURS SUPPLY AND TOU CHARGES**

The following consumers / consumer organizations have raised objections on night hours supply and TOU charges.

1. The Borsad Industries Association, Borsad
2. The Gujarat Cold Storage Association, Ahmedabad

The issues raised are

- To reintroduce the concessional tariff for LTP – IV during night hours.
- Not to introduce TOU charges for below 500 KVA in HT connections

#### **Response of licensee**

The Commission in tariff orders dated 10/10/2000 had introduced a special tariff for LT consumers for exclusive use during night hours. However, as very few consumers opted for it, this special tariff has been discontinued in tariff order dated 6<sup>th</sup> May 2006. The suggestion for introducing night hour tariff for LT industrial consumers with more than 50 HP is acceptable to the company if approved by the Commission. This also depends on the number of consumers willing to opt for night hour tariff.

It is proposed in the current petition to make TOU charges applicable to all consumers of HTP-I category. It is the intent of the company to apply the time of use charge to as many as consumer categories in due course of time. Consumer has to note that cost of supplying power at peak hours is significantly higher and network requirement for peak hour supply is also high. Thus, tariff structure is devised recognizing this fact and allow recovery at higher rates for peak hour use.

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

*The views of the objectors and the petitioner are noted. The concessional tariff under LT – IV for exclusive night use is approved by the Commission.*

### **3.10 THEFT OF ENERGY**

The following objectors have raised the issue on theft of energy.

1. Shri M.S. Dharodia, Wankaner
2. Shri Sunil Balakrishna Oza, Ahmedabad & Shri Ratansinh Ramsinh Padhiar
3. Shri Dinesh Parshottamdas Rathod, Jetpur
4. Shri Babubhai Dhanabhai Zhalavadia

The issues raised are

- Failure to control direct hooking of lines
- Accounting of the assessment
- Illegal procedure followed in booking meter related theft cases
- Objection to mass drive and suggestion to appoint strong vigilance officer

#### **Response of licensee**

Every year more than 2 lakhs installations of various categories are being checked by MGCVCL. Due attention is paid on power theft complaints. However as a large area is covered under MGCVCL and overhead network is also spread over even to the remote areas, it is very difficult to arrest the menace of direct hooking entirely. To avoid direct



hooking, MGVCCL have planned to convert existing overhead LT network into LT less or high voltage distribution system, and thereby a consumer or a very small group of consumers shall get power supply through a low capacity distribution transformer, matching with the load demand of that consumer or very small group of consumers. MGVCCL is converting overhead conductor by AB Cable. This will definitely help in reducing this menace of electricity hooking.

Regarding the assessment made for theft of energy and accounting thereof, it is to be mentioned that the assessment made for theft of energy is accounted under the head "Other income" and it is also mentioned in the petition.

In case of faulty/ burnt/ non-working or slow meters are being replaced in the presence of the consumers or in the presence of representative of consumer and signatures on the meter replacement proforma are taken. If during the replacement of meter, it is observed that meter seals / meter is doubtful / suspected then the meter is wrapped. After making PANCHANAMA and filling of the prescribed formats, the suspected meter is checked in the lab in the presence of the consumer or representative of the consumer. If theft is detected during the inspection of the meter, the supplementary bill is issued as per the provision of Electricity Act 2003.

In the areas where "tough" consumers reside, a mass drive is arranged with police protection. Otherwise a small team of officers go for checking electrical installations. At present the chief of the vigilance department is an IPS officer, under whose control efficient checking is being carried out in all the DISCOMs.

***Commission's view***

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

**3.11 SECURITY DEPOSIT**

The Central South Gujarat Salt Manufacturers Association has raised the issue of paying interest on the security deposit.

**Response of licensee**

Rate of interest on security deposit is as per the Regulation notified by the Commission. Such interest payable on S.D. is credited in the consumers account as per the Regulation. DPC is also recovered as prescribed by the Commission in the prevalent tariff order.

***Commission's view***

*Contents of the objection and response are noted.*

**3.12 FUEL COST ADJUSTMENT (FCA)**

The following consumers / organizations have raised objections on the fuel cost adjustment issues.

1. Shri Kanubhai Patel, Visnagar
2. The Laghu Udyog Bharati, Ahmedabad and Federation of Panchmahal Industries, Godhra



The objections raised are:

- Not to allow any interim extra charges by the way of FPPPA
- Accounting of the FPPPA charges

#### **Response of licensee**

All power purchase agreements are approved by the Commission. These costs are scrutinized by the Commission at the time of ARR petition.

Revenue recovered under the head FPPPA is included in the revenue from the sale of power. No surplus is shown in the petition.

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

*The fuel surcharge is allowed only to the extent considered appropriate.*

### **3.13 DELAYED PAYMENT CHARGES**

Shri Dinesh Parshottamdas Rathod, Jetpur has objected for very high charges for change of meter (Rs. 100/-) and delayed payment charges.

#### **Response of licensee**

Delayed payment charge is not “interest”, but it is a penalty on the consumer for not paying his bill in time. This has serious implication on the cash flow of the company and, therefore, delayed payment charge has to be higher than the short-term interest rate. Company is not charging for change of meter.

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

*The points are noted.*

### **3.14 AGRICULTURE METERING AND CONSUMPTION**

The following objectors raised the issues on agricultural consumption.

1. The Gujarat Krushi Vij Grahak Suraksha, Visnagar
2. The Federation of Gujarat Industries, Vadodara

The main contents of the issue are:

- Supply of water to brick manufacturers under the agricultural category to be removed and separate category to be introduced if necessary.
- Providing meters to agricultural connections
- Low rate for agricultural sector and increase in capital expenditure for giving new agricultural connections
- Subsidizing agricultural sector is the GoG's prerogative and not be borne by the company, who in turn is collecting the same from other consumers.

#### **Response of licensee**

The supply to brick manufacturing units by an agricultural consumer is an optional facility and the consumer can opt for it, if he desires. This is not a compulsory requirement but an option as per the GERC Tariff Order.



Company endeavors hard for providing meters to presently unmetered agricultural installations but it is resisted by the farmers, which even resulted in to some sort of agitation in some of the areas. However, at present no new connection is released without meter. Secondly, the available 3 Ø static meters are utilized for replacing the old electro mechanical meters for effective metering of the metered category consumers. Agricultural consumer not opting for metered tariff is not giving security of meter. As on 31/05/2008, MGVL has installed 33324 meters on agriculture connections out of total 59600 agriculture connections.

The targets for agricultural connections are finalized under the 'Golden Goal' scheme of the GoG, for which 10% grant funding is considered by GoG. The cost of setting up the network and giving connections are recovered over a period of time from the retail tariff. MGVL has to release 16,000 agricultural connections in coming three years as shown in the ARR petition.

As regards the total realization of revenue due from agricultural sector through the subsidy from the GoG, Commission may take note of this.

***Commission's view***

*The Commission has given directive to meter all the unmetered agricultural connections.*

**3.15 GOLDEN GOALS**

The following objectors raised issues connected to the expenditure plan for the Golden Goals scheme.

1. The Federation of Gujarat Industry, Vadodara
2. The Mahuva Chamber of Commerce and Industry, Mahuva.

**Response of licensee**

The distribution companies of Gujarat have initiated this programme as part of Golden Jubilee celebrations in the state of Gujarat. This is in line with the GoG's developmental schemes. The Golden Goal targets of releasing agriculture connections and giving connection to BPL households are indeed very ambitious. Clearly, the DISCOMs cannot succeed in these initiatives without financial support from GoG as also other agencies and adequate tariff related measures by the Commission as the financial impact of implementation of these initiatives is significant. It may be noted that the DISCOMs have considered 100% grant funding from GoG for CAPEX related to giving connections to BPL households and 10% grant funding for releasing agricultural connections. Provided that the above support is forthcoming from GoG and GERC, the DISCOM shall do its best to achieve the targets as proposed.

Before finalizing the petition for submission to GERC, the company has consulted the GoG regarding financing of these schemes. The company has assumed GoG support based on its discussion with GoG.

***Commission's view***

*The issues raised are noted. The Commission would take appropriate action.*



### 3.16 RECOVERY OF REACTIVE CHARGES, RECONNECTION CHARGES, RESEALING CHARGES ETC.

The following consumers / consumer organizations have raised objections for collection or increase of various charges collected.

1. Shri Surendra B. Mehta, Bhavnagar
2. Shri M.N. Trivedi & V.R. Patel, Gandhinagar
3. The Laghu Udyog Bharati, Ahmedabad and Federation of Panchamahar Industries, Godhra
4. The Southern Gujarat Chamber of Commerce & Industry and Surat Citizen's Council Trust, Surat
5. President, Gujarat Cold Storage Association, Ahmedabad.

The contentions of objectors are:

- stop recovery of meter rent after the cost of meter's collected
- not to allow recovery of burnt meter charges, resealing and reconnection charges
- proposed reactive energy charges not to be allowed
- not to allow the increase in fixed charges

#### **Response of licensee**

Meter rent is recovered as per the regulations of licensee's power to recover expenditure incurred in providing Electric Supply as notified by GERC.

Similarly reconnection charges, resealing charges are also recovered as per the regulations notified by the commission.

In the burnt meter cases, the meter security deposit will be adjusted towards the cost of the meter and the consumer will be served notice to deposit meter security amount afresh in case the burning of the meter is due to causes attributable to the consumers. The procedure is as per the regulations notified by GERC.

As a basic commercial principle, all the fixed costs should be recovered through fixed charges. However, at present the company recovers very less amount as fixed charges. Therefore the company has proposed increase in fixed and energy charges for the control period.

As per the provision of "Electricity Supply Code and Related Matters Regulations" consumers having motive power load of 2 kW or more shall have to connect power factor corrective equipment like shunt capacitor. It is the prime responsibility of every consumer to maintain the PF at 0.9 or more. Therefore and to maintain the grid discipline, we have proposed "reactive energy charge" to be recovered from the consumer having 10 HP or more of contracted demand under LT industrial (Motive Power) category.

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

*The recovery of various charges in accordance with regulations is allowed. Appropriate decision is taken by the Commission on revision of fixed charges.*





### 3.17 NON-TARIFF INCOME

The Federation of Gujarat Industries, Vadodara have objected to the drastic reduction projected in the non-tariff income by the petitioner.

#### **Response of licensee**

The APDRP grant which forms part of non-tariff income (Rs 55.35 Crores) is likely to be discontinued during the control period and hence not considered in the projections.

#### **Commissions View:**

*Projections under non-tariff income are reviewed and decision taken.*

### 3.18 PROVIDING SERVICE WIRE

Shri M.N. Trivedi & Shri V.R Patel of Gandhinagar have raised issue of providing service wire of adequate capacity.

#### **Response of licensee**

Service wire for supplying power to the consumers is utilised as per the demanded load of the consumers. No charges are recovered in case of burning of service wire.

#### **Commission View**

*The observation of the licensee is noted.*

### 3.19 OTHER ISSUES

#### **(i) New Substations**

Shri M.N Trivedi and Shri V.R Patel of Gandhinagar have raised the issue of need for establishment of new substations.

#### **Response of licensee**

New Substations are established as per the load requirement of respective area. Company is supposed to give power supply within the voltage regulation limit notified by the Commission for the respective voltage level.

#### **Commission View**

The views are noted.

#### **(ii) Use of Solar Energy and provision of U.G Cable**

Dr S.M. Rana of Vadodara has suggested the use of solar energy for residential purpose and use UG cable in society area instead of overhead lines.

#### **Response of licensee**

Utilization of solar energy for residential purpose is a policy matter and GOG & GEDA are working on this. Those who are willing to utilize solar cell for their residence can approach GEDA.

At present, company's majority network is overhead lines. Conversion of existing overhead network to under ground cable is quite expensive.

#### **Commission View:**

*The points raised are 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 purchase and the likely revenue by sale of energy. This section examines in detail the customer category-wise energy sales projected by the MGVCL in its Multi Year Tariff petition for the control period 2008-09 to 2010-11 for approval of ARR.

### 4.2 Consumer Categories

MGVCL serves over 20 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 not covered in 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 and even the agricultural consumers who are connected since the last six to seven 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

MGVCL has projected the energy sales for the control period based on actual sales data for 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.

MGVCL has therefore, estimated the consumers connected load and energy sales based on cumulative annual growth (CAGR) trends during the past years. Wherever the trend has seemed unreasonable or unsustainable, the growth factors have been corrected by the DISCOM to arrive at more realistic projections.



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

MGVCL has furnished the category-wise energy sales over the last six years (2003-2008) and projected sales for the control period 2008-09 to 2010-11 and also the underlying CAGR (5 years and 3 years) thereof. Category-wise sales, over the last 6 years as furnished by MGVCL are shown in Table 4.1 below:

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

MU

<b>Tariff Category</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>
<b>LT consumers</b>						
Residential	779	836	896	973	1078	1180
Commercial	228	254	283	310	348	404
Industrial LT	287	307	335	357	388	430
Public Lighting	44	42	44	46	50	53
Agriculture	803	766	745	743	723	739
Public Water works	83	90	97	102	102	118
<b>LT Total</b>	<b>2224</b>	<b>2295</b>	<b>2400</b>	<b>2531</b>	<b>2693</b>	<b>2923</b>
<b>HT consumers</b>						
Industrial HT	1302	1342	1325	1327	1553	1683
Railway traction	250	246	255	266	280	299
<b>HT Total</b>	<b>1552</b>	<b>1588</b>	<b>1580</b>	<b>1593</b>	<b>1833</b>	<b>1983</b>
<b>Total</b>	<b>3776</b>	<b>3883</b>	<b>3979</b>	<b>4124</b>	<b>4527</b>	<b>4906</b>

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

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

<b>Tariff Category</b>	<b>CAGR (5 years)</b>	<b>CAGR (3 years)</b>	<b>YoY 2007</b>	<b>YoY 2008</b>
<b>LT consumers</b>				
Residential	8.5%	9.7%	10.8%	9.5%
Commercial	11.2%	10.9%	12.3%	15.9%
Industrial LT	7.8%	7.6%	8.6%	11.0%
Public Lighting	3.0%	5.8%	7.7%	6.3%
Agriculture	(-) 2.6%	(-) 1.5%	(-) 2.7%	2.3%
Public Water works	6.6%	5.2%	4.9%	9.9%
<b>LT Total</b>	<b>4.9%</b>	<b>5.9%</b>	<b>6.4%</b>	<b>8.5%</b>
<b>HT consumers</b>				
Industrial HT	4.5%	8.3%	17.1%	8.4%
Railway traction	2.9%	4.8%	5.3%	7.0%
<b>HT Total</b>	<b>4.3%</b>	<b>7.7%</b>	<b>15.1%</b>	<b>8.1%</b>
<b>Total</b>	<b>4.6%</b>	<b>6.7%</b>	<b>9.8%</b>	<b>8.4%</b>

Based on the above growth rates of energy sold MGVCL 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	2009 (Projected)	2010 (Projected)	2011 (Projected)
<b>LT consumers</b>			
Residential	1329	1488	1658
Commercial	452	506	567
Industrial LT	467	507	550
Public Lighting	56	60	63
Agriculture	824	907	989
Public Water works	125	133	141
<b>LT Total</b>	<b>3254</b>	<b>3600</b>	<b>3969</b>
<b>HT consumers</b>			
Industrial HT	1823	1974	2138
Railway traction	315	332	349
<b>HT Total</b>	<b>2138</b>	<b>2306</b>	<b>2487</b>
<b>Total</b>	<b>5392</b>	<b>5906</b>	<b>6456</b>

#### 4.4 Detailed analysis of energy sales projected

The category-wise energy sales given for the years 2002-03 to 2007-08 in Table 4.1 are the actuals. The energy sales for the control period 2008-09 to 2010-11 are projected based on 5 years / 3 years CAGR between the period 2002-03 and 2006-07 / 2005-07 and year on year (YoY) sales for the period between 2006 and 2007.

MGVCL 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 MGVCL for the control period as given in Table 4.3 are discussed below:

##### 4.4.1 Residential

The sales to this category constitutes to about 24% of total energy sales of the company. MGVCL has projected the energy sales to residential category at 1329 MU for 2008-09, 1488 MU for 2009-10 and 1658 MU for 2010-11. A growth of 9.7% (3 years CAGR) has been considered by the company over the energy sales for 2007-08. In addition, the company has added the consumption of 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.)	104022	99505	99481
2	Cumulative number of connections (Nos.)	104022	203527	303008
3	Total additional energy supplied (MUs)	37	73	109
4	Additional load added (MW)	10	20	30



As seen from Table 4.2 the growth rates witnessed over a 5-year and 3-year periods are 8.5% and 9.7% respectively, and the growth during 2006-07 over 2005-06 was 10.8% and that of 2007-08 over 2006-07 is 9.5%. MGVCL has considered a mid-term growth of 9.7% (3 year CAGR) which it expects to continue during the control period. This is inline with 5 year CAGR and growth during 2006-07.

Though the YOY growth during 2007 was 10.8%, such growth may not sustain over the control period and the growth of 9.7% estimated by MGVCL 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. MGVCL has estimated the energy consumption by BPL households at 30 units / month per household which is also reasonable at one unit per household per day.

**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	1329	12.63
2009-10	1488	11.96
2010-11	1658	11.42

#### 4.4.2 Commercial

The sale to this category constitutes about 8.2% of total sales of the company.

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

2008-09	452 MU
2009-10	506 MU
2010-11	567 MU

The company has considered a growth of 12% which is midterm growth during 2004-05 to 2006-07 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 11.2% during the 5-year period 2003-07, 10.9% during the 3 year period 2005 – 2007, and YOY growth of 12.3% during 2007 and 15.9% during 2008. The company expects this high level of growth witnessed during 2006-07 and 2007-08. It is possible that this level of growth may continue during the control period. This is not very high compared to 5 year CAGR and 3 year CAGR.

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

Year	Energy (MU)
2008-09	452
2009-10	506
2010-11	567

#### 4.4.3 Industrial (LT)

The consumption of this category accounts to about 8.8% of total energy sales of the company.

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

2008-09	467 MU
2009-10	507 MU
2009-11	550 MU

The company has assumed a growth of 8.5% based on the three year (2004-05 to 2006-07) CAGR, and projected the sales for the control period at this growth rate. The five year (2003-07) CAGR of this category was 7.8%, and that of 3 year (2005-07) was 7.6%. The YOY growth rates during 2007 and 2008 were 8.6% and 11% respectively. The growth rate has increased over the last 5 years, the growth of 8.5% 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 2007 and 2008, the Commission considers the growth of 8.5% is reasonable.

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

Year	Energy (MU)
2008-09	467
2009-10	507
2010-11	550

#### 4.4.4 Public Lighting

The consumption of public lighting accounts to about 1% of total energy sales of the company. MGVCL has projected the sales for the control period for this category as below:

2008-09	-	56 MU
2009-10	-	60 MU
2010-11	-	63 MU

The company has considered a growth rate of 6.3% based on the growth during the year 2008.

The growth of this category over a five-year period (2003 to 2007) and 3 year period (2005-07) were 3% and 5.8% respectively. The YOY growth during 2007 and 2008 was 7.7% and 6.3% respectively. The growth of this category is fluctuating over the years and the growth of 6.3% is considered reasonable as it is inline with the past growth.

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

2008-09 – 56 MU
2009-10 – 60 MU
2010-11 – 63 MU

#### 4.4.5 Agricultural (Irrigation) Pumpsets

The consumption by agricultural (irrigation) pumpsets accounts to about 15% 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 unmetered, MGCVCL has projected the energy sales to this category during the control period as below:

2008-09	-	824 MU
2009-10	-	907 MU
2010-11	-	989 MU

The company has considered a nominal growth of 2% for the control period. The growth rate applied for the metered category only. Un-metered category are not being added. The consumption for unmetered category 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 in MGCVCL area would be as in Table 4.5 below:

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

<i>Release of pending Agriculture Connections</i>	Unit	FY 2008-09	FY 2009-10	FY 2010-11
Number of New Agriculture Connections	Nos.	5333	5333	5333
Cumulative number of Connections	Nos.	5333	10667	16000
Additional sales	MUs	77	154	231
Additional Load Added	HP	45333	90667	136000
Additional Load Added	MW	34	68	101

As mentioned the growth approved is only for metered connections which are varying between 1,000 to 2,000 / annum during the last 5 years. The other connections are unmetered which are 26276 and no more unmetered connections are being added.

The growth rate of energy sale during the 5 years and 3 years periods and also during 2006-07 were negative at (-2.6%), (-) 1.5% and (-) 2.7% respectively. The growth during 2007-08 was 2.3%. The negative growth might be due to correction of normative consumption levels. The company has assumed a growth of 2% during the control period. The number of connections released mostly depends on Government policy and connections being released are only 2 to 3 thousands per year; the nominal growth assumed by the company is approved.

The consumption by unmetered connections is assessed at 1700 kWh/HP/annum as specified by the Commission. The Commission approves the growth of 2% for metered connections and the norm of 1700 kWh/HP/annum for unmetered 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 by unmetered category. In the present MYT petition, MGCVCL has furnished the average



agricultural consumption of metered pumpsets at 654 to 694 units/ HP/ year. A consumption level of 650 units /HP/year is adopted for new connections – which have to be metered connections – to be released under “Golden Goals”. The 650 kWh/HP/Year is also the average consumption of metered connections in the four DISCOMs which is adopted in all the DISCOMs to arrive at the consumption of additional connections being released.

The agricultural consumption for the control period is given in Table 4.6 below:

**Table 4.6**  
**Agricultural consumption for the control period**

Sl. N.	Metered / Unmetered	Number of Consumers	Connected load (HP)	Energy Consumed (MU)
<b>Year 2008-09</b>				
1.	Unmetered	26542	280684	477
2.	Metered	32537	367687	255
3.	New Connection (metered).	5333	45333	29
<b>4.</b>	<b>Total</b>	<b>64412</b>	<b>593704</b>	<b>761</b>
<b>2009-10</b>				
1	Un-metered	26542	280684	477
2	Metered	33097	387416	261
3	New Connected (metered)	10667	90667	59
<b>4</b>	<b>Total</b>	<b>70306</b>	<b>758767</b>	<b>797</b>
<b>2010-11</b>				
1	Un-metered	26542	280684	477
2	Metered	33667	408202	267
3	New Connected (metered)	16000	136000	88
<b>4</b>	<b>Total</b>	<b>76209</b>	<b>824886</b>	<b>832</b>

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

Year	Energy (MU)
2008-09	761
2009-10	797
2010-11	832

#### 4.4.6 Public Water Works

The energy sales to this category accounts to about 2.6% of total energy sales of the company. MGVL has projected the sales to this category during the control period as below:

Year	Energy (MU)
2008-09	125 MU
2009-10	133 MU
2010-11	141 MU

The company assumed a growth of 6.3% during the control period.





The 5 year CAGR (2003-07) of this category was 6.6%, but later it came down to 5.2% during the three year period between 2004-05 and 2006-07 and 4.9% during 2006-07 and again increased to 9.9% during 2007-08. Looking at the spurt in growth during 2007-08, the company assumed a growth of 6.3% during the control period. The spurt is stated to be due to increase in connected load, the growth of 6.3% is inline with growth during 5-year period.

The growth of 6.3% is more appropriate considering the priority given for urban and rural water supply and hence approved.

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

Year	Energy (MU)
2008-09	125
2009-10	133
2010-11	141

#### 4.4.7 Industrial HT

The sales to this category accounts to about 34% of the total sales of the company.

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

2008-09	1823 MU
2009-10	1974 MU
2010-11	2138 MU

The consumption is assessed by the company at a growth rate of 8.3% during the control period, based on expected growth.

It is submitted by MGVCL that there has been huge increase in industrial activity in MGVCL area leading to very high growth rates in demand from this category, a growth of 17.1% was recorded during 2006-07, in 2007-08 the growth was lower, but still was very robust at 8.4%. Even during the past three year period the growth was 8.3%. Hence the growth in demand is expected to stabilize as the new capacity has already been added during 2006-07.

The Commission considers the growth rate of 8.3% during the control period proposed by MGVCL is reasonable.

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

Year	Energy (MU)
2008-09	1823
2009-10	1974
2010-11	2138

#### 4.4.8 Railway Traction

The sales to this category accounts to about 6.0% of total energy sales. MGVCL has projected sales growth at the rate of 5.3% during control period as below:

2008-09	315 MU
2009-10	332 MU
2010-11	349 MU

The CAGR recorded during the 2005-2007 was 4.8% and YOY growth during 2007 and 2008 are 5.3% and 7% respectively.

Hence the Commission considers that a growth of 5.3% assumed by MGVCL is reasonable as it is inline with the growth during the last three years.

Accordingly the Commission approves the energy sales to Railway Traction during the control period as below:

2008-09	315 MU
2009-10	332 MU
2010-11	349 MU

#### 4.4.9 Total Energy Sales

Total energy sales as projected by MGVCL 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 MGVCL			Energy Sales approved by the Commission		
		2008-09	2009-10	2010-11	2008-09	2009-10	2010-11
	<b>LT consumers</b>						
1.	Residential	1329	1488	1658	1329	1488	1658
2.	Commercial	452	506	567	452	506	567
3.	Industrial LT	467	507	550	467	507	550
4.	Public Lighting	56	60	63	56	60	63
5.	Agriculture	824	907	989	761	797	832
6.	Public water works	125	133	141	125	133	141
	<b>LT Total</b>	<b>3253</b>	<b>3601</b>	<b>3968</b>	<b>3190</b>	<b>3491</b>	<b>3811</b>
	<b>H.T Consumers</b>						
7.	Industrial HT	1823	1974	2138	1823	1974	2138
8.	Railway Traction	315	332	349	315	332	349
9.	<b>HT Total</b>	<b>2138</b>	<b>2306</b>	<b>2487</b>	<b>2138</b>	<b>2306</b>	<b>2487</b>
10.	<b>Grand Total</b>	<b>5391</b>	<b>5907</b>	<b>6455</b>	<b>5328</b>	<b>5797</b>	<b>6298</b>

#### 4.5 Distribution Losses

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

	2006-07 (Appr) (Act.)		2007-08 (Revised)	2008-09 (Projected)	2009-10 (Projected)	2010-11 (Projected)
Distribution Loss (%)	18.24	15.10	15.86	15.39	14.89	14.39



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

Year	Losses Projected by MGVCL	Approved by the Commission	Actual now furnished
2006-07	18.24	18.24	15.10
2007-08	16.74	16.74	15.86

The DISCOM has reduced the loss levels considerably during 2006-07 and 2007-08 compared to targets fixed by the Commission during the years at 18.24% and 16.74%.

Having done such an improvement the DISCOM has now revised the losses during 2007-08 to 15.86%. Having made commendable efforts to reduce the losses from 18.24% to 15.10% during 2006-07, there is no justification for increase in losses during 2007-08. With the same efforts that it had made during 2006-07, it must be possible to reduce the losses by 1% during 2008-09 and the next two years.

Approving the loss level of 15.86% for 2007-08, the Commission approves the loss trajectory for the control period 2008-09 to 2010-11 as below in Table 4.8.

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

Year	Loss levels approved by the Commission (%)
2007-08	15.86
2008-09	15.00
2009-10	14.00
2010-11	13.00

The MGVCL shall maintain the commendable work it has done during the earlier years in reducing the distribution losses and reduce the losses to the level fixed above.

#### 4.6 Energy Requirement

The total energy requirement of the Distribution Company to meet the total demand of 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 MGVCL			Approved by the Commission		
		2008-09	2009-10	2010-11	2008-09	2009-10	2010-11
1	Estimated Energy Sales	5392	5906	6456	5328	5797	6298
2	Distribution loss (%)	980 (15.39)	1033 (14.89)	1085 (14.39)	940 (15.00)	944 (14.00)	941 (13.00)
3	Energy input required to the distribution system	6372	6939	7541	6268	6741	7239



#### 4.7 Energy Balance

The summary of Energy balance projected by MGVCCL.

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

(MU)

Sl.No.	Particulars	2008-09	2009-10	2010-11
1.	Energy Demand	5392	5906	6456
2.	Distribution loss (%)	15.39%	14.89%	14.39%
3.	Energy Requirement	6373	6939	7541
4.	Transmission loss (%)	4.09%	4.04%	3.99%
5.	Total units to be input to the Tr. System	6644	7231	7854
6.	Pooled losses	134	123	129
7.	Total input for power	6778	7354	7983
8.	Energy drawn and billed by GUVNL	6778	7354	7983

**Commission's view:**

The Commission has examined the energy balance worked out by MGVCCL. 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/WBREB. The transmission loss in GETCO system and pooled loss are accepted as projected by MGVCCL 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 as 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	5328	5797	6298
2.	Distribution loss (%)	(15.00)	(14.00)	(13.00)
3.	Energy requirement	6268	6741	7239
4.	Transmission loss	267	283	301
5.	Loss (%)	4.09	4.04	3.99
6.	Energy input to transmission system	6535	7024	7540
7.	Pooled loss	134	123	129
<b>8.</b>	<b>Total energy requirement</b>	<b>6669</b>	<b>7147</b>	<b>7669</b>

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

**Table 4.12**  
**Total energy requirement approved by the Commission**

(MU)

Year	As projected by MGVCCL	Approved by the Commission
2008-09	6778	6669
2009-10	7354	7147
2010-11	7983	7669



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

The quantum of purchase from various generating stations and the costs are discussed later.

#### 4.8 Revenue Requirement – 2008-09 to 2010-11

MGVCL has projected the Aggregate Revenue Requirement for the control period at Rs.232338 lakh, Rs.273250 lakhs and Rs.297314 lakhs for the year 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	183563	217015	233815
2.	O & M Costs	33201	36521	40173
3.	Depreciation	5923	7421	8756
4.	Interest on Loans & Finance Charges	7959	9246	10261
5.	Interest on Working Capital	2320	2595	2862
6.	Other Debits	113	118	124
7.	Extraordinary Items	4	4	4
8.	Provision for bad debts	221	248	275
9.	<i>Less Interest &amp; Expenses Capitalised</i>	4463	4463	4463
10.	Sub Total (1 to 8)-9	228840	268705	291807
11.	Return on Equity	6103	7133	8077
12.	Provision for Tax	166	183	201
13.	Total Expenditure	235109	276021	300085
14.	Less: non tariff income	2771	2771	2771
15.	<b>Aggregate revenue requirement</b>	<b>232338</b>	<b>273250</b>	<b>297314</b>

#### 4.9 The Projected expenses by MGVCL and Decisions of the Commission

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

##### 4.9.1 Power Purchase Cost

As discussed in para 4.6 and 4.7 above, the energy requirement of MGVCL 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**  
**Energy Requirement**

Year	Energy at Interface point	Energy at Generation Bus
2008-09	6268	6669
2009-10	6741	7147
2010-11	7239	7669

The cost of power purchase estimated by MGVCL 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 DISCOMs with GUVNL.

#### 4.9.1.1 Allocation of Capacities / PPAs

It is submitted by the MGVCL in the MYT petition that the company has been currently allocated the PPAs as per the scheme as given in Table 4.15 below. Some of the stations listed are not currently commissioned, but are expected online during the control period.

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

<b>Allocated Generation Capacity from Stations</b>	<b>MW</b>
Gandhi Nagar V	55
Sikka TPS	60
Kutch Lignite I to III	108
Kutch Lignite IV	56
Utran Gas Based	46
Dhuvaran Gas Based – Stage I	11
Dhuvaran Gas Based – Stage II	11
Utran Extension*	94
Essar	90
GPEC	98
GSEG	90
GIPCL Expansion	63
GSPC – Pipavav*	90
NPC – Kakra par*	31
NPC – Tarapur – 3&4	69
NTPC – Vindya Chal III	67
NTPC – KAWAS	47
NTPC – Kahalgoan	125
NTPC – Sipat Stage II	68
SSNNL – Hydro	116
NTPC – North Karanpura*	19
Sipat – Stage – I*	54
Wind Forms (Old policy)	3
Wind Form (New policies)	92
Bagasse	2
Adani Power*	150
Aryan*	60

\*To be commissioned.

#### 4.9.1.2 Merit Order Dispatch

It is submitted by MGVCL that in order to minimize the power purchase cost, it has worked out a comprehensive merit order dispatch (MOD) following the same principles in accordance with the previous tariff order of the Commission from the dispatch available from its capacity / PPA allocated generating stations.

The Nuclear Power Corporation (NPC) power plants and hydro power plants viz., SSNL, Ukai hydro, NPC Tarapore and Kakrapara 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 based on the merit order (based on the variable cost) of each generating unit / stations.

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

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

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

MGVCL: Power Purchase for FY 2008-09	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)
Gandhinagar V	55	355	355	2054	5845	470	0	0	8369	2.35
Sikka TPS	60	352	106	2254	2184	496	0	0	4935	4.67
Kutch Lignite I to III	108	578	578	8192	6579	874	0	0	15644	2.70
Kutch Lignite IV	56	322	322	3175	3439	454	0	0	7068	2.19
Utran Gas Based	46	302	280	1540	5091	409	0	0	7039	2.52
Dhuvaran Gas Based – Stage – I	11	69	21	443	407	94	0	0	944	4.54
Dhuvaran Gas Based – Stage – II	11	76	23	626	797	100	0	0	1522	6.71
ESSAR	90	612	489	3332	9838	809	0	191	1469	2.90
GPEC	98	669	535	6888	13211	884	0	209	21191	3.96
GSEG	90	616	616	6677	9106	814	0	0	16597	2.70
GIPCL, Expansion	63	203	203	2190	3545	268	0	0	6003	2.96
NPC – Kakrapar	31	202	202	0	4106	267	104	73	4550	2.25
NPC – Tarapur – 3&4	69	459	459	0	12527	606	236	165	13534	2.95
NTPC – VINDHYACHAL – III	67	477	477	2996	4466	630	246	0	8337	1.75
NTPC – KAWAS	47	333	100	2604	3084	440	172	120	6419	6.43
NTPC – Kahalgaon	125	809	809	7521	9789	1069	417	0	18796	2.32
NTPC – Sipat Stage-II	68	442	442	0	2389	585	228	0	3202	0.72
SSNNL – Hydro	116	144	144	0	2943	1069	74	0	4086	2.85
Sipat Stage – I	54	350	350	2523	5951	463	180	0	9117	2.60
Wind Farms (Old Policy)	3	6	6	3	111	4	0	0	118	1.87
Wind Farms (New Policy)	66	132	132	0	4456	87	0	0	4543	3.44
Bagasse	2	15	15	2	439	3	0	0	444	3.04
RELIANCE INDUSTRIES LTD. NARODA		57	57	0	1323	75	0	0	1398	2.47
UNITED PHOSPHOROUS LTD. JHAGADIA		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 Anlkeshwar		15	15	0	293	20	0	0	313	2.03
ONGC, Hazira		6	6	0	105	7	0	0	113	2.03
A/s ADANI EXPORT (PHILIPS CARBON)		19	19	0	380	25	0	0	406	2.14
M/s Arvind Mills LTD		0	0	0	0	0	0	0	0	0.13
<b>Total</b>	<b>4543</b>	<b>7637</b>	<b>6778</b>	<b>53019</b>	<b>112772</b>	<b>11048</b>	<b>1657</b>	<b>757</b>	<b>179254</b>	<b>2.64</b>



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

DGVCL: Power Purchase for FY 2009-10	Capacity allocated to Discom (MW)	Units Available (MU)	Units Dispatched (MU)	Fixed Cost (Rs Lakhs)	Variable Cost (Rs. Lakhs)	Transmission Charges (Rs. Lakhs)	PGCIL Charge (Rs. Lakhs)	Incentive (Rs. Lacs)	Total Cost (Rs .Lakhs)	Per Unit Cost (Rs./ Unit)
Gandhinagar V	55	355	107	2054	1753	481	0	0	4288	4.02
Sikka TPS	60	352	106	2254	2184	508	0	0	4946	4.68
Kutch Lignite I to III	108	578	578	8192	6579	894	0	0	15664	2.71
Kutch Lignite IV	56	322	322	3175	3439	465	0	0	7078	2.20
Utran Gas Based	46	302	91	1540	1647	418	0	0	3605	3.98
Dhuvaran Gas Based – Stage – I	11	69	21	443	407	96	0	0	946	4.55
Dhuvaran Gas Based –Stage – II	11	76	23	626	797	102	0	0	1524	6.72
Utran Extension	94	461	138	4650	2917	862	0	0	8428	6.10
ESSAR	90	612	489	3332	9838	827	0	191	14188	2.90
GPEC	98	669	535	6888	13211	904	0	209	21212	3.97
GSEG	90	616	492	6677	7285	832	0	0	14794	3.00
GIPCL, Expansion	63	405	324	4380	5672	548	0	0	10600	3.27
NPC – Kakrapar	31	202	202	0	4106	274	109	73	4562	2.26
NPC – Tarapur – 3&4	69	459	459	0	12527	620	248	165	13560	2.96
NTPC – VINDHYACHAL – III	67	477	477	2996	4466	645	258	0	8364	1.75
NTPC – KAWAS	47	333	100	2604	3084	450	180	120	6438	6.45
NTPC – Kahalgoan	125	809	809	7521	9789	1094	438	278	19119	2.36
NTPC – Sipat Stage – II	68	442	442	0	2389	598	239	0	3227	0.73
SSNNL – Hydro	116	144	144	0	2943	1094	78	0	4114	2.87
Sipat Stage – I	54	350	105	3784	1785	473	189	0	6232	5.93
Wind Farms (Old Policy)	3	6	6	0	96	4	0	0	101	1.83
Wind Farms (New Policy)	79	138	138	0	4649	106	0	0	4756	3.45
Bagasse	2	13	13	0	384	3	0	0	386	3.02
APPL	150	972	925	13991	13681	188	0	0	27860	3.01
Aryan	60	194	194	3395	405	38	0	0	3838	1.97
RELIANCE INDUSTRIES LTD. NARODA	0	57	57	0	1323	76	0	0	1400	2.48
UNITED PHOSPHOROUS LTD. JHAGADIA	0	0	0	0	0	0	0	0	0	0.14
GUJARAT ALKALIS & CHEML. LTD. BARUCH	0	19	19	0	370	25	0	0	396	2.10
ONGC Anlkeshwar	0	15	15	0	293	21	0	0	314	2.04
ONGC, Hazira	0	6	6	0	105	8	0	0	113	2.04
M/s ADANI EXPORT (PHILIPS CARBON)	0	19	19	0	380	26	0	0	406	2.14
M/s Arvind Mills LTD	0	0	0	0	0	0	0	0	0	0.14
<b>Total</b>	<b>4726</b>	<b>8470</b>	<b>7354</b>	<b>78501</b>	<b>118504</b>	<b>12678</b>	<b>1740</b>	<b>1035</b>	<b>212459</b>	<b>2.89</b>





**Table 4.18**

**Power Purchase for FY 2010-11**

DGVCL: Power Purchase for FY 2010-11	Capacity allocated to Discom (MW)	Units Available (MU)	Units Dispatched (MU)	Fixed Cost (Rs Lakhs)	Variable Cost (Rs. Lakhs)	Transmission Charges (Rs. Lakhs)	PGCIL Charges (Rs. Lakhs)	Incentive (Rs. Lakhs)	Total Cost (Rs Lakhs)	Per Unit Cost (Rs./ Unit)
Gandhinagar V	55	355	355	2054	5845	564	0	0	8463	2.38
Sikka TPS	60	352	106	2254	2184	596	0	0	5034	4.77
Kutch Lignite I to III	108	578	578	8192	5679	1049	0	0	15719	2.73
Kutch Lignite IV	56	322	322	3175	3439	545	0	0	7159	2.22
Utran Gas Based	46	302	91	1540	1647	491	0	0	3678	4.06
Dhuvaran Gas Based – Stage – I	11	69	21	443	407	113	0	0	963	4.63
Dhuvaran Gas Based –Stage – II	11	76	23	626	797	120	0	0	1542	6.79
Utran Extension	94	637	191	6454	4037	1011	0	0	11502	6.02
ESSAR	90	612	489	3332	9838	971	0	191	14331	2.93
GPEC	98	669	535	6888	13211	1061	0	209	21368	4.00
GSEG	90	616	616	6677	9106	977	0	0	16760	2.72
GIPCL, Expansion	63	405	122	4380	2127	643	0	0	7150	5.88
NPC – Kakrapar	31	202	202	0	4106	321	104	73	4604	2.28
NPC – Tarapur – 3&4	69	459	459	0	12527	728	236	165	13655	2.98
NTPC- VINDHYACHAL- III	67	477	477	2996	4466	757	245	0	8463	1.77
NTPC – KAWAS	47	477	477	2996	4466	757	245	0	8463	21.77
NTPC – Kahalgaon	125	809	809	7521	9789	1283	416	291	19300	2.39
NTPC – Sipat Stage – II	68	442	442	0	2389	702	228	0	3319	0.75
SSNNL – Hydro	116	144	144	0	2943	1283	74	0	4300	3.00
NTPC North, Karanpura	19	125	125	1349	2121	198	64	0	3733	2.99
Sipat Stage – I	54	350	111	3784	1884	555	180	0	6403	5.78
Wind Farms (Old Policy)	3	6	6	0	96	5	0	0	101	1.84
Wind Farms (New Policy)	79	161	161	0	5423	146	0	0	5569	3.46
Bagasse	2	15	15	0	439	4	0	0	443	3.03
APPL	150	972	972	13681	14380	220	0	0	28282	2.91
Aryan	60	389	389	6560	811	88	0	0	7459	1.92
RELIANCE INDUSTRIES LTD. NARODA	0	57	57	0	1323	90	0	0	1413	2.50
UNITED PHOSPHOROUS LTD. JHAGADIA	0	0	0	0	0	0	0	0	0	0.16
GUJARAT ALKALIS & CHEML. LTD. BARUCH	0	19	19	0	370	30	0	0	400	2.13
ONGC Anlkeshwar	0	15	15	0	293	24	0	0	317	2.06
ONGC, Hazira	0	6	6	0	105	9	0	0	114	2.06
M/s ADANI EXPORT (PHILIPS CARBON)	0	19	19	0	380	30	0	0	411	2.16
M/s Arvind Mills LTD	0	0	0	0	0	0	0	0	0	0.16
<b>Total</b>	<b>5015</b>	<b>10022</b>	<b>7983</b>	<b>84755</b>	<b>126338</b>	<b>16065</b>	<b>1718</b>	<b>10482</b>	<b>29924</b>	<b>2.88</b>



#### 4.9.1.4 Transmission Charges

The transmission charges payable to GETCO and PGCIL as projected by MGVCCL are given in Table 4.19 below. It is stated that the transmission charges to GETCO are calculated as proposed 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	11048	12678	16065
PGCIL charges	1657	1740	1718
<b>Total Transmission charges</b>	<b>12705</b>	<b>14418</b>	<b>17783</b>

#### 4.9.1.5 GUVNL Cost

It is submitted that GUVNL is entrusted with the operation of supplying power to bulk licensees and the overall coordination between its subsidizing companies. It also undertakes the function of raising and managing the overall loans portfolio 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 Kandla Port Trust, TPL (Surat), TPL (Ahmedabad) has been considered. Since TPL is likely to have their own 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 also been assumed that GUVNL shall be able to find a suitable replacement 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 on year.

It is also stated that 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 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 revenues from trading. The projections of GUVNL sale to licensees and trading and GUVNL cost allocation for the control period and the revenue from sale of power are given in Table 4.20 and 4.21 below:

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

Sale of Licensees-	Unit Rate	2007-08	2008-09	2009-10	2010-11
Total MUs Sold to AEC & SEC	Rs. 2.78/Unit	4530	4530	2619	0
Total MUs Sold to Kandla Port Trust	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</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
Total Expenses (B)	187772	218118	206931	210333
<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 basis of the power purchase for the particular year as given in Table 4.22 below:

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

(Rs. Lakhs)

Cost allocation	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 MGCVCL 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**

<b>Annual Recurring Cost of E-Urja</b>	<b>(Rs. Lakhs)</b>
Depreciation	2826
Interest Cost	2136
AMC	960
<b>Total Annual Expenditure</b>	<b>5923</b>
Percentage of total licensees with Company	12.1%
Allocation to the company	717

The total cost of power purchase for the company for the control period comes to the power purchase cost 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 MGCVCL</b>	<b>2008-09</b>	<b>2009-10</b>	<b>2010-11</b>
Power purchase cost from merit order	179254	212459	229924
GUVNL Cost + E-Urja charge	4309	4556	3891
<b>Total</b>	<b>183563</b>	<b>217015</b>	<b>233815</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 require 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.

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

Apart from the tariff payment GUVNL shall also charge transmission charges and a margin to cover its own operating expenses. 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 all 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, excluding the distribution areas of the three licensees have come under the control of the four newly created DISCOMs. The DISCOMs do not have uniform consumer load mix. PGVCL and UGVCL have higher percentage of Agricultural load comparative 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 are some changes in the allocation of PPAs / stations to MGVCL 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. It is understood the allotment of PPAs / stations is not firm. GUVNL is directed to furnish the firm allocation of PPAs to the four DISCOMs.

The intention of the allocation is to have uniform tariff to different categories of consumers in all the four distribution company areas which have different consumer load mix as suggested in the Tariff Policy.

**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 assignments 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 appropriate during the transition period and approves. However GUVNL is directed to furnish firm allocation of PPAs to the DISCOMs.



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

<b>Allocated Generation Capacity from Stations</b>	<b>MW</b>
Gandhi Nagar V	55
Sikka TPS	60
Kutch Lignite I to III	108
Kutch Lignite IV	56
Utran Gas Based	46
Dhuvaran Gas Based – Stage I	11
Dhuvaran Gas Based – Stage II	11
Utran Extension*	94
Essar	90
GPEC	98
GSEG	90
GIPCL Expansion	63
GSPC – Pipavav*	90
NPC – Kakra par	31
NPC – Tarapur – 3&4	69
NTPC – Vindya Chal III	67
NTPC – KAWAJ	47
NTPC – Kahalgoan	125
NTPC – Sipat Stage II	68
SSNNL – Hydro	116
NTPC – North Karanpura*	19
Sipat – Stage – I*	54
Wind Forms (Old policy)	3
Winf Form (New policies)	92
Bagasse	2
APPL*	150
Aryan*	60
<b>Total</b>	<b>1775</b>

\*stations to be commissioned.

The total allocation in MW works out to 1775 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 MGVL. The energy required to be purchased by MGVL is discussed in para 4.7. The quantum of energy required to be purchased by MGVL as approved by the Commission as given in Table 4.11.

### **Purchase in Merit Order**

The generating stations are organized in merit order based on variable cost of each station. The stations of NPC and Hydro Stations are must run stations. The fixed and variable costs of GSECL stations for the control period as approved in the Tariff Order of GSECL for control period. The fixed and variable costs during the period April to September 2007 of 2007-08 are considered for central generating stations and IPPs. For a new generating

units / stations now added in the PPAs allocated, the quantum and costs as provided by MGVCL / GUVNL in MYT petition 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.	NTPC-Sipat Stage-II	0.54
2.	NTPC-Vindhyachal Stage-III	0.94
3.	Kutch Lignite – IV	1.07
4.	Kutch Lignite I to III	1.14
5.	NTPC-Kahalgaon	1.21
6.	APPL	1.479
7.	GSEG	1.48
8.	Gandhinagar TPS	1.64
9.	GIPCL – Expansion	1.75
10.	Utran gas based	1.82
11.	Dhuvaran Gas based Stage-I	1.95
12.	Essar	2.01
13.	NPC Kakrapara	2.03
14.	Sikka TPS	2.07
15.	Aryan	2.084
16.	GPEC	2.47
17.	NPC Tarapur 3 & 4	2.73
18.	NTPC-Kawas	3.09
19.	Dhuvaran Gas based Stage-II	3.51

**Power Purchase – 2008-09 to 2010-11**

Power purchase for the control period (2008-09 to 2010-11) is based on energy requirement of MGVCL as approved by the Commission. The fixed and variable costs of GSECL stations for the control period are as approved by the Commission in the Tariff Order of GSECL for the control period 2008-09 to 2010-11. For central generating stations and IPPs the fixed and variable costs considered are as per the average of the bills for the first half (April to September 2007) of 2007-08. For other stations / purchases also the fixed and variable costs are taken as proposed by MGVCL / GUVNL in the MYT petition. Any variation in the fixed charges and variable costs during the control period shall be claimed by MGVCL / GUVNL under FPPPA formula approved by the Commission. 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 MGVL-Approved by the Commission for the year 2008-09**

Station	Allocated Capacity	Energy Available (MU)	Energy Despatchable (MU)	Shared fixed cost (Rs. Lakhs)	Unit variable cost (Rs./KWH)	Total variablecost (Rs. lakhs)	Incentives
<b>GSECL</b>							
Gandhinagar V	55	403	403	2380	1.47	5924	
Sikka TPS	60	352	250	2599	1.99	4975	
Kutch Lignite I to III	108	598	598	8095	1.07	6399	
Kutch Lignite IV	56	344	344	6141	0.98	3371	
Utran Gas Based	46	356	30	1774	2.16	648	
Dhuvaran Gas – I	11	84	11	535	2.21	243	
Dhuvaran Gas-II	11	84	11	697	2.21	243	
Tax				488			
<b>Sub-Total</b>	<b>347</b>	<b>2221</b>	<b>1647</b>	<b>22709</b>		<b>21803</b>	<b>0</b>
<b>IPPS</b>							
ESSAR	90	612	612	3332	2.01	12301	191
GPEC	98	669	492	6888	2.47	12152	209
GSEG	90	616	616	6677	1.48	9117	
GIPCL, Expansion	63	203	203	2190	1.75	3553	
<b>Sub-Total</b>	<b>341</b>	<b>2100</b>	<b>1923</b>	<b>19087</b>		<b>37123</b>	<b>400</b>
<b>Central Station</b>							
NPC – Kakrapar	31	202	202	0	2.03	4101	73
NPC – Tarapur – 3&4	69	459	459	0	2.73	12531	165
NTPC – VINDHYACHAL – III	67	477	477	2996	0.94	4484	
NTPC – KAWAS	47	333	15	2604	3.09	464	120
NTPC – Kahalgoan	125	809	809	7521	1.21	9789	
NTPC – Sipat Stage – II	68	442	442	0	0.54	2387	
SSNNL – Hydro	116	144	144	0	2.05	2952	
Sipat Stage – I	54	350	350	2523	1.70	5950	
<b>Sub-Total</b>	<b>577</b>	<b>3216</b>	<b>2898</b>	<b>15644</b>		<b>42656</b>	<b>358</b>
<b>Others</b>						0	
Wind Farms (Old Policy)	3	6	6	3	1.75	105	
Wind Farms (New Policy)	66	132	132	0	3.37	4448	
Bagasse	2	15	15	2	3.00	450	
RELIANCE INDUSTRIES LTD. NARODA		57	48	0	2.34	1123	
UNITED PHOSPHOROUS LTD. JHAGADIA		0	0	0	0	0	
GUJARAT ALKALIS & CHEMIL. LTD, BARUCH		19	0	0	1.97	0	
ONGC Anlkeshwar		15	0	0	1.90	0	
ONGC, Hazira		6	0	0	1.90	0	
A/s ADANI EXPORT (PHILIPS CARBON)		19	0	0	2.00	0	
M/s Arvind Mills LTD		0	0	0	0	0	
<b>Sub-Total</b>	<b>71</b>	<b>269</b>	<b>201</b>	<b>5</b>		<b>6126</b>	<b>0</b>
<b>Total</b>	<b>1336</b>	<b>7806</b>	<b>6669</b>	<b>57445</b>		<b>107709</b>	<b>758</b>





**Table 4.28**

**Power Purchase Costs of MGVL - Approved by the Commission for the year 2009-10**

station	Capacity allocated to the Discom	Units Available (MU)	Units Despatchable (MU)	fixed cost (Rs. Lakhs)	Unit variable cost (Rs./KWH)	Total variable cost (Rs. lakhs)	Incentives
<b>GSECL</b>							
Gandhinagar V	55	403	50	2394	1.47	735	
Sikka TPS	60	352	50	2633	1.99	995	
Kutch Lignite I to III	108	598	598	8210	1.07	6399	
Kutch Lignite IV	56	344	344	5194	0.98	3371	
Utran Gas Based	46	356	30	1756	2.16	648	
Dhuvaran Gas – I	11	84	10	523	2.21	221	
Dhuvaran Gas-II	11	84	10	693	2.21	221	
Utran Extension	94	458	48	4443	1.86	893	
Tax				590			
<b>Sub-Total</b>	<b>441</b>	<b>2679</b>	<b>1140</b>	<b>26436</b>		<b>13483</b>	<b>0</b>
<b>IPPs</b>						0	
ESSAR	90	612	612	3332	2.01	12301	191
GPEC	98	669	398	6888	2.47	9831	209
GSEG	90	616	616	6677	1.48	9117	
GIPCL, Expansion	63	405	405	4380	1.75	7088	
<b>Sub-Total</b>	<b>341</b>	<b>2302</b>	<b>2031</b>	<b>21277</b>		<b>38336</b>	<b>400</b>
<b>Central Station</b>						0	
NPC – Kakrapar	31	202	202	0	2.03	4101	73
NPC – Tarapur – 3&4	69	459	459	0	2.73	12531	165
NTPC – VINDHYACHAL – III	67	477	477	2996	0.94	4484	
NTPC – KAWAS	47	333	2	2604	3.09	62	
NTPC – Kahalgoan	125	809	809	7521	1.21	9789	278
NTPC – Sipat Stage – II	68	442	442	0	0.54	2387	
SSNNL – Hydro	116	144	144	0	2.05	2952	
Sipat Stage – I	54	350	50	3784	1.70	850	
<b>Sub-Total</b>	<b>577</b>	<b>3216</b>	<b>2585</b>	<b>16905</b>		<b>37155</b>	<b>516</b>
<b>Others</b>						0	
Wind Farms (Old Policy)	3	6	6	0	1.75	105	
Wind Farms (New Policy)	79	138	138	0	3.37	4651	
Bagasse	2	13	13	0	3.00	390	
APPL	150	972	972	13991	1.479	14376	
Aryan	60	194	194	3395	2.084	4043	
RELIANCE INDUSTRIES LTD. NARODA		57	57	0	2.34	1334	
UNITED PHOSPHOROUS LTD. JHAGADIA		0	0	0	0	0	
GUJARAT ALKALIS & CHEML. LTD. BARUCH		19	11	0	1.97	217	
ONGC Ankeshwar		15	0	0	1.90	0	
ONGC, Hazira		6	0	0	1.90	0	
A/s ADANI EXPORT (PHILIPS CARBON)		19	0	0	2.00	0	
M/s Arvind Mills LTD		0	0	0	0	0	
<b>Sub-Total</b>	<b>294</b>	<b>1439</b>	<b>1391</b>	<b>17386</b>		<b>25115</b>	<b>0</b>
<b>Grand Total</b>	<b>1653</b>	<b>9636</b>	<b>7147</b>	<b>82004</b>		<b>114088</b>	<b>916</b>



**Table 4.29**  
**Power Purchase Costs of MGVCL-Approved by the Commission for the year 2010-11**

Station	Allocated Capacity	Energy Available (MU)	Energy Despatchable (MU)	Shared fixed cost (Rs. Lakhs)	Unit variable cost (Rs./KWH)	Total variablecost (Rs. lakhs)	Incentives
<b>GSECL</b>							
Gandhinagar V	55	403	113	2419	1.47	1661	
Sikka TPS	60	352	50	2712	1.99	995	
Kutch Lignite I to III	108	598	598	8284	1.07	6399	
Kutch Lignite IV	56	344	344	5053	0.98	3371	
Utran Gas Based	46	356	50	1744	2.16	1080	
Dhuvaran Gas – I	11	84	20	510	2.21	442	
Dhuvaran Gas-II	11	84	20	683	2.21	442	
Utran Extension	94	632	204	6210	1.86	3794	
Tax				617			
<b>Sub-Total</b>	<b>441</b>	<b>2853</b>	<b>1399</b>	<b>28232</b>		<b>18184</b>	<b>0</b>
<b>IPPs</b>							
ESSAR	90	612	612	3332	2.01	12301	191
GPEC	98	669	650	6888	2.47	16055	209
GSEG	90	616	616	6677	1.48	9117	
GIPCL, Expansion	63	405	50	4380	1.75	875	
GSPC PIPAVAV	90	30	5	246	2.12	106	
<b>Sub-Total</b>	<b>431</b>	<b>2332</b>	<b>1933</b>	<b>21523</b>		<b>38454</b>	<b>400</b>
<b>Central Station</b>							
NPC – Kakrapar	31	202	202	0	2.03	4101	73
NPC – Tarapur – 3&4	69	459	459	0	2.73	12531	165
NTPC – VINDHYACHAL – III	67	477	477	2996	0.94	4484	
NTPC – KAWAS	47	333	0	2404	3.09	0	
NTPC – Kahalgaon	125	809	809	7521	1.21	9789	291
NTPC – Sipat Stage – II	68	442	442	0	0.54	2387	
SSNNL – Hydro	116	144	144	0	2.05	2952	
NTPC North Karanpura	19	125	125	1349	1.70	2125	
Sipat Stage – I	54	350	50	3784	1.70	850	
<b>Sub-Total</b>	<b>596</b>	<b>3341</b>	<b>2708</b>	<b>18054</b>		<b>39218</b>	<b>529</b>
<b>Others</b>							
Wind Farms (Old Policy)	3	6	6	0	1.75	105	
Wind Farms (New Policy)	79	161	161	0	3.37	5426	
Bagasse	2	15	15	0	3.00	450	
APPL	150	972	972	13681	1.479	14376	
Aryan	60	389	389	6560	2.084	8107	
RELIANCE INDUSTRIES LTD. NARODA		57	57	0	2.34	1334	
UNITED PHOSPHOROUS LTD. JHAGADIA			0	0	0	0	
GUJARAT ALKALIS & CHEML. LTD. BARUCH		19	19	0	1.97	374	
ONGC Anleshwar		15	10	0	1.90	190	
ONGC, Hazira		6	0	0	1.90	0	
A/s ADANI EXPORT (PHILIPS CARBON)		19	0	0	2.00	0	
M/s Arvind Mills LTD		0	0	0	0	0	
<b>Sub-Total</b>	<b>294</b>	<b>1659</b>	<b>1629</b>	<b>20241</b>		<b>30361</b>	<b>0</b>
<b>Total</b>	<b>1762</b>	<b>10185</b>	<b>7669</b>	<b>88050</b>	<b>0</b>	<b>126218</b>	<b>929</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	3216	2898
2.	IPPs	2100	1923
3.	GSECL	2221	1647
4.	Others	269	201
<b>5.</b>	<b>Total</b>	<b>7806</b>	<b>6669</b>
<b>2009-10</b>			
6.	Central Sector	3216	2585
7.	IPPs	2302	2031
8.	GSECL	2679	1140
9.	Others	1439	1391
<b>10.</b>	<b>Total</b>	<b>9636</b>	<b>7147</b>
<b>2010-11</b>			
11.	Central Sector	3341	2708
12.	IPPs	2332	1933
13.	GSECL	2853	1399
14.	Others	1659	1629
<b>15.</b>	<b>Total</b>	<b>10185</b>	<b>7669</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, MGVCL 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 costs (Rs. lakhs)	Fixed costs + Variable costs (Rs. lakhs)	Incentive (Rs. lakhs)	Total cost (Rs. Lakhs)	Cost per unit (Rs. kWh)
1.	Central Station	2898	15644	42657	58301	358	58659	2.02
2.	IPPs	1923	19087	37123	56210	400	56610	2.94
3.	GSECL	1647	22709	21803	44512	0	44512	2.70
4.	Others	201	5	6126	6131	0	6131	3.05
<b>5.</b>	<b>Total</b>	<b>6669</b>	<b>57445</b>	<b>107709</b>	<b>165154</b>	<b>758</b>	<b>165912</b>	<b>2.49</b>



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

Sl. No.	Source	Energy (MU)	Fixed Cost (Rs.lakhs)	Variable costs (Rs. lakhs)	Fixed costs + Variable costs (Rs. lakhs)	Incentive (Rs. lakhs)	Total cost (Rs. Lakhs)	Cost per unit (Rs. kWh)
1.	Central Station	2585	16905	37155	54060	516	54576	2.11
2.	IPPs	2031	21277	38336	59613	400	60013	2.95
3.	GSECL	1140	26436	13483	39919	0	39919	3.50
4.	Others	1391	17386	25115	42501	0	42501	3.06
5.	Total	7147	82004	114089	196093	916	197009	2.76

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

Sl. No.	Source	Energy (MU)	Fixed Cost (Rs.lakhs)	Variable costs (Rs. lakhs)	Fixed costs + Variable costs (Rs. lakhs)	Incentive (Rs. lakhs)	Total cost (Rs. Lakhs)	Cost per unit (Rs. kWh)
1.	Central Station	2708	18054	39218	57272	529	57801	2.13
2.	IPPs	1933	21523	38454	59977	400	60377	3.12
3.	GSECL	1399	28232	18184	46416	0	46416	3.32
4.	Others	1629	20241	30361	50602	0	50602	3.10
5.	Total	7669	88050	126217	214267	929	215196	2.79

**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 MGVCCL.

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**

(Rs. Lakhs)

Sl. No.	Details	Charges		
		2008-09	2009-10	2010-11
1.	GETCO charges	10496	11727	15262
2.	PGCIL charges	1657	1740	1718
3.	Total Transmission charges	12153	13467	16980



## 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 MGCVCL 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 Kandla Port Trust and the expenditure including the power purchase cost from the stations allocated to GUVNL to supply power to the TPL and Kandla Port Trust and other expenses of GUVNL. The details are given in Table 4.35.

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

(Rs. Lakhs)

Sl. No.	Particulars	2008-09	2009-10	2010-11
1.	Revenue from sale of power to TPL, Kandla Port Trust 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	39554	40671	41853
	Total expenses	218117	206931	210333
3.	<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 Kandla Port Trust. The revenue is arrived at about Rs.2.92/kWh for supply to TPL and Rs.3.79/unit to Kandla Port Trust. The sales to TPL is reduced to 4530 MU in 2008-09, to 2619 MU in 2009-10 and nil during 2010-11 as TPL is going to have its own generation at SUGEN.

As shown in Table 4-35 above, a gap of Rs.79566 lakhs in GUVNL operations during the control period are 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 Kandla Port Trust 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 given the source of purchase and the price at which it is proposed to be purchased. 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 DGVCL. It is Rs.3.20 to 3.54 /kWh. Hence the cost of purchase of power by GUVNL for sale to TPL and Kandla Port Trust is considered reasonable.

The other operating expenses of GUVNL are as below:

(Rs. Lakhs)

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		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 annual accounts for 2007-08 the expenses 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 GUVNL clarified on 28.11.2008 that during FY 2006-07 the company reviewed various accounts showing receivable / 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 so 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 of expenses 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
<b>Total</b>	<b>16760</b>	<b>16911</b>	<b>17069</b>

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 and the functions of holding company with certain liabilities transferred to it as a holding company.

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

### GUVNL Cost Allocations approved

(Rs. Lakhs)

S.N	Particulars	2008-09	2009-10	2010-11
1	Revenue from sale of power to TPL, Kandla Port Trust 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**

Cost Allocation (Rs. lakhs)	PGVCL	UGVCL	MGVCL	DGVCL	Total
2008-09	1796	1231	603	971	4601
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	12.1%
Allocation to the company	717



### 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 MGCVL as shown in Table 4.37

**Table 4.37**

### Total power purchase costs during control period

(Rs. Lakhs)

Sl.No.	Details	2008-09	2009-10	2010-11
1	Power purchase costs	165912	197009	215196
2	Transmission costs PGCIL & GETCO	12153	13467	16980
3	GUVNL costs	1320	1386	717
4	Total power purchase cost	179385	211862	232893

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

Year	Power purchase cost (Rs. lakhs)
2008-09	179385
2009-10	211862
2010-11	232893

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 factors 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 MGCVL has clubbed all the above three expenses under the head O&M expenses stating that these are fundamental to the functioning of a distribution utility and are intertwined together impacting one another. It is further stated by MGCVL that it is in line with the methodology adopted for generation and transmission utilities by the Commission for approval of expenses.

The MGCVL 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	2005-06 (Actuals)	2006-07 (Actuals)	2007-08 (Estimated)	Projection		
				2008-09	2009-10	2010-11
O&M expenses	17205	27439	30182	33201	36521	40173

The O&M expenses for the year 2006-07 actuals were higher by about 59% over the actuals for the year 2005-06. Taking 2006-07 as base the MGVCCL has estimated with 10% increase for the year 2007-08 and also every year during the control period. MGVCCL 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, increase in DA by 5% etc.
2. Additional provision of Rs.5299 lakhs towards payment of arrears on implementation of the 6<sup>th</sup> Pay Commission Recommendations which are awaiting a final clearance.
3. Charging of Rs. 2311 lakhs towards past liabilities of leave encashment to employees.
4. The R&M expenditure in FY 2006-07 has been high on account of a renewed focus on preventive maintenance and replacement of ageing equipment. Further, the company has also enhanced its activities in refurbishing and maintenance work of the building infrastructure of the company as they have remained neglected in the past.
5. MGVCCL has undertaken various initiatives during the year such as opening of more consumer care centers, increased penetration of computerization etc., due to which there has been a high outgo in A&G expenses.

MGVCCL 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 MGVCCL. Instead of furnishing the full details under each head the MGVCCL has furnished the lumpsum figures even for the actuals making it difficult to analyse the past trend under each component. MGVCCL 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 MGVCCL 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 MGVCCL**

(Rs.lakhs )

Particulars	Actuals			Projections		
	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Employee cost	11669	20441	16831	24733	27207	29927
R&M expenses	3419	3910	3846	4731	5204	5725
A&G expenses	2117	3088	3226	3737	4110	4521
Total	17205	27439	23903	33201	36521	40173



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 2005-06 and 2006-07 and 2007-08 furnished by MGVL are the same as per annual accounts.

The O&M expenses proposed by the MGVL for the control period are analysed as under:

### Employee cost

MGVL has projected the employees cost at Rs. 24733 lakhs for the year 2008-09, Rs.27207 lakhs for the year 2009-10 and Rs. 29927 lakhs for the year 2010-11. This is based on 10% increase per annum over the projected figure of Rs. 22485 lakhs for the year 2007-08.

It is submitted by MGVL that an amount of Rs. 7611 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. For the year 2008-09 also an amount of Rs. 6412 lakhs is provided towards estimated arrears on similar lines payable on account of 6<sup>th</sup> Pay Commission and also Rs.7053 lakhs, Rs. 7758 lakhs for the years 2009-10 and 2010-11 respectively. As per annual accounts the employee costs for 2007-08 is Rs. 16830 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. The projected employee cost during 2008-09 is Rs.24733 lakhs which includes Rs.6412 lakhs of arrear payment on implementation of 6<sup>th</sup> Pay Commission recommendations and also 10% increase over 2007-08 actuals. 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 (3847 lakhs) and balance 40% (Rs. 2565 lakhs) during 2009-10. The employee cost as above is approved by the Commission with an increase of 6% per annum.

2008-09	Rs. 21687 lakhs (16830 x 1.06 + 3847)
2009-10	Rs. 21475 lakhs (17840 x 1.06 + 2565)
2010-11	Rs. 20046 lakhs (18910 x 1.06)

**The Commission approves the employee cost at Rs. 21687 lakhs during 2008-09, Rs. 21475 lakhs during 2009-10 and Rs. 20046 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

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

2008-09	Rs. 4731 lakhs
2009-10	Rs. 5204 lakhs
2010-11	Rs. 5725 lakhs

The Commission has obtained the R&M expenses incurred for earlier years. The expenses are as below:

Particulars	(Rs. Lakhs)					
	2005-06 (Actuals)	2006-07 (Actuals)	2007-08 (Actuals)	2008-09 (projected)	2009-10 (Projected)	2010-11 (Projected)
Repair & Maintenance expenses	3419	3909	3846	4731	5204	5725



It is seen that there is considerable increase in the R&M costs during the year 2006-07. It is submitted by MGVCL that the expenditure is high during 2006-07 on account of renewed focus on preventive maintenance and replacement of ageing equipment. The company has also enhanced its activities in refurbishing and maintenance work for the building infrastructure of the company which remain neglected over years in the past.

It is seen from the Annual Accounts that the R&M expenses for the year 2007-08 are Rs. 3846 lakhs. The major part of the expenses is R&M of lines, cable Network etc amounting to Rs. 3194 lakhs and the balance is on maintenance of plant and machinery etc. The expenditure is lower than the expenditure during 2006-07.

MGVCL has projected an amount of Rs. 4731 lakhs during 2008-09 which 23% higher than the expenditure during 2007-08.

In view of actual expenditure of Rs. 3846 lakhs during 2007-08 for refurbishing of old distribution system and replacements the Commission approves the expenditure of Rs. 4038 lakhs for the year 2008-09 with an increase of 5% for the next two years on the expenditure during 2007-08 (base year). 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	4038	4240	4452

#### A&G expenses

MGVCL has projected the Administration and General Expenses for the control period as below:

2008-09	Rs. 3737 lakhs
2009-10	Rs. 4110 lakhs
2010-11	Rs. 4521 lakhs

The expenses for the earlier years and projected for the control period are as under:

(Rs. Lakhs)

Particulars	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
A&G expenses	1888	3088	3226	3737	4110	4521

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 is reasonable and approves the A&G expenses for the control period as under:

2007-08 (Actuals)	Rs. 3226 lakhs
2008-09	Rs. 3420 lakhs
2009-10	Rs. 3625 lakhs
2010-11	Rs. 3842 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	21687	21475	20046
2.	R&M expenses	4038	4240	4452
3.	A&G expenses	3420	3625	3842
	<b>Total O&amp;M expenses</b>	<b>29145</b>	<b>29340</b>	<b>28340</b>

### 4.12 Provision for bad and doubtful debts

The MGVCL has projected the provision for bad and doubtful debts as detailed in the Table 4.40 below.

**Table 4.40**

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

(Rs. lakhs)

Particulars	2007-08	2008-09	2009-10	2010-11
Provision for bad debts	195	221	248	275
% of sales revenue		0.10%	0.10%	0.10%

MGVCL has mentioned that it is a very legitimate expenditure which is associated with the business risk and is a consumer related expense. MGVCL has projected the provision at 0.1% of the projected revenue from sale of power.

The MGVCL has a consumer base of about Rs. 20.6 lakhs by the end of March 2008 and about 85% of them are LT residential consumers.

The area of operations of MGVCL covers about 23854 Sq. Kms spreading with 4 circles. As such the Commission considers 0.1% of the revenue is reasonable towards provision for bad and doubtful debts. Accordingly approves as claimed by MGVCL as detailed in the Table 4.41 below:

**Table 4.41**

**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	221	248	275

The Commission approves the provision for bad debts at Rs. 221 lakhse for 2008-09, Rs. 248 lakhs for 2009-10 and Rs. 275 lakhs for 2010-11.

### 4.13 Depreciation

The MGVCL has claimed Rs. 222100 lakhs towards depreciation charges for the control period 2008-11 as detailed in the Table 4.42 below.

**Table 4.42**

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

(Rs.lakhs)

Particulars	2007-08	2008-09	2009-10	2010-11
Depreciation	4703	5923	7421	8756



MGVCL 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 3.60% and the same rate has been adopted for projections during the control period as detailed below:

**Table 4.43**  
**Calculation of Depreciation**

(Rs. Lakhs)

Depreciation	2006-07	2007-08	2008-09	2009-10	2010-11
Gross block at the beginning of the year	96,847	118,970	141,904	186,667	225,032
Additions during year (Net)	22,123	22,934	44,763	38,365	35,662
Retirement during the year	-	-	-	-	-
Cumulative Depreciation at the beginning of the year	13,658	17,549	22,251	28,174	35,596
Depreciation for the year	3,890	4,703	5,923	7,421	8,756
Cumulative Depreciation at the end of the year	17,549	22,251	28,174	35,596	44,352
Average rate of depreciation	3.61%	3.61%	3.61%	3.61%	3.61%
Net Block at the beginning of the year	83,189	101,421	119,653	158,493	189,436
Net Block at the close of the year	101,421	119,653	158,493	189,436	216,342

The depreciation charges are claimed 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. 5,923 lakhs for 2008-09, Rs. 7,421 lakhs for 2009-10 and Rs. 8,756 lakhs for 2010-11.

#### 4.14 Capital expenditure

The MGVCL has projected capital expenditure of Rs. 118,790 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	3200	5542	5350	5230
	System Improvement Scheme	1796	850	870	790
	Jyoti Gram Yojna	2730	0	0	0
	Electrification of hutments	1492	2257	1909	2005



	Capital Expenditure Plan	2007-08	Control Period		
			2008-09	2009-10	2010-11
	Kutir Jyothi Scheme	119	1120	1176	1235
	Scheme of meters	2484	4400	3960	3564
	<b>Total</b>	<b>11821</b>	<b>14169</b>	<b>13265</b>	<b>12824</b>
<b>B</b>	<b>Rural Electrification Scheme</b>				
	TASP (Wells and Petapara)	2962	4263	4689	4220
	Special Component Plan	10	214	58	58
	REC Normal	62	260	460	560
	<b>Total</b>	<b>3035</b>	<b>4737</b>	<b>5207</b>	<b>4838</b>
<b>C</b>	<b>Others</b>				
	TASP Petapara (Central)				
	Energy Audit				
	Energy Conservation	0	75	75	75
	<b>Total</b>	<b>0</b>	<b>75</b>	<b>75</b>	<b>75</b>
	<b>Earth quake rehabilitation work</b>				
<b>D</b>	<b>Non Plan Scheme</b>				
	RE Non Plan (Tatkal)	343	0	0	0
	APDRP	0	480	0	0
	RGVY	1744	4785	1744	842
	DRUM	447	404	0	0
	<b>Total</b>	<b>2533</b>	<b>5669</b>	<b>1744</b>	<b>872</b>
<b>E</b>	<b>Other New Schemes</b>				
	Automatic PF Control panels	2347	1425	940	825
	Aerial Bunch Conductors	460	1200	1320	1452
	HVDS in selected sub-division	752	6100	7660	6970
	Automatic meter reading	100	1440	260	305
	GIS in cities other than Baroda	25	225	125	65
	Automation and Computerization	172	280	130	100
	Underground Cables	336	500	336	230
	Replacement of Conductor	339	280	155	205
	Misc. Civil Work	275	450	315	405
	Other New Schemes	626	1942	1442	1135
	<b>Total</b>	<b>5432</b>	<b>13842</b>	<b>12683</b>	<b>11692</b>
<b>F</b>	<b>Other Schemes</b>				
<b>1</b>	<b>Urban Development</b>	<b>0</b>	<b>300</b>	<b>210</b>	<b>190</b>
<b>2</b>	<b>New Gujarat Pattern</b>	<b>110</b>	<b>880</b>	<b>90</b>	<b>80</b>
	<b>Total</b>	<b>113.33</b>	<b>1180</b>	<b>300</b>	<b>270</b>
<b>G</b>	<b>Golden Goal Scheme</b>				
	Pending Agriculture Connections	0	5091	5091	5091
	<b>Capital Expenditure Total</b>	<b>22934</b>	<b>44763</b>	<b>38365</b>	<b>35662</b>

The distribution schemes include normal development schemes and system improvement schemes Jyotigram Yojana, electrification of hamlets. About 620000 new connections are proposed to be released during the control period. MGVL has mentioned that as a part of the "Golden Goals" targets set by Government of Gujarat, the DISCOMs shall 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. 5091 lakhs per annum during the control period. MGVCCL proposes to connect about 16,000 connections under this schemes.

It is further mentioned by the MGVCCL that it plans to connect over 3.00 lakh connections under BPL household as part of the 'Golden Goals' targets set by Government of Gujarat. This involves 100% grant for funding the capital expenditure requested 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 BPL service connections 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 MGVCCL for the control period. The utility should however impress upon the State Government to provide 100% grant for this scheme.

The Commission approves the capital expenditure for the control period as projected by the MGVCCL, with the 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 details of capital expenditure under various schemes are given separately.

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	2663	5201	5077	4997
Grant	8996	13730	10061	8952
Equity	4981	8768	8134	7622
Debt	6295	17064	15093	14091
<b>Total capital expenditure</b>	<b>22934</b>	<b>44763</b>	<b>38365</b>	<b>35662</b>

The MGVCCL has projected equity at about 34% and debt at about 66% 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	22934	44763	38365	35662
Less: Consumer Contribution	2663	5201	5077	4997
Grants	8996	13730	10061	8952
Balance Capex	11275	25832	23227	21713
Equity (30%)	3383	7750	6968	6514
Debt	7892	18082	16259	15199

The Commission observes that the above equity and debt are correctly taken by the MGCVCL in calculation for return on equity and interest on loans. The debt and equity figures are wrongly exhibited in table 52 of the petition.

The Commission approves the sources of funding the capital expenditure as detailed in Table 4.46 above for the control period.

**4.15 Interest and Finance charges**

The MGCVCL has projected the interest and finance charges at Rs. 27466 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	52700	55323	67873	77345
Additions	7893	18083	16259	15199
Repayment	5270	5532	6787	7735
Interest during the year	5806	6622	7806	8716
Interest on security deposit	1030	1133	1236	1342
Guarantee charges	204	204	204	204
Total interest and finance charges	7041	7959	9246	10261
Closing balance of loans	55323	67873	77345	84810
Average rate of interest (%)	10.75	10.75	10.75	10.75
Average tenure of loans year	10	10	10	10

The MGCVCL 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 MGCVCL has not furnished any details in respect of security deposits. The MGCVCL 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. 204 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. 158 lakhs the actuals for 2007-08. The MGVCL 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. 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	2008-09	2009-10	2010-11
Opening balance of loans	55323	61174	63946
Additions	11383	8889	7092
Repayments	5532	6117	6395
Closing balance of loans	61174	63946	64643
Interest charges @ 10.0%	5825	6256	6429
Interest on security deposits	1133	1236	1342
Guarantee charges	158	158	158
<b>Total interest and finance charges</b>	<b>7116</b>	<b>7650</b>	<b>7929</b>

**4.16 Interest on Security Deposit**

The MGVCL has projected interest on security deposit at Rs. 3711 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 Deposit projected by MGVCL**

(Rs. in lakhs)

Particulars	2007-08	2008-09	2009-10	2010-11
Interest on security deposits	1030	1133	1236	1342

The MGVCL 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 annual accounts is Rs. 67000 lakhs.

The MGVCL has stated that the escalation of deposit is equal to over all growth in consumers projected for the control period as indicated in Table 13 of MYT Petition which is about 10%. The security deposit with annual increase of 10% and interest thereon is worked out as detailed in Table 4.49 A below.



**Table 4.49A****Consumer Security Deposit and interest for the control period 2008-11**

(Rs. in lakhs)

Particulars	2007-08	2008-09	2009-10	2010-11
Consumer security deposit	67000	73700	81070	89177
Interest @ 6%		4221	4643	5107

Interest on security deposit @ 6% P.A. worked out to more than that 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 deposit as projected by MGVCL.

**The Commission approves the interest on security deposits at Rs. 1133 lakhs for the year 2008-09 and Rs. 1236 lakhs for the year 2009-10 and Rs. 1342 lakhs for the year 2010-11 as projected by MGVCL.**

**4.17 Interest on working capital**

The MGVCL has claimed Rs. 7777 lakhs towards interest on working capital for the control period 2008-11. The year-wise details projected by MGVCL are given in the Table 4.50 below.

**Table 4.50****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	2541	2795	3074	3381
Maintenance spares escalated at 6% P.A.	842	892	946	1002
Receivables	16210	18407	20691	22876
Total working capital	19593	22094	24211	27259
Rate of interest for working capital	10.5%	10.5%	10.5%	10.5%
Interest on working capital	2057	2320	2595	2862

The MGVCL has submitted that interest on working capital has been calculated based on normative working capital formula as per Terms and Conditions of Tariff Regulations except in respect of receivables. Regarding receivables the MGVCL has taken into consideration one month revenue instead of two 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 4.51 below.



**Table 4.51****Interest on working capital approved for the control period 2008-11**

(Rs.lakhs)

Particulars	2008-09	2009-10	2010-11
O&M expenses	2429	2445	2362
Spares	892	946	1002
Receivables (one month)	18596	21555	23404
Working capital	21917	24946	26768
Interest on working capital @ 10.25%	2246	2557	2744

The Commission, therefore approves the interest on working capital at Rs. 2190 lakhs for the year 2008-09, Rs. 2460 lakhs for 2009-10 and Rs. 2700 lakhs for the year 2010-11.

**4.18 Return on equity**

The MGVCL has projected the return on equity at Rs. 21313 lakhs for the control period as detailed in the Table 4.52 below:

**Table 4.52****Return on equity projected for the control period**

(Rs. lakhs)

Particulars	2007-08	2008-09	2009-10	2010-11
Opening equity capital	36334	39717	47467	54435
Addition during the year	3383	7750	6768	6514
Closing equity	39717	47467	54435	60949
Average equity	38026	43592	50951	57692
Opening free reserves	3436	2716	1069	1233
Addition during the year	2662	6103	7133	8077
Less: Reserves transferred to equity	3383	7750	6868	6514
Closing free reserves	2716	1069	1233	2796
Average reserves	3076	1892	1151	2015
Reserves considered for ROE	3383	7750	6968	6514
Equity for Capex	3883	7750	6968	6514
Rate of ROE	7%	14%	14%	14%
Return on average equity	2662	6103	7133	8077

The MGVCL 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, 2004. In this regard MGVCL 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 return on equity approved by the Commission is given below:



(Rs. lakhs)

Particulars	2007-08	2008-09	2009-10	2010-11
Opening equity capital	36334	39717	47467	54435
Addition during the year	3383	7750	6768	6514
Closing equity	39717	47467	54435	60949
Average equity	38026	43592	50951	57692
Rate of ROE	7%	14%	14%	14%
Return on average equity	2662	6103	7133	8077

The Commission, accordingly, approves the return on equity at Rs. 6103 lakhs for 2008-09, Rs. 7133 lakhs for 2009-10 and Rs. 8077 lakhs for 2010-11.

#### 4.19 Other expenses

The MGVCL has projected the other debits and extra – ordinary items under other expenses as detailed in the Table 4.53 below.

**Table 4.53**

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

(Rs.lakhs)

Other expenses	2007-08	2008-09	2009-10	2010-11
Other debits	107	113	118	124
Extra ordinary items	4	4	4	4

MGVCL 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 recover frequently or regularly. Other debits primarily include material cost variance and other miscellaneous losses.

The Commission approves the other debits and extraordinary items as projected by MGVCL for the control period.

#### 4.20 Capitalization of expenses

The MGVCL has projected Rs. 4463 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 interest and O&M expenses viz., Employee cost, Repairs and Maintenance expenses and A&G expenses. The Commission obtained the annual accounts for 2007-08 (P.A.) and the expenses capitalized were Rs. 4056 lakhs during 2007-08.

For O&M expenses the annual increase considered is 5 % during the control period. It is reasonable to assume that capitalization of O&M charges would also increase by 5 % P.A. The Commission, therefore, considers annual increase of 5 % over the actuals for 2007-08 as detailed in the Table 4.54 below:



**Table 4.54**  
**Capitalization of O&M expenses approved for the control period**

(Rs.lakhs)

Particulars	2007-08	2008-09	2009-10	2010-11
Expenses capitalized	4056	4259	4472	4695

The Commission, accordingly approves the capitalization of O&M expenses at Rs. 4259 lakhs for 2008-09, Rs. 4472 lakhs for 2009-10 and Rs. 4695 lakhs for 2010-11.

#### 4.21 Taxes

MGVCL 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 MGVCL.

**DGVCL has however limited the claim to fringe benefit tax on O&M expenses, MAT is not claimed. The claim is limited to fringe benefit tax on employees cost.**

**The Commission, accordingly approves the provision of tax at Rs. 108 lakhs for 2008-09, Rs. 107 lakhs for 2009-10 and Rs. 100 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 MGVCL has projected the other consumer related income as detailed in the Table 4.55 below for the control period.

**Table 4.55**  
**Other consumer related income projected by MGVCL**

(Rs.lakhs)

Particulars	2006-07 (A)	2007-08	2008-09	2009-10	2010-11
Rental for metered service lines		2948	3132	3327	3535
Recoveries for theft of power		648	639	732	777
Wheeling charges		656	697	741	787
Miscellaneous charges		1637	1739	1848	1963
<b>Total</b>		<b>5890</b>	<b>6257</b>	<b>6647</b>	<b>7062</b>

MGVCL 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 6.25 % per annum.

The Commission has obtained the annual accounts for 2007-08 (Pro). The other income for 2007-08 as per accounts was Rs. 6162 lakhs. The category-wise growth rates of consumers for the control period projected by MGVCL are 9.98 % in 2008-09, 9.08 % in 2009-10 and 8.52 % 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 4.56 below.



**Table 4.56**  
**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	6162	6777	7392	8022

The Commission, accordingly, approves the other consumer related income at Rs. 6777 lakhs for 2008-09, Rs. 7392 lakhs for 2009-10 and Rs. 8022 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 MGCVCL has projected the non-tariff income as detailed in the Table 4.57 below for the control period.

**Table 4.57**  
**Non – Tariff income projected by MGCVCL for the control period**

(Rs.lakhs)

Particulars	2006-07 (A)	2007-08	2008-09	2009-10	2010-11
Interest on staff loans and advances	124	124	124	124	124
Interest from consumers	3	3	3	3	3
Delayed payment charges from consumers HT & LT	1540	1540	1540	1540	1540
Income from trading	237	237	237	237	237
Gain on sale of fixed assets	20	20	20	20	20
APDRP incentive	5535				
Miscellaneous receipts	846	8.46	846	846	846
<b>Total</b>	<b>8306</b>	<b>2771</b>	<b>2771</b>	<b>2771</b>	<b>2771</b>

MGVCL 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 incentive has not been considered for projections.

The non-tariff income other than subsidies and incentives for the control period has been projected at Rs. 2771 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. 2128 lakhs in 2005-06 increased to Rs. 2632 lakhs in 2007-08 (actuals) and the growth is about 12%% P.A. Further MGCVCL accounted for Rs. 2111 lakhs in 2005-06, Rs. 5193 lakhs in 2006-07 and Rs. 4057 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 12% annual increase the non-tariff income is worked out as detailed in the Table 4.58 below:

**Table 4.58**  
**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	2632	2948	3302	3698

The Commission, accordingly approves the non-tariff income at Rs. 2948 lakhs for 2008-09, Rs. 3302 lakhs for 2009-10 and Rs. 3698 lakhs for 2010-11.



#### 4.24 Revenue from existing tariff

The MGCVCL has projected the revenue from existing tariff as detailed in the Table 4.59 below for the control period 2008-11.

**Table 4.59**

**Category-wise revenue projected by MGCVCL for the control period 2008-11**

(Rs.lakhs)

Sl.No.	Category	2008-09	2009-10	2010-11
I	LT			
1	Residential	40606	45124	50015
2	Commercial	21683	24171	26955
3	Industrial LT	21187	22895	24743
4	Public Lighting	1915	2035	2164
5	Agriculture (without compensation)	4391	4877	5364
6	Public Water works	3512	3733	3969
7	Agricultural Compensation	3726	3834	3942
<b>8</b>	<b>LT total (with Agricultural Compensation)</b>	<b>97020</b>	<b>106669</b>	<b>117152</b>
II	HT			
9	Industrial HT	86296	93107	100466
10	Railway Traction	16336	17145	17996
<b>11</b>	<b>HT Total</b>	<b>102632</b>	<b>110252</b>	<b>118462</b>
<b>12</b>	<b>Total Revenue with Agricultural Compensation</b>	<b>199651</b>	<b>216922</b>	<b>235613</b>

The expected revenue from existing tariff on the basis of sales approved by the Commission is worked out based on unit rate given in Form-D-5 in the MYT petition as detailed in the Table 4.60 below:

**Table 4.60**

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

Sl. No	Category	2008-09			2009-010			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	1329	3.05	40535	1488	3.03	45086	1658	3.02	50072
2	Commercial	452	4.8	21696	506	4.77	24136	567	4.75	26933
3	Industrial LT	467	4.54	21202	507	4.52	22916	550	4.5	24750
4	Public Lighting	56	3.42	1915	60	3.42	2052	63	3.42	2155
5	Agriculture (With Tariff Compensation)	761	0.98	7458	797	0.96	7651	832	0.94	7821
6	Public Water Works	125	2.81	3513	133	2.81	3737	141	2.81	3962
<b>7</b>	<b>Total LT</b>	<b>3190</b>		<b>96318</b>	<b>3491</b>		<b>105580</b>	<b>3811</b>		<b>115692</b>
<b>II</b>	<b>HT Consumers:</b>									
8	Industrial HT	1823	4.73	86228	1974	4.72	93173	2138	4.7	100486
9	Railway Traction	315	5.18	16317	332	5.17	17164	349	5.15	17974
10	Total HT	<b>2138</b>		<b>102545</b>	<b>2306</b>		<b>110337</b>	<b>2487</b>		<b>118460</b>
<b>11</b>	<b>Total Revenue (With Agricultural Compensation) (7+10)</b>	<b>5328</b>		<b>198863</b>	<b>5797</b>		<b>215917</b>	<b>6298</b>		<b>234151</b>



4.25 The summary of revenue requirement for the control period 2008-11 as projected by MGVCL and as analysed and approved in the preceding paragraphs is given in Table 4.61 below:

**Table 4.61**  
**Revenue requirement as projected by MGVCL and as approved by the Commission for the control period 2008-11**

(Rs. Lakhs)

S.No.	Particulars	As projected by MGVCL			Approved by the Commission		
		FY 2008-09	FY 2009-10	FY 2010-11	FY 2008-09	FY 2009-10	FY 2010-11
1	Cost of Power Purchase	183563	217015	233815	179385	211862	232893
2	O & M Expenses	33201	36521	40173	29145	29340	28340
3	Depreciation	5923	7421	8756	5923	7421	8756
4	Interest on Loans & Finance Charges	7959	9246	10261	7116	7650	7929
5	Interest on Working Capital	2320	2595	2862	2246	2557	2744
6	Other Debits	113	118	124	113	118	124
7	Extraordinary items	4	4	4	4	4	4
8	Provision for bad debts	221	248	275	221	248	275
10	<b>Sub Total [ (1 to 8)</b>	<b>233304</b>	<b>273168</b>	<b>296270</b>	<b>224153</b>	<b>259200</b>	<b>281065</b>
9	Less : Interest & Expenses Capitalised	4463	4463	4463	4259	4472	4695
	<b>Sub Total</b>	<b>228841</b>	<b>268705</b>	<b>291807</b>	<b>219894</b>	<b>254728</b>	<b>276370</b>
11	Return on equity	6103	7133	8077	6103	7133	8077
12	Provision for Tax	166	183	201	108	107	100
13	<b>Total Expenditure (10 to 12)</b>	<b>235110</b>	<b>276021</b>	<b>300085</b>	<b>226105</b>	<b>261968</b>	<b>284547</b>
14	Less : non tariff income	2771	2771	2771	2948	3302	3698
15	<b>Aggregate revenue requirement (13-14)</b>	<b>232339</b>	<b>273250</b>	<b>297314</b>	<b>223157</b>	<b>258666</b>	<b>280849</b>
16	Revenue with existing tariff	211850*	238878*	264676*	198863	215917	234151
17	Other Income consumer related	6257	6647	7062	6777	7392	8022
18	<b>Total revenue before subsidy (16+17)</b>	<b>218107</b>	<b>245525</b>	<b>271738</b>	<b>205640</b>	<b>223309</b>	<b>242173</b>
19	Subsidy	7323	7425	7511	7323	7425	7511
20	Other Subsidies	2779	3008	3207	2779	3008	3207
21	<b>Total revenue after subsidy (18 to 20)</b>	<b>228209</b>	<b>255958</b>	<b>282456</b>	<b>215742</b>	<b>233742</b>	<b>252891</b>
22	<b>Gap (15-21)</b>	<b>4130</b>	<b>17292</b>	<b>14858</b>	<b>7415</b>	<b>24924</b>	<b>27958</b>

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





## Chapter 5

# Capital Expenditure Plan

5.1 The MGVCL proposed Capital Expenditure under various schemes i.e. Distribution Schemes, Rural Electrification Schemes Centrally Sponsored Schemes and other schemes. The details of estimates for Capital Expenditure for the control period 2008-9 to 2010-11 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)

	Schemes	Control Period		
		2008-09	2009-10	2010-11
<b>A</b>	<b>Distribution Schemes</b>			
	Normal Development Scheme	5542	5350	5230
	System improvement Scheme	850	870	790
	Jyoti Gram Yojna	0	0	0
	Electrification of hutments	2257	1909	2005
	Kutir jyoti scheme	1120	1176	1235
	Scheme of meters	4400	3960	3564
	<b>Total</b>	<b>14169</b>	<b>13265</b>	<b>12824</b>
<b>B</b>	<b>Rural Electrification Scheme</b>			
	TASP (Wells and Petapara)	4263	4689	4220
	Special Component Scheme	214	58	58
	REC Normal	260	460	560
	<b>Total</b>	<b>4737</b>	<b>5207</b>	<b>4838</b>
<b>C</b>	<b>Others</b>			
	TASP Petapara (Central)			
	Energy Audit			
	Energy Conservation	75	75	75
	<b>Total</b>	<b>75</b>	<b>75</b>	<b>75</b>
	<b>Earthquake rehabilitation work</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>D</b>	<b>Non Plan Schemes</b>			
	RE Non Plan (Tatkal)	0	0	0
	APDRP	480	0	0
	RGVY	4785	1744	872
	DRUM	404	0	0
	<b>Total</b>	<b>5669</b>	<b>1744</b>	<b>872</b>
<b>E</b>	<b>Other new schemes</b>			
	Automatic PF control panels	1425	940	825
	Aerial Bunch Conductors	1200	1320	1452

	HVDS in selected sub- division	6100	7660	6970
	Automatic meter reading*	1440	260	305
	GIS in cities other than Baroda*	225	125	65
	Automation and computerization*	280	130	100
	Underground Cables	500	336	230
	Replacement of conductor	280	155	205
	Misc. Civil works	450	315	405
	Other New Schemes	1942	1442	1135
	<b>Total</b>	<b>13842</b>	<b>12683</b>	<b>11692</b>
<b>F</b>	<b>Other Schemes</b>			
1	Urban Development	300	210	190
2	New Gujarat Pattern	880	90	80
	<b>Total</b>	<b>1180</b>	<b>300</b>	<b>270</b>
<b>G</b>	<b>Golden Goal Scheme</b>			
	Pending Agriculture Connections	5091	5091	5091
	<b>Capital Expenditure Total</b>	<b>44,763</b>	<b>38,365</b>	<b>35,662</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 some of existing distribution system and strengthening of sub-transmission lines and sub-stations.

**Table 5.2**  
**Break up of Capex under Normal Development Scheme**

S.No	NORMAL DEVELOPMENT SCHEME	Physical Nos.	Rs. Lakhs
1	Lighting & domestic connections	58000	1740
2	L.T. Industrial Connections	2000	800
3	H.T. Industrial Connections	125	150
4	Agriculture Shifting Connections	100	65
5	Agriculture PDC to Reconnection	300	210
6	Agriculture Extension of Load	300	60
7	Water works	200	120
8	Turn key Maintenance Km, Other Works, Shifting of Line /T/C Etc.	10000	300
9	Etc.	-	2097
	<b>Total</b>		<b>5542</b>

### 5.2.2 TASP (Wells and Petapara)

The company undertakes the work of Rural Electrification in tribal areas under Tribal Areas Sub-Plan financed by the State Government for electrification of virgin areas and also extensive electrification in the areas already electrified earlier. For providing such electrification facility in tribal area, the State Government is providing financial assistance under TASP Scheme. The scheme involves electrification of wells and petaparas.



### 5.2.3 REC Wells

To expedite the releasing of Pending Agricultural Applications Company has decided to have intensive programme for the same.

### 5.2.4 System Improvement Schemes (Own Scheme)

Every year consumers are added as per demand of power over and above the existing consumers. Hence the system expansion is 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.

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

Govt. of India has launched the subject 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 shall be 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 would 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 would be to prevent the pilferage of power.

### 5.2.6 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 Agriculture applicants within the span of three years.

With this, every year about 5000 farmers would get electrical connection and thereby would be able to irrigate their farms and contribute in 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 5.3**  
**Pending Agriculture Connections - Estimates and Assumptions**

Number of Agriculture Connections to be released	Nos.	16000
Phasing of the Project	Years	3
<b>Assumptions:</b>		
Load per Connection	HP	8.5
Consumption per HP	Kwh	1700
Estimated material Cost per Connection	Rs.	85905
Labour Cost	Rs.	9545
Total Cost	Rs.	95450
<b>Total Project Cost</b>	<b>Rs. Lakhs</b>	<b>15272</b>

**Table 5.4**  
**Phasing of release of agricultural connections**

Phasing		2008-09	2009-10	2010-11
Number of New Agriculture connections	Nos.	5333	5333	5333
Cumulative number of Connections	Nos.	5333	10667	16000
Total Additional Units Supplied	MU	77	154	231
Additional Load Added	HP	45333	90667	136000
Additional Load Added	MW	34	68	101
Capital Expenditure	Rs. Lakhs	5091	5091	5091

### 5.2.7 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 lac connections per year across Gujarat.

The company plans to issue over 3 lakh connections to these consumers during the control period. It has been assumed that the GoG shall provide a 100 %grant for funding the capital expenditure required under this programme under funds already budgeted by them 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 5.5**  
**BPL Household Connections - Estimates and Assumptions**

Number of Household Connections to be released	Nos.	303008
Phasing of the Project	Years	3
<b>Assumptions:</b>		
Consumption per Month	Kwh	30
Connected Load	kw	0.1



**Table 5.6**  
**Phasing of release of BPL Household connections**

Phasing		2008-09	2009-10	2010-11
Number of New Household connections	Nos.	104022	99505	99481
Cumulative number of Connections	Nos.	104022	203527	303008
Total Additional Units Supplied	MU	37	73	109
Additional Load Added	MW	10	20	30

### 5.3 Funding

The above mentioned capital expenditure would be funded as follows:

**Table 5.7**  
**Funding of Capital Expenditure**

Sl. No.	Source of Capex	2007-08	2008-09	2009-10	2010-11
1	Consumer Contribution	2663	5201	5077	4997
2	Grants	8996	13730	10061	8952
3	Equity	4981	8768	8134	7622
4	Additional Equity	0	0	0	0
5	Loans	6295	17064	15093	14091
6	GoG Loans	0	0	0	0
	<b>Total Capital Expenditure</b>	<b>22934</b>	<b>44763</b>	<b>38365</b>	<b>35662</b>

### 5.4 Commission's view:

MGVCL has outlined the works they propose 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 and some with equity and some quantum of loans, one major schemes taken up by the company is "Release of pending agricultural connections" under "Golden Goal" programme of State Government with 10% grant. The utility would take up with 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 MGVL.

MGVL has submitted the compliance of the Directives issued earlier.

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

#### **Compliance to Directives issued under Tariff order dated 31st March 2007.**

#### **Directive –1: Agricultural Consumption Estimate**

There is a wide difference between the consumption recorded by meters and the norm adopted for the unmetered category. Since the agricultural feeders are separated, meters should be provided on these feeders. Then the energy consumed by the pumpsets could be arrived at for one year. This will provide a reliable base for a realistic norm for the unmetered category of agricultural consumers. This shall be done as priority and reported.

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 estimation by unmetered consumers asked for by the Commission in its last tariff order.

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

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 could not be carried out as desired. We have again taken up the work on hand.

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 cannot be estimated.

The company is endeavoring to achieve in first phase metering at the DTC level and has made progress in the recent past.

The consumption patterns 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.

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 implementing the 100% metering target. Hence, the company prays to 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 of DTC metering in MGVCL**

DTC Transformers Metering		
Total Number of Transformers in FY 2007-08	Nos.	40418
Number of Transformers with Meters	Nos.	22135
Unmetered Transformers	%	54.54

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

Metering of Agriculture feeder transformers		
Number of unmetered Agriculture Consumers	Nos	26276
Number of Agriculture dominated feeders	Nos	349

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:

### **Metered and Unmetered Ag. Consumers**

Year	Metered			Unmetered		
	Consumers	HP	MUs	Consumers	HP	MUs
2004-05	27803	295439	256.65	28238	287051	487.98
2005-06	30230	317898	261.58	27078	280660	481.02
2006-07	31445	331192	245.39	26542	280684	477.68
2007-08	33324	347089	264.76	26276	278730	474.63

### **Scenario Analysis: Estimating unmetered Ag. consumption**

<b>Scenario 1:</b>	<b>Unit</b>	
Total Units sent on Agricultural dominated feeders	MUs	958.28
Technical Losses on Agricultural dominated feeders	%	10.08
Energy available for sale	MUs	861.68
Units billed to consumers other than unmetered agriculture	MUs	264.76
Energy available for sale to unmetered agriculture	MUs	596.92
Connected Load of unmetered Agriculture on Agricultural dominated feeders	HP	278730
Energy sent out per HP of load to unmetered agriculture	Units	2141



<b>Scenario 1:</b>	<b>Unit</b>	
<b>Scenario 2:</b>		
Total Units sent on Agricultural dominated feeders	MUs	958.28
Technical Losses on( Agricultural dominated + Commercial Losses (Overall))	%	20.85
Energy available for sale	MUs	758.479
Units billed to consumers other than unmetered agriculture	MUs	264.76
Energy available for sale to unmetered agriculture	MUs	493.71
Connected Load of unmetered Agriculture on Agricultural dominated feeders	HP	278730
Energy sent out per HP of load to unmetered agriculture	Units	1771
<b>Scenario 3:</b>		
Total Units sent on Agricultural dominated feeders	MUs	958.28
Distribution losses on non Agricultural dominated feeders and excluding EHT	%	17.78
Energy available for sale	MUs	787.898
Units billed to consumers other than unmetered agriculture	MUs	264.76
Energy available for sale to unmetered agriculture	MUs	523.14
Connected Load of unmetered Agriculture on Agricultural dominated feeders	HP	278730
Energy sent out per HP of load to unmetered agriculture	Units	1877

Scenario 1 indicates the pre-commercial loss figure 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 if commercial losses were at overall company levels

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 Consumption per HP**

Metered Consumption	Units Billed	Connected Load	Units / HP
Years	MUs	HP	
FY 2007-08	264.76	347089	762
FY 2006-07	245.39	331192	740
FY 2005-06	261.58	317898	822

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 or the estimations done in the section above. This is so because of the following reasons:





Nature of tariff: Obviously, 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 a common practice of unmetered agriculture consumers to keep their motors on for the entire duration of power supply. This leads to considerably more consumption in unmetered agriculture.

The consumption recorded in metered category is also lowered because of considerable instances of theft as well as meter tampering seen in supply to this category.

It may also be noted that the actual consumption in unmetered agriculture is a function of 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 within a range of values, season-to-season, year-to-year.

**Commission's comments:**

*It is observed from the compliance submitted by MGVCCL 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 assessing LT losses on the LT network below distribution transformers.*

*The progress on this is very poor. Only 22135 transformers are metered out of 40418 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 –2: Energy Audit**

The report on the energy audit has not been received. Action taken shall be reported by April 2007. Needless to say, energy audit is important to identify high loss areas and to take effective steps to reduce losses.

**Compliance**

In MGVCCL, meters are being installed on all Transformer centers and perfect consumer coding is being done on these transformer centers. Alongwith the regular meter reading programme, reading of these transformer centers is being taken and losses are calculated. Transformer centers where losses are high, after proper surveillance, installation checking is done and thus, it becomes very useful for quality checking.

Till date, 54% metering is completed on various categories of DTC. This provides the exact details of weak pockets of the feeders, and accordingly the rectification/ quality checking work can be done.



**Commission's comments:**

*The progress achieved is noted. The metering on balance transformers may be completed. A brief report on the reduction in losses based on Energy Audit on some transformers at random in urban areas may be submitted to the Commission.*

**Directive –3: Distribution Loss**

Since Distribution Companies are independent entities, they need to furnish the distribution losses, technical and non-technical and not club up transmission and distribution loss as was done in the present tariff filing.

**Compliance**

Reduction of distribution losses has always been a priority area for MGVCL, as indicated by the reduction of losses in the last few years. Some of the steps taken by company are enlisted below:

**Steps to Reduce Technical Losses**

- Automatic Power Factor Controller (APFC) [for reactive energy compensation]
- Energy Accounting
- AMR in HT and LT consumers category
- Ariel Bunch Conductor (ABC)
- High Voltage Distribution System (HVDS)
- Sub-Station Monitoring
- Ring Main Unit (RMU)
- Monthly Billing
- MEGA
- Individual franchisee
- Projects for High Loss Feeders
- SCADA
- Re-conductring of HT
- Theft Control Measures
- AG Dominant Feeders
- Special Designed Transformers (SDT)
- Pole Mounted Meters
- Surveillance
- Use of Coated conductors/ XLPE coated Service Line
- Transformer Centers with low loss transformer
- Under Ground Cables:

**Steps to Reduce Commercial Losses:**

- Effective Spot billing-Feeder-wise & Transformer-wise consumer coding & billing
- DT metering for DTR wise energy audit
- Allocation of structure code to consumers and review DTR wise
- Category-wise specific consumption and specific revenue
- High quality meters to be replaced on sluggish meters
- Verification of metering arrangements & metering ratio in CT operated meters
- Metering of street lights and WW services
- 100% Terminal cover sealing
- Verification of billing data & reports generated by HHE Loss

There is @ 6.5% reduction in the losses of the year 2006-07 compared to 2005-06.

**Commission's comments:**

*Action taken to reduce the losses is noted. The measures taken shall result in reduction of losses further. Loss levels in different arrears may be closely monitored and action taken to reduce the losses.*

**Directive –4: Jyotigram**

The Jyotigram Scheme provides 24 hours three-phase supply to all rural households. The impact of this scheme, in terms of increase in sales and revenue may be studied. The loss levels in Jyotigram Yojana should be closely monitored.

Action taken should be reported early.

**Compliance**

MGVCL is closely monitoring the losses of JGY category and following work is being carried out to control the JGY losses over and above regular monitoring:

**Measures to reduce losses in JGY Feeders**

1	All S/L must be taken out
2	AB/Coated Conductor
3	Tail end span must have Coated / AB conductor
4	More concentrated efforts in JGY
5	Feeder / Village Franchising, MEGA
6	Pole Metering
7	APFC Panels
8	Energy Accounting TC wise
9	HVDS as per the requirement
10	Shifting Ag connection which are on JGY feeders, so that they can not take un-due advantage of 24 hours
11	Checking for all the industrial, Commercial connections, Ice Factories, etc on JGY feeders

**Commission's comments:**

*The measures shall naturally result in reduction of distribution losses. DISCOM shall report to the Commission to what extent the losses are reduced in each village / group of villages.*

## **Directive – 5: Efficient Meter Reading Billing and Collection**

Action taken is noted. Efforts shall continue to improve meter reading, billing and revenue realization.

### **Compliance**

Timely meter reading, billing and collection can significantly improve the cash flows.

Following action is already being implemented in MGVCL for efficient meter reading, billing and collection:

- MGVCL has already introduced spot billing system and bills are served to consumers on the spot on the basis of meter reading taken by meter readers.
- Meter reading through Hand-Held Computers have been implemented wherein meter reading data are entered in the Hand-Held Computers and print out is taken on the spot and the same is attached with the energy bill for that amount. The meter reading data in the Hand Held Instruments are stored properly to utilize the same in next bill. This ensures accuracy in the data and billing work in each cycle is expedited resulting in saving on time.
- Bill collection through Cheque Drop Boxes and Internet facilities have already been introduced earlier and the same is in operation.
- To implement the payment through e-Payment facilities, Company has made an arrangement with State Bank of India for e-Payment facilities.
- Facilities of 'Anywhere Payment' has also been introduced by the company in Baroda city i.e. consumers of Baroda city can pay their energy bill at any office of the Sub-Division in Baroda city. Similar facilities are also planned to be introduced in other cities / towns.
- The Company has also introduced the facility of 'Any Time Payment' Machines (ATP Machines) which are electronic machines like ATM and they are working round the clock. Consumers can pay their energy bill either through cheque or cash and insert the same in the machine and get the printed receipt on the spot.
- Company has introduced monthly billing system in place of bi-monthly billing system. At the initial stage, the monthly billing system was introduced in some of the sub-divisions in Baroda city as a pilot project.
- Having observed the encouraging results, the monthly billing system is extended in the entire Baroda city from June 2006 onwards. Monthly billing system in other cities and towns of various Circles is also introduced.
- MGVCL has introduced the facility of mobile van for collection of energy bill at consumers' door step in Alkapuri and Gotri sub-division areas. This results in fast recovery of revenue alongwith service to consumers at their door step, especially useful to senior citizens, old age consumers and service class consumers.

### **Commission's comments**

*Action taken is noted*



## **Directive – 6: Consumer Services**

For consumers services, following steps are taken by MGVCL

### **Compliance:**

#### **FULLY COMPUTERIZED ALL TIME PAYMENT CENTRE (ATP)**

MGVCL has put into operation All Time Payment Centres in Baroda city area. These centres are like Bank's ATM Centres, where payment of energy bills can be made by the consumers at any time and the Receipt for the amount paid is issued immediately. The Company envisages to set up these centres in all Urban areas of the Company.

#### **CONSUMERS MEET PERIODICALLY PREFERABLY EVERY 3 MONTHS**

MGVCL has started arranging the consumers' meet for HT and LT industrial consumers, wherein the representatives of the consumers, Industrial Associations and Federations etc. are invited to raise their grievances in presence of the top officials of the Company. The grievances are looked into by drawing the minutes of the meeting and taking remedial measures. The Industrial Associations have expressed their satisfaction about such consumers' meetings.

#### **CONSUMER SATISFACTION SURVEY**

MGVCL has carried out consumers' satisfaction survey. The results of the survey has shown that the MGVCL in respect of consumer satisfaction, is much ahead compared to other Electricity Suppliers and HT consumers, which contributes 48% of the revenue. The survey has also revealed that the performance of MGVCL has improved after unbundling. The Company also envisages continuing such survey works in future.

#### **WEBSITE**

MGVCL has developed its Website with full information, so that consumers can send their grievances and check the details of the rules, regulations and procedures and they receive the compliance to the complaints sent by them about the action taken by the MGVCL.

#### **MONTHLY BILLING**

Monthly billing instead of bi-monthly billing is started in the entire area of Baroda City and also on other important urban areas of MGVCL with a view to have easy cash flow and to avoid consumer complaints.

#### **SAMPARK**

A programme to meet the consumers at unconventional places is introduced to have direct contact with the consumers to understand the difficulties / aspirations and needs of the consumers. This programme helps in identifying specific problems of consumers and then by to design future schemes and projects for betterment of consumers. Sampark also gives a sense of pride and belongings to the consumers.

#### **Consumer Grievances Redressal Forum**

- 1.0 We have identified area-wise office responsible to accept complaint at Circle Office, Sub-division Office and also at Corporate Office.
- 2.0 We have published the advertisement in newspaper, Gujarat Samachar / Sandesh on 27.07.2005 and also on 30.04.2006, educating consumer about Forum address,



Phone No, Fax No and e-mail ID of each Forum so that anyone can lodge their complaint as per their convenience.

- 3.0 We have also educated the people through newspaper that the meetings of the Forum is regularly arranged on 10th of every month at local subdivision office, on 20th at Circle office and last day of month at Corporate Office so that anyone can represent their grievances in the meeting.
- 4.0 We have fixed Sign-boards at each Corporate, Circle and Sub-division offices educating the consumer about the establishment of the Forum.
- 5.0 We have also published on our website i.e. [www.mgvcl.com](http://www.mgvcl.com)

### **Consumer's Grievance Redressal System**

For quick redressal of Grievances of consumers, MGVCL has set up Forum at Corporate Office Vadodara.

- We register every complaint lodged by the consumer
- A unique number is given to each complaint
- The Commission has nominated an Independent Member in the Forum
- Complaint is given the acknowledgement of the receipt of the grievances
- On analysis of the complaint, if it is found that complaint has arisen on account of misinterpretation of prevailing provision, we issue the order accordingly so that time in dealing with the complain can be saved as well as grievance of consumer gets redressed without loss of time.
- For other type of complaints, we give enough opportunity to both the parties and issue speaking order.
- We have separate e-mail ids for the forum, consumer can lodge his complaint through e-mail.
- The forum is maintaining true and correct records of all complaints.
- A certified copy of every order passed by the forum is delivered to the consumer.
- Two Independent members are appointed in the Consumer Grievances Redressal Forum

The forum submits their quarterly review report to The Commission as per guidelines of The Commission.

To address the consumer grievance expeditiously, we have emphasized on strong internal grievance redressal mechanism at all levels i.e. sub-dn., Division and Circle level. This in turn would help in reduce the number of complaints.

### **Commission's comments:**

*Action taken is noted. Efforts made shall continue to improve the service.*



## Directive – 7: Cent Percent Metering

### Compliance:

All consumers other than agricultural consumers are provided with meters. For agricultural consumers too, new connections under any scheme are being released with meters. Looking to the year-wise data for the last two years, it can be seen that, un-metered agricultural connections are reducing every year as against metered agricultural consumers are increasing. The details are as under:

**Table**  
**Metering of Agriculture Consumers**

Year	Metered consumers	Un metered consumers	%mtrd wrt total Ag	% un- metered wrt total Ag
2004-05	27803	28238	49.61	50.39
2005-06	30230	27078	52.75	47.25
2006-07	31445	26542	54.23	45.77
2007-08	33324	26276	55.91	44.09

Total Un-metered consumers are 1.26% i.e. 98.74% metered consumers are there in MGVCL as on Mar-2008. It can be seen that metered consumers in agriculture are increasing.

### 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 – 8: Business Plan

### Compliance:

The Business Plan for the next five years (2008-09 to 2012-13) is under preparation and upon finalization, it shall be immediately submitted to the Commission.

### Commission comments:

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

## Directive – 9: Introduction of MYT

### Compliance:

The directive of the Commission is noted and accordingly this ARR petition is filed under Multi-Year-Tariff (MYT) from 2008-09.

### 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 – 10: Allocation of PPAs

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 of 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, at present, through PPA reallocation so as to maintain uniform retail tariff. We may have to continue this exercise 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 – 11: Distribution Transformers Failure

Transformer failures rates are still high. The total failure rate should be reduced to less than 10%.

### **Compliance**

#### **Transformer Failures**

Particulars	Unit	2007-08	2006-07	2005-06
Transformer Population	No	40412	37926	34099
Transformer Failure	No	3910	3640	4436
Transformer Failed	%	9.68	09.60	13.01

Transformer failure as can be seen that, is reduced to 9.68 % from 13.01%. The Company has noted the need to submit a periodical report to the Commission and will take the necessary action for the compliance.

### **Commission's comments:**

*The achievement is noted. The transformer failures has marginally gone up during 2007-08, the transformer failure shall be reduced.*

## FRESH DIRECTIVES

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

MGVCL is at present purchasing about 157 MU, about 3.5% 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>		
<b>IPPs</b>				
ESSAR	300	11106	1224	2.01
GPEC	655	45919	2556	2.47
GIPCL II (160)	160	5136	953	1.72



<b>GSECL PLANTS</b>	<b>Capacity (MW)</b>	<b>Fixed Cost (Rs. Lakhs)</b>	<b>Energy Purchase (MU)</b>	<b>Variable Cost (Rs. KWh)</b>
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
<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.

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

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.
$OGD_A$	<b>is the actual level of delivered energy at the bus bar (net generation) from GSECL's thermal plants in million units during the quarter.</b>
$H_B$	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.
$PPC_B$	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.*

## Chapter 8

### Open Access – Transmission Charges, Wheeling Charges and Cross Subsidy Surcharge

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8.1 The Commission approved the transmission charges, wheeling charges and cross subsidy surcharge for open access users for the year 2005-06 in its order dated 28<sup>th</sup> February 2006. These charges were based on 2003-04 data made available by GEB.

The Gujarat Energy Transmission Corporation (GETCO) and the four Distribution Companies – DGVCL, MGVCL, UGVCL and PGVCL the successor entitles of Gujarat Electricity Board (GEB) filed the petitions for determination of Annual Revenue Requirement (ARR), transmission charges and retail supply tariff for the control period 2008-09 to 2010-11.

The Commission approved the ARR of the above utilities, transmission charges and retail supply tariffs in the respective orders. Based on the approved charges, the Commission revises the open access charges as below. These charges are applicable for the year 2008-09.

#### 8.2 Transmission Charges

The transmission charges as given below are applicable for the use of transmission lines (system) of GETCO, the transmission licensee, by Generating Companies, Distribution Licensees, other licensees and also consumers who are permitted open access under section 42 (2) of the Electricity Act 2003.

##### **Rates:**

Transmission charges for 2008-09 Rs. 2410/MW/Day  
Rs. 73298/MW/Month

##### **Plus**

Energy loss in kind at 4.09%

The transmission charges payable in cash by long term open access and short term open access users shall be –

- Long term open access users = Rs. 2410/MW/Day
- Short term open access users = Rs. 603/MW/Day

(1/4 X long term rate= 1/4X2410 = Rs. 603)

The transmission charges for short term open access users shall further be based on

(a)	Upto 6 hours in a day in one block – (1/4 X Short term rate (1/4 X 603))	=	Rs.151 / MW
(b)	More than 6 hours and upto 12 hours in one block (1/2 Short term – 1/2 X 603)	=	Rs. 302 / MW
(c)	More than 12 hours upto 24 hours in one block is the short term rate	=	Rs. 603 / MW

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, MGCVL, 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 consumers 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, MGCVL, 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 MGVCL for structural changes in tariff categories and increase in tariff

MGVCL 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 MGVCL 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 MGVCL.

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 MGVCL and decision of the Commission

MGVCL 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.163.28 crore for the year 2008-09, Rs.392.48 crore for the year 2009-10 and Rs.439.21 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 MGVCL for the control period, the Commission has arrived at a revenue gap of Rs.74.15 crore during 2008-09, Rs. 249.24 crore during 2009-10 and Rs.279.58 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 the 1<sup>st</sup> February 2009. The utility can recover about 38% 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 38% 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.

There would not be any adverse effect on the cash flow of the utility as the commission has already permitted the utility to recover increase, if any, of the cost of power purchase through FPPPA. The expenditure on power purchase constitutes about 84% of the total expenses and any increase in other expenses - interest and finance charges, interest on working capital, O&M expenses and depreciation (non-cash expenditure item) which constitute about 16% of total expenses - will have only marginal impact.

The utility is directed to file the Annual Performance Review application for 2008-09 and tariff proposal for 2009-10 by the 31<sup>st</sup> March 2009 with audited accounts for 2007-08, actuals for the first nine months (April to December 2008) of 2008-09 and projections for the balance three months of 2008-09 before the Commission for a decision on determination of retail supply tariff for the year 2009-10.



## COMMISSION'S ORDER

Having considered the petition of MGVCL for approval of Aggregate Revenue Requirement (ARR) and determination of retail supply tariffs, the Commission approves the Aggregate Revenue Requirement for Madhya Gujarat Vij Company Limited (MGVCL) 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	179385	211862	232893
2	O & M Expenses	29145	29340	28340
3	Depreciation	5923	7421	8756
4	Interest on Loans & Finance Charges	7116	7650	7929
5	Interest on Working Capital	2246	2557	2744
6	Other Debits	113	118	124
7	Extraordinary items	4	4	4
8	Provision for bad debts	221	248	275
10	<b>Sub Total</b>	<b>224153</b>	<b>259200</b>	<b>281065</b>
9	Less : Interest & Expenses Capitalised	4259	4472	4695
	<b>Sub Total</b>	<b>219894</b>	<b>254728</b>	<b>276370</b>
11	Return on equity	6103	7133	8077
12	Provision for Tax	108	107	100
13	<b>Total Expenditure</b>	<b>226105</b>	<b>261968</b>	<b>284547</b>
14	Less : Non tariff income	2948	3302	3698
15	<b>Aggregate revenue requirement</b>	<b>223157</b>	<b>258666</b>	<b>280849</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
---------------	------------------

**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 Corporations, 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)</b>	<b>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 | } | <b>As per HTP-I Tariff</b> |
| 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        |   |                            |

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