GUJARAT ELECTRICITY REGULATORY COMMISSION

Multi-Year Tariff Order:

Truing up for FY 2009-10,

Annual Performance Review for FY 2010-11,

Aggregate Revenue Requirement for FY 2011-12 to FY 2015-16

and Determination of Tariff for FY 2011-12

For

Torrent Power Limited (TPL)

Case No. 1092 of 2011

6th September, 2011

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GUJARAT ELECTRICITY REGULATORY COMMISSION (GERC)

AHMEDABAD

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CONTENTS

TABLES

ANNEXURES

ABBREVIATION

AGP	Agriculture General Purpose
A&G	Administrative and General
AMR	Automatic Meter Reading
APDRP	Accelerated Power Development and Reform Program
APP	Ahmedabad Power Plant
APR	Annual Performance Review
APTEL	Appellate Tribunal for Electricity
ARR	Aggregate Revenue Requirement
BHP	Brake Horse Power
BoB	Bank of Baroda
BPL	Below Poverty Line
C&I	Control & Instrumentation
CAGR	Compound Annual Growth Rate
CAPEX	Capital Expenditure
CCPP	Combined Cycle Gas Power Plant
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
CGP	Commercial General Purpose
CHP	Coal Handling Plant
CIL	Coal India Limited
CMD	Coincident Maximum Demand
CoD	Commercial Operation Date
CPP	Captive Power Plant
CSS	Cross Subsidy Surcharge
CT	Current Transformer
CV	Calorific Value
D/C	Double Circuit
DoE	Diversion of Energy
DPC	Delayed Payment Charge
DSM	Demand Side Management
DT	Distribution Transformer
EHV	Extra High Voltage
ERP	Enterprise Resource Planning
ESP	Electro Static Precipitator
FPA	Fuel Price Adjustment
FPPPA	Fuel and Power Purchase Price Adjustment
FSA	Fuel Supply Agreement
FY	Financial Year
GCV	Gross Calorific Value
GERC	Gujarat Electricity Regulatory Commission
GETCO	Gujarat Energy Transmission Corporation Limited
GFA	Gross Fixed Asset
GIDC	Gujarat Industrial Development Corporation
GIS	Geographic Information System
GLP	General Lighting Purpose
GT	Gas Turbine
GTG	Gas Turbine Generator
GUVNL	Gujarat Urja Vikas Nigam Ltd
HDFC	Housing Development Finance Corporation
HT	High Tension
HTMD	High Tension Maximum Demand
HV	High Voltage
IDFC	Infrastructure Development Finance Corporation
IEC	International Electro Technical Commission
IGP	Industrial General Purpose
IS	Indian Standards
IT	Information Technology

Kcal	Kilo Calorie
Kg	Kilo Gram
Km	Kilometre
kV	Kilo Volt
kWh	Kilo Watt Hour
LIC	Life Insurance Corporation
LT	Low Tension
LTMD	Low Tension Maximum Demand
LTP	Low Tension Power
MAT	Minimum Alternate Tax
MMBTU	Million British Thermal Unit
MOCB	Miniature Oil Circuit Breaker
MOD	Merit Order Despatch
MRI	Meter Reading Instrument
MRS	Main Receiving Station
MT	Metric Tonne
MU	Million Units
MVA	Mega Volt Ampere
MVAR	Mega Volt-Ampere Reactive
MW	Mega Watt
MYT	Multi-Year Tariff
NCV	Net Calorific Value
NTCT	Night Time Concession Tariff
NTPC	National Thermal Power Corporation
O&M	Operation and Maintenance
OCB	Oil Circuit Breaker
OEM	Original Equipment Manufacturer
OHL	Overhead Line
PAF	Plant Availability Factor
PBT	Profit Before Tax
PF	Power Factor
PGCIL	Power Grid Corporation of India Limited
PLF	Plant Load Factor
PPA	Power Purchase Agreement
PPC	Power Purchase Cost
PT	Potential Transformer
R&M	Repair and Maintenance
RE	Revised Estimate
REC	Renewable Energy Certificate
RFO	Residual Fuel Oil
RGP	Residential General Purpose
RLA	Residual Life Assessment
RMU	Ring Main Unit
RoE	Return on Equity
RPO	Renewable Purchase Obligation
RTC	Round the Clock
RTI	Right to Information
SBAR	State Bank Advance Rate
SBI	State Bank of India
SBPLR	State Bank Primary Lending Rate
SCADA	Supervisory Control And Data Acquisition
SCM	Standard Cubic Meter
SD	Security Deposit
SECL	South Eastern Coal Fields Limited
SEZ	Special Economic Zone
SFC	Secondary Fuel Consumption
SHR	Station Heat Rate
SLC	Service Line Charges
Sq.Km	Square Kilometer
STG	Steam Turbine Generator
T&D	Transmission & Distribution

TO	Tariff Order
TOU	Time of Use
TPAL	Torrent Power AEC Limited
TPGL	Torrent Power Generation Limited
TPL	Torrent Power Limited
TPL-G	TPL Generation
TPL-D	TPL Distribution
TPL-G(APP)	TPL-G (Ahmedabad Power Plants)
TPSL	Torrent Power Surat Limited
UG cable	Underground Cable
UI	Unscheduled Interchange
VCB	Vacuum Circuit Breaker
VFD	Variable Frequency Drive
Wt.Av.	Weighted Average
YoY	Year on Year

Before the Gujarat Electricity Regulatory Commission at Ahmedabad

Case No. 1092 of 2011

Date of the Order: 06.09.2011

CORAM

Dr. P.K. Mishra, Chairman
Shri Pravinbhai Patel, Member
Dr. M.K. Iyer, Member

ORDER

1. Background and Brief History

1.1 Background

The Torrent Power Limited (hereinafter referred to as TPL or Petitioner) filed its petition on 24th February, 2011, under section 62 of the Electricity Act, 2003 read with Gujarat Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2005 and Gujarat Electricity Commission (Multi-Year Tariff Framework) Regulations, 2007 for truing up of FY 2009-10, Annual Performance Review (APR) for FY 2010-11, Aggregate Revenue Requirement (ARR) for the control period for FY 2011-12 to 2015-16 and determination of tariff for generation and distribution business for FY 2011-12.

The Commission admitted the petition on 4th April, 2011 and subsequently upon undertaking its technical validation found that additional information was required from TPL. Accordingly, the Commission issued a letter on 6th May, 2011 directing the Petitioner to submit additional information. Following the discussions between the

Commission and the Petitioner on 24th and 26th May, 2011 the additional information was furnished by the Petitioner vide its letter dated 2nd June, 2011.

1.2 Torrent Power Limited (TPL)

The Torrent Power Limited (TPL) is a company incorporated under the Companies Act, 1956 and is carrying on the business of Generation and Distribution of Electricity in the cities of Ahmedabad, Gandhinagar and Surat. TPL had assumed the business consequent upon the amalgamation of Torrent Power AEC Limited (TPAL), Torrent Power Surat Limited (TPSL) and Torrent Power Generation Limited (TPGL) with Torrent Power Limited. Besides, TPL is also engaged in other businesses which do not come under the regulatory overview of the Commission.

The TPAL was a licensee under the Indian Electricity Act, 1910 and TPSL was a sanctioned holder (in terms of sanction granted by the Government of Gujarat) under the provisions of the Indian Electricity Act, 1910. Torrent Power Limited is a deemed licensee for distribution of electricity under Section 19 (i) (d) read with section 19 (1) (i) of the Gujarat Electricity Industry (Reorganization and Regularization) Act, 2003 and under section 14 of the Electricity Act, 2003. The Commission had granted approval to the transfer / assignment of licenses to Torrent Power AEC Limited and Torrent Power SEC Limited so as to incorporate the name of TPL as a licensee in place of TPAL and TPSL in the respective licenses without change of any terms and conditions of license.

The approval of the Commission was subject to the order and direction of the Honourable High Court of Gujarat on the scheme of amalgamation / merger of TPAL, TPSL and TPGL and TPL. The scheme of amalgamation was approved by the Honourable High Court of Gujarat vide its order dated 11th September, 2006.

1.3 Commission's Order for the first control period

The TPL had filed its petition under the Multi-Year Tariff Framework for FY 2008-09, FY 2009-10 and FY 2010-11 on 8th May 2008 in accordance with Gujarat Electricity Regulatory Commission (Multi-Year Tariff Framework) Regulations, 2007 notified by the Commission. The Commission, in exercise of the power vested in it under sections 61 to 64 of the Electricity Act, 2003 and all other powers enabling it on this behalf, and after taking into consideration the submission made by TPL, the objections by various stakeholders, response of TPL, issues raised during public hearing and all other relevant material, issued the Multi-Year tariff order on 17th January, 2009 for the control period comprising FY 2008-09, FY 2009-10 and FY 2010-11.

The Commission issued the orders on (i) Annual Performance for FY 2008-09 and determination of tariff for FY 2009-10 on 9th December, 2009 and (ii) Performance Review for the FY 2009-10 and determination of tariff for FY 2010-11 on 31st March, 2010.

1.4 Admission of the current petition and public hearing process

The TPL submitted the current petition for truing up of FY 2009-10, Annual Performance Review for FY 2010-11 and determination of Aggregate Revenue Requirement (ARR) for the generation and distribution business for the control period FY 2011-12 to FY 2015-16 and determination of tariff for FY 2011-12 for generation and distribution business on 24th February, 2011. As mentioned earlier, the Commission admitted the petition (Case No.1092 of 2011) on 4th April, 2011.

In accordance with section 64 of the Electricity Act, 2003, the Commission directed TPL to publish its application in the abridged form to ensure public participation. The public notice was published in the following newspapers on 9th April, 2011 inviting objections / suggestions from its stakeholders on the ARR petition filed by it.

Sl.No.	Name of the Newspaper	Language	Date of publication
	Ahmedabad		
1	Indian Express	English	9th April, 2011
2	Sandesh	Gujarati	9th April, 2011
3	Gujarat Samachar	Gujarati	9th April, 2011
4	Divya Bhaskar	Gujarati	9th April, 2011
5	Sambhaav Metro	Gujarati	9th April, 2011
6	Jaihind	Gujarati	9th April, 2011
7	Loksatta	Gujarati	9th April, 2011
	Surat		
1	Times of India	English	9th April, 2011
2	Gujaratmitra	Gujarati	9th April, 2011

The Petitioner has also placed the public notice and the petition on its website (torrentpower.com) for inviting objections and suggestions on the petition. The interested parties / stakeholders were asked to file their objections / suggestions on the petition on or before 10th May, 2011. The period was extended upto 31st May, 2011 on the specific request by the stakeholders.

The TPL / Commission received objections / suggestions from 157 consumers / consumer organisations. The Commission examined the objections / suggestions received and fixed the date of public hearing for TPL to be held at Commission's office, Ahmedabad on 23rd and 24th June, 2011. Communications were sent to these consumers / consumer organizations to take part in the public hearing process for presenting their views in person before the Commission. The Public hearing was conducted as scheduled at the Commission's office premises at Ahmedabad.

The names of consumers and consumer organizations who filed their objections / suggestions and the objectors who participated in the public hearing for presenting their objections are given in Annexures 1.1 and 1.2.

A short note on the main issues raised by the objectors in written submissions in public hearing in respect of the petition along with the response of TPL and the Commission's views on the response is given in Chapter-3.

1.5 Approach of this order

The Multi-Year Tariff Regulations, 2007 provide for truing up of the previous year, Annual Performance Review (APR) for the current year and determination of tariff for the ensuing years. The Commission had approved the ARR for the three-year period of the first control period from FY 2008-09 to FY 2010-11 in the MYT order dated 17th January, 2009. The Commission had undertaken of the Annual Performance Review for FY 2008-09 in its order issued on 9th December, 2009.

The TPL has approached the Commission with the present petition for truing up of the FY 2009-10, the Annual Performance Review for the FY 2010-11 and determination of ARR for the period FY 2011-12 to FY 2015-16, the control period and determination of tariff for the FY 2011-12.

In this order Commission has considered the truing up of FY 2009-10, the Annual Performance Review' for the FY 2010-11 and approval of ARR for the control period FY 2011-12 to FY 2015-16, and determination of the tariff for the FY 2011-12.

The TPL had moved the Appellate Tribunal for Electricity (APTEL) in the appeal No.61 of 2010 on the decisions of the Commission in Case No. 966 of 2009 on various issues in the performance review for the year 2008-09 and determination of tariff for the year 2009-10.

The APTEL issued certain decisions / directives to the Commission on the issues raised by TPL in its judgment vide order dated 9th May, 2011.

The APTEL through its judgment dated 23rd March, 2010 (Appeal No.68 of 2009) and judgment dated 5th April, 2011 (Review Petition 9 of 2010) had also directed the Commission to reconsider some issues during the process of truing up.

The Commission conducted a public hearing on 21st June, 2011 on the decisions / directives of the APTEL and has issued the order on these issues vide order dated 05.09.2011. The Commission's decisions are incorporated under the respective components of ARR under Truing up, Annual Performance Review and MYT orders by making specific mention of the actions of the Commission on the directives of the APTEL.

The Commission has undertaken truing up for the FY 2009-10 and performance review for FY 2010-11 based on the submission of the petition. The Commission has also undertaken the computation of gains and losses for the FY 2009-10 based on the audited annual accounts made available by the Petitioner. The Commission has not undertaken any computation of gains and losses for the FY 2010-11 as the audited accounts are not available for the said year by the Petitioner. The computation of gains and losses for the FY 2010-11 would be undertaken on the basis of audited annual accounts of the Petitioner for the FY 2010-11 while finalizing the tariff order for FY 2012-13.

While scrutinizing the revision of the ARR, the Commission has been primarily guided by the following principle:

1. Controllable parameters have been considered at the level of approval under the MYT order unless the Commission considers that there are valid reasons for revision of the same
2. Un-controllable parameters have been revised based on the actual performance observed.

The truing up of the FY 2009-10 and Annual Performance Review for FY 2010-11 have been considered based on MYT Regulations, 2007.

The determination of ARR for the period FY 2011-12 to FY 2015-16 and the determination of tariff for FY 2011-12 have been considered as per the GERC (MYT) Regulations, 2011. The final draft of these Regulations along with discussion paper was circulated to all stakeholders on December, 2010 and based on their comments and suggestions the Commission notified these Regulations as GERC (Multi-Year Tariff) Regulations, 2011 on 22nd March, 2011.

The Regulation 1.4 (a) of these Regulations, 2011 reads as under:

> ***"These Regulations shall be applicable for determination of tariff in all cases covered under these Regulations from 1st April, 2011 and onwards".***

1.6 Contents of this order

The order is divided into nine chapters:

1. The **first** chapter provides a brief background regarding the Petitioner, the petition on hand and details of the public hearing process and approach adopted in this order.
2. The **second** chapter outlines the summary of TPL MYT petition.
3. The **third** chapter deals with the public hearing process including the objections raised by various stakeholders, TPL's response and Commission's views on the response.
4. The **fourth** chapter focuses on the details of truing up of FY 2009-10.
5. The **fifth** chapter deals with the Annual Performance Review for FY 2010-11.
6. The **sixth** chapter containing the detail of the Aggregate Revenue Requirement (ARR) for the generation and distribution businesses for the FY

2011-12 to FY 2015-16, the control period and determination of tariff for FY 2011-12.

7. The **seventh** chapter refers to compliance of directives and issue of fresh directives.
8. The **eighth** chapter deals with fuel and power purchase cost adjustment.
9. The **ninth** chapter deals with computation of wheeling charges and cross subsidy surcharge.
10. The **tenth** chapter outlines the tariff philosophy and design approved by the Commission, Tariff Schedule and Annexures that are appropriate.

1.7 Business Plan

The TPL has submitted the Business Plan for the control period of five (5) years from 1st April, 2011 to 31st March, 2016 in pursuance of the directive of the Commission vide letter No. GERC/MYT/Tariff 2010/1446 dated 15th September, 2010. It is observed that the details provided in the Business Plan are in variance with the provisions of GERC (MYT) Regulations, 2011 based on which the (MYT) Order is being issued.

The TPL has, therefore, to revise the Business Plan in accordance with the provisions / norms of the GERC (MYT) Regulations, 2011 and submit the same within three months of issue of this order.

A mid-term review of the Business plan will be carried out during the FY 2014-15, if the licensee desires such review, as provided in Regulation 19.1 of the GERC (MYT) Regulations, 2011.

Annexure 1.1

List of Organisations and Individuals who filed objections / suggestions

Sl. No	Name
1	Gujarat Chamber of Commerce and Industry
2	Ahmedabad Printing Press Association
3	Utility User's Welfare Association
4	Vishram Park Association
5	Harishchandra Park Co.- Op . Housing Society Ltd
6	Shri Tejaskumar Dineshbhai Shar
7	Dr. Mukesh N. Shah and Others 125 Objectors
8	Mr. Yagnesh Shah
9	Shri Rajnikant P. Shukla
10	Surat Municipal Corporation
11	Surat Citizen's Council Trust & Southern Gujarat Chamber of Commerce & Industry
12	Shri Mukesh Parikh – Grahak Suraksha Ane Pagla Samiti -
13	Shri Dalpatram G. Navdiwala
14	Shri Amarsinh Chavda
15	Laghu Udyog Bharati – Gujarat + 1 Additional Response
16	Consumer Education and Research Society
17	Lokshahi Suraksha Sangathan
18	Federation of Industries and Association (Gujarat)
19	Representation of Bhav Vadhara ni Ladat Nagarik Sangharsh Samiti (5 Members)
20	Viom Networks Ltd
21	TTSL – TATA Teleservices Ltd.
22	Reliance Communication Ltd
23	Shri R.K Thapa
24	Shri Bipinchandra Chandulal Dave
25	Shri Manishbhai Babubhai Brahmabhatt
26	Smt. Hiral Mukesh Parikh
27	Indus Towers Ltd.
28	Shri Bharat Kanaiyalal Bhatt

Breakup of Sr. No 7 of Objectors' List

Dr. Mukesh N. Shah and Other 125 Objectors

Sl.No	Name
7/1	Dr. Mukesh N. Shah – Aditya Hospital
7/2	Dr. Ashvin C. Patel – Astha Pathology Laboratory
7/3	Shri M.P. Gupta
7/4	Shri Kiran Kilubhai Patel
7/5	Shri Kaushik C. Patel
7/6	Shri Shailesh N. Patel
7/7	Shri Deepak P. Shah
7/8	Shri Natwarbhai Jivanlal Prajapati
7/9	Shri Mahendrakumar Govindbhai Patel
7/10	Shri Sumanbhai Chaganlal Patel
7/11	Shri Sanjay B. Dave
7/12	Dr. Rajesh Prakapati
7/13	Shri Dineshbhai Bhimjibhai Gadhvi
7/14	Dr. Prashant Patel – Rukshmani Medical Hospital
7/15	Parvati Jadav Hospital
7/16	Dr. Vijay B. Shaf – Dev Hospital
7/17	Dr. Janak Sadhwani – pooja Hospital Dr. Tapsi Sadhwani – Chirayu Surgical Hospital
7/18	Dr . K.G. Gupta – Trupti Hospital
7/19	Dr. Mahesh k. Patel – Rukshami surgical Hospital
7/20	Dr. Ruchika Nikul sathawaea- Avis Eye Care Centre
7/21	Dr. Saurin Shah & Dr. Shaishav Soni – Ashirwad Hospital
7/22	Dr. Milap Jolapara – Sparsh: the Shin Clinic
7/23	Dr. Gyanendra H. Singh – Hansraj Hospital
7/24	Ajay Industrial Estate
7/25	Dr. Manish Gupta
7/26	Shri Mahadeo Ishvarlal Desai
7/27	Gandhinagar Shaher Vasahat Mahamandal
7/28	Parth Gas Service
7/29	Shri Manubhai M. Patel
7/30	Shri Sureshbhai Patel
7/31	Shri M.K. Yagnik
7/32	Shri Ashwinbhai Barot
7/33	Shri Ramanbhai L. Patel
7/34	Shri Suresh G. Shah
7/35	Smt. Alka G. Bhatt
7/36	Shri Kanusinh L. Vaghela
7/37	Shri V.D. Zala
7/38	Shri Malay Zaveri
7/39	Shri H.A. Bhatt
7/40	Smt. Chandrikaben K. Solanki
7/41	Shri P.K. Bhatt
7/42	Shri K.R. Shah
7/43	Shri S.G. Trivedi
7/44	Shri P.J. Kapadia
7/45	Shri D.K. Khemani
7/46	Shri C.N. Barot
7/47	Shri M.K. Mehta
7/48	Smt. Parul K. Soni
7/49	Shri Manoj K. Panchal

7/50	Smt. Sushma Yadav
7/51	Shri Mukesh Kumar Saxena
7/52	Shri Arvind P. Patel
7/53	Shri Ishwarbhai G. Patel
7/54	Shri P.K. Ruwala
7/55	Shri Mahendra Shah
7/56	Smt. Jayaben P. Panchal
7/57	Smt. Ushaben P. Shukla
7/58	Shri Babubhai G. Patel
7/59	Smt. Jayshreeben Sheth
7/60	Shri Ashokbhai Patel
7/61	Shri Mundrabhai B. Vyas
7/62	Shri Mansukhbhai B. Panchal
7/63	Smt. Ushaben M. Panchal
7/64	Smt. Kanakben V. Suthar
7/65	Smt. Parulben R. Shah
7/66	Shri Krishnakant G. Mevada
7/67	Smt. Meenaben Ajmera
7/68	Smt. Varshaben K. Patel
7/69	Smt. Niruben K. Mevada
7/70	Shri Dashrathbhai P. Patel
7/71	Shri Chimanbhai K. Patel
7/72	Shri Sunilbhai G. Panchal
7/73	Shri Natwarlal Mistry
7/74	Smt. Taraben I. Mistry
7/75	Shri Viral N. Patel
7/76	Shri Shankarlal H. Patel
7/77	Shri Vasantbhai S. Patel
7/78	Shri Hasmukhbhai A. Shah
7/79	SaraswatiChandra Co.-Op. Housing Society Ltd.
7/80	Shri Maheshkumar B. Desai
7/81	Dr. Jurish Bhatia - Aarogya Clinic for Dental & Child Care
7/82	Rajput Utkarsh Sewa Mandal - Odhav
7/83	Shri Parshottam B. Patel
7/84	Shri Bhogilal Kishordas Patel
7/85	Shri Vitthalbhai Shivram Patel
7/86	Shri Prahaladbhai Jethadas Patel
7/87	Shri Dayabhai Shivram Patel
7/88	Shri Rameshbhai Naranbhai Patel
7/89	Shri Chandrakant Bhailal Patel
7/90	Shri Ranchodbhai Chaganlal Patel
7/91	Shri Dashrathbhai Manilal Patel
7/92	Shri Rakeshbhai Ratilal Patel
7/93	Smt. Taraben B. Patel
7/94	Shri Pankajbhai K. Patel
7/95	Shri Rasiklal Hiralal Patel
7/96	Shri Bhogilal K. Patel
7/97	Shri Bhailal D. Patel
7/98	Shri Baldevbhai Rambhai
7/99	Shri Hiralal Babaldas Patel
7/100	Shri Bharatbhai B. Patel
7/101	Shri Ashwinbhai P. Mehta
7/102	Shri Babubhai Ishwarbhai Patel
7/103	Shri Hitesh Keshavlal Patel
7/104	Shri Hasmukhbhai Babubhai Patel

7/105	Shri Chaturbhai Khodidas Mandli
7/106	Shri Bhupendrabhai S. Patel
7/107	Shri Mahipatbhai Damodardas Patel
7/108	Shri Babubhai Hargovinddas Patel
7/109	Shri Narendrabhai Aatmaram Patel
7/110	Shri Sharadkumar Ganpatlal Patel
7/111	Shri Narottambhai Gangaram Patel
7/112	Shri Mayurbhai M. Patel
7/113	Shri Ambalal Shivram Patel
7/114	Shri K.D. Patel
7/115	Shri Manubhai Chabildas Patel
7/116	Shri Ambalal Kachrabhai Patel
7/117	Shri Rohit J. Patel
7/118	Shri Bachubhai Manilal Patel
7/119	Shri Govindbhai Madhavlal Patel
7/120	Shri Chandrakant Khodidas Patel
7/121	Shri Pravinchandra Prabhudas Patel
7/122	Shri Ramanbhai Hargovandas Patel
7/123	Shri Sitaram K. Patel
7/124	Shri Chandubhai Raichanddas Patel
7/125	Smt. Priti L. Shah
7/126	Shri Kantilal U. Dakoria

Breakup of Sl. No 19 of Objectors' List

Representatives of Bhav Vadhara ni Ladat Nagarik Sangharh Samiti (5 Members)

Sl. No.	Name
19/1	Shri Manishbhai Babubhai Brahmabhatt, Representative, Bhav Vadhara ni Ladat Nagarik Sangharsh Samiti
19/2	Shri R.K. Thapa, Representative, Bhav Vadhara ni Ladat Nagarik Sangharsh Samiti
19/3	Shri Manishbhai Babubhai Brahmabhatt, Representative, Bhav Vadhara ni Ladat Nagarik Sangharsh Samiti
19/4	Advocate M.M. Sadulla, Representative, Bhav Vadhara ni Ladat Nagarik Sangharsh Samiti
19/5	Advocate Rajan Rajput, Representative, Bhav Vadhara ni Ladat Nagarik Sangharsh Samiti

Annexure 1.2

List of participants in public hearing

Sl. No	Name
1	Gujarat Chamber of Commerce and Industry
2	Ahmedabad Printing Press Association
3	Utility User's Welfare Association
4	Vishram Park Association
5	Harishchandra Park Co.- Op . Housing Society Ltd
6	Shri Tejaskumar Dineshbhai Shar
7	Dr . Mukesh N. Shah and Others 125 Objectors
8	Mr. Yagnesh Shah
9	Shri Rajnikant P. Shukla
10	Surat Municipal Corporation
11	Surat Citizen's Council Trust & Southern Gujarat Chamber of Commerce & Industry
12	Shri Mukesh Parikh – Grahak Suraksha Ane Pagla Samiti -
13	Shri Dalpatram G. Navdiwala
14	Shri Amarsinh Chavda
15	Laghu Udyog Bharati – Gujarat + 1 Additional Response
16	Consumer Education and Research Society
17	Lokshahi Suraksha Sangathan
18	Federation of Industries and Association (Gujarat)
19	Representation of Bhav Vadhara ni Ladat Nagarik Sangharsh Samiti (5 Members)
20	Viom Networks Ltd
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22	Reliance Communication Ltd
23	Shri R.K Thapa
24	Shri Bipinchandra Chandulal Dave
25	Shri Manishbhai Babubhai Brahmabhatt
26	Smt. Hiral Mukesh Parikh
27	Indus Towers Ltd.
28	Shri Bharat Kanaiyalal Bhatt

2. Summary of ARR and Tariff Petition for FY 2011-12 to FY 2015-16

2.1 Aggregate Revenue Requirement (ARR)

The Torrent Power Limited (TPL), in its petition, has submitted the Aggregate Revenue Requirement for the generation and distribution businesses for FY2011-12 to FY 2015-16, the control period, for meeting the expenses and the estimated revenue with the existing tariff for the control period. The ARR for the generation and distribution businesses and the gap are given in tables below:

Table 2.1: Aggregate Revenue Requirement for TPL (G) for the period FY 2011-12 to FY 2015-16

(Rs. crores)

Sl. No.	Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
1.	Variable cost	868.93	764.05	824.75	665.80	647.42
2.	O&M expenses	134.82	142.53	150.68	159.30	168.41
3.	Depreciation	34.23	45.23	54.48	51.48	52.44
4.	Interest on loan	15.10	30.30	40.43	36.82	33.36
5.	Interest on working capital	43.06	40.27	43.91	37.09	36.55
6.	Return on equity	49.36	58.59	65.94	64.48	63.18
7.	Income tax	24.55	29.14	32.80	32.07	31.42
8.	Less: Non-tariff income	0.98	0.01	1.04	1.07	1.10
9.	**ARR**	**1169.07**	**1109.11**	**1211.96**	**1045.96**	**1031.69**

Table 2.2: Aggregate Revenue Requirement for TPL-D Ahmedabad supply area for the period FY 2011-12 to FY 2015-16

(Rs. crores)

Sl. No.	Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
1.	Power purchase expenses	2431.05	2696.31	2943.70	3219.66	3357.48
2.	O&M expenses	229.90	257.79	289.25	324.76	364.86
3.	Depreciation	112.66	163.57	216.40	249.97	271.39
4.	Interest on long term loans	86.08	153.03	212.60	238.00	239.92
5.	Interest on security deposit	13.04	14.43	15.95	17.63	19.47
6.	Interest on working capital	46.19	59.58	68.28	81.65	87.53
7.	Provision for bad debts	3.06	3.54	4.00	4.42	4.65
8.	Contingency reserve	0.60	0.60	0.60	0.60	0.60
9.	Return on equity capital	153.97	199.52	244.55	272.66	290.16
10.	Income tax	38.33	49.66	60.87	67.87	72.23
11.	Less: Non-tariff income	51.70	51.70	53.25	54.84	56.49

Sl. No.	Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
12.	**ARR**	**3063.20**	**3544.79**	**4001.34**	**4420.72**	**4650.10**

Table 2.3: Aggregate Revenue Requirement for TPL-D Surat supply area for the period FY 2011-12 to FY 2015-16

(Rs. crores)

Sl. No.	Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
1.	Power purchase expenses	1374.04	1489.49	1600.64	1716.31	1755.46
2.	O&M expenses	100.97	1111.22	122.45	135.09	148.99
3.	Depreciation	45.20	48.85	51.61	53.95	56.05
4.	Interest on long term loans	42.29	37.33	33.49	27.73	25.13
5.	Interest on security deposit	9.12	9.51	9.91	10.31	10.71
6.	Interest on working capital	37.84	40.72	43.50	46.38	42.71
7.	Provision for bad debts	1.68	1.81	1.94	2.05	2.12
8.	Contingency reserve	0.40	0.40	0.40	0.40	0.40
9.	Return on equity capital	73.47	74.73	75.57	76.46	77.14
10.	Income tax	18.29	18.60	18.81	19.03	19.20
11.	Less: Non-tariff income	21.90	22.40	22.95	23.63	24.42
12.	**ARR**	**1681.36**	**1810.26**	**1935.38**	**2064.07**	**2118.48**

Table 2.4: Aggregate Revenue Requirement of TPL (D) for the period FY 2011-12 to FY 2015-16

(Rs. crores)

Sl. No.	Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
1.	Power purchase expenses	3805.09	4185.80	4544.34	4935.96	5112.94
2.	O&M expenses	330.87	369.01	411.70	459.85	513.85
3.	Depreciation	157.86	212.42	268.01	303.91	327.44
4.	Interest on long term loans	128.37	190.36	246.09	265.73	265.05
5.	Interest on security deposit	22.16	23.94	25.86	27.94	30.18
6.	Interest on working capital	84.03	100.29	111.79	128.03	135.24
7.	Provision for bad debts	4.74	5.36	5.94	6.48	6.77
8.	Contingency reserve	1.00	1.00	1.00	1.00	1.00
9.	Return on equity capital	227.44	274.25	320.12	349.12	367.30
10.	Income tax	56.61	68.26	79.68	86.90	91.43
11.	Less: Non-tariff income	73.63	75.65	77.80	80.12	82.60
12.	**ARR**	**4744.55**	**5355.04**	**5936.72**	**6484.80**	**6768.59**

2.2 Aggregate Revenue Requirement for Distribution Business, Revenue at existing tariff rates and the revenue gap (deficit or surplus)

Aggregate Revenue Requirement of TPL-D, the revenue from sale of power at the existing tariff rates and the gap estimated for FY 2011-12 are as below:

Table 2.5: Aggregate Revenue Requirement and Revenue at existing tariff rates and the gap of TPL for the FY 2011-12

Sl. No.	Particulars	FY 2011-12		
		Ahmedabad	Surat	Total
1.	Net Aggregate Revenue Requirement	3063.20	1681.36	4744.55
2.	Revenue from sale of power at existing tariff rates	2173.65	1291.36	3465.01
3.	FPPPA revenue @Rs.0.70 per unit	390.11	230.82	620.93
4.	Net Gap/ (Surplus)	499.44	159.18	658.61

2.3 TPL's request to the Commission:

(a) To admit the petition for truing up for FY 2009-10, revision of Aggregate Revenue Requirement for FY 2010-11 and Aggregate Revenue Requirement for the period FY 2011-12 to FY 2015-16.

(b) To approve the gap of FY 2009-10 as per the final ' truing up ' and carrying cost for un-recovered gap.

(c) To approve the sharing of gains / losses proposed by TPL for FY 2009- 10.

(d) To approve the gap for FY 2010-11 and the carrying (carried forward) cost for un-recovered gap.

(e) To approve the revised Aggregate Revenue Requirement for FY 2011-12 to FY 2015-16.

(f) To approve the charges for wheeling of electricity and retail supply tariff of electricity with effect from 1st April, 2011.

(g) To approve the tariff as proposed by the TPL for its Ahmedabad and Surat supply areas.

(h) To allow the recovery of earlier year's revenue gap along with gap of FY 2009-10 and FY 2010-11 through surcharges.

(i) To allow the petitioner to make additions/ alterations/ changes/ modifications to the application at a future date.

(j) To permit the Petitioner to file all necessary pleadings and documents in the proceedings and documents from time to time for effective consideration of the proceedings.

(k) To condone the delay in filing the present petition.

(l) To allow the Petitioner for any other relief, order or direction, which the Commission deems fit to be issued.

(m) To condone any inadvertent omissions/errors/rounding off difference / shortcomings.

3. Brief outline of objections raised, response from TPL and Commission's view

3.0 Public response to the petition

In response to the public notice, inviting objections/suggestions of the stakeholders on the MYT petition filed by TPL for 'Truing up' of FY 2009-10, performance review for FY 2010-11 and approval of ARR for FY 2011-12 to FY 2015-16, a number of consumers/consumer organisations filed their objections / suggestions in writing. Some of these objectors participated in the public hearing also. It is observed that the objections / suggestions filed, by and large, are repetitive in nature. Some of the objections are general in nature and some are specific to the proposal submitted by TPL for approval of ARR and Tariff revision. The Commission has, therefore, referred the objections/suggestions issue-wise rather than objector-wise. The objections / suggestions by consumers / consumer organisations, the response from the Petitioner and the views of the Commission are as given below.

3.1 The proposals for increase in tariffs are not warranted. The company is profit making

Objections: Some objectors submitted that TPL is a profit making company and hence, there is no need for a tariff hike. The objectors have specially highlighted the balance sheet, profit and loss statement, stock price and dividend paid by the company.

TPL's response: TPL has submitted that the Annual statements of the Accounts are as per the stipulations of the Companies Act and relate to the entire business of the company for regulated, as well as the other businesses. But the tariff petition relates only to the regulated business of the company.

Commission's view: *The petition relates only to the regulated business of the company. The Commission goes into the reasonableness, or otherwise, of the proposals in the petition and allows a return of 14% on the equity for regulated business of the company and decides, keeping in view the relevant Regulations, on the need for any hike, or otherwise, in the tariff.*

3.2 Revision of Tariff retrospectively

Objections: It is submitted by some of the objectors that the filing of the petition is unduly delayed and the petition for revision of tariff retrospectively needs to be rejected.

TPL's response: Petitioner has submitted that it was in the process of finalising the estimate of ARR and Tariff for the second control period. Later, it was directed vide letter dated 12th November, 2010 specifying the second control period of 5 year from FY 2011-12 to FY 2015-16. The finalisation of the Business Plan and the petition, which is based on that, necessarily takes time, but still the petitioner has expedited the petition. Hence, the petition may be allowed.

Commission's view: *The Commission has noted the objections and petitioner's response. However, in future the Petitioner shall take steps to file the petition in time.*

3.3 Recovery of Regulatory Asset

Objection: It is submitted by the objector(s) that the plea for recovery of Regulatory Asset by way of surcharge be rejected.

TPL's response: It is submitted by TPL that the revenue gap for the past years is nonrecurring in nature and it is not proper to load it in the tariffs. This plea is in accordance with the Tariff Regulations, 2005.

Commission's view: *The Commission has examined this issue and has taken an appropriate decision.*

3.4 Petition No 1091/2011

Objection: It is submitted by some of the objectors that Petition No.1091/2011 was withdrawn because it was beset with infirmities. If the current petition follows the same analogy, the same should be kept in abeyance until all data is furnished.

TPL's response: The Petition No.1091/2011 referred to is not relevant to the current petition.

Commission's view: *The current petition is considered, based on its merits and as per the relevant Regulations.*

3.5 The petition and public notice should be in Gujarati Language

Objection: It is submitted by the objectors that the petition and public notice are not published in the Gujarati language.

TPL's response: It is submitted by TPL that the public notice was published in the Gujarati language. The petition has been made in English as per the prevailing practice of the Commission.

Commission view: *The Commission agrees with the petitioner's explanation. However, TPL should provide information / replies in Gujarati for the comments / objections received in Gujarati, even though the language of the proceedings is English.*

3.6 Accounting Statement of the Petition

Objections: Many of the objectors have submitted that, as per the GERC (MYT Frame work) Regulations, 2007, Accounting Statements to be filed with the petition, shall follow the requirements of the Companies' Act. The Companies Act requires that the corresponding accounts of the immediately preceding financial year shall be furnished for ready reference. But this has not been done. The accounting statements are not as per the stipulation of MYT framework regulations.

TPL's response: TPL has submitted that, while passing the order dated 9th December, 2009, in case No 966/2009, the Commission directed that separate accounting statements be furnished from FY 2010-11 onwards. However, a separate accounting statement for FY 2009-10, was submitted in the current petition. FY 2009-10 being the first year of submission of accounts in the MYT regime, the accounting statement submitted is without the corresponding figures for the preceding year.

Commission view: The response of the petitioner is noted. In future, the petitioner shall furnish the Accounting statements in accordance with the relevant Regulations.

3.7 Separate accounts for the regulated business

Objection: Some of the objectors have submitted that, as per section 51 of the Electricity Act, 2003 read with Regulation 28 of GERC Distribution Licence

Regulations, 2005, the petitioner needs to maintain separate accounts for Regulated Business.

TPL's response: It is submitted by TPL that these provisions are applicable when the licensee engages in "other business" for optimum utilisation of the distribution assets and infrastructure. The petitioner has not engaged in any such "other business". The petitioner maintains separate accounts for each of the business, generation, Ahmedabad and Surat distribution and the audited accounting statements have been submitted.

Commission's view: *The Commission feels that, whenever the licensee company engages in any other business whether utilising the regulated assets or not, there needs to be transparency in the accounts so as to obviate any effect of the unregulated business on the regulated business. The Commission is constantly striving to enhance transparency in all such circumstances. The licensee shall maintain separate accounts for Regulated Business and submit Accounting Statements as per the relevant Regulations.*

3.8 No independent corroboration of expenses and revenue of the unregulated business activities of the petitioner

Objection: The objectors have submitted that there is no independent corroboration and impartial audit of the unregulated activities of the petitioner and its franchisees outside the licence area.

TPL's response: TPL has submitted that the Accounts are prepared as per the standards specified by the ICAI, in accordance with the Companies' Act, 1956. The separate accounting statements for the present proceedings have been duly certified by the Statutory Auditors of the company for FY 2009-10

Commission view: *The Commission has no reason to believe that the audited figures of the petitioner are mixed up with the unregulated business of the petitioner.*

3.9 Wide disparity between the projections of power purchase etc., approved by the Commission and the actuals

Objections: It is submitted by some of the objectors that there is wide gap between the projections approved by the Commission and the actual figures on power purchase indicating lack of commercial prudence.

Petitioner's response: TPL has submitted that dynamic factors such as the economic slowdown during 2008-09 and the revival in 2009-10, could not be predicted and factored into the Commission's approved figures. This was the reason for the divergence

Commission view: *Such large variation may occur under such an unpredictable situation. However, the petitioner is directed to be more realistic in the estimation of demand and power procurement.*

3.10 Sales forecast

Objections: Some of the objectors have submitted that the sales forecast is unduly pessimistic

TPL's response: TPL has submitted that historical trend analysis formed the basis for the projections. The methodology and assumptions used in the forecast are clearly indicated.

Commission's view: *The sales forecast is generally considered, based on past trend, with corrections, wherever required. The trend method gives a fairly realistic estimate of sales.*

3.11 Data furnished to the Collector of Electricity Duty (CED)

Objection: It is submitted by some of the objectors that the figures of category-wise sales obtained from collector of Electricity Duty from 2009-10 conflict with those provided by TPL in the petition.

TPL's response: TPL has submitted that the data of the category wise sales given in the petition is as per the categories defined under tariff schedule approved by the Commission. The data referred to in the objection was as per the definition of categories under the Bombay Electricity Duty Act. The Categorisation is different and not comparable with each other.

Commission's view: *The Commission appreciates the efforts of the objector to check on the veracity of the figures of the petitioner. The petitioner's explanation is noted.*

3.12 T&D Losses

Objection: - Some of the objectors have submitted that the petitioner had not been able to bring down T&D losses to the given target

TPL's response: TPL has submitted that it had achieved the targets of T&D losses reduction during the period 2008-09 to 2010-11

Commission's view: *The T&D losses have been brought down during the period.*

3.13 Cost of Supply

Objection: It is submitted by some of the objectors that TPL has not supplied the category - wise cost of supply. The National Electricity Policy recommends this.

TPL's response: TPL has submitted that NEP requires comparison with average cost of supply. The cost of supply voltage - wise was furnished earlier. Further study for category - wise cost is under way.

Commission's view: *The petitioner needs to submit a comprehensive study for determination of category-wise cost of supply. This should be expedited.*

3.14 Basis for categorisation of consumers for Tariff purposes

Objection: It is submitted by some of the objectors that characteristics of usage, and not purpose of use, should be the basis for determination of category of consumer in the tariff categorisation.

TPL's response: TPL has submitted that tariff categorisation is to be done as per the provisions of the Electricity Act, 2003.

Commission's view: *The Electricity Act lays down clear guidelines in respect of categorisation of consumers for tariff purposes. The categorisation in the Tariff Order is done in accordance with the provisions of the Act, particularly, under Section 62 (3) of the Act. It shall be the purpose for which the supply is required.*

3.15 Employee expenses

Objection: Some of the objectors have contended that employee expenses cannot be considered uncontrollable even though the wage revision settlement was generous. The Petitioner should aim at productivity gains, rather than increasing employee cost. Managerial remuneration is high. Some of the executives hold multiple jobs in other non-regulated areas of their business.

TPL's response: TPL has submitted that the wages are determined as per the provisions of Industrial Dispute Act, 1947. The petitioner company is a high performing company. Its employee costs are comparable with those in other similar industries.

Commission view: *The employee cost is normally treated as a controllable expense as per Regulations, but in the years when revision takes place or any additional payments are made in view of policies / provisions of State or Central Government, these are treated as uncontrollable.*

3.16 Capital expenditure

Objections: Some of the objectors have submitted that the capital expenditure is increased recklessly. The return of 14% is quite high for private utilities. The capital expenditure has to be pruned.

TPL's response: TPL has submitted that capital expenditure is incurred prudently considering relevant factors like load growth, new connections, safety and reliability, modernisation, etc. The estimate for 2009-10 was approved by the Commission. Actual figures have been submitted by the petitioner for truing up.

Commission's view: *Only reasonable expenditure is allowed by the Commission on due scrutiny.*

3.17 Capital investment: Safety initiatives

Objection: Some of the objectors have submitted that the CAPEX of Rs.1666 crores on safety initiative is very heavy and should be spread over a larger period beyond the control period and spent on a priority basis.

TPL's response: TPL has submitted that the CAPEX is essentially on a priority basis.

Commission's view: *Capital expenditure on this item is examined by the Commission and appropriate decision is taken.*

3.18 Cost of Coal

Objection: It is submitted by some of the objectors that the cost of imported coal and the calorific value are high. It needs to be compared with GEB costs of coal. Also, there could be a provision for price variation of coal, based on calorific value.

TPL's response: - TPL has submitted that the petitioner follows a prudent business practice in procurement of coal - imported or indigenous. There is a FSA with SECL and it does not provide for variation on the basis of calorific value. Relevant details of coal purchases are submitted to the Commission from time to time. Statutory Auditor's Certificate is submitted as part of FPPPA submissions.

Commission's view: *To the extent feasible, the Commission tries to scrutinize the cost of imported coal incurred by others and ascertain the reasons for any variations, in order to work out the reasonable rate that can be admitted.*

3.19 Imported coal Vs. Indigenous coal

Objection: Some of the objectors have submitted that the CV of imported coal is 4781 kcal/Kg, whereas domestic coal's CV is 4999 kcal/Kg. Price of imported coal per MT is Rs 4800, whereas that of domestic coal is Rs 3062. TPL is not directly importing coal but getting imported coal on high sale basis, whereby the profit of the original importer increases the cost.

TPL's response: TPL has submitted that the Petitioner imports coal as per prudent business practices.

Commission's view: *Noted. The Petitioner shall hereafter furnish a detailed statement of the practices followed by it in procuring coal vis-à-vis similarly placed importers.*

3.20 Verification of coal stocks

Objection: One of the objectors submitted that the CEA inspection report on the Sabarmati power station mentions that the station officials stated that the coal stocks were verified from time to time by GERC officials. But the letter from GERC on 18/03/2011, in response to an RTI petition of the objector, states GERC never made verification of the coal stocks. TPL needs to be penalized for making a false statement.

TPL's response: TPL has submitted that the petitioner never represented that the Commission officials have been verifying coal stock. The requisite data of coal receipts, coal consumption, and transit loss have been submitted to the Commission.

Commission's view: *The Commission cannot micromanage and supervise the operations of the licensees. Statements submitted by petitioner are taken as reliable. If, any misrepresentation is detected, it will be dealt with as per the penal provisions of the Act and the Regulations.*

3.21 Transit loss of coal

Objection: Some of the objectors have submitted that the petitioner was allowed a transit loss of 1.4% vis-à-vis normative transit loss of 0.8%, as per the Regulations. Even that was exceeded by the petitioner.

TPL's response: The transit loss could not be brought to the allowed level of 1.4%, despite efforts by the petitioner in view of uncontrollable factors like long distance of transit from coalfields to the generating station and its effect on evaporation, wind, seepage, theft and pilferage in transit.

Commission's view: *The Commission has allowed a transit Loss of 1.4%, as against the normative loss of 0.8%, considering the long distance involved and consequental losses. The Commission feels there is scope for considerable reduction in transit loss through vigorous and sustained efforts.*

3.22 Return on equity

Objection: It is submitted by the objector that the return on equity of Rs. 191.21 crore (Table-53 of the petition) amounts to Rs. 0.24 / kWh of sales and it is high. Equity determination and ROE calculation of the petitioner are not correct. Equity growth is not correlated to sales figures of Ahmedabad / Surat supply areas.

TPL's response: TPL has submitted that the equity determination and ROE computation on equity are done according to GERC Tariff Regulations, 2005. Increase in equity cannot be correlated with the sales figures of the corresponding area.

Commission's view: *Equity and ROE are covered by the Regulations and have been allowed accordingly.*

3.23 Additions to equity

Objection: Some of the objectors have submitted that Rs 5.47 crores is added to equity in paragraph 3.52, Table 31, Page No. 57 of petition. But it should be 30% of Rs 14.29 crore (Table 25 of petition), which comes to Rs 4.28 crore.

TPL's response: TPL has submitted that equity component is claimed once the capital expenditure is capitalised - and not on capital expenditure incurred.

Commission's view: *The equity component is allowed on the value of asset capitalised during the year.*

3.24 Interest on working capital

Objection: The objectors have submitted that the interest on working capital is claimed for two months for TPL (G) as well as TPL (D) claiming that the generation and distribution units are separate entities, whereas in the matter of accounting statements, it claims that these are part of a single entity.

TPL's response: TPL has submitted that the interest on working capital is claimed in accordance with the GERC Tariff Regulations, 2005. This issue was addressed by the Appellate Tribunal judgment dated 09/05/2011.

Commission's view: *The Regulation relating to working capital has been applied for determination of working capital and interest thereon. GERC (MYT) Regulations, 2011, however, do not allow the working capital, both on own generation and distribution.*

3.25 Non-tariff Income

Objection: The objector has submitted that the sale of power to GEB is computed as non-tariff income of TPL-G (APPI). This sale is not computed to TPL (D) but the expenditure is shown as power purchase by TPL (D). But this power is not received by TPL (D). This is not fair.

TPL's response: TPL has not replied

Commission's view: *The income from sale of power to the consumer is shown as tariff income. The sales to GUVNL, is shown as non-tariff income, and the non-tariff income is subtracted from the total revenue requirement, thus, giving due credit to the distribution business / and to the consumers.*

3.26 Meter rent

Objections: The objectors have submitted that the meter rent shall be equal to the interest amount of the cost of the meter. If deposit is collected towards cost of meter, it should earn reasonable interest to the consumer. Meter rent is revised even though the cost of meter is recovered fully from the time the service is released. The total recovery through the meter rent is high, compared to the cost of meter over its lifetime.

TPL's response: TPL has submitted that the meter rent is collected in accordance with the EA 2003 and the Commission's Regulations of 2005 relating thereto .The meter rent is included in the non-tariff income of ARR and hence gets included in tariff determination**.** Interest is paid on the total amount held as security deposit as per the GERC (SD) Regulations, 2005.

Commission's view: *The statutory provisions and the Commission's regulations in respect of the meter rent have been formulated after detailed consideration of all relevant aspects. Meter rent is recoverable under Section 45 (3) of the Electricity Act, 2003.*

3.27 SUGEN's generation cost

Objections: Some of the objectors have submitted that the SUGEN's generation costs are regulated by CERC. These costs should not be mixed up with the present petition.

TPL's response: TPL has submitted that the CERC approved cost of SUGEN generation will get reflected only in power purchase**.**

Commission's view: *The CERC approved cost of SUGEN generation gets reflected in the cost of power purchase only.*

3.28 Bilateral Power purchases

Objection: Some of the objectors have submitted whether the bilateral contracts to meet shortfall in supply have been approved by the Commission?

TPL's response: TPL has submitted that the short-term purchases have to be done to meet the demand. The existing regulations and the Act do not envisage any approval of the Commission for short-term purchases.

Commission's view: *The licensee needs to be prudent in power purchase so as to reduce cost. The Commission examined the reasonableness of the cost of short-term power purchases and appropriate decision taken in approving the costs in the truing up.*

3.30 Secondary Fuel Oil consumption

Objection: It is submitted by some of the objectors that the secondary fuel oil consumption is depicted in gms/kWh, instead of ml/kWh as per regulations.

TPL's response: TPL has submitted that this has the approval of the Commission in its earlier orders.

Commission's view: *Whether it is shown in gms/kWh or ml/kWh, it is necessary that the secondary fuel oil consumption is reduced to the least possible extent, as provided in the Regulations. However, the petitioner is directed to furnish the data on secondary fuel oil consumption in ml/kWh, as stipulated by the Regulations.*

3.31 All stations are base load stations

Objection: Some of the objectors have submitted that they would like to know which are peak load stations?

TPL's response: TPL has submitted that all the Petitioner's stations are base load stations.

Commission's view: *The concepts of base load and peak load have been undergoing change in the context of power trading across borders. Essentially, base load stations are those which are economical to run continuously at an optimal rating. When there is no demand, the station would be backed down.*

3.31 PAF, PLF and generation

Objection: Some of the objectors have submitted that the gross generation according to PAF should be 3922 MU. Against this, the actual generation is shown as 4093 MU.

TPL's response: TPL has submitted that PAF and PLF ought to be computed with reference to installed capacity. The PAF relates to availability of the plant and PLF relates to the generation of electricity. The calculations of the objectors are erroneous.

Commission's view: *The PAF, the PLF, the capacity and the generation have been checked with reference to the Regulations and allowable figures are adopted in the order. PAF refers to availability of the plant and the PLF depends on actual generation. The generation figures, as per PAF and PLF, could be marginally different. Sometimes, the machine is loaded more than rated capacity for a few hours when required which could result in PLF being more than PAF.*

3.32 High PLF

Objection: Some of the objectors have submitted that a high PLF of 93.44% (vide pare 2.7of petition) is obtained at the cost of merit order dispatch (MOD).

TPL's response: TPL has submitted that the contention of the objector is denied.

Commission's view: *The licensee shall ensure that power purchase costs are optimised. MOD is decided, based on variable cost of generation. MOD is decided by the licensee who has to ensure that the mix of generation dispatched conforms to the merit order without any bias or favour to any player.*

3.33 Power Factor adjustment charges

Objection: It is submitted by some of the objectors that the Power Factor (PF) charges are sought to be levied on absolute basis, instead of ad-valorem basis. Investment for PF corrections have been made by consumers on the assumption of continuance of ad-valorem charge. This leads to stranding of investments on capacitors, etc.

TPL's response: TPL has submitted that the consumers are obliged to maintain a high P.F. Charging on ad-valorem basis will also lead to progressive increase with increase in tariff. The proposed structure of PF adjustment charges may be allowed by the Commission.

Commission's view: *This is examined and appropriate decision taken.*

3.34 Not to allow reduction of PF rebate

Objection: It is submitted by some of the objectors that the petitioner's request for reduction of PF rebate should not be accepted

TPL's response: TPL has submitted that the PF structure proposed by the petitioner may be allowed.

Commission's view: - *This is examined and appropriate decision taken.*

3.35 Power Factor incentives and penalties

Objection: It is submitted by some of the objectors that the penalty proposal is more severe than the incentive and hence should not approved.

TPL's response: TPL has submitted that a high P.F is desirable. Rebate is given to motivate the consumers to maintain a high P.F. Penalty needs to be more than the rebate.

Commission's view: *A high P.F is desirable. Rebate is given to motivate the consumers to maintain a high P.F. Penalty has to be adequate to see that the consumers maintain a high PF.*

3.36 Incentives for PLF above 80%

Objection: Some of the objectors have submitted that TPL should not be awarded the incentive for PLF above 80%. The incentive mentioned in Regulation 15 (II) (a) of Terms and Conditions of Tariff Regulations, 2005 shall not be allowed. MYT Regulations, 2007 do not speak of PLF more than 80%. MYT framework itself contains incentives/disincentives.

TPL's response: TPL has submitted that the issues have been addressed by the Appellate Tribunal for Electricity in its judgment dated 09/05/2011.

Commission's view: *These issues have been dealt with in the 'truing up' chapter of this Order.*

3.37 Rationale for levy of fixed charges

Objection: The objectors have submitted that in a realm of shortages, recovery of fixed cost by way of fixed charges is not valid

TPL's response: TPL has submitted that the existing tariff structure is in accordance with the Electricity Act, 2003 and other rules/regulations. Ideally, the fixed charge component of tariff should recover the entire fixed cost of providing service to consumers. Only about 20% of the total fixed cost is being recovered by way of fixed charges, through tariff.

Commission's view: *Fixed costs are sunk costs and need to be recovered as fixed charges which cover the fixed costs of generation and investment for the distribution network. Only a portion of the fixed costs is being recovered as fixed charges though tariffs.*

3.38 HT consumer's contribution to peak demand

Objection: Some of the objectors have submitted that it is not correct to assume that the entire HT consumer demand coincides with system peak demand. This will be unfair to new users of wheeling. Sample survey of HT consumers to ascertain the extent of peak contribution is needed.

TPL's response: TPL has submitted that only the contracted demand, and not the connected load is taken for assigning the HT users' responsibility for peak demand. The HT users invariably consume power during peak hours. Any reduction of open access charges will amount to cross subsidisation to the wheeling consumers.

Commission's view: *It is mostly the HT consumers who use power during peak hours and open access charges are, accordingly, arrived at.*

3.39 Pumping by local authority as a separate tariff category

Objection: It is submitted by one of the objectors that the introduction of separate category HTMD III is not warranted.

TPL's response: TPL has submitted that the tariff increase proposed for the category is lower than the overall increase in tariff.

Commission's view: *This is examined and appropriate decision is taken.*

3.40 Up-rating program of E station

Objection: It is submitted by some of the objectors that TPL has not done the up rating of the E-station, as programmed in May, 2008. The capital investment for this needs scrutiny.

TPL's response: TPL has submitted that the CAPEX of E station has been deferred due to vendor's issues.

Commission's view: - *Noted*

3.41 Demand Based Tariff for Domestic consumers

Objection: The objectors have submitted that Maximum Demand (MD) tariff is proposed for connected load in excess of 15 kW. How is the plug points accounted for in the definition of connected load? The minimum billing demand of 12 kW proposed is high for a connected load of 15 kW.

TPL's response: TPL has submitted that the petitioner is required to establish the network and also purchase power to meet the maximum demand. All the connected load of the high value consumers is expected to come on the network during peak load. Also, minimum billing demand is specified at 85% of contract demand as per existing definition. Also, the demand charges are only nominal at Rs 10/kw/month.

Commission's view: *These issues have been considered and appropriate decision is taken in the Tariff Determination.*

3.42 Residential pumping and common services (demand based)

Objection: The objectors have submitted that the nomenclature of residential pumping and common services as a category causes hardships to local shopping facilities in residential societies, which are denied the common facilities of water and lift.

TPL's response: No response by TPL

Commission view: The issue is examined and appropriate decision is taken, while determining the tariffs.

3.43 Maximum Demand (MD) on KVA basis

Objection: It is submitted by the objectors that MD billing shall be done on KVA basis, instead of KW basis

TPL's response: TPL has submitted that the consumers have familiarity and understanding with KW demand. PF penalty and charges take care of reactive management, if the demand is on kW basis.

Commission's view: *Demand in kW takes care of reactive power management by the consumer. Hence, it is considered desirable.*

3.44 Industrial (demand based) Tariff

Objection: Some of the objectors have submitted that the tariff for the category industry (demand based) is anti- small consumers, especially at the lower limit of 15 KW, where the billing demand is 12 kW (80% of connected load). The limit should be reduced to 7/8 kW. In general, the billing MD should be 60% of contract load.

TPL's response: TPL has submitted that the consumer need not keep his contract demand equal to his connected load. Depending on usage, he can opt for a contract demand lower than the connected load. The licensee needs to keep the network suitable for the load and also to estimate purchase of power to meet the demand. The fixed cost needs to be recovered in the tariff.

Commission's view: *The issue is examined and appropriate decision is taken in determining the tariffs.*

3.45 Categorization of Telecom Services

Objection: Some objectors have submitted that the definition of industries, as defined in Bombay Electricity Duty Act, 1958, is obsolete where service sector contributes 55% of GDP. Better load factors in establishment like 24x7 call centres and Telecom installations should not attract highest commercial rates. A new category is called for with low average tariff for the better load factor. Telecom services are public utility services. They provide 24-hour service to the subscribers. Tower installation have mixed load. Factors, such as high load factor, requirement of power on 24x7 basis, service to consumers on emergency basis, etc., should be considered while determining the Tariff. The service sector should be categorised as an industry, rather than present classification as commercial. Alternatively, a separate category may be created. Several states in the country apply industrial tariff for telecom services.

TPL's response: TPL has submitted that the present tariff categorisation is based on type of load. As per the Act, consumers can be differentiated according to certain factors indicated in the Electricity Act, 2003. The telecom towers fall in the IT service industry, as per State Government Policy. Also, as per the State Government Policy, all service undertakings are excluded from the definition of industrial category. Hence, the State Government recovers electricity duty from them at commercial rates. In a case relating to BSNL, the Appellate Tribunal felt that, even if the appellant feels that it should come under industry category as per statutes like Finance Act, ID Act, Factories Act, ESI Act, it alone cannot be the basis to claim to be charged under industrial tariff. Telecom services cannot claim the public utility status, because they have moved away from basic telecom service to value added services.

Commission's view: - *All relevant factors have been taken into consideration while categorising the various classes of consumers and tariff.*

3.46 Night Time Concessional Tariff

Objection: Some of the objectors have submitted that there should be no demand charge in the night time concessional tariff (NTCT). Fixed costs are recovered at the peak period.

TPL's response: TPL has submitted that the proposed NTCT tariff has only 30% of the normal demand charges. It is necessary to create network to cater to such customers also. Even the normal demand charges are only a small portion of fixed charges. Only 30% of this is proposed. It is reasonable.

Commission's view: *The demand charges cannot be totally waived under NTCT. A portion has to be recovered to meet the fixed costs.*

3.47 Tariffs for Ahmedabad and Surat

Objection: Some of the objectors have submitted that separate tariffs for Ahmedabad and Surat is discriminative. There should be uniform tariff for both the areas.

TPL's response: TPL has submitted that the tariff petitions for the two licensee areas as per the respective ARRs. The petitioner has put forth pleas for uniform tariff in the past proceedings.

Commission's view: *The licenses for the two areas are different. The ARRs are different. So the tariffs are different. TPL had proposed uniform tariff, for the two areas earlier, but a number of consumers had objected to this and consumers wanted different tariffs. This issue will be examined and appropriate decision will be taken in due course.*

3.48 Tariff Slabs

Objection: some of the objectors have submitted that slabs should be increased to four for residential and commercial tariff slabs. The burden should be passed more onto heavier consuming consumers.

TPL's response: TPL has submitted that all aspects, including ability to pay, have been taken into consideration in designing the slabs. The slabs are telescopic. Only consumption beyond the slab limit will attract higher rate.

Commission's view: *The relevant aspects, including ability to pay, have been taken into consideration in designing the slabs.*

3.49 Wheeling charges proposed are high

Objection: - The objectors have submitted that the wheeling charges proposed will raise the entry barrier for private participation in the sector.

TPL's response: TPL has submitted that artificial lowering of wheeling charges, under the plea of competition, will be against the provisions of Electricity Act, 2003.

Commission's view: *The Commission's endeavour is to ensure that the wheeling charges are reasonable and just to all parties. The charges are arrived at as per the Regulations of the Commission.*

3.50 Cost of standby facility for Open Access customers

Objection: Some of the objectors have submitted that the cost of standby facilities or the cost of under-utilisation by open access customers should not burden the regular consumers.

TPL's response: TPL has submitted that the proposal to charge wheeling charges on Rs./KW basis will resolve the issue of cross-subsidization. If, standby facility is obtained, such consumers will have to pay the cost for those availing the facility.

Commission's view: *The petitioner's explanation is valid.*

3.51 Recovery of the deficit of FY 2009-10 and 2010-11

Objection: The objectors have submitted that the recovery of deficit during FY 2009-10 and FY 2010-11 should be spread over a larger time span.

TPL's response: TPL has submitted that recovery needs to be done speedily so as not to thrust undue burden on future customers. National Tariff Policy also advises thus.

Commission's view: *Recovery needs to be done early so as not to put undue burden on future customers. The recovery of gap for FY 2009-10 (True up for FY 2009-10) will be done during FY 2011-12 and recovery of gap for FY 2010-11 will be done during FY 2012-13, when truing up for FY 2010-11 is done.*

3.52 Renewable Energy

Objection: Some of the objectors have submitted that the increase in renewable power purchase obligation (RPPO) from 1.5% to 5% and the levy of green cess by the State Government would burden the consumers. There should be a timeline for such preferential treatment.

TPL's response: TPL has submitted that the cost of renewable energy is estimated and charged as per the prevailing regulations.

Commission's view: *It is necessary to follow the national imperatives. The increase in tariff due to increase in RPPO is marginal.*

3.53 One Connection per one premises

Objection: It is submitted by some of the objectors that only one connection should be provided for one premise for industrial use. No separation should be needed for lighting and motive load in one premise.

TPL's response: TPL has submitted that the tariff proposal of the petitioner is in line with this suggestion.

Commission view: *This is examined and appropriate decision is taken.*

3.54 Non-compliance of directives

Objection: Some of the objectors have submitted that the petitioner should be penalised for non-compliance of the directives of the Commission.

TPL's response: The petitioner has complied with all the directives. The directive on category-wise cost of supply will be submitted, as per the observation of the Commission in the Tariff Order dated 31st March, 2010.

Commission's view: *The petitioner has generally been complying with the directives. The petitioner is directed to comply with the directive issued on category-wise cost of supply early.*

3.55 Additional Information supplied by the petitioner to the Commission

Objection: Some of the objectors have submitted that additional information supplied by the petitioner is not as per the legal procedure under affidavit as per Regulation 28 (1) of Conduct of Business Regulations.

TPL's Response: TPL has submitted that the tariff determination exercise is within the Regulatory Regime contemplated by Electricity Act, 2003 and, accordingly, the Commission can call for additional information.

Commission's View: *The Commission can ask for and seek relevant additional information in the matter of approval of ARR and tariff formulation. Where any false* *and misleading information is provided, whether under oath / affidavit or not, the Commission will deal with such instances effectively.*

3.56 Statutory Audit of costs

Objections: Some of the objectors have submitted that the Auditor's report of the balance sheet of the petitioner expresses satisfaction that, prima facie, the prescribed accounts and records have been maintained, but that detailed examination of the said records was not made and hence the petitioner's figures cannot be relied up on.

TPL's response: TPL has submitted that the said note of the auditors is, in fact, a general practice being followed by the statutory auditors. The petitioner's accounts are prepared and maintained as per the accounting standards of the ICAI. in accordance with the Companies' Act, 1956. Accounting statements for each regulated business, duly certified by the statutory auditors for the FY 2009-10, have been provided with the petition. The contention that the accounts are not properly audited is not correct.

Commission's view: *The statutory auditors cannot go into an exhaustive voucher-by-voucher check of all the records. Likewise, the Commission cannot go into the affairs of the petitioner with a fine toothcomb. In case any misdemeanour is found, the petitioner will have to bear the penal consequences. The accounts duly audited by statutory auditors are generally accepted. In case of any doubt, the Commission will get the accounts verified.*

3.57 Benefits of MYT are not achieved

Objection: Some of the objectors have submitted that an increase of 35 to 40 % in tariff is sought, apart from uncontrollable costs like fuel and power purchase costs, which have already been recovered through FPPPA. Hence, the benefit of MYT have not been achieved.

TPL's response: TPL has submitted that the increase in tariff proposed is the result of various components of the ARR. The proposed tariff hike is 19.47% for Ahmedabad supply area and 10.47% for the Surat area.

Commission's view: *Only the costs and return on equity are allowed as per the Regulations after prudence check.*

3.58 Quality of Coal

Objection: - Some of the objectors have submitted that the quality of coal is poor. Steps taken to improve quality and calorific value shall be stated. There should be transparency in pricing and quality of coal.

TPL's response: TPL has submitted that the prices of coal are determined by SECL. Petitioner is bound to accept the coal supplied by SECL, and has no control on the C.V. In the new FSA regime, joint sampling of coal at receiving end is abolished. Sampling of coal at loading end is not operationalized by SECL despite provision in FSA.

Commission view: *The FSA has provisions to enforce quality of coal. TPL needs to exercise its rights under the FSA appropriately.*

3.59 MYT Regulations, 2007

Objection: Some of the objectors have submitted that the gap is high because the filling is as per the older MYT regulations

TPL's response: TPL has submitted that the filling is as per instructions contained in Commission's letter of 12th November, 2010. There has been huge increase of expenses in the past 8/9 years, which the petitioner had adsorbed through operational efficiencies, etc., except for minor revision in FY 2010-11.

Commission's view: *In order to see that the petition is not delayed until the new Regulations came into force, the petitioner filed petition under the Regulations, 2007. However, the ARR is analyzed and approved, based on the MYT Regulations, 2011.*

3.60 FPPPA

Objection: Some of the objectors have submitted that the proposed amendment to the FPPPA formula may be rejected. The Levy of 70 Ps/kWh amounts to exploitation of consumers.

TPL's response: TPL has submitted that the rationale of the proposed FPPPA formula is explained in the petition. It has also received the imprimatur of the Tribunal in its judgment on Appeal No. 68 of 2009. The Rs 0.7/unit reflects the current level of FPPPA.

Commission's view: *Commission has already approved the FPPPA formula, which will continue to be implemented.*

3.61 Loss of life due to electrical accidents

Objection: Some of the objectors have submitted that the petitioner should be held responsible for the accidents and victims should be compensated.

TPL's response: TPL has submitted that as a responsible utility the petitioner is committed to enhance safety measures. Appropriate capital expenditure is proposed during the MYT second control period towards the special initiative on safety. Consumer awareness programmes are run to highlight safety.

Commission's view: *The petitioner needs to focus on safety issues. Loss of public property or life is a serious issue. The petitioner shall take appropriate steps for the same.*

4. Truing up of FY 2009-10

4.0 Introduction

This chapter of the order deals with the truing up of FY 2009-10 for the following business activities of Torrent Power Limited (TPL):

- Generation Business (TPL-Generation (Ahmedabad Power Plant), hereinafter referred to as TPL-G (APP).
- Distribution Business -Two distribution licensees (TPL-Ahmedabad and TPL-Surat)

The Commission has studied and analyzed each component of the ARR for the FY 2009-10 in the following paragraphs.

4.1 TPL - Generation (APP)

4.1.1 Generating Stations of TPL-G (APP)

The TPL has existing power generation facilities with total installed capacity of 500 MW at Ahmedabad [TPL-G (APP)] that consists of 400 MW coal based thermal power plant at Sabarmati and 100 MW combined cycle gas based power plant at Vatva. TPL had also commissioned a combined cycle power plant (CCPP) of 1147.5 MW (SUGEN) at Akhakhol village near Surat in FY 2009-10. For its distribution business, TPL sourced power from its own generation facilities in Ahmedabad, SUGEN (to the extent of 835 MW) and balance from other sources.

The generation cost of the SUGEN Plant is decided by CERC and shall be taken as power purchase cost for any purchase from SUGEN by TPL for its distribution companies at Ahmedabad, Gandhinagar and Surat.

The Commission is required to determine the generation cost for the TPL-G (APP) stations. The generation costs of these stations are discussed as below:

TPL-G (APP) owns and operates the following generating stations:

- Four coal-based thermal stations at Sabarmati namely, Sabarmati C Station, Sabarmati D Station, Sabarmati E Station and Sabarmati F Station.
- One Combined Cycle Gas based Power Plant at Vatva

The details of the stations existing as on 1st April, 2009 along with their capacities and dates of commission are given in the table below:

Table 4.1: Capacity, COD and age of TPL-G (APP) Stations as on 1st April 2009

Name of the station	Capacity in MW	Year of COD	Age/ Years
Sabarmati Thermal Power Plant (Coal based)			
C Station	2X30MW	1961/1997* *(Year of turbine retrofitting)	48
D Station	1X120MW	1978/2004 *(Uprating capacity)	31
E Station	1X110MW	1984	25
F Station	1X110MW	1988	21
Vatva Combined Cycle Gas based Power Plant			
Gas turbine	2X32.5MW	1990 & 1991	19
Steam turbine	1X35MW	1991	18

4.1.2 Operating Performance Parameters

The fuel cost of a generation station depends on (i) the performance parameters, such as Plant Load Factor (PLF), Station Heat Rate (SHR), Auxiliary Consumption, Secondary Fuel Oil Consumption and Transit Loss (in case of coal stations) (ii) cost parameters such as Gross Calorific Value of fuel, type of fuel and price of fuel etc.

The TPL has submitted the actual operating performance on Plant Availability Factor (PAF), Plant Load Factor (PLF), Station Heat Rate (SHR), Auxiliary Consumption and Specific Oil Consumption and coal transit loss for FY 2009-10 for the individual stations. The Commission has taken up the truing up of the annual performance parameters for FY 2009-10, which are discussed in the following sections.

4.1.2.1 Plant Availability Factor (PAF)

Petitioner's submission

The TPL has submitted the actuals of plant availability factor for different stations for FY 2009-10. The PAF (i) approved in the MYT Order dated 17th January, 2009, (ii) considered in the Annual Performance Review (APR) by the Commission in its order dated 31st March, 2010 and (iii) the actuals as furnished by TPL in the present petition for the period are given in the table below:

Table 4.2: Plant Availability Factor of TPL-G (APP) for FY 2009-10

(%)

Sl. No.	Station	Approved for FY 2009-10 in the MYT Order	Considered in the APR for FY 2009-10	Actuals for FY 2009-10
	Sabarmati			
1.	C Station	95.05	91.85	92.93
2.	D Station	94.73	94.65	95.04
3.	E Station	73.63	95.93	97.57
4.	F Station	95.36	95.07	95.69
5.	**Vatva Gas Station**	93.81	96.25	96.85

The TPL has submitted that the PAF of the units have been computed considering their annual plant shut down schedules to undertake maintenance, statutory inspections and the actual forced outages of the units during FY 2009-10.The actual performance of PAF for all the stations has been in line with the estimates considered in the APR for FY 2009-10.

Commission's Analysis

It is found in the analysis that the PAF level is lower than the approved levels of the last MYT Order in the case of C station. In the case of other stations, it is higher than what was approved.

For the purpose of truing up for the FY 2009-10, the PAF level is approved as per the actuals for all the stations as they are all above the 80% specified norm in the regulations, as given in the table below:

Table 4.3: Plant Availability Factor of TPL-G (APP) approved for truing up for FY 2009-10

(%)

Sl. No.	Station	Approved for FY 2009-10 in the MYT Order	Considered in the APR for FY 2009-10	Actuals for FY 2009-10	Approved for truing up
	Sabarmati				
1.	C Station	95.05	91.85	92.93	92.93
2.	D Station	94.73	94.65	95.04	95.04
3.	E Station	73.63	95.93	97.57	97.57
4.	F Station	95.36	95.07	95.69	95.69
5.	**Vatva Gas Station**	93.81	96.25	96.85	96.85

4.1.2.2 Plant Load Factor (PLF)

Petitioner's submission

The TPL has submitted the actuals of plant load factor (PLF) of different stations for FY 2009-10.

The PLF (i) approved in the MYT Order dated 17th January, 2009, (ii) considered in the Annual Performance Review (APR) by the Commission in its order dated 31st March, 2010 and (iii) the actuals as furnished by TPL in the present petition are given in the table below:

Table 4.4: Plant Load Factor of TPL-G (APP) for FY 2009-10

(%)

Sl. No.	Station	Approved for FY 2009-10 in the MYT Order	Considered in the APR for FY2009-10	Actuals for FY 2009-10
	Sabarmati			
1.	C Station	93.84	88.33	87.02
2.	D Station	93.37	96.28	94.49
3.	E Station	72.71	95.74	96.39
4.	F Station	94.34	96.01	94.99
5.	**Vatva Gas Station**	87.97	91.67	91.10

The TPL has submitted that, as per Regulation 15 (ii) of the GERC (Terms and Conditions of Tariff) Regulations, 2005 an incentive has to be paid for the increase in generation over and above the target PLF of 80%. As per Regulation 22, the incentive shall be payable at a flat rate of 25.0 Paise/kWh for ex-bus actual energy in excess of ex-bus energy corresponding to target plant load factor.

The TPL has claimed that the TPL-G (APP) has achieved a PLF of 93.44% for the generating stations and accordingly the excess generation eligible for the purpose of incentive works out to 549.16 MU, which amounts to an incentive of Rs.13.73 crore and the same is to be added to the truing up ARR for recovery.

Commission's Analysis

The Commission has analyzed the submissions made by the Petitioner.

The Commission has taken note of the above reduction in PLF for C station and approved the PLF for FY 2009-10 for truing up purpose as per actuals as given in the table below:

Table 4.5: Plant Load Factor of TPL-G (APP) approved for truing up for FY 2009-10

(%)

Sl. No.	Station	Approved for FY 2009-10 in the MYT Order	Considered in the APR for FY 2009-10	Actuals for FY 2009-10	Approved for truing up
	Sabarmati				
1.	C Station	93.84	88.33	87.02	87.02
2.	D Station	93.37	96.28	94.49	94.49
3.	E Station	72.71	95.74	96.39	96.39
4.	F Station	94.34	96.01	94.99	94.99
5.	**Vatva Gas Station**	87.97	91.67	91.10	91.10

The incentive will be allowed only for those stations where generation exceeded 80% PLF as given in the table 4.5 above.

4.1.2.3 Auxiliary consumption

Petitioner's submission

The TPL has submitted the actuals of auxiliary consumption of different stations for FY 2009-10.

The auxiliary consumption (i) approved in the MYT Order dated 17th January, 2009, (ii) considered in the Annual Performance Review (APR) in the order dated 31st March, 2010 and (iii) the actuals as furnished by TPL in the present petition for the period are given in the table below:

Table 4.6: Auxiliary consumption of TPL-G (APP) for FY 2009-10

(%)

Sl. No.	Station	Approved for FY 2009-10 in the MYT Order	Considered in the APR for FY 2009-10	Actuals for FY 2009-10
	Sabarmati			
1.	C Station	9.41	9.59	9.54
2.	D Station	8.73	8.39	8.60
3.	E Station	8.73	8.39	8.60
4.	F Station	8.73	8.39	8.60
5.	**Vatva Gas Station**	2.92	2.40	2.50

The TPL submitted that it has made substantial efforts to maintain the auxiliary consumption at approved level. TPL submitted even though the auxiliary consumption is a controllable parameter, to consider the fact that higher auxiliary consumption in 'C' station was uncontrollable in view of the age and size of the station.

Commission's Analysis

It is noted that for the 'C' station the actual auxiliary consumption is marginally more than that of the approved levels in the MYT order and in the case of other stations, it is less than the approved levels.

The Commission approves the auxiliary consumption for various stations as in the earlier MYT order dated 17th January, 2009 for FY 2009-10, for truing up purpose as it is a controllable parameter.

The auxiliary consumption approved for different stations for the purpose of 'truing up ' for FY 2009-10 is given in Table below:

Table 4.7: Auxiliary consumption of TPL-G (APP) approved for truing up for FY 2009-10

(%)

Sl. No.	Station	Approved for FY 2009-10 in the MYT Order	Considered in the APR for FY 2009-10	Actuals for FY 2009-10	Approved for FY 2009-10 for truing up
	Sabarmati				
1.	C Station	9.41	9.59	9.54	9.41
2.	D Station	8.73	8.39	8.60	8.73
3.	E Station	8.73	8.39	8.60	8.73
4.	F Station	8.73	8.39	8.60	8.73
5.	**Vatva Gas Station**	2.92	2.40	2.50	2.92

4.1.2.4 Station Heat Rate (SHR)

Petitioner's submission

The TPL has furnished the actual SHR attained for different stations during FY 2009-10. The station heat rate (i) approved in the MYT Order dated 17th January 2009, (ii) considered in the Annual Performance Review (APR) in the order dated 31st March 2010 and (iii) the actuals as furnished by TPL in the present petition for the period are given in the table below:

Table 4.8: Station Heat Rate of TPL-G (APP) claimed for FY 2009-10

(kCal/kWh)

Sl. No.	Station	Approved for FY 2009-10 in the MYT Order	Considered in the APR for FY 2009-10	Actuals for FY 2009-10
	Sabarmati			
1.	C Station	3700	3532	3195
2.	D Station	2565	2441	2384
3.	E Station	2675	2613	2588
4.	F Station	2715	2648	2602
5.	**Vatva Gas Station**	1950	1923	1925

The SHR approved in the MYT order dated 17th January, 2009 for all the stations was based on Net Calorific Value (NCV). The values considered in the APR for FY 2009-10 and actuals for FY 2009-10 are also based on NCV basis.

Commission's Analysis

It is a well known fact and the established industry practice in India is to define and calculate the operational parameters, including boiler efficiency and turbine heat rate for coal fired stations on the basis of Gross Calorific Value (GCV) and not the Net Calorific Value (NCV) as above. Accordingly the operational parameters are invariably specified on GCV basis by the Regulators.

In the light of the above, the Commission had requested for a study to be conducted by the Central Electricity Authority (CEA), with regard to the technical parameters of generating stations of TPL-G (APP). In the recommendations, which were published in October 2009, the CEA has recommended to follow the SHR parameters on GCV basis. The Commission in its MYT order of 17th January, 2009 had given conditional approval on the SHR subject to study by CEA.

However, in its order dated 9th December, 2009, the Commission decided not to implement these recommendations for FY 2009-10 on the ground that such a move would give little time for the Petitioner to adopt them and also absorb their impact. Hence, it was decided to consider CEA recommendations from the next business year, i.e. the FY 2010-11, and not for current FY 2009-10.

It is submitted by TPL in its petition that there was a change in the coal sampling point, due to which SHR was changed from August 2009. Therefore, the comparison for first 4 months (April 2009 to July 2009) was done with the MYT approved NCV based SHR and for next 8 months (August 2009 to March 2010) with GCV equivalent SHR approved for the FY 2010-11. Accordingly, the norm of SHR based on Wt. Av. NCV for FY 2009-10, is computed as given in the table below:

Table 4.9: Revised Station Heat Rate submitted by TPL for TPL-G (APP) in FY 2009-10

(K.cal/kWh)

Sl. No.	Station	MYT order	APR order			Actual
			NCV	NCV equivalent*	NCV Wt Average	
	Sabarmati					
1	C Station	3700	3532	2972	3214	3195
2	D Station	2565	2441	2311	2396	2384
3	E Station	2675	2613	2571	2606	2588

4	F Station	2715	2648	2571	2619	2602
5	**Vatva Gas Station**	1950	1923	1950	1950	1925

* NCV equivalent of SHR approved on GCV basis for FY 2010-11 in the order dated 31st March, 2010.

In its petition, the TPL also requested for computation of sharing of gains / losses on account of SHR based on the above principle.

The Commission examined the computation of SHR norm on NCV basis as submitted by the TPL and considered it to be reasonable and approved the same for the purpose of truing up for FY 2009-10 instead of SHR approved in MYT order. The SHR values based on NCV basis approved for FY 2009-10, are as given in the table below:

Table 4.10: Station Heat Rate approved for truing up for FY 2009-10

(K.cal/kWh)

Sl. No.	Station	Approved for FY 2009-10 in the MYT Order	Considered in the APR for FY 2009-10	Actuals for FY 2009-10	Approved for truing up
	Sabarmati				
1.	C Station	3700	3532	3195	3214
2.	D Station	2565	2441	2384	2396
3.	E Station	2675	2613	2588	2606
4.	F Station	2715	2648	2602	2619
5.	**Vatva Gas Station**	1950	1923	1925	1950

4.1.2.5 Secondary Fuel Oil Consumption (SFC)

Petitioner's submission

The TPL has furnished the actuals of Secondary Fuel Oil Consumption for the different stations of TPL-G (APP) during the FY 2009-10.

The Secondary Fuel Oil Consumption (i) approved in the MYT Order dated 17th January 2009, (ii) considered in the Annual Performance Review (APR) in the order dated 31st March 2010 and (iii) the actuals as furnished by TPL in the present petition for the second control period are given in the table below:

Table 4.11: Secondary Fuel Oil Consumption of TPL-G (APP) for FY 2009-10

(gm/kWh)

Sl. No.	Station	Approved for FY 2009-10 in the MYT Order	Considered in the APR for FY 2009-10	Actuals for FY 2009-10
	Sabarmati			
1.	C Station	1.45	0.22	0.32
2.	D Station	1.45	0.22	0.32
3.	E Station	1.45	0.22	0.32
4.	F Station	1.45	0.22	0.32

The TPL submitted that the Commission has considered the SFC of 0.22 gm/kWh in the APR order dated 31st March, 2010, based on the actual H_1 FY 2009-10. A very low SFC achieved in H_1 of FY 2009-10 was due to lower incidence of backing down and forced outage etc., which eventually led to lower consumption of secondary fuel oil.

Commission's Analysis

The actual Secondary Fuel Consumption (SFC) of (0.32gm/kWh) for FY 2009-10 is marginally over and above the SFC that was considered in the APR for FY 2009-10. But it is much lower than that of the SFC approved (1.45gm/kWh) in the MYT order dated 17th January, 2009 for the FY 2009-10.

As the SFC is a performance parameter, which is controllable, the Commission approves, for truing up purpose, the SFC values as mentioned in the MYT order, for FY 2009-10.

Accordingly, the SFC approved for FY 2009-10, for truing up purpose is given in the table below:

Table 4.12: Secondary Fuel Oil Consumption approved for truing up for FY 2009-10

(gm/kWh)

Sl. No.	Station	Approved for FY 2009-10 in the MYT Order	Considered in the APR for FY 2009-10	Actuals for FY 2009-10	Approved for truing up
	Sabarmati				
1.	C Station	1.45	0.22	0.32	1.45
2.	D Station	1.45	0.22	0.32	1.45
3.	E Station	1.45	0.22	0.32	1.45
4.	F Station	1.45	0.22	0.32	1.45

4.1.2.6 Transit Loss

Petitioner's submission

In its petition, the TPL has submitted the actual percentage of transit loss of coal for all the coal-based stations of TPL-G (APP) during the FY 2009-10.

The transit loss of coal (i) approved in the MYT Order dated 17th January, 2009, (ii) considered in the Annual Performance Review (APR) in the order dated 31st March, 2010 and (iii) the actuals as furnished by TPL in the present petition for the period are given in the table below:

Table 4.13: Transit Loss of TPL-G (APP) for FY 2009-10 (in %)

(%)

Stations	Approved for FY 2009-10 in the MYT Order	Considered in the APR for FY 2009-10	Actuals for FY 2009-10
All coal based stations	1.40	1.40	3.13

The TPL submitted that the actual transit loss achieved for FY 2009-10 is higher than the approved one in spite of all its efforts to contain the same and there are various uncontrollable reasons due to which the transit loss is still higher. It is stated that the following are the reasons for the same:

- The distance of coal mine of South Eastern Coal Fields (SECL) is more than 1300 KM from the generating station.
- There is an expected element of losses in the weight of coal due to natural reasons on account of evaporation, wind and seepage of fine coal through the wagons which are often open topped.
- There are also losses due to theft and pilferage activities, for which TPL has been taking corrective measures to contain them as mentioned below:
  (a) TPL is operating a fully functional 24X7 office at Mahendragarh (Chhattisgarh) and the staff located at this office individually supervise the rakes loaded in SECL to reduce the losses due to handling and theft of coal.
  (b) It is also ensured that the loaded wagons are marked with white lime to identify any attempts of theft / pilferage en-route.
  (c) TPL also deploys armed security guard to accompany rakes from the sidings to its generation facility at Sabarmati.

In its petition the TPL submitted that any further reduction in the transit loss below the level of 3.13% is beyond its control and requested that the transit loss be considered as an uncontrollable parameter and approve on actual basis.

Commission's Analysis

The Commission has assessed the submission of the Petitioner and noted that the transit loss for FY 2009-10 in the MYT order dated 17th January, 2009 was approved at a higher level compared to the norms set for such transit losses as per GERC Terms and Conditions of Tariff Regulations, 2005.

Accordingly, the Commission has approved a transit loss of 1.4% only in the order dated 9th December, 2009 and in order dated 31st March, 2010 as compared to 0.8%

specified in the GERC (Terms and Conditions of Tariff), Regulations, 2005. The Appellate Tribunal for Electricity (APTEL), in its order dated 23rd March, 2010, opined that some consideration deserves to be given for increased transit loss. However, the APTEL left it to the State Commission, to decide increased percentage of allowable coal transit losses for TPL-G stations. Consequently, the Commission decided to approve transit loss of coal at 1.9% for the years FY 2009-10 and 2010-11 in their review order dated 05.09.2011 in the Petition No. 966 of 2009.

Based on the above observation, the percentage of transit loss for truing up for FY 2009-10 is approved as given in the table below:

Table 4.14: Transit loss approved for truing up for FY 2009-10 (in %)

(%)

Stations	Approved for FY 2009-10 in the MYT Order	Considered in the APR for FY 2009-10	Actuals for FY 2009-10	Approved for truing up
All coal based stations	1.40	1.40	3.13	1.90

4.1.2.7 Summary of performance parameters approved for truing up for FY 2009-10

Based on the analysis in the preceding paragraphs, the performance parameters approved for different power generation stations of TPL-G (APP) for the FY 2009-10, for truing up purpose are listed in the table below:

Table 4.15: Performance parameters for TPL-G (APP) stations approved for truing up for the FY 2009-10

Sl. No.	Station	PAF (%)	PLF (%)	Aux. Consum-ption (%)	Station Heat Rate Kcal/kWh (on NCV basis)	Secondary fuel oil consumption (gm/kWh)	Transit loss of coal (%)
	Sabarmati						
1.	C Station	92.93	87.02	9.41	3214	1.45	1.90
2.	D Station	95.04	94.49	8.73	2396	1.45	1.90
3.	E Station	97.57	96.39	8.73	2606	1.45	1.90
4.	F Station	95.69	94.99	8.73	2619	1.45	1.90
5.	**Vatva Gas Station**	96.85	91.10	2.92	1950	**-**	**-**

4.1.3 Gross and Net generation

The gross and net generation of power in different stations, as per actuals submitted by TPL and as approved for truing up purpose for the FY 2009-10 are given in the table below:

Table 4.16: The gross and net generation of power for truing up for FY 2009-10

Sl. No.	Station	As per actuals submitted by TPL				As approved by the Commission			
		Gross generation (MU)	Aux consum-ption (%)	Aux consum-ption (MU)	Net generation (MU)	Gross generation (MU)	Aux consum-ption (%)	Aux consum-ption (MU)	Net generation (MU)
	Sabarmati								
1.	C Station	457.39	9.54	43.64	413.75	457.38	9.41	43.04	414.34
2.	D Station	993.31	8.60	85.47	907.84	993.28	8.73	86.71	908.57
3.	E Station	928.78	8.60	79.92	848.86	928.81	8.73	81.09	847.73
4.	F Station	915.35	8.60	78.77	836.59	915.32	8.73	79.91	835.42
5.	**Vatva Gas Station**	**798.04**	**2.50**	**19.95**	**778.09**	**798.04**	**2.92**	**23.30**	**774.74**
	Total	**4092.88**	**-**	**307.76**	**3785.12**	**4092.83**	**-**	**314.05**	**3778.80**

4.1.4 Cost Parameters

The cost parameters include NCV/GCV of fuel, mix of fuel and price of fuel. The Sabarmati C, D, E & F stations of TPL-G (APP) run on coal as base fuel. A mix of indigenous and imported coal is used in these stations.

The Vatva Gas Station (CCPP) is run by gas as base fuel.

The TPL submitted the details of actual Wt Av NCV, mix of coal and Wt Av price of fuel for different stations as discussed below for FY 2009-10:

4.1.4.1 Wt. Av. Net Calorific Value (NCV) of fuel

The TPL has furnished the actuals of Wt. Av. NCV of fuels for all the stations put together for FY 2009-10, as given in the table below:

Table 4.17: Actual Wt. Av. Net Calorific value (NCV) of different fuels for coal based stations for FY 2009-10

Wt. Av. NCV of the indigenous coal (K.cal/Kg)	4296
Wt. Av. NCV of imported coal (K.cal/Kg)	4883
Wt. Av. NCV of secondary fuel oil (K.cal/Kg)	9700

For Vatva gas station, TPL submitted that it has entered into heat value contract (Rs. /MMBTU) for gas sourcing.

In its reply to the communication by the Commission, TPL furnished additional information vide its letter dated 2nd June, 2011, wherein the details of fuel consumption and cost for each station are furnished. From these details the station wise, Wt. Av. NCV of fuel consumed in each power station are as given in the table below:

Table 4.18: Wt. Av. Net Calorific value (NCV) of fuels for different stations for FY 2009-10

Sl. No.	Station	Wt. Av. NCV of the mix of the coal as fed into the boiler (K.cal/Kg)	Wt. Av. NCV of secondary fuel oil (K.cal/Kg)	Wt. Av. NCV of Gas
	Sabarmati			
1.	C Station	4319.29	9720.43	-
2.	D Station	4579.74	9856.82	-
3.	E Station	4559.17	9712.22	-
4.	F Station	4555.52	9700.52	-

4.1.4.2 Mix of coal

The TPL has furnished the details of actual percentages of the mix of indigenous and imported coal in its coal based power stations during the FY 2009-10, as given in the table below:

Table 4.19: The mix of different types of coal for FY 2009-10*

Sl. No.	Station	Indigenous coal (%)	Imported coal (%)
	Sabarmati		
1.	C Station	100.00	0.00
2.	D Station	51.00	49.00
3.	E Station	55.00	45.00
4.	F Station	55.00	45.00

* The mix of coal for different stations is as per the additional information furnished by TPL, in its letter dated 2nd June 2011.

4.1.4.3 Wt Av Prices of Fuel

The TPL has furnished the actuals of Wt Av Price per unit of different fuels for all the stations put together for FY 2009-10, as given in the table below:

Table 4.20: Wt. Av. Price / unit of fuels for FY 2009-10 (Actuals)

Sl. No.	Station	Wt. Av. cost of indigenous coal (Rs/MT)	Wt. Av. cost of imported coal (Rs/MT)	Wt. Av. cost of secondary fuel oil (Rs/MT)	Wt. Av. cost of gas (Rs/MMBTU)
	Sabarmati				
1.	All the coal stations	3179.11	4107.00	28606.05	-
2.	Vatva Gas Station	-	-	-	328.44

In its communication dated 2nd June, 2011, TPL has furnished the actual Wt. Av. cost / MT of different fuels for different stations for FY 2009-10 as given in the table below:

Table 4.21: Wt. Av. Price / unit of fuels for FY 2009-10 (Actuals) for different stations

Sl. No.	Station	Wt. Av. cost of indigenous coal (Rs/MT)	Wt. Av. cost of imported coal (Rs/MT)	Wt. Av. cost of secondary fuel oil (Rs/MT)	Wt. Av. cost of gas (Rs/ MMBTU)
	Sabarmati				
1.	C Station	3163.50	-	27914.71	-
2.	D Station	3183.89	4109.65	30899.87	-
3.	E Station	3179.64	4107.49	30357.05	-
4.	F Station	3185.13	4105.14	27452.89	-
5.	**Vatva Gas Station**	-	-	-	332.37

Commission's Analysis

As already discussed in paragraph 4.1.2.4 the Commission decided to consider the SHR on NCV basis and so the fuel calorific value also be on NCV basis, as approved in the MYT order dated 17th January, 2009.

The Commission, after due validation approves the Wt. Av. NCV of fuels, percentage of mix of coal and prices of fuels (actuals) as furnished by TPL for truing up purpose for FY 2009-10, as they are uncontrollable items.

4.1.5 Fuel Costs

Based on the performance and cost parameters, the approved fuel costs for each of the stations for the year FY 2009-10 for truing up purpose along with actuals furnished by TPL are given in the table below:

Table 4.22: Approved fuel cost of TPL-G (APP) for truing up for FY 2009-10

Sl. No.	Station	As per actuals furnished by TPL				As approved by the Commission			
		Gross generation (MU)	Net generation (MU)	Fuel cost (Rs. crore)	Fuel cost per unit net (Rs/kWh)	Gross generation (MU)	Net generation (MU)	Fuel cost (Rs. crore)	Fuel cost per unit net (Rs/kWh)
	Sabarmati								
1.	C Station	457.39	413.75	111.42	2.69	457.38	414.34	111.12	2.68
2.	D Station	993.31	907.84	191.63	2.11	993.28	906.57	193.97	2.14
3.	E Station	928.78	848.86	193.12	2.27	928.81	847.73	195.82	2.31
4.	F Station	915.35	836.59	191.71	2.29	915.32	835.42	193.80	2.32
5.	**Vatva Gas Station**	798.04	778.09	202.67	2.60	798.04	774.74	205.25	2.65
	Total	**4092.88**	**3785.12**	**890.55**	**2.35**	**4092.83**	**3778.80**	**899.96**	**2.38**

The detailed calculations for arriving at the above costs are given in Annexure 4.1 to 4.5.

4.1.6 Variation between actual costs and approved costs

The approved fuel costs of all the stations except C station of TPL for truing up purpose are higher than the actual costs for the reasons mentioned below:

- The actual SHR achieved for each station is lower than that approved by the Commission.
- The actual SFC (secondary fuel oil consumption) for each station is also lower than that approved by the Commission.
- In the case of transit loss, the actual performance of TPL-G (APP) is not up to the mark, compared to the approved one.
- In the case of C station, the gains achieved due to better SHR are offset by higher percentage of transit loss.

The comparison between the fuel costs of all stations put together as per audited annual accounts for FY 2009-10 and the cost approved for truing up purpose are as given in the table below:

Table 4.23: Total fuel cost as per audited annual accounts, as per actuals and as approved for truing up for FY 2009-10

(Rs. crore)

Item	As per annual accounts	As per actuals	As approved
Total fuel cost	890.48	890.55	899.96

4.1.7 Gains and losses in fuel costs due to controllable factors of TPL-G (APP)

The TPL has arrived at the fuel expenses incurred for FY 2009-10, on the basis of the actual operational parameters such as station heat rate (SHR), auxiliary consumption, specific fuel oil consumption (SFC) and transit loss of coal. The Commission has compared the fuel expenses, so derived by TPL with the fuel expenses on the basis of the approved operational performance parameters for actual net generation for identification of gains / losses on account of variation in these parameters and approves the gains / losses station-wise as given in the table below:

Table 4.24: Approved gains / losses from fuel expenses (due to controllable factors) for FY 2009-10

(Rs. crore)

Sl. No.	Station	Actual fuel cost as submitted by TPL	Fuel cost arrived at with approved parameters for actual net generation for FY 2009-10	Gains / (losses) due to controllable factors
	Sabarmati			
1.	C Station	111.42	111.03	(0.39)
2.	D Station	191.63	194.28	2.65
3.	E Station	193.12	196.11	2.99
4.	F Station	191.71	194.17	2.46
5.	**Vatva Gas Station**	202.67	206.14	3.47
	Total	**890.55**	**901.73**	**11.18**

4.1.8 Fixed Charges

4.1.8.1 Operation and Maintenance (O&M) expenses

The TPL has claimed a sum of Rs. 127.36 crore towards actual O&M expenses in the truing up for FY 2009-10, as against Rs. 136.30 crore approved in the MYT order dated 17th January, 2009 as detailed in the table below:

Table 4.25: O&M expenses of TPL-G (APP) claimed for FY 2009-10

(Rs. crore)

Particulars	FY 2009-10		
	MYT Order	APR Order	Actual
Employee cost	52.69	52.69	65.19
R&M expenses	60.12	60.12	47.90
A&G expenses	23.49	23.49	14.27
Total O&M expenses	**136.30**	**136.30**	**127.36**

The O&M expenses are discussed component wise in the following paragraphs.

(i) Employee expenses

The TPL has claimed a sum of Rs. 65.19 crore towards actual employee cost in the truing up for FY 2009-10, as against Rs. 52.69 crore approved in the MYT order dated 17th January, 2009.

Petitioner's submission

The TPL has submitted that its employee expenses have exceeded the approved values due to one-time impact of Rs. 10.59 crore on account of wage revision settlement arrived at under section 12 (3) of the Industrial Dispute Act, 1947. The TPL has also claimed that this wage revision is to be considered as uncontrollable factor and needs to be trued up at actual in accordance with GERC (MYT Framework) Regulations, 2007 read with the judgment of the Hon'ble Appellate Tribunal for Electricity in Appeal No. 68 of 2009.

Commission's Analysis

The Commission has verified the actual employee cost with the segregated audited accounts submitted by the TPL for FY 2009-10. The gross employee cost is Rs. 82.09 crore as per the segregated accounts.

The net employee cost claimed is Rs. 65.19 crore against Rs. 52.69 crore approved in the MYT Order for FY 2009-10. The deviation between approved and net employee cost claimed is thus leading to a Rs. 12.50 crore loss on account of wage revision.

The Commission has termed the deviation on account of wage revision as uncontrollable factor.

The Commission, accordingly, approves the employee expenses at Rs. 65.19 crore in the truing up for FY 2009-10.

(ii) Repairs & Maintenance (R&M) expenses

The TPL has claimed a sum of Rs. 47.90 crore towards actual R&M expenses in the truing up for FY 2009-10 against Rs. 60.12 crore approved in the MYT Order dated 17th January, 2009.

Petitioner's submission

The TPL has submitted that the actual expenses under R&M are lower by an amount of Rs. 12.21 crore as compared to the approved expenses. The TPL has mentioned that out of the total of Rs. 12.21 crore an amount of Rs. 6.74 crore is on account of deferment of major overhaul to FY 2010-11; considered as uncontrollable factor and the balance amount of Rs.5.47 crore under R&M account is considered as a controllable factor.

Commission's Analysis

The Commission has verified the actual R&M expenses with the segregated and audited accounts and found them to be correct. As per the MYT Framework Regulations, 2007 the deviation in R&M expenses is considered as a controllable factor.

The Commission, accordingly, approves the R&M expenses at Rs. 47.90 crore in the truing up for FY 2009-10.

(iii) Administration and General (A&G) expenses

The TPL has claimed a sum of Rs. 14.27 crore towards actual A&G expenses in the truing up for FY 2009-10 against Rs. 23.49 crore approved in the MYT Order dated 17th January, 2009.

Petitioner's submission

TPL has submitted that the actual expenses under A&G are lower by an amount of Rs. 9.22 crore as compared to the approved A&G expenses and that the sharing of gains and losses that has been computed as per the Regulations.

Commission's Analysis

With reference to a query from the Commission, the TPL has furnished actual A&G expenses including water charges at Rs.14.27 crore for the year 2009-10. The water charges are said to have been included in fuel expenses.

The deviation in A&G expenses is considered as a controllable factor in accordance with the MYT Framework Regulations, 2007.

The Commission, accordingly, considers the A&G expenses at Rs. 14.27 crore in the truing up for FY 2009-10.

The total O&M expenses and the gain / loss approved in the truing up for FY 2009-10 are summarized in the table below:

Table 4.26: O&M expenses and gain / loss approved in truing up for FY 2009-10

(Rs. crore)

Particulars	As per MYT Order FY 2009-10	Approved in truing up for FY 2009-10	Deviation +/(-)	Gain / (loss) due to controllable factor	Gain / (loss) due to uncontrollable factor
Employee expenses	52.69	65.19	(12.5)	-	(12.5)
R&M expenses	60.12	47.90	12.22	12.22	-
A&G expenses	23.49	14.27	9.22	9.22	-
Total O&M expenses	**136.30**	**127.36**	**8.94**	**21.44**	**(12.5)**

4.1.8.2 Capital expenditure, Capitalization and Sources of Funding

The TPL has claimed Rs. 14.29 crore towards actual capital expenditure in the truing up for FY 2009-10 as against Rs. 115.31 crore approved in the MYT order for FY 2009-10 and Rs. 43.55 crore considered in the APR for FY 2009-10. The details are given in the table below:

Table 4.27: Capital expenditure claimed by TPL-G (APP) for FY 2009-10

Particulars	MYT Order	APR Order	Actual
E station up-gradation	85.00		
Construction of new cooling towers	2.00		
Renovation of down stream conveyor from existing crusher house to D,E&F station bunkers	6.25		
Pollution control scheme	7.95		
C station cooling tower – IDCT		6	
ESP Field extension, overhauling of existing ESP, control replacement		0.5	
HP heater replacement for 'F' station		0.5	
Renovation and refurbishment of civil structure / building for C station		1	1.75
Normal capital expenditure - Sabarmati	12.08	12.04	3.17
Normal capital expenditure- Vatva	2.03	1.55	0.95
Carry over of earlier years		7.31	
Miscellaneous item – Admin		14.65	8.42
Total	**115.31**	**43.55**	**14.29**

Petitioner's submission

The TPL has explained the reasons for reduction of capital expenditure as given below:

- C station cooling tower-IDCT was initially planned to be taken up during FY 2009-10 and therefore a provision of Rs. 6 crore was provided in the ARR later. IDCT was planned to be executed over two years, i.e. FY 2009-10 and FY 2010-11. However, due to delay in getting response from vendors, the project was deferred to FY 2010-11.
- Normal capital expenditure in Sabarmati station has been Rs. 3.17 crore against the approved expenditure of Rs. 12.04 crore due to deferment.
- In the miscellaneous items, actual expenditure of Rs. 8.42 crore has been incurred against an estimate of Rs. 14.65 crore. The lower expenditure was due to non-execution of some due to various constraints, such as, delay in land acquisition for the main gate entrance, access control system and common parking at the station premises.

Commission's Analysis:

The TPL has claimed a capitalization of Rs. 18.23 crore against the actual capital expenditure of Rs. 14.29 crore. The asset addition during FY 2009-10 as verified from the segregated and audited annual accounts in the generation business is put at Rs. 18.23 crore.

The TPL has estimated that the quantum of debt and equity using the normative debt equity ratio of 70:30, as detailed in the table below:

Table 4.28: Capitalization and sources of funding claimed in truing up for FY 2009-10

(Rs. crore)

Particulars	FY 2009-10	
	MYT Order	Actual
Capital expenditure	115.31	14.29
Capitalization during the year	136.61	18.23
Normative Debt @ 70%	95.63	12.76
Normative Equity @ 30%	40.98	5.47

The Commission observes that the actual capital expenditure achieved is far lower than the capital expenditure approved in the MYT Order and also APR for FY 2009-10. The Commission reiterates its earlier observation that utilities actually incur lower capital expenditure than what was approved while determining the tariff. TPL is required to propose realistic capital investment so that the consumers are not saddled with avoidable burden.

The Commission approves the capital expenditure, capitalization and sources of funding as shown in the table below in the truing up for FY 2009-10.

Table 4.29: Approved capitalization and sources of funding in truing up for FY 2009-10

Particulars	FY 2009-10	
	Actual claimed	Approved in truing up
Capital expenditure	14.29	14.29
Capitalization during the year	18.23	18.23
Normative Debt @ 70%	12.76	12.76
Normative Equity @ 30%	5.47	5.47

4.1.8.3 Interest expenses

The TPL has claimed a sum of Rs. 7.79 crore towards actual interest expenses in the truing up for FY 2009-10 against Rs. 17.96 crore approved in the MYT Order and Rs. 7.59 crore considered in the APR order for FY 2009-10 as detailed in the table below:

Table 4.30: Interest claimed in the truing up for FY 2009-10

(Rs. crore)

Loan Heads	APR Order	Actual
Existing loans		
LIC I		
Opening Balance	46.66	46.66
Repayments	4.79	4.79
Closing Balance	41.87	41.88
Interest Rate	11.00%	11.00%
Interest on Loan	4.9	5.3
IDFC Term Loan II		
Opening Balance	17.86	17.86
Repayments	7.14	7.14
Closing Balance	10.71	10.71
Interest Rate	8.17%	8.17%
Interest on Loan	1.12	1.12
Total	**6.02**	**6.42**
Loans drawn during FY 2009-10		
Capitalization During the Year	41.94	18.23
Normative Debt @ 70%	29.36	12.76
Opening Balance	-	-

Loan Heads	APR Order	Actual
New Borrowings	29.36	12.76
Repayments	0.73	0.32
Closing Balance	28.63	12.44
Interest Expense at 11 % Rate	**1.57**	**1.37**
Total Interest Expenses	**7.59**	**7.79**

Petitioner's submission

The TPL has submitted that the Commission had revised the interest expenses in the APR order 988/2010 based on the proposal of TPL on the actual loans at the beginning of the year and additional loan for capital expenditure during FY 2009-10. It is further submitted that the actual loan schedule for FY 2009-10 and the corresponding interest has been submitted for approval.

Commission's Analysis

The existing loans outstanding as on 1st April, 2009 and the details of repayment and interest charges on these loans are verified and found to be correct. The additional loan of Rs. 12.76 crore borrowed during FY 2009-10 is in accordance with the capitalization of Capex and funding the Capex as approved in table 4.28 above.

The Commission has computed the allowable interest charges for FY 2009-10 as detailed in the table below:

Table 4.31: Interest approved by the Commission in the truing up for FY 2009-10

(Rs. crore)

Loan Heads	APR Order	Actual
Existing loans		
LIC I		
Opening Balance	46.66	46.66
Repayments	4.79	4.79
Closing Balance	41.87	41.88
Interest Rate	11.00%	11.00%
Interest on Loan	4.9	5.30
IDFC Term Loan II		
Opening Balance	17.86	17.86
Repayments	7.14	7.14
Closing Balance	10.71	10.71
Interest Rate	8.17%	8.17%
Interest on Loan	1.12	1.12
Total	**6.02**	**6.42**
Loans drawn during FY 2009-10		
Capitalization During the Year	41.94	18.23
Normative Debt @ 70%	29.36	12.76

Loan Heads	APR Order	Actual
Opening Balance	-	-
New Borrowings	29.36	12.76
Repayments	0.73	0.32
Closing Balance	28.63	12.44
Interest Expense at 11 % Rate	**1.57**	**0.70**
Total Interest Expenses	**7.59**	**7.12**

The Commission, accordingly, approves the interest and finance charges at Rs. 7.12 crore in the truing up for FY 2009-10.

In regard to the computation of gains / losses, Regulation 9.6.2 (e) considers interest and finance charges as a controllable expense. The Commission has observed that the interest and finance charges are dependent on the total amount of capital expenditure, capitalization and the extent of borrowings accounted during the financial year. Therefore, the deviation is considered as uncontrollable.

The Commission, accordingly, approves the gains / losses on account of interest and finance charges in the truing up for FY 2009-10 as detailed in the table below:

Table 4.32: Gains / losses approved in the truing up for FY 2009-10

(Rs. crore)

Particulars	As per MYT Order FY 2009-10	Approved in truing up for FY 2009-10	Deviation +/(-)	Gain /(loss) due to uncontrollable factor
Interest and Finance charges	17.96	7.12	10.84	10.84

4.1.8.4 Interest on working capital

The TPL has claimed a sum of Rs. 35.26 crore towards interest on working capital in the truing up of FY 2009-10 as against Rs. 27.16 crore approved in the MYT Order and Rs. 27.23 crore considered in the APR order for FY 2009-10 as detailed in the table below:

Table 4.33: Interest on working capital of TPL-G (APP) claimed for FY 2009-10

(Rs. crore)

Particulars	FY 2009-10		
	MYT Order	APR Order	Actual
Coal and Secondary fuel for 2 months	81.41	83.27	114.65
Gas for 1 month	12.21	12.54	16.89
O&M expense for 1 month	11.36	11.36	10.61
1 % of GFA for maintenance spares	7.74	7.36	7.55
Receivables for 2 months	152.24	151.17	194.34
Normative Working Capital	264.96	265.7	344.04
Interest Rate	10.25%	10.25%	10.25%
Interest on Working Capital	27.16	27.23	35.26

Petitioner's submission

The TPL has submitted that the revised computation for interest on working capital is higher than that of the interest approved in the MYT Order since the working capital requirement has increased mainly due to increase in the fuel costs compared to the approved base cost which is uncontrollable in nature.

Commission's Analysis

The Commission has examined the computation of normative working capital and interest thereon under GERC (Terms and Conditions for Determination of Tariff) Regulations, 2005. Based on the O&M expenses approved in the truing up and other components of ARR in the truing up for FY 2009-10, the Commission has computed the working capital and interest thereon as detailed in the table below:

Table 4.34: Interest on working capital approved in truing up for FY 2009-10

(Rs. crore)

Particulars	FY 2009-10			
	MYT Order	APR Order	Actual	Approved in truing up for FY 2009-10
Coal and secondary fuel for 2 months	81.41	83.27	114.65	115.46
Gas for 1 month	12.21	12.54	16.89	17.1
O&M expense for 1 month	11.36	11.36	10.61	10.61
1 % of GFA for maintenance spares	7.74	7.36	7.55	7.36
Receivables for 2 months	152.24	151.17	194.34	194.10
Normative Working Capital	264.96	265.7	344.04	344.63
Interest Rate	10.25%	10.25%	10.25%	10.25%
Interest on Working Capital	**27.16**	**27.23**	**35.26**	**35.32**

The Commission, accordingly, approves the interest on working capital at Rs. 35.32 crore in the truing up for FY 2009-10.

As indicated above, the Commission has analysed various components – controllable and uncontrollable – to arrive at the approved figure of working capital, based on which the interest on working capital has been calculated. After working out the interest on working capital, the Commission, as also suggested by TPL, has treated the interest as uncontrollable cost for the purpose of estimating gain/loss.

The Commission, accordingly, approves the gains / losses on account of interest on working capital in the truing up for FY 2009-10 as detailed in the table below:

Table 4.35: Gain / loss in Interest on working capital approved in the truing up for FY 2009-10

(Rs. crore)

Particulars	As per MYT Order FY 2009-10	Approved in truing up for FY 2009-10	Deviation +/(-)	Gain /(loss) due to uncontrollable factor
Interest on working capital	27.16	35.32	(8.16)	(8.16)

4.1.8.5 Depreciation

The TPL has claimed a sum of Rs. 27.49 crore towards depreciation in the truing up for FY 2009-10 as against Rs. 33.94 crore approved in the MYT Order and Rs. 27.63 crore considered in the APR order for FY 2009-10 as detailed in the table below :

Table 4.36: Depreciation of TPL-G (APP) claimed for FY 2009-10

(Rs. crore)

Particulars	FY 2010-11		
	MYT Order	APR Order	Actual
Depreciation	33.94	27.63	27.49

Petitioner's submission

The TPL has submitted that the depreciation rates as per CERC (Terms and Conditions of Tariff) Regulations, 2004 are applied on opening GFA of FY 2009-10 and for addition of assets from 1st April, 2009 onwards it is computed at rates specified in the Appendix III to the CERC (Terms and Conditions of Tariff) Regulations, 2009.

Commission's Analysis

The Petitioner has computed and submitted the depreciation for FY 2009-10 using CERC depreciation rates and asset classification wise. The details of opening balance of assets as on 1st April, 2009 including addition and deduction to the Gross Block during FY 2009-10 and the depreciation on the assets, classification wise, are given in Form 12A, Annexure-1 of the petition. The opening and closing balances of assets are as per the segregated and audited accounts for FY 2009-10.

The Commission, accordingly, approves the depreciation at Rs. 27.49 crore in the truing up for FY 2009-10.

In regard to the computation of gains / losses, Regulation 9.6.2 (e) considers depreciation as a controllable expense. However, the Commission has considered that the capital expenditure as an uncontrollable cost and hence depreciation being dependent on CAPEX and capitalization, treated it as uncontrollable factor.

The Commission, accordingly, approves the gains / losses on account of depreciation in the truing up for FY 2009-10 as detailed in the table below:

Table 4.37: Gain / loss due to depreciation approved in the truing up for FY 2009-10

(Rs. crore)

Particulars	As per MYT Order FY 2009-10	Approved in truing up for FY 2009-10	Deviation +/(-)	Gain / (loss) due to uncontrollable factor
Depreciation	33.94	27.49	6.45	6.45

4.1.8.6 Return on equity

The TPL has claimed a sum of Rs. 43.49 crore towards return on equity in the truing up for FY 2009-10 against Rs. 48.25 crore approved in the MYT Order and Rs. 43.99 crore approved in the APR order for FY 2009-10 as detailed in the table below:

Table 4.38: Return on equity of TPL-G (APP) claimed for FY 2009-10

(Rs. crore)

Particulars	FY 2009-10		
	MYT Order	APR Order	Actual
Opening equity	324.15	307.91	307.91
Equity addition	40.98	12.58	5.47
Closing equity	365.13	320.49	313.38
Return on equity	48.25	43.99	43.49

Petitioner's submission

The TPL has submitted that the return on equity is computed at 14% on the average of the opening and closing balance of equity for FY 2009-10.

Commission's Analysis

The opening equity for FY 2009-10 is as per the closing equity for FY 2008-09 approved in the APR for FY 2008-09. The addition of equity of Rs. 5.47 crore during FY 2009-10 is as per the capitalization in accordance with the segregated audited accounts for FY 2009-10.

The Commission, accordingly, approves the return on equity at Rs. 43.49 crore in the truing up for FY 2009-10 as detailed in the table below:

Table 4.39: Return on equity approved truing up for FY 2009-10

(Rs. crore)

Particulars	FY 2009-10	
	APR Order	Actual
Opening equity	307.91	307.91
Equity addition	12.58	5.47
Closing equity	320.49	313.38
Average equity	314.20	310.65
Return on equity @14%	43.99	43.49

The return on equity depends on the total amount of capitalization and the debt equity ratio considered during the Financial Year and these parameters are uncontrollable in nature. The variance in the amount of return on equity is therefore also treated as uncontrollable expense.

The Commission, accordingly, approves the gains / losses on account of return on equity in the truing up for FY 2009-10 as detailed below.

Table 4.40: Return on equity and gain / loss approved in the truing up for FY 2009-10

(Rs. crore)

Particulars	As per MYT Order FY 2009-10	Approved in truing up for FY 2009-10	Deviation +/(-)	Gain / (loss) due to uncontrollable factor
Return on equity	48.25	43.49	4.76	4.76

4.1.8.7 Income Tax

The TPL has claimed a sum of Rs. 22.39 crore towards income tax in the truing up for FY 2009-10 against Rs. 16.40 crore approved in the MYT Order and Rs. 14.95 crore considered in the APR order for FY 2009-10 as detailed in the table below :

Table 4.41: Income Tax claimed for TPL-G (APP) for FY 2009-10

(Rs. crore)

Particulars	MYT Order	APR Order	Actual
Income Tax	16.40	14.95	22.39

Petitioner's submission

The TPL has submitted that it has calculated the income tax on revised ROE so as to earn post tax ROE of 14% as per the Regulations on the basis of considering the income tax rate at 33.99%.

Commission's Analysis

Taking into consideration the observation of the Hon'ble APTEL in its judgment dated 5th January, 2011 that "Torrent Power Limited" should neither benefit nor lose on account of tax payable which is pass through in the tariff, the Commission has revised income tax figures approved for MYT period 2008-11 by adopting corporate tax rate at 33.99% for generation business and MAT at 11.33% for distribution business in the review exercise vide Commission's order dated 05.09.2011.

As per the segregated audited accounts of TPL the tax for FY 2009-10 is Rs.207.50 crore for the entire TPL. This actual income tax is apportioned based on the profit before tax (PBT) for each business, considering the income tax at 33.99% for generation business (APP) and at 11.33% for the distribution business of Ahmedabad and Surat supply areas.

The income tax apportioned to the generation business is Rs.26.45 crore for FY 2009-10.

The Commission, accordingly, approves the income tax at Rs.26.45 crore in the Truing up for FY 2009-10

The Commission has treated the income tax as an uncontrollable expense. The Commission, accordingly, approves the gains / losses on account of income tax in the truing up for FY 2009-10 as detailed in the table below:

Table 4.42: Income Tax and gain/loss due to income tax approved in the truing up for FY 2009-10

(Rs. crore)

Particulars	As per MYT Order FY 2009-10	Approved in truing up for FY 2009-10	Deviation +/(-)	Gain /(loss) due to uncontrollable factor
Income Tax	16.40*	26.45	(10.05)	(10.05)

*Revised in the review order to Rs.24.84 crore.

4.1.8.8 Non-Tariff income

Petitioner's submission

The TPL has submitted that the actual non-tariff income was Rs. 2.02 crore in the truing up for FY 2009-10 as against Rs. 1.50 crore approved in the MYT order and Rs. 0.84 crore considered in the APR for FY 2009-10 as detailed in the table below:

Table 4.43: Non-tariff income for TPL-G (APP) claimed for FY 2009-10

(Rs. crore)

Particulars	FY 2009-10

	MYT Order	APR Order	Actual
Non-Tariff income	1.50	0.84	2.02

Commission's Analysis

The non-tariff income of TPL is put at Rs.2.02 crore as per the segregated and audited annual accounts.

The Commission, accordingly, approves the non-tariff income at Rs. 2.02 crore in the truing up for FY 2009-10.

The deviation in non-tariff income is at Rs**. 0.52** crore, which is a gain considered as uncontrollable factor.

The Commission, accordingly, approves the gains / losses on account of non-tariff income in the truing up for FY 2009-10 as detailed below.

Table 4.44: Non-tariff income and gains / losses approved in the truing up for FY 2009-10

(Rs. crore)

Particulars	As per MYT Order FY 2009-10	Approved in truing up for FY 2009-10	Deviation +/(-)	Gain / (loss) due to uncontrollable factor
Non-tariff income	1.50	2.02	0.52	0.52

4.1.8.9 Incentive

The TPL has claimed a sum of Rs. 13.73 crore towards incentive in the truing up for FY 2009-10.

Petitioner's submission

The TPL has submitted that TPL-G (APP) had achieved a PLF of 93.44% for generating stations and that accordingly the excess generation eligible for the purpose of incentive works out to 549.16 MU resulting in an incentive of Rs. 13.73 crore at Rs. 0.25 / kWh.

Commission's Analysis

According to Regulation 5 (ii) read with Regulation 22 of GERC (Terms and Conditions of Tariff) Regulations, 2005, incentive for achieving higher PLF is payable for actual ex-bus generation over and above the target PLF of 80% at the rate of 25P/kWh

The actual ex-bus generation over and above the target generation in the TPL is arrived as 543 MU and the incentive thereon works out to Rs.13.58 crore.

The Commission, accordingly, approves the incentive at Rs.13.58 crore in the truing up of TPL for FY 2009-10 as detailed below.

4.1.9 Revised ARR for FY 2009-10

The Commission has reviewed the performance of TPL-G (APP) under Regulation 9.3 of MYT Regulations, 2007 with reference to segregated and audited annual accounts for FY 2009-10.

Accordingly, the Commission has computed the sharing of gains and losses for FY 2009-10 based on the truing up for each of the components discussed in the above paragraphs.

The ARR approved in the MYT order dated 17th January, 2009 as claimed by TPL in truing up for FY 2009-10 along with sharing of gains / losses computed in accordance with MYT Regulations, 2007 are given in the table below:

Table 4.45: ARR approved in truing up for FY 2009-10

(Rs. crore)

Particulars	FY 2009-10 (MYT order)	FY 2009-10 (Actuals claimed)	Approved in truing up for FY 2009-10	Deviation +/(-)	Gain/(loss) due to Controllable factors	Gain/(loss) due to Uncontrollable factors
	1	2	3	4 (1-3)	5	6
Variable cost	634.92	890.55	899.96	(265.04)	11.18	(276.22)
Employee expenses	52.69	65.19	65.19	(12.50)	0.00	(12.50)
R&M expenses	60.12	47.90	47.90	12.22	12.22	-
A&G expenses	23.49	14.27	14.27	9.22	9.22	
Depreciation	33.94	27.49	27.49	6.45		6.45
Interest on loan	17.96	7.79	7.12	10.84		10.84
Interest on working capital	27.16	35.26	35.32	(8.16)		(8.16)
Return on equity	48.25	43.49	43.49	4.76		4.76
Income Tax	16.40	22.39	26.45	(10.05)		(10.05)
Less: Non-tariff income	1.50	2.02	2.02	0.52		0.52
ARR	**913.43**	**1152.31**	**1165.17**	**(251.75)**	**32.62**	**(284.37)**
Add: Incentive for Generation		13.73	13.58	(13.58)		(13.58)
Net ARR	**913.43**	**1166.04**	**1178.75**	**(265.33)**	**32.62**	**(297.95)**

4.1.10 Sharing of Gains / Losses for FY 2009-10

The Commission has analyzed the gains / losses on account of controllable and uncontrollable factors.

The relevant Regulations are as extracted below:

Regulation 10.1 "The approved aggregate gain or loss to the Generating Company or Licensee on account of uncontrollable factors shall be passed through as an adjustment in the tariff of the Generating Company or licensee over such period as may be specified in the Order of the Commission passed under Regulation 9.7 (a)."

Regulation 11.1 "The approved aggregate gain to the Generating Company or Licensee on account of controllable factors shall be dealt with in the following manner:

(a) One third of the amount of such gain shall be passed on as a rebate in tariffs over such period as may be specified in the Order of the Commission under Regulation 9.7;
(b) One third of amount of such gain shall be retained in a special reserve by the Generating Company or Licensee for the purpose of absorbing the impact of any future losses on account of controllable factors under clause (b) of Regulation 11.2; and
(c) The balance amount of gain may be utilized, at the discretion of the Generating Company or Licensee".

Regulation 11.2 "The approved aggregate loss to the Generating Company or Licensee on account of controllable factors shall be dealt with in the following manner:

(a) One third of the amount of such loss maybe passed on as an additional charge in tariffs over such period as may be specified in the Order of the Commission under Regulation 9.7; and
(b) The balance amount of loss shall be absorbed by the Generating Company or licensee."

Accordingly, the gain on account of controllable factors is arrived at Rs. 32.62 crore for FY 2009-10. Out of this 1/3rd gain, i.e. Rs.10.87 crore is to be passed on to the consumers and another 1/3rd, Rs.10.87 crore, is to be credited to the special reserve. Similarly, the total loss of Rs.297.95 crore on account of uncontrollable factors shall also be passed on to consumers through an adjustment in the tariff. The details are given in table below:

Table 4.46: Revised ARR approved for TPL-G (APP) for FY 2009-10

(Rs. crore)

Sl.No.	Particulars	FY 2009-10
1.	ARR approved in the MYT for FY 2009-10 (T.O. dated 19/01/2009)	913.43
2.	Less: Gain on account of controllable factor to be passed on to the consumers (1/3rd)	10.87
3.	Add: Loss on account of uncontrollable factor to be passed on to consumers	297.95
4.	**Revised ARR for FY 2009-10 (Trued up)**	**1200.51**

4.2 Ahmedabad Distribution

4.2.1 Energy Sales to the Consumers

Petitioner's submission:

The TPL has submitted the category-wise actual energy sales for Ahmedabad area for the FY 2009-10 along with the sales approved by the Commission in MYT order and APR order for FY 2009-10 as given in the table below:

Table 4.47: Energy sales for FY 2009-10 for Ahmedabad area

(MU)

Sl.No.	Category	MYT Order	APR Order	Actual
(1)	(2)	(3)	(4)	(5)
1.	RGP	1547.04	1576.56	1543.53
2.	CGP	836.53	864.60	827.70
3.	LTP	285.13	268.21	270.70
4.	LTMD	898.57	849.19	869.68
5.	HT	1546.03	1433.91	1332.28
6.	HT pumping	98.78	97.94	98.90
7.	Others	127.54	68.23	66.94
8.	DoE units	-	-	9.20
9.	**Total**	**5339.63**	**5158.64**	**5018.28**

The actual sales come to 5018.28 MU to Ahmedabad area for FY 2009-10 against 5339.63 MU in MYT order dated 17th January, 2009 and 5158.64 MU in the APR order dated 9th December, 2009.

Commission's Analysis

The Commission, in the tariff order dated 31st March, 2010, had considered revised estimate of sales of 5158.64 MU for Ahmedabad area for FY 2009-10 on the basis of actual sales for a period of nine (9) months and estimate for three (3) months. The actual energy sales in Ahmedabad area is marginally lower by (140 MU) compared to the revised estimated sales considered by the Commission in its APR for 2009-10. However, the energy sales are lower by 321 MU as against the sales approved in MYT tariff order 2009.

The Commission approves the energy sales as mentioned in table 4.45 for Ahmedabad area totalling to 5018.28 MU for truing up for FY 2009-10.

4.2.2 Distribution Loss

Petitioner's submission

The TPL has submitted that the actual distribution loss at Ahmedabad was assessed at 8.5%. The distribution losses approved in the MYT order for FY 2009-10 and considered in APR order for FY 2009-10 and the actuals for FY 2009-10 are given below:

Table 4.48: Distribution loss for 2009-10

(%)

Particulars	Approved MYT	Approved APR	Actual
Distribution loss	10.25	10.19	8.50

It is submitted by TPL that it had made considerable efforts to reduce the distribution loss.

4.2.3 Energy Requirement

Petitioner's submission

Based on the actual energy sales and the transmission and distribution losses, the actual energy requirement for Ahmedabad area as submitted by TPL for FY 2009-10 are given below:

Table 4.49: Energy Requirement for FY 2009-10 for Ahmedabad area

Sl. No.	Particulars	MYT Order	ARR Order	Actual
1.	Energy sales (MU)	5339.63	5152.64	5018.28
2.	Distributor loss (%)	10.25	10.19	8.50
3.	Distribution loss (MU)	609.82	585.31	466.02
4.	Energy input at distribution level	5949.45	5743.95	5484.30
5.	Transmission loss	156.00	47.48	47.47
6.	Energy Requirement	6105.45	5791.43	5531.77

Commission's Analysis

The actual energy requirement submitted by the Petitioner for FY 2009-10 along with energy requirement as per MYT order has been examined. Energy requirement is the sum of actual energy sales and transmission and distribution losses as given in table 4.47 above.

The Commission approves the energy requirement at 5531.77 MU for truing up for FY 2009-10 as given in the above table.

4.2.4 Energy Availability

The TPL has submitted that power purchase should be sourced on a collective basis for optimization of costs. The TPL has further submitted that flexibility of power dispatch from the source point facilitated management of power procurement in an efficient manner and also helps in meeting the varying loads of each of the areas.

It is also submitted by TPL that it had sourced power from its own plants at Sabarmati and Vatva termed as TPL-G (APP), TPL SUGEN plant besides Wind Energy under the RPO obligation and other sources through bilateral/power exchange. However, the primary requirement is met from TPL-G (APP) and SUGEN power plant as the renewable power is a post scheduled power. The source-wise power procured for Ahmedabad supply area during FY 2009-10 are given in the table below:

Table 4.50: Energy Availability (Net) for FY 2009-10 for Ahmedabad area

(MU)

Sl. No.	Energy Sources	MYT Order	ARR Order	Actual
1.	TPL-G (APP)	3559.91	3823.36	3784.67
2.	TPL-G (SUGEN)	2088.00	1305.69	1146.35
3.	GUVNL	137.54	324.16	493.92
4.	Power Exchange	0.00	0.00	29.62
5.	SUGEN Infirm	0.00	0.00	128.26
6.	RPO/Wind Energy	320.00	69.98	60.75
7.	UI	-	(31.67)	(111.80)
	Total	**6105.45**	**5791.42**	**5531.77**

Commission's Analysis

It is seen from the table above that the TPL had procured power from TPL-G (APP), SUGEN power plant, GUVNL, SUGEN (Infirm), Power Exchange and RPO - Wind energy. The TPL-G (APP), SUGEN, GUVNL and Wind energy are approved sources of power by the Commission as per the MYT order. The TPL has also been purchasing small quantum of power (29.62 MU) from Power exchange. It is submitted that the short-term purchase was on account of shortfall in power supply sources through bilateral and power exchange. Such a purchase was to meet the peak hour requirement. TPL sold as much as 111.80 MU of energy under UI (unscheduled interchange) on account of deviation from the scheduled purchase and energy sold.

The Commission approves the source wise power procured as given below for truing up for FY 2009-10.

Table 4.51: Approved source-wise power purchase in truing up for FY 2009-10

(MU)

Sl. No.	Energy Sources	MYT Order	Actual as per TPL	Actual Approved
1.	TPL-G (APP)	3559.91	3784.67	3784.67
2.	TPL-G (SUGEN)	2088.00	1146.35	1146.35
3.	GUVNL	137.54	493.92	493.92
4.	Power Exchange	0.00	29.62	29.62
5.	SUGEN Infirm	0.00	128.26	128.26
6.	RPO/Wind Energy	320.00	60.75	60.75
	Total	**6105.45**	**5531.77**	**5643.57**

4.2.5 Power Purchase

The TPL has submitted the actual power purchase cost for the FY 2009-10 along with power purchase approved in MYT order and considered in APR for FY 2009-10 as given in table below:

Table 4.52: Power Purchase cost projected by TPL for Ahmedabad area for FY 2009-10

(Rs. crore)

Sl. No.	Energy Sources	MYT Order	ARR Order	Actual
1.	TPL-G (APP)	913.43	907.00	1186.46
2.	TPL-G (SUGEN)	622.22	389.10	471.20
3.	GUVNL	42.78	193.49	196.37
4.	Power Exchange	0.00	0.00	15.63
5.	SUGEN Infirm	0.00	0.00	47.33
6.	RPO/Wind Energy	112.32	24.53	23.45
7.	UI	-	12.94	-
	Total	**1690.75**	**1501.17**	**1940.44**

It is submitted by the Petitioner that the variation in the power purchase cost from APR order is on account of the following factors:

- Increase in fuel cost of TPL-G (APP) and SUGEN

- Increase in tariff by GUVNL
- Power procured through short-term sources in order to meet the short- fall during the year.

It is further submitted that power was sourced from TPL-G (APP), SUGEN, and short-term sources. Variable charges from TPL-G (APP) have increased on account of increase in fuel costs. During FY 2009-10, GUVNL had discontinued supply of power to TPL, due to which, TPL had to resort to short-term power purchase, thus leading to increase in the cost of the power purchase.

It is also further submitted that the variation in power purchase cost is uncontrollable except on account of variation in distribution losses.

Commission's Analysis

The Commission had approved the quantum of power purchase at 6105.45 MU for FY 2009-10 in its MYT order and revised it to 5791.43 MU in APR order against which the TPL has purchased 5531.77 MU during FY 2009-10.

The TPL had purchased 128.26 MU of infirm power of SUGEN from GUVNL at Rs. 3.69 / kWh as per agreement between TPL and GUVNL.

The Commission had approved power purchase cost at Rs. 1690.75 crore in MYT order and considered Rs. 1501.17 crore in APR for FY 2009-10 against actual cost of Rs. 1940.44 crore.

The TPL has stated that it had resorted to short-term purchase from power exchange to meet the demand to provide uninterrupted supply to its consumers due to GUVNL discontinuing power supply during FY 2009-10. The short-term purchase is at Rs. 6.27 / kWh and it is considered reasonable for peak power considering the market rate prevailing during FY 2009-10.

TPL has calculated the power purchase cost of TPL-G (APP) of Rs.1186.46 crore (Table 4.50) including the gains and losses due to controllable and uncontrollable factors. The Commission has computed revised ARR of TPL-G (APP) considering gains/losses due to controllable and uncontrollable factors and arrived at Rs.1200.51 crore (Table 4.46).

The Commission, accordingly, approves the purchase of power at Rs.1937.62 crore during FY 2009-10 for truing up as given below:

Table 4.53: Power Purchase cost approved for Ahmedabad area for FY 2009-10

(Rs. crore)

Sl. No.	Energy Sources	MYT Order	ARR Order	Actuals furnished by TPL	Approved in truing up
1.	TPL-G (APP)	913.43	907.00	1186.46	1200.51
2.	TPL-G (SUGEN)	622.22	389.10	471.20	471.20
3.	GUVNL	42.78	193.49	196.37	196.37
4.	Power Exchange	0.00	0.00	15.63	15.63
5.	SUGEN Infirm	0.00	0.00	47.33	47.33
6.	RPO/Wind Energy	112.32	24.53	23.45	23.45
7.	UI	-	12.94	-	-
	Total	**1690.75**	**1501.17**	**1940.44**	**1954.49**

4.2.5.1 Gain due to reduction in energy requirement due to reduction in distribution loss.

The TPL furnished the details of computation of distribution loss gains for Ahmedabad area vide e-mail dated 15th June, 20011 as given in the table below:

Table 4.54: Gain due to reduction in energy requirement for FY 2009-10 claimed by TPL

Particulars	UoM	Ahmedabad	
		Norm	Actuals
Sales	MU	5018.28	5018.28
Wheeling of energy	MU	57.20	-
Total energy wheeled	MU	5075.48	5018.28
Distribution loss	%	10.25%	8.50%
Power purchase required	MU	5655.13	5484.30
Transmission loss	MU		47.47
Total power purchase required	MU		5531.77
Ahmedabad generation	Rs. crore		1186.46
Total power purchase cost	Rs. crore		1940.44
Ahmedabad generation	MU		3784.67
Cost of power purchase from all sources	Rs./kWh		3.59
Cost of power excluding Ahmedabad generation	Rs./kWh		3.94
Savings in MU	MU		113.63
Savings due to improvement in distribution loss	Rs. crore		44.79

Thus, the TPL computed the distribution loss gains at Rs. 44.79 crore.

Commission Analysis

The TPL has not taken into account the wheeled energy for the input of actual energy to arrive at actual percentage distribution loss. The calculation of distribution loss considering wheeling of energy at input as well as at output level of distribution network is as shown in the table below:

Table 4.55: Percentage distribution loss for FY 2009-10 considering wheeled energy

(MU)

Particulars		Actual considered in truing up
Energy sales	a	5018.28
Setoff wheeled energy	b	57.20
Total energy output	c=(a+b)	5075.48
Energy input at distribution level for FY 2009-10	d	5484.30
Energy input at distribution level for wheeling purpose	e	57.20
Total energy input at distribution level	f=(d+e)	5541.50
Distribution loss	g=(f-c)	466.02
Distribution (%)	h=g/f*100	8.41%

As shown above, the actual distribution loss for TPL-D (Ahmedabad) is 8.41%.

Revised computation for sharing of gain on account of reduction in energy requirement would be as shown in table below:

Table 4.56: Revised computation for reduction in energy requirement of TPL-D (Ahmedabad) due to reduction in distribution loss.

(MU)

Particulars		Gains calculation
Energy sales	a	5018.28
Setoff wheeled energy	b	57.20
Total energy output	c=(a+b)	5075.48
MYT approved distribution loss	d	10.25%
Energy requirement at distribution level as per MYT approved loss	e (c/1-d)	5655.13
Normative energy requirement at distribution level at MYT approved loss	f=e-b	5597.93
Actual energy purchased at distribution level	g	5484.30
Reduction in energy requirement	h=f-g	113.63

Thus, the savings of 113.63 MU of energy purchase computed by TPL is found to be in order.

TPL has considered power purchase rate of Rs. 3.94/kWh excluding Ahmedabad generation for computing gain on account of improvement in distribution losses. But, the Commission finds it appropriate to consider average weighted power purchase rate. The cost of purchase of 5644 MU was Rs. 1920 crore (excluding gains arrived in truing up) i.e. Rs. 3.40 per kWh.

Computation for sharing of gain on account of reduction in energy requirement due to improvement in distribution loss for TPL-D (Ahmedabad) is as given in table below:

Table 4.57: Computation for sharing of gain due to reduction in energy requirement of TPL-D (Ahmedabad)

Particulars		Amount
Reduction in energy requirement (MU)	a	113.63
Average power purchase cost (Rs./kWh)	b	3.40
Gain due to improvement in distribution loss (Rs. crore)	c=axb	38.63

4.2.6 Fixed Charges

4.2.6.1 Operation and Maintenance (O&M) expenses

The TPL has claimed a sum of Rs. 202.06 crore towards actual O&M expenses in the truing up for FY 2009-10 against Rs. 177.63 crore approved in the MYT order dated 17th January, 2009 as well as in the APR Order for FY 2009-10 as detailed in the table below:

Table 4.58: O&M expenses claimed by TPL- Ahmedabad for FY 2009-10

(Rs. crore)

Particulars	FY 2009-10		
	MYT Order	**APR Order**	**Actual**
Employee cost	66.38	66.38	77.00
R&M expenses	77.60	77.60	80.52
A&G expenses	33.65	33.65	44.54
Total O&M expenses	**177.63**	**177.63**	**202.06**

The O&M expenses are discussed component-wise in the following paragraphs.

(i) Employee expenses

The TPL has claimed a sum of Rs. 77.00 crore towards actual employee expenses in the truing up for FY 2009-10 as against Rs. 66.38 crore approved in the MYT order dated 17th January, 2009.

Petitioner's submission

The TPL has submitted that the employee expenses of Ahmedabad supply area have exceeded the approved levels due to one time impact of Rs. 17.98 crore on account of wage revision settlement arrived at under section 12 (3) of the Industrial

Dispute Act, 1947. It is further submitted that the impact of the wage revision is to be considered as uncontrollable factor and needs truing up at actual expenses in accordance with GERC (MYT Framework) Regulations, 2007 read with the judgment of the Hon'ble Appellate Tribunal for Electricity in Appeal No. 68 of 2009.

Commission's Analysis

The Commission has verified the actual employee cost with the segregated audited accounts submitted by TPL for FY 2009-10. The gross employee cost was Rs. 122.62 crore. The net employee cost was Rs. 77.00 crore against Rs. 66.38 crore approved in the MYT Order as well as in the APR Order for FY 2009-10. The deviation is said to be a loss of Rs. 10.62 crore on account of wage revision.

The deviation on account of wage revision is considered as uncontrollable factor.

The Commission, accordingly, approves the employee cost at Rs. 77.00 crore in the truing up for FY 2009-10.

(ii) Repairs and Maintenance (R&M) expenses

The TPL has claimed a sum of Rs. 80.52 crore towards actual R&M expenses in the truing up for FY 2009-10 against Rs. 77.60 crore approved in the MYT Order dated 17th January, 2009 and the APR Order for FY 2009-10.

Petitioner's submission

The TPL has submitted that the variance in R&M cost compared to the cost approved in MYT order is mainly on account of controllable factors and that it has to be dealt with in accordance with the MYT Frame work Regulation, 2009 for sharing of gains / losses.

Commission's Analysis

The Commission has verified the actual R&M expenses with the segregated and audited accounts for FY 2009-10 and found them to be correct. The deviation is assessed at Rs. 2.92 crore (loss) mostly on account of controllable factors.

The Commission, accordingly, approves the R&M expenses at Rs. 80.52 crore in the truing up for FY 2009-10.

(iii) Administration and General (A&G) expenses

The TPL has claimed a sum of Rs. 44.54 crore towards the actual A&G expenses in the truing up for FY 2009-10 against in the Rs. 33.65 crore approved in the MYT Order dated 17th January, 2009 as well as in the APR order for FY 2009-10.

Petitioner's submission

The TPL has submitted that the variation in A&G expenses is mainly on account of controllable factors except certain specific uncontrollable factors. The deviation of Rs. 10.89 crore (loss) includes Rs. 7.86 crore on account of past provision towards imposition of tax as per show-cause notice issued by the Service Tax Authorities. The petitioner said that the imposition of Tax being an uncontrollable item it should be treated as a pass through. The balance of Rs. 3.03 crore in the deviation is on account of controllable factors and the same needs to be treated in accordance with the MYT Framework Regulations for the sharing of gains / losses.

Commission's Analysis

The actual A&G expenses are verified with reference to the segregated and audited accounts for FY 2009-10 and found to be correct. This includes Rs. 7.86 crore towards service tax as indicated in Schedule 8 of the annual accounts for FY 2009-10. However, this provision towards service tax of Rs.7.86 crore is not considered in the truing up. This shall be considered by the Commission as and when it is actually paid.

The Commission, accordingly, approves the A&G expenses at Rs. 36.68 crore in the truing up for FY 2009-10.

The total O&M expenses and gain / loss considered in the truing up for FY 2009-10 are as summarized in the table below:

Table 4.59: O&M expenses and gain / loss approved in truing up for FY 2009-10

(Rs. crore)

Particulars	As per MYT Order FY 2009-10	Approved in truing up for FY 2009-10	Deviation +/(-)	Gain / (loss) due to controllable factor	Gain / (loss) due to uncontrollable factor
Employee cost	66.38	77.00	(10.62)	-	(10.62)
R&M expenses	77.60	80.52	(2.92)	(2.92)	-
A&G expenses	33.65	36.68	(3.03)	(3.03)	-
Total O&M expenses	**177.63**	**194.20**	**(16.57)**	**(5.95)**	**(10.62)**

4.2.6.2 Capital expenditure, Capitalization and Sources of Funding

The TPL has furnished the actual capital expenditure at Rs. 232.98 crore in the truing up for FY 2009-10 against Rs. 447.99 crore approved in the MYT order for FY 2009-10 and Rs. 289.98 crore considered in the APR order for FY 2009-10. The details are as given in the table below:

Table 4.60: Capital expenditure claimed by TPL- Ahmedabad for FY 2009-10

Particulars	MYT Order	APR Order	Actual
EHV	253.01	143.67	116.77
HT Network	93.50	61.50	60.89
LT Network	43.98	29.45	28.92
Metering	25.87	19.41	17.99
Special Projects	7.30	6.55	-
Customer Care & IT Initiatives	24.33	29.40	7.78
Total	**447.99**	**289.98**	**232.36**

Petitioner's submission

(a) Capital Expenditure

The TPL has submitted that the capital expenditure incurred by Ahmedabad Supply Area was lower than the approved value at an actual expenditure of Rs. 232.36 crore against Rs. 289.98 crore approved in the APR for FY 2009-10.The TPL has mentioned that major reason for such variation is lower expenditure in Special Projects head due to deferment of the segments like GIS, Customer Care and IT Initiatives. Further, the actual expenditure under Customer Care and IT Initiatives was accounted at Rs. 7.78 crore only though the approved provision was Rs. 29.40 crore.

The Commission, accordingly, approves the capital expenditure at Rs. 232.36 crore in the truing up for FY 2009-10.

(b) Capitalization

The TPL has claimed a sum of Rs. 212.63 crore towards capitalization against the actual capital expenditure of Rs. 232.36 crore. The net addition of assets i.e. capitalization during FY 2009-10 is Rs. 212.63 crore as verified from the segregated annual accounts for FY 2009-10.

The TPL has estimated the quantum of debt and equity using the normative debt equity ratio 70:30 as detailed in the table below:

Table 4.61: Approved capitalization and sources of funding for FY 2009-10

(Rs. crore)

Particulars	FY 2009-10	
	Actuals claimed	**Approved in truing up**
Capitalization expenditure	232.36	232.36
Capitalization during the year	212.63	212.63
Less: (i) SLC additions	44.88	44.88
(ii) Grant in aid	10.45	10.45
Balance capitalization	157.30	157.30
Normative Debt @ 70%	110.11	110.11
Normative equity @ 30%	47.19	47.19

The Commission approves the capitalization and funding as shown in the above table in the truing up for FY 2009-10.

4.2.6.3 Interest expenses

TPL has claimed a sum of Rs. 54.28 crore towards actual interest expenses in the truing up for FY 2009-10 as detailed in the table below against Rs. 112.31 crore approved in the MYT Order and Rs. 49.85 crore considered in the APR order for FY 2009-10.

Table 4.62: Interest claimed in the truing up for FY 2009-10

(Rs. crore)

Particulars	Amount
Existing loans	
APDRP	
Opening Balance	35.22
Repayments	0.97
Closing Balance	34.25
Interest Rate	9.00%
Interest Expense	3.13
HDFC 2 A	
Opening Balance	40.38
Repayments	7.69
Closing Balance	32.69
Interest Rate	10.75%
Interest Expense	3.43
HDFC 3 A	
Opening Balance	100.00
Repayments	16.67
Closing Balance	83.33
Interest Rate	11.00%
Interest Expense	10.25
ICD/SBI from FY 2009	
Opening Balance	193.30

Particulars	**Amount**
Repayments	35.19
Closing Balance	158.11
Interest Rate	11.00%
Interest Expense	19.88
LIC	
Opening Balance	50.84
Repayments	5.21
Closing Balance	45.60
Interest Rate	11.00%
Interest Expense	5.78
Total	**42.48**
Loans drawn during the year FY 2009-10	
Capitalization during the year	212.63
Less: SLC additions	44.88
Less: Grant in aid	10.45
Normative Debt @ 70%	110.11
Opening balance	-
New borrowings	110.11
Closing balance	107.36
Interest Expense @ 10.75%	**11.80**
Total interest on loans	**54.28**

Petitioner's submission

The TPL has submitted that the Commission in its order in case No. 988/2010 had revised the interest expenses based on the TPL's proposal considering the actual loans at the commencement of the FY and additional loan due to capital expenditure during FY 2009-10. The TPL further submitted that the actual loan schedule for FY 2009-10 and the corresponding interest expenses is an uncontrollable item, since it is dependent on the level of actual capital expenditure.

Commission's Analysis

The existing loans outstanding as on 01/04/2009 and the details of repayment and interest charges on these loans given in Form D-3A (TPL-D Ahmedabad Licensee Area) are verified and found to be correct for the existing loans. The additional loan of Rs. 110.11 crore borrowed during FY 2009-10 is in accordance with the capitalization of CAPEX and funding and as approved in the table 4.61 above. The TPL has claimed interest on the loan drawn during FY 2009-10 for the whole year instead of 6 months. The Commission has computed the interest on loan drawn during the year for 6 months since the exact date of capitalisation of each and every scheme is not known.

The Commission, accordingly, approves the interest and finance charges at Rs. 48.39 crore in the truing up for FY 2009-10.

Table 4.63: Interest approved by the Commission in the truing up for FY 2009-10

(Rs. crore)

Particulars	Amount
Existing loans	
APDRP	
Opening Balance	35.22
Repayments	0.97
Closing Balance	34.25
Interest Rate	9.00%
Interest Expense	3.13
HDFC 2 A	
Opening Balance	40.38
Repayments	7.69
Closing Balance	32.69
Interest Rate	10.75%
Interest Expense	3.43
HDFC 3 A	
Opening Balance	100.00
Repayments	16.67
Closing Balance	83.33
Interest Rate	11.00%
Interest Expense	10.25
ICD/SBI from FY 2009	
Opening Balance	193.30
Repayments	35.19
Closing Balance	158.11
Interest Rate	11.00%
Interest Expense	19.88
LIC	
Opening Balance	50.84
Repayments	5.21
Closing Balance	45.60
Interest Rate	11.00%
Interest Expense	5.78
Loans drawn during the year FY 2009-10	
Capitalization during the year	212.63
Less: SLC additions	44.88
Less: Grant in aid	10.45
Normative Debt @ 70%	110.11
Opening balance	-
New borrowings	110.11
Closing balance	107.36
Interest Expense @ 10.75%	5.92
Total interest on loans	**48.39**

The deviation of Rs. 63.92 crore is considered as a gain. The Commission has observed that the interest and finance charges are dependent on the amount of capital expenditure, capitalization and the extent of borrowings considered during the financial year. Hence, the deviation is considered as uncontrollable factor.

The Commission, accordingly, approves the gains / losses on account of interest and finance charges in the truing up for FY 2009-10 as detailed in the table below:

Table 4.64: Gains / losses approved in the truing up for FY 2009-10

(Rs. crore)

Particulars	As per MYT Order for FY 2009-10	Approved in truing up for FY 2009-10	Deviation +/(-)	Gain /(loss) due to uncontrollable factor
Interest and Finance charges	112.31	48.39	63.92	63.92

4.2.6.4 Interest on security deposit

The TPL has claimed a sum of Rs. 9.47 crore towards interest on security deposit in the truing up for FY 2009-10 against Rs. 9.72 crore approved in the MYT Order and Rs. 9.32 crore considered in the APR order for FY 2009-10 as detailed in the table below :

Table 4.65: Interest on security deposit claimed for TPL-Ahmedabad for FY 2009-10

(Rs. crore)

Particulars	FY 2009-10		
	MYT Order	APR Order	Actual
Interest Rate	6%	6%	6%
Interest on Security Deposit	9.72	9.32	9.47

Petitioner's submission

The TPL has submitted that the actual interest expense on the security deposit is higher than the approved expense in the APR order as actual amount of security deposit made during FY 2009-10 is higher than the estimates.

Commission's Analysis

The Commission has verified the actual interest on security deposit with the segregated audited accounts for FY 2009-10 submitted by TPL and found it to be correct.

The Commission, accordingly, approves the interest on security deposit at Rs. 9.47 crore in the truing up for FY 2009-10.

The deviation of Rs. 0.25 crore is considered a gain on account of uncontrollable factor as detailed in the table below:

Table 4.66: Approved gain / loss due to interest paid on security deposit in the truing up for FY 2009-10

(Rs. crore)

Particulars	Approved in the MYT Order for FY 2009-10	Approved in the truing up for FY 2009-10	Deviation +/(-)	Gain / (loss) due to uncontrollable factor
Interest on Security Deposit	9.72	9.47	0.25	0.25

4.2.6.5 Interest on working capital

The TPL has claimed a sum of Rs. 45.92 crore towards interest on working capital in the truing up for FY 2009-10 against Rs. 24.66 crore approved in the MYT Order and Rs. 21.85 crore considered in the APR order for FY 2009-10 as detailed in the table below :

Table 4.67: Interest on working capital claimed by for TPL- Ahmedabad for FY 2009-10

(Rs. crore)

Particulars	FY 2009-10		
	MYT Order	APR Order	Actual
O&M expense for 1 month	14.80	14.80	16.84
1 % of GFA for maintenance spares	12.26	21.00	23.13
Receivables for 2 months	216.34	177.39	408.04
Normative Working Capital	243.34	213.19	448.01
Interest Rate	10.25%	10.25%	10.25%
Interest on Working Capital	24.66	21.85	45.92

Petitioner's submission

The TPL has submitted that the interest on working capital is computed by applying the interest rate @ 10.25% on working capital requirement arrived at in accordance with the GERC (Terms and Conditions of Tariff) Regulations, 2005. The major reason for variation is due to (i) deduction of receivables of TPL-G (APP) from the total working capital requirement of Ahmedabad Supply Area by the Commission and (ii) that the working capital requirement has increased on account of higher receivables.

Commission's Analysis

The Commission has examined the computation of normative working capital and interest thereon under GERC (Terms and Conditions for Determination of Tariff)

Regulations, 2005. The Commission has also taken into consideration the judgment of Hon'ble Appellate Tribunal in Appeal No. 61 of 2010, *inter alia* the deduction of the amount of generation receivables in calculating interest on working capital. The interest on working capital is computed taking into consideration 2 months receivables without deducting the generation receivables. The details are given in the table below:

Table 4.68: Interest on working capital approved for FY 2009-10

(Rs. crore)

Particulars	FY 2009-10	
	Actual claimed	**Approved in true up**
O&M expense for 1 month	16.84	16.18
1 % of GFA for maintenance spares	23.13	21.00
Receivables for 2 months	408.04	404.07
Normative Working Capital	448.01	441.25
Interest Rate	10.25%	10.25%
Interest on Working Capital	45.92	45.23

The Commission, accordingly, approves the interest on working capital at Rs. 45.23 crore in the truing up for FY 2009-10 as detailed in the above table.

The deviation of Rs. 20.57 crore is assessed as loss and also as an uncontrollable factor as detailed in the table below:

Table 4.69: Approved gain / loss due interest on working capital in the truing up for FY 2009-10

(Rs. crore)

Particulars	Approved in the MYT Order	Approved in the truing up for FY 2009-10	Deviation +/(-)	Gain (loss) due to uncontrollable factor
Interest on working capital	24.66	45.23	(20.57)	(20.57)

4.2.6.6 Depreciation

The TPL has claimed a sum of Rs. 72.50 crore towards depreciation actual in the truing up for FY 2009-10 against Rs. 82.75 crore approved in the MYT Order and Rs. 69.82 crore considered in the APR order for FY 2009-10 as detailed in the table below:

Table 4.70: Depreciation claimed by TPL- Ahmedabad for FY 2009-10

(Rs. crore)

Particulars	FY 2009-10		
	MYT Order	**APR Order**	**Actual**
Depreciation	82.75	69.83	72.50

Petitioner's submission

The TPL has submitted that on the depreciation rates as per CERC (Terms and Conditions of Tariff) Regulations, 2004 are applied on opening GFA of FY 2009-10 and for addition of assets from 1st April, 2009 onwards and the level of depreciation has been computed at rates specified in the Appendix III to the CERC (Terms and Conditions of Tariff) Regulations, 2009. The TPL has also submitted for approval of the depreciation and that it should be considered as an uncontrollable item.

Commission's Analysis

The Petitioner has computed the depreciation for FY 2009-10 using CERC depreciation rates, as per the asset classification-wise. The details of opening balance of assets as on 1st April, 2009, addition and deduction to the Gross Block during FY 2009-10 and the depreciation on the assets, asset classification- wise, are given in Form D-2A (TPL-D Ahmedabad Licensee Area) page 334 of petition. The opening and closing balance of assets are as per the segregated and audited accounts for FY 2009-10.

The Commission, accordingly, approves the depreciation at Rs. 72.50 crore in the truing up for FY 2009-10.

The deviation of Rs. 10.25 crore is assessed as a gain and the Commission has considered it as uncontrollable item as the depreciation is dependent on Capex and capitalization.

The Commission, accordingly, approves the gains / losses on account of depreciation in the truing up for FY 2009-10 as detailed in the table below:

Table 4.71: Depreciation and gain / loss due to depreciation approved in the truing up for FY 2009-10

(Rs. crore)

Particulars	As per MYT Order FY 2009-10	Approved in truing up for FY 2009-10	Deviation +(-)	Gain / (loss) due to uncontrollable factor
Depreciation	82.75	72.50	10.25	10.25

4.2.6.7 Return on equity

The TPL has claimed a sum of Rs. 122.31 crore towards return on equity @ 14% in the truing up for FY 2009-10 against Rs. 130.55 crore approved in the MYT Order and Rs. 123.31 crore considered in the APR order for FY 2009-10 as detailed in the table below :

Table 4.72: Return on equity claimed for TPL- Ahmedabad for FY 2009-10

(Rs. crore)

Particulars	FY 2009-10		
	MYT Order	APR Order	Actual
Opening equity	864.18	850.05	850.05
Equity addition during the year	139.51	60.03	47.19
Closing equity during the year	1003.69	910.09	897.24
Return on equity	130.55	123.21	122.31

Petitioner's submission

The TPL has submitted that the closing balance of equity has been arrived at considering additional equity of 30% of the capitalization during the year. The return on equity has been thus computed applying a rate of 14% on the average of the opening and closing balance of equity for FY 2009-10.

Commission's Analysis

The opening equity for FY 2009-10 is same as the closing equity for FY 2008-09 approved in the APR for FY 2008-09. The addition of equity of Rs. 47.19 crore during FY 2009-10 is due to capitalization as per the segregated and audited accounts for FY 2009-10.

The Commission, accordingly, approves the return on equity at Rs. 122.31 crore in the truing up for FY 2009-10.

The return on equity depends on the amount of capitalization and the debt equity ratio considered during the Financial Year and these parameters are uncontrollable in nature. The variance in the amount of return on equity is therefore treated as an uncontrollable item.

The Commission, accordingly, approves the gains / loss on account of return on equity in the truing up for FY 2009-10 as detailed below.

Table 4.73: Return on equity and gain / loss approved in the truing up for FY 2009-10

(Rs. crore)

Particulars	As per MYT Order for FY 2009-10	Approved in truing up for FY 2009-10	Deviation +/(-)	Gain / (loss) due to uncontrollable factor
Return on equity	130.55	122.31	8.24	8.24

4.2.6.8 Income Tax

The TPL has claimed a sum of Rs. 25.04 crore towards income tax in the truing up for FY 2009-10 against Rs. 44.37 crore approved in the MYT Order and Rs. 20.94 crore considered in the APR order for FY 2009-10 as detailed in the table below:

Table 4.74: Income Tax claimed for TPL- Ahmedabad for FY 2009-10

(Rs. crore)

Particulars	FY 2009-10		
	MYT Order	APR Order	Actual
Income Tax	44.37	20.94	25.04

Petitioner's submission

The TPL has submitted that the Commission has approved income tax at the MAT Rate of 16.99% on the approved ROE. The TPL has revised the income tax by applying the MAT rate of 16.99% on the ROE to earn post tax ROE at 14% as per the Regulations.

Commission's Analysis

As per the segregated audited accounts of TPL the tax for FY 2009-10 is Rs.207.50 crore for the entire TPL. This actual income tax is apportioned based on the profit before tax (PBT) for each business, considering the income tax at 33.99% for generation business (APP) and at 11.33% for the distribution business of Ahmedabad and Surat supply areas.

The income tax apportioned to the Ahmedabad distribution is Rs.8.52 crore for FY 2009-10.

The Commission, accordingly, approves the income tax at Rs.8.52 crore in the truing up for FY 2009-10

The Commission approves the gains / losses on account of income tax in the truing up for FY 2009-10 treating the income tax as an uncontrollable expense as detailed in the table below:

Table 4.75: Income tax and gain / loss due to income tax approved in the truing up for FY 2009-10

(Rs. crore)

Particulars	As per MYT	Approved in	Deviation	Gain / (loss) due to

	Order for FY 2009-10	truing up for FY 2009-10	+(-)	uncontrollable factor
Income Tax	44.37*	8.52	35.85	35.85

*Revised to Rs.16.68 crore in review order dated 05.09.2011

4.2.6.9 Bad debt

The TPL has claimed sum of Rs. 1.09 crore towards bad debts in the truing up for FY 2009-10 against Rs.2.05 crore approved in the MYT order and Rs.1.97 crore considered in the APR for FY 2009-10 as detailed in the table below:

Table 4.76: Bad debts claimed for TPL- Ahmedabad for FY 2009-10

(Rs. crore)

Particulars	FY 2009-10		
	MYT Order	APR Order	Actual
Bad debts	2.05	1.97	1.09

Petitioner's submission

The Petitioner has requested to consider the actual bad debts written off as uncontrollable item of expenditure in accordance with the GERC (Terms and Conditions of Tariff) Regulations, 2005.

Commission's Analysis

The Commission has verified the bad debts written off with reference to the segregated and audited accounts submitted by TPL for FY 2009-10.

The Commission, accordingly, approves the bad debts written off at Rs. 1.09 crore in the truing up for FY 2009-10.

The deviation in bad debts is Rs. 0.96 crore which is a gain and considered as controllable factor.

The Commission, accordingly, approves the gain / loss on account bad debts in the truing up for FY 2009-10 as detailed below:

Table 4.77: Bad debts and gain / loss approved in the truing up for FY 2009-10

(Rs. crore)

Particulars	As per MYT Order for FY 2009-10	Approved in truing up for FY 2009-10	Deviation +/(-)	Gain / (loss) due to controllable factor
Bad debts	2.05	1.09	0.96	0.96

4.2.6.10 Contingency Reserve

Petitioner's submission

The TPL has proposed the contingency reserve at Rs. 0.60 crore in the truing up for FY 2009-10 which is the same as approved in the MYT order and the APR order for FY 2009-10 as detailed in the table below:

Table 4.78: Contingency Reserve claimed for TPL- Ahmedabad for FY 2009-10

(Rs. crore)

Particulars	FY 2009-10		
	MYT Order	APR Order	Actual
Contingency Reserve	0.60	0.60	0.60

Commission's Analysis

The proposed contingency reserve is consistent with the approval accorded in the past.

Table 4.79: Contingency reserve and gain/loss approved in the truing up for FY 2009-10

(Rs. crore)

Particulars	As per MYT Order for FY 2009-10	Approved in truing up for FY 2009-10	Deviation +/(-)	Gain / (loss) due to uncontrollable factor
Bad debts	0.60	0.60	-	-

The Commission, accordingly, approves the contingency reserve at Rs. 0.60 crore in the truing up for FY 2009-10.

There is no deviation in the contingency reserve.

4.2.6.11 Non-Tariff income

The TPL has claimed a sum of Rs. 51.39 crore as the non-tariff income in the truing up for FY 2009-10 against Rs. 80.44 crore approved in the MYT order and Rs. 51.17 crore considered in the APR for FY 2009-10 as detailed in the table below:

Table 4.80: Non-Tariff income claimed for TPL- Ahmedabad for FY 2009-10

(Rs. crore)

Particulars	FY 2009-10		
	MYT Order	APR Order	Actual
Non-Tariff income	80.44	51.17	51.39

Petitioner's submission

The Petitioner has submitted that the actual non-tariff income for FY 2009-10 is Rs. 51.39 crore only which is an uncontrollable item.

Commission's Analysis

The Commission has verified the non-tariff income with the segregated audited accounts and found it to be correct.

The Commission, accordingly, approves the non-tariff income at Rs. 51.39 crore in the truing up for FY 2009-10.

The deviation in non-tariff income is assessed at Rs. 29.05 crore is a loss and considered as an uncontrollable factor.

The Commission, accordingly, approves the gains / losses on account of non-tariff income in the truing up for FY 2009-10 as detailed below.

Table 4.81: Non-tariff income and gains / losses approved in the truing up for FY 2009-10

(Rs. crore)

Particulars	As per MYT Order for FY 2009-10	Approved in truing up for FY 2009-10	Deviation +/(-)	Gain (loss) due to uncontrollable factor
Non-tariff income	80.44	51.39	(29.05)	(29.05)

4.2.7 Revenue from sale of power

Petitioner's submission

The TPL has submitted a sum of Rs. 2379.95 crore as the revenue from sale of power in the truing up for FY 2009-10 against Rs. 2045.63 crore approved in the MYT order for FY 2009-10 as detailed in the table below.

Table 4.82: Revenue with existing tariff claimed for TPL- Ahmedabad for FY 2009-10

(Rs. crore)

Particulars	FY 2009-10		
	MYT Order	ARR Order	Actual
Revenue from existing tariff	2045.63	1904.69	2379.95

Commission's Analysis

The Commission has obtained the segregated and audited annual accounts for FY 2009-10 from the TPL, which puts the revenue from sale of energy at Rs. 2382.03

crore. With reference to a query from the Commission to furnish the actual sales and revenue in Form D-4/A, TPL has furnished a certificate from their auditors showing the revenue for FY 2009-10 as detailed below:

Table 4.83: Revenue from sale of power claimed by TPL for FY 2009-10

(Rs. crore)

Particulars	For the year ended 31st March, 2010
Revenue from power supply as per audited Profit & Loss Account	2382.03
Less: Prompt payment discount on sale of power	44.44
Add: Liability in respect of FPPPA	42.36
Total	**2379.95**

The category-wise sales and revenue for FY 2009-10 are as given in the table below:

Table 4.84: Category-wise sales and revenue for FY 2009-10

(Rs. crores)

Category	MU	Fixed Charges	Energy Charges	Time of Use Charges	Power Factor Adjustment	Total
AHMEDABAD SUPPLY AREA						
Residential	1543.53	8.06	480.31			488.37
Commercial	827.05	13.53	371.73			385.27
LTP - I	60.57	1.41	20.72			22.13
LTP - II	210.13	10.88	73.54			84.42
LTMD - I	122.87	4.32	43.18		-0.63	46.87
LTMD - II	746.82	36.86	281.54		-0.30	318.09
HTMD	1332.28	61.55	450.58	33.64	-0.61	545.16
HT Pumping	98.90	9.78	25.87	1.43		37.08
Agri	8.49	0.01	2.70			2.71
GLP	8.90	0.03	3.34			3.37
Temp	1.59	0.61	0.62			1.23
Streetlight	47.96		17.73			17.74
DOE	9.20		9.20			9.20
FPPPA						381.90
UI						38.48
Total	**5018.29**	**147.05**	**1781.07**	**35.07**	**-1.54**	**2382.03**

The prompt payment discount being an expense is shown in the ARR and gross revenue is shown as detailed below:

Table 4.85: Approved revenue from sale of power for FY 2009-10 in truing up

(Rs. crore)

Particulars	For the year ended 31st March, 2010
Revenue from power supply as per audited Profit & Loss Account	2382.03
Add: Liability in respect of FPPPA	42.36

Particulars	For the year ended 31st March, 2010
Total	**2424.39**

The Commission, accordingly, approves the revenue from sale of power at Rs. 2424.39 crore in the truing up for FY 2009-10.

4.2.8 Gain / Loss under truing up for FY 2009-10

The Commission has reviewed the performance of TPL-D Ahmedabad Supply Area under Regulation 9.3 of MYT Regulations, 2007, with reference to segregated and audited annual accounts for FY 2009-10. The Commission has computed the gain / loss for FY 2009-10 based on the truing up for each of the components discussed in the above paragraphs.

The Aggregate Revenue Requirement (ARR) approved in the MYT order dated 17th January, 2009, actual claimed in truing up, approved for truing up and gains / losses computed in accordance with the MYT Regulations are detailed in the table below:

Table 4.86: ARR approved in respect of TPL- Ahmedabad in the truing up or FY 2009-10

(Rs. lakhs)

Particulars	FY 2009-10 (MYT order)	FY 2009-10 (Actuals claimed)	Approved in truing up for FY 2009-10	Deviation	Gain/(loss) due to Controllable factors	Gain/(loss) due to Controllable factors
	1	2	3	4 (1-3)	5	6
Power Purchase cost	1690.75	1940.44	1954.49	(263.74)	38.63	(302.37)
Employee expenses	66.38	77.00	77.00	(10.62)	-	(10.62)
R&M expenses	77.60	80.52	80.52	(2.92)	(2.92)	-
A&G expenses	33.65	44.54	36.68	(3.03)	(3.03)	-
Depreciation	82.75	72.50	72.50	10.25		10.25
Interest on loan	112.31	54.28	48.39	63.92		63.92
Interest on security deposit	9.72	9.47	9.47	0.25		0.25
Interest on working capital	24.66	45.92	45.23	(20.57)		(20.57)
Prompt payment discount			44.44	(44.44)		(44.44)
Return on equity	130.55	122.31	122.31	8.24		8.24
Income Tax	44.37	25.04	8.52	35.85		35.85
Bad Debts	2.05	1.09	1.09	0.96	0.96	

Particulars	FY 2009-10 (MYT order)	FY 2009-10 (Actuals claimed)	Approved in truing up for FY 2009-10	Deviation	Gain/(loss) due to Controllable factors	Gain/(loss) due to Controllable factors
Contingency Reserve	0.60	0.60	0.60	0.00		
Less: Non-tariff income	80.44	51.39	51.39	(29.05)		29.05
Net ARR	2194.95	2422.32	2449.85	(254.90)	33.64	(288.54)

4.2.9 Sharing of Gains / Losses for FY 2009-10

The Commission has analyzed the gains / losses on account of controllable and uncontrollable factors.

The relevant Regulations are extracted as below:

Regulation 10.1 "The approved aggregate gain or loss to the Generating Company or Licensee on account of uncontrollable factors shall be passed through as an adjustment in the tariff of the Generating Company or licensee over such period as may be specified in the Order of the Commission passed under Regulation 9.7 (a)."

Regulation 11.1 "The approved aggregate gain to the Generating Company or Licensee on account of controllable factors shall be dealt with in the following manner:

(a) One third of the amount of such gain shall be passed on as a rebate in tariffs over such period as may be specified in the Order of the Commission under Regulation 9.7;
(b) One third of amount of such gain shall be retained in a special reserve by the Generating Company or Licensee for the purpose of absorbing the impact of any future losses on account of controllable factors under clause (b) of Regulation 11.2; and
(c) The balance amount of gain may be utilized, at the discretion of the Generating Company or Licensee".

Regulation 11.2 "The approved aggregate loss to the Generating Company or Licensee on account of controllable factors shall be dealt with in the following manner:

(a) *One third of the amount of such loss maybe passed on as an additional charge in tariffs over such period as may be specified in the Order of the Commission under Regulation 9.7; and*

(b) *The balance amount of loss shall be absorbed by the Generating Company or licensee."*

The gain on account of controllable factors is arrived at Rs. 33.64 crore for FY 2009-10. Out of this 1/3rd gain of Rs. 11.21 crore is to be passed on to the consumers and the other 1/3rd gain of Rs. 11.21 crore is to be credited to the special reserve. The entire loss of Rs. 288.54 crore on account of uncontrollable factors shall also be passed on to consumers through an adjustment in the Tariff. The details are as given in table below:

Table 4.87: Revised ARR approved for TPL- Ahmedabad for FY 2009-10

(Rs. crore)

Sl. No.	Particulars	FY 2009-10
1.	ARR approved in the MYT for FY 2009-10 (T.O. dated 19/01/2009)	2194.95
2.	Less: Gain on account of controllable factor to be passed on to the consumers (1/3rd)	11.21
3.	Add: Loss on account of uncontrollable factor to be passed on to consumers	288.54
4.	**Revised ARR for FY 2009-10 (Trued up)**	**2472.28**
5.	Net (Gap) / Surplus (4-1)	(277.33)

The revenue gap for TPL-Ahmedabad is summarized in the Table below:

Table 4.88: Revenue gap for TPL- Ahmedabad for FY 2009-10

(Rs. crore)

Particulars	**FY 2009-10**		
	MYT Order	**Actual claimed**	**Approved in truing up**
Net Annual Revenue Requirement	2194.95	2448.22	2472.28
Revenue from sale of energy	2045.63	2379.95	2424.39
(Gap) / Surplus	**(149.32)**	**(68.27)**	**(47.89)**

4.2.10 Incentive for reduction in Distribution loss for FY 2007-08

Earlier the Commission had not computed any gain due to the better performance of the licensee for Distribution loss. The petitioner has represented before the Hon'ble APTEL for the same and in its judgment dated 23rd March, 2010, the Hon'ble APTEL observed as under:

"In our view the Regulations incentivise performance better than the norms and disincentivise performance below norms of AT&C loss level. Therefore, we are not in

agreement with the plea of the State Commission that the gains of efficiency accrue from the capital expenditure made by licensee and therefore, must be passed on the consumers. Capital expenditure is anyway made in the entire supply chain.
In this view of the matter we direct that the ***Commission should decide sharing of the gain of efficiency between the Appellant and the consumers as provided for in Regulation 66*** *of the State Commission (Supra)"*

In view of the above, the Commission now considers that the gain due to better performance of the petitioner in FY 2007-08 to be shared equally between licensee and the consumers.

Now, as provided in paragraph 3.4 of the Commission's Order dated 17th January, 2009, the petitioner, by achieving a loss level of 8.75% against the approved target of 9.26%, had reduced energy requirement to the extent of 46 MU. Further, the total cost of power purchase and own generation considered by the Commission was Rs. 2162.91 crore and energy procured was 8192 MU. Hence, the weighted average cost of power procurement works out as Rs. 2.64 per kWh. Accordingly, total gain due to better performance works out to Rs. 12.14 crore.

Earlier, the Commission had worked out surplus of Rs.10.64 crore for FY 2007-08. Now considering the share of the petitioner due to better performance of Distribution loss at Rs. 6.07 crore, **the revised surplus for FY 2007-08 works out as Rs.4.57 crore.**

4.3 Surat Distribution

4.3.1 Energy Sales to the Consumers

Petitioner's submission:

The TPL has submitted the category-wise actual energy sales for Surat area for the FY 2009-10 along with the sales approved by the Commission in MYT order dated 17th January, 2009 and APR order dated 31st March, 2010 as given in the table below:

Table 4.89: Energy sales for FY 2009-10 for Surat area

(MU)

Sl. No.	Category	MYT Order	APR Order	Actual
(1)	(2)	(3)	(4)	(5)
1.	Residential	597.00	564.65	553.63
2.	Commercial	477.41	444.36	454.64
3.	LTP	1811.67	1563.81	1583.06
4.	LTMD	249.33	159.42	174.14
5.	HTMD	247.74	231.25	230.32
6.	Others	27.75	25.97	25.83
7.	DoE units	-	2.66	5.14
8.	**Total**	**3410.90**	**2992.11**	**3026.78**

The actual sales come to 3026.78 MU in the Surat area for FY 2009-10 against 3410.90 MU as per MYT order and 2992.11 MU as per APR order.

Commission's Analysis

The Commission, in the tariff order dated 31st March, 2010, had considered revised estimate of sales of 2992.11 MU for Surat area for FY 2009-10 based on actuals for nine (9) months and estimates for the remaining three (3) months. The actual energy sales in Surat area is marginally higher (35 MU) than the revised estimated sales considered by the Commission in the APR. The sales, however, are lower by 384 MU compared to the sales approved in MYT order FY 2009.

The Commission approves the energy sales in column 5 of Table 4.89 for Surat area totalling to 3026.78 MU for truing up for FY 2009-10.

4.3.2 Distribution Loss

Petitioner's submission

The TPL has submitted the distribution loss at 5.15% in the Surat area for FY 2009-10. The distribution loss approved in the MYT order FY 2009 and APR order FY 2010 and the actuals for FY 2009-10 are given below:

Table 4.90: Distribution loss for 2009-10

(%)

Particulars	Approved in MYT order	Approved in APR order	Audited Actual
Distribution loss	6.00	5.38	5.15

It is submitted by TPL that it had made considerable efforts to reduce the distribution loss.

4.3.3 Energy Requirement

Petitioner's submission

Based on the actual energy sales and the transmission and distribution losses the actual energy requirement for Surat area submitted by TPL is as below:

Table 4.91: Energy Requirement for FY 2009-10 for Surat supply area

Sl.No.	Particulars	MYT Order	ARR Order	Actual
1.	Energy sales (MU)	3410.90	2992.11	3026.78
2.	Distributor loss (%)	6.00	5.38	5.15
3.	Distribution loss (MU)	217.72	170.13	164.29
4.	Energy input at distribution level	3628.62	3162.24	3191.07
5.	Transmission loss	60.00	37.11	33.21
6.	Energy Requirement	3688.62	3199.35	3224.28

Commission's Analysis

The energy requirement submitted by the Petitioner for FY 2009-10 along with energy requirement as per MYT order have been examined. Energy requirement is the sum of actual energy sales and transmission and distribution loss earlier approved in as given in table 4.90 above.

The Commission approves the energy requirement at 3224.28 MU as given in Column 5 of Table 4.9 above under truing up for FY 2009-10.

4.3.4 Energy Availability

Petitioner's submission

The TPL has submitted that power purchase should be sourced on a collective basis for optimization of costs. The petitioner has also submitted that flexibility of power dispatch from the source point facilitates efficient management of power procurement and also helps in meeting the varying load demand of each area.

It is also submitted by the petitioner that TPL sourced power from its own plant at

TPL SUGEN, GUVNL and Wind Energy under RPO obligation besides other sources such as bilateral / power exchange. However, the primary requirement is met from TPL SUGEN power plant and GUVNL as the renewable power being a post scheduled power. The source-wise power procured for Surat supply area is as given in the table below:

Table 4.92: Energy Availability (Net) for FY 2009-10 for Surat area

(MU)

Sl. No.	Energy Sources	MYT Order	ARR Order	Actual
1.	TPL-G (SUGEN)	3484.00	2173.44	2257.97
2.	GUVNL	-	1000.25	403.37
3.	Power Exchange	-	-	1.48
4.	SUGEN (Infirm power)	-	-	596.86
5.	RPO (wind energy)	204.65	47.47	46.32
6.	UI	-	(21.81)	(83.99)
	Total	**3688.65**	**3199.35**	**3222.01**

Commission's Analysis

It is seen from the table above that TPL has procured power from SUGEN power plant, GUVNL, SUGEN (Infirm), Power Exchange and RPO-Wind Energy. SUGEN, GUVNL and Wind energy (RPO) are approved sources of power by the Commission in the MYT order. The TPL had also made short-term purchase of small quantum of power (1.48 MU) from sources such as bilateral and power exchange. It is submitted that the short-term purchase was on account of shortfall in power supply. This purchase is stated to meet mainly the peak hour requirements. The TPL sold 83.99 MU of energy under UI (unscheduled inter-change) on account of deviation from the scheduled purchase and energy procured.

The Commission approves the source-wise power procured as given below:

Table 4.93: Approved source-wise power purchase for truing up for FY 2009-10

(MU)

Sl. No.	Energy Sources	MYT Order	ARR Order	Actual
1.	TPL-G (SUGEN)	3484.00	2173.44	2257.97
2.	GUVNL	-	1000.25	403.37
3.	Power Exchange	-	-	1.48
4.	SUGEN (Infirm power)	-	-	596.86
5.	RPO (wind energy)	204.65	47.47	46.32
	Total	**3688.65**	**3221.16**	**3306.00**

4.3.5 Power Purchase Cost

The TPL has submitted the actual power purchase cost for the FY 2009-10 along with power purchase approved in MYT order and considered in APR for FY 2009-10 as given in table below:

Table 4.94: Power Purchase cost projected by TPL for Surat area for FY 2009-10

(Rs. crore)

Sl. No.	Energy Sources	MYT Order	ARR Order	Actual
1.	TPL-G (SUGEN)	1038.23	647.69	807.48
2.	GUVNL	-	310.08	161.02
3.	Power Exchange	-	-	0.71
4.	SUGEN (Infirm)	-	-	220.27
5.	RPO	71.96	16.66	15.92
6.	UI	-	10.86	-
	Total	**1110.19**	**963.56**	**1205.40**

It is submitted by the Petitioner that the variation in the power purchase cost from the approved levels of APR order is due to the following factors:

- Increase in fuel cost of SUGEN
- Increase in tariff by GUVNL
- Additional power procured through short-term sources in order to meet the short- fall during the year.

It is further submitted that power was sourced from SUGEN, GUVNL, RPO and short-term sources. Variable charges from SUGEN have increased on account of increase in fuel costs. During FY 2009-10, GUVNL discontinued supply of power, due to which, TPL had to increase the power purchase from SUGEN (Infirm) and a very small quantity on short-term purchase, thus leading to increase in cost for the power purchase.

It is also further submitted that the variation in power purchase cost is an uncontrollable factor except on account of variation in distribution losses.

Commission's Analysis

The Commission had approved the quantum of purchase at 3688.65 MU for FY 2009-10 in MYT order and considered 3199.35 MU in APR order. TPL has purchased 3222.01 MU for FY 2009-10.

The Commission approved power purchase cost at Rs. 1110.19 crore in MYT order and Rs.963.56 crore in APR order. However, the actual power purchase as submitted by TPL is Rs.1205.40 crore and the power purchase as per segregated and audited annual accounts is also assessed at Rs.1205.40 crore.

The TPL has stated that it had to resort to short-term purchase from power exchange to meet the shortfall in order to provide continuous supply to its consumers following GUVNL discontinuing power for a period during FY 2009-10.

The TPL had purchased infirm power of SUGEN from GUVNL at Rs. 3.69 / kWh as per agreement between TPL and GUVNL.

The Short-term power was purchased at Rs. 4.80 /kWh and it is considered reasonable based on the prevailing market rate during FY 2009-10.

The Commission approves the power purchase cost at Rs. 1205.40 crore during FY 2009-10 for truing up.

4.3.5.1 Gain due to reduction in energy requirement due to reduction in distribution loss.

The TPL furnished the details of computation of distribution loss gains for Surat area vide e-mail dated 15th June, 2011 as given in the table below:

Table 4.95: Gain due to reduction in energy requirement in FY 2009-10 claimed by TPL

Particulars	UoM	Surat	
		Norm	**Actuals**
Sales	MU	3026.78	3026.78
Wheeling of energy	MU	15.02	-
Total energy wheeled	MU	3041.80	3026.78
Distribution loss	%	6.00%	5.15%
Power purchase required	MU	3235.96	3191.07
Transmission loss	MU		33.21
Total power required	MU		3224.28
Total power purchase cost	Rs. crore		1205.40
Savings	MU		29.87
Savings due to improvement in distribution loss	Rs. crore		11.77

Thus, the TPL computed the distribution loss gains at Rs. 11.77 crore.

Commission Analysis

TPL has not taken into account the wheeled energy for the input of actual energy to arrive at the actual percentage of distribution loss.

The calculation of distribution loss considering wheeling of energy at input as well as at output level of distribution network is as shown in the table below:

Table 4.96: Percentage distribution loss for FY 2009-10 considering wheeled energy

(MU)

Particulars		Actual considered in truing up
Energy sales	a	3026.78
Setoff wheeled energy	b	15.02
Total energy output	c=(a+b)	3041.80
Energy input at distribution level for FY 2009-10	d	3191.07
Energy input at distribution level for wheeling purpose	e	15.02
Total energy input at distribution level	f=(d+e)	3206.09
Distribution loss	g=(f-c)	164.29
Distribution (%)	h=g/f*100	5.12%

As shown above, the actual distribution loss for TPL-D (Surat) is 5.12%.

Revised computation for sharing of gain on account of reduction in energy requirement would be as shown in table below:

Table 4.97: Revised computation for reduction in energy requirement of TPL-D (Surat) due to reduction in distribution loss.

(MU)

Particulars		Gains calculation
Energy sales	a	3026.78
Setoff wheeled energy	b	15.02
Total energy out put	c=(a+b)	3041.80
MYT approved distribution loss	d	6.00%
Energy requirement at distribution level as per MYT approved loss	e (c/1-d)	3235.96
Normative energy requirement at distribution level at MYT approved loss	f=e-b	3220.94
Actual energy purchased at distribution level	g	3191.07
Reduction in energy requirement	h=f-g	29.87

Thus, the savings of 29.87 MU of energy purchase computed by TPL is found to be in order.

TPL has considered power purchase rate of Rs. 3.94 /kWh excluding Ahmedabad generation for computing on account of improvement in distribution losses. But, the Commission finds it appropriate to consider average weighted power purchase rate. The power purchase cost for purchase of 3306 MU was Rs. 1205.40 crore i.e. Rs. 3.65 per kWh.

Computation for sharing of gain on account of reduction in energy requirement due to improvement in distribution loss for TPL-D (Surat) is as given in table below:

Table 4.98: Computation for sharing of gain due to reduction in energy requirement of TPL-D (Surat)

Particulars		**Amount**
Reduction in energy requirement (MU)	a	29.87
Average power purchase cost (Rs./kWh)	b	3.65
Gain due to improvement in distribution loss (Rs. crore)	c=a x b	10.90

4.3.6 Fixed Charges

4.3.6.1 Operation and Maintenance (O&M) expenses

The TPL has claimed a sum of Rs. 84.55 crore towards actual O&M expenses in the truing up for FY 2009-10 as against Rs. 89.92 crore approved in the MYT order dated 17th January, 2009 and also in the APR order for FY 2009-10 as detailed in the table below:

Table 4.99: O&M expenses claimed by TPL- Surat for FY 2009-10

(Rs. crore)

Particulars	**MYT Order**	**APR Order**	**Actual**
Employee cost	35.70	35.70	40.00
R&M expenses	28.10	28.10	20.98
A&G expenses	26.12	26.12	23.57
Total O&M expenses	**89.92**	**89.92**	**84.55**

The O&M expenses are discussed component-wise in the following paragraphs.

(i) Employee expenses

The TPL has claimed a sum of Rs. 40.00 crore towards actual employee cost in the truing up for FY 2009-10 against Rs. 35.70 crore approved in the MYT order as well as in the APR order for FY 2009-10.

Petitioner's submission

The TPL has submitted that the employee expenses of Surat area has exceeded the approved values due to one time impact of Rs. 5.20 crore on account of provision of wage revision as per the negotiation under progress with the Union. The revision will be applicable with effect from 1st January 2010 and the impact of the revision was to be considered as uncontrollable factors and need to be trued up at actual in accordance with GERC (MYT Framework) Regulations, 2007 read with the judgment of the Hon'ble Appellate Tribunal for Electricity in Appeal No. 68 of 2009.

Commission's Analysis

The Commission has verified the actual employee expenses on he basis of the segregated audited accounts for FY 2009-10 as submitted by TPL. The gross employee cost was Rs. 47.50 crore. The net employee cost is Rs. 40.00 crore against Rs. 35.70 crore approved in the MYT Order as well as Tariff Order for FY 2009-10. The deviation is Rs. 4.30 crore (loss) which is stated to be on account of wage revision.

The deviation on account of wage revision is considered as uncontrollable factor.

The Commission, accordingly, approves the employee expenses at Rs. 40.00 crore in the truing up for FY 2009-10.

(ii) Repairs & Maintenance (R&M) expenses

TPL has claimed a sum of Rs. 20.98 crore towards R&M expenses in the truing up for FY 2009-10 against Rs. 28.10 crore approved in the MYT Order as well as in the APR Order for FY 2009-10.

Petitioner's submission

TPL has submitted that the variance in R&M expenses compared to the MYT approved cost is mainly due to controllable factors and that the variation is to be dealt with in accordance with the MYT Framework Regulations for sharing of gains / losses.

Commission's Analysis

The Commission verified the actual R&M expenses with the segregated and audited annual accounts for FY 2009-10 and found them to be correct. The deviation worked out at Rs.7.12 crore is considered a gain and also claimed as a controllable factor.

The Commission, accordingly approves the R&M expenses at Rs. 20.98 crore in the truing up for FY 2009-10.

(iii) Administration & General (A&G) expenses

The TPL has claimed a sum of Rs. 23.57 crore towards the actual A&G expenses in the truing up for FY 2009-10 as against Rs. 26.12 crore approved in the MYT Order as well as in the APR order for FY 2009-10.

Petitioner's submission

The TPL has submitted that the variation in A&G expenses is mostly due to both controllable and some uncontrollable factors. The deviation of Rs. 2.55 crore is explained to have been caused due to a gain of Rs. 4.80 crore on account of savings – a controllable factor and also loss of Rs. 2.25 crore on account of uncontrollable factor. The petitioner submitted that the A&G expenses include Rs. 2.25 crore on account of part provision for service tax as per the notice of the service tax authorities. This factor–service tax being an uncontrollable item is to be treated as a pass through and the gains of Rs. 4.80 crore on account of savings are to be shared in accordance with the regulations.

Commission's Analysis

The actual A&G expenses are verified with reference to the segregated and audited accounts for FY 2009-10. The actual A&G expenses are Rs. 23.57 crore. This includes Rs. 2.25 crore towards service tax as indicated in Schedule 8 of the segregated and audited annual accounts for FY 2009-10. This provision towards service tax at Rs.2.25 crore is not considered in the truing up. This shall be considered by the Commission as and when it is actually paid.

The Commission, accordingly, approves the A&G expenses at Rs. 21.32 crore in the truing up for FY 2009-10.

The deviation of Rs. 4.80 crore is said to be a net gain. The Commission considers Rs. 4.80 crore gain towards the uncontrollable factor.

The total O&M expenses and gain / loss considered in the truing up for FY 2009-10 are summarized in the table below:

Table 4.100: O&M expenses and gain / loss approved in truing up for FY 2009-10

(Rs. crore)

Particulars	As per MYT Order FY 2009-10	Approved in truing up for FY 2009-10	Deviation +/(-)	Gain (loss) due to controllable factor	Gain / (loss) due to uncontrollable factor
Employee cost	35.70	40.00	(4.30)	-	(4.30)

Particulars	As per MYT Order FY 2009-10	Approved in truing up for FY 2009-10	Deviation +/(-)	Gain (loss) due to controllable factor	Gain / (loss) due to uncontrollable factor
R&M expenses	28.10	20.98	7.12	7.12	-
A&G expenses	26.12	21.32	4.80	4.80	-
Total O&M expenses	**89.92**	**82.30**	**7.62**	**11.92**	**(4.30)**

4.3.6.2 Capital expenditure

The TPL has furnished the actual capital expenditure at Rs. 120.99 crore in the truing up for FY 2009-10 against Rs. 101.25 crore approved in the MYT order and Rs. 137.63 crore considered in the APR order for FY 2009-10 as detailed in the table below:

Table 4.101: Capital expenditure claimed by TPL- SURAT for FY 2009-10

(Rs. crore)

Particulars	MYT Order	APR Order	Actual
EHV	14.58	13.34	1.07
HT Network	43.30	26.79	14.89
LT Network	17.21	12.27	12.83
Metering	19.97	8.44	6.58
220kV line	-	61.54	84.45
Customer Care & IT Initiatives	6.19	15.25	1.17
Total	**101.25**	**137.63**	**120.99**

Petitioner's submission

(a) Capital Expenditure

The TPL has submitted that the capital expenditure incurred in Surat Supply Area has been lower than the approved value with actual expenditure at Rs. 120.99 crore against the approval of Rs. 137.63 crore in the APR order. The TPL has indicated the major variances in the actual expenditure against the approval as detailed below:

EHV Network: The Commission in its order in Case No. 988/2010 has approved capital expenditure pertaining to EHV Network of Rs. 13.34 crore. However, the load growth expected in the Ghod Dhod Road, City Light Road, other parts of the walled city areas have not yet materialized and the delay in provision of legal clarity on conversion of Krushi farm as a commercial entity led to deferment of several works such as (i) the shifting of power transformers and (ii) purchase of land for new receiving stations. Thus, a major quantum of the expenditure of Rs 10 crore has been deferred against purchase of land for setting up of the new receiving station.

HT Network: The Commission in its order in Case No. 988/2010 has approved capital expenditure of Rs. 26.79 crore towards HT network on which the TPL has incurred the capital expenditure of Rs. 14.89 crore. The variation in expenses is on account of deferment in capital expenditure related to augmentation requirement for load growth which had slowed down the works. The TPL has taken initiatives to optimize the existing network by undertaking minor modifications of the existing network and to cater to the growth in demand through the existing network.

220 kV line: The Capital expenditure amounting to Rs 84.45 crore has been incurred for commissioning the 220 kV F GIS receiving station to receive power from TPL – SUGEN. The increase of cost from Rs 61.54 crore to Rs 84.45 crore is explained as a fallout of deferment of activities envisaged in earlier years.

Customer Care & IT Initiatives: The Commission in its order in Case No. 988/2010 has approved capital expenditure under the above head for Rs. 15.25 crore. However, the expenditure for the year is pegged at Rs. 1.17 crore. The major deviation is on account of deferment of various controllable factors as given below.

- **Geographic Information System (GIS)**: The cost envisaged to be incurred in FY2009-10 relating to the activity for the integration of GIS with SCADA / EMS / DMS & SAP software has been deferred.
- **Information Technology**: A part of SAP Integration and Licensing cost for FY 2009-10 has been deferred in view of the revised schedule of the SAP implementation. .
- **Customer Care**: Reduction in total expenditure was due to the deferment in setting up of Customer Interaction Centres (CIC) at A & B station.

The Commission, accordingly, approves the capital expenditure at Rs. 120.99 crore in the truing up for FY 2009-10.

(b) Capitalization

The TPL has claimed a sum of Rs. 112.03 crore towards capitalization against the actual capital expenditure of Rs. 120.99 crore. The net addition of assets during FY 2009-10 is put at Rs. 112.03 crore as verified from the details given in Form D-2, E, page 338 of the petition.

The TPL has estimated the quantum of debt and equity using the normative debt equity ratio 70:30 as detailed in table below:

Table 4.102: Approved capitalization and sources of funding for FY 2009-10

(Rs. crore)

Particulars	Actual claimed	Approved in truing up
Capitalization expenditure	120.99	120.99
Capitalization during the year	112.03	112.03
Less: (i) SLC	10.21	10.21
(ii) Grant in aid	5.96	5.96
Balance capitalization	95.86	95.86
Normative Debt @ 70%	67.10	67.10
Normative equity @ 30%	28.76	28.76

The Commission approves the capitalization and funding as shown in the above table in the truing up for FY 2009-10.

4.3.6.3 Interest expenses

The TPL has claimed a sum of Rs. 54.12 crore towards actual interest expenses in the truing up for FY 2009-10 as detailed in the table below against Rs. 25.38 crore approved in the MYT Order and Rs. 49.85 crore considered in the APR order for FY 2009-10

Table 4.103: Interest claimed in the truing up for FY 2009-10

(Rs. crore)

Particulars	
Surat	
Existing loans	
APDRP	
Opening Balance	24.40
Repayments	0.67
Closing Balance	23.73
Interest Rate	9.00%
Interest Expense	2.17
IDFC - I	
Opening Balance	50.00
Repayments	14.29
Closing Balance	35.71
Interest Rate	8.23%
Interest Expense	3.42
IDBI	
Opening Balance	20.96
Repayments	3.49
Closing Balance	17.47
Interest Rate	11.00%
Interest Expense	2.15
HDFC II	
Opening Balance	40.38
Repayments	7.69
Closing Balance	32.69
Interest Rate	11.50%
Interest Expense	3.95

Particulars	
LIC	
Opening Balance	97.50
Repayments	10.00
Closing Balance	87.50
Interest Rate	11.00%
Interest Expense	10.23
IDFC II	
Opening Balance	250.00
Repayments	25.00
Closing Balance	225.00
Interest Rate	11.00%
Interest Expense	25.29
Total interest expense on the above loans	**47.22**
Loans drawn in FY 2009-10	
Capitalization during the year	112.03
Less: SLC additions	10.21
Less: Grant in aid	5.96
Normative Debt @ 70%	67.10
Opening balance	-
New borrowings	67.10
Closing balance	55.92
Interest Expense	6.90
Total interest on loans	**54.12**

Petitioner's submission

The TPL has submitted that the Commission in its order in case No. 988/2010 had revised the interest expenses based on TPL's proposal to consider the actual loans at the starting of the year and additional loan due to estimated capital expenditure during FY 2009-10. The TPL further submitted that the actual loan schedule for FY 2009-10 and the corresponding interest expenses are an uncontrollable item, since they are dependent on the actual capital expenditure.

Commission's Analysis

The existing loans outstanding as on 01/04/2009 and the details of repayment and interest charges on these loans are given in Form D-3B (TPL-D Surat Licensee Area) and they are verified.

The additional loan of Rs. 67.10 crore is in accordance with the requirements of capitalization of CAPEX and funding the CAPEX as approved in Table 4.86 above. However, it is noted that TPL has calculated the interest on the additional loan of Rs.

67.10 crore borrowed during the year for the entire year as if, the loan was drawn at the beginning of the year FY 2009-10 which appears to be not a fact.

Since the TPL has not submitted any documentary evidence of actual loan drawal in FY 2009-10 the Commission decided to consider the interest for an average period of 6 months only. The interest on this additional loan works out to Rs. 3.69 crore against Rs. 6.90 crore claimed by TPL. Further, it is noted from the Form D-3B (TPL-D Surat Licensee Area) in the petition, that no loans were borrowed during the year FY 2009-10. Since interest is allowed on normative basis, the Commission approves Rs.3.69 crore on the additional loan of Rs. 67.10 crore for FY 2009-10. Thus, the total interest on loan for FY 2009-10 works out to Rs. 50.91 crore as detailed in the table below:

Table 4.104: Interest approved in the truing up for FY 2009-10

(Rs. crore)

Particulars	
Surat	
Existing loans	
APDRP	
Opening Balance	24.40
Repayments	0.67
Closing Balance	23.73
Interest Rate	9.00%
Interest Expense	2.17
IDFC - I	
Opening Balance	50.00
Repayments	14.29
Closing Balance	35.71
Interest Rate	8.23%
Interest Expense	3.42
IDBI	
Opening Balance	20.96
Repayments	3.49
Closing Balance	17.47
Interest Rate	11.00%
Interest Expense	2.15
HDFC II	
Opening Balance	40.38
Repayments	7.69
Closing Balance	32.69
Interest Rate	11.50%
Interest Expense	3.95
LIC	
Opening Balance	97.50
Repayments	10.00
Closing Balance	87.50
Interest Rate	11.00%

Interest Expense	10.23
IDFC II	
Opening Balance	250.00
Repayments	25.00
Closing Balance	225.00
Interest Rate	11.00%
Interest Expense	25.29
Total interest expense	**47.22**
Capitalization during the year	112.03
Less: SLC additions	10.21
Less: Grant in aid	5.96
Normative Debt @ 70%	67.10
Opening balance	-
New borrowings	67.10
Closing balance	55.91
Interest Expense	3.69
Total interest on loans	**50.91**

The Commission, accordingly, approves the interest and finance charges at Rs. 50.91 crore in the truing up for FY 2009-10.

The deviation of Rs.25.53 crore is a loss and said to be due to uncontrollable factors.

The Commission, accordingly, approves the gain / loss on account of interest and finance charges in the truing up for FY 2009-10 as detailed in the Table below:

Table 4.105: Interest and gain / loss due to interest approved in the truing up for FY 2009-10

(Rs. crore)

Particulars	As per MYT Order FY 2009-10	Approved in truing up for FY 2009-10	Deviation +(-)	Gain (loss) due to uncontrollable factor
Interest and Finance charges	25.38	50.91	(25.53)	(25.53)

4.3.6.4 Interest on security deposit

The TPL has claimed a sum of Rs. 8.37 crore towards interest on security deposit in the truing up for FY 2009-10 against Rs. 6.47 crore approved in the MYT Order and Rs. 8.21 crore considered in the APR order for FY 2009-10 as detailed in the table below:

Table 4.106: Interest on security deposit claimed in respect of TPL-Surat for FY 2009-10

(Rs. crore)

Particulars	FY 2009-10		
	MYT Order	APR Order	Actual
Interest Rate	6%	6%	6%
Interest on Security Deposit	6.47	8.21	8.37

Petitioner's submission

The TPL has submitted that the actual interest expense on the security deposit is higher than that of the approved values in the APR order as actual security deposit during FY 2009-10 is higher than the estimates.

Commission's Analysis

The Commission verified the actual interest on security deposit with the segregated and audited accounts and found that the actual interest is only Rs. 8.36 crore.

The Commission, accordingly, approves the interest on security deposit at Rs. 8.36 crore in the truing up for FY 2009-10.

The deviation of Rs.1.89 crore is considered to be a loss on account of uncontrollable factor as detailed in the table below:

Table 4.107: Approved gain / loss due interest on security deposit in the truing up for FY 2009-10

(Rs. crore)

Particulars	Approved in the MYT Order	Approved in the truing up for FY 2009-10	Deviation +/(-)	Gain (loss) due to uncontrollable factor
Interest on Security Deposit	6.47	8.36	(1.89)	(1.89)

4.3.6.5 Interest on working capital

The TPL has claimed a sum of Rs. 27.62 crore towards interest on working capital as against Rs. 24.94 crore approved in the MYT Order and Rs. 21.98 crore approved in the APR order for FY 2009-10 as detailed in the table below:

Table 4.108: Interest on working capital claimed by for TPL-D (Surat Area) for FY 2009-10

(Rs. crore)

Particulars	MYT Order	APR Order	Actual
O&M expense for 1 month	7.49	7.49	7.05
1 % of GFA for maintenance spares	3.87	11.53	12.65
Receivables for 2 months	231.96	195.39	249.76

Particulars	MYT Order	APR Order	Actual
Normative Working Capital	243.32	214.41	269.45
Interest Rate	10.25%	10.25%	10.25%
Interest on Working Capital	24.94	21.98	27.62

Petitioner's submission

The TPL has submitted that the interest on working capital is computed @ 10.25% in accordance with the GERC (Terms and Conditions of Tariff) Regulations, 2005.

Commission's Analysis

The Commission has examined the computation of normative working capital and interest thereon under GERC (Terms and Conditions for Determination of Tariff) Regulations, 2005. Based on the expenses approved in the truing up the working capital is recomputed as detailed table below:

Table 4.109: Interest on working capital approved for FY 2009-10

(Rs. crore)

Particulars	Actual claimed	Approved in true up
O&M expense for 1 month	7.05	6.85
1 % of GFA for maintenance spares	12.65	11.53
Receivables for 2 months	249.76	246.56
Normative Working Capital	269.45	264.94
Interest Rate	10.25%	10.25%
Interest on Working Capital	**27.62**	**27.16**

The Commission, accordingly, approves the interest on working capital at Rs. 27.16 crore in the truing up for FY 2009-10 as detailed in the above table.

4.3.6.6 Depreciation

The TPL has claimed a sum of Rs. 38.52 crore towards depreciation in the truing up for FY 2009-10 against Rs. 43.42 crore approved in the MYT Order and Rs. 37.48 crore considered in the APR order for FY 2009-10 as detailed in the table below:

Table 4.110: Depreciation claimed by TPL- Surat for FY 2009-10

(Rs. crore)

Particulars	FY 2009-10		
	MYT Order	APR Order	Actual
Depreciation	43.42	37.48	38.52

Petitioner's submission

The TPL has submitted that the depreciation rates as per CERC (Terms and Conditions of Tariff) Regulations, 2004 are applied on the opening GFA of FY 2009-10 and for addition of assets from 1st April, 2009 onwards. The petitioner also submitted that the depreciation has been computed at rates specified in the Appendix III to the CERC (Terms and Conditions of Tariff) Regulations, 2009 and that the approved depreciation is claimed as an uncontrollable item.

Commission's Analysis

The Petitioner has computed the depreciation for FY 2009-10 by applying CERC depreciation rates and assets classification-wise. The details of opening balance of assets as on 1st April, 2009, addition and deduction to the Gross Block during FY 2009-10 and the depreciation on the assets, asset classification- wise, are given in the petition. The opening and closing balances of assets are as per the segregated and audited accounts for FY 2009-10.

The Commission, accordingly, approves the depreciation at Rs. 38.52 crore in the truing up for FY 2009-10.

The deviation is Rs. 4.90 crore and assessed as a gain. The Commission has considered the capital expenditure as an uncontrollable item. Since depreciation is dependent on CAPEX and capitalization, the deviation is considered as an uncontrollable item.

The Commission, accordingly, approves the gain/loss on account of depreciation in the truing up for FY 2009-10 as detailed in the table below:

Table 4.111: Depreciation and gain / loss due to depreciation approved in the truing up for FY 2009-10

(Rs. crore)

Particulars	As per MYT Order FY 2009-10	Approved in truing up for FY 2009-10	Deviation +/(-)	Gain / (loss) due to uncontrollable factor
Depreciation	43.42	38.52	4.90	4.90

4.3.6.7 Return on equity

The TPL has claimed a sum of Rs. 68.90 crore towards return on equity @ 14% in the truing up for FY 2009-10 as against Rs. 75.86 crore approved in the MYT Order and Rs. 70.31 crore approved in the APR order for FY 2009-10 as detailed in the table below :

Table 4.112: Return on equity claimed for TPL- Surat for FY 2009-10

(Rs. crore)

Particulars	FY 2009-10		
	MYT Order	**APR Order**	**Actual**
Opening equity	532.62	477.78	477.78
Equity addition during the year	26.24	48.88	28.76
Closing equity during the year	558.86	526.65	506.53
Return on equity	75.86	70.31	68.90

Petitioner's submission

The TPL has submitted that the closing balance of equity has been arrived at considering additional equity of 30% of the capitalization during the year. The return on equity has been computed applying a rate of 14% on the average of the opening and closing balance of equity for FY 2009-10.

Commission's Analysis

The opening equity for FY 2009-10 is as per the closing equity for FY 2008-09 approved in the APR for FY 2008-09. The addition of equity of Rs. 28.76 crore during FY 2009-10 is due to capitalization as per the segregated and audited accounts for FY 2009-10.

The Commission, accordingly approves the return on equity at Rs. 68.90 crore in the truing up for FY 2009-10.

The return on equity depends on the amount of capitalization and the debt equity ratio considered during the Financial Year and these parameters are uncontrollable in nature. The variance in the amount of return on equity is therefore, treated as an uncontrollable item.

The Commission, accordingly, approves the gain / loss on account of return on equity in the truing up for FY 2009-10 as detailed below.

Table 4.113: Return on equity and gain / loss approved in the truing up for FY 2009-10

(Rs. crore)

Particulars	As per MYT Order FY 2009- 10	Approved in truing up for FY 2009-10	Deviation +/(-)	Gain / (loss) due to uncontrollable factor
Return on equity	75.86	68.90	6.96	6.96

4.3.6.8 Income Tax

The TPL has claimed a sum of Rs. 14.11 crore towards income tax in the truing up for FY 2009-10 as against Rs. 25.76 crore approved in the MYT Order and Rs.11.95 crore approved in the APR order for FY 2009-10 as detailed in the table below:

Table 4.114: Income Tax claimed for TPL- Surat for FY 2009-10

(Rs. crore)

Particulars	FY 2009-10		
	MYT Order	APR Order	Actual
Income Tax	25.78	11.95	14.11

Petitioner's submission

The TPL has submitted that the Commission has approved income tax at the MAT Rate of 16.99% on the approved ROE. The TPL has revised the income tax by applying the MAT rate of 16.99% on the ROE to earn post tax ROE at 14% as per the Regulations.

Commission's Analysis

As per the segregated audited accounts of TPL the tax for FY 2009-10 is Rs.207.50 crore for the entire TPL. This actual income tax is apportioned based on the profit before tax (PBT) for each business, considering the income tax at 33.99% for generation business (APP) and at 11.33% for the distribution business of Ahmedabad and Surat supply areas.

The income tax apportioned to the Surat distribution is Rs.4.98 crore for FY 2009-10.

The Commission, accordingly, approves the income tax at Rs.4.98 crore in the truing up for FY 2009-10

The Commission has treated the income tax as an uncontrollable expense and accordingly approved the gain / loss on account of income tax in the truing up for FY 2009-10 as detailed in the table below:

Table 4.115: Income Tax and gain / loss due to income tax approved in the truing up for FY 2009-10

(Rs. crore)

Particulars	As per MYT Order FY 2009-10	Approved in truing up for FY 2009-10	Deviation +/(-)	Gain / (loss) due to uncontrollable factor
Income Tax	25.78*	4.98	20.80	20.80

*Revised to Rs.9.69 crore in review order dated 05.09.2011

4.3.6.9 Bad debts

The TPL has claimed a sum of Rs. 0.36 crore towards written off debts in the truing up for FY 2009-10 against Rs.1. 27 crore approved in the MYT order and Rs. 1.17 crore considered in the APR for FY 2009-10 as detailed in the table below:

Table 4.116: Bad debts claimed for TPL- Surat for FY 2009-10

(Rs. crore)

Particulars	FY 2009-10		
	MYT Order	APR Order	Actual
Bad debts	1.27	1.17	0.36

Petitioner's submission

The Petitioner has requested the commission to consider the actual bad debts written off as uncontrollable item of expenditure in accordance with the GERC (Terms and Conditions of Tariff) Regulations, 2004.

Commission's Analysis

The Commission has verified the bad debts written off with reference to the segregated and audited annual accounts for FY 2009-10 as submitted by TPL and found to be at Rs. 0.36 crore only .

The Commission, accordingly, approves the bad debts written off at Rs. 0.36 crore in the truing up for FY 2009-10.

The Commission assessed the deviation in bad debts at Rs. 0.91 crore as a gain and considered it as a controllable item.

The Commission, accordingly, approves the gain / loss on account of bad debts in the truing up for FY 2009-10 as detailed below.

Table 4.117: Bad debts and Gain / loss approved in the truing up for FY 2009-10

(Rs. crore)

Particulars	As per MYT Order FY 2009-10	Approved in truing up for FY 2009-10	Deviation +/(-)	Gain / (loss) due to controllable factor
Bad debts	1.27	0.36	0.91	0.91

4.3.6.10 Contingency Reserve

Petitioner's submission

TPL has proposed the contingency reserve at Rs. 0.40 crore in the truing up for FY 2009-10 which is the same as approved in the MYT order as well as APR order for FY 2009-10 as detailed in the table below:

Table 4.118: Contingency Reserve claimed for TPL- Surat for FY 2009-10

(Rs. crore)

Particulars	FY 2009-10		
	MYT Order	APR Order	Actual
Bad debts	0.40	0.40	0.40

Commission's Analysis

The proposed contingency reserve is consistent with the approval accorded in the past.

The Commission, accordingly, approves the contingency reserve at Rs. 0.40 crore in the truing up for FY 2009-10 and also states that there was no deviation in the contingency reserve.

Table 4.119: Contingency Reserve and Gain / loss approved in the truing up for FY 2009-10

(Rs. crore)

Particulars	As per MYT Order FY 2009-10	Approved in truing up for FY 2009-10	Deviation +/(-)	Gain / (loss) due to controllable factor
Contingency Reserve	0.40	0.40	-	-

4.3.6.11 Non-Tariff income

The TPL has furnished the non-tariff income at Rs. 19.60 crore in the truing up for FY 2009-10 against Rs. 28.20 crore approved in the MYT order and Rs. 19.00 crore considered in the APR for FY 2009-10 as detailed in the table below:

Table 4.120: Non-Tariff income claimed for TPL- Surat for FY 2009-10

(Rs. crore)

Particulars	FY 2009-10		
	MYT Order	APR Order	Actual
Non-Tariff income	28.20	19.00	19.60

Petitioner's submission

The Petitioner has submitted that the actual non-tariff income for FY 2009-10 is Rs. 19.60 crore only, which is an uncontrollable item.

Commission's Analysis

The Commission has verified the non-tariff income with the segregated and audited accounts for FY 2009-10 and found to be Rs. 19.59 crore.

The Commission, accordingly, approves the non-tariff income at Rs. 19.59 crore in the truing up for FY 2009-10.

The deviation in non-tariff income at Rs. 8.61 crore is assessed as a loss and is considered as an uncontrollable item.

The Commission, accordingly, approves the gains / losses on account of non-tariff income in the truing up for FY 2009-10 as detailed below.

Table 4.121: Non-tariff income and gain /loss approved in the truing up for FY 2009-10

(Rs. crore)

Particulars	As per MYT Order for FY 2009-10	Approved in truing up for FY 2009-10	Deviation +/(-)	Gain / (loss) due to uncontrollable factor
Non-tariff income	28.20	19.59	(8.61)	(8.61)

4.3.7 Revenue from sale of power

Petitioner's submission

The TPL has furnished the revenue from sale of power at Rs. 1479.35 crore in the truing up for FY 2009-10 against Rs. 1271.27 crore approved in the MYT order for FY 2009-10 as detailed in the Table below.

Table 4.122: Revenue from existing tariff claimed for TPL-D (Surat Area) for FY 2009-10

(Rs. crore)

Particulars	FY 2009-10		
	MYT Order	Tariff Order dated 09.12.2009	Actual
Revenue from existing tariff	1271.27	1090.94	1479.35

Commission's Analysis

The Commission has received the segregated and audited annual accounts for FY 2009-10 from the TPL. As per the audited accounts, the revenue from power supply is Rs.1454.11 crore. With reference to a query from the Commission to furnish the actual sales and revenue in Form D-4/A, the TPL has submitted a certificate from their auditors showing the revenue for FY 2009-10 as detailed below:

Table 4.123: Revised revenue details submitted by TPL

(Rs. crore)

Particulars	For the year ended 31st March, 2010
Revenue from power supply as per audited Profit & Loss Account	1454.11
Add: Liability in respect of FPPPA	25.24
Total	**1479.35**

The category-wise sales and revenue for FY 209-10 are as given in the table below:

Table 4.124: Category-wise sales and revenue for FY 2009-10

(Rs. crore)

Category	MU	Fixed Charges	Energy Charges	Time of Use Charges	Power Factor Adjustment	Total
SURAT SUPPLY AREA						
Residential	553.63	2.48	175.56			178.05
Commercial	454.64	9.30	194.58			203.88
LTP	1583.06	22.42	563.41			585.83
LTMD	174.14	4.88	67.18			72.06
HTMD - I	188.08	5.86	69.26	2.04		77.16
HTMD - II	42.25	1.90	16.31	0.28		18.48
Agriculture	0.77	0.01	0.04			0.05
GLP	21.86	0.04	6.89			6.92
Temp	3.2		1.51			1.51
DOE	5.14		5.14			5.14
FPPPA						274.92
UI						30.10
Total	**3026.77**	**46.88**	**1099.89**	**2.32**		**1454.11**

The Commission, accordingly, approves the revenue from sale of power at Rs. 1479.35 crore in the truing up for FY 2009-10.

4.3.8 Gains / Losses based on truing up for FY 2009-10

The Commission has reviewed the performance of TPL-D Surat Supply Area under Regulation 9.3 of MYT Regulations, 2007, with reference to segregated and audited annual accounts for FY 2009-10. The Commission has computed the gains / losses for FY 2009-10 based on the truing up for each of the components discussed in the above paragraphs.

The Aggregate Revenue Requirement (ARR) approved in the MYT order dated 17th January, 2009 and the actual claimed in truing up, approved for truing up, gains / losses computed in accordance with the MYT Regulations are as given in the Table below:

Table 4.125: ARR approved in respect of TPL-D Surat Supply area in the truing up or FY 2009-10

(Rs. crore)

Particulars	FY 2009-10 (MYT order)	FY 2009-10 (Actuals claimed)	Approved in truing up for FY 2009-10	Deviation +/(-)	Gain/(loss) due to Controllable factors	Gain/(loss) due to Uncontrollable factors
	1	2	3	4 (1-3)	5	6
Power Purchase cost	1110.19	1205.40	1205.40	(95.21)	10.90	(106.11)
Employee expenses	35.70	40.00	40.00	(4.30)	-	(4.30)
R&M expenses	28.10	20.98	20.98	7.12	7.12	-
A&G expenses	26.12	23.57	21.32	4.80	4.80	-
Depreciation	43.42	38.52	38.52	4.90		4.90
Interest on Security Deposit	6.47	8.37	8.36	(1.89)		(1.89)
Interest on loan	25.38	54.12	50.91	(25.53)		(25.53)
Interest on working capital	24.94	27.62	27.16	(2.22)		(2.22)
Return on equity	75.86	68.90	68.90	6.96		6.96
Income Tax	25.78	14.11	4.98	20.80		20.80
Bad Debts	1.27	0.36	0.36	0.91	0.91	
Contingency Reserves	0.40	0.40	0.40	0.00		0.00
Less: Non-tariff income	28.20	19.60	19.59	8.61		8.61
Net ARR	**1375.44**	**1482.75**	**1467.70**	**(92.27)**	**23.73**	**(116.00)**

4.3.9 Sharing of Gains / Losses for FY 2009-10

The Commission has analyzed the gains / losses on account of controllable and uncontrollable factors.

The relevant Regulations are extracted as below:

Regulation 10.1 "The approved aggregate gain or loss to the Generating Company or Licensee on account of uncontrollable factors shall be passed through as an adjustment in the tariff of the Generating Company or licensee over such period as may be specified in the Order of the Commission passed under Regulation 9.7 (a)."

Regulation 11.1 "The approved aggregate gain to the Generating Company or Licensee on account of controllable factors shall be dealt with in the following manner:

(a) One third of the amount of such gain shall be passed on as a rebate in tariffs over such period as may be specified in the Order of the Commission under Regulation 9.7;

(b) One third of amount of such gain shall be retained in a special reserve by the Generating Company or Licensee for the purpose of absorbing the impact of any future losses on account of controllable factors under clause (b) of Regulation 11.2; and

(c) The balance amount of gain may be utilized, at the discretion of the Generating Company or Licensee".

Regulation 11.2 "The approved aggregate loss to the Generating Company or Licensee on account of controllable factors shall be dealt with in the following manner:

(a) One third of the amount of such loss maybe passed on as an additional charge in tariffs over such period as may be specified in the Order of the Commission under Regulation 9.7; and

(b) The balance amount of loss shall be absorbed by the Generating Company or licensee."

The gain on account of controllable factors is arrived at Rs. 23.73 crore for FY 2009-10. Out of this one-third gain of Rs.7.91 crore is to be passed on to the consumers and one-third gain of Rs. 7.91 crore is to be credited to the special reserve. The entire loss of Rs.116.00 crore on account of uncontrollable factors shall be passed on to the consumers through an adjustment in the tariff. The revenue gap as compared to the MYT approved in the Tariff order dated 14th December, 2009 is summarized in Table below:

Table 4.126: Revised ARR approved for TPL-D (Surat Area) for FY 2009-10

(Rs. crore)

Sl. No.	Particulars	FY 2009-10
1.	ARR approved in the MYT for FY 2009-10 (T.O. dated 17/01/2009)	1375.44
2.	Les: Gain on account of controllable factor to be passed on to the consumers (1/3rd)	7.91
3.	Add: Loss on account of uncontrollable factor to be passed on to consumers	116.00
4.	**Revised ARR for FY 2009-10**	**1483.53**
5.	Net (Gap) / Surplus (4-1)	(108.09)

The following table summarizes the revenue gap for Surat supply area for FY 2009-10.

Table 4.127: Revenue Gap for TPL-Surat for FY 2009-10

(Rs. crore)

Particulars	FY 2009-10		
	MYT Order	Actual	Approved in truing up
Surat Supply area			
Net Annual Revenue Requirement	1375.43	1498.55	1483.52
Revenue from sale of power	1271.27	1479.35	1479.35
(Gap)/ Surplus	104.16	19.20	(4.17)

Annexure 4.1

C – Station: Fuel cost in truing up for FY 2009-10 (As Approved)

Sl.No.	Item	Derivation	Unit	2009-10
1	Capacity	A	MW	60
2	PLF	B	%	87.02
3	Gross Generation	C	MUs	457.38
4	Auxiliary Consumption	E	%	9.41%
5	Auxiliary Consumption	D=C*E	MUs	43.04
6	Net Generation	Y=C-D	MUs	414.34
7	Station Heat Rate	F	KCal/KWH.	3,214.00
8	Sp. Oil Consumption	G	gms/kWh	1.45
9	Gross Calorific Value of Coal	H	kcal/kg	4,319.29
10	Calorific value of Oil	I	kcal/kg	9,720.43
11	Overall Heat	J=C*F	G Cal	1470010.064
12	Heat from Oil	K=(C*G*I)/1000	G Cal	6447
13	Heat from Coal	L=J-K	G Cal	1463564
14	Transit loss of coal	M	%	1.90%
15	Coal Blend			
16	A) Indigenous Coal	X1	%	100.00%
17	B) Imported Coal	X2	%	0.00%
18	Actual Oil Consumption	N=C*G	MT	663
19	Actual Coal Consumption	O=(L*1000)/H	MT	338844
20	A) Indigenous Coal	Q1=O*X1/(1-M)	MT	345406.26
21	B) Imported Coal	Q2=O*X2	MT	0.00
22	Price of Coal			
23	A) Indigenous Coal	P1	Rs/MT	3163.50
24	C) Imported Coal	P2	Rs/MT	
25	Price of Oil	P3	Rs/MT	27914.71
26	Coal cost			
27	A) Indigenous Coal	N1=Q1*P1/10^5	Rs Lakh	10926.93
28	B) Imported Coal	N2=Q2*P2/10^5	Rs Lakh	0
29	Total Coal Cost	N3=N1+N2	Rs Lakh	10927
30	Oil Cost	N4=P3*N/10^5	Rs Lakh	185
31	Total Fuel Cost	P=N3+N4	Rs Lakh	11112
32	Fuel Cost/Unit Gross	Q=P/(C*10)	Rs/kWh	2.43
33	Fuel Cost/Unit Net	R=P/(Y*10)	Rs/kWh	2.68
34	Cost of fuel/G.Cal	S=(P/J)*10^5	Rs/Gcal	756
35	Actual net generation	T	MUs	414
36	Normative fuel cost for actual net generation	U=T*R*10	Rs. lakhs	11102.99

Annexure 4.2

D – Station: Fuel cost in Truing up for FY 2009-10 (As Approved)

Sl.No.	Item	Derivation	Unit	2009-10
1	Capacity	A	MW	120
2	PLF	B	%	94.49
3	Gross Generation	C	MUs	993.28
4	Auxiliary Consumption	E	%	8.73%
5	Auxiliary Consumption	D=C*E	MUs	86.71
6	Net Generation	Y=C-D	MUs	906.57
7	Station Heat Rate	F	KCal/KWH.	2,396.00
8	Sp. Oil Consumption	G	gms/kWh	1.45
9	Gross Calorific Value of Coal	H	kcal/kg	4,579.74
10	Calorific value of Oil	I	kcal/kg	9,856.82
11	Overall Heat	J=C*F	G Cal	2379896.196
12	Heat from Oil	K=(C*G*I)/1000	G Cal	14196
13	Heat from Coal	L=J-K	G Cal	2365700
14	Transit loss of coal	M	%	1.90%
15	Coal Blend			
16	A) Indigenous Coal	X1	%	51.00%
17	B) Imported Coal	X2	%	49.00%
18	Actual Oil Consumption	N=C*G	MT	1440
19	Actual Coal Consumption	O=(L*1000)/H	MT	516558
20	A) Indigenous Coal	Q1=O*X1/(1-M)	MT	268546.81
21	B) Imported Coal	Q2=O*X2	MT	253113.26
22	Specific Coal Consumption		kg/kWh	
23	Price of Coal			
24	A) Indigenous Coal	P1	Rs/MT	3183.89
25	C) Imported Coal	P2	Rs/MT	4109.65
26	Price of Oil	P3	Rs/MT	30899.87
27	Coal cost			
28	A) Indigenous Coal	N1=Q1*P1/10^5	Rs Lakh	8550.23
29	B) Imported Coal	N2=Q2*P2/10^5	Rs Lakh	10402
30	Total Coal Cost	N3=N1+N2	Rs Lakh	18952
31	Oil Cost	N4=P3*N/10^5	Rs Lakh	445
32	Total Fuel Cost	P=N3+N4	Rs Lakh	19397
33	Fuel Cost/Unit Gross	Q=P/(C*10)	Rs/kWh	1.95
34	Fuel Cost/Unit Net	R=P/(Y*10)	Rs/kWh	2.14
35	Cost of fuel/G.Cal	S=(P/J)*10^5	Rs/Gcal	815
35	Actual net generation	T	MUs	908
36	Normative fuel cost for actual net generation	U=T*R*10	Rs. lakhs	19428.03

Annexure 4.3

E – Station: Fuel cost truing up for FY 2009-10 (As Approved)

Sl.No.	Item	Derivation	Unit	2009-10
1	Capacity	A	MW	110
2	PLF	B	%	96.39
3	Gross Generation	C	MUs	928.81
4	Auxiliary Consumption	E	%	8.73%
5	Auxiliary Consumption	D=C*E	MUs	81.09
6	Net Generation	Y=C-D	MUs	847.73
7	Station Heat Rate	F	KCal/KWH.	2,606.00
8	Sp. Oil Consumption	G	gms/kWh	1.45
9	Gross Calorific Value of Coal	H	kcal/kg	4,559.17
10	Calorific value of Oil	I	kcal/kg	9,712.22
11	Overall Heat	J=C*F	G Cal	2420489.388
12	Heat from Oil	K=(C*G*I)/1000	G Cal	13080
13	Heat from Coal	L=J-K	G Cal	2407409
14	Transit loss of coal	M	%	1.90%
15	Coal Blend			
16	A) Indigenous Coal	X1	%	55.00%
17	B) Imported Coal	X2	%	45.00%
18	Actual Oil Consumption	N=C*G	MT	1347
19	Actual Coal Consumption	O=(L*1000)/H	MT	528037
20	A) Indigenous Coal	Q1=O*X1/(1-M)	MT	296045.05
21	B) Imported Coal	Q2=O*X2	MT	237616.52
22	Specific Coal Consumption		kg/kWh	
23	Price of Coal			
24	A) Indigenous Coal	P1	Rs/MT	3179.64
25	C) Imported Coal	P2	Rs/MT	4107.49
26	Price of Oil	P3	Rs/MT	30357.05
27	Coal cost			
28	A) Indigenous Coal	N1=Q1*P1/10^5	Rs Lakh	9413.17
29	B) Imported Coal	N2=Q2*P2/10^5	Rs Lakh	9760
30	Total Coal Cost	N3=N1+N2	Rs Lakh	19173
31	Oil Cost	N4=P3*N/10^5	Rs Lakh	409
32	Total Fuel Cost	P=N3+N4	Rs Lakh	19582
33	Fuel Cost/Unit Gross	Q=P/(C*10)	Rs/kWh	2.11
34	Fuel Cost/Unit Net	R=P/(Y*10)	Rs/kWh	2.31
35	Cost of fuel/G.Cal	S=(P/J)*10^5	Rs/Gcal	809
35	Actual net generation	T	MUs	849
36	Normative fuel cost for actual net generation	U=T*R*10	Rs. lakhs	19611.45

Annexure 4.4

F – Station: Fuel cost in truing up for FY 2009-10 (As Approved)

Sl.No.	Item	Derivation	Unit	2009-10
1	Capacity	A	MW	110
2	PLF	B	%	94.99
3	Gross Generation	C	MUs	915.32
4	Auxiliary Consumption	E	%	8.73%
5	Auxiliary Consumption	D=C*E	MUs	79.91
6	Net Generation	Y=C-D	MUs	835.42
7	Station Heat Rate	F	KCal/KWH.	2,619.00
8	Sp. Oil Consumption	G	gms/kWh	1.45
9	Gross Calorific Value of Coal	H	kcal/kg	4,555.52
10	Calorific value of Oil	I	kcal/kg	9,700.52
11	Overall Heat	J=C*F	G Cal	2397232.613
12	Heat from Oil	K=(C*G*I)/1000	G Cal	12875
13	Heat from Coal	L=J-K	G Cal	2384358
14	Transit loss of coal	M	%	1.90%
15	Coal Blend			
16	A) Indigenous Coal	X1	%	55.00%
17	B) Imported Coal	X2	%	45.00%
18	Actual Oil Consumption	N=C*G	MT	1327
19	Actual Coal Consumption	O=(L*1000)/H	MT	523400
20	A) Indigenous Coal	Q1=O*X1/(1-M)	MT	293445.31
21	B) Imported Coal	Q2=O*X2	MT	235529.87
22	Specific Coal Consumption		kg/kWh	
23	Price of Coal			
24	A) Indigenous Coal	P1	Rs/MT	3185.13
25	C) Imported Coal	P2	Rs/MT	4105.14
26	Price of Oil	P3	Rs/MT	27452.89
27	Coal cost			
28	A) Indigenous Coal	N1=Q1*P1/10^5	Rs Lakh	9346.61
29	B) Imported Coal	N2=Q2*P2/10^5	Rs Lakh	9669
30	Total Coal Cost	N3=N1+N2	Rs Lakh	19015
31	Oil Cost	N4=P3*N/10^5	Rs Lakh	364
32	Total Fuel Cost	P=N3+N4	Rs Lakh	19380
33	Fuel Cost/Unit Gross	Q=P/(C*10)	Rs/kWh	2.12
34	Fuel Cost/Unit Net	R=P/(Y*10)	Rs/kWh	2.32
35	Cost of fuel/G.Cal	S=(P/J)*10^5	Rs/Gcal	808
35	Actual net generation	T	MUs	837
36	Normative fuel cost for actual net generation	U=T*R*10	Rs. lakhs	19416.55

Annexure 4.5

Vatva – CCPP: Fuel cost in truing up for FY 2009-10 (As Approved)

S.No	Particulars	Deviation	UOM	2009-10
1	Capacity	A	MW	100
2	PLF	B	%	91.10
3	Generation (gross)	C	MU	798.04
4	Auxiliary Consumption	D	%	2.92%
5	Auxiliary Consumption	E	MU	23.30
6	Net Generation	F	MU	774.73
7	Heat Rate	G=(C*F)	kcal/kwh	1950.00
8	Total Heat	H=(C*G)	M kcal	1556178
9	Specific Gas Consumption	I	kcal/MMBtu	252
10	Actual Gas Consumption	J=(H/I)	MMBtu	6175.31
11	Cost of Gas per MMBtu	K	Rs./MMBtu	332.37
12	Total Cost of Gas	L=(J*K)/100	Rs. lakhs	20524.88
13	Fuel cost / unit gross	M=L/C*10	Rs/kWH	2.57
14	Fuel cost / unit net	N=L/F*10	Rs/Kcal	2.65
15	Actual net generation	O		778.09
16	Normative Fuel Cost	P=O*N*10		20613.70

5. Annual Performance Review for FY 2010-11

5.0 Introduction

This chapter deals with the Annual Performance Review (APR) for FY 2010-11 for the following business activities of Torrent Power Limited (TPL):

- Generation Business (TPL-Generation Ahmedabad Power Plant), hereinafter referred to as TPL-G (APP).
- Two distribution licensees (TPL-Ahmedabad and TPL-Surat)

5.1 TPL-Generation (APP)

5.1.1 Generating Stations of TPL-G (APP)

The details of generating stations of TPL-G (APP) as on 1st April, 2010 along with their capacities are given in the table below:

Table 5.1: Capacity, COD and Age of TPL-G (APP) Generating Stations as on 1st April, 2010

Name of the station	Capacity in MW	Year of COD	Age/Year
Sabarmati Thermal Power Plant (Coal based)			
C Station	2X30MW	1961/1997* (*Year of turbine retrofitting)	49
D Station	1X120MW	1978/2004* (*Uprating capacity)	32
E Station	1X110MW	1984	26
F Station	1X110MW	1988	22
Vatva Combined Cycle Power Plant (Gas based)			
Gas turbine	2X32.5MW	1990 & 1991	20
Steam turbine	1X35MW	1991	19

The performance and cost parameters of the generating stations for FY 2010-11 are discussed in the following sections as part of the Annual Performance Review.

5.1.2 Operating Performance Parameters

The TPL has submitted the actual performance parameters for the first half year of FY 2010-11 and Revised Estimate (RE) for the whole year of FY 2010-11 namely the Plant Availability Factor (PAF), Plant Load Factor (PLF), Station Heat Rate, Auxiliary Consumption (AC), Secondary Fuel oil Consumption (SFC) and coal transit loss etc. The Commission has undertaken the annual performance review of the individual operating parameters of the generating stations, which are discussed in detail in the following paragraphs.

5.1.2.1 Plant Availability Factor (PAF)

Petitioner's submission

The TPL has submitted the actuals of plant availability factor (PAF) for the first half year and revised estimate (RE) for the whole year of FY 2010-11, for all the generating stations of TPL-G (APP).

The PAF (i) approved by the Commission in the MYT order dated 17th January, 2009 (ii) approved in its tariff order dated 31st March, 2010 (iii) actuals for the first half year and (iv) RE for the FY 2010-11 as submitted by TPL are given in the table below:

Table 5.2: Plant Availability Factor of TPL-G (APP) for FY 2010-11

(%)

Sl. No.	Station	Approved for FY 2010-11 in the MYT order	Approved by the Commission in its order dated 31/03/2010	TPL H_1 (Actual)	Revised Estimate (RE) for FY 2010-11
	Sabarmati				
1.	C Station	91.03	90.48	98.59	85.76
2.	D Station	90.73	83.09	98.86	93.14
3.	E Station	93.71	93.21	99.13	95.73
4.	F Station	94.02	93.21	99.57	95.13
5.	**Vatva Gas Station**	**95.63**	**95.09**	**99.79**	**95.96**

In its petition, the TPL submitted that based on revised overhauling schedule as compared to the ones proposed in the earlier orders, the RE of PAF of each station are estimated. It is said that except for C station, the revised estimates for PAF are higher in comparison to that approved in MYT order. The revised PAF estimate for C station is lower due to the failure of rotor of T/A-15 turbo generator and that the turbo rotor was likely to be out of order till the end of the year increasing the number of outage days.

Commission's Analysis

The reasons given by TPL for reduced PAF of C station are studied and considered. For other stations, however, the PAF (RE) is higher than the PAF approved in MYT order and the APR order dated 31st March, 2010.

Accordingly, the Commission considers the PAF for the purpose of APR for FY 2010-11 as given in the table below:

Table 5.3: Plant Availability Factor for TPL-G (APP) considered for APR for FY 2010-11

(%)

Sl. No.	Station	Approved for FY 2010-11 in the MYT order	Approved by the Commission in its order dated 31/03/2010	Revised Estimate (RE) for FY 2010-11	Considered for APR for FY 2010-11
	Sabarmati				
1.	C Station	91.03	90.48	85.76	85.76
2.	D Station	90.73	83.09	93.14	93.14
3.	E Station	93.71	93.21	95.73	95.73
4.	F Station	94.02	93.21	95.13	95.13
5.	**Vatva Gas Station**	**95.63**	**95.09**	**95.96**	**95.96**

5.1.2.2 Plant Load Factor (PLF)

Petitioner's submission

The TPL has submitted the actual plant load factor (PLF) of different stations for the first half-year and RE for the whole FY 2010-11.

The PLF as (i) approved by the Commission in the MYT Order dated 17th January, 2009 (ii) approved in its order dated 31st March, 2010 for annual tariff determination for FY 2010-11 (iii) actuals for the first half year and (iv) RE for the FY 2010-11 submitted by TPL are as given in the table below:

Table 5.4: Plant Load Factor of TPL-G (APP) for FY 2010-11

(PLF in %)

Sl. No.	Station	Approved for FY 2010-11 in the MYT order	Approved by the Commission in its order dated 31/03/2010	TPL H_1 (Actual)	Revised Estimate (RE) for FY 2010-11
	Sabarmati				
1.	C Station	89.89	89.11	87.50	65.11
2.	D Station	89.42	82.45	97.83	85.40
3.	E Station	92.53	91.74	98.61	85.25
4.	F Station	93.01	92.06	98.69	85.89

Sl. No.	Station	Approved for FY 2010-11 in the MYT order	Approved by the Commission in its order dated 31/03/2010	TPL H_1 (Actual)	Revised Estimate (RE) for FY 2010-11
5.	**Vatva Gas Station**	89.23	89.05	96.50	80.45

The TPL has further submitted that the reduction in PLF of generating units is mainly on account of estimated lower demand by TPL-D (Ahmedabad), considering merit order despatch and technical minimum level.

The additional reason for reduction in PLF to 65.11% for C Station as against 89.11% approved in MYT order is stated to be due to forced outage of the T/A-15 generator. The low PLF of Vatva CCPP is also partly attributed to the shortfall in gas availability being faced recently at the plant.

It is also submitted by TPL that the incentive computation has not been done for FY 2010-11 and the same shall be claimed on the basis of the actual performance.

Commission's Analysis

For almost all the TPL generating stations the PLF (RE) is lower than that of the approved levels in the MYT order and in the order dated 31st March, 2010 for annual tariff determination for FY 2010-11 of the Commission.

The Commission has taken note of the reasons mentioned by TPL for fall in PLF and considers the PLF (RE) as projected by TPL for the purpose of APR for FY 2010-11, as given in the table below:

Though the expected lower drawal by TPL-D (Ahmedabad) may affect the PLF, this cannot be the sole reason for poor performance of the stations during the second half of the year, when compared to the first half year of FY 2010-11.

Table 5.5: Plant Load Factor for TPL-G (APP) considered for APR for FY 2010-11

(%)

Sl. No.	Station	Approved for FY 2010-11 in the MYT order	Approved by the Commission in its order dated 31/03/2010	Revised Estimate (RE) for FY 2010-11	Considered for APR for FY 2010-11
	Sabarmati				
1.	C Station	89.89	89.11	65.11	65.11

Sl. No.	Station	Approved for FY 2010-11 in the MYT order	Approved by the Commission in its order dated 31/03/2010	Revised Estimate (RE) for FY 2010-11	Considered for APR for FY 2010-11
2.	D Station	89.42	82.45	85.40	85.40
3.	E Station	92.53	91.74	85.25	85.25
4.	F Station	93.01	92.06	85.89	85.89
5.	Vatva Gas Station	89.23	89.05	80.45	80.45

5.1.2.3 Auxiliary consumption

Petitioner's submission

The TPL has submitted the actuals of auxiliary consumption for the first half year and RE for the whole of FY 2010-11.

The auxiliary consumption (i) approved by the Commission in the MYT Order dated 17th January, 2009 (ii) approved in its order dated 31st March, 2010 for annual determination of tariff for FY 2010-11 (iii) actuals for the first half year and (iv) RE for the FY 2010-11 submitted by TPL are as given in the table below:

Table 5.6: Auxiliary consumption of TPL-G (APP) for FY 2010-11

(%)

Sl. No.	Station	Approved for FY 2010-11 in the MYT order	Approved by the Commission in its order dated 31/03/2010	H_1 (Actual)	Revised Estimate (RE) for FY 2010-11
	Sabarmati				
1.	C Station	9.41	9.50	9.68	9.75
2.	D Station	8.73	9.00	8.73	8.91
3.	E Station	8.73	9.00	8.73	8.91
4.	F Station	8.73	9.00	8.73	8.91
5.	**Vatva Gas Station**	2.92	3.00	2.54	2.74

The TPL has explained that the auxiliary consumption for D, E, F stations and Vatva CCPP complied with the approved estimates. It is submitted that the auxiliary consumption percentage of C station is slightly higher than the approved estimate on account of ageing of the station and the lower PLF and that TPL is making all-out efforts to contain the auxiliary consumption. It is also stated by TPL that the existing NDCTs of C station is being replaced by IDCT, which would lead to an increase in the auxiliary consumption levels from FY 2010-11.

It is also pleaded by TPL in its petition that the generation plants with similar profile (ageing and unit size of Station C) across the country, are consuming significantly higher auxiliary consumption and various Regulatory Commissions have approved higher auxiliary consumption norms to be consistent with the actual scenario.

In view of the above, TPL requests for approval of projected (RE) auxiliary consumption under revised estimates.

Commission's Analysis

It is noted that revised estimates of auxiliary consumption for all the stations except for Vatva CCPP is higher than that approved levels for FY 2010-11 in the MYT order.

Though TPL indicated the reasons for higher auxiliary consumption in its petition, the Commission is of the opinion that the reasons are not acceptable. The auxiliary consumption (RE) for FY 2010-11, proposed by TPL is more than H_1 values for the stations. In the case of C station, the H_1 value and RE are more than the value approved in the MYT order.

It is held that the TPL can bring the auxiliary consumption down to the MYT approved level during FY 2010-11 and the same is considered for C station. In the case D, E and F stations the H_1 values are on par with the approved ratios in the MYT order and the same values are considered for these stations for the purpose of APR for FY 2010-11. In the case of Vatva gas station, the RE value of 2.74% is lower than that of the approved % in the MYT order and the order dated 31st March 2010, though, it is higher than the H_1 actual. Hence for the purpose of APR for FY 2010-11, it is decided to consider the RE value proposed by TPL.

Accordingly, the auxiliary consumption considered for the purpose of APR for FY 2010-11, for different stations, is as given in the table below:

Table 5.7: Auxiliary consumption considered for APR for FY 2010-11

(Measured in %)

Sl. No.	Station	Approved for FY 2010-11 in the MYT order	Approved by the Commission in its order dated 31/03/2010	Revised Estimate (RE) for FY 2010-11	Considered for APR for FY 2010-11
	Sabarmati				
1.	C Station	9.41	9.50	9.75	9.41
2.	D Station	8.73	9.00	8.91	8.73
3.	E Station	8.73	9.00	8.91	8.73

Sl. No.	Station	Approved for FY 2010-11 in the MYT order	Approved by the Commission in its order dated 31/03/2010	Revised Estimate (RE) for FY 2010-11	Considered for APR for FY 2010-11
4.	F Station	8.73	9.00	8.91	8.73
5.	**Vatva Gas Station**	2.92	3.00	2.74	2.74

5.1.2.4 Station Heat Rate (SHR)

Petitioner's submission

The TPL has submitted the actual SHR of different stations for the first half year and revised estimates for the remaining period of the FY 2010-11.

The station heat rate (i) approved by the Commission in the MYT Order dated 17th January, 2009 (ii) approved in its order dated 31st March, 2010 for annual determination of tariff for FY 2010-11 (iii) actuals for the first half year and (iv) RE for the rest of FY 2010-11 are as submitted by TPL are given in the table below:

Table 5.8: Station Heat Rate for FY 2010-11

(in kCal/kWh)

Sl. No.	Station	Approved for FY 2010-11 in the MYT order	Approved by the Commission in its order dated 1/03/2010	TPL H_1 (Actual)	Revised Estimate (RE) for FY 2010-11
	Sabarmati				
1.	C Station	3675	3150	3120	3130
2.	D Station	2565	2450	2420	2433
3.	E Station	2525	2725	2695	2707
4.	F Station	2715	2725	2695	2708
5.	**Vatva Gas Station**	1950	2165	2118	2137

In its petition the TPL requests for consideration of the revised estimates by the Commission for FY 2010-11. It is also stated that the impact of lower PLF during the second half of the FY is not factored in the above values and submits that any variation in performance parameters on account of such factor has to be allowed at the actuals during truing up.

Commission's Analysis

The SHR values approved in the MYT order for the FY2010-11 were on NCV (Net Calorific Value) basis. As already discussed earlier, on the Commission's request CEA conducted a study with regard to technical parameters of TPL-G (APP) and recommended SHR parameters on GCV (Gross Calorific Value) basis. The Commission in its order dated 9th December, 2009, decided to consider these recommendations for FY 2010-11. Accordingly, the Commission approved SHR values on GCV basis for the TPL-G (APP) stations, in its order dated 31st March, 2010 for the FY 2010-11. The Revised Estimate (RE) proposed by TPL, for FY 2010-11, are found to be improvement over those approved in the order dated 31st March, 2010 and hence the (RE) values as proposed by TPL are considered for the purpose of APR for FY 2010-11, as given in the table below:

Table 5.9: Station Heat Rate considered for APR for FY 2010-11

(In kCal/kWh)

Sl. No.	Station	Approved for FY 2010-11 in the MYT order	Approved by the Commission in its order dated 31/03/2010	Revised Estimate (RE) for FY 2010-11	Considered for APR for FY 2010-11
	Sabarmati				
1.	C Station	3675	3150	3130	3130
2.	D Station	2565	2450	2433	2433
3.	E Station	2525	2725	2707	2707
4.	F Station	2715	2725	2708	2708
5.	**Vatva Gas Station**	1950	2165	2137	2137

5.1.2.5 Secondary Fuel Oil Consumption (SFC)

Petitioner's submission

The TPL has furnished the actuals of secondary fuel oil consumption (SFC) for different stations (coal based) for the first half of FY and RE for the whole of FY 2010-11.

The Secondary Fuel Oil Consumption (SFC) (i) approved by the Commission in the MYT Order dated 17th January, 2009 (ii) approved in its order dated 31st March, 2010 for annual determination of tariff for FY 2010-11 (iii) actuals for the first half year and (iv) RE for the whole of FY 2010-11 are as submitted by TPL are given in the table below:

Table 5.10: Secondary Fuel Oil Consumption for APR for FY 2010-11

(in Gms/kWh)

Sl. No.	Station	Approved for FY 2010-11 in the MYT order	Approved by the Commission in its order dated 31/03/2010	TPL H_1 Actual)	Revised Estimate (RE) for FY 2010-11
	Sabarmati				
1.	C Station	1.45	2.09	1.21	1.50
2.	D Station	1.45	1.04	0.44	0.69
3.	E Station	1.45	1.04	0.28	0.60
4.	F Station	1.45	1.04	0.27	0.60

In the MYT order of January, 2009 the SFC has been approved considering 1.39 ml / kWh = 1,45 gms/kWh for composite plant considering all the stations together. The approved consumption norms for SFC were revised in the order dated 31st March 2010 based on the CEA recommendations. The Commission noticed that these consumptions norms revised were erroneous as they were converted from ml/kWh adopting conversion factor of 1 ml = 1.04 gm instead of 1 ml = 0.96 gm. The consumption norms for C, D, E and F stations will be 1.92, 0.96, 0.96 and 0.96 grams / kWh respectively.

The TPL submitted that efficient operations in all stations have resulted in lower consumption levels of SFC, but SFC is likely to be higher than the actual of H_1 (2010-11). It also submitted that due to forced outage of T/A-15 turbo generator of C station, for some period, the SFC consumption will increase, as running a single turbine of 30 MW required adequate oil support to maintain the stability of the flame.

Commission's Analysis

Based on the CEA recommendations, the Commission in its order dated 31st March, 2010, approved the SFC for each station separately. The levels of SFC achieved during the H_1 (FY 2010-11) are much lower. The commission decided to consider the RE values as proposed by TPL for the purpose of APR for FY 2010-11 as given in the table below:

Table 5.11: Secondary Fuel Oil Consumption considered for APR for FY 2010-11

(in gms/kWh

Sl. No.	Station	Approved for FY 2010-11 in the MYT order	Approved by the Commission in its order dated 31/03/2010	Revised Estimate (RE) for FY 2010-11	Considered for APR for FY 2010-11
	Sabarmati				
1.	C Station	1.45	2.09	1.50	1.50
2.	D Station	1.45	1.04	0.69	0.69
3.	E Station	1.45	1.04	0.60	0.60
4.	F Station	1.45	1.04	0.60	0.60

5.1.2.6 Transit Loss

Petitioner's submission

The TPL has furnished the actuals of transit loss of coal for all the stations put together belonging to TPL-G (APP) for the first half of FY and RE for the whole of FY2010-11.

The transit loss as (i) approved by the Commission in the MYT Order dated17th January 2009 (ii) approved in its order dated 31st March, 2010 for annual determination of tariff for FY 2010-11 (iii) actuals for the first half year and (iv) RE for the FY 2010-11 are as submitted by TPL are given in Table below:

Table 5.12: Transit Loss for FY 2010-11

(%)

Station	Approved for FY 2010-11 in the MYT order	Approved by the Commission in its order dated 31/03/2010	Revised Estimate (RE) for FY 2010-11
All coal based stations	1.40	1.40	3.12

The TPL submitted that, it has been making continuous efforts to reduce the transit loss and in this endeavor, The TPL has reduced transit losses from one time high of 8% to the present level of 3.21%. It is also submitted that TPL cannot reduce the transit loss to the approved level (1.4 %) due to the factors beyond its control.

Commission's Analysis

The Commission has approved a transit loss of 1.4% for the FY 2010-11 in the MYT order dated 17th January, 2009, in its order dated 9th December, 2009 and APR order dated 31st March, 2010, as compared to 0.8% specified in the GERC Terms and Conditions of Tariff. The Commission feels, there is no need to revise the same. Anyhow, on the opinion of APTEL, as mentioned in para 4.1.2.6, the Commission decided to consider the transit loss at 1.9% for FY 2010-11.

Accordingly, the transit loss is considered at 1.9% for the purpose of APR for the FY 2010-11, as given in the table below:

Table 5.13: Transit loss considered for APR for FY 2010-11

(%)

Station	Approved for FY 2010-11 in the MYT order	Approved by the Commission in its order dated 31/03/2010	Revised Estimate (RE) for FY 2010-11	Considered for APR for FY 2010-11
All coal based stations	1.40	1.40	3.12	1.90

5.1.3 Performance parameters considered for APR for FY 2010-11

The performance parameters considered for FY 2010-11, as discussed in the earlier paragraphs for the purpose of APR for FY 2010-11 are as listed in the table below:

Table 5.14: Performance parameters considered for the purpose of APR for FY 2010-11

Sl. No.	Station	PAF (%)	PLF (%)	Aux. consumption (%)	Station Heat Rate (Kcal/kWh)	Secondary fuel oil consumption (gm/kWh)	Transit loss of coal (%)
	Sabarmati						
1.	C Station	85.76	65.11	9.41	3130	1.50	1.90
2.	D Station	93.14	85.40	8.73	2433	0.69	1.90
3.	E Station	95.73	85.25	8.73	2707	0.60	1.90
4.	F Station	95.13	85.89	8.73	2708	0.60	1.90
5.	**Vatva Gas Station**	95.96	80.45	2.74	2137	-	-

5.1.4 Gross and Net generation for FY 2010-11 for the purpose of APR

The gross and net generation of different stations, as per RE submitted by TPL and as considered by the Commission for APR for the FY 2010-11, are as given in the Table below:

Table 5.15: The gross and net generation (in MU) for FY 2010-11 for APR

Sl. No.	Station	As per actuals submitted by TPL				As considered by the Commission			
		Gross generation (MU)	Auxiliary consumption (%)	Auxiliary consumption (MU)	Net generation (MU)	Gross generation (MU)	Auxiliary consumption (%)	Auxiliary consumption (MU)	Net generation (MU)
	Sabarmati								
1.	**C Station**	342	9.75	33	309	342.22	9.41	32.20	310.02
2.	**D Station**	898	8.91	80	818	897.72	8.73	78.37	819.35
3.	**E Station**	821	8.91	73	748	821.47	8.73	71.77	749.75
4.	**F Station**	828	8.91	74	754	827.64	8.73	72.25	755.38
5.	Vatva Gas Station	705	2.74	19	685	704.74	2.74	19.31	685.43
	Total	**3594**	**-**	**280**	**3314**	**3593.79**	**-**	**273.90**	**3319.93**

5.1.5 Cost parameters

The cost parameters include GCV of fuel, mix of fuel and price of fuel.

The TPL has submitted the details of RE of Wt Av GCV, mix of coal and Wt Av price of fuel for different stations for the FY 2010-11, as discussed below.

5.1.5.1 Wt Av Gross Calorific Value (GCV) of fuel

The TPL has furnished the revised estimate of Wt Av GCV of fuels for the FY 2010-11, as given in the table below:

Table 5.16: Wt Av Gross Calorific value (GCV) of fuels for different stations for FY 2010-11

Sl. No.	Station	Wt Av GCV of indigenous coal (Kcal/Kg)	Wt Av GCV of imported coal (Kcal/Kg)	Wt Av GCV of secondary fuel oil (Kcal/Kg)	Wt Av GCV of Gas (Kcal/SCM)*
	Sabarmati				
1.	For all stations	4573	5167	10320	-
2.	Vatva Gas Station	-	-	-	*

- The TPL says that it has entered into heat value contract (Rs/MMBTU) for gas sourcing, though, Commission approved the GCV for gas received at 9218 Kcal/1000SCM, for FY 2010-11, in its order dated 31st March 2010.
- (Source : Petition of the TPL)

In the additional information submitted by the TPL vide its letter dated 2nd June 2011, the Wt Av GCV of the mix of the coal and Wt Av GCV of secondary fuel for each station are furnished as given in the Table below:

Table 5.17: Wt Av Gross Calorific value (GCV) of fuels for different stations for FY 2010-11

Sl. No.	Station	Wt Av GCV of mix of coal (Kcal/Kg)	Wt Av GCV of secondary fuel oil (Kcal/Kg)
	Sabarmati		
1.	C Station	4492.32	10315.34
2.	D Station	4818.07	10319.31
3.	E Station	4787.70	10325.66
4.	F Station	4791.93	10326.93
5.	**Vatva Gas Station**		

Commission's Analysis

For the purpose of APR for FY 2010-11, the revised estimated values of Wt Av GCV furnished by TPL vide its letter dated 2nd June 2011are considered.

5.1.5.2 Blending Ratio of Coal

The TPL submitted that during FY 2010-11, it has estimated the blending of fuel at 70:30 ratio for the estimated level of generation, for all the stations put together.

In the additional information furnished by TPL vide its letter dated 2nd June, 2011, the RE / values of the ratio of mix of indigenous and imported coals for each station are furnished as given in the table below:

Table 5.18: RE values of ratio of mix of indigenous and imported coal for FY 2009-10 for APR

(%)

Sl. No.	Station	Indigenous coal (%)	Imported coal (%)
	Sabarmati		
1.	C Station	100%	0%
2.	D Station	62.00%	38.00%

Sl. No.	Station	Indigenous coal (%)	Imported coal (%)
3.	E Station	66.00%	34.00%
4.	F Station	65.00%	35.00%

Commission's Analysis

For the purpose of APR for FY 2010-11, the RE values of blending ratio of coal for individual stations, as furnished by TPL are considered.

5.1.5.3 Wt Av Prices of Fuel

The TPL has furnished the RE of Wt Av Price per unit of different fuels for different stations for FY 2010-11 as given in the table below:

Table 5.19: Wt Av price / unit of fuels for FY 2010-11 (RE), for all the stations put together

Sl. No.	Station	Wt Av cost of indigenous coal (Rs/MT)	Wt Av cost of imported coal (Rs/MT)	Wt Av cost of Gas (Rs/ MMBTU)	Wt Av cost of secondary fuel oil (Rs/MT)
	Sabarmati				
1.	All coal stations	3043.71	4539.39	-	22757.38
2.	**Vatva Gas Station**	-	-	259.49	-

TPL, vide its letter dated 2nd June, 2011 has furnished the unit cost (RE) of different fuels for each station for FY 2010-11, as given in the table below:

Table 5.20: Wt Av price / unit of fuels for different stations for FY 2010-11 (RE)

Sl. No.	Station	Wt Av cost of indigenous coal (Rs/MT)	Wt Av cost of imported coal (Rs/MT)	Wt Av cost of secondary fuel (Rs/MT)	Wt Av cost of gas (Rs/MMBTU)
	Sabarmati				
1.	C Station	3148.54	-	27914.71	-
2.	D Station	3006.07	4557.09	22829.82	-
3.	E Station	3020.34	4543.90	21579.76	-
4.	F Station	3020.01	4517.50	21427.91	-
5.	**Vatva Gas Station**	-	-	-	260.48

Commission's Analysis

The Commission has decided to consider the revised estimate (RE) prices of fuel furnished by TPL for individual stations for the purpose of APR for the FY 2010-11. The actual prices will be taken into account at the time of truing up of the costs for FY 2010-11 after audited annual accounts are made available.

5.1.5.4 Fuel Costs

Based on the performance parameters, considered in the earlier paragraphs, and the RE values of cost parameters considered for APR purpose, the fuel costs for each station for FY 2010-11, for the purpose of APR are as given in the table below:

Table 5.21: Fuel cost of different stations considered for FY 2010-11 for APR

Sl. No.	Station	As per actuals furnished by TPL				As considered by the Commission			
		Gross generation (MU)	Net generation (MU)	Fuel cost (Rs. crore)	Fuel cost / net (Rs/kWh)	Gross generation (MU)	Net generation (MU)	Fuel cost (Rs. crore)	Fuel cost / net (Rs/kWh)
	Sabarmati								
1.	C Station	342	309	78.43	2.54	342.22	310.02	77.58	2.50
2.	D Station	897	818	166.55	2.04	897.72	819.35	165.56	2.02
3.	E Station	821	748	168.17	2.25	821.47	749.75	166.82	2.23
4.	F Station	827	754	169.49	2.25	827.64	755.38	168.22	2.23
5.	**Vatva Gas Station**	704	685	155.67	2.27	704.74	685.43	155.67	2.27
	Total	**3593**	**3314**	**738.31**	**2.23**	**3593.79**	**3319.93**	**733.85**	**2.21**

The detailed calculations for each station for arriving at the above costs are given in Annexures 5.1 to 5.5

The Commission has reiterated that transit loss will be considered only in case of indigenous coal.

5.1.6 Fixed charges

5.1.6.1 Operation and Maintenance (O&M) expenses for FY 2010-11

The TPL has claimed a sum of Rs. 154.23 crore towards estimated O&M expenses in the RE for FY 2010-11. The O&M expenses approved by the Commission in the MYT order for FY 2010-11, Tariff Order for FY 2010-11 and claimed by the TPL in the RE are as detailed in the table below:

Table 5.22: O&M expenses claimed by TPL-G (APP) for FY 2010-11

(Rs. crore)

Particulars	MYT Order	ARR Order	H1 Actual	Revised Estimate
Employee cost	55.85	55.85	35.43	74.11
R&M expenses	53.12	53.12	12.65	55.21
A&G expenses	24.90	24.90	8.44	24.90
Total O&M expenses	**133.87**	**133.87**	**56.53**	**154.23**

The O&M expenses comprise of employee cost, Repairs and Maintenance expenses and Administration and General expenses. The O&M expenses are discussed component wise in the following paragraphs.

(i) Employee cost

The TPL has claimed a sum of Rs. 74.11 crore towards employee expenses in the RE for FY 2010-11 against Rs. 55.85 crore approved in the MYT order for FY 2010-11.

Petitioner's submission

The TPL has submitted that variation in the employee expenses is around Rs. 18.26 crore on account of change in law and wage revision. The amendment in the gratuity norms by the Central Government has resulted in one-time impact on the employee cost. The petitioner said that the wage revision had resulted in an increase of base salaries impacting the employee expenses in FY 2010-11 and subsequent years. The TPL has requested the commission to consider the variation in employee expenses on account of uncontrollable factors.

Commission's Analysis

The Commission has approved the employee cost at Rs.54.60 crore in the truing up for FY 2009-10. In the MYT order for FY 2010-11, the Commission permitted 6% escalation over FY 2009-10 towards employee cost. Considering a 6% escalation over the employee cost of Rs. 54.60 crore the total employee cost works out Rs. 57.88 crore for FY in question.

The Commission, accordingly, considers Rs. 57.88 crore towards employee cost in the review for FY 2010-11 as given in table below:

Table 5.23: Employee cost considered in APR for TPL-G (APP) for FY 2010-11

(Rs. crore)

Particulars	MYT Order	Tariff Order	Claimed in RE	Considered for APR
Employee cost	55.85	55.85	74.11	57.88

(ii) Repairs & Maintenance (R&M) expenses

The TPL has claimed Rs.55.21 crore towards R&M expenses in the APR for FY 2010-11 against Rs. 53.12 crore approved in the MYT Order for FY 2010-11.

Petitioner's submission

The TPL has submitted that the R&M expenses in the Revised Estimate (RE) have exceeded the approved levels mainly on account of major overhauling of the Vatva generating station and requested the commission to consider the variation caused due to major overhauling as an uncontrollable factor . The expenses of Rs. 12.65 crore have been incurred in the H1 of the FY and the balance amount is to be incurred in H2 of FY as part of the annual maintenance scheduled in the second half of the FY 2010-11.

Commission's Analysis

The R&M expenditure is a controllable item. The expenses incurred in the H1 are Rs. 12.65 crore. However, the Commission approves the R&M expenses at the same level i.e. Rs. 53.12 crore as approved in the MYT order. Any variation in actual expense will be considered during the truing up based on the audited annual accounts for FY 2010-11.

The Commission considers the R&M expenses at Rs. 53.12 crore in the APR for FY 2010-11 as given below:

Table 5.24: R&M expenses considered in APR for FY 2010-11

(Rs. crore)

Particulars	MYT Order	Tariff Order	Claimed in RE	Considered for APR
R&M expenses	53.12	53.12	55.21	53.12

(iii) Administration & General (A&G) expenses

The TPL has claimed a sum of Rs. 24.90 crore towards A&G expenses in the APR for FY 2010-11.The A&G expenses claimed in the Review are the same as the approved amount in the MYT order and Tariff order for FY 2011.

Petitioner's submission

The TPL has submitted that the revised estimate for A&G for the FY 2010-11 is assessed at Rs. 24.90 crore in accordance with the approved expenses and that any variation in the actual expenses is to be dealt with at the time of truing up in accordance with the MYT Framework Regulations, 2007.

Commission's Analysis

The A&G expenditure is a controllable item. The expenses incurred in the H1 are Rs. 8.44 crore. However the Commission approves the A&G expenses at the same level i.e. Rs. 24.90 crore as approved in the MYT order. Any variation in actual expense will be considered during the truing up based on the audited annual accounts for FY 2010-11.

The Commission, accordingly, considers the A&G expenses at Rs. 24.90 crore in the review as approved in the MYT order for FY 2010-11 as given below:

Table 5.25: A&G expenses considered in APR for FY 2010-11

(Rs. crore)

Particulars	MYT Order	Tariff Order	Claimed in RE	Considered for APR
A&G expenses	24.90	24.90	24.90	24.90

The aggregate O&M expenses considered in the APR for FY 2010-11 are summarized in the table below:

Table 5.26: O&M expenses considered in the APR for FY 2010-11

(Rs. crore)

Particulars	MYT Order	Tariff Order	Claimed in RE	Considered for APR
Employee cost	55.85	55.85	74.11	57.88
R&M expenses	53.12	53.12	55.21	53.12
A&G expenses	24.90	24.90	24.90	24.90
Total O&M expenses	**133.87**	**133.87**	**154.22**	**135.90**

5.1.6.2 Capital expenditure, Capitalization and Sources of funding

The TPL has estimated that the capital expenditure would be at Rs. 111.66 crore in the APR for FY 2010-11 as against Rs. 31.17 crore approved in the MYT order and Rs. 80.59 crore approved in the Tariff order for FY 2010-11 as detailed in the table below:

Table 5.27: Capital expenditure claimed by TPL-G (APP) for FY 2010-11

(Rs. crore)

Particulars	FY 2010-11		
	MYT Order	ARR Order	Revised Estimate
C station cooling tower – IDCT	0.00	3.00	7.00
F Station upgradation	0.00	0.00	16.46
E Station upgradation	0.00	16.46	16.46

ESP field extension, overhauling of existing ESP, control replacement, Ash handling system extension	0.00	17.00	17.00
HP Heater replacement for "F " Station	0.00	2.50	2.50
Renovation and refurbishment of civil structures/buildings	0.00	5.00	5.00
Installation of new conveyor from conveyor N4B discharge end	0.00	2.00	0.00
Pollution control scheme	0.00	6.00	6.00
Renovation of down stream conveyor from existing crusher house to D,E & F station bunkers	7.50	0.00	0.00
Construction of new cooling towers	8.00	2.50	0.00
Normal Capital expenditure – Sabarmati	12.54	22.57	22.57
Normal Capital Expenditure – Vatva	3.13	0.85	0.85
Construction of New Electrical Machines, Motor Shed for " D/E Station	0.00	0.60	0.00
Miscellaneous Item- Admin	0.00	2.11	2.12
Carry over from earlier years	0.00	0.00	15.70
Total Cost	**31.17**	**80.59**	**111.66**

Petitioner's submission

The TPL has submitted that the capital expenditure estimates for FY 2010-11 has been revised on account of deferment of projects from FY 2009-10. It is further stated that the revised estimate includes Rs. 16.46 crore each against the E & F stations upgradation and Rs. 15.70 crore against deferred projects of FY 2009-10. The deferred projects include the CAPEX on account of procurement of modified BPF Cartridge, Refurbishment of Governing Valve Servo and the spares for new CHP Equipment etc.

Commission's Analysis

The Commission had approved Rs. 80.59 crore towards capital expenditure in the Tariff Order FY 2010-11. The TPL has now revised CAPEX to Rs. 111.66 crore because of deferment of upgradation of E & F stations and deferred projects of FY 2009-10. The Commission takes note of this revision in the CAPEX and considers the capital expenditure at Rs. 111.66 crore as estimated by TPL.

The Commission, accordingly, considers the capital expenditure at Rs. 111.66 crore in the APR for FY 2010-11 as approved in the Tariff order for FY 2010-11.

5.1.6.3 Interest expenses

The TPL has claimed a sum of Rs. 9.16 crore towards interest expenses in the review for FY 2010-11 against Rs. 22.35 crore approved in the MYT Order and Rs. 9.08 crore approved in the Tariff order for FY 2010-11 as detailed in the table below:

Table 5.28: Interest claimed in the APR for FY 2010-11

(Rs. crore)

Loan Heads	FY2010-11		
	MYT Order	**ARR Order**	**Revised estimate**
Existing loans			
LIC I			
Opening Balance	95.00	41.87	41.88
Repayment	2.50	4.79	4.79
Closing Balance	92.50	37.08	37.09
Interest Expense	9.13	4.37	4.34
IDFC Term Loan II			
Opening Balance	10.71	10.71	10.71
Repayment	7.14	7.14	7.14
Closing Balance	3.57	3.57	3.57
Interest Expense	0.53	0.49	0.58
Bank of Baroda Term Loan			
Opening Balance	95.63	28.63	12.44
Repayment	0.00	0.00	1.28
Closing Balance	95.63	28.63	11.17
Interest Expense	10.28	2.91	1.27
Total interest expense	**19.94**	**7.77**	**6.20**
Loans drawn during FY 2010-11			
Capitalization During the Year	33.17	70.63	78.74
Normative Debt @ 70%	23.22	49.44	55.12
Opening Balance	0.00	0.00	0.00
Repayment	0.00	2.94	0.00
Additions	23.22	23.76	55.12
Closing Balance	0.00	20.82	55.12
Interest Expense	**2.41**	**1.31**	**2.96**
Total Interest Expenses	**22.35**	**9.08**	**9.16**

Petitioner's submission

The TPL has submitted that the deviation in interest expenditure is on account of variation in capital expenditure compared to the estimated level of capital expenditure. And that in addition to the existing loans, the interest expenses on account of approved capitalization during FY 2010-11 are included in the revised estimate. TPL has further submitted that the interest expense is uncontrollable expense and requested to approve the interest expense as proposed.

Commission's Analysis

The capital expenditure as approved at Rs. 80.59 crore in the Tariff order for FY 2010-11 has been revised to Rs. 111.66 crore in the APR for FY 2010-11

The Commission, accordingly, considers the interest on loans at Rs. 9.16 crore in the APR for FY2010-11.

5.1.6.4 Interest on working capital

The TPL has claimed a sum of Rs. 31.04 crore towards interest on working capital in the APR for FY 2010-11 against Rs. 28.34 crore approved in the MYT Order and Rs. 26.83 crore in the Tariff order for FY 2010-11 as detailed in the table below:

Table 5.29: Interest on working capital for TPL-G (APP) for FY 2010-11

(Rs. crore)

Particulars	FY 2010-11		
	MYT Order	ARR Order	Revised estimate
Coal & Secondary fuel for 2 months	84.41	81.21	97.11
Gas for 1 month	12.38	12.36	12.97
O&M expense for 1 month	11.16	11.16	12.85
1 % of GFA for maintenance spares	8.80	7.78	8.29
Receivables for 2 months	157.74	149.24	171.63
Normative Working Capital	274.49	261.74	302.86
Interest Rate	10.25%	10.25%	10.25%
Interest on Working Capital	**28.34**	**26.83**	**31.04**

Petitioner's submission

The TPL has submitted that the revised computation for interest on working capital is higher than the approved on account of increase in the fuel cost.

Commission's Analysis

The Commission has examined the computation of normative working capital and interest thereon under GERC (Terms and Conditions for Determination of Tariff) Regulations, 2005. Based on the O&M expenses and other components of ARR considered in the APR for FY 2010-11, the Commission has computed the working capital and interest thereon as detailed in the table below:

Table 5.30: Interest on working capital approved for TPL-G (APP) for FY 2010-11

(Rs. crore)

Particulars	FY 2010-11			
	MYT Order	ARR Order	Revised Estimate	Considered for APR
Coal & Secondary fuel for 2 months	84.41	81.21	97.11	96.71
Gas for 1 month	12.38	12.36	12.97	13.14
O&M expense for 1 month	11.16	11.16	12.85	11.33
1 % of GFA for maintenance spares	8.80	7.78	8.29	7.55
Receivables for 2 months	157.74	149.24	171.63	166.52
Normative Working Capital	274.49	261.74	302.86	295.25

Interest Rate	10.25%	10.25%	10.25%	10.25%
Interest on Working Capital	28.34	26.83	31.04	30.26

The Commission, accordingly, considers the interest on working capital at Rs. 30.26 crore in the APR for FY 2009-10.

5.1.6.5 Depreciation

The TPL has claimed a sum of Rs. 29.94 crore towards depreciation in the APR for FY 2010-11 against Rs. 36.99 crore approved in the MYT Order and Rs. 29.49 crore approved in the Tariff order for FY 2010-11 as detailed in the table below:

Table 5.31: Depreciation claimed by TPL-G (APP) for FY 2010-11

(Rs. crore)

Particulars	FY 2010-11		
	MYT Order	ARR Order	Revised Estimate
Depreciation	36.99	29.49	29.94

Petitioner's submission

The TPL has submitted that the depreciation rates as per CERC (Terms and Conditions of Tariff) Regulations, 2004 are applied on opening GFA of FY 2009-10. With regard to addition of assets from 1st April, 2009 onwards depreciation has been computed at depreciation rates specified in the Appendix III to the CERC (Terms and Conditions of Tariff) Regulations, 2009.

Commission's Analysis

The petitioner has computed the depreciation for FY 2010-11 as per the CERC depreciation rates and asset classification wise as submitted by TPL. The opening balance of assets as on 01/04/2010, is the same as closing balance of assets as on 31st March, 2010 as per the segregated and audited annual accounts. Since the Commission has considered the CAPEX and capitalization in the APR for the FY 2010-11 as estimated by TPL for FY 2010-11, the depreciation in the review for FY 2010-11 is considered at the same level i.e. Rs. 29.94 crore as estimated by TPL and as detailed in the table below:

Table 5.32: Depreciation considered for TPL-G (APP) in the APR for FY 2010-11

(Rs. crore)

Particulars	FY 2010-11			
	MYT Order	Tariff Order	Claimed in RE	Considered for APR
Depreciation	36.99	29.49	29.94	29.94

5.1.6.6 Return on equity

The TPL has claimed a sum of Rs. 45.44 crore towards return on equity in the APR for FY 2010-11 as against Rs. 51.82 crore approved in the MYT Order and Rs. 46.35 crore as approved in the Tariff order for FY 2010-11 and are as detailed in the table below :

Table 5.33: Return on equity claimed by TPL-G (APP) for FY 2010-11

(Rs. crore)

Particulars	FY 2010-11		
	MYT Order	ARR Order	Revised Estimate
Opening equity	365.13	320.49	313.38
Equity addition	9.95	21.19	22.43
Closing equity	375.08	341.68	335.81
Return on equity	51.82	46.35	45.44

Petitioner's submission

The TPL has submitted that the return on equity has been revised on the basis of the revision of the opening and closing balance of equity as per the actual capitalization at starting of FY 2010-11 and planned capitalization during FY 2010-11. **The return on equity is thus estimated at 14% on the average of the opening and closing balance of equity in FY 2010-11.**

Commission's Analysis

The opening equity for FY 2009-10 is as per the closing equity for FY 2009-10 approved in the truing up for FY 2009-10. The TPL has estimated the equity addition during FY 2010-11 at Rs. 22.43 crore based on proposed capitalization of Rs. 78.74 crore.

Accordingly the Commission has estimated the return on equity as detailed in the table below:

Table 5.34: Return on equity considered for APR for FY 2010-11

(Rs. crore)

Particulars	FY 2010-11			
	MYT Order	ARR Order	Revised Estimate	Considered for APR
Opening equity	365.13	320.49	313.38	313.38
Equity addition	9.95	21.19	22.43	22.43
Closing equity	375.08	341.68	335.81	335.81
Average equity	370.11	331.09	324.60	324.60
Return on equity @ 14%	51.82	46.35	45.44	45.44

The Commission, accordingly, considers the return on equity at Rs. 45.44crore in the APR for FY 2010-11.

5.1.6.7 Income Tax

The TPL has estimated the income tax at Rs. 22.60 crore in the APR for FY 2010-11 as against Rs. 17.61 crore approved in the MYT Order for FY 2010-11 and Rs. 15.76 crore approved in the Tariff order for FY 2010-11 as detailed in the table below:

Table 5.35: Income Tax claimed for TPL-G (APP) for FY 2010-11

(Rs. crore)

Particulars	FY 2010-11		
	MYT Order	ARR Order	Revised Estimate
Income Tax	17.61	15.76	22.60

Petitioner's submission

The TPL has submitted that it has calculated the income tax on revised ROE to earn post tax ROE of 14% as per the Regulations considering the income tax rate of 33.22%.

Commission's Analysis

The Commission has revised income tax to Rs.26.68 crore for FY 2010-11 in the review orders dated 05.09.2011.

The Commission, accordingly, considers the income tax at Rs.26.68 crore in the APR 2010-11 as detailed in the table below:

Table 5.36: Income tax considered in the APR for FY 2010-11

(Rs. crore)

Particulars	MYT Order	ARR Order	Revised Estimate	Considered for APR
Income Tax	17.61*	15.76	22.60	26.68

*Revised to Rs.26.68 crore in the review orders 05.09.2011.

5.1.6.8 Non-Tariff income

The TPL has estimated the non-tariff income at Rs. 0.95 crore in the APR for FY 2010-11 as against Rs. 1.50 crore approved in the MYT order and as well in Tariff order for FY 2010-11 as detailed in the table below:

Table 5.37: Non-Tariff income of TPL-G (APP) for FY 2010-11

(Rs. crore)

Particulars	MYT Order	ARR Order	Revised Estimate
Non-Tariff income	1.50	1.50	0.95

Petitioner's submission

The TPL has submitted that the non-tariff income during H1 of the FY 2010-11 is Rs. 0.45 crore and the revised estimate for the whole year is Rs. 0.95 crore and requested the commission to consider the same in the review.

Commission's Analysis

The Commission has noted that the actual non-tariff income during FY 2009-10 was of the order of Rs. 14.18 crore as against its estimation at Rs. 0.95 crore in the APR for FY 2010-11.The TPL has not furnished any reason for the fall in non-tariff income estimated for FY 2010-11.

The Commission considers the non-tariff income at Rs.14.18 crore (the actual for FY 2009-10) in the APR for FY 2010-11.

Table 5.38: Non-tariff income considered in APR for FY 2010-11

(Rs. crore)

Particulars	FY 2010-11			
	MYT Order	ARR Order	Revised Estimate	Considered for APR
Non-tariff income	1.50	1.50	0.95	14.18

5.1.7 Revised ARR for FY 2010-11

The ARR approved in the MYT order for FY 2010-11, in the Tariff order dated 31st March, 2010 proposed by TPL in the RE for FY 2010-11 and considered by the Commission in the performance review for FY 2010-11 are as given in the table below:

Table 5.39: ARR considered for TPL-G (APP) in APR for FY 2010-11

(Rs. crore)

Sl. No.	Particulars	Approved in MYT Order for FY 2010-11	Approved in ARR Order for FY 2010-11	Claimed in RE for FY 2010-11	Considered in APR for FY 2010-11	Deviation (3-7) +/(-)
1	**2**	**3**	**4**	**5**	**6**	**7**
1	Variable Cost	656.94	635.57	738.31	733.85	(76.91)
2	Employee expenses	55.85	55.85	74.11	57.88	(2.03)
3	R&M Expenses	53.12	53.12	55.21	53.12	0.00
4	A&G Expenses	24.90	24.90	24.90	24.90	0.00
5	Depreciation	36.99	29.49	29.94	29.94	7.05
6	Interest on Loan	22.35	9.08	9.16	9.16	13.19
7	Interest on Working capital	28.34	26.83	31.04	30.26	(1.92)
8	Return on equity	51.82	46.35	45.44	45.44	6.38
9	Income Tax	17.61	15.76	22.60	26.68	(9.07)
10	Less: Non-tariff income	1.50	1.50	0.95	14.18	(12.68)
11	**Net ARR**	**946.42**	**895.45**	**1029.77**	**997.05**	**(50.63)**

The Commission has not considered any gain / loss in the performance review. The actual performance for FY 2010-11 will be reviewed with reference to the segregated and audited annual accounts for FY 2010-11 and any sharing of loss / gain as per GERC Regulations will be considered at the time of truing up for FY 2010-11.

5.2 Ahmedabad Distribution

5.2.1 Energy sales

Petitioner's submission

The TPL has, in its petition, estimated the energy sales for FY 2010-11 based on actual sales for the first half of FY 2010-11 and extrapolated the rest for the complete FY.

The TPL has submitted the category-wise energy sales approved in the MYT order dated 17th January, 2009, ARR order dated 31st March, 2010, the actual sales for H_1 of FY 2010-11 and revised estimate for rest of FY 2010-11 as given in the table below:

Table 5.40: Energy sales for Ahmedabad area in FY 2010-11

(MU)

Particulars	MYT order	ARR order	H_1 actual	Revised estimate
Residential	1676.38	1744.19	1011.89	1731.20
Commercial	940.79	981.79	520.12	923.32
LTP	300.16	279.82	146.87	287.76
LTMD	976.21	937.85	450.95	885.78
HTMD	1598.60	1505.61	737.93	1358.90
HT Pumping	100.62	109.45	59.04	103.65
Others	138.35	70.38	32.93	69.88
DoE	-	-	4.33	4.33
Total	**5731.11**	**5629.09**	**2964.05**	**5364.81**

It is submitted by TPL that the consumer category-wise energy sales have been revised on the basis of the actual sales and the per-capita consumption achieved for the first H_1 of FY 2010-11 after giving due weightage to the actual sales during the last financial year (2009-10), the revival of economy and feedback received from end users. The TPL has explained the reasons for variation in category wise sales from that of the approved sales in MYT order of 2009 and ARR order of FY 2010-11 as below:

5.2.1.1 Domestic - General Purpose

The TPL has submitted that the growth in the domestic category for FY 2010-11 over FY 2009-10 is estimated to be 12.16%, as against 5 year CAGR of 8.03%. The Commission approved 1676.38 MU for this category in the MYT order, but revised to 1744.19 MU in the ARR order for FY 2010-11. However, considering the sales trend in the first half of FY 2010-11 and the per capita method, the sales under this category have been revised to 1731.20 MU, which is in accordance with ARR order approved by the Commission.

5.2.1.2 Commercial - General Purpose and Industrial General Purpose

The TPL has submitted that commercial category sales growth in FY 2010-11 over FY 2009-10 is estimated to be around 11.64%, as against the 5 year CAGR of 12.06%.

This category mainly includes mid sized commercial complexes and small retail shops. Even during recession period, it was observed that this category was not significantly impacted. The Commission in the MYT order has approved the sales of 940.79 MU to this category and in the ARR order FY 2010-11; it was revised to 981.79 MU.

However considering the sales trend in the first half of FY 2010-11 and per capita method, the sales to this category have been revised to 923.32 MU which is in accordance with the earlier order.

5.2.1.3 Low Tension Power (LTP)

The small-scale textile and engineering industry are the main contributors to this category of consumers

The TPL has submitted that the LTP category sales growth in FY 2010-11 over FY 2009-10 is estimated to be 6.30% as against the 5 year CAGR of 2.44%. The Commission had approved the sales of 300.16 MU in MYT order and revised it to 279.82 MU in ARR order of FY 2010-11.

However considering the sales trend in the first half of FY 2010-11 and as per capita method, the sales have been revised to 287.76 MU which is in accordance with the sales approved by the Commission in the ARR order FY 2010-11.

5.2.1.4 Low Tension - Maximum Demand

The TPL has submitted that the sales to this category is mainly contributed by the industries, commercial complexes, power looms, casting and molding, chemical, ice factories and plastic etc. The LTMD category sales growth in FY 2010-11 over FY 2009-10 is estimated to be 1.85% as against the 5 year CAGR of 7.21%.

The Commission had approved the sales of 976.21 MU in the MYT order for FY 2009 and revised it to 937.85 MU in the ARR order FY 2010-11.

However, considering the sales trend in the first six months of FY 2010-11 and the per capita method, the sales in this category have been revised to 885.78 MU which is marginally lower than the sales approved by the Commission in the ARR order 2010.

5.2.1.5 High Tension - Maximum Demand (HTMD)

The TPL has submitted that as against the Three year CAGR for the category at around 3.84% the growth in FY 2010-11 over FY 2009-10 is estimated to be as high as 2.00%.

The Commission had approved sales of 1598.60 MU for this category in the MYT order 2009 and revised it to 1505.61 MU in the ARR order 2010. Considering the prevailing sales trend in the first half of FY 2010-11 and the per capita method, the sales of this category have been revised to 1358.90 MU which is less than what was approved by the Commission in the earlier orders.

5.2.1.6 High Tension - Pumping

The TPL has submitted that there was a declining trend of sales under this category. Though the 5 year CAGR is around 1.68%, the growth in FY 2010-11 over FY 2009-10 is estimated to be on a higher level at 4.80%. This increase is attributable to deficit monsoon scenario in the last year. Due to deficit monsoon rains and lower ground water levels, more power has been consumed for agricultural water pumping.

The Commission in the ARR order dated 31st March, 2010 had approved 109.45 MU for this sector. Considering the sales trend in the first half of FY 2010-11 and the per capita method, the sales of this category have been revised to 103.65 MU which is in accordance with the earlier orders.

5.2.1.7 Others

The TPL submitted that the Others category included general lighting purpose, agriculture and temporary supply sectors and constitute a very small proportion of overall energy sale.

The 5-year CAGR of this category is around 0.30% whereas estimated growth in FY 2010-11 over FY 2009-10 is 4.40%. The Commission had approved sales of 138.35 MU in the MYT order 2009 and revised it to 70.38 MU in the ARR order for this category. However, considering the sales trend during the first half of FY 2010-11 and the as per capita method the sales for this category have been revised to 69.88 MU.

Commission's Analysis

The Commission analyzed the revised estimates submitted by TPL- Ahmedabad area and observed that the revised estimate of sales are lower than the sales approved in ARR order dated 31st March, 2010 for most of the categories.

Table 5.41: Category-wise sales for Ahmedabad area for APR for FY 2010-11

(MU)

Particulars	ARR order	Revised estimate considered for APR
Residential	1744.19	1731.20
Commercial	981.79	923.32
LTP	279.82	287.76
LTMD	937.85	885.78
HTMD	1505.61	1358.90
HT Pumping	109.45	103.65
Others	70.38	69.88
DOE	-	4.33
Total	**5629.09**	**5364.81**

The Commission for the purpose of APR for FY 2010-11 has considered the revised estimate of sales of 5364.81 MU submitted by TPL for Ahmedabad area.

5.2.2 Consumer forecast

Petitioner's submission

The TPL has submitted the category-wise consumers as per MYT order dated 17th January, 2009, ARR order dated 31st March, 2010 and revised estimate for FY 2010-11 as given in table below:

Table 5.42: Consumer category-wise number of installations in FY 2010-11

Particulars	MYT order	ARR order	Revised estimate
Residential	1173961	1224952	1182706
Commercial	332963	330476	323246
LTP	50538	58050	57532
LTMD	12035	14174	12921
HTMD	812	799	762
HT Pumping	137	158	159
Others	3823	3303	3770
Total	**1574269**	**1631912**	**1581096**

It is submitted by TPL that it has considered the factors like the current economic scenario and upcoming projects etc in its consumer forecast. In order to project the number of installations, TPL D has also interacted with consumers like builders, real estate developers and industrialists, to track their future plans. For all the categories the projection or number of installations is based on the growth trend in the first half of FY 2010-11 and the feedback from the end use survey.

Commission's Analysis

The Commission has observed that there is a decline in the number of consumers in all the categories except in "others''. The Ahmedabad supply area is mostly dominated by residential consumers who constitute about 75% of total consumers.

The Commission considers the number of consumers projected by TPL under revised estimate for FY 2010-11 as given in the table below:

Table 5.43: Category wise number of consumers of Ahmedabad area for FY 2010-11

(Nos.)

Particulars	ARR order	Revised estimate considered for APR
Residential	1224952	1182706
Commercial	330476	323246
LTP	58050	57532
LTMD	14174	12921
HTMD	799	762
HT Pumping	158	159
Others	3303	3770

Particulars	ARR order	Revised estimate considered for APR
Total	**1631912**	**1581096**

5.2.3 Distribution loss

The TPL has projected the distribution loss of 8.64% under revised estimate for FY 2010-11. The distribution loss approved by the Commission in the MYT order for FY 2010-11, in the ARR order for FY 2010-11, losses for the first half of FY 2010-11 and revised estimate for FY 2010-11 are as given in the table below:

Table 5.44: Distribution loss for Ahmedabad area for FY 2010-11

Particulars	Distribution loss (%)
MYT order dated 17.1.2009	10.00
ARR order dated 31.3.2010	9.94
First half of FY 2010-11	10.04
Revised estimate for FY 2010-11	8.64

Commission's Analysis

The TPL has furnished the actual distribution loss of 8.50% for FY 2009-10. The Commission considers the distribution loss of 8.50% for FY 2010-11 at the same level as in FY 2009-10.

5.2.4 Energy Requirement

The TPL has submitted that considering the revised sales forecast for FY 2010-11 and energy loss in transmission and distribution, the estimated energy requirement for Ahmedabad Area as in the table below:

Table 5.45: Energy requirement for Ahmedabad area for FY 2010-11

Particulars	MYT order	ARR order	H_1 actual	Revised estimate
Energy sales (MU)	5731.11	5629.09	2964.05	5364.81
Distribution loss (%)	10.00%	9.94%	10.04%	8.64%
Distribution loss (MU)	636.79	621.38	330.79	507.40
Energy input at distribution level	6367.90	6250.47	3294.84	5872.20
Transmission loss	47.00	99.16	63.08	108.20
Energy requirement	6414.90	6349.63	3357.92	5980.40

It is submitted by TPL that energy requirement for FY 2010-11 has reduced drastically with the reduction of energy sales over the ARR approved sales by 369.23 MU.

Commission's Analysis

The energy requirement has naturally come down with the reduction in energy sales. The Commission has analyzed the energy requirement revised by TPL for FY 2010-11. The TPL estimated that the distribution loss was at 8.64%, as stated in the previous paragraph where as the Commission has considered the loss level at 8.5%.

The energy requirement is accordingly considered as given below:

Table 5.46: Energy requirement for Ahmedabad area considered by the Commission for FY 2010-11

Particulars	ARR order for FY 2010-11	Revised estimate for FY 2010-11	Considered by the Commission for FY 2010-11
Energy sales (MU)	5629.09	5364.81	5364.81
Distribution loss (%)	9.94%	8.64%	8.50%
Distribution loss (MU)	621.38	507.40	498.37
Energy input at distribution level	6250.47	5872.20	5863.18
Transmission loss (MU)	99.16	108.20	108.20
Energy requirement	6349.63	5980.40	5971.38

The Commission considers the energy requirement at 5971.38 MU in APR for FY 2010-11.

5.2.5 Energy Availability

Petitioner's submission

The TPL has provided the sources-wise statement of energy supplied for each area separately, but submitted that power purchase should be sourced on a collective basis for the purpose of economy of scale. It is further submitted that flexibility of power despatch from the sources enables it to manage power procurement in an efficient manner and also helps in managing the varying load requirement of each of the areas.

It is submitted by TPL that it sourced power from its own plant at Sabarmati and Vatva termed as TPL-G (APP), TPL SUGEN Plant, Wind energy for RPO obligation and other sources such as bilateral / power exchange. However, the primary requirement is met from TPL-G (APP), and the TPL – SUGEN Plants.

The source-wise estimated power availability for Ahmedabad area as approved in MYT order 2009, ARR order 2010, actuals during the first half of FY 2010-11 and revised estimate for FY 2010-11 are given in the table below.

Table 5.47: Energy Availability (Net) for Ahmedabad area for FY 2010-11

(MU)

Particulars	MYT order	ARR order	H_1 actual	Revised estimate
TPL-G (APP)	3750.51	3580.96	1961.84	3314.12
TPL-G (SUGEN)	2206.00	2432.01	1378.39	2481.57
GUVNL	-	260		-
Power Exchange	-	-	51.34	179
RPO / Wind energy	458.49	76.91	31.20	70.12
UI	-	-	(64.85)	(64.85)
Total	**6415.00**	**6349.63**	**3357.92**	**5980.40**

The TPL has submitted that as per GERC Regulations, TPL has to purchase electricity from renewable sources to the extent of 5% of the total consumption of its consumers including T & D loss in a FY.

The TPL has also submitted to what extent it could meet the RPO obligations during FY 2010-11 as given in table below:

Table 5.48 : RPO for Ahmedabad area for FY 2010-11

(MU)

Particulars	Ahmedabad	Surat	TPL-D
Approved energy requirement	6349.63	3338.42	9688.05
RPO requirement			
Wind (4.5%)	285.73	150.23	435.96
Solar (0.25%)	15.87	8.35	24.22
Biomass, Baggasse & others (0.25%)	15.87	8.35	24.22
Total (5%)	317.47	166.93	484.40

The TPL has also stated that it has made efforts to invite fresh bids for availing electricity from renewable power developers, but very few developers had come forward and shown interest in supplying renewable electricity. Some renewable power developers were willing to supply electricity but were not agreeable to the rates approved by the Commission. Therefore, it had become extremely difficult to meet the RPO as specified by the Commission.

In order to source power from solar energy, TPL has signed PPA for 50 MW with some solar project developers in January 2011.The projects are expected to commence generation of electricity from December 2011.

Based on the above, the TPL has requested the Commission to revise the minimum percentage of RPO target to a lower level from renewable sources as per actuals.

Commission's Analysis

The Commission has taken note of the difficulties expressed by the petitioner in fulfilling the RPO for sourcing renewable energy. However, the quantum of energy fixed in ARR 2011 is retained in APR also for FY 2010-11. The TPL shall make all efforts to obtain energy from all available renewable sources to meet the RPO fixed by the Commission.

The Commission has considered the distribution loss of 8.5% and the power availability as revised accordingly to match the requirement as given in Table below:

Table 5.49: Power availability considered by the Commission for Ahmedabad area for FY 2010-11

(MU)

Particulars	MYT order	ARR order	Revised estimate	considered by the Commission for FY 2010-11
TPL-G (APP)	3750.51	3580.96	3314.12	3314.12
TPL-G (SUGEN)	2206.00	2432.01	2481.57	2481.57
GUVNL	-	260	-	-
Power Exchange	-	-	179	170.42
RPO / Wind energy	458.49	76.91	70.12	70.12
UI	-	-	(64.85)	(64.85)
Total	**6415.00**	**6349.63**	**5980.40**	**5971.38**

5.2.6 Power Purchase Cost

The TPL has submitted that it had considered the actual power purchase cost for the first half of FY 2010-11 and also considered the approved base cost for the estimated level of energy requirement for the second half of FY 2010-11 to arrive the revised estimate for FY 2010-11.

It is further submitted that TPL has revised the power purchase cost due to revision of quantum of power purchase and the prevailing rate from TPL-G (APP), SUGEN, Wind energy and others.

The power purchase cost approved in MYT order dated 17th January, 2009, ARR order dated 31st March, 2010 and submitted in revised estimate for FY 2010-11 are as given in the table below:

Table 5.50: Power purchase cost for FY 2010-11 for Ahmedabad area

(Rs. crore)

Particulars	MYT order	ARR order	Revised estimate
TPL-G (APP)	946.42	895.44	1029.78
TPL-G (SUGEN)	646.36	712.58	828.08
GUVNL	0.00	80.52	0.00
Power exchange	0.00	0.00	68.43

Particulars	MYT order	ARR order	Revised estimate
RPO / Wind energy	160.93	27.00	22.84
UI	0.00	0.00	0.00
Total	1753.71	1715.53	1949.12

Commission's Analysis

The Commission has examined the revised estimate of power purchase cost submitted by TPL. The Commission has revised the energy requirement to 5971.38 MU as against 5980.40 MU estimated by TPL, as discussed in above paragraphs. The power purchase cost is accordingly revised by reducing the power purchase, projected by TPL, from power exchange.

The Commission, accordingly, considered power purchase cost at Rs.1945.84 crore.

5.2.7 Fixed Charges

5.2.7.1 Operation and Maintenance (O&M) expenses

The TPL has claimed a sum of Rs. 217.89 crore in the RE for FY 2010-11 towards O&M expenses. The O&M expenses approved by the Commission in the MYT Order dated 17th January, 2009, approved in the Tariff Order for FY 2010-11 dated 31st March, 2010 and also presented by TPL in the RE based on actual in the H_1 are detailed in the table below:

Table 5.51 : O&M expenses claimed by TPL- Ahmedabad area for FY 2010-11

(Rs. crore)

Particulars	MYT Order	ARR Order	H1 Actual	Revised Estimate
Employee cost	70.37	70.37	43.63	95.16
R&M expenses	82.25	82.25	36.82	82.25
A&G expenses	35.67	35.67	26.07	40.48
Total O&M expenses	**188.29**	**188.29**	**106.53**	**217.89**

The O&M expenses comprise of Employee cost, Repairs & Maintenance expenses and Administration and General expenses. The O&M expenses are discussed component- wise in the following paragraphs.

(i) Employee cost

The TPL has claimed a sum of Rs. 95.16 crore towards employee expenses in the RE for FY 2010-11 against Rs. 70.37 crore approved in the MYT order for FY 2010-11.

Petitioner's submission

In its submission the TPL has said that an increase in employee cost is on account of change in gratuity policy of the central Government and also impact of wage revision and requested that the variation be considered as an uncontrollable factor.

Commission's Analysis

The Commission has noted that the increase in employee cost is due to wage revision. The net employee cost is put at Rs. 77.00 crore including Rs. 10.62 crore towards wage revision for FY 2009-10. In the MYT order for FY 2010-11, the Commission permitted 6% escalation over FY 2009-10 employee cost. Considering 6% escalation over the normalized employee cost of Rs. 66.38 crore the employee cost works out to Rs. 70.36 crore.

The Commission, accordingly, considers Rs. 70.37 crore towards employee cost in the Review for FY 2010-11 as approved in the MYT order as given in table below:

Table 5.52: Employee cost for TPL-D Ahmedabad area considered in APR for FY 2010-11

(Rs. crore)

Particulars	FY 2010-11			
	MYT Order	**Tariff Order**	**Claimed in RE**	**Considered for APR**
Employee cost	70.37	70.37	95.16	70.37

(ii) Repairs & Maintenance (R&M) expenses

The TPL has claimed a sum of Rs. 82.25 crore towards R&M expenses in the APR for FY 2010-11 against Rs. 82.25 crore approved in the MYT Order as well as in the Tariff order for FY 2010-11.

Petitioner's submission

The TPL has submitted that the actual expenditure for R&M expenses in the H1 of FY 2010-11 for Ahmedabad area is Rs. 36.82 crore and the revised estimate is Rs. 82.25 crore in accordance with MYT order for FY 2010-11.

Commission's Analysis

The Commission considers Rs. 82.25 crore as the R & M expenses in the review for FY 2010-11 as approved in the MYT Order and Tariff Order for FY 2010-11 as projected by TPL in the present petition as detailed in the table below:

Table 5.53: R&M expenses considered in APR for FY 2010-11

(Rs. crore)

Particulars	MYT Order	Tariff Order	Claimed in RE	Considered for APR
R&M expenses	82.25	82.25	82.25	82.25

(iii) Administration & General (A&G) expenses

The TPL has claimed a sum of Rs. 40.46 crore towards A&G expenses in the APR for FY 2010-11 as against Rs. 35.67 crore approved in the MYT order and in the Tariff order for FY 2011.

Petitioner's submission

The petitioner has submitted that the actual expenditure for A&G in H_1 of FY 2010-11 for Ahmedabad supply area is Rs. 26.07 crore and estimated at Rs. 40.48 crore in the RE for FY 2010-11. The TPL has further submitted that it is contesting the imposition of Service Tax by the Service Tax Authority and submitted that it would approach the Commission for the appropriate adjustments at the time of truing up.

Commission's Analysis

The A&G expenses are considered controllable expenses and the Commission retains these expenses at Rs. 35.67 crore as approved in the MYT and in the Tariff order for FY 2010-11 as detailed in the table below:

Table 5.54: A&G expenses considered in APR for FY 2010-11

(Rs. crore)

Particulars	MYT order	Tariff order	Claimed in RE	Considered for APR
A&G expenses	35.67	35.67	40.48	35.67

The aggregate O&M expenses considered in the APR for FY 2010-11 are summarized in the Table below:

Table 5.55: O&M expenses considered in the APR for FY 2010-11

(Rs. crore)

Particulars	MYT order	Tariff order	Claimed in RE	Considered for APR
Employee cost	70.37	70.37	95.16	70.37
R&M expenses	82.25	82.25	82.25	82.25
A&G expenses	35.67	35.67	40.48	35.67
Total O&M expenses	**188.29**	**188.29**	**217.89**	**188.29**

5.2.7.2 Capital expenditure

The TPL has estimated that the capital expenditure at Rs. 256.61 crore in the APR for FY 2010-11 against Rs. 365.81 crore approved in the MYT order and Rs. 315.12 crore and also approved in the Tariff order for FY 2010-11 are as detailed in the table below:

Table 5.56: : Capital expenditure claimed by TPL- Ahmedabad area for FY 2010-11

(Rs. crore)

Particulars	FY 2010-11		
	MYT Order	ARR Order	Revised Estimate
EHV Network			
Bulk Supply Points	2.50	-	-
EHV Transmission	58.50	64.60	0.76
EHV Sub Station Projects	20.20	46.54	42.96
33 kV Sub-Stations Projects	78.10	31.56	17.60
Upgradation	7.20	9.30	3.00
Renovation & Replacement	1.35	4.25	3.65
Safety	1.30	1.87	2.95
Support Infrastructure	2.38	6.02	1.76
Automation & HR	3.97	3.20	2.28
Sub-Total EHV Network	**175.50**	**167.34**	**74.96**
HT Network			
Distribution Substation	43.74	35.82	33.92
New HT Consumers	10.65	15.09	17.50
Transformer Replacement	4.43	2.10	2.05
Cable Scheme	4.55	1.34	0.81
Renovation & Replacement	23.78	11.48	5.75
Safety	4.04	6.74	3.72
Supporting Infrastructure	-	0.20	0.15
Reactive Power Compensation	0.50	0.61	0.61
Sub-Total HT Network	**91.69**	**73.37**	**64.50**
LT Network			
Services extension on Mains/DE	27.49	11.94	16.22
Services on extension/reduction	16.77	9.17	8.94
SEP services	0.55	2.31	2.26
Others	3.51	6.61	6.17
Supporting Infrastructure	3.06	0.25	0.15

Particulars	FY 2010-11		
	MYT Order	ARR Order	Revised Estimate
Sub-Total LT Network	**51.38**	**30.28**	**33.74**
Meter Management			
Normal Load Growth	12.89	9.62	11.13
Reliability, Renovation and Replacement	11.33	11.13	8.41
Supporting Infrastructure	0.01	0.51	0.49
Reactive Power Compensation	0.66	-	-
Sub-Total Meter Management	**24.90**	**21.26**	**20.03**
Customer Care and IT Infrastructure Total	2.73	2.37	19.52
Others			
Special Projects			
Test Benches for MTL	-	3.00	2.25
Geographic Information System	0.68	6.20	10.65
Others	8.35	-	-
Distribution Administration and Miscellaneous	10.58	11.30	30.86
Sub- Total Others	**19.61**	**20.50**	**43.76**
Grand Total	**365.81**	**315.12**	**256.51**

Petitioner's submission

The TPL has submitted that the capital expenditure during FY 2010-11 has reduced by Rs. 58.61 crore as compared to the Tariff order for FY 2010-11 and has explained the major variations as detailed below:

EHV network: The Commission approved capital expenditure of Rs. 167.34 crore in its order in Case No. 988/2010. In comparison, the revised estimate for the FY on the account is put at Rs. 74.96 crore and the variation of Rs 92.38 crores has been observed following deferment of a few schemes in EHV lines & 33 kV substation projects to the subsequent years. The details of the major items are as provided below.

- The portion of implementation of 132 kV line from Airport to Nicol -2 amounting to Rs 35 crores has been deferred to the subsequent years.
- Substantial capital expenditure amounting to Rs 19.20 crores for upgradation of 66 kV Sabarmati-Gandhinagar line to 132 kV was planned in FY 2010-11 has also been deferred to the subsequent years.
- The Uprating of New Pirana – Nicol 2 line Vinzol and Vastral project costing Rs.10.40 crore is also deferred to FY 2014-15 .

- Deferment of 33 kV Substations: The variation of Rs 13.96 crores in the expenditure is also on account of (i) Deferment of implementation of 33 kV Naroda-Nicol Road Sub-station to FY 2011-12 & FY 2012-13, (ii) Delay in procurement of land for 33 kV Cancer Hospital sub-station & corresponding deferment to FY 2011-12 and (iii) Delay in implementation of 33 kV Nova Spent sub-station at GIDC Vatva.

Customer Care and IT Infrastructure: - The revised estimate for the year is put at Rs. 19.52 crore, which is mainly on account of capital expenditure of Rs 17.15 crore incurred for the ERP implementation (SAP).The same was earlier proposed in 2009-10 and deferred to FY 2010-11 and the capital expenditure deferred on this account then was put at Rs. 14.42 crore.

Distribution Administration and Miscellaneous: - The expenditure under this account includes the Office Space, Employee facilities, Office Equipments, Furniture and Fixtures, etc. The Commission approved capital expenditure of Rs. 11.30 crores in the order no. 988/2010 as against a revised estimate for the FY by the petitioner at Rs. 30.86 crore. The variation of Rs 19.56 crore has been stated to be on account of (i) Central Store (Rs. 10 crore) (ii) Three new customer care centre (Rs. 7.5 crore) and (iii) Customer Care Centre at Naranpura Zonal Office (Rs. 4 crore) which were not envisaged earlier.

Commission's Analysis

The Commission noted that the actual capital expenditure incurred during FY 2009-10 was Rs. 232.98 crore. The TPL has mentioned that the revision of CAPEX in FY 2010-11 has resulted in the reduction of Rs. 58.61 crore when compared to Rs. 315.12 approved in the previous order 988/2010. But when compared to the capital expenditure approved in MYT order the reduction is said to be only Rs. 109.30 crore. Hence the Commission accepts the reduction proposed by TPL in the APR for FY 2010-11 for the Ahmedabad Supply Area.

The Commission, accordingly considers the capital expenditure at Rs. 256.51 crore in the APR for FY 2010-11.

5.2.7.3 Interest expenses

The TPL has claimed a sum of Rs. 55.14 crore towards interest expenses in the revised estimate for FY 2010-11 against Rs. 130.60 crore approved in the MYT Order and Rs. 61.12 crore approved in the ARR for FY 2010-11 as detailed in the table below:

Table 5.57: Interest claimed for FY 2010-11

Particulars	(Rs. crore)
Ahmedabad Supply Area	
Existing loans	
APDRP	
Opening Balance	34.25
Repayments	1.74
Closing Balance	32.51
Interest Rate	9.00%
Interest Expense	3.00
HDFC 2 A	
Opening Balance	32.69
Repayments	7.69
Closing Balance	25.00
Interest Rate	10.75%
Interest Expense	3.10
HDFC 3 A	
Opening Balance	83.33
Repayments	16.67
Closing Balance	66.67
Interest Rate	11.00%
Interest Expense	8.25
ICD/SBI from FY 2009	
Opening Balance	158.11
Repayments	35.19
Closing Balance	122.92
Interest Rate	11.00%
Interest Expense	15.46
LIC	
Opening Balance	45.63
Repayments	5.21
Closing Balance	40.41
Interest Rate	11.00%
Interest Expense	4.73
Bank of Baroda	
Opening Balance	107.36
Repayments	11.01
Closing Balance	96.35
Interest Rate	10.75%

Particulars	(Rs. crore)
Interest Expense	10.95
Total	**45.49**
Loans drawn during the year FY 2010-11	
Capital expenditure during the year	217.15
Capitalization during the year	342.16
Less: SLC additions	47.13
Less: Grant in aid	-
Normative Debt @ 70%	206.52
Opening balance	-
New borrowings	206.52
Repayments	-
Closing balance	193.37
Interest Expense	9.65
Total interest on loans	**55.14**

Petitioner's submission

The TPL has submitted that the interest expenses on loans would be on account of two types of loans.

(i) Existing loans: Actual loans drawn at starting of the year FY 2010-11 or opening balance of FY 2010-11 and

(ii) New loans: Loan drawn for the capital expenditure to be undertaken in FY 2010-11

The TPL has further submitted that the interest expense is uncontrollable expense and is totally dependent on the actual capital expenditure incurred during the respective years.

Commission's Analysis

The opening balances of loans for FY 2010-11 are the same as closing balances of loans for the FY 2009-10 approved in the truing up for FY 2009-10. The new loans of Rs. 206.32 crore considered for drawal during FY 2010-11are as per the capitalization of Rs. 342.16 crore and debt considered at 70% of the net capitalization of Rs. 295.03 crore after deducting the SLC of Rs. 47.13 crore.

The Commission, accordingly, considers the interest expenses at Rs. 55.14 crore in the APR for FY2010-11 as projected by TPL as detailed in the table.

Table 5.58: Interest and finance charges considered in APR for FY 2010-11

(Rs. crore)

Particulars	Claimed in RE	Considered for APR
Interest expenses	55.14	55.14

5.2.7.4 Interest on Security Deposit

The TPL has estimated the interest on security deposit at Rs. 11.78 crore in the revised estimate for FY 2010-11 as against Rs. 11.01 crore approved in the MYT Order and Rs. 9.53 crore considered in the Tariff order for FY 2010-11 as detailed in the table below:

Table 5.59: Interest on security deposit claimed in respect of Ahmedabad Area for FY 2010-11

(Rs. crore)

Particulars	FY 2010-11		
	MYT Order	ARR Order	Actual
Interest Rate	6%	6%	6%
Interest on Security Deposit	11.01	9.53	11.78

Petitioner's submission

The TPL has submitted that interest on security deposit has been worked out at 6% for the FY 2010-11 as approved by the Commission in the previous order 988/2010. The interest expense on this item has increased as compared to the approved percentage due to actual security deposit being higher than what was considered by the Commission while issuing previous order.

Commission's Analysis

Since the petitioner has submitted that the interest expenses on security deposit have increased due to increase in the actual security deposit, the Commission accepts the claim of interest on security deposit at Rs. 11.78 crore as estimated by TPL in the RE for FY 2010-11.

Table 5.60: Interest on security deposit considered in APR for FY 2010-11

(Rs. crore)

Particulars	Claimed in RE	Considered for APR
Interest on Security deposit	11.78	11.78

5.2.7.5 Interest on working capital

The TPL has claimed an interest on working capital at Rs. 47.03 crore in the revised for FY 2010-11 as against Rs. 26.35 crore approved in the MYT order and Rs. 25.36 crore approved in the Tariff order for FY 2010-11 and the same are as detailed in the table below:

Table 5.61: Interest on working capital for TPL- Ahmedabad area for FY 2010-11

(Rs. crore)

Particulars	FY 2010-11		
	MYT Order	ARR Order	Revised estimate
O&M expense for 1 month	15.69	15.69	18.16
1 % of GFA for maintenance spares	31.03	23.48	26.49
Receivables for 2 months	228.80	208.15	414.19
Normative Working Capital	275.52	247.32	458.84
Interest Rate	10.25%	10.25%	10.25%
Interest on Working Capital	**26.35**	**25.35**	**47.03**

Petitioner's submission

The TPL has submitted that interest on working capital is arrived at by applying the applicable interest rate on the working capital requirement computed in accordance with the GERC (Terms and Conditions for Determination of Tariff) Regulations, 2005. It has further submitted that the revised estimate for interest on working capital requirement is higher than the approved percentage . The major reason for variation is due to the deduction of receivables of TPL-G (APP) from the total working capital requirement of Ahmedabad Supply Area by the Commission. It is further submitted by TPL that working capital requirement for Ahmedabad Area has been increased on account of higher receivables.

Commission's Analysis

The Commission has examined the computation of normative working capital and interest thereon under GERC (Terms and Conditions for Determination of Tariff) Regulations, 2005. The Commission has also taken into consideration the judgment of Hon'ble Appellate Tribunal in Appeal No. 61 of 2010, *inter alia* the deduction of the amount of generation receivables in calculating interest on working capital. The interest on working capital is thus computed taking into consideration 2 month's receivables without deducting the generation receivables as per the details as given in the table below:

Table 5.62: Interest on working capital for TPL- Ahmedabad area considered in APR for FY 2010-11

(Rs. crore)

Particulars	FY 2010-11	
	Claimed in revised estimate	Considered in APR
O&M expense for 1 month	18.16	15.69
1 % of GFA for maintenance spares	26.49	23.13
Receivables for 2 months	414.19	398.82
Normative Working Capital	458.84	437.64

Interest Rate	10.25%	10.25%
Interest on Working Capital	**47.03**	**44.86**

The Commission, accordingly, considers the interest on working capital at Rs. 44.60 crore in the APR for FY 2010-11.

5.2.7.6 Depreciation

The TPL has estimated the depreciation at Rs. 86.82 crore in the RE for FY 2010-11 as against Rs. 95.57 crore approved in the MYT Order and Rs. 81.52 crore approved in the ARR for FY 2010-11 as detailed in the table below:

Table 5.63: Depreciation claimed for TPL- Ahmedabad area for FY 2010-11

(Rs. crore)

Particulars	FY 2010-11		
	MYT Order	ARR Order	Revised Estimate
Depreciation	95.57	81.52	86.82

Petitioner's submission

The TPL has submitted that it has bifurcated the assets into two categories i.e assets as on 31st March 2009 and new assets capitalized after 31st March, 2009 for computation of depreciation. The depreciation rates as per CERC (Terms and Conditions of Tariff) Regulations, 2004 are applied for estimation of depreciation for the assets as on 31st March, 2009. For new assets capitalized after 31st March, 2009 the depreciation is estimated by applying the depreciation rates as per CERC (Terms and Conditions of Tariff) Regulations, 2009.

Commission's Analysis

The petitioner has computed the depreciation for FY 2009-10 using CERC depreciation rates asset classification-wise. The details of opening balance of assets as on 1st April, 2010, addition and deduction to the Gross Block during FY 2010-11 and the depreciation on the assets, asset classification-wise are as given in Form D-2A, page 334 of the petition. The opening balance of assets for FY 2010-11 are as per the closing balance of assets are as per the segregated annual accounts for FY 2009-10. The commission has noted that the addition of assets during FY 2010-11 were as per the capitalization of capital expenditure considered for FY 2010-11.

The Commission, accordingly, considers the depreciation at Rs. 86.82 crore in the APR for FY 2010-11

Table 5.64: Depreciation considered in APR for FY 2010-11

(Rs. crore)

Particulars	Claimed in RE	Considered for APR
Depreciation	86.82	86.82

5.2.7.7 Return on equity

TPL has estimated the return on equity at Rs. 131.68 crore in the APR for FY 2010-11 as against Rs. 146.19 crore approved in the MYT Order and Rs. 134.16 crore approved in the ARR order for FY 2010-11 which are as detailed in the table below:

Table 5.65: Return on equity claimed by TPL- Ahmedabad area for FY 2010-11

(Rs. crore)

Particulars	FY 2010-11		
	MYT Order	ARR Order	Revised Estimate
Opening equity	1003.69	910.09	897.24
Equity addition	89.39	96.43	86.68
Closing equity	1093.08	1006.52	983.93
Return on equity	**146.19**	**134.16**	**131.68**

Petitioner's submission

The TPL has submitted that the return on equity has been revised based on the revision of the opening and closing balance of equity due to actual capitalization at beginning of FY 2010-11 and planned capitalization till the end of FY 2010-11.The return on equity is estimated at 14% on the average of the opening and closing balance of equity in FY 2010-11.

Commission's Analysis

The Commission noted that the opening equity for FY 2009-10 is as per the closing equity for FY 2009-10 and approved in the truing up for FY 2009-10. TPL has furnished the equity addition at Rs. 86.68 crore for FY 2010-11. But the capitalization during FY 2010-11 after deducting the SLC is Rs. 295.03 crore and 30% of same works out to Rs. 88.51 crore as against RE of Rs. 86.68 crore claimed by the petitioner. The return on equity works out to Rs. 131.81 crore as detailed in the table below:

Table 5.66: Return on equity considered in the APR for FY 2010-11

(Rs. crore)

Particulars	FY 2010-11			
	MYT Order	ARR Order	Revised Estimate	Considered for APR
Opening equity	1003.69	910.09	897.24	897.24
Equity addition	89.39	96.43	86.68	88.51
Closing equity	1093.08	1006.52	983.03	985.75
Return on equity @ 14%	**146.19**	**134.16**	**131.68**	**131.81**

The Commission, accordingly considers the return on equity at Rs. 131.81 crore in the APR for FY 2010-11.

5.2.7.8 Income Tax

Te TPL has estimated the income tax at Rs. 32.78 crore in the APR for FY 2010-11 as against Rs. 49.69 crore approved in the MYT Order and Rs. 22.80 crore approved in the Tariff order for FY 2010-11 and detailed as in the table below:

Table 5.67: Income Tax claimed for TPL-Ahmedabad area for FY 2010-11

(Rs. crore)

Particulars	FY 2010-11		
	MYT Order	ARR Order	Revised Estimate
Income Tax	49.69	22.80	32.78

Petitioner's submission

The TPL has submitted that the MAT rate has been revised at 19.93% and therefore it has revised the estimate based on the revised income tax rate and ROE to earn post tax ROE at 14% as per the Regulations.

Commission's Analysis

The Commission has revised the income tax to Rs.18.68 crore for FY 2010-11 (MYT) in the review orders dated 05.09.2011. The Commission, accordingly, considered the income tax at Rs.18.68 crore in the APR for FY 2010-11 as detailed in the table below:

Table 5.68: Income tax considered in the APR for FY 2010-11

(Rs. crore)

Particulars	FY 2010-11			
	MYT Order	ARR Order	Revised Estimate	Considered for APR
Income Tax	49.69*	22.80	32.78	18.68

*Review orders dated 05.09 2001 to Rs.181.68 crore.

5.2.7.9 Non-Tariff income

The TPL has estimated the non-tariff income at Rs. 50.20 crore as actual in the APR for FY 2010-11 against Rs. 84.86 crore approved in the MYT order and Rs. 55.84 crore approved in the Tariff order for FY 2010-11. The actual for the H_1 of FY 2010-11 is given at Rs. 24.70 crore as detailed in the table below:

Table 5.69: Non-Tariff income of TPL- Ahmedabad area for FY 2010-11

(Rs. crore)

Particulars	FY 2010-11			
	MYT Order	ARR Order	H_1 Actual	Revised Estimate
Non-Tariff income	84.86	55.84	24.70	50.20

Petitioner's submission

The TPL has submitted that it has revised the non-tariff income based on H_1 of FY 2010-11 actual incomes.

Commission's Analysis

The Commission has noted that the actual non-tariff income is Rs.51.39 crore during FY 2009-10 and the estimated amount for FY 2010-11 is Rs.50.20 crore.

The Commission, accordingly, considers the non-tariff income at Rs. 50.20 crore in the APR for FY 2010-11 as detailed in the table below:

Table 5.70: Non-tariff income considered in APR for FY 2010-11

(Rs. crore)

Particulars	Claimed in RE	Considered for APR
Non-tariff Income	50.20	50.20

5.2.7.10 Provision for bad debts

The TPL has claimed a sum of Rs. 2.49 crore towards bad debts in the APR for FY 2010-11 against Rs. 2.20 crore approved in the MYT order and Rs. 2.14 crore approved in the Tariff order for FY 2010-11 as detailed in the table below:

Table 5.71: Provision for bad debts for TPL- Ahmedabad area for FY 2010-11

(Rs. crore)

Particulars	FY 2010-11			
	MYT Order	ARR Order	H_1 Actual	Revised Estimate
Provision for bad debts	2.20	2.14	1.25	2.49

Petitioner's submission

The TPL has submitted that it has revised the provision for bad debts with the revision of revenue requirement for FY 2010-11 at 0.1% on the revenue.

Commission's Analysis

The TPL has estimated the revenue from sale of power at Rs. 2347.35 crore in the APR for FY 2010-11 and the bad debts at 0.1% of the revenue works out to Rs. 2.35 crore for same FY .

The Commission, accordingly, considers the provision for bad debts at Rs. 2.35 crore in the APR for FY 2010-11 as detailed in the table below:

Table 5.72 : Provision for bad debts considered for TPL-D Ahmedabad area for FY 2010-11

(Rs. crore)

Particulars	FY 2010-11			
	MYT Order	ARR Order	Claimed in RE	Considered in APR
Provision for bad debts	2.20	2.14	2.49	2.35

5.2.7.11 Contingency Reserve

The TPL has projected the contingency reserve at Rs. 0.60 crore in the APR for FY 2010-11 which is the same as approved in the MYT order and as well as Tariff order for FY 2010-11 which are all as detailed in the table below:

Table 5.73 Contingency reserve for TPL-D Ahmedabad area for FY 2010-11

(Rs. crore)

Particulars	FY 2010-11		
	MYT Order	ARR Order	Revised Estimate
Contingency Reserve	0.60	0.60	0.60

Commission's Analysis

The proposed contingency reserve is in accordance with the approval accorded in the past.

The Commission, accordingly considers the contingency reserve at Rs. 0.60 crore in the APR for FY 2010-11 as detailed in the table below:

Table 5.74: Contingency reserve considered in APR for FY 2010-11

(Rs. crore)

Particulars	Claimed in RE	Considered for APR
Contingency reserve	0.60	0.60

5.2.7.12 Revenue from sale of power

The TPL has estimated the revenue from sale of power at Rs. 2347.35 crore in the APR for FY 2010-11 against Rs. 2200.92 crore approved in the MYT order and Rs. 2144.34 approved in the Tariff order for FY 2010-11 which are all as detailed the table below:

Table 5.75: Revenue from sale of power for TPL-D Ahmedabad area for FY 2010-11

(Rs. crore)

Particulars	FY 2010-11			
	MYT Order	ARR Order	H_1 Actual	Revised Estimate
Revenue from sale of power	2200.92	2144.34	1423.81	2347.35

Petitioner's submission

The TPL has submitted that the revenue from sale of power has been revised after computation of the revised sales and existing tariff rates for different category of consumers.

Commission's Analysis

The commission has noted that the category-wise sales and revenue for FY 2010-11 are as given in the petition submitted by the TPL. The Commission takes into consideration the revenue from sale of power at Rs. 2347.35 crore in the APR for FY 2010-11 as estimated by TPL. The sales and revenue for FY 2010-11 with existing tariff are summarised in the table below:

Table 5.76: Revenue from sales power FY 2010-11

(Rs. crores)

Category	MU	Fixed Charges	Energy Charges	Time of Use Charges	Power Factor Adjustment	Prompt Payment Discount	Total
AHMEDABAD SUPPLY AREA							
Residential	1731.20	8.26	559.71			-14.21	553.76
Commercial	923.32	14.07	422.59			-8.30	428.36
LTP - I	64.38	1.74	22.53			-0.46	23.81
LTP - II	223.38	11.19	80.42			-1.74	89.87
LTMD - I	125.14	4.54	45.24		-0.63	-0.96	48.19

Category	MU	Fixed Charges	Energy Charges	Time of Use Charges	Power Factor Adjustment	Prompt Payment Discount	Total
LTMD - II	760.64	39.61	289.80		-0.30	-6.59	322.52
HTMD	1358.90	64.14	467.46	34.31	-0.61	-11.88	553.42
HT Pumping	103.65	9.91	40.02	1.50		-0.89	50.54
Agri	9.25		2.94			-0.05	2.89
GLP	9.71	0.03	3.75			-0.08	3.70
Temp	1.11	0.41	0.44				0.85
Streetlight	49.81		16.44			-0.36	16.08
DOE	4.33		4.33				4.33
FPPPA							219.27
UI							29.78
Total	**5364.82**	**153.90**	**1955.67**	**35.81**	**-1.54**	**-45.52**	**2347.37**

5.2.8 Revised ARR for FY 2010-11

The ARR approved in the MYT order for FY 2010-11, in the Tariff Order dated 31st March, 2010, proposed by TPL in the RE for FY 2010-11 and considered by the Commission in the performance review for FY 2010-11 are given in the table below:

Table 5.77: ARR for TPL-D Ahmedabad area considered in APR for FY 2010-11

(Rs. crore)

Sl. No	Particulars	Approved in MYT Order for FY 2010-11	Approved in ARR Order for FY 2010-11	Claimed in RE for FY 2010-11	Considered in APR for FY 2010-11	Deviation +/(-) (3-7)
1	**2**	**3**	**4**	**5**	**6**	**7**
1	Power Purchase Cost	1753.56	1715.53	1949.12	1945.84	(192.28)
2	Employee expenses	70.37	70.37	95.16	70.37	0.00
3	R&M Expenses	82.25	82.25	82.25	82.25	0.00
4	A&G Expenses	35.67	35.67	40.48	35.67	0.00
5	Depreciation	95.57	81.52	86.82	86.82	8.75
6	Interest on security deposit	130.60	61.12	55.14	55.14	75.46
7	Interest on Loan	11.01	9.53	11.78	11.78	(0.77)
8	Interest on working capital	26.35	25.35	47.03	44.86	(18.51)
9	Return on equity	146.19	134.16	131.68	131.81	45.52
10	Prompt payment discount				45.52	(45.52)
11	Income Tax	49.69	22.80	32.78	18.68	31.01
12	Provision for Bad debts	2.20	2.14	2.49	2.35	(0.15)
13	Contingency Reserve	0.60	0.60	0.60	0.60	0.00
14	Less: Non-tariff income	84.86	55.84	50.20	50.20	34.66
15	**Net ARR**	**2319.20**	**2185.20**	**2485.13**	**2481.49**	**(162.29)**

The Commission has not considered any gain / loss in the performance review. The actual performance for FY 2010-11 will be reviewed with reference to the segregated and audited annual accounts for FY 2010-11 . Similarly the sharing of gain / loss as per GERC Regulations will be considered at the time of truing up for FY 2010-11.

5.3 Surat Distribution

5.3.1 Energy sales

Petitioner's submission

The TPL has, in its petition, estimated the energy sales for Surat area for FY 2010-11 based on actual sales of the first half of FY 2010-11 and extrapolated for the rest of the complete FY.

The TPL has submitted the category-wise energy sales approved in the MYT order dated 17th January, 2009, ARR order dated 31st March, 2010, the actual sales for H_1 of FY 2010-11 and revised estimate for FY 2010-11 which are given in the table below:

Table 5.78 : Energy Sales for Surat area in FY 2010-11

(MU)

Particulars	FY 2010-11			
	MYT order	ARR order	H_1 actual	Revised estimate
Residential	642.00	592.88	343.56	588.62
Commercial	516.34	459.63	272.61	497.31
LTP	1929.39	1625.66	448.58	854.57
LTMD	270.95	174.37	459.11	958.11
HTMD	258.75	239.07	123.50	241.05
Others	29.56	26.57	12.99	26.40
DoE	0.00	2.72	1.84	1.84
Total	**3647.00**	**3120.90**	**1662.18**	**3167.88**

It is submitted by TPL that the energy sales for FY 2010-11 have been revised based on the actual energy sales during the first half of FY 2010-11 and per capita method. TPL has explained the reasons for variation in category wise sales from that of the approved in MYT order 2009 and ARR order FY 2010-11 as below:

5.3.1.1 Domestic - General Purpose

The growth in the residential category for FY 2010-11 over FY 2009-10 is estimated at 6.32%, as against 5 year CAGR of 6.29%. The Commission had approved 642.0

MU sales for this category in the MYT order 2009, but revised to 592.88 MU in ARR order for FY 2010-11. However considering the sales trend in the first half of FY 2010-11 and the per capita method, the sales under this category have been revised to 588.62 MU which is in accordance with ARR order approved by the Commission.

5.3.1.2 Commercial

This category consists of sales to lighting and fan load of the LT services consumers. Considering the dip in the growth of sales during FY 2008-09, TPL, in the previous year, had projected a fall in sales at 3.44%.

The Commission in the MYT order 2009 approved the sales of 516.34 MU to this category and in ARR order 2010 it was revised to 459.63 MU.

However, considering the trend in the first half of FY 2010-11 and per capita method, and year on year sales growth, the sales to this category have been revised to 497.31 MU which is higher than the earlier order.

5.3.1.3 Low Tension Power (LTP)

The small-scale textile and engineering industry are the main contributors to this category. .

The petitioner had estimated the LTP category sales growth in FY 2010-11 over FY 2009-10 to be 6.30% as against the 5 year CAGR of 2.44%. The Commission had approved the sales of 300.16 MU in MYT order 2009 and revised it 279.82 MU in ARR order for FY 2010-11.

However considering the sales trend in the first half of FY 2010-11 and per capital method, the sales have been revised to 287.76 MU which is in accordance with the sales approved by the Commission in the ARR order FY 2010-11.

5.3.1.4 Low Tension - Maximum Demand (LTMD)

The TPL has submitted that the sales to this category are mainly contributed by small scale textiles and diamond units.

The Commission had approved the sales of 1929.39 MU in the MYT order 2009 and revised it to 1625.66 MU in ARR order FY 2010-11.

The Commission in the previous order has re-categorized the LTP category to include consumers below 15 BHP from the below 50 BHP earlier . This has resulted in more consumers moving out of the LTP category to LTMD category.

5.3.1.5 High Tension - Maximum Demand (HTMD)

The TPL has submitted that the consumption of this category is contributed by textile, diamond industries and commercial establishment in HTMD-1 and water works and pumping stations in HTMD-2 by the local authority.

The Commission in the MYT order 2009, had approved sales of 258.75 MU and revised to 239.07 MU in ARR order 2010. Considering the trend in the first half of FY 2010-11 the sales of this category have been revised to 241.05 MU. It is submitted by TPL that HTMD consumption is likely to decline steadily on account of shifting of textile houses outside the city, which is expected to continue for the next few years.

5.3.1.6 Others

The TPL has submitted that the category of Others include general lighting purpose, agriculture and temporary supply categories and constitutes a very small proportion of the total sales.

The sales have been kept at 26.40 MU against approval of 26.57 MU.

Commission's Analysis

The Commission analyzed the revised estimates provided by TPL for Surat area for overall sales and observed that the revised estimate of sales are marginally higher than approved in ARR order 2010 as given in the table below:

Table 5.79: Category-wise sales for Surat area for FY 2010-11

(MU)

Particulars	ARR order	Revised estimate considered for APR
Residential	592.88	588.62
Commercial	459.63	497.31
LTP	1625.66	854.57
LTMD	174.37	958.11
HTMD	239.07	241.05
Others	26.57	26.40
DOE	2.72	1.84
Total	**3120.90**	**3167.88**

The Commission has considered the revised estimate sales of 3167.88 MU submitted by TPL for Surat area in APR for FY 2010-11.

5.3.2 Consumer Forecast

Petitioner's submission

The TPL has submitted that the category-wise consumers as per MYT order 2009, ARR order 2010 and revised estimate for FY 2010-11 as given in the table below:

Table 5.80: Consumer category-wise No. of installations in FY 2010-11

Particulars	MYT order	ARR order	Revised estimate
Residential	410252	393245	363497
Commercial	170575	170036	167585
LTP	63439	61093	49702
LTMD	1332	1148	13044
HTMD	197	205	181
Others	2478	2793	2359
Total	**648273**	**628520**	**596378**

It is submitted by TPL that it has considered the factors like the current economic scenario and upcoming projects etc in the area . In order to project the number of installations, the TPL D has interacted with consumers like builders, real estate developers and industrialists, to track their future plans. For all the categories the projection of number of installations is based on the growth trend in the first half of FY 2010-11 and the feed back from the end use survey.

Commission's Analysis

The Commission has observed that there is decline in number of consumers in all categories except in LTMD which might be due to shifting of consumers from LTP to LTMD. The Surat supply area is mostly dominated by the category of domestic consumers who constitute about 61% of total consumers followed by commercial (28%).

The Commission considers the number of consumers projected by TPL under revised estimate for FY 2010-11 as given in the table below:

Table 5.81: Category wise consumers of Surat area for FY 2010-11

(MU)

Particulars	ARR order	Revised estimate considered for APR
Domestic	393245	363497
Commercial	170036	167585

Particulars	ARR order	Revised estimate considered for APR
LTP	61093	49702
LTMD	1148	13044
HTMD	205	181
Others	2793	2359
Total	628520	596378

5.3.3 Distribution loss

The TPL has projected the distribution loss of 5.17% under revised estimate for FY 2010-11. The distribution loss approved by the Commission in MYT order FY 2009, ARR order for 2010, losses for the first half of FY 2010-11 and revised estimate for FY 2010-11 are as given in the table below:

Table 5.82: Distribution loss for Surat area for FY 2010-11

Particulars	Distribution loss (%)
MYT order dated 17.01.2009	6.00
ARR order dated 31.03.2010	5.38
First half of FY 2010-11	4.87
Revised estimate for FY 2010-11	5.17

Commission's Analysis

The TPL has furnished earlier the actual distribution loss of 5.15% for Surat area for FY 2009-10. The Commission considers the distribution loss of 5.15% for FY 2010-11 at the same level as in truing up of FY 2009-10.

5.3.4 Energy Requirement

Considering the revised sales forecast for FY 2010-11 and energy loss in transmission and distribution, the estimated energy requirement as submitted by TPL for Surat area is as in the table below:

Table 5.83: Energy requirement for Surat area for FY 2010-11

Particulars	MYT order	ARR order	H_1 actual	Revised estimate
Energy sales (MU)	3647.00	3120.90	1662.18	3167.88
Distribution loss (%)	6.00	5.38	4.87	5.17
Distribution loss (MU)	232.79	177.45	85.09	172.74
Energy input at distribution level	3879.79	3298.36	1747.27	3340.62
Transmission loss	51.00	40.06	17.75	30.97
Energy requirement	3930.79	3338.42	1765.01	3371.59

It is submitted by TPL that energy requirement for FY 2010-11 has reduced drastically with the reduction of energy sales over the ARR approved sales by 369.23 MU.

Commission's Analysis

The Commission has analyzed the energy requirement revised by TPL for FY 2010-11 and noted that the energy requirement has also consequently fallen due to reduced energy sales .Though the TPL has estimated energy requirement with distribution loss at 5.17% the Commission as stated in the previous paragraph has considered the loss level at 5.15% only.

The energy requirement is accordingly considered as given below:

Table 3.84: Energy requirement for Surat area considered by the Commission for FY 2010-11

Particulars	ARR order for FY 2010-11	Revised estimate for FY 2010-11	Considered by the Commission for FY 2010-11
Energy sales (MU)	3120.90	3167.88	3167.88
Distribution loss (%)	5.38	5.17	5.15
Distribution loss (MU)	177.45	172.74	172.12
Energy input at distribution level	3298.36	3340.62	3340.00
Transmission loss (MU)	40.06	30.97	30.97
Energy requirement	3338.42	3371.59	3370.97

The Commission considers the energy requirement at 3370.97 MU in APR for FY 2010-11.

5.3.5 Energy Availability

Petitioner's submission

The TPL has provided sources-wise energy supplied for each area, but submitted that power purchase should be sourced on a collective basis for the purpose of economies of scale. It is further submitted that flexibility of power dispatch from the sources enables it to manage power procurement in an efficient manner and also helps in meeting the varying load requirement of each of the areas.

It is submitted by TPL that it sources power from its own plant at TPL SUGEN, wind energy for RPO obligation and other sources such as bilateral / power exchange. However the primary requirement is met from TPL – SUGEN Plants.

The source-wise estimated power availability for Surat area approved in MYT order 2009, ARR order 2010, actuals during first half of FY 2010-11 and revised estimate for FY 2010-11 are as given in the table below:

Table 5.85: Energy Availability (Net) for Surat area for FY 2010-11

(MU)

Particulars	MYT order	ARR order	H_1 actual	Revised estimate
TPL-G (SUGEN)	3639.00	3297.98	1756.04	3295.53
Power exchange	-	-	53.25	94.42
RPO / Wind energy	291.76	40.44	22.48	48.39
UI	-	-	(66.76)	(66.76)
Total	**3930.76**	**3338.42**	**1765.01**	**3371.59**

The TPL has submitted that as per GERC Regulations it has to purchase electricity from renewable sources to the extent of 5% of the total requirement of its consumers including T & D loss in a year.

The TPL has also submitted to what extent it could meet the RPO obligations during FY 2010-11 as given in the table below:

Table 5.86: RPO for Surat area for FY 2010-11

(MU)

Particulars	Ahmedabad	Surat	TPL-D
Approved energy requirement	6349.63	3338.42	9688.05
RPO requirement			
Wind (4.5%)	285.73	150.23	435.96
Solar (0.25%)	15.87	8.35	24.22
Biomass, Baggasse & others (0.25%)	15.87	8.35	24.22
Total (5%)	**317.47**	**166.93**	**484.40**

The TPL has also stated that it has made attempts to invite bids for availing electricity from renewable power developers, but very few developers had shown interest in supplying renewable electricity. While some renewable power developers were willing to supply electricity they were not agreeable to the rates approved by the Commission. Therefore, it is becoming difficult to meet the RPO requirements as specified by the Commission.

For sourcing power from solar energy, TPL has signed PPA for 50 MW with solar project developers in January, 2011. The project is expected to commence generation of electricity from December, 2011.

Based on the above, TPL has requested the Commission to revise the minimum percentage of RPO target to a lower level from renewable sources as per actuals.

Commission's Analysis

The Commission has taken note of the difficulties expressed by the petitioner in meeting the RPO stipulations. However the quantum of energy fixed in ARR 2011 is retained in APR for FY 2010-11. The TPL shall make all possible efforts to obtain energy from renewable sources to meet the RPO fixed by the Commission.

The Commission has considered the distribution loss of 5.15% and the power availability is revised accordingly to match the requirement as given in the table below:

Table 5.87: Power availability considered by the Commission for Surat area for FY 2010-11

(MU)

Particulars	FY 2010-11			
	MYT order	ARR order	Revised estimate	Considered by the Commission
TPL-G (SUGEN)	3639.00	3297.98	3295.53	3295.53
Power exchange	-	-	94.42	93.80
RPO / Wind energy	291.76	40.44	48.39	48.39
UI	-	-	(66.76)	(66.76)
Total	**3930.76**	**3338.42**	**3371.59**	**3370.97**

5.3.6 Power Purchase Cost

The TPL has submitted the actual power purchase cost for the first half of FY 2010-11, where in the approved base cost has been considered for the estimated level of energy requirement for the second half of FY 2010-11 to arrive at the revised estimate for FY 2010-11.

It is further submitted that TPL has revised the power purchase cost due to revision of quantum of power purchase and the rate from SUGEN, Wind energy and other sources.

The power purchase cost approved in MYT order dated 12.01.2009, ARR order dated 31.03.2010 and submitted in revised estimate for FY 2010-11 are as given in the table below:

Table 5.88: Power purchase cost for FY 2010-11 for Surat area

(Rs. crore)

Particulars	FY 2010-11		
	MYT order	ARR order	Revised estimate
TPL-G (SUGEN)	1066.23	966.31	1048.98
Power exchange	0.00	0.00	46.47
RPO / Wind energy	102.41	14.19	16.57
UI	0.00	0.00	0.00
Total	**1168.63**	**980.50**	**1112.03**

Commission's Analysis

The Commission has examined the revised estimate of power purchase cost submitted by the TPL. The Commission has also revised the energy requirement to 3370.97 MU against 3371.59 MU estimated by TPL. The power purchase cost is accordingly revised reducing the power purchase from power exchange.

The Commission, accordingly, considered power purchase cost is Rs. 1111.72 crore.

5.3.7 Fixed Charges

5.3.7.1 Operation and Maintenance (O&M) expenses

The TPL has claimed Rs. 96.88 crore in the RE for FY 2010-11. The O&M expenses approved by the Commission in the MYT order dated 17th January 2009 and in the Tariff order for FY 2010-11 dated 31st March 2010 and claimed by TPL in the RE based on actuals in the H_1 are as detailed in the table below:

Table 5.89: O&M expenses claimed by TPL-D Surat Area for FY 2010-11

(Rs. crore)

Particulars	FY 2010-11			
	MYT Order	ARR Order	H_1 Actual	Revised Estimate
Employee cost	37.84	37.84	19.55	39.40
R&M expenses	29.79	29.79	9.49	29.79
A&G expenses	27.69	27.69	11.04	27.69
Total O&M expenses	**95.32**	**95.32**	**40.08**	**96.88**

The O&M expenses submitted by the TPL comprise of Employee cost, Repairs and Maintenance expenses and Administration and General expenses. The O&M expenses are discussed component wise in the following paragraphs.

(i) Employee cost

The TPL has claimed a sum of Rs. 39.40 crore towards employee expenses in the RE for FY 2010-11 as against Rs. 37.84 crore approved in the MYT order of FY 2010-11.

Petitioner's submission

The TPL has submitted that the increase in employee cost is on account of change in gratuity policy of the Central Government and the impact of wage revision and requested the commission that the variation be considered as an uncontrollable factor.

Commission's Analysis

The Commission has noted that the increase in employee cost is due to wage revision. The net employee cost is Rs. 40.00 crore and the normalized employee cost is Rs. 34.80 crore. In the MYT order for FY 2010-11, the Commission permitted 6% escalation over FY 2009-10 employee cost. Considering 6% escalation over the normalized employee cost of Rs. 34.80 crore the employee cost works out to Rs. 36.89 crore.

The Commission, however considers Rs. 37.84 crore towards employee cost in the Review for FY 2010-11 as approved in the MYT order and as given in table below:

Table 5.90: Employee cost for TPL-D Surat Area considered in APR for FY 2010-11

(Rs. crore)

Particulars	MYT Order	Tariff Order	Claimed in RE	Considered for APR
Employee cost	37.84	37.84	39.40	37.84

(ii) Repairs & Maintenance (R&M) expenses

The TPL has claimed a sum of Rs. 29.79 crore towards R&M expenses in the APR for FY 2010-11 which is the same as approved in the MYT Order and also in the Tariff order for FY 2010-11.

Petitioner's submission

The TPL has submitted that the actual expenditure for R&M expenses in the H1of FY 2010-11 for Surat supply area are Rs. 9.49 crore and the revised estimate at Rs. 29.79 crore is in accordance with MYT order for FY 2010-11.

Commission's Analysis

The Commission considers Rs.29.79 crore in the review for FY 2010-11 as approved in the MYT order and Tariff order for FY 2010-11 and as projected by TPL as detailed in the table below:

Table 5.91: R&M expenses considered in APR for FY 2010-11

(Rs. crore)

Particulars	MYT Order	Tariff Order	Claimed in RE	Considered for APR
R&M expenses	29.79	29.79	29.79	29.79

(iii) Administration and General (A&G) expenses

The TPL has claimed a sum of Rs. 27.69 crore towards A&G expenses in the APR for FY 2010-11 against Rs. 27.69 crore approved in the MYT order as well as in the Tariff order for FY 2011.

Petitioner's submission

The petitioner has submitted that actual expenditure for A&G in H_1 of FY 2010-11 for Surat Supply is Rs. 11.04 crore and is estimated at Rs. 27.69 crore in the RE for FY 2010-11. The TPL has further submitted that it is contesting the imposition of Service Tax by the Service Tax Authority and that it would approach the Commission for the appropriate adjustments at the time of truing up.

Commission's Analysis

The A&G expenses are considered controllable expenses and the Commission retains these expenses at Rs. 27.69 crore approved in the MYT as well as Tariff order for FY 2010-11 which are as detailed in the table below:

Table 5.92: A&G expenses considered in APR for FY 2010-11

(Rs. crore)

Particulars	MYT Order	Tariff Order	Claimed in RE	Considered for APR
A&G expenses	27.69	27.69	27.69	27.69

The aggregate O&M expenses considered in the APR for FY 2010-11 are summarized in the table below:

Table 5.93: O&M expenses considered in the APR for FY 2010-11

(Rs. crore)

Particulars	FY 2010-11			
	MYT Order	Tariff Order	Claimed in RE	Considered for APR
Employee cost	37.84	37.84	39.40	37.84
R&M expenses	29.79	29.79	29.79	29.79
A&G expenses	27.69	27.69	27.69	27.69
Total O&M expenses	**95.32**	**95.32**	**96.88**	**95.32**

5.3.7.2 Capital expenditure

The TPL has estimated the capital expenditure at Rs. 56.88 crore in the APR for FY 2010-11 as against Rs. 73.21 crore approved in the MYT order and Rs. 89.09 crore approved in the Tariff order for FY 2010-11 which are detailed in the table below:

Table 5.94: Capital expenditure claimed by TPL-D Surat Area for FY 2010-11

(Rs. crore)

Particulars	FY 2010-11		
	MYT Order	ARR Order	Revised Estimate
EHV			
Replacement of Receiving Station Equipment	1.19	1.25	1.75
Testing and Measuring Equipment	0.1	0.15	0.19
C station Bus Modernization		0.53	-
Commissioning of additional Connectivity		11.15	-
Capacitor bank at Receiving Station	0.05	-	-
EHV Hardware Up gradation /Automation and Technology Up gradation		-	0.1
Forecasting Software for ABT		0.14	-
Total	**1.34**	**13.22**	**2.03**
HT Network			
HT Network Strengthening & Development	17.85	19.03	11.07
Dist. Transformer	7.21	4.56	3.65
11kVSwitchgears	4.42	4.46	3.20
Sub-Station &Others	1.4	1.35	1.15
LT Panel	0.41	0.74	0.66
Audit Meters	0.05	0.05	0.22
Automation	0.05	5.97	0.42
Miscellaneous	1.21	1.00	0.31
Total	**32.6**	**37.16**	**20.68**
LT Network			
LT Network Strengthening & Development	16.79	16.51	13.73
LT Breaker		0	0.12

Particulars	FY 2010-11		
	MYT Order	**ARR Order**	**Revised Estimate**
LT Capacitor & APFC	0.35	0.31	0.19
Total	**17.14**	**16.82**	**14.04**
Metering		**0**	**0**
Meters	14.45	11.41	7.47
Meter equipment & Accessories	0.87	0.69	0.53
AMR	3.71	2.98	-
Total	**19.03**	**15.08**	**8.01**
Customer care & IT initiative			
Gas	0	1.34	0
IT	1.42	1.65	1.60
Customer care	1.69	3.83	6.86
Total	3.11	6.82	8.46
220kV line		-	3.64
Grand Total	**73.21**	**89.09**	**56.88**

Petitioner's submission

The TPL has submitted that the capital expenditure in FY 2010-11 has been revised at Rs. 56.88 crore against the approval of Rs. 89.09 crore in the Tariff order for FY 2010-11. The TPL has explained the major variations as detailed below:

EHV Network: The Commission has approved capital expenditure of Rs. 13.22 Crores in the order no. 988/2010. The revised estimate for the year is Rs. 2.03 Crores amounting to a variation of Rs 11.19 Crore .The petitioner has explained the variation as an outcome of the deferment of interconnectivity of 66 kV sub-station due to deviations observed in the load patterns and growth areas .

Investment in HT Network: The Commission approved capital expenditure of Rs. 37.16 crores in the order no. 988/2010 as against the revised estimate for the year put at Rs. 20.68 crore and the variation of Rs 16.48 crores which has been explained as below

- The major variation is in the HT network strengthening & development activities with a reduction of Rs 7.96 Crores. The reduction is mainly due to deferment of projects on account of lower growth in the Ghod Dhod Road, parts of the Walled City, City Light Road and Krushi Farm. Therefore, the additional capital expenditure has not been incurred and the load has been catered from the existing network.
- Additionally, the capital expenditure of Rs 5.55 crores planned for automation has been deferred.

220 kV Line: An expenditure of Rs 3.65 crores has been included in the FY 2010-11 on account of installation of 220 kV F GIS receiving station.

Commission's Analysis

The TPL had submitted that the actual capital expenditure incurred during FY 2009-10 was Rs. 120.99 crore. The revision of CAPEX in FY 2010-11 has resulted in the reduction of Rs. 32.21 crore when compared to Rs. 89.09 approved in the previous order 988/2010. But when compared to the capital expenditure approved in MYT order the reduction is put at 16.33 crore. The Commission accepts the reduction proposed by TPL in the APR for FY 2010-11 for the Surat Supply Area.

The Commission, accordingly, considers the capital expenditure at Rs. 56.88 crore in the APR for FY 2010-11.

5.3.7.3 Interest expenses

The TPL has claimed a sum of Rs. 45.52 crore towards interest expenses in the revised estimate for FY 2010-11 as against Rs. 26.13 crore approved in the MYT Order and Rs. 44.64 crore approved in the ARR for FY 2010-11 which are detailed in the table below:

Table 5.95: Interest claimed for FY 2010-11

Particulars	(Rs. crore)
Surat Supply Area	
Existing loans	
APDRP	
Opening Balance	23.73
Repayments	1.21
Closing Balance	22.52
Interest Rate	9%
Interest Expense	2.09
IDFC I	
Opening Balance	35.71
Repayments	14.29
Closing Balance	21.43
Interest Rate	8.23%
Interest Expense	2.25
IDBI	
Opening Balance	73.38
Repayments	14.73
Closing Balance	58.65
Interest Rate	11%
Interest Expense	7.30

Particulars	(Rs. crore)
HDFC II	
Opening Balance	32.69
Repayments	7.69
Closing Balance	25.00
Interest Rate	11.50%
Interest Expense	3.38
LIC	
Opening Balance	87.50
Repayments	10.00
Closing Balance	77.50
Interest Rate	11.00%
Interest Expense	9.13
IDFC II	
Opening Balance	225.00
Repayments	25.00
Closing Balance	200.00
Interest Rate	11.00%
Interest Expense	17.89
Total	**42.04**
Loans drawn during the year FY 2010-11	
Capitalization during the year	56.88
Less: SLC additions	9.10
Less: Grant in aid	-
Normative Debt @ 70%	33.44
Opening balance	-
New borrowings	33.44
Repayments	9.55
Closing balance	22.54
Interest Expense	3.47
Total interest on loans	**45.52**

Petitioner's submission

The TPL has submitted that the interest expenses on loans would be on account of two types of loans.

(i) Existing loans: Actual loans drawn at starting of the year FY 2010-11 or opening balance of FY 2010-11 and

(ii) New loans: Loan drawn for the capital expenditure to be done in FY 2010-11

The TPL has further submitted that interest expense is an uncontrollable expense and is totally dependant on the actual capital expenditure incurred for the respective years.

Commission's Analysis

The opening balances of loans for FY 2010-11 are the same as closing balances of loans for the FY 2009-10 approved in the truing up for FY 2009-10. The new loans of Rs. 33.44 crore considered for drawal in FY 2010-11 are as per the capitalization of Rs. 56.88 crore and debt considered at 70% of the net capitalization of Rs. 47.78 crore after deducting the SLC of Rs. 9.10 crore.

The Commission, accordingly, considers the interest expenses at Rs. 45.52 crore in the APR for FY2010-11 as projected by TPL.

5.3.7.4 Interest on Security Deposit

The TPL has estimated the interest on security deposit at Rs. 8.78 crore in the revised estimate for FY 2010-11 against Rs. 5.97 crore approved in the MYT Order and Rs. 8.51 crore considered in the ARR order for FY 2010-11 which are all as detailed in the table below:

Table 5.96: Interest on security deposit claimed in respect of Surat Area for FY 2010-11

(Rs. crore)

Particulars	MYT Order	ARR Order	Revised estimate
Interest Rate	6%	6%	6%
Interest on Security Deposit	5.97	8.51	8.78

Petitioner's submission

The TPL has submitted that interest on security deposit has been worked out at 6% for the FY 2010-11 as approved by the Commission in previous order 988/2010. The interest expense on this item has increased as compared to the approved due to higher actual security deposit than that considered while issuing previous order.

Commission's Analysis

Since the petitioner has submitted that the interest expenses on security deposit have increased due to increase in the actual security deposit. The Commission considers and accepts the interest on security deposit at Rs. 8.78 crore as estimated by TPL in the RE for FY 2010-11.

5.3.7.5 Interest on working capital

The TPL has claimed a sum of Rs 26.13 crore as interest on working capital in the revised estimate for FY 2010-11 against Rs. 26.30 crore approved in the MYT order and Rs. 22.26 crore approved in the ARR order for FY 2010-11 which are all as detailed in the table below:

Table 5.97: Interest on working capital claimed for TPL-D Surat Area for FY 2010-11

(Rs. crore)

Particulars	MYT Order	ARR Order	Revised estimate
O&M expense for 1 month	7.94	7.94	8.07
1 % of GFA for maintenance spares	15.53	13.31	13.21
Receivables for 2 months	240.88	195.91	233.65
Normative Working Capital	264.35	217.16	254.94
Interest Rate	10.25%	10.25%	10.25%
Interest on Working Capital	**26.30**	**22.26**	**26.13**

Petitioner's submission

The TPL has submitted that interest on working capital is arrived at by applying the applicable interest rate on the working capital requirement computed in accordance with the GERC (Terms and Conditions for Determination of Tariff) Regulations, 2005.

Commission's Analysis

The Commission has examined the submission of TPL on the computation of normative working capital and interest thereon under GERC (Terms and Conditions for Determination of Tariff) Regulations, 2005, which are detailed as given in the table below:

Table 5.98: Interest on working capital for TPL-D Surat Area considered in APR for FY 2010-11

(Rs. crore)

Particulars	Claimed in revised estimate	Considered in APR
O&M expense for 1 month	8.07	7.94
1 % of GFA for maintenance spares	13.21	12.65
Receivables for 2 months	233.65	231.16
Normative Working Capital	254.94	251.75
Interest Rate	10.25%	10.25%
Interest on Working Capital	**26.13**	**25.80**

The Commission, accordingly, considers the interest on working capital at Rs. 25.80 crore in the APR for FY 2010-11.

5.3.7.6 Depreciation

The TPL has estimated the depreciation at Rs. 41.10 crore in the RE for FY 2010-11 as against Rs. 45.99 crore approved in the MYT Order and Rs. 41.09 crore approved in the ARR for FY 2010-11 which are detailed in the table below:

Table 5.99: Depreciation claimed for TPL-D Surat Area for FY 2010-11

(Rs. crore)

Particulars	MYT Order	ARR Order	Revised Estimate
Depreciation	45.99	41.09	41.10

Petitioner's submission

The TPL has submitted that it has bifurcated the assets into two categories i.e assets as on 31st March, 2009 and new assets capitalized after 31st March, 2009 for computation of depreciation. The depreciation rates as per CERC (Terms and Conditions of Tariff) Regulations, 2004 are used for estimation of depreciation for the assets as on 31st March, 2009. For new assets capitalized after 31st March, 2009 the depreciation is estimated by using the depreciation rates as per CERC (Terms and Conditions of Tariff) Regulations, 2009.

Commission's Analysis

The petitioner has computed the depreciation for FY 2009-10 using CERC depreciation rates for asset classification wise. The details of opening balance of assets as on 1st April, 2010, addition and deduction to the Gross Block during FY 2010-11 and the depreciation on the assets, asset classification wise are given in Form D-2 E, page 338 of the petition. The opening balance of assets for FY 2010-11 are as per the closing balance of assets as per the segregated and audited annual accounts for FY 2009-10. The addition of assets during FY 2010-11 is as per the capitalization of capital expenditure considered for FY 2010-11.

The Commission, accordingly, considers the depreciation at Rs. 41.10 crore in the APR for FY 2010-11

5.3.7.7 Return on equity

The TPL has estimated the return on equity at Rs.71.92 crore in the APR for FY 2010-11 as against Rs. 78.77 crore approved in the MYT Order and Rs. 75.39 crore approved in the ARR order for FY 2010-11 as detailed in the table below:

Table 5.100: Return on equity claimed by TPL-D Surat Area for FY 2010-11

(Rs. crore)

Particulars	FY 2010-11		
	MYT Order	ARR Order	Revised Estimate
Opening equity	558.86	526.65	506.53
Equity addition	17.68	23.75	14.33

Particulars	FY 2010-11		
	MYT Order	ARR Order	Revised Estimate
Closing equity	576.54	550.40	520.87
Return on equity @ 14%	**78.77**	**75.39**	**71.92**

Petitioner's submission

The TPL has submitted that the return on equity has been revised based on the revision of the opening and closing balance of equity due to actual capitalization at starting of FY 2010-11 and planned capitalization till the end of FY 2010-11. The return on equity is estimated at 14% on the average of the opening and closing balance of equity in FY 2010-11.

Commission's Analysis

The commission noted that the opening equity for FY 2010-11 is as per the closing equity for FY 2009-10 approved in the truing up for FY 2009-10. TPL has furnished the equity addition at Rs. 14.33 crore for FY 2010-11. The capitalization during FY 2010-11 after deducting the SLC is Rs. 47.78 crore and 30% of this works out to Rs. 14.33 crore. The return on equity works out to Rs. 71.92 crore and is as detailed in the table below:

Table 5.101: Return on equity considered in the APR for FY 2010-11

(Rs. crore)

Particulars	MYT Order	ARR Order	Revised Estimate	Considered for APR
Opening equity	558.86	526.65	506.53	506.53
Equity addition	17.68	23.75	14.33	14.33
Closing equity	576.54	550.40	520.87	520.87
Return on equity @ 14%	**78.77**	**75.39**	**71.92**	**71.92**

The Commission, accordingly, considers the return on equity at Rs. 71.92 crore in the APR for FY 2010-11.

5.3.7.8 Income Tax

The TPL has estimated the income tax at Rs. 17.90 crore in the APR for FY 2010-11 against Rs. 26.09 crore approved in the MYT order and Rs. 12.81 crore approved in the ARR for FY 2010-11 as detailed in the table below:

Table 5.102: Income Tax claimed for TPL-D Surat Area for FY 2010-11

(Rs. crore)

Particulars	MYT Order	ARR Order	Revised Estimate
Income Tax	26.09	12.81	17.90

Petitioner's submission

The TPL has submitted that the MAT rate has been revised at 19.93% and therefore it has revised the estimate based on the revised income tax rate and ROE to earn post tax ROE at 14% as per the Regulations.

Commission's Analysis

The Commission has revised the income tax to Rs.9.81 crore in the review order dated 05.09 2011.

The Commission, accordingly, considers income tax at Rs.9.81 crore in the APR for FY 2010-11.

Table 5.103: Income tax considered in the APR for FY 2010-11

(Rs. crore)

Particulars	MYT Order	ARR Order	Revised Estimate	Considered for APR
Income Tax	26.09*	12.81	17.90	9.81

*Revised to Rs.9.81 crore in the review order dated 05.09.2011

5.3.7.9 Non-Tariff income

The TPL has estimated the non-tariff income at Rs. 20.15 crore as actual in the APR for FY 2010-11 against Rs. 29.73 crore approved in the MYT order and Rs. 19.82 crore approved in the ARR order for FY 2010-11. The actual for the H_1 is given at Rs. 10.61 crore as detailed in the table below:

Table 5.104: Non-Tariff income of TPL-D Surat Area for FY 2010-11

(Rs. crore)

Particulars	MYT Order	ARR Order	H_1 Actual	Revised Estimate
Non-Tariff income	29.76	19.82	10.61	20.15

Petitioner's submission

The TPL has submitted that it has revised the non-tariff income based on H_1 of FY 2010-11 actual income.

Commission's Analysis

The Commission has noted that the actual non-tariff income during FY 2009-10 was Rs. 19.59 crore and the estimated non-tariff income is almost the same for FY 2010-11.

The Commission, accordingly, considers the non-tariff income at Rs. 20.15 crore in the APR for FY 2010-11.

Table 5.105: Non-Tariff income for TPL-D Surat Area considered for FY 2010-11

(Rs. crore)

Particulars	Claimed in RE	Considered in APR FY 2010-11
Non-Tariff income	20.15	20.15

5.3.7.10 Provision for bad debts

The TPL has claimed a sum of Rs. 1.40 crore towards bad debts in the APR for FY 2010-11 against Rs. 1.36 crore approved in the MYT order and Rs. 1.18 crore approved in the ARR order for FY 2010-11 as detailed in the table below:

Table 5.106: Provision for bad debts for TPL-D Surat Area for FY 2010-11

(Rs. crore)

Particulars	MYT Order	ARR Order	H_1 Actual	Revised Estimate
Provision for bad debts	1.36	1.18	0.18	1.40

Petitioner's submission

The TPL has submitted that it has revised the provision for bad debts with the revision of revenue requirement for FY 2010-11 at 0.1% on the revenue.

Commission's Analysis

The commission noted that the TPL has estimated the revenue from sale of power at Rs. 1386.95 crore in the APR for FY 2010-11. The bad debts at 0.1% of the revenue work out to Rs. 1.39 crore for FY 2010-11.

The Commission, accordingly, considers and accepts the provision for bad debts at Rs. 1.39 crore in the APR for FY 2010-11 as detailed in the table below:

Table 5.107: Provision for bad debts considered for TPL-D Surat Area for FY 2010-11

(Rs. crore)

Particulars	MYT Order	ARR Order	Claimed in RE	Considered in APR
Provision for bad debts	1.36	1.18	1.40	1.39

5.3.7.11 Contingency Reserve

The TPL has projected the contingency reserve at Rs. 0.40 crore in the APR for FY 2010-11 which is the same as approved in the MYT order as well as ARR order for FY 2010-11 as detailed in the table below:

Table 5.108: Contingency reserve for TPL-D Surat Area for FY 2010-11

(Rs. crore)

Particulars	MYT Order	ARR Order	Revised Estimate
Contingency Reserve	0.40	0.40	0.40

Commission's Analysis

The proposed contingency reserve is in accordance with the approval accorded in the past.

The Commission, accordingly approves the contingency reserve at Rs. 0.40 crore in the APR for FY 2010-11.

Table 5.109: Contingency reserve for TPL-D Surat Area considered for FY 2010-11

(Rs. crore)

Particulars	Claimed in RE	Considered in APR FY 2010-11
Contingency reserve	0.40	0.40

5.3.7.12 Revenue from sale of power

The TPL has estimated the revenue from sale of power at Rs. 1386.95 crore in the APR for FY 2010-11 as against Rs. 1355.68 crore approved in the MYT order and Rs. 1175.45 approved in the ARR order for FY 2010-11 as detailed the table below:

Table 5.110 : Revenue from sale of power for TPL-D Surat Area for FY 2010-11

(Rs. crore)

Particulars	MYT Order	ARR Order	H_1 Actual	Revised Estimate
Revenue from sale of power	1355.68	1175.45	1797.78	1386.95

Petitioner's submission

The TPL has submitted that the revenue from sale of power has been revised by computation from the revised sales and existing tariff rates for different category of consumers.

Commission's Analysis

The category wise sales and revenue for FY 2010-11 in respect of Surat Area are given in the petition. The Commission takes into consideration the revenue from sale of power at Rs. 1386.95 crore in the APR for FY 2010-11 as estimated by TPL. The sales and revenue for FY 2010-11 with existing tariff are summarised in the table below:

Table 5.111: Revenue from sale of power

(Rs. crore)

Category	MU	Fixed Charges	Energy Charges	Time of Use Charges	Power Factor Adjustment	Total
SURAT SUPPLY AREA						
Residential	588.62	2.50	194.11			196.61
Commercial	497.31	9.43	218.87			228.30
LTP	854.57	8.90	301.06			309.96
LTMD	958.11	16.89	373.66			390.55
HTMD - I	190.52	6.86	74.30	1.11		82.27
HTMD - II	50.53	1.89	19.62	0.98		22.49
Agriculture	0.72	0.01	0.04			0.05
GLP	22.57	0.04	7.33			7.37
Temporary	3.11		1.52			1.52
DOE	1.84		1.84			1.84
FPPPA						124.44
UI						21.54
Total	**3167.9**	**46.52**	**1192.35**	**2.09**		**1386.94**

5.3.8 Revised ARR for FY 2010-11

The ARR approved in the MYT order for FY 2010-11, in the Tariff Order dated 31st March, 2010, proposed by TPL in the RE for FY 2010-11 and considered by the Commission in the performance review for FY 2010-11 are given in the table below:

Table 5.112: ARR for TPL-D Surat Area considered in APR for FY 2010-11

(Rs. crore)

Sl. No.	Particulars	Approved in MYT Order for FY 2010-11	Approved in ARR Order for FY 2010-11	Claimed in RE for FY 2010-11	Considered in APR for FY 2010-11	Deviation (3-7) +/(-)
1	**2**	**3**	**4**	**5**	**6**	**7**
1	Power Purchase Cost	1168.72	980.50	1112.03	1111.72	57.00
2	Employee expenses	37.84	37.84	39.40	37.84	0.00
3	R&M Expenses	29.79	29.79	29.79	29.79	0.00
4	A&G Expenses	27.69	27.69	27.69	27.69	0.00
5	Depreciation	45.99	41.09	41.10	41.10	4.89
6	Interest on security deposit	5.97	8.51	8.78	8.78	(2.81)
7	Interest on Loan	26.13	44.64	45.52	45.52	(19.39)
8	Interest on working capital	26.30	22.26	26.13	25.80	0.50
9	Return on equity	78.77	75.39	71.92	71.92	6.85
10	Income Tax	26.09	12.81	17.90	9.81	16.28
11	Provision for Bad debts	1.36	1.18	1.40	1.39	(0.03)
12	Contingency Reserve	0.40	0.40	0.40	0.40	0.00
13	Less: Non-tariff income	29.76	19.82	20.15	19.59	(10.17)
14	**Net ARR**	**1445.29**	**1262.28**	**1401.91**	**1392.17**	**53.12**

The Commission has not considered any gain / loss in the performance review. The actual performance for FY 2010-11 will be reviewed with reference to the segregated audited annual accounts for FY 2010-11 and sharing of gain / loss as per GERC Regulations will be considered at the time of truing up for FY 2010-11.

Annexure 5.1

C – Station: Fuel cost in APR for FY 2010-11

Sl.No.	Item	Derivation	Unit	2010-11
1	Capacity	A	MW	60
2	PLF	B	%	65.11
3	Gross Generation	C	MU	342.22
4	Auxiliary Consumption	D	%	9.41%
5	Auxiliary Consumption	E=C*D	MU	32.20
6	Net Generation	Y=C-E	MU	310.02
7	Station Heat Rate	F	KCal/KWH.	3,130.00
8	Sp. Oil Consumption	G	gms/kWh	1.50
9	Gross Calorific Value of Coal	H	kcal/kg	4,492.32
10	Calorific value of Oil	I	kcal/kg	10,315.34
11	Overall Heat	J=C*F	G Cal	1071142.841
12	Heat from Oil	K=(C*G*I)/1000	G Cal	5295
13	Heat from Coal	L=J-K	G Cal	1065848
14	Transit loss of coal	M	%	1.90%
15	Coal Blend			
16	A) Indigenous Coal	X1	%	100.00%
17	B) Imported Coal	X2	%	0.00%
18	Actual Oil Consumption	N=C*G	MT	513
19	Actual Coal Consumption	O=(L*1000)/H	MT	237260
20	A) Indigenous Coal	Q1=O*X1/(1-M)	MT	241855.22
21	B) Imported Coal	Q2=O*X2	MT	0.00
22	Price of Coal			
23	A) Indigenous Coal	P1	Rs/MT	3148.54
24	C) Imported Coal	P2	Rs/MT	
25	Price of Oil	P3	Rs/MT	27914.71
26	Coal cost			
27	A) Indigenous Coal	N1=Q1*P1/10^5	Rs Lakh	7614.91
28	B) Imported Coal	N2=Q2*P2/10^5	Rs Lakh	0
29	Total Coal Cost	N3=N1+N2	Rs Lakh	7615
30	Oil Cost	N4=P3*N/10^5	Rs Lakh	143
31	Total Fuel Cost	P=N3+N4	Rs Lakh	7758
32	Fuel Cost/Unit Gross	Q=P/(C*10)	Rs/kWh	2.27
33	Fuel Cost/Unit Net	R=P/(Y*10)	Rs/kWh	2.50
34	Cost of fuel/G.Cal	S=(P/J)*10^5	Rs/Gcal	724

Annexure 5.2

D – Station: Fuel cost in APR for FY 2010-11

Sl.No.	Item	Derivation	Unit	2010-11
1	Capacity	A	MW	120
2	PLF	B	%	85.4
3	Gross Generation	C	MU	897.72
4	Auxiliary Consumption	D	%	8.73%
5	Auxiliary Consumption	E=C*D	MU	78.37
6	Net Generation	Y=C-E	MU	819.35
7	Station Heat Rate	F	KCal/KWH.	2,433.00
8	Sp. Oil Consumption	G	gms/kWh	0.69
9	Gross Calorific Value of Coal	H	kcal/kg	4,818.07
10	Calorific value of Oil	I	kcal/kg	10,319.31
11	Overall Heat	J=C*F	G Cal	2184164.438
12	Heat from Oil	K=(C*G*I)/1000	G Cal	6392
13	Heat from Coal	L=J-K	G Cal	2177772
14	Transit loss of coal	M	%	1.90%
15	Coal Blend			
16	A) Indigenous Coal	X1	%	62.00%
17	B) Imported Coal	X2	%	38.00%
18	Actual Oil Consumption	N=C*G	MT	619
19	Actual Coal Consumption	O=(L*1000)/H	MT	452001
20	A) Indigenous Coal	Q1=O*X1/(1-M)	MT	285668.30
21	B) Imported Coal	Q2=O*X2	MT	171760.37
22	Specific Coal Consumption			
23	Price of Coal	P1	Rs/MT	
24	A) Indigenous Coal	P2	Rs/MT	3006.07
25	B) Imported Coal	P3	Rs/MT	4557.09
26	Price of Oil			22829.82
27	Coal cost	N1=Q1*P1/10^5	Rs Lakh	
28	A) Indigenous Coal	N2=Q2*P2/10^5	Rs Lakh	8587.39
29	B) Imported Coal	N3=N1+N2	Rs Lakh	7827
30	Total Coal Cost	N4=P3*N/10^5	Rs Lakh	16415
31	Oil Cost	P=N3+N4	Rs Lakh	141
32	Total Fuel Cost	Q=P/(C*10)	Rs/kWh	16556
33	Fuel Cost/Unit Gross	R=P/(Y*10)	Rs/kWh	1.84
34	Fuel Cost/Unit Net	S=(P/J)*10^5	Rs/Gcal	2.02
35	Cost of fuel/G.Cal	T=(P/J)*10^5		758

Annexure 5.3

E – Station: Fuel cost in APR for FY 2010-11

Sl.No.	Item	Derivation	Unit	2010-11
1	Capacity	A	MW	110
2	PLF	B	%	85.25
3	Gross Generation	C	MU	821.47
4	Auxiliary Consumption	D	%	8.73%
5	Auxiliary Consumption	E=C*D	MU	71.71
6	Net Generation	Y=C-E	MU	749.75
7	Station Heat Rate	F	KCal/KWH.	2,707.00
8	Sp. Oil Consumption	G	gms/kWh	0.60
9	Gross Calorific Value of Coal	H	kcal/kg	4,787.70
10	Calorific value of Oil	I	kcal/kg	10,325.66
11	Overall Heat	J=C*F	G Cal	2223716.583
12	Heat from Oil	K=(C*G*I)/1000	G Cal	5089
13	Heat from Coal	L=J-K	G Cal	2218627
14	Transit loss of coal	M	%	1.90%
15	Coal Blend			
16	A) Indigenous Coal	X1	%	66.00%
17	B) Imported Coal	X2	%	34.00%
18	Actual Oil Consumption	N=C*G	MT	493
19	Actual Coal Consumption	O=(L*1000)/H	MT	463401
20	A) Indigenous Coal	Q1=O*X1/(1-M)	MT	311768.58
21	B) Imported Coal	Q2=O*X2	MT	157556.50
22	Specific Coal Consumption			
23	Price of Coal	P1	Rs/MT	
24	A) Indigenous Coal	P2	Rs/MT	3020.34
25	C) Imported Coal	P3	Rs/MT	4543.90
26	Price of Oil			21579.76
27	Coal cost	N1=Q1*P1/10^5	Rs Lakh	
28	A) Indigenous Coal	N2=Q2*P2/10^5	Rs Lakh	9416.47
29	B) Imported Coal	N3=N1+N2	Rs Lakh	7159
30	Total Coal Cost	N4=P3*N/10^5	Rs Lakh	16576
31	Oil Cost	P=N3+N4	Rs Lakh	106
32	Total Fuel Cost	Q=P/(C*10)	Rs/kWh	16682
33	Fuel Cost/Unit Gross	R=P/(Y*10)	Rs/kWh	2.03
34	Fuel Cost/Unit Net	S=(P/J)*10^5	Rs/Gcal	2.23
35	Cost of fuel/G.Cal	T=(P/J)*10^5		750

Annexure 5.4

F – Station: Fuel cost in APR for FY 2010-11

Sl.No.	Item	Derivation	Unit	2010-11
1	Capacity	A	MW	110
2	PLF	B	%	85.89
3	Gross Generation	C	MU	827.64
4	Auxiliary Consumption	D	%	8.73%
5	Auxiliary Consumption	E=C*D	MU	72.25
6	Net Generation	Y=C-E	MU	755.38
7	Station Heat Rate	F	KCal/KWH.	2,708.00
8	Sp. Oil Consumption	G	gms/kWh	0.60
9	Gross Calorific Value of Coal	H	kcal/kg	4,791.93
10	Calorific value of Oil	I	kcal/kg	10,326.93
11	Overall Heat	J=C*F	G Cal	2241238.396
12	Heat from Oil	K=(C*G*I)/1000	G Cal	5128
13	Heat from Coal	L=J-K	G Cal	2236110
14	Transit loss of coal	M	%	1.90%
15	Coal Blend			
16	A) Indigenous Coal	X1	%	65.00%
17	B) Imported Coal	X2	%	35.00%
18	Actual Oil Consumption	N=C*G	MT	497
19	Actual Coal Consumption	O=(L*1000)/H	MT	466641
20	A) Indigenous Coal	Q1=O*X1/(1-M)	MT	309191.18
21	B) Imported Coal	Q2=O*X2	MT	163324.29
22	Specific Coal Consumption			
23	Price of Coal	P1	Rs/MT	
24	A) Indigenous Coal	P2	Rs/MT	3020.01
25	C) Imported Coal	P3	Rs/MT	4517.50
26	Price of Oil			21427.91
27	Coal cost	N1=Q1*P1/10^5	Rs Lakh	
28	A) Indigenous Coal	N2=Q2*P2/10^5	Rs Lakh	9337.60
29	B) Imported Coal	N3=N1+N2	Rs Lakh	7378
30	Total Coal Cost	N4=P3*N/10^5	Rs Lakh	16716
31	Oil Cost	P=N3+N4	Rs Lakh	106
32	Total Fuel Cost	Q=P/(C*10)	Rs/kWh	16822
33	Fuel Cost/Unit Gross	R=P/(Y*10)	Rs/kWh	2.03
34	Fuel Cost/Unit Net	S=(P/J)*10^5	Rs/Gcal	2.23
35	Cost of fuel/G.Cal	T=(P/J)*10^5		751

Annexure 5.5

Vatva-CCPP: Fuel cost in APR for FY 2010-11

S.No	Particulars	Deviation	UOM	2010-11
1	Capacity	A	MW	100
2	PLF	B	%	80.45%
3	Generation (gross)	C=A*8760*B /1000	MU	704.74
4	Auxilary Consumption	D	%	2.74%
5	Auxilary Consumption	E	MU	19.31
6	Net Generation	F	MU	685.43
7	Heat Rate	G	kcal/kwh	2137
8	Total Heat	H=(C*G)	M kcal	1506033.65
9	Specific Gas Consumption	I	kcal/MMBtu	252
10	Actual Gas Consumption	J=(H/I)	MMBtu	5976.32
11	Cost of Gas per MMBtu	K	Rs./MMBtu	260.48
12	Total Cost of Gas	L=(J*K)/100	Rs. lakhs	15567.13
13	Fuel cost / unit gross	M=L/C*10	Rs/kWh	2.21
14	Fuel cost / unit net	N=L/F*10	Rs/KWh	2.27

6. Aggregate Revenue Requirement (ARR) for the control period FY 2011-12 to FY 2015-16 and determination of tariff for FY 2011-12

6.0 Introduction

The TPL has submitted the petition for approval of Aggregate Revenue Requirement (ARR) for generation, Ahmedabad distribution and Surat distribution for the control period FY 2011-12 to FY 2015-16.

The Commission has studied and analyzed each component of the ARR in the following paragraphs.

6.1 TPL-Generation (APP)

6.1.1 Generating Stations of TPL-G (APP) and their performance

The details of generating stations of TPL-G (APP) as on 1st April, 2011 along with their capacities are as given in the table below:

Table 6.1: Capacity, COD and age of TPL-G (APR) Generating Stations as on 1st April, 2011

Name of the station	Capacity in MW	Year of COD	Age/Year
Sabarmati Thermal Power Plant (Coal based)			
C Station	2X30MW	1961/1997 (Year of turbine retrofitting)	50
D Station	1X120MW	1978/2004 (Uprating capacity)	33
E Station	1X110MW	1984	27
F Station	1X110MW	1988	23
Vatva Combined Cycle Power Plant (Gas based)			
Gas turbine	2X32.5MW	1990 & 1991	21
Steam turbine	1X35MW	1991	20

6.1.2 Performance of generating stations

The TPL's projections for the MYT period and Commission's analysis and decisions.

The actual performance of the stations for FY 2009-10 and RE for FY 2010-11 as provided by the TPL and the Commission's analysis and decisions are already discussed in the chapters 4 and 5.

The TPL has submitted that it has prepared the MYT petition for TPL-G (APP) in accordance with the Regulation 6.1 of the GERC (MYT Framework) Regulations, 2007. It has also submitted that the estimates of operational parameters and cost of generation are developed for FY 2010-11 as per approved parameters. However, the TPL requested the Commission to allow necessary adjustments in operating norms (SHR, auxiliary consumption, secondary fuel oil consumption-SFC etc) during the control period FY 2011-12 to FY 2015-16 in view of lower PLF due to various reasons.

The improvement in the parameters of E & F stations have been considered as per the anticipated capital expenditure to be incurred in each station during the control period FY 2011-12 to FY 2015-16.

The projections of TPL for the control period and the analysis of the Commission are discussed below parameter-wise.

The Commission has considered the vintage of the TPL-G (APP) thermal plants, constraints in the operation etc and fixed certain operation parameters for each of them for the control period FY 2011-12 to FY 2015-16 in the MYT Regulations, 2011. These parameters are taken note of while determining the tariff during the control period.

6.1.2.1 Plant Availability Factor (PAF)

Petitioner's submission

The TPL projected plant availability factor (PAF) for all the stations for the control period as given in the table below:

Table 6.2: Projected Plant Availability Factor for the control period FY 2011-12 to FY 2015-16

(%)

Sl. No.	Station	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
	Sabarmati					
1.	C Station	98.10	97.50	97.50	-	-
2.	D Station	91.80	97.50	97.50	97.50	87.70
3.	E Station	97.50	75.30	97.50	97.50	96.70
4.	F Station	97.50	75.30	97.50	97.50	97.50
5.	**Vatva Gas Station**					
	STG	98.10	98.60	95.10	98.60	98.60
	GTG-1	98.10	95.10	95.10	98.60	94.30
	GTG-2	98.10	98.60	95.10	98.60	98.60

The TPL has submitted that the PAF has been computed after considering annual shutdown of the units without factoring the aspects of forced outage and shutdown of the unit due to low system demand. The TPL has tabulated the planned maintenance days for each unit as given in the table below:

Table 6.3: Projected planned maintenance of TPL-G (APP) for the control period FY 2011-12 to FY 2015-16

(No. of days)

Sl. No.	Station	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
	Sabarmati					
1.	C Station	7	9	9	-	-
2.	D Station	30	9	9	9	45
3.	E Station	9	90	9	9	12
4.	F Station	9	90	9	9	9
5.	**Vatva Gas Station (CCPP)**					
	STG	7	5	18	5	5
	GTG-1	7	18	18	5	21
	GTG-2	7	5	18	5	5

The TPL has also submitted that apart from scheduled plant maintenance, C station is proposed to be removed from operation form 1st April, 2014. But the issue of plant's continuation may be reviewed on the basis of its operational conditions and requirements. It has also been submitted that the PAF may undergo change due to forced outages, backing downs and other unforeseen circumstances.

Commission's Analysis

The Commission has analyzed the submission made by the petitioner with regard to the vintage of the machines, past performance etc, and approved PAF for each stations, as projected by TPL as given in the table below:

Table 6.4: Approved Plant Availability Factor for TPL-G (APP) for the control period FY 2011-12 to FY 2015-16

(%)

Sl. No.	Station	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
	Sabarmati					
1.	C Station	98.10	97.50	97.50	-	-
2.	D Station	91.80	97.50	97.50	97.50	87.70
3.	E Station	97.50	75.30	97.50	97.50	96.70
4.	F Station	97.50	75.30	97.50	97.50	97.50
5.	**Vatva Gas Station**	98.10	95.10	95.10	98.60	94.30

6.1.2.2 Plant Load Factor (PLF)

Petitioner's submission

The TPL has projected the plant load factor for all the stations for the control period as given in the table below:

Table 6.5: Projected Plant Load Factor for the control period FY 2011-12 to FY 2015-16

(%)

Sl. No.	Station	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
	Sabarmati					
1.	C Station	78.54	80.18	78.19	-	-
2.	D Station	83.59	85.41	79.88	77.56	70.44
3.	E Station	80.74	64.25	81.33	78.03	77.92
4.	F Station	82.97	65.77	82.62	78.51	78.89
5.	**Vatva Gas Station**	**88.56**	81.88	76.48	77.88	76.91

The TPL has submitted that the PLF is proposed considering the factors like Merit Order Despatch (MOD), aging and minimum technical load etc. Since the upgradation works of E&F stations are planned during FY 2012-13, the consequent PAF & PLF have been projected lower than that of previous corresponding years.

Commission's Analysis

The Commission has analyzed the submission made by the TPL with regard to the aging of the equipments and planned maintenance schedules and accordingly approved PLF for different stations as projected by the TPL in the table as given below:

Table 6.6: Approved Plant Load Factor for TPL-G (APP) for control period FY 2011-12 to FY 2015-16

(%)

Sl. No.	Station	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
	Sabarmati					
1.	C Station	78.54	80.18	78.19	-	-
2.	D Station	83.59	85.41	79.88	77.56	70.44
3.	E Station	80.74	64.25	81.33	78.03	77.92

Sl. No.	Station	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
4.	F Station	82.97	65.77	82.62	78.51	78.89
5.	Vatva Gas Station	88.56	81.88	76.48	77.88	76.91

6.1.2.3 Auxiliary consumption

Petitioner's submission

The TPL has projected the auxiliary consumption for all the stations for the control period, as given in the table below:

Table 6.7: Projected Auxiliary consumption for the control period FY 2011-12 to FY 2015-16

(%)

Sl. No.	Station	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
	Sabarmati					
1.	C Station	9.50	9.50	9.50	-	-
2.	D Station	9.00	9.00	9.00	9.00	9.00
3.	E Station	9.00	9.00	9.00	9.00	9.00
4.	F Station	9.00	9.00	9.00	9.00	9.00
5.	**Vatva Gas Station**	3.00	3.00	3.00	3.00	3.00

In its petition TPL has submitted on the projected auxiliary consumption as follows:

- It has proposed the auxiliary consumption as approved by the Commission in its order in case No. 988/2010 dated 31st March 2010.
- The plants with similar unit size, as in other states, and that of units in D,E and F stations of TPL-G (APP) are approved for auxiliary consumption of 10 to 12% .
- Station C is around 50 years old and hence, the performance is lower than the approved level of 9.5% indicated by the Commission in the last order. The other plants with similar profile (age and unit size) across the country have higher auxiliary consumption levels.
- To consider the proposed auxiliary consumption for MYT second control period, subject to review as may be required.

Commission's Analysis

The Commission has analyzed the submission made by the petitioner on vintage of the machines, past performance etc and approved auxiliary consumption norms for different stations on the basis of the GERC (MYT) Regulations, 2011 as given in the table below:

Table 6.8: Approved Auxiliary consumption for TPL-G (APP) for the control period FY 2011-12 to FY 2015-16

(%)

Sl. No.	Station	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
	Sabarmati					
1.	C Station	9.50	9.50	9.50	-	-
2.	D Station	9.00	9.00	9.00	9.00	9.00
3.	E Station	9.00	9.00	9.00	9.00	9.00
4.	F Station	9.00	9.00	9.00	9.00	9.00
5.	**Vatva Gas Station**	3.00	3.00	3.00	3.00	3.00

The Commission may revise the norms for the auxiliary energy consumption for the above, mentioned generating stations in case of Renovation and Modernization of the generating stations as envisaged in the clause 54.6 (b) of the GERC (MYT) Regulations, 2011.

6.1.2.4 Station Heat Rate (SHR)

Petitioner's submission

The TPL has projected the SHR of different stations for the control period of FY 2011-12 to FY 2015-16, as given in the table below:

Table 6.9: Projected Station Heat Rate for the control period FY 2011-12 to FY 2015-16

(Kcal/kWh)

Sl. No.	Station	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
	Sabarmati					
1.	C Station	3150	3150	3150	-	-
2.	D Station	2450	2450	2450	2450	2450
3.	E Station	2725	2590	2455	2455	2455
4.	F Station	2705	2668	2455	2455	2455
5.	**Vatva Gas Station**	**2165**	**2165**	**2165**	**2165**	**2165**

In its petition TPL has submitted on the proposed SHR as follows:

- The SHR for all the stations is proposed at the levels approved by the Commission in its order in case No. 988/2010 dated 31st March, 2010, duly taking into consideration the anticipated improvements in the performance of E&F stations after the Renovation and Modernization works.
- The TPL would approach the Commission for appropriate adjustment in SHR for various stations on the basis of the lower PLF on their respective SHR.

Commission's Analysis

The Commission has analyzed the submission made by the TPL.

The SHR proposed for the stations C & D and Vatva (CCPP) are in accordance with those permitted levels as per the GERC (MYT) Regulations, 2011. For E&F stations, however, TPL proposed better SHR 2725 to 2455 Kcal/kWh in the case of E station and 2705 to 2455 Kcal/kWh in the case of F station against 2725 Kcal/kWh for all the years of the control period FY 2011-12 to FY 2015-16 as per GERC (MYT) Regulations, 2011.

Clause 4.1 of MYT Regulations, 2011 provides that:
"For removal of doubts, it is clarified that the norms of operation specified under these Regulations are the ceiling norms and this shall not preclude the Generating Company or the Transmission Licensee or the Distribution Licensee, as the case may be, and the beneficiaries from agreeing to improved norms of operation and in case the improved norms are agreed to, such improved norms shall be applicable for determination of tariff."

In view of the above, the Commission approves the SHR for different stations including the E & F stations for the control period for FY 2011-12 to FY 2015-16 as projected by TPL and are as given in the table below:

Table 6.10: Approved Station Heat Rate for TPL-G (APP) for the control period FY 2011-12 to FY 2015-16

(Kcal/kWh)

Sl. No.	Station	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
	Sabarmati					
1.	C Station	3150	3150	3150	-	-
2.	D Station	2450	2450	2450	2450	2450
3.	E Station	2725	2590	2455	2455	2455
4.	F Station	2705	2668	2455	2455	2455
5.	**Vatva Gas Station**	2165	2165	2165	2165	2165

The Commission is of the view that there is no need for review of the SHR approved, at a later date, as submitted by TPL.

6.1.2.5 Secondary Fuel Oil Consumption (SFC)

Petitioner's submission

The TPL projected the secondary fuel oil consumption of different stations for the control period FY 2011-12 to FY 2015-16 as given in the table below:

Table 6.11: Projected Secondary Fuel Oil Consumption for the control period FY 2011-12 to FY 2015-16

(In gms/kWh)

Sl. No.	Station	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
	Sabarmati					
1.	C Station	2.09	2.09	2.09	-	-
2.	D Station	1.04	1.04	1.04	1.04	1.04
3.	E Station	1.04	1.04	1.04	1.04	1.04
4.	F Station	1.04	1.04	1.04	1.04	1.04

In its petition the TPL has submitted on the proposed secondary fuel oil consumption for the MYT period as follows

- The SFC for the control period is proposed in accordance with the levels approved for FY 2010-11 by the Commission, in its order in case No. 988/2010 dated 31st March, 2010, which are also recommended by CEA.
- The Coal based thermal power plants require support of RFO / HSD for start up of boiler. The number of start up and shutdowns would increase during the control period and also result in increase in secondary fuel oil consumption levels.
- The TPL would approach the Commission for appropriate adjustments in SFCs after observing the impact of varying load conditions on their respective SFCs.

Commission's Analysis

The Commission has analyzed the submission made by the TPL with regard to aging of the machines, past performance etc and approves secondary fuel oil consumption for different stations taking into account the GERC (MYT) Regulations, 2011 which are as given in the table below:

Table 6.12: Approved secondary fuel oil consumption for TPL-G (APP) for the control period FY 2011-12 to FY 2015-16

(ml/kWh)*

Sl. No.	Station	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
	Sabarmati					
1.	C Station	2.00	2.00	2.00	-	-
2.	D Station	1.00	1.00	1.00	1.00	1.00
3.	E Station	1.00	1.00	1.00	1.00	1.00
4.	F Station	1.00	1.00	1.00	1.00	1.00

The Commission could consider to revise the norms for the secondary fuel consumption for the above mentioned generating stations, in case of Renovation and Modernization undertaken by the generating stations as envisaged in clause 54.4 of GERC (MYT) Regulations, 2011.

6.1.2.6 Transit loss of coal

Petitioner's submission

In its petition the TPL has projected transit loss of coal for the control period for FY 2011-12 to FY 2015-16 as given in the table below:

Table 6.13: Projected Transit loss of coal for the control period FY 2011-12 to FY 2015-16

(%)

Station	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
All stations	3.00	3.00	3.00	3.00	3.00

The TPL has submitted that various uncontrollable factors such as (i) natural factors e.g. evaporation, wind and spillover of fine coal through the wagon (ii) theft and pilferage etc. as the coal has to be transported over a long distances as the reasons for the high incidence of transit loss.

Commission's Analysis

The Commission has analyzed the submissions made by the TPL and is of the opinion that there is no justification for such high incidence of transit loss. Accordingly, the Commission approves the transit loss in accordance with the GERC (MYT) Regulations, 2011 which are as given in the table below:

Table 6.14: Approved Transit loss of coal for the control period FY 2011-12 to FY 2015-16

(%)

Station	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
All stations	1.40	1.20	1.00	0.90	0.80

The Commission has reiterated that the claim of transit loss is permissible only in the case of indigenous coal.

6.1.3 Performance parameters approved

Based on the decisions in the earlier paragraphs the performance parameters approved by the Commission for the control period FY 2011-12 to FY 2015-16 for different stations are summarized as in the table below:

Table 6.15: Approved parameters of PAF, PLF, Auxiliary consumption, station heat rate, specific oil consumption and coal transit loss for FY 2011-12 to FY 2015-16

Station	PAF (%)					PLF (%)					Auxiliary consumption (%)				
	2011-12	2012-13	2013-14	2014-15	2015-16	2011-12	2012-13	2013-14	2014-15	2015-16	2011-12	2012-13	2013-14	2014-15	2015-16
C	98.10	97.50	97.50	-	-	78.54	80.18	78.19	-	-	9.50	9.50	9.50	-	-
D	91.80	97.50	97.50	97.50	87.70	83.59	85.41	79.88	77.56	70.44	9.00	9.00	9.00	9.00	9.00
E	97.50	75.30	97.50	97.50	96.70	80.74	64.25	81.33	78.03	77.92	9.00	9.00	9.00	9.00	9.00
F	97.50	75.30	97.50	97.50	97.50	82.97	65.77	82.62	78.51	78.89	9.00	9.00	9.00	9.00	9.00
Vatva	98.10	95.10	95.10	98.60	94.30	88.56	81.88	76.48	77.88	76.91	3.00	3.00	3.00	3.00	3.00

Station	Heat Rate (Kcal/kWh)					Secondary fuel oil consumption (ml/kWh)					Transit loss of coal (%)				
	2011-12	2012-13	2013-14	2014-15	2015-16	2011-12	2012-13	2013-14	2014-15	2015-16	2011-12	2012-13	2013-14	2014-15	2015-16
C	3150	3150	3150	-	-	2.00	2.00	2.00	-	-	1.40	1.20	1.00	0.90	0.80
D	2450	2450	2450	2450	2450	1.00	1.00	1.00	1.00	1.00	1.40	1.20	1.00	0.90	0.80
E	2725	2590	2455	2455	2455	1.00	1.00	1.00	1.00	1.00	1.40	1.20	1.00	0.90	0.80
F	2705	2668	2455	2455	2455	1.00	1.00	1.00	1.00	1.00	1.40	1.20	1.00	0.90	0.80
Vatva	2165	2165	2165	2165	2165	-	-	-	-	-	-	-	-	-	-

6.1.4 Projected Gross and Net generation

Petitioner's submission

The TPL has projected the gross and net generation of different stations with the projected PLF and auxiliary consumption for the control period FY 2011-12 to FY 2015-16 as given in the table below:

Table 6.16: Projected gross and net generation for the control period FY 2011-12 to FY 2015-16

(MU)

Sl. No.	Station	FY 2011-12		FY 2012-13		FY 2013-14		FY 2014-15		FY 2015-16	
		Gross	Net	Gross	Net	Gross	Net	Gross	Net	Gross	Net
	Sabarmati										
1.	C Station	413.96	374.63	421.43	381.39	410.96	371.92	-	-	-	-
2.	D Station	881.09	801.79	897.87	817.06	839.74	764.17	815.26	741.89	742.50	675.87
3.	E Station	780.18	709.96	640.08	582.47	854.95	778.00	820.28	746.46	821.31	747.39
4.	F Station	801.65	729.50	640.08	582.47	868.52	790.35	825.27	751.00	831.52	756.68
5.	**Vatva Gas Station**	777.94	754.61	717.23	695.71	669.99	649.89	682.27	661.80	675.56	655.29
	Total	**3654.82**	**3370.49**	**3316.69**	**3059.11**	**3644.16**	**3354.33**	**3143.09**	**2901.14**	**3070.89**	**2835.05**

6.1.4.1 Approved Gross and Net Generation

The gross and net generation for different stations in the TPL as approved by the Commission based on the permissible parameters of PLF and auxiliary consumption as discussed in the earlier paragraphs are as given in the table below:

Table 6.17: Approved gross and net generation for the control period FY 2011-12 to FY 2015-16

(MU)

Sl. No.	Station	FY 2011-12		FY 2012-13		FY 2013-14		FY 2014-15		FY 2015-16	
		Gross	Net	Gross	Net	Gross	Net	Gross	Net	Gross	Net
	Sabarmati										
1.	C Station	413.94	374.61	421.43	381.39	410.97	371.92	-	-	-	-
2.	D Station	881.11	801.81	897.83	817.03	839.70	764.13	815.31	741.93	742.49	675.67
3.	E Station	780.14	709.93	640.11	582.50	854.94	778.00	820.25	746.43	821.34	747.42
4.	F Station	801.69	729.54	655.25	596.28	868.50	790.34	825.30	751.02	831.56	756.72
5.	**Vatva Gas Station**	777.91	754.57	717.27	695.75	669.96	649.87	682.23	661.76	675.57	655.29
	Total	**3654.89**	**3370.46**	**3331.89**	**3072.95**	**3644.07**	**3354.26**	**3143.09**	**2901.14**	**3070.96**	**2835.10**

6.1.5 Generation costs – Variable (Energy) and Capacity (Fixed) charges

6.1.5.1 Variable costs (Energy charges)

The performance parameters for different stations are as discussed in the earlier paragraphs and approved for the control period from FY 2011-12 to FY 2015-16. The variable cost (mostly fuel cost) depends on the cost parameters such as GCV of fuel used, blending ratio of coal and price of fuel. TPL-G (APP) stations run on both coal and gas. For coal stations, a mix of indigenous and imported coal is used.

It is basically decided to adopt the cost parameters, (except blending ratio of coal) as actually obtained during the FY 2010-11 for the control period FY 2011-12 to FY 2015-16, with the provision to pass on any difference in fuel cost achieved due to variation in cost parameters to the consumers during the control period as per the FPPPA formula.

The TPL projections and Commission's analysis on the mix of coal, Wt Av GCV of fuels to be consumed and Wt Av Price of fuel for different stations are discussed as below:

6.1.5.2 Blending ratio of coal

Petitioner's submission

In its petition the TPL has projected the blending ratio of indigenous and imported coal for the control period FY 2011-12 to FY 2015-16, which are as given in the table below:

Table 6.18: Projected blending ratio of coal of TPL-G (APP) for the control Period FY 2011-12 to FY 2015-16, for all the stations put together

(%)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Indigenous coal	73	81	75	91	93
Imported coal	27	19	25	9	7

The TPL has submitted that the coal requirement is primarily met from indigenous sources and any additional requirement in case of constraints in supply is met from imported sources. Since the PLF claimed for the stations are lower as compared to previous years, the utilization of imported coal would accordingly be lower and hence resulting in improvement in the blending ratio. Further, as the vintage C station will be taken out of operation in FY 2014-15, the imported coal requirement will be further lower during FY 2014-15 and FY 215-16.

In real time operations, the blending ratio and the fuel cost will also change from the proposed level depending on various system parameters and availability of other generation sources etc.

As per the additional information furnished by the TPL in its letter dated 2nd June, 2011, the projected blending ratio of coal for the individual stations are as in the table below:

Table 6.19: Projected blending ratio of coal for different stations for the control Period FY 2011-12 to FY 2015-16

(In % of indigenous : imported)

Stations	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
C	100:00	100:00	100:00	-	-
D	67:33	76:24	69:31	91:09	93:07
E	67:33	76:24	69:31	91:09	93:07
F	67:33	76:24	69:31	91:09	93:07

Commission's Analysis

The submission of the petitioner with regard to blending ratio of coal as projected for the control period is considered and approved as given in the table below:

Table 6.20: Approved blending ratio of coal for different stations for the control Period FY 2011-12 to FY 2015-16

(indigenous : imported)

Stations	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
C	100:00	100:00	100:00	-	-
D	67:33	76:24	69:31	91:09	93:07
E	67:33	76:24	69:31	91:09	93:07
F	67:33	76:24	69:31	91:09	93:07

6.1.5.3 Weighted Average Gross Calorific Value of fuel

The TPL has projected the Wt Av GCV of different fuels, for the control period for FY 2011-12 to FY 2015-16 as given in the table below:

Table 6.21 (a): Projected Wt Av GCV of fuel of TPL-G (APP) for the control Period FY 2011-12 to FY 2015-16

(Kcal/kWh)

Sabarmati Stations C,D,E & F	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Indigenous coal	4264	4264	4264	4264	4264
Imported coal	5193	5193	5193	5193	5193
Secondary fuel oil	10278	10278	10278	10278	10278

The TPL submitted that the calorific vale of fuel proposed is based on the actual gross calorific value of coal received in the second quarter (Q_2) of FY 2010-11. It is also stated the quality of coal has been deteriorating over the years and the fuel linkages with CIL / SECL have been converted into fuel supply agreements from 1st April 2009.

The TPL has not projected any Wt Av GCV for gas. It is stated that it has entered into heat value contract (Rs/MMBTU) for gas sourcing.

On a query from the Commission, TPL furnished the actuals of Wt Av GCV of different fuels for FY 2010-11, vide its communication dated 3rd August, 2011 which are as given in the table below:

Table 6.21 (b): Actual Wt Av GCV of different fuels for TPL-G (APP) for FY 2010-11

Particulars	Wt Av GCV of indigenous coal (Kcal/Kg)	Wt Av GCV of imported coal (Kcal/Kg)	Wt Av GCV of secondary fuel (Kcal/Litre)	Wt Av GCV of gas (Kcal/MMBTU)
Sabarmati Stations C,D,E & F	4251	5158	9909*	-
Vatva gas station	-	-	-	252

* The TPL furnished the Wt Av GCV of secondary fuel as 10306 Kcal/Kg, which is equivalent to 9909 Kcal/Litre.

Commission's Analysis

The Commission has examined the submission of TPL regarding the projection of Wt Av GCV of different fuels, as actually obtained during the 2nd quarter (Q_2) of FY 2010-11 and the additional information furnished on 3rd August, 2011. It is decided to approve the values actually obtained during FY 2010-11, for the control period FY 2011-12 to FY 2015-16.

The actual values are bound to change from the approved level in accordance with the quality of fuels actually supplied. Any difference in fuel costs due to the variation in the approved values is to be passed on to the consumers based on the approved FPPPA formula.

The Wt Av calorific value of different fuels approved for the control period FY 2011-12 to FY 2015-16 are as given in the table below:

Table 6.22: Approved Wt Av GCVs of fuels of TPL-G (APP) for the control Period FY 2011-12 to FY 2015-16

Sl. No.	Station	Wt Av GCV of mix of coal as per the approved blending ratio* (Kcal/Kg)					Wt Av GCV of secondary fuel (oil) (Kcal/L)	Wt Av GCV of gas (Kcal/ MMBTU)
		FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16		
1.	C	4251	4251	4251	4251	4251	9909	
2.	D	4550	4469	4532	4333	4314	9909	
3.	E	4550	4469	4532	4333	4314	9909	
4.	F	4550	4469	4532	4333	4314	9909	
5.	Vatva Gas CCPP	-	-	-	-	-	-	252

* The Wt Av GCV of the mix of coal is arrived at based on the proposed mix of indigenous and imported coal for different years, and Wt Av GCV of the respective coals.

6.1.5.4 Weighted Average price of fuel

The TPL has projected the Wt Av prices of different fuels for the control period as given in the table below:

Table 6.23 (a): Projected Wt Av price of different fuels of TPL-G (APP) for the control Period FY 2011-12 to FY 2015-16

Type of fuel	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Wt Av cost of indigenous coal (Rs/MT)	3265.63	3265.63	3265.63	3265.63	3265.63
Wt Av cost of Imported coal	5375.17	5375.17	5375.17	5375.17	5375.17

(Rs/MT)					
Wt Av cost of Secondary fuel oil (Rs/MT)	30909.91	30909.91	30909.91	30909.91	30909.91
Wt Av cost of Gas (Rs/MMBTU)	284.19	284.19	284.19	284.19	284.19

The TPL submitted that the proposed price of fuels are based on the actual price of fuel (received) in the 2nd quarter (Q2) of FY 2010-11.

On a query from the Commission, TPL furnished the actuals of Wt Av prices of different fuels actually obtained for FY 2010-11, vide its communicated dated 3rd August, 2011 which are as given in the table below:

Table 6.23 (b) : Actuals of Wt Av price of different fuels of TPL-G (APP) for FY 2010-11

Type of fuel	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Wt Av cost of indigenous coal (Rs/MT)	3385	3385	3385	3385	3385
Wt Av cost of Imported coal (Rs/MT)	5162	5162	5162	5162	5162
Wt Av cost of Secondary fuel* oil (Rs/Kl)	30092	30092	30092	30092	30092
Wt Av cost of Gas (Rs/MMBTU)	289.76	289.76	289.76	289.76	289.76

*The TPL furnished price of secondary fuel at Rs. 31296/MT which works out to Rs. 30092/kl.

Commission's Analysis

The Commission has decided to approve the fuel prices, actually obtained during FY 2010-11, for the control period FY 2011-12 to FY 2015-16, as it is more appropriate than adopting the prices of 2nd quarter of FY 2010-11.

Accordingly, the prices of different fuels approved for the control period for FY 2011-12 to FY 2015-16, are as given in the table below:

Table 6.24: Approved Wt Av prices of different fuels of TPL-G (APP) for the control Period FY 2011-12 to FY 2015-16

Type of fuel	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Wt Av cost of indigenous coal (Rs/MT)	3385	3385	3385	3385	3385
Wt Av cost of Imported coal (Rs/MT)	5162	5162	5162	5162	5162
Wt Av cost of Secondary fuel oil (Rs/Kl)	30092	30092	30092	30092	30092
Wt Av cost of Gas (Rs/MMBTU)	289.76	289.76	289.76	289.76	289.76

The Commission has decided to arrive at the fuel cost for the control period based on the cost parameters approved in the tables 6.15 and 6.24. Any difference in the fuel cost due to variation in cost parameters is to be passed on to the consumers as per approved FPPPA formula.

6.1.5.5 Fuel costs

The station-wise approved fuel costs for the control period based on the decisions of the Commission in the earlier paragraphs are as given in the table below:

Table 6.25: Approved Fuel cost of different stations of TPL-G (APP) for the control Period FY 2011-12 to FY 2015-16

(Rs. crore)

Sl. No.	Station	FY 2011-12		FY 2012-13		FY 2013-14		FY 2014-15		FY 2015-16	
		Proj	App.	Proj	App.	Proj	App.	Proj	App.	Proj	App.
	Sabarmati										
1	C Station	104.93	107.13	106.82	108.85	104.17	105.94	-	-	-	-
2	D Station	192.16	191.83	190.66	191.08	182.24	181.54	165.17	166.50	149.35	150.68
3	E Station	189.06	188.73	143.60	143.94	185.91	185.20	166.52	167.85	165.54	167.02
4	F Station	192.85	192.53	147.85	151.74	188.86	188.14	167.53	168.88	167.59	169.10
5	**Vatva Gas Station**	189.94	193.65	175.11	178.58	163.58	166.78	166.58	169.83	164.94	168.18
	Total	**868.94**	**873.87**	**764.04**	**774.17**	**824.76**	**827.60**	**665.80**	**673.06**	**647.42**	**654.98**

Proj: Projected App: Approved

6.1.5.6 Fuel cost per unit (kWh)

The fuel costs of different stations per unit of gross and net generation as approved by Commission are as given in the table below:

Table 6.26: Approved Fuel cost per unit of different stations of TPL-G (APP) for the control Period FY 2011-12 to FY 2015-16

(Rs/kWh)

Sl. No.	Station	FY 2011-12		FY 2012-13		FY 2013-14		FY 2014-15		FY 2015-16	
		Gross (RsU)	Net (Rs/U)	Gross (RsU)	Net (Rs/U)	Gross (RsU)	Net (Rs/U)	Gross (RsU)	Net (Rs/U)	Gross (RsU)	Net (Rs/U)
	Sabarmati										
1	C Station	2.59	2.86	2.58	2.85	2.58	2.85	-	-	-	-
2	D Station	2.18	2.39	2.13	2.34	2.16	2.38	2.04	2.24	2.03	2.23
3	E Station	2.42	2.66	2.25	2.47	2.17	2.38	2.05	2.25	2.03	2.23
4	F Station	2.40	2.64	2.32	2.54	2.17	2.38	2.05	2.25	2.03	2.23
5	Vatva Gas Station	2.49	2.57	2.49	2.57	2.49	2.57	2.49	2.57	2.49	2.57
6	**TPL-G (APP)**	**2.39**	**2.59**	**2.32**	**2.52**	**2.27**	**2.47**	**2.14**	**2.32**	**2.13**	**2.31**

6.1.5.7 Fuel cost per Giga calories

The fuel cost approved per Giga calories (G. Cal) for each of the stations for the control period for FY 2011-12 to FY 2015-16 are as given in the table below:

Table 6.27: Approved Fuel cost per G. cal of different stations of TPL-G (APP) for the control Period FY 2011-12 to FY 2015-16

(Rs/G.Cal)

Sl. No.	Station	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
	Sabarmati					
1.	C Station	822	820	818	-	-
2.	D Station	889	869	882	834	828
3.	E Station	888	868	882	834	828
4.	F Station	888	868	882	834	828
5	**Vatva Gas Station**	1150	1150	1150	1150	1150

The detailed calculations for each station for assessment of the above costs are given in Annexure 6.1 to 6.6.

6.1.6 Fixed charges

6.1.6.1 Operation and Maintenance (O&M) expenses for FY 2010-11

In its submission the TPL has projected the O&M expenses for the control period FY 2011-12 to FY 2015-16 as detailed in the table below:

Table 6.28: O&M expenses projected by TPL-G (APP) for the control period FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
O&M expenses	134.82	142.53	150.68	159.30	168.41

The O&M expenses consist of Employee expenses, Repairs & Maintenance (R&M) expenses and Administration & General (A&G) expenses.

Petitioner's submission

It is submitted by TPL that it has proposed a composite O&M expense in order to achieve operational flexibility to promote efficient operation instead of bifurcating them into employee expenses, R&M expenses and A&G expenses. The TPL has submitted that it has considered the average O&M expenses for three years ending on 31st March, 2010 and this average is considered as base O&M expense for the FY ending on 31st March, 2009 which escalated @ 5.72% every year in order to arrive at the O&M expense for FY 2011-12 and onwards. It is further mentioned that this methodology has been considered for the O&M components, which normally escalate on account of general inflation. The TPL has further submitted that it has not taken into account the one-time expenses such as the wage revision, major overhauling of station, change in law etc., which are uncontrollable factors and would be claimed at actual, over and above the proposed normal allowable components.

The TPL has requested the Commission to approve the O&M expenses as projected and allow any expenditure on account of wage revision, major overhauling, change in law, changes in levies / taxes / duties / charges by other authorities at actual as and when it incurred in addition to the expenses projected .

Commission's Analysis

The Commission has examined the O&M expenses for the control period submitted by TPL and noted that the average actual O&M expenses for the three years ending 31st March, 2010 are considered as base for the FY 2008-09 and that these charges are escalated @ 4% p.a. thereon to arrive at the O&M expenses for FY 2011-12. However, the TPL has not submitted the details of O&M expenses actual for the years 2007-08, 2008-09 and 2009-10. The O&M expenses projected for the control period are also not in accordance with the Regulation 55 of GERC (MYT) Regulations, 2011.

The Commission has obtained the actual O&M expenses for the three years ending 31st March, 2010 from TPL.

The actual O&M expenses furnished by TPL for the three years ending March, 2010, are as given in the table below:

Table 6.29: O&M expenses (actuals) furnished by TPL for the years 2007-08 to 2009-10

(Rs. crore)

Particulars	FY 2007-08	FY 2008-09	FY 2009-10
Employee expenses	46.89	48.86	54.60
R&M expenses	49.93	45.62	52.55
A&G expenses*	28.01	26.33	22.86
Total O&M expenses	124.83	120.81	130.01
* Includes water charges hitherto included as part of fuel expenses			
Water charges	7.10	7.23	8.59
Original A&G	20.91	19.10	14.27
A&G including water charges	28.01	26.33	22.86

The Regulation 55.1 of GERC (MYT) Regulations, 2011 specifies that the O&M charges excluding water charges and including insurance shall be derived on the basis of the average of the actual O&M expenses excluding water charges and including insurance for the three year ending 31st March, 2010. Accordingly the Commission has arrived at the permissible O&M expenses for the control period of FY 2011-12 to FY 2015-16, which are as detailed below:

(i) O&M expenses excluding water charges

Table 6.30: O&M expenses excluding water charges for the years FY 2007-08 to FY 2009-10

(Rs. crore)

Particulars	FY 2007-08	FY 2008-09	FY 2009-10	Three years average considered for FY 2008-09
Employee expenses	46.89	48.86	54.60	50.12
R&M expenses	49.93	45.62	52.55	49.37
A&G expenses	20.91	19.10	14.27	18.09
Total O&M expenses	117.73	113.58	121.42	117.58

The three-year average O&M charges have been considered as O&M expenses for FY 2008-09. These O&M expenses are increased at an escalation factor of 4% per annum to arrive at the O&M expenses for FY 2011-12. Considering these O&M expenses as determined for FY 2011-12 the permissible O&M expenses for the years FY 2012-13 to FY 2015-16 are arrived at by escalating the O&M expenses of FY 2011-12 at 5.72% per annum for each year of the control period.

The O&M expenses approved for the control period FY 2011-12 to FY 2015-16 are given in the table below:

Table 6.31: Approved O&M expenses for the control period FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
O&M expenses	132.26	139.82	147.82	156.28	165.2

(ii) Water charges

In its submission the TPL has included the water charges in A&G expenses for the years FY 2007-08, FY 2008-09 and FY 2009-10 as part of O&M expenses and projected the O&M expenses at an annual escalation of 5.72%. The water charges included in the O&M expenses for the years FY 2007-08, FY 2008-09 and FY 2009-10 are as given below:

Table 6.32: Water charges actual claimed by TPL-G (APP)

(Rs. crore)

Particulars	FY 2007-08	FY 2008-09	FY 2009-10
Water charges	7.10	7.23	8.59

Petitioner's submission

The TPL has submitted that the water charges hitherto were included as part of fuel expenses.

Commission's Analysis

The Commission has observed that the water charges are not separately exhibited in the audited annual accounts as they were stated to be included in the fuel costs. The water charges were furnished after the additional information was called for from TPL. While considering the O&M expenses for the control period FY 2011-12 to FY 2015-16 the water charges are excluded from the O&M charges. As such the Commission recognizes the water charges separately. The water charges, which are in the nature of levy, may not be increased every year and its consumption also may not increase year after year as there is no substantial increase in the proposed generation as well .The Commission is of the opinion that the water charges shall be considered at the level of actuals i.e. FY 2009-10 for the control period. Any increase in the water charges will be considered at the time of Truing Up based on the audited annual accounts for the respective years. Hence the water charges are required to be mentioned separately in the audited annual accounts for this purpose.

The actual water charges as per the audited annual accounts for the FY 2009-10 are Rs. 8.59 crore. The Commission considers the water charges for TPL-G (APP) at Rs. 8.59 crore for each year of the control period FY 2011-12 to FY 2015-16 as detailed in the table below:

Table 6.33: Approved water charges for the control period FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Water charges	8.59	8.59	8.59	8.59	8.59

The Commission, accordingly, approves the water charges for the control period FY 2011-12 to FY 2015-16 as detailed in the table above.

6.1.6.2 Capital expenditure

The TPL has projected the capital expenditure to the extent of Rs. 468.61 crore for the control period FY 2011-12 to FY 2015-16. The year wise CAPEX proposed and the details of schemes covered are as given the table below:

Table 6.34: Capital expenditure projected for TPL-G (APP) for the control period FY 2010-11 to 2015-16

(Rs. crore)

Project Name	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	Total
Capital Expenditure for Enhancement & Life Extensions						
Efficiency Enhancement and Life Extension (Upgradation) F Station	97.81	48.98	-	-	-	146.79
Efficiency Enhancement and Life Extension (Upgradation) E Station	101.12	47.02	-	-	-	148.14
Pollution Control Scheme (Waste water management)	11.00	-	-	-	-	11.00
Installation of new conveyor N4B discharge end	4.00	-	-	-	-	4.00
Renovation and Refurbishment of Civil Structures/Building	7.00	-	-	-	-	7.00
D Station Boiler Refurbishment	12.00	-	-	-	-	12.00
Construction of new cooling tower	10.00	-	-	-	-	10.00
Replacement of cooling tower	-	-	-	-	12.00	12.00
Sub-Total	**242.93**	**96.00**	**-**	**-**	**12.00**	**350.93**
Normal Capital Expenditure Schemes at Sabarmati TPP						
Electrical Works Related	3.90	0.05	3.71	0.30	0.60	8.56
Laboratory Apparatus Related	0.15	-	8.02	0.38	0.42	8.97
Turbine Works Related	4.00	7.00	0.70	0.75	9.00	21.45
CHP Works Related	3.50	-	-	-	-	3.50
Ancillary Works	0.03	0.65	0.23	0.38	0.23	1.55
Civil Works	7.38					7.38
Others	0.85		2.3			3.15
Sub Total	**19.81**	**7.73**	**12.66**	**4.11**	**10.25**	**54.56**
Normal Capital Expenditure Schemes at Vatva CCGTPP						
Electrical Works Related	0.10	0.35	0.95	0.20	-	1.60
MMS	22.28	-	5.45	2.6	-	30.33
Ancillary Works	0.59	0.01	0.86	0.01	0.01	1.48
Control & Instrumentation systems related	-	-	2.35	0.1	-	2.45
Sub-Total	**22.97**	**0.36**	**9.61**	**2.91**	**0.01**	**35.86**
Miscellaneous Capital Expenditure						
Facility Works	10.14	0.04	-	-	-	10.18
Office Equipments & Vehicles	0.51	0.05	0.12	0.09	0.09	0.86

Related						
Safety & Security	16.22	-	-	-	-	16.22
Sub-Total	**26.87**	**0.09**	**0.12**	**0.09**	**0.09**	**27.26**
Grand Total	**312.58**	**104.18**	**22.39**	**7.11**	**22.35**	**468.61**

Petitioner's submission

The TPL has submitted that it operated the generating plants efficiently maintaining all the operational parameters at one of the best in its size and vintage of the plants and that there was a necessity to make capital expenditure. The TPL has indicated the major areas of capital expenditure as detailed below:

(i) Efficiency Enhancement and Life Extension (Up-gradation) of E &F Stations

The E& F stations of the Sabarmati TPP are at the fag end of their designed and predicted life cycle of 25 years and the TPL proposed to upgrade their life by incurring an estimated CAPEX of Rs 294.93 Crores during the control Period.

(ii) Turbine Related Works in Sabarmati TPP Routine Works

The CAPEX against this item consists of expenses on turbine related components at all the stations estimated at Rs 21.45 crore for the control Period.

(iii) Mechanical System Related Works in Vatva CCPP Routine Works

A sum of Rs 18 crore is planned as a major expenditure during FY 2011-12 for replacement of GT Rotor with Compressor blade, which has already crossed its designed life cycle.

(iv) Others

The Other major items include expenditure in the Pollution Control scheme /Waste Water Management at Sabarmati TPP, boiler Refurbishment in D Station and the replacement of Cooling Tower in Sabarmati TPP, etc.

The TPL has submitted that the capital expenditure proposed and described above is necessary for the smooth operation of the vintage station and requested for approval of the same.

The TPL has considered normative debt equity of 70:30 for funding the capital expenditure. Capitalization and normative debt are given in table 137 and addition of equity in Table 141 of the petition. The details of sources of funding are as summarized in the table below:

Table 6.35: Projected capital expenditure and capitalization for the control period FY 2011-12 to 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Capex of the year	312.58	104.18	22.39	7.11	22.36
Capitalization	113.65	329.03	22.39	7.11	29.35
Debt (70%)	79.56	230.32	15.67	4.98	20.55
Equity (30%)	33.50	98.45	6.50	(27.38)*	8.81

* Reduction of equity on account of retirement of the C station

The TPL has explained in its letter dated 4th July, 2011 that the capital cost of 'C' station to the extent of Rs.98.39 crore is projected to be withdrawn during FY 2014-15 and 30% of the capital cost i.e. Rs.29.52 crore is also proposed to be withdrawn towards equity. The addition of equity proposed for FY 2014-15 is Rs.2.13 crore towards 30% of proposed capitalisation of Rs.7.11 crore. Thus, the net deduction of equity is shown as Rs.27.38 crore

Commission's Analysis

The Commission reiterates its earlier observation that utilities normally incur significantly lower CAPEX than what was approved during the determination of the tariff. While capital investment is required for efficient operation of the generating plants, any such capital investment increases the fixed asset base, resulting in higher debt servicing, higher return on equity and higher depreciation on the same generation plants, which are already in operation. In fact the capital cost of a plant needs to be capped at a particular stage. In the case of TPL-G (APP) the TPL has been projecting every year normal capital expenditure for the existing stations. The Commission feels that it is necessary for TPL to ensure that capital investment schemes being proposed are necessary and justified and subsequently do not impose avoidable burden on consumers at a later date by way of increase in Tariff.

The Commission, however, approves the proposed capital expenditure and capitalization for the control period FY 2011-12 to FY 2015-16 as projected.

Table 6.36: Approved Capital expenditure and capitalization for the control period FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Capex of the year	312.58	104.18	22.39	7.11	22.36
Capitalization	113.65	329.03	22.39	7.11	29.35
Debt (70%)	79.56	230.32	15.67	4.98	20.55
Equity (30%)	33.50	98.45	6.50	(27.38)*	8.81

* Reduction of equity on account of retirement of the C station

6.1.6.3 Interest expenses

The TPL has projected the interest and finance charges at Rs. 156.01 crore for the control period FY 2011-12 to FY 2015-16 as detailed in the table below:

Table 6.36: Interest on loans projected for TPL-G (APP) for the control period FY 2011-12 to FY 2015-16

(Rs. crore)

Loan Heads	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Existing loans					
LIC I					
Opening Balance	37.09	32.31	27.52	22.73	17.95
Repayments	4.79	4.79	4.79	4.79	4.79
Closing Balance	32.31	27.52	22.73	17.95	13.16
Interest Rate	11.00%	11.00%	11.00%	11.00%	11.00%
Interest on loan	3.82	3.29	2.76	2.24	1.71
IDFC Term Loan II					
Opening Balance	3.57				
Repayments	3.57				
Closing Balance	-				
Interest Rate	8.17%				
Interest on loan	0.15				
Bank of Baroda Term Loan					
Opening Balance	11.17	9.89	8.62	7.34	6.06
Repayments	1.28	1.28	1.28	1.28	1.28
Closing Balance	9.89	8.62	7.34	6.06	4.79
Interest Rate	10.75%	10.75%	10.75%	10.75%	10.75%
Interest on loan	1.13	0.99	0.86	0.72	0.58
New loan in FY 2010-11					
Opening Balance	55.12	49.60	44.09	38.58	33.07
Repayments	5.51	5.51	5.51	5.51	5.51
Closing Balance	49.60	44.09	38.58	33.07	27.56
Interest Rate	10.75%	10.75%	10.75%	10.75%	10.75%
Interest on loan	5.63	5.04	4.44	3.85	3.26
Interest expense on existing loan	**10.72**	**9.32**	**8.07**	**6.81**	**5.55**
Loans drawn during the					

Loan Heads	**FY 2011-12**	**FY 2012-13**	**FY 2013-14**	**FY 2014-15**	**FY 2015-16**
control period					
Capitalization During the Year	113.65	329.03	22.39	7.11	29.35
Normative Debt @ 70%	79.56	230.32	15.67	4.98	20.55
Opening Balance	-	79.56	301.92	286.61	259.03
New borrowings	79.56	230.32	15.67	4.98	20.55
Repayment	-	7.96	30.99	32.55	33.05
Closing Balance	79.56	301.92	286.61	259.03	246.52
Interest Expense	**4.38**	**20.98**	**32.37**	**30.01**	**27.81**
Total Interest Expenses	**15.10**	**30.30**	**40.43**	**36.82**	**33.36**

Petitioner's submission

The TPL has submitted that the interest expenses on loans would be on account of two types of loans.

(a) Opening balance of loans i.e existing loans drawn at the starting of the FY 2011-12 and
(b) New loans drawn against the capital expenditure planned for each of the year in the control period of FY 2011-12 to FY 2015-16.

The capital expenditure for the control period is proposed to be funded through a normative debt equity ratio of 70:30 as per the GERC (Terms and Conditions of Tariff) Regulations, 2005.

Commission's Analysis

The opening balance of loans for FY 2011-12 is as per the closing balance of loans considered in the APR for FY 2010-11. The repayment of existing loan is taken by the TPL as per the terms and conditions of existing loans and a 10 year period is considered for the new loans.

In accordance with the Regulation 39 of GERC (MYT) Regulations, 2011 the repayment for the year during the tariff period from FY 2011-12 to FY 2015-16 shall be deemed to be equal to the depreciation allowed for that year (Regulation 39.3) and the rate of interest shall be at the weighted average rate of interest calculated on the basis of the actual loan portfolio at the beginning of each year applicable to the generating company (Regulation 39.5).

The weighted average rate of interest on the loans for the year FY 2010-11 (APR) worked out to 10.64%.

The interest and finance charges for the control period are arrived at in accordance with the Regulation 39 of GERC (MYT) Regulations, 2011 and are as detailed in the table below:

Table 6.37: Approved interest and finance charges for the control period FY 2010-11 to 2015-16

(Rs. crore)

Sl. No	Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
1.	Opening loan	106.95	152.28	337.37	298.56	252.06
2.	Loan addition during the year	79.56	230.32	15.67	4.98	20.55
3.	Repayment during the year	34.23	45.23	54.48	51.48	52.44
4.	Closing loan	152.28	337.37	298.56	252.06	220.17
5.	Average loan	129.62	244.83	317.965	275.31	236.115
6.	Weighted average rate of interest	10.64%	10.64%	10.64%	10.64%	10.64%
7.	Interest charges	13.79	26.05	33.83	29.29	25.12

The Commission, accordingly, approves the interest and finance charges as detailed in the above table for the control period FY 2011-12 to FY 2015-16.

6.1.6.4 Interest on working capital

The TPL has projected the interest on working capital at Rs. 200.88 crore for the control period of FY 2011-12 to FY 2015-16 as detailed in the table below:

Table 6.38: Projected Interest on working capital for TPL-G (APP) for the control period FY 2010-11 to 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Coal & Secondary fuel for 2 months	113.17	98.16	110.20	93.20	80.41
Gas for 1 month	15.83	14.59	13.63	13.88	13.74
O&M expense for 1 month	11.23	11.88	12.56	13.28	14.03
1 % of GFA for maintenance spares	9.41	12.69	12.91	12.00	12.29
Receivables for 2 month	194.85	184.85	201.99	174.33	171.95
Working Capital Requirement	344.48	322.17	351.29	296.68	292.43
Interest Rate	12.50%	12.50%	12.50%	12.50%	12.50%
Interest on Working Capital	43.06	40.27	43.91	37.09	36.55

Petitioner's submission

The TPL has submitted that the interest on working capital is computed by applying the interest rate on the working capital requirement arrived at as per the GERC (Terms and Conditions of Tariff) Regulations, 2005. The TPL has further submitted that the rate of interest of 12.50% is considered being the SBI PLR rate as on 15th December 2010.

Commission's Analysis

The Commission has noted that the parameters adopted by the TPL are different from the normative parameters notified in the (MYT) Regulations, 2011.

The TPL has considered the interest on working capital at 12.50% being the SBI PLR rate as on 15th December, 2010. As per the GERC (MYT) Regulations 41 (d) the interest on working capital shall be allowed at a rate equal to State Bank Advance Rate (SBAR) as o 1st April of the financial year in which the petition is filed. The petition was filed on 24th February, 2011 for the FY 2010-11 and accordingly the applicable rate of SBI PLR as on 01/04/2010 is 11.75%. The TPL has considered two (2) months receivables while the provision under Regulation 41.1 (vi) is categorically specified that in the case of generating stations, no amount shall be allowed towards receivables, to the extent of supply of power by the generation business to the Retail supply business. In the computation of working capital. 2 months coal is considered by TPL while the Regulation specifies 1½ month coal as working capital.

The Commission has computed the working capital and the interest on working capital for the control period FY 2011-12 to FY 2015-16 in accordance with Regulation 41 of MYT Regulations, 2011 which are as detailed in the table below:

Table 6.39: Interest on working capital approved for TPL-G (APP) for the control period FY 2010-11 to 2015-16

(Rs. crore)

Sl. No.	Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
1.	Cost of coal for 1½ month	83.79	73.31	81.33	61.98	59.95
2.	Cost of secondary fuel oil for two (2) months	1.65	1,52	1.70	1.23	1.20
3.	Gas for 1 month	16.14	14.88	13.90	14.15	14.00
4.	O&M expense for 1 month	11.02	11.65	12.32	13.02	13.77
5.	1% of GFA for maintenance spares	8.29	9.41	12.69	12.91	12.00
6.	Receivables for 1 month	0.00	0.00	0.00	0.00	0.00
7.	Total Working Capital Requirement	120.89	110.77	121.93	103.30	100.92
8.	Interest Rate	11.75%	11.75%	11.75%	11.75%	11.75%
9.	Interest on Working Capital	14.20	13.02	14.33	12.14	11.86

As the entire generation from APP is for TPL's own distribution i.e Retail Supply Business, the receivables are not considered for the purpose of working capital.

The Commission, accordingly, approves the interest on working capital, as detailed in the above Table for the control period of FY 2010-11 to FY 2015-16.

6.1.6.5 Depreciation

The TPL has projected the depreciation charges at Rs. 237.86 crore for the control period FY 2011-12 to FY 2015-16, which are as detailed in the table below:

Table 6.40: Depreciation projected for TPL-G (APP) for the control period FY 2010-11 to 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Depreciation	34.23	45.23	54.48	51.48	52.44

Petitioner's submission

The TPL has submitted that the depreciation rates as per CERC (Terms and Conditions of Tariff) Regulations, 2004 are applied on opening GFA of FY 2009-10 and for addition of assets from 1st April, 2009 onwards. The depreciation has been computed at depreciation rates specified in the Appendix III to the CERC (Terms and Conditions of Tariff) Regulations, 2009.

Commission's Analysis

The petitioner has computed the depreciation for the control period FY 2011-12 to 2015-16 at CERC depreciation rates in accordance with asset classification wise and year wise addition of assets as per the approved capitalization. The details of asset classification wise additions and the computation of depreciation rates are given in Format-12A of Annexure-1 of the petition. The deprecation rates considered by TPL for the addition of assets from 1st April, 2009 onwards are the same as per the rates specified in Depreciation schedule Annexure 1 of GERC (MYT) Regulations, 2011.

The Commission approves the depreciation rates for the control period FY 2011-12 to FY 2015-16 as projected by TPL which are as detailed in the table below:

Table 6.41: Approved Depreciation for the control period FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Depreciation	34.23	45.23	54.48	51.48	52.44

6.1.6.6 Return on equity

The TPL has claimed a sum of Rs. 301.55 crore towards return on equity for the control period FY 2011-12 to FY 2015-16 as detailed in the table below:

Table 6.42: Return on equity projected for TPL-G (APP) for the control period FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Opening equity	335.81	369.31	467.76	474.25	446.87
Equity addition	33.50	98.45	6.50	(27.38)	8.81
Closing equity	369.31	467.76	474.25	446.87	455.67
Return on equity @ 14%	49.36	58.59	65.94	64.48	63.18

Petitioner's submission

The TPL has submitted that the return on equity has been arrived at on the basis of the opening and closing balance of equity considering the estimated capitalization in FY of the control period. The return on equity is claimed at 14% on the average of opening and closing balance of equity. It is further submitted by TPL that there would be a net deduction in the equity component by Rs. 27.38 crore in FY 2014-15 on account of retirement of the vintage C station in FY 2014-15.

Commission's Analysis

The Commission has examined the submission made by TPL. The opening balance of equity as on 01/04/2011 is the same as closing balance of equity as on 31/03/2011 considered in the APR for FY 2010-11. The capitalization of capital expenditure is in accordance with the projections by TPL for the control period. However, there are minor errors in arriving at the normative equity based on the proposed capitalization.

The Commission has estimated that the return on equity would be as detailed in the table below:

Table 6.43: Return on equity approved for the control period FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Opening equity	335.81	369.9	468.61	475.33	447.95
Equity addition	34.09	98.71	6.72	2.13	8.8
Equity withdrawn				-29.52	
Closing equity	369.9	468.61	475.33	447.95	456.75
Average equity	352.86	419.26	471.97	461.64	452.35
Return on equity	49.40	58.70	66.08	64.63	63.33

The TPL has shown a net deduction in the equity component by Rs. 27.38 crore in the FY 2014-15 on account of retirement of the C station. It is observed from the petition that there is corresponding deduction of Plant & Machinery to the extent of Rs. 98.39 crore in FY 2014-15. The resultant equity reduction is Rs.29.52 crore towards 30% of the capital cost of Rs.98.39 crore

The Commission provisionally accepts the deduction of equity and asset base towards vintage C station. The TPL is directed to provide full details such as station wise capital cost, station wise equity, station wise accumulated depreciation of APP as on 01/04/2010 before by 30/09/2011.

The Commission, accordingly, approves the return on equity as detailed in the above table for the control period FY 2011-12 to FY 2015-16 subject to review.

6.1.6.7 Income Tax

The TPL has estimated the income tax at Rs. 149.88 crore for the control period FY 2011-12 to FY 2015-16 as detailed in the table below:

Table 6.44: Income Tax projected for TPL-G (APP) for the control period FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Income Tax	24.55	29.14	32.80	32.07	31.42

Petitioner's submission

The TPL has submitted that for the purpose of estimate of Income tax, TPL has considered normal tax rate applicable to TPL-G (APP) considering it as a separate entity. The TPL has estimated the income tax @ of 33.22% on the grossed up ROE so as to earn post tax ROE at 14% as per the GERC (Terms and Conditions of Tariff) Regulations, 2005

Commission's Analysis

The Regulation 42.1 of GERC (MYT) Regulations, 2011 specifies that the Commission in its MYT order shall provisionally approve income tax payable for each year of the control period, if any, based on the actual income tax paid as per the latest audited accounts available for the applicant, subject to prudence check. The latest audited accounts available in the case of TPL are for FY 2009-10 and the income tax admitted in the Truing Up for FY 2009-10 is Rs. 26.45 crore.

The Commission, accordingly considers the provision for income tax for the control period for FY 2011-12 to FY 2015-16 as approved in the Truing Up for FY 2009-10. Any variation in income tax actually paid and approved shall be considered based on the documentary evidence at the time of Truing Up for each year of the control period in accordance with Regulation 42.2 of GERC (MYT) Regulations, 2011.

The Commission, accordingly, approves the income tax for the control period for FY 2011-12 to FY 2015-16, which are as detailed in the table below:

Table 6.45: Approved Income tax for the control period FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Income Tax	26.45	26.45	26.45	26.45	26.45

6.1.6.8 Non-Tariff income

The TPL has estimated the non-tariff income at Rs. 5.20 crore for the control period FY 2011-12 to FY 2015-16 as detailed in the table below:

Table 6.46: Non-Tariff income projected for TPL-G (APP) for the control period FY 2010-11 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Non-Tariff income	0.98	1.01	1.04	1.07	1.10

Commission's Analysis

The Commission has observed that the actual non-tariff income in FY 2009-10 was Rs. 2.02 crore as per segregated accounting statement. However, for projecting non-tariff income the Commission has considered non-tariff income including income from fly ash, which was earlier adjusted into R&M expenses. Accordingly, the Commission considers the non-tariff income at Rs. 14.18 crore for each year of the control period based on actual for FY 2009-10 as detailed in the table below:

Table 6.47: Approved Non-tariff income for the control period FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Non-tariff income	14.18	14.18	14.18	14.18	14.18

6.1.7 Projected and Approved ARR

Based on the Commission's analysis and decisions the fixed and variable charges for the control period FY 2011-12 to FY 2015-16 are determined.

The ARR as projected by the TPL and ARR as approved by the Commission in respect of TPL-G (APP) for the control period FY 2011-12 to FY 2015-16 are as given in the two tables below:

Table 6.48: Proposed ARR for TPL-G (APP) for the control period FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Variable cost	**868.93**	**764.05**	824.75	665.80	647.42
O&M expenses	**134.82**	142.53	150.68	159.30	168.41
Depreciation	**34.23**	45.23	54.48	51.48	52.44
Interest on loan	**15.10**	30.30	40.43	36.82	33.36
Interest on working capital	**43.06**	40.27	43.91	37.09	36.55
Return on equity	**49.36**	58.59	65.94	64.48	63.18
Income Tax	**24.55**	29.14	32.80	32.07	31.42
Less: Non-tariff income	**0.98**	1.01	1.04	1.07	1.10
Net ARR	1,169.07	**1,109.11**	**1,211.96**	**1,045.96**	**1,031.69**

Table 6.49: Approved ARR for TPL-G (APP) for the control period FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Variable cost	873.87	774.17	827.60	673.06	654.98
O&M expenses	132.26	139.82	147.82	156.28	165.22
Water Charges	8.59	8.59	8.59	8.59	8.59
Depreciation	34.23	45.23	54.48	51.48	52.44
Interest on loan	13.79	26.05	33.83	29.29	25.12
Interest on working capital	14.20	13.02	14.33	12.14	11.86
Return on equity	49.40	58.70	66.08	64.63	63.33
Income Tax	26.45	26.45	26.45	26.45	26.45
Less: Non-tariff income	14.18	14.18	14.18	14.18	14.18
Net ARR	**1138.68**	**1077.84**	**1165.00**	**1007.74**	**993.81**

Projected and Approved Variable and Fixed Costs						
Particulars		**2011-12**	**2012-13**	**2013-14**	**2014-15**	**2015-16**
Total Variable Cost (Rs Crores)						
	Projected	868.93	764.95	824.75	665.80	647.42
	Approved	873.87	774.17	827.60	673.06	654.98
Variable Cost per unit (Rs/KwH)						
	Projected	2.58	2.50	2.46	2.29	2.28
	Approved	2.59	2.52	2.47	2.32	2.31
Total Fixed (Rs Crores)						

	Projected	301.12	346.07	388.25	381.23	385.37
	Approved	264.81	303.67	337.40	334.68	338.83
Fixed Cost per unit (Rs/KwH)						
	Projected	0.89	1.13	1.16	1.31	1.36
	Approved	0.79	0.99	1.01	1.15	1.20
Total ARR (Rs Crores)						
	Projected	1169.07	1109.11	1211.96	1045.96	1031.69
	Approved	1138.68	1077.84	1165.00	1007.74	993.81
Cost of supply per unit (Rs/KwH)						
	Projected	3.47	3.63	3.61	3.61	3.64
	Approved	3.38	3.54	3.47	3.47	3.50

6.2 Ahmedabad Distribution

6.2.1 Energy sales

It is necessary to have a category-wise energy sales projection for estimating the probable revenue from the sales and assess the quantum of power purchase. Realistic estimation of energy sales is, therefore, an important requirement. This section, examines in detail the consumer category-wise sales projected by TPL in its MYT petition for the period FY 2011-12 to FY 2015-16 for approval of ARR during the control period.

The licensee distributes electricity to about 16.00 lakh consumers in the cities of Ahmedabad and Gandhinagar.

6.2.2 Category-wise consumers

The consumers in Ahmedabad and Gandhinagar are broadly categorized as under:

Residential-Domestic (RGP)	Applicable to lights, fans, appliances etc in residential premises
Commercial (CGP & IGP)	Applicable to lights, fans, appliances etc in commercial, industrial premises (other than residential)
LT industrial	
LTP I & II	Applicable to motive power installations up to and including 15 BHP
LTMD I & II	Applicable to motive power installations above 15 BHP
Street lights	Applicable to public lighting system
HTP industrial	
HTMD – I	Applicable to High tension consumers for maximum demand 100 kVA and above
HTMD - II	Applicable for supply consumers contracting maximum demand of 100 kVA and above not covered under HTMD-I
HT (pumping station)	Applicable for supply to water and sewage pumping stations.
Agriculture (LTP-AG)	Applicable to motive power for agricultural purpose

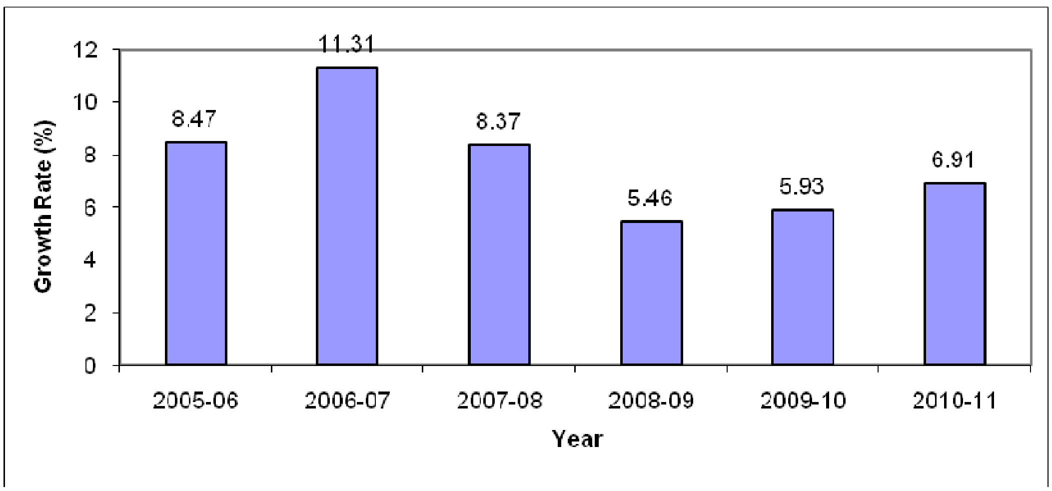
Temporary supply	Applicable to installations for temporary requirement of electricity supply

6.2.3 Overall approach to sales projections

The TPL has submitted that Ahmedabad, after attaining “Mega city” status, saw multi fold development and consequently there has been an increase in consumption of various commodities. The hike in construction and industrial activities, on account of this growth has led to sharp increase in energy consumption in residential, commercial and industrial consumers.

Even though the activities are likely to continue at the same level, the sales growth is expected to decline as can be observed from the graphical representation shown in Figure 1 below:

Figure 6.1 : Growth rate of energy sales in Ahmedabad area



The sales growth reduced from 11.31% in FY 2006-07 to 6.91% in FY 2010-11 (RE).

It is submitted by TPL that it has relied on past trends and given due weightage to trends in specific consumption and expected developmental plans, industrial and economic growth in Ahmedabad in arriving at sales growth.

6.2.4 Projected energy sales

The TPL has furnished the past trends in category-wise energy sales since FY 2005-06 and the growth rates.

The data on category wise energy sales for the last 5 years FY 2005-06 to FY 2009-10 (actual) and estimated sales for FY 2010-11 as furnished by TPL is given in the table below:

Table 6.50: Historical data for energy sales to consumers in Ahmedabad supply area

(MU)

Category	FY 2005-06	FY 2006-07	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11 (RE)	8 year CAGR (%)	5 year CAGR (%)
RGP	1128.00	1209.00	1293.00	1425.00	1544.00	1731.00	8.40	8.94
CGP and IGP	520.00	592.00	671.00	781.00	827.00	923.00	11.96	12.16
LTP	231.00	240.00	242.00	257.00	271.00	288.00	0.16	4.51
LTMD	686.00	715.00	749.00	773.00	870.00	886.00	8.71	5.25
HT Pumping stations	94.00	102.00	91.00	88.00	99.00	104.00	-1.61	2.04
HT	987.00	1190.00	1334.00	1366.00	1332.00	1359.00	8.04	6.61
Others	78.00	97.00	112.00	67.00	76.00	74.00	-1.09	-1.05
Total	**3724.00**	**4145.00**	**4492.00**	**4737.00**	**5018.00**	**5365.00**	**7.76**	**7.58**

6.2.5 Forecast of category-wise sales

The category-wise sales to consumers for the control period FY 2011-12 to FY 2015-16 is discussed in this section. The sales growth is based on historical trend (CAGR) and with some marginal adjustments based on end use survey etc. The growth in energy consumption is likely to remain normal and any spurt in growth is unlikely. The category-wise sales forecast is as follows:

6.2.5.1 Residential (RGP)

Petitioner's submission

This category accounts to about 32% of the total sales. This category consists of residential consumers. It is submitted by TPL that it had recorded higher growth in the past mainly due to new construction activities in the residential / real estate projects. In the recent past there has been lower construction activity within the Ahmedabad supply area due to limited availability of open land required for development and high cost of construction. The sales to RGP category is forecasted by considering the 5 year CAGR of 8.95% and with due consideration to the per capita consumption.

The TPL has projected the sales growth for the control period FY 2011-12 to FY 2015-16 as below:

Table 6.51: Energy sales in RGP category projected for the control period FY 2011-12 to FY 2015-16

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Energy sales (MU)	1886	2054	2238	2438	2656
YoY growth rate (%)	7.09	7.41	7.41	7.41	7.41

Commission's Analysis

The Residential category recorded a CAGR of 8.40% and 8.94% in energy sales during 8 year and 5 year periods respectively. The Commission considers a growth of 8.94% over FY 2010-11 sales for this category during the control period.

The Commission approves the sales to the residential category for the period FY 2011-12 to FY 2015-16 at 8.94% growth as given in the table below:

Table 6.52: Energy sales approved by the Commission for the residential category for the period FY 2011-12 to FY 2015-16

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Energy sales (MU)	1886	2055	2238	2438	2657

6.2.5.2 Commercial (CGP / IGP)

The commercial category accounts to about 17% of the total sales. The TPL has projected the sales for the control period as under:

Table 6.53: Energy sales in Commercial category projected for the control period FY 2011-12 to FY 2015-16

(%)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Energy sales (MU)	1018	1122	1237	1363	1501
YoY growth rate (%)	10.22	10.27	10.22	10.18	10.14

The TPL has considered a moderate growth of about 10% against 8 year and 5 year CAGR of 11.96% and 12.17% respectively.

Commission's Analysis

As seen from the table 6.50 above this category had recorded an 8 year CAGR of 11.96% and 5 year CAGR of 12.16%. The Commission considers a growth rate of 12.16% over the sales of FY 2010-11 during the control period.

The Commission approves the sales as given below:

Table 6.54: Energy sales approved by the Commission for commercial category for the period FY 2011-12 to FY 2015-16

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Energy sales (MU)	1035	1161	1302	1461	1638

6.2.5.3 Low Tension Power (LTP)

This category consists of consumers having motive power load up to and including 15 BHP for residential purpose, pumping stations run by local authorities and industry. The consumption of this category accounts to about 5.4% of total consumption.

TPL has projected the sales of this category for the control period FY 2011-12 to FY 2015-16 as under:

Table 6.55: Projected energy sales for LTP category for the period FY 2011-12 to FY 2015-16

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Energy sales (MU)	291	295	299	303	307
YoY growth rate (%)	1.27	1.33	1.31	1.29	1.27

Petitioner's submission

It is submitted by TPL that this category recorded 8 year CAGR of 0.16% and 5 year CAGR of 4.49%. However, due to decline in per capita consumption TPL has forecasted a fall in the sales on YoY growth to around 1.3% in the control period.

Commission's Analysis

As seen from the table 6.50 above this category recorded CAGR of 0.16% and 4.51% over 8 year and 5 year periods respectively. Since the growth is stable over 5 year period, it is reasonable to consider a sales growth of 4.51% over sales of FY 2010-11 for the control period.

The Commission approves the sales for Low Tension Power (LTP) category at 4.51% growth as given below:

Table 6.56: Energy sales approved by the Commission for LTP category for the period FY 2011-12 to FY 2015-16

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Energy sales (MU)	301	315	329	344	359

6.2.5.4 Low Tension Maximum Demand (LTMD)

This category consists of the consumption from the motive power load above 15 BHP for residential purpose, pumping stations run by local authorities and industrial motive power.

The sales of this category accounts to about 17% of the total consumption. TPL has projected the sales to this category during the control period as below:

Table 6.57: Projected energy sales LTMD category for the period FY 2011-12 to FY 2015-16

(MU)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Energy sales (MU)	932	980	1031	1085	1141
YoY growth rate (%)	5.19	5.19	5.19	5.19	5.19

Petitioner's submission

The TPL has submitted that the sales to this category recorded a 8 year CAGR of 8.71% and 5 year CAGR of 5.24 %. TPL has considered a growth of 5.19% which is in line with 5 year CAGR of 5.24%.

Commission's Analysis

This category recorded CAGR of 8.71% and 5.25% over 8 year period and 5 year periods respectively.

The Commission considers that 5 year CAGR at 5.25% is realistic and accordingly approves the energy sales to low tension maximum demand (LTMD) category during control period as below:

Table 6.58: Sales approved by the Commission for LTMD category for the period FY 2011-12 to FY 2015-16

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Energy sales (MU)	933	981	1033	1087	1144

6.2.5.5 HT Pumping Stations (HTP)

Petitioner's submission

This category of consumers include the water and sewerage pumping stations run by local authorities and the sales to this category account to about 2.0% of total consumption. It is submitted by TPL that the connections to pumping stations are more or less fixed without any major increase in connections or consumption on a year-to-year basis and that the consumption by this category also depends on the monsoon and ground water levels in the licensed area. The 8 year CAGR of (-) 1.61% and 5 year CAGR of 1.97% also indicated that the growth in the control period would be substantially lower. It is stated that the increase in energy sales during FY 2010-11 is due to local authorities taking 16 new connections during FY 2010-11. Since the sales are likely to be static, the TPL has considered a growth of 0.79% during the control period as below:

Table 6.59: Projected energy for HT pumping category for the period FY 2011-12 to FY 2015-16

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Energy sales (MU)	104	105	106	107	108
YoY growth rate (%)	0.79	0.79	0.79	0.79	0.79

Commission's Analysis

The category recorded a growth rate of -1.61% and 2.04% for 8 year and 5 year period respectively.

The Commission considers, based on earlier growth trends, the growth of 2.04% is realistic and approves the sales to HT pumping for the control period as given below:

Table 6.60: Sales approved by the Commission for HTP category for the period FY 2011-12 to FY 2015-16

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Energy sales (MU)	106	108	111	113	115

6.2.5.6 HT Maximum Demand (HTMD)

The sales to this category accounts to about 25% of total sales and the TPL has projected the energy sales for the control period as below:

Table 6.61: Energy sales projected by TPL for the period FY 2011-12 to FY 2015-16

(MU)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Energy sales (MU)	1306	1351	1397	1446	1496
YoY growth rate (%)	(-) 3.90	3.44	3.45	3.47	3.48

Petitioner's submission

It is submitted by TPL that the consumers of this category are inclined towards sourcing their power requirements through captive power plants (CPPs) and hence the sales to these consumers have declined and the sales during the control period FY 2011-12 to FY 2015-16 are estimated considering the likely fall in consumption. The TPL has quoted two Industries, which have gone for captive power plant and that in view of their shift the sales are likely to fall by 52 MU in FY 2011-12 and 13 MU in FY 2012-13.

This category recorded 8 year CAGR of 8.04%, 5 year CAGR of 6.60% and 3 year CAGR of 0.62%. Hence, moderate growth of 3.45% is considered by TPL for the control period FY 2011-12 to FY 2015-16.

Commission's Analysis

HTMD category recorded a CAGR of 8.04% and 6.61% in the energy sales for the 8 year and 5 year period respectively. The Commission considers based on earlier trends a growth of 6.61% over the sales of FY 2010-11 sales for the control period.

The Commission approves the sales to high-tension maximum demand category for the control period FY 2011-12 to FY 2015-16 as below:

Table 6.62: Sales approved by the Commission for HTMD category for the period FY 2011-12 to FY 2015-16

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Energy sales (MU)	1449	1545	1646	1755	1871

6.2.5.7 Others

The category of others contains the sales to the GLP category, LTP (AG) and temporary units. The TPL has projected the sales to this category for the control period as under:

Table 6.63: Projected energy sales to others for the control period FY 2011-12 to FY 2015-16

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Energy sales (MU)	68	66	64	62	60
YoY growth rate (%)	(-) 2.97	(-) 2.95	(-) 2.94	(-) 2.93	(-) 2.92

It is submitted by TPL that 8 year CAGR of (-) 1.09% and 5 year CAGR (-) 0.99% for this category shows a declining trend of sales including a fall in per capita consumption and therefore considered a declining growth rate in conformity with the expected scenario in the sales and accordingly forecasted for the control period.

Commission's Analysis

The others category recorded a CAGR of -1.09% and -1.05% for the 8 year and 5 year period respectively.The Commission considers the growth of -1.05% over FY 2010-11. T**he Commission approves the sales for the control period FY 2011-12 to FY 2015-16 as below:**

Table 6.64: Sales approved by the Commission for others for the period FY 2011-12 to FY 2015-16

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Energy sales (MU)	73	72	72	71	71

6.2.6 Summary of Energy sales

The category-wise energy sales for the control period for Ahmedabad supply area is discussed in the above paragraphs. The sales for each of the categories as projected by TPL and as approved by the Commission are given in the tables below:

Table 6.65: Projected category-wise energy sales for Ahmedabad Area for the period FY 2011-12 to FY 2015-16

(MU)

Category	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
RGP	1854	1991	2139	2297	2467
CGP and IGP	1018	1122	1237	1363	1501
LTP	291	295	299	303	307
LTMD	932	980	1031	1085	1141
HT Pumping stations	104	105	106	107	108
HTMD	1306	1351	1397	1446	1496
Others	68	66	64	62	60
Total	**5573**	**5911**	**6273**	**6662**	**7080**

Table 6.66: Approved Energy sales for the Ahmedabad area for the period FY 2011-2 to FY 2015-16

(MU)

Category	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Residential	1886	2055	2238	2438	2657
Commercial	1035	1161	1302	1461	1638
LTP	301	315	329	344	359
LTMD	933	981	1033	1087	1144
HT Pumping stations	106	108	111	113	115
HT	1449	1545	1646	1755	1871
Others	73	72	72	71	71
Total	**5783**	**6237**	**6731**	**7269**	**7855**

6.2.7 Consumer Forecast

Petitioner's submission

In its petition, the TPL has submitted that the number of consumer installations for FY 2011-12 would be at 16.27 lakh and its projections are based on historical trend, market scenario, upcoming projects and expected development plans in the supply area and analysis of number of applications received in the past.

The number of consumer installations during FY 2009-10 FY 2010-11 (RE) and projected for FY 2011-12 are given below:

Table 6.67: Number of consumers installations in Ahmedabad Area for FY 2011-12

(Nos.)

Category	FY 2009-10	FY 2010-11 (RE)	FY 2011-12
Residential	154096	1182706	1214631
Commercial	310920	323246	335255
Low Tension Power	55754	57532	59470
Low Tension Maximum Demand	12096	12921	13141
HT Pumping stations	702	762	826
HT	145	159	172
Others	3771	3770	3738
Total	**1537484**	**1581096**	**1627233**

Commission's Analysis

The number of consumer installations projected for the FY 2011-12 is in accordance with the trend in earlier years.

The Commission, accordingly, notes the number of consumers for Ahmedabad area as projected by TPL

6.2.8 Distribution losses

Petitioner's submission

The TPL has projected the distribution losses at 9.0% for all the years of control period FY 2011-12 to FY 2015-16.

It is submitted by TPL that the second control period would witness higher growth in LT load as compared to the HT load, which would lead to distribution of higher load through LT network. This can be observed from the comparison of sales growth of both LT and HT categories proposed for the second MYT control period. As technical losses are higher in the LT network, sales growth in the category would accordingly lead to higher distribution losses

The TPL has also compared the losses in Ahmedabad area with other licensee areas in Mumbai, Delhi and Kolkata in support of its projection of distribution losses.

Commission's Analysis

The Commission had approved an actual loss of 8.5 percent during FY 2009-10 in the Truing Up of the FY . The TPL has proposed substantial capital investments in Ahmedabad area during the control period for augmentation of transmission and distribution network, which the Commission has also approved in this order.

The Commission therefore sees no reason for increase in distribution losses from 8.5% to 9.0% as proposed by the TPL and accordingly it retains the loss level at 8.5% for the control period FY 2011-12 to FY 2015-16 as below:

Table 6.68: Distribution losses approved by the Commission for TPL-D Ahmedabad area for the period FY 2011-12 to FY 2015-16

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Distribution losses (%)	8.50	8.50	8.50	8.50	8.50

6.2.9 Energy Requirement

Petitioner's submission

The Energy requirement is the sum of total of energy sales and the transmission and distribution losses. Based on the projected energy sales and T & D losses the TPL has projected the energy requirement which are as below:

Table 6.69: Energy requirement projected by TPL-D for Ahmedabad area for the period FY 2011-12 to FY 2015-16

(MU)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Total sales	5572.95	5,910.79	6,273.30	6,662.39	7,080.13
Distribution loss (%)	9.00%	9.00%	9.00%	9.00%	9.00%
Energy required at distribution periphery	6124.12	6495.38	6 893.74	7321.31	7780.36

Commission's Analysis

Based on the energy sales approved in paragraph 6.2.6 and table 6.66 and distribution losses as approved in paragraph 6.2.8 and table 6.68 the Commission has computed the energy requirement of Ahmedabad distribution area and at its periphery as below:

Table 6.70: Energy requirement approved by the Commission for TPL-D Ahmedabad area for the period FY 2011-12 to FY 2015-16

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Energy sales (MU)	5783	6237	6731	7269	7855
Distribution loss approved at (%)	8.5	8.5	8.5	8.5	8.5
Distribution loss approved at MU)	537	579	625	675	730
Energy requirement at distribution periphery (MU)	6320	6816	7356	7944	8584

The Commission approves the energy requirement of TPL-D Ahmedabad supply area at its periphery as in the table above.

6.2.10 Fixed Charges

6.2.10.1 Operation and Maintenance (O&M) expenses

The O&M expenses submitted by the TPL comprise of Employee expenses, Administration and General (A&G) expenses and Repairs and Maintenance (R&M) expenses. The company has projected O&M expenses as a composite head on a

Rs. per unit basis for the control period FY 2011-12 to FY 2015-16 as detailed in the table below:

Table 6.71: O&M expenses per unit projected for TPL-D Ahmedabad for the control period

(Rs. /unit)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
O&M expenses	0.41	0.44	0.46	0.49	0.52

The O&M expenses in absolute figures are given only in the ARR (Table 188) which are detailed as in the table below:

Table 6.72: O&M expenses projected for TPL-D Ahmedabad for the control period FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
O&M expenses	229.90	257.79	289.25	324.76	364.86

Petitioner's submission

The petitioner has submitted that O&M expenses are to be considered as a composite expense head so as to provide flexibility to the utility in incurring the expenses amongst its constituents and enables it to optimize the utilization of the approved cost.

It is further submitted by TPL that while estimating the O&M expenses for the control period, the average O&M expenses per unit of energy sales for three years ending on March 31, 2010 have been considered as base O&M expenses for financial year ending on March 31, 2009. The same is escalated @ 5.72% every year in order to arrive at the O&M expenses per unit for the control period starting from FY 2011-12 to FY 2015-16.

The petitioner has submitted that the above methodology has been considered for arriving at the O&M components, which have normal increments on account of general revision. The TPL has requested the Commission to treat this as uncontrollable expense and that such expenses are to be allowed over and above the normal allowable component as it does not take into account the expenses such as wage revision, imposition of service tax, change in law, change in levies / duties / taxes and charges etc.

Commission's Analysis

The Commission has examined the O&M expenses proposed by TPL on Rs. per unit basis for the control period for FY 2011-12 to FY 2015-16 and its submission that the average O&M expenses @ per unit of energy sales for three years ending on March 31, 2010 are considered as base for the FY 2008-09 and these charges are escalated @ 5.72% p.a. thereon to arrive at the O&M expenses for FY 2011-12 and onwards.

The Commission noted that TPL has not submitted, with its petition, the details of O&M expenses actuals for the years FY 2007-08, FY 2008-09 and FY 2009-10 and also that the projections made for the control period are not in accordance with the Regulation 98.6 of GERC (MYT) Regulations, 2011.

Accordingly the Commission has obtained the actual O&M expenses for the three years ending March 31, 2010 from TPL. The normalized O&M expenses furnished by TPL for the three years ending March 2010 are given in the table below:

Table 6.73 : O&M expenses actual furnished for TPL-D Ahmedabad for the years 2007-08 to 2009-10

(Rs. crore)

Particulars	FY 2007-08	FY 2008-09	FY 2009-10	Average for the three years considered for FY 2008-09
Employee expenses	59.08	64.93	59.02	61.01
R&M expenses	69.06	70.47	80.52	73.35
A&G expenses	29.95	27.71	36.68	31.45
Total O&M expenses	158.09	163.11	176.22	165.81

The Commission has arrived at the permissible O&M expense for the control period FY 2011-12 to FY 2015-16 in accordance with Regulation 98.6 of GERC (MYT) Regulations, 2011. The three-year average O&M expenses have been considered as O&M expenses for FY 2008-09. These O&M charges for FY 2008-09 are escalated at 4% per annum to get the O&M expenses for FY 2011-12. Taking these O & M expenses determined for FY 2011-12, the permissible O&M expenses for the years FY 2012-13 to FY 2015-16 are arrived at by escalating the O&M expenses of FY 2011-12 @ 5.72% per annum for each year of the control period. The O&M expenses arrived at for the control period is given in the table below:

Table 6.74: Approved O&M expenses for TPL-D Ahmedabad Area for the control period of FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
O&M expenses	186.51	197.18	208.46	220.39	232.99

The Commission, accordingly, approves the O&M expenses for the control period FY 2011-12 to FY 2015-16 which are as detailed in the table above.

6.2.10.2 Capital expenditure

The TPL has projected the capital expenditure to the extent of Rs. 4037.36 crore for the control period FY 2011-12 to FY 2015-16. The year-wise CAPEX proposed and the details of schemes covered are as given the table below:

Table 6.75: Capital expenditure projected for TPL-D Ahmedabad area for the control period FY 2011-12 to FY 2015-16

(Rs. crore)

Project Name	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	Total
EHV Network						
Bulk Supply Points	60.00	170.00				230.00
EHV Lines	74.83	383.91	45.35	75.40	28.85	608.34
EHV Sub Stations	84.29	147.00	65.00	68.20	87.30	451.79
33kV Sub Stations projects	71.79	56.15	29.30	26.25	14.25	197.74
Others	17.60	10.91	7.50	7.50	7.50	51.01
Sub-Total	**308.51**	**767.97**	**147.15**	**177.35**	**137.90**	**1538.88**
HT Network						
New Substations	41.91	39.69	44.08	42.83	44.42	212.93
New HT Consumers	19.26	19.26	20.23	21.24	21.24	101.23
Transformer Replacement	7.33	7.77	8.58	9.51	10.46	43.65
11kV Normal Load Growth Cable / OHL Schemes	2.19	2.38	2.49	2.41	1.74	11.21
System Maintenance Related Expenses	11.47	10.28	8.68	7.31	6.86	44.60
Supporting Infrastructure	0.63	0.22	0.16	0.18	0.16	1.35
Reactive Power Compensation	0.82	0.83	0.90	0.95	0.95	4.45
Sub Total HT Network	**83.62**	**80.44**	**85.12**	**84.42**	**85.83**	**419.42**
LT network						
Services extension on Mains/DE	15.58	16.62	18.57	20.68	21.89	93.34
Services on extension/reduction	11.80	12.12	11.97	12.92	13.27	62.08
SEP services	3.00	2.75	2.62	2.48	2.20	13.05
Load balancing & load management on DT's	6.70	6.96	7.74	8.96	9.45	39.81
Supporting infrastructure	0.25	0.26	0.28	0.29	0.30	1.38

Project Name	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	Total
Sub-Total LT network	**37.32**	**38.71**	**41.18**	**45.32**	**47.12**	**209.65**
Meter Management						
Normal Load Growth	10.49	11.01	11.18	11.69	12.22	56.60
SEP	1.34	1.22	1.18	1.08	1.04	5.87
System maintenance requirements	8.44	8.44	8.51	8.51	8.51	42.41
Supporting infrastructure	0.64	0.77	0.53	0.59	0.53	3.06
Sub-Total Meter Management	**20.91**	**21.45**	**21.41**	**21.89**	**22.30**	**107.95**
Special imitative on safety	**352.25**	**521.75**	**485.00**	**307.00**	**-**	**1666.00**
Others						
Special projects	6.97	5.77	7.17	2.14	2.14	24.20
Distribution Administration	11.18	8.51	14.80	4.38	2.46	41.33
IT & Related expenditure	5.81	6.11	5.16	8.09	4.76	29.93
Sub-Total Others	**23.96**	**20.39**	**27.13**	**14.60**	**9.37**	**95.45**
Grand Total	**826.57**	**1450.71**	**806.99**	**650.58**	**302.51**	**4037.36**

Petitioner's submission

The TPL has submitted that it plans to undertake capital expenditure for augmentation and upgradation of distribution network to meet the requirements of increasing load reliability and redundancy, regulatory norms and safety measures. It is further submitted that at the advent of the control period TPL plans to capture the capital expenditure requirements to maintain the efficiency with long term planning. The petitioner further indicated the major areas of capital expenditure in respect of Ahmedabad supply area, which are as detailed below:

Bulk Supply Points: The bulk supply point at Gota station which was planned in the 1st Control Period is deferred to the control period due to the lower load as compared to the expected growth in the period .

EHV Lines: The capital expenditure planned under this head is mainly to provide redundancy to the EHV sub-stations with emergency service consumers by providing additional EHV feed, take up ring network to avoid interruption during fault conditions and also to upgrade the existing EHV lines to cater to the increased load requirements. The major projects which are captured under this head are 132 kV Line from Airport to Nicol – 2, 132 kV Inter connection between Dudheswar and Pirana via SSR, Vadavi Gota 400 kV D/C line, 220 kV D/C Nicol – 2 to Dehgam Line, etc.

EHV Substations: The capital expenditure planned under this head is for implementation of new substation or up-gradation of the existing sub-station to cater the increasing existing and future load. The increase of load is estimated on the basis of the information of developers' plans in the command areas of the substation. Therefore, the major capital expenditure planned are additional transformer in 400/132 kV EHV substation at Pirana – 2, 400 kV koba S/s, 400 kV City S/s, 132 kV River Front substation, Up-grading 66 kV SSR Jamalapur to 132 kV, etc. In addition to the above, TPL proposes to implement 400 kV Koba & City and 220 kV Ranip & Nehru Nagar sub-stations, as part of a program to develop the skeletal network in view of the long-term demand growth forecasted at 5360 MW by 2030. These sub-stations are to be utilized as bulk import points and initial expenditure on them to be incurred in the MYT 2nd Control Period as a part of the total skeletal network.

33 KV Substations: The capital expenditure under this head would include the implementation of new substations or up-gradation of the existing to cater to the additional load as well as bringing the substations to the proximity of the load centre thereby reducing fault outage time. The major substations planned are 33 kV Cancer Hospital, 33 kV New Ranip, 33 kV Mother Diary, 33 kV Electronic SEZ S/S etc.

Special Initiatives on Safety: In view of vast development of the Ahmedabad City in the last decade it is found that the statutory & technical space clearances to the network/ equipments from human interface/ infrastructure/ civil structures have been compromised. Many EHV & HV lines have come under exposure to general public due to increased congestion of public infrastructure and illegal encroachments. Additionally, the switchgears & equipments have become aged & obsolete due to which operations have become risky leading to increased probabilities of accidents to general public and employees. Therefore, TPL has planned under grounding of major overhead lines and replacement of old, obsolete switchgears, which are prone to accidents.

Other CAPEX: The other capital expenditure items comprise of (i) service extension works in LT network, (ii) metering and supporting infrastructure for load growth, and (iii) Special Projects in relation to meter test benches, AMR, GIS, IT projects, etc.

Petitioner's submission

The TPL has considered normative debt equity of 70:30 for funding the capital expenditure. The details of sources of funding are as given in the table below:

Table 6.76 : Projected capital expenditure and capitalization during the control period FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Capex of the year	826.57	1450.71	806.99	650.58	302.51
Capitalization	826.57	1450.71	806.99	650.58	302.51
Less: SLC Additions	49.48	51.96	54.55	57.28	60.15
Less: Grant in aid	-	-	-	-	-
Balance capitalization	777.09	1398.75	752.44	593.31	242.36
Normative Debt @ 70%	543.96	979.13	526.70	415.31	169.65
Normative Equity @ 30%	231.78	418.92	224.27	177.34	72.71

Commission's Analysis

The Commission reiterates its earlier observation that utilities actually incur significantly lesser capital expenditure than what was approved while determining the tariff. While capital investment is required to be made by TPL Distribution for various purposes like the creation of new infrastructure to meet the load growth, to meet statutory requirements, to strengthen the existing system and increase its operational efficiency, replace old and obsolete assets, any such capital investment increases the fixed asset base, resulting in the higher debt servicing, higher return on equity and higher depreciation which ultimately affects the tariffs to consumers. The Commission finds it necessary to ensure that the proposed capital investment schemes do not impose avoidable burden on the consumers by way of increase in tariff and that the CAPEX should be utilized at optimum level.

It is observed that TPL has envisaged huge Capex for various schemes *inter alia* special initiatives on safety at a staggering provision of Rs. 1666 crore which needs adequate justification. This requires to be reexamined segment-wise and the expenditure spread out to the next control period. In fact TPL has been requested to reexamine and revise the provision. However, the TPL has not revised the provision in this regard but only intends to capitalize the entire capital expenditure during the same year in which the investment is proposed.

The Commission is of the opinion that the proposed CAPEX is quite ambitious and requires a detailed review. However, the Commission would not like to prune down the proposed capital investment at this stage pending a review.

The Commission approves the capital expenditure as proposed by the TPL including CAPEX on safety measures. However, the capitalisation of CAPEX on safety measures is not considered for loading on ARR at this stage and would be considered on actual capitalisation.

The TPL may seek midterm review of the capital investment plan along with others, if any, in accordance with the Regulation 19 of GERC (MYT) Regulations, 2011 by providing all the relevant details, including the details of actual investment made by that time against the projected safety measures.

A directive to this effect is issued separately in this order.

The CAPEX and capitalization and funding approved by the Commission are given in the Table below:

Table 6.77: Approved capital expenditure and capitalization and funding for the control period FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	**FY 2011-12**	**FY 2012-13**	**FY 2013-14**	**FY 2014-15**	**FY 2015-16**
Opening balance		**352.25**	**873.99**	**1358.99**	**1666.00**
Add: New investment	826.57	1450.70	806.99	650.59	302.52
Total	**826.57**	**1802.95**	**1680.98**	**2009.58**	**1968.52**
Less: Investment capitalized	474.32	928.96	321.99	343.58	302.51
Closing balance	**352.25**	**873.99**	**1358.99**	**1666.00**	**1666.01**
Funding of Capex					
Capitalization	474.32	928.96	321.99	343.58	302.51
Less: SLC	49.48	51.96	54.55	57.28	60.15
Balance capitalization	424.84	877.00	267.44	286.30	242.36
Normative Debt @ 70%	297.39	613.90	187.21	200.41	169.65
Normative Equity @ 30%	127.45	263.10	80.23	85.89	72.71

The Commission has arrived at the opening and closing balance of GFA taking into consideration the capitalization approved in the above table as detailed in the table below:

Table 6.78 : Gross Fixed Assets for the control period FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	**Opening balance**	**Additions during the year**	**Closing balance**
FY 2011-12	2352.01	474.32	2826.33
FY 2012-13	2826.33	928.96	3755.29

Particulars	Opening balance	Additions during the year	Closing balance
FY 2013-14	3755.29	321.99	4077.28
FY 2014-15	4077.28	343.58	4420.86
FY 2015-16	4420.86	302.51	4723.37

The above gross fixed assets are taken into consideration for computation of depreciation charges.

6.2.10.3 Interest expenses

The TPL has projected the interest expenses at Rs. 929.63 crore for the control period of FY 2011-12 to FY 2015-16 which are as detailed in the table below:

Table 6.79: Interest expenses projected for TPL- D Ahmedabad for control period FY 2011-12 to FY 2015-16

(Rs. crore)

Loan Heads	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Ahmedabad Supply Area					
APDRP					
Opening Balance	32.51	30.25	27.99	25.74	23.48
Repayments	2.26	2.26	2.26	2.26	2.26
Closing Balance	30.25	27.99	25.74	23.48	21.22
Interest Rate	9.00%	9.00%	9.00%	9.00%	9.00%
Interest on loan	2.82	2.62	2.42	2.21	2.01
HDFC 2 A					
Opening Balance	25.00	17.31	9.62	1.92	-
Repayments	7.69	7.69	7.69	1.92	-
Closing Balance	17.31	9.62	1.92	-	-
Interest Rate	10.75%	10.75%	10.75%	10.75%	10.75%
Interest on loan	2.27	1.45	0.62	0.10	
HDFC 3 A					
Opening Balance	66.67	50.00	33.33	16.67	-
Repayments	16.67	16.67	16.67	16.67	-
Closing Balance	50.00	33.33	16.67	-	
Interest Rate	11.00%	11.00%	11.00%	11.00%	11.00%
Interest on loan	6.42	4.58	2.75	0.92	-
ICD / SBI from FY 2009					
Opening Balance	122.92	87.73	-	-	-
Repayments	35.19	87.73	-	-	-
Closing Balance	87.73	-	-	-	-
Interest Rate	11.00%	11.00%	-	-	-
Interest on loan	11.59	4.83	-	-	-
LIC					
Opening Balance	40.41	35.20	29.98	24.77	19.55
Repayments	5.21	5.21	5.21	5.21	5.21
Closing Balance	35.20	29.98	24.77	19.55	14.34
Interest Rate	11.00%	11.00%	11.00%	11.00%	11.00%

Loan Heads	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Interest on loan	4.16	3.58	3.01	2.44	1.86
BOB					
Opening Balance	148.85	131.84	114.82	97.81	80.80
Repayments	17.01	17.01	17.01	17.01	17.01
Closing Balance	131.84	114.82	97.81	80.80	63.79
Interest Rate	10.93%	10.93%	10.93%	10.93%	10.93%
Interest on loan	15.33	13.48	11.62	9.76	7.90
IDFC					
Opening Balance	82.69	71.15	59.62	48.08	36.54
Repayments	11.54	11.54	11.54	11.54	11.54
Closing Balance	71.15	59.62	48.08	36.54	25.00
Interest Rate	9.92%	9.92%	9.92%	9.92%	9.92%
Interest on loan	7.63	6.49	5.34	4.20	3.05
'New loan in FY 2010-11'					
Opening Balance	58.17	52.36	46.54	40.72	34.90
Repayments	5.82	5.82	5.82	5.82	5.82
Closing Balance	52.36	46.54	40.72	34.90	29.09
Interest Rate	11.00%	11.00%	11.00%	11.00%	11.00%
Interest on loan	5.94	5.32	4.69	4.06	3.44
Interest Expense on existing loan	**56.16**	**42.34**	**30.45**	**23.69**	**18.27**
Interest expenses for loan against capital expenditure					
Capitalization during the year	826.57	1450.71	806.99	850.59	302.51
Less: SLC Additions	49.48	51.96	54.55	57.28	60.15
Less: Grant in aid	-	-	-	-	-
Normative Debt @ 70%	543.96	979.13	526.70	415.31	169.65
Opening balance	-	543.96	1468.69	1843.09	2053.42
New borrowings	543.93	979.13	526.70	415.31	169.65
Repayments	-	54.40	152.31	204.98	246.51
Closing balance	543.96	1488.69	1843.09	2053.42	1976.56
Interest expenses on new loan	**29.92**	**110.70**	**182.15**	**214.31**	**221.65**
Total interest	**86.08**	**153.03**	**212.60**	**238.00**	**239.92**

Petitioner's submission

The TPL has submitted that the interest expenses on loans would be on account of two types of loans.

(a) Opening balance of loans i.e existing loans drawn at the starting of the FY 2011-12 and

(b) New loans drawn against the capital expenditure planned for each of the year in the control period FY 2011-12 to FY 2015-16.

It is further submitted that the capital expenditure for the control period is proposed to be funded through a normative debt equity ratio of 70:30 as per the GERC (Terms and Conditions of Tariff) Regulations, 2005.

Commission's Analysis

The opening balance of loans for FY 2011-12 is as per the closing balance of loans considered in the APR for FY 2010-11. The repayment of existing loan is taken by the TPL as per the terms and conditions of existing loans and a 10-year period is considered for the new loans.

In accordance with the Regulation 39 of GERC (MYT) Regulations, 2011 the repayment for the year during the tariff period from FY 2011-12 to FY 2015-16 shall be deemed to be equal to the depreciation allowed for that year (Regulation 39.3) and the rate of interest shall be at the weighted average rate of interest calculated on the basis of the actual loan portfolio at the beginning of each year, applicable to the Distribution Licensee (Regulation 39.5).

The weighted average rate of interest on the loans for the year FY 2010-11 (APR) has been worked out to 10.49%.

The interest on loans for the control period is arrived at in accordance with the Regulation 39 of GERC (MYT) Regulations, 2011 which are as detailed in the table below:

Table 6.80: Approved interest on loans for control period FY 2011-12 to FY 2015-16

(Rs. crore)

Sl. No.	Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
1.	Opening loan	577.23	768.20	1241.26	1255.36	1264.99
2.	Loan addition during the year	297.39	613.90	187.21	200.41	169.65
3.	Repayment during the year	106.41	140.85	173.10	190.78	207.57
4.	Closing loan	768.20	1241.26	1255.36	1264.99	1227.07
5.	Average loan	672.72	1004.73	1248.31	1260.18	1246.03
6.	Weighted average rate of interest	10.49%	10.49%	10.49%	10.49%	10.49%
7.	Interest expenses	**70.57**	**105.40**	**130.95**	**132.19**	**130.71**

The Commission, accordingly, approves the interest expenses as detailed in the above table for the control period FY 2011-12 to FY 2015-16.

6.2.10.4 Interest on working capital

The TPL has projected the interest on working capital at Rs. 343.23 crore for the control period FY 2011-12 to FY 2015-16 as detailed in the table below:

Table 6.81: Projected Interest on working capital for TPL- Ahmedabad for control period FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
O&M expense	19.16	21.48	24.10	27.06	30.41
Spares as a% of stores	34.71	49.20	57.22	63.70	66.73
Receivables	315.69	405.95	464.90	562.46	603.07
Working capital	369.56	476.62	546.22	653.22	700.20
Interest on Working Capital	46.19	59.58	68.28	81.65	87.53

Petitioner's submission

The TPL has submitted that the interest on working capital is computed as per the GERC (Terms and Conditions of Tariff) Regulations, 2005. The interest rate of 12.50% being the SBI PLR rate on 15th December, 2010 and is applied on the working capital requirement arrived at in accordance with the Regulations.

Commission's Analysis

The Commission has noted that the parameters adopted by the TPL are different from the normative parameters notified in the MYT Regulations, 2011. TPL has considered the interest on working capital at 12.50% being the SBI PLR on 15th December 2010. As per the GERC (MYT) Regulation 41.4 (b) the interest on working capital shall be allowed at the rate equal to State Bank Advance Rate (SBAR) as on 1st April of the financial year in which the petition is filed. The TPL has filed the petition on 24th February 2011 in the FY 2010-11 and the applicable rate of SBI PLR as on 01/04/2010 is 11.75%. The TPL has considered two (2) months receivables less receivable considered for generation business. The Regulation 41.4 (iii) specified that only receivables equivalent to one month of the expected revenue from sale of power at the prevailing tariffs minus the amount held as security deposit from consumer.

The Commission has computed the working capital and the interest on working capital for the control period FY 2011-12 to FY 2015-16 in accordance with

Regulation 41 of (MYT) Regulations, 2011 for the retail supply of electricity as detailed in the table below:

Table 6.82 : Interest on working capital approved for TPL-D Ahmedabad for the control period FY 2011-12 to FY 2015-16

(Rs. crore)

Sl. No.	Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
1.	O&M expenses for one month	15.54	16.43	17.37	18.37	19.42
2.	Maintenance spares 1% of GFA	23.52	28.26	37.55	40.77	44.21
3.	Receivables for 1 month sales revenue at the prevailing tariffs	226.42	244.26	263.70	284.87	307.95
4.	Less: Amount held as security deposit from consumers	-206.32	-228.32	-252.52	-279.14	-308.42
5.	Total Working Capital Requirement	59.16	60.64	66.10	64.87	63.15
6.	Interest Rate	11.75%	11.75%	11.75%	11.75%	11.75%
7.	Interest on Working Capital	6.95	7.13	7.77	7.62	7.42

The Commission, accordingly, approves the interest on working capital for the control period for FY 2011-12 to FY 2015-16 as detailed in the Table above.

6.2.10.5 Interest on Security Deposit

The TPL has claimed a sum of Rs. 80.52 crore towards interest on security deposit for the control period FY 2011-12 to FY 2015-16 as detailed in the table below:

Table 6.83: Interest on security deposit projected for TPL-D Ahmedabad for the control period FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Opening balance of security deposit	206.32	228.32	252.52	279.14	308.42
Closing balance of security deposit	228.32	252.52	279.14	308.42	340.63
Interest cost	13.04	14.43	15.95	17.63	19.47

Petitioner's submission

TheTPL has submitted that it has estimated the interest on security deposit for each year considering the interest rate of 6% consistent with the approved rate on the average of opening and closing balances of security deposit for Ahmedabad Supply Area. The addition of deposit has been projected on the basis of growth during FY 2010-11.

Commission's Analysis

The TPL has calculated the interest on security deposits @ 6% P.A. on the average of opening and closing balances for the year and this is found to be correct.

The Commission, accordingly, approves the interest on security deposit for the control period FY 2011-12 to FY 2015-16 as detailed in the table below:

Table 6.84: Approved interest on security deposit for the control period FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Opening balance of security deposit	206.32	228.32	252.52	279.14	308.42
Closing balance of security deposit	228.32	252.52	279.14	308.42	340.63
Interest cost	13.04	14.43	15.95	17.63	19.47

6.2.10.6 Depreciation

The TPL has claimed a sum of Rs. 1013.99 crore towards depreciation for the control period FY 2011-12 to FY 2015-16 which are as detailed in the table below:

Table 6.85: Depreciation projected for TPL- D Ahmedabad for the control period FY 2011-12 to 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Depreciation	112.66	163.57	216.40	249.97	271.39

Petitioner's submission

The TPL has submitted that the depreciation rates as per CERC (Terms and Conditions of Tariff) Regulations, 2004 are applied on opening GFA of FY 2009-10 and for addition of assets from 1st April, 2009 onwards, depreciation has been computed at depreciation rates specified in the Appendix III to the CERC (Terms and Conditions of Tariff) Regulations, 2009.

Commission's Analysis

The petitioner has computed the depreciation for the control period FY 2009-10 using CERC depreciation rates asset classification-wise as submitted by TPL. The details of opening balance of assets as on 1st April, 2011, addition and deduction to the Gross Block during each year of the control period and the depreciation on the assets, asset classification-wise are as given in Form D-2 A (TPL-D Ahmedabad License Area) page 335 to 337 of the petition. The TPL has considered the projected capital expenditure for the control period by proposing the entire investment for the year as capitalization. However, the Commission has approved capitalization as detailed in the table 6.77. In view of this the depreciation gets changed with the capitalization. The approved opening and closing balances of GFA are given in the table 6.78 above.

The weighted average depreciation considered by TPL based on the methodology adopted worked out to 4.11% for FY 2011-12, 4.28% for FY 2012-13, 4.42% for FY 2013-14, 4.49% for FY 2014-15 and 4.54% for FY 2015-16. The Commission has computed the depreciation for the control period considering the above weighted average rate of depreciation as detailed in the table below:

Table 6.86: Approved Depreciation for control period FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
GFA in the beginning of the year	2352.01	2826.33	3755.29	4077.28	4420.86
Additions during the year	474.32	928.96	321.99	343.58	302.51
GFA at the end of the year	2826.33	3755.29	4077.28	4420.86	4723.37
Average GFA	**2589.17**	**3290.81**	**3916.29**	**4249.07**	**4572.12**
Weighted average rate of depreciation	4.11%	4.28%	4.42%	4.49%	4.54%
Depreciation for the year	106.41	140.85	173.10	190.78	207.57

The Commission, accordingly, approves the depreciation for the control period FY 2011-12 to FY 2015-16 as detailed in the above table.

6.2.10.7 Return on equity

The TPL has claimed a sum of Rs. 1160.86 crore towards return on equity for the control period FY 2011-12 to FY 2015-16 as detailed in the table below:

Table 6.87 : Return on equity projected for TPL- D Ahmedabad for the control period FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Opening equity and reserves	983.93	1215.70	1634.62	1858.89	2036.23
Additions to equity towards capital investments	231.78	418.92	224.27	177.34	72.71
Closing balance of equity and reserves	1215.70	1634.62	1858.89	2036.23	2108.94
Return on equity @ 14% on the average balance	153.97	199.52	244.55	272.66	290.16

Petitioner's submission

The TPL has submitted that the return on equity has been based on the opening and closing balance of equity considering the estimated capitalization in each year of the control period. The return on equity is claimed at 14% on the average of opening and closing balance of equity.

Commission's Analysis

The Commission has examined the submission made by the TPL that the opening balance of equity as on 01/04/2011, is the same as closing balance of equity as on 31/03/2011 considered in the APR for FY 2010-11. The capitalization of capital expenditure is approved in table No. 6.77 and on the basis of which the Commission has estimated the return on equity as detailed in the table below:

Table 6.88 : Return on equity approved for control period FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Opening equity	985.75	1113.20	1376.30	1456.53	1542.42
Equity addition	127.45	263.10	80.23	85.89	72.71
Closing equity	1113.20	1376.30	1456.53	1542.42	1615.13
Average equity	1049.48	1244.75	1416.42	1499.48	1578.78
Return on equity@ 14%	**146.93**	**174.27**	**198.30**	**209.93**	**221.03**

The Commission, accordingly, approves the return on equity as detailed in the above Table for the control period FY 2011-12 to FY 2015-16.

6.2.10.8 Income Tax

The TPL has estimated the income tax at Rs. 288.96 crore for the control FY 2011-12 to FY 2015-16 as detailed in the table below:

Table 6.89: Income Tax projected for TPL- D Ahmedabad for the control period FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Income Tax	38.33	49.66	60.87	67.87	72.23

Petitioner's submission

The TPL has submitted that for the purpose of estimate it has considered TPL-D as a separate entity. It has estimated the income tax at an income tax rate of 19.93% on the grossed up ROE so as to earn post tax ROE at 14% as per the GERC (Terms and Conditions of Tariff) Regulations, 2005.

Commission's Analysis

The Regulation 42.1 of GERC (MYT) Regulations, 2011 specifies that the Commission in its MYT order shall provisionally approve income tax payable for each year of the control period, if any, based on the actual income tax paid as per the latest audited accounts available for the applicant, subject to prudence check. The latest audited accounts available in the case of TPL are for FY 2009-10 and the income tax admitted in the Truing Up for FY 2009-10 is Rs. 8.52 crore.

The Commission, accordingly, considers the provision for income tax for the control period for FY 2011-12 to FY 2015-16 as approved in the Truing Up for FY 2009-10. Any variation in income tax actually paid and approved shall be considered based on the documentary evidence at the time of Truing Up for each year of the control period in accordance with Regulation 42.2 of GERC (MYT) Regulations, 2011.

The Commission, accordingly, approves the income tax for the control period for FY 2011-12 to FY 2015-16 as detailed in the table below:

Table 6.90: Approved Income tax for the control period FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2011-12	FY 2011-12	FY 2011-12	FY 2011-12
Income Tax	8.52	8.52	8.52	8.52	8.52

6.2.10.9 Non-Tariff income

The TPL has estimated the non-tariff income at Rs. 274.46 crore for the control period FY 2011-12 to FY 2015-16 as detailed in the table below:

Table 6.91 : Non-Tariff income projected for TPL-D Ahmedabad for FY 2010-11 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Non-Tariff income	51.70	53.25	54.84	56.49	58.18

Petitioner's submission

The petitioner has submitted that the non-tariff income consists of mostly the income from meter rent, street light maintenance, sale of scrap, DPC recovery, and bad debt recovery etc.

Commission's Analysis

The Commission has observed that the actual non-tariff income in FY 2009-10 was Rs. 51.39 crore and the projection for the control period is in line with the actual for FY 2009-10.

The Commission, accordingly, approves the non-tariff income for the control period for FY 2011-12 to FY 2015-16 as detailed in the table below:

Table 6.92: Approved Non-tariff income for the control period FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Non-Tariff income	51.70	53.25	54.84	56.49	58.18

6.2.10.10 Provision for Bad Debts

The TPL has estimated the bad debts at Rs. 19.67 crore for the control period FY 2011-12 to FY 2015-16 as detailed in the table below:

Table 6.93: Bad debts projected for TPL-D Ahmedabad for FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Bad debts	3.06	3.54	4.00	4.42	4.65

Petitioner's submission

The TPL has submitted that bad debts has been estimated at 0.10% of the estimated revenue from sale of power in respect of Ahmedabad Supply Area for the control period FY 2011-12 to FY 2015-16 and requested the Commission to approve the bad debts as estimated by TPL and the actual bad debts written off will be considered at the time of truing up.

Commission's Analysis

Regulation 98.8 of GERC (MYT) Regulations, 2011specifies that the Commission may allow bad debts written off as a pass through in the aggregate revenue requirement subject to prudence check. The actual bad debts written off during FY 2009-10 as per segregated audited accounts are Rs.1.09 crore.

The Commission, accordingly, approves the provision for bad debts at Rs.1.09 crore per each year of the control period FY 2011-12 to FY 2015-16 based on the actual bad debts written off as per the audited accounts for FY 2009-10 as detailed in the table below:

Table 6.94: Approved bad debts for the control period FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Bad debts	1.09	1.09	1.09	1.09	1.09

6.2.10.11 Contingency Reserve

Petitioner's submission

The TPL has submitted that it has proposed a contribution to the contingency reserve at Rs. 0.60 crore P.A for each year of control period FY 2011-12 to FY 2015-16.

Commission's Analysis

The proposed contribution to contingency reserve is in accordance with Regulation 85.6 of GERC (MYT) Regulations, 2011.

The Commission, accordingly, approves the contingency reserve for the control period for FY 2011-12 to FY 2015-16 as detailed in the table below:

Table 6.95: Approved contingency reserve for TPL-D Ahmedabad for control period FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Contingency reserve	0.60	0.60	0.60	0.60	0.60

6.2.11 Revenue from sale of power

The TPL has estimated the revenue from sale of power with existing tariff for FY 2011-12 at Rs. 2173.65 crore.

Petitioner's submission

The TPL has submitted that revenue from sale of power has been computed considering the sales and existing tariff rates for different categories of consumers, which are detailed in the respective formats.

Commission's Analysis

The Commission has analyzed the sales projected by TPL for the Ahmedabad Supply Area and estimated the sales category-wise in the table No.6.66.

The Commission has computed the revenue from sale of power with existing tariff rates as detailed in the table below:

Table 6.96: Revenue with existing tariff for the Control Period FY 2011-12 to FY 2015-16

Sl. No	Category	Average Tariff (Rs/kWH)	FY 2011-12		FY 2012-13		FY 2013-14		FY 2014-15		FY 2015-16	
			MU	Rs. Crore	MU	Rs. Crore	MU	Rs. Crore	MU	Rs. Crore	MU	Rs. Crore
1	Residential	3.29	1886	620.43	2054	675.91	2238	736.35	2438	802.20	2656	873.94
2	Commercial	4.73	1035	489.67	1161	549.21	1302	616.00	1461	690.91	1638	774.93
3	LTP	4.04	301	121.60	315	127.08	329	132.81	344	138.80	359	145.06
4	LTMD	4.33	933	403.78	981	424.98	1033	447.29	1087	470.77	1144	495.49
5	HT Pumping	4.33	106	45.95	108	46.89	111	47.85	113	48.83	115	49.82
6	HTMD	4.18	1449	605.59	1544	645.59	1646	688.24	1755	733.70	1871	782.16
7	Others	3.44	73	25.19	72	24.93	72	24.66	71	24.41	70	24.15
8	**Total**		**5783**	**2312.20**	**6237**	**2494.59**	**6731**	**2693.20**	**7269**	**2909.61**	**7855**	**3145.55**
9	FPPPA @ 70 paise / Kwh	0.7		404.79		436.58		471.16		508.81		549.82
10	**Total Revenue**			**2716.99**		**2931.17**		**3164.37**		**3418.43**		**3695.37**
11	**Less rebate @1.00%**	1.00%		27.17		29.31		31.64		34.18		36.95
12	**Net Revenue**			**2689.82**		**2901.85**		**3132.73**		**3384.24**		**3658.41**

The Commission, accordingly, approves the revenue from sale of power at Rs. 2716.99 crore with existing tariff rates for the FY 2011-12 the first year of the control period for FY 2011-12 to FY 2015-16.

6.2.12 Aggregate Revenue Requirement

The aggregate revenue requirement for the control period as projected by TPL and as approved by the Commission is as given in the following two tables.

Table 6.97: Projected ARR for TPL-D Ahmedabad for the control period FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Power Purchase cost	2431.05	2696.31	2943.70	3219.66	3357.48
O&M expenses	229.90	257.79	289.25	324.76	364.86
Depreciation	112.66	163.57	216.40	249.97	271.39
Interest on loan	86.08	153.03	212.60	238.00	239.92
Interest on security deposit	13.04	14.43	15.95	17.63	19.47
Interest on working capital	46.19	59.58	68.28	81.65	87.53
Bad Debts	3.06	3.54	4.00	4.42	4.65
Contingency Reserve	0.60	0.60	0.60	0.60	0.60
Return on equity	153.97	199.52	244.55	272.66	290.16
Income Tax	38.33	49.66	60.87	67.87	72.23
Less: Non-tariff income	51.70	53.25	54.84	56.49	58.18
Net ARR	**3063.20**	**3544.79**	**4001.34**	**4420.72**	**4650.10**

Table 6.98: Approved ARR for TPL-D Ahmedabad for the control period FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Power Purchase cost*	2257.84	2545.00	2849.99	3216.68	3410.33
O&M expenses	186.51	197.18	208.46	220.38	232.99
Depreciation	106.41	140.85	173.10	190.78	207.57
Interest on loan	70.57	105.40	130.95	132.19	130.71
Interest on security deposit	13.04	14.43	15.95	17.63	19.47
Interest on working capital	6.95	7.13	7.77	7.62	7.42
Return on equity	146.93	174.27	198.30	209.93	221.03
Income Tax	8.52	8.52	8.52	8.52	8.52
Bad Debts	1.09	1.09	1.09	1.09	1.09
Contingency Reserve	0.6	0.6	0.6	0.6	0.6
Prompt payment rebate	27.17	29.31	31.64	34.18	36.95
Less: Non-tariff income	51.7	53.25	54.84	56.49	58.18
Net ARR	**2773.93**	**3170.60**	**3571.50**	**3983.12**	**4218.51**

* Refer table 6.161.

6.2.13 Revenue gap for FY 2011-12

The ARR for FY 2011-12 is approved at Rs. 2773.93 crore and the revenue from sale of power with approved sales and with existing tariff is Rs.2716.99 crore including FPPPA. The estimated gap for FY 2011-12 is given in the table below:

Table 6.99: Revenue gap of TPL- Ahmedabad for FY 2011-12

(Rs. crore)

Sl. No.	Particulars	Projected by TPL	Approved by the Commission
1	Net: Aggregate Revenue Requirement	3063.20	2773,93
2	Revenue from sale of power at existing tariff rates	2173.65	2312.20
3	FPPPA revenue @ Rs. 0.70 per unit	390.11	404.79
4	Net surplus / (gap) [(2 + 3) – 1]	(499.44)	(56.94)
5	Add: Gap due to truing up of FY 2009-10		(47.89)
6	Add: Gap arrived in the GERC Order considering APTEL judgment for FY 2008-09.		(25.58)
7	Less: Surplus arrived in GERC order considering APTEL judgement for FY 2007-08		4.57
8	**Total gap**		**(125.84)**

6.3 Surat Distribution

6.3.1 Energy sales

Projection of category-wise energy sales is essential for estimating the likely revenue from the sales and arrive at the quantum of power purchase. Realistic estimation of energy sales is, therefore, an important requirement. This section, examines in detail the consumer category-wise sales projected by TPL in its MYT petition for the period FY 2011-12 to FY 2015-16 and presented for approval of ARR during the control period.

The licensee distributes electricity to about 6.09 lakh consumers in the city of Surat.

6.3.2 Category-wise consumers

The consumers in Surat is broadly categorized as under:

Residential	Applicable to lights, fans, appliances etc in residential premises
Commercial	Applicable to lights, fans, appliances etc in commercial, industrial premises (other than residential)
LTP	Applicable to motive power installations up to and including 15 BHP
LTMD	Applicable to motive power installations above15 BHP
HTMD	Applicable to High tension consumers for maximum demand 100 kVA and above
Agriculture (AGP)	Applicable to motive power for agricultural purpose
Temporary supply	Applicable to installations for temporary requirement of electricity supply

6.3.3 Overall approach to sales projections

It is submitted by TPL that the energy sales forecast for the Surat area is based on the historical trends, expected developmental plans and per capita consumption trends of new and old consumers. The sales estimation has been arrived at after taking into consideration various factors like market scenario etc as well..

6.3.4 Projected energy sales

The TPL has furnished the past trends in category-wise energy sales since FY 2005-06 and the growth rates.

The data on category wise energy sales for the last 5 years FY 2005-06 to FY 2009-10 (actual) and estimated sales for FY 2010-11 for Surat area furnished by TPL is as given below:

Table 6.100: Historical data for energy sales to consumers in Surat supply area

(MU)

Category	FY 2005-06	FY 2006-07	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11 (RE)	8 year CAGR (%)	5 year CAGR (%)
Residential	455	480	517	538	554	589	6.23	5.30
Commercial	355	374	411	424	455	497	7.69	6.96
LTP	1500	1497	1619	1531	1583	855	3.87	1.90
LTMD	150	168	187	164	174	958		
HTMD	218	204	219	220	230	241	2.43	2.03
Others	23	23	30	30	31	28	4.40	4.01
Total	2701	2746	2983	2907	3027	3168	4.69	3.24

The TPL submitted that due to change in load limit in LTP and LTMD category in accordance with the Commission's order dated 31st March, 2010 in case No. 988/2010 the sales have been shifted from LTP to LTMD category. Therefore, the growth rate for these categories has been estimated collectively by TPL.

6.3.5 Forecast of category-wise sales

The consumer category-wise sales for the control period FY 2011-12 to FY 2015-16 is discussed in this section. The growth is based on historical trend (CAGR) and with some marginal adjustments based on end use survey etc. The growth in energy consumption is likely to remain normal and any spurt in growth is unlikely. The category-wise forecast is as follows:

6.3.5.1 Residential

Petitioner's submission

The sales under this category accounts to about 18.6% of total sales. It is submitted by TPL that residential category witnessed growth trend of 5% to 6% with 5 year CAGR of 5.28%. It can be inferred that a steady growth of consumption would occur in future considering the above. The TPL has taken YoY growth of about 6% for this category for the control period FY 2011-12 to FY 2015-16 as given in the table below:

Table 6.101: Energy sales projected for residential category for the control period FY 2011-12 to FY 2015-16

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Energy sales (MU)	626	664	704	746	790

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
YoY growth rate (%)	6.31	6.05	6.02	5.98	5.95

Commission's Analysis

The Commission has examined the projected sales by TPL to this category for the control period. This category has recorded a CAGR of 6.23% and 5.30% for the 8 year and 5 year periods respectively up to FY 2010-11.

The Commission considers a growth rate of 5.30% is reasonable and approves the sales for this category as given in the table below:

Table 6.102: Energy sales approved by the Commission for the residential category for the control period FY 2011-12 to FY 2015-16

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Energy sales (MU)	620	652	688	724	763

6.3.5.2 Commercial

The commercial category accounts to about 14% of the total sales and the TPL has projected its sales growth for the control period as under:

Table 6.103: Energy sales in Commercial category projected for the control period FY 2011-12 to FY 2015-16

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Energy sales (MU)	534	574	616	665	717
YoY growth rate (%)	7.30	7.48	7.44	7.91	7.86

Petitioner's submission

The TPL has considered a moderate growth of about 7.5% against 8 year and 5 year CAGR of 7.69% and 6.97% respectively. It is submitted by TPL that there has been few instances of development of new commercial complexes in the license area due to which it is expected that the sales forecast with YoY growth in this category for the control period would be around 7.5%.

Commission's Analysis

As seen from table 6.100 above this category has recorded an 8 year CAGR of 7.69% and 5 year CAGR of 6.96%.

The Commission considers the growth of 6.96% is reasonable and accordingly approves the sales to this category for the control period as given below:

Table 6.104 : Energy sales approved by the Commission for commercial category for the control period FY 2011-12 to FY 2015-16

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Energy sales (MU)	532	569	608	651	696

6.3.5.3 Low Tension Power (LTP)

This category consists of consumers having motive power load up to and including 15 BHP from the textiles and diamond industries. The consumption of this category accounts to about 2.7% of total consumption.

The TPL has projected the sales of this category for the control period FY 2011-12 to FY 2015-16 as under:

Table 6.105: Projected Energy sales for commercial for the control period FY 2011-12 to FY 2015-16

(%)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Energy sales (MU)	890	927	964	1002	1040
YoY growth rate (%)	4.19	4.12	3.99	3.94	3.79

Petitioner's submission

It is submitted by TPL that textile and diamond industry has revived in FY 2009-10 as compared to FY 2008-09 and hence this category would experience higher sales. The collective LTP and LTMD 8 year CAGR and 5 year CAGR for the two categories have registered a growth rate of 3.87% and 1.9% respectively. Hence, TPL has considered a growth rate at around 4% based on the historical trend and per capita consumption.

Commission's Analysis

As seen from the table 6.100, this category recorded CAGR of 3.87% and 1.9% respectively over 8 year and 5-year periods respectively. The Commission considers the growth of 1.90% over a 5 year period.

Accordingly, the Commission approves the sales for Low Tension Power (LTP) category at 1.90% growth as given in the table below:

Table 6.106: Energy sales approved by the Commission for LTP category for the control period FY 2011-12 to FY 2015-16

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Energy sales (MU)	871	888	905	922	939

6.3.5.4 Low Tension Maximum Demand (LTMD)

This category consists of the consumption from the motive power load above 15 BHP to 50 BHP from textile and diamond industry.

The sales of this category account to about 30% of the total consumption and the petitioner has projected the sales to this category during the control period as below:

Table 6.107 : Projected sales for LTMD category for the control period FY 2011-12 to FY 2015-16

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Energy sales (MU)	975	993	1011	1030	1048
YoY growth rate (%)	1.72	1.89	1.81	1.88	1.75

Petitioner's submission

The TPL has submitted that the diamond industries have revived in FY 2009-10 as compared to FY 2008-09 and the sales from this category recorded a 8 year CAGR of 3.87% and 5 year CAGR of 1.90% respectively It is further submitted by TPL that based on the historical trend and per capita consumption, it has considered a growth of 1.80% in line with 5 year CAGR.

Commission's Analysis

This category records a 5 year CAGR of 1.9%. The Commission considers that the growth of 1.90% based on 5 year CAGR of merged LTP and LTMD.

The Commission approves the energy sales to low tension maximum demand (LTMD) category during control period as below:

Table 6.108 : Energy Sales approved by the Commission for LTMD category for the period FY 2011-12 to FY 2015-16

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Energy sales (MU)	976	995	1014	1033	1053

6.3.5.5 HTMD Category

The sales to this category accounts to about 7.6% of total sales.

The TPL has projected the energy sales to this category for the control period as below:

Table 6.109 : Energy sales projected by TPL-D for the control period FY 2011-12 to FY 2015-16

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Energy sales (MU)	246	251	255	262	270
YoY growth rate (%)	2.19	1.90	1.59	2.75	3.05

Petitioner's submission

The TPL has submitted that the demand and sales from the category is attributed to the textiles, diamond industries and commercial establishments in HTMD-I category and water works pumping stations run by local authority in the HTMD-II category. There is an ongoing trend of the textile process houses to shift to the outskirts of the city which is expected to continue in the coming years due to stringent pollution norms. As a result the textile houses having higher load factor are likely to get replaced by occupants of lower level load factor.

The category recorded 8-year CAGR of 2.43% and 5-year CAGR of 2.03% respectively and hence a moderate growth rate of around 2.0% is considered by TPL based on historical trend and per capita consumption growth for the control period FY 2011-12 to FY 2015-16.

Commission's Analysis

This category recorded a CAGR of 2.43% and 2.03% over the 8 year and 5 year period respectively. The Commission considers the growth of 2.03% based on 5 year CAGR and approves the sales accordingly.

The Commission approves the sales to high-tension maximum demand category for the control period FY 2011-12 to FY 2015-16 as below:

Table 6.110: Energy sales approved by the Commission for HTMD category for the control period FY 2011-12 to FY 2015-16

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Energy sales (MU)	246	251	256	261	266

6.3.5.6 Others

The category of Others comprises of sales to the General category, LTP (AG) and temporary consumers and the TPL has projected the sales to this category for the control period as under:

Table 6. 111: Projected energy sales to others for the control period FY 2011-12 to FY 2015-16

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Energy sales (MU)	27	28	28	29	30
YoY growth rate (%)	(-) 4.92	2.46	2.91	2.47	2.76

Petitioner's submission

It is submitted by TPL that growth rates recorded in this category during the 8 year and 5 year CAGR are 4.40% and 4.18% respectively. But in recent years there has been a drop in sales in the category, which is evident from the 3 year CAGR of (-) recording a growth of 2.01% only. The TPL has therefore, considered the sales to this category based on recent growth rate and per capita consumption.

Commission's Analysis

This category recorded a CAGR of 4.40% and 4.01% over the 8 year and 5 year period respectively.The Commission considers the growth rate of 4.01% over the sales of FY 2010-11

The Commission approves the sales for the control period FY 2011-12 to FY 2015-16 as below:

Table 6.112: Sales approved by the Commission for others for the control period FY 2011-12 to FY 2015-16

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Energy sales (MU)	29	30	31	32	34

6.3.6 Summary of Energy sales

The category-wise energy sales for the control period for Surat area are discussed in the above paragraphs. The sales in each of the categories as projected by TPL and as approved by the Commission are as given in the tables below:

Table 6.113 Projected category-wise energy sales for TPL-D Surat Supply Area for the period FY 2011-12 to FY 2015-16

Category	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Residential	626	664	704	746	790
Commercial	534	574	616	665	717
LTP	890	927	964	1002	1040
LTMD	975	993	1011	1030	1048
HTMD	246	251	255	262	270
Others	27	28	28	29	30
Total	**3297**	**3437**	**3578**	**3734**	**3895**

Table 6.114: Approved Energy sales for the TPL-D Surat area for the period FY 2011-2 to FY 2015-16

Category	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Residential	620	652	688	724	763
Commercial	532	569	608	651	696
LTP	871	888	905	922	939
LTMD	976	995	1014	1033	1053
HTMD	246	251	256	261	266
Others	29	30	31	32	34
Total	**3274**	**3385**	**3502**	**3623**	**3751**

6.3.7 Consumer Forecast

Petitioner's submission

The TPL has projected the number of consumer installations for FY 2011-12 at 6.09 lakh. It has further submitted that the projection is based on historical trend, market scenario, upcoming projects and expected development plans in the supply area and analysis of number of applications received in the past.

The number of consumer installations during FY 2009-10, FY 2010-11 (RE) and projected for FY 2011-12 are as given below:

Table 6.115: Number of consumer installations in Surat Area for FY 2011-12

(Nos.)

Category	FY 2009-10	FY 2010-11 (RE)	FY 2011-12
Residential	361214	363497	369748
Commercial	164547	167595	172570
Low Tension Power	60418	49702	51362
Low Tension Maximum Demand	1041	13044	13236
Hither Tension Maximum Demand	178	181	191
Others	2352	2359	2171
Total	**589750**	**596378**	**609278**

Commission's Analysis

The number of consumer installations projected for the FY 2011-12 is in accordance with the ongoing trend in earlier years.

The number of consumers as projected by TPL for Surat area has been accordingly approved by the Commission.

6.3.8 Distribution losses

Petitioner's submission

The TPL has projected the distribution losses at 6.0% for all the years of the control period FY 2011-12 to FY 2015-16.

It is submitted by TPL that the second control period would witness higher growth in LT load as compared to the HT load, which would lead to distribution of higher load through LT network. This can be observed from the comparison of LT sales growth and HT sales growth proposed by the petitioner for the second MYT control period. The TPL also submitted that due to the higher technical losses in the LT network higher sales in the category would lead to higher distribution losses,

The TPL has also submitted a comparative statement of losses in Surat area with other licensee areas in Mumbai, Delhi and Kolkata in support of its projected and proposed losses.

Commission's Analysis

In the truing up of 2009-10 the Commission approved the actual losses for FY 2009-10 at 5.15%. The TPL has proposed considerable capital investments in Surat area during the control period for augmentation of transmission and distribution network, which the Commission has also approved in this order.

The Commission, therefore, finds no reason for increase in distribution losses from 5.15% to 6.0% as proposed by the TPL and retains the loss level at 5.15% for the control period FY 2011-12 to FY 2015-16 as below:

Table 6.116: Distribution losses approved by the Commission for Surat area for the period FY 2011-12 to FY 2015-16

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Distribution losses (%)	5.15	5.15	5.15	5.15	5.15

6.3.9 Energy Requirement

Petitioner's submission

The Energy requirement is the sum total of energy sales including the transmission and distribution losses. Based on the projected energy sales and the distribution losses TPL has projected the energy requirement as below:

Table 6.117: Energy requirement projected by TPL for Surat area for the period FY 2011-12 to FY 2015-16

(In MU)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Total sales	3297.44	3435.65	3578.06	3733.59	3895.00
Distribution loss (%)	6.00	6.00	6.00	6.00	6.00
Energy required at distribution periphery	3507.92	3654.95	3806.45	3971.90	4143.62

Commission's Analysis

Based on the energy sales approved in paragraph 6.3.6 and table No. 6.114 and also distribution losses approved in paragraph 6.3.8 and table No. 6.116, the Commission has computed the energy requirement of Surat distribution area at its periphery as below:

Table 6.118: Energy requirement approved by the Commission for Surat distribution area for the period FY 2011-12 to FY 2015-16

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Energy sales (MU)	3274	3385	3502	3623	3751
Distribution loss approved at (%)	5.15	5.15	5.15	5.15	5.15
Distribution loss approved at (MU)	178	184	190	197	204
Energy requirement at distribution periphery	3452	3569	3692	3820	3955

The Commission approves the energy requirement of Surat distribution area at its periphery as in the table above.

6.3.10 Fixed Charges

6.3.10.1 Operation and Maintenance (O&M) expenses

The O&M expenses consist of Employee expenses, Administration and General (A&G) expenses and Repairs and Maintenance (R&M) expenses. The TPL has projected O&M expenses as a composite head on Rs. per unit basis for the control period FY 2011-12 to FY 2015-16 as detailed in the table below:

Table 6.119 : O&M expenses per unit for TPL-D Surat area for the control period FY 2011-12 to FY 2015-16

(Rs./unit)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
O&M expenses	0.31	0.32	0.34	0.36	0.38

The O&M expenses in absolute figures are given only in the ARR (Table 188 of the petition) which are as detailed in the table below:

Table 6.120: O&M expenses claimed by TPL-D Surat area for the control period FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
O&M expenses	100.97	111.22	122.45	135.09	148.99

Petitioner's submission

The petitioner has submitted that O&M expenses are to be considered as a composite expense head so as to enable flexibility in incurring the expenses amongst its constituents. The TPL has submitted that the approval of composite expense provides operational flexibility to the utility and enables it to optimize the utilization of the approved cost.

It is further submitted by TPL that while estimating the O&M expenses for the control period, the average O&M expenses per unit of energy sales for three years ending on 31st March, 2010 have been considered as base for the O&M expenses for the financial year ending on 31st March, 2009 and the same is escalated @ 5.72% every year in order to arrive at the O&M expenses per unit for the control period starting from FY 2011-12 to FY 2015-16. It is further submitted that the above methodology has been considered for the O&M components, which have normal increments on account of general revision. The TPL has further mentioned that it does not take into account the uncontrollable expenses such as wage revision, imposition of service tax, change in law, change in levies / duties / taxes and charges etc. and has requested the Commission to treat this as uncontrollable expense and that such expenses are to be allowed over and above the normal allowable components.

Commission's Analysis

The Commission has examined the O&M expenses proposed by TPL on Rs. per unit basis for the control period for FY 2011-12 to FY 2015-16. The TPL has submitted that the average O&M expenses per unit of energy sales for three years ending March 31, 2010 are considered as base for the FY 2008-09 and these charges are escalated @ 5.72% p.a. thereon to arrive at the O&M expenses for FY 2011-12 and onwards. **The TPL has not submitted the details of O&M expenses actuals for the years FY 2007-08, FY 2008-09 and FY 2009-10**.

The O&M expenses projected for the control period are also not in accordance with the Regulation 98.6 of GERC (MYT) Regulations, 2011.

The Commission has obtained the actual O&M expenses for the three years ending March 31, 2010 from TPL and the normalized O&M expenses furnished by TPL for the three years ending March 2010 are as given in the table below:

Table 6.121: O&M expenses furnished by TPL-D Surat area for the years 2007-08 to 2009-10

(Rs. crore)

Particulars	FY 2007-08	FY 2008-09	FY 2009-10	Average for the three years considered for FY 2008-09
Employee expenses	31.77	33.30	34.80	33.29
R&M expenses	25.01	21.55	20.98	22.51
A&G expenses	23.25	19.06	21.32	21.21
Total O&M expenses	80.03	**73.91**	**77.10**	**77.01**

The Commission has arrived at the permissible levels of O&M expense for the control period FY 2011-12 to FY 2015-16 in accordance with Regulation 98.6 of GERC (MYT) Regulations, 2011. The three-year average O&M expenses have been considered as O&M expenses for FY 2008-09. These O&M charges for FY 2008-09 are escalated at 4% per annum to arrive at the O&M expenses for FY 2011-12. The O & M expenses so determined for FY 2011-12 are considered as base and the permissible O&M expenses for the years FY 2012-13 to FY 2015-16 are arrived at by escalating the O&M expenses of FY 2011-12 at 5.72% per annum for each year of the control period. The O&M expenses thus arrived for the control periods are as given in the table below:

Table 6.122: Approved O&M expenses for TPL-D Surat area for the control period for FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
O&M expenses	86.63	91.58	96.82	102.36	108.21

The Commission, accordingly, approves the O&M expenses for the control period FY 2011-12 to FY 2015-16 as detailed in the table above.

6.3.10.2 Capital expenditure

The TPL has projected the capital expenditure to the extent of Rs. 298.38 crore for the control period FY 2011-12 to FY 2015-16. The year wise Capex proposed and the details of schemes covered are as given the table below:

Table 6.123: Capital expenditure projected by TPL-D Surat area for the control period FY 2011-12 to FY 2015-16

(Rs. crore)

Project Name	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	Total
Commissioning of power transformer	4.4			4.4		8.8
Comm. of 66kV Inter connectivity	27.38	23.48	0	0	0	50.84
Replacement of EHV equiptment	1.8	1.04	1.91	2.1	2.1	8.95
New Power Transformer and Replacement	0	3.3	0	0	0	3.3
Others	1.65	0.47	1.4	0.77	0.77	5.06
Sub-Total	**35.23**	**28.27**	**3.31**	**7.27**	**2.87**	**76.95**
HV						
HT Cable & Acc.	4.09	4.19	11.58	7.47	3.98	31.31
Dist Transformer for new S/s	2.78	2.9	2.75	2.75	2.89	14.07
Installation of 11kV Sw & BMC for new S/s	1.35	1.43	1.29	1.29	1.35	6.71
Replacement of 'HT Cable & Acc.	4.18	4.18	3.7	3.22	3.22	18.5
Replacement of 11kV Sw & BMC	1.48	0.37	0.38	0.4	0.42	3.05
Others	2.30	2.90	3.04	4.95	3.25	16.44
Sub- Total	**16.18**	**15.97**	**22.74**	**20.08**	**15.11**	**90.08**
LT						
LT Cable & Acc. (New App.)	13.12	13.32	13.73	13.9	13.94	68.01
Others	0.47	0.44	0.55	0.57	0.59	2.62
Sub-Total	**13.59**	**13.76**	**14.28**	**14.47**	**14.53**	**70.63**
Meter & Meter Equipment						

Project Name	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	Total
Installation of New Meters	2.46	2.54	2.55	2.62	2.61	12.78
Replacement of Meters	5.01	4.84	4.79	4.8	4.72	24.16
NABL Accreditation	0.30	0.00	0.00	0.00	0.00	0.30
Sub-Total	**7.77**	**7.38**	**7.34**	**7.42**	**7.33**	**37.24**
Others						
CRM	0.71	0.66	0.00	0.00	0.00	1.37
IT	1.87	0.88	0.73	0.78	0.80	5.06
Civil	3.00	0.45	0.55	0.81	0.45	5.26
GIS	0.00	0.00	0.20	0.20	0.20	0.60
Adm & Others	5.04	2.38	1.03	0.93	0.94	10.32
Tools & Inst.-Mtr	0.16	0.17	0.21	0.21	0.22	0.97
Sub-Total	**10.78**	**4.54**	**2.72**	**2.93**	**2.61**	**23.58**
Grand Total	**83.53**	**69.89**	**50.38**	**52.15**	**42.45**	**298.38**

Petitioner's submission

The TPL has submitted that the capital expenditure for Surat Supply Area consists of the expenditure in network and equipments such as the additional power transformer, distribution transformers, switch gears, additional EHV & HV substations to cater to the load growth, LT network to meet the consumer connectivity, Safety and other miscellaneous items such as automation, IT, etc.

The TPL has indicated the major capital expenditure in respect of Surat Supply Area as detailed below:

EHV Network

Commissioning of Additional Power Transformer: There has been increase in residential and commercial load at Majura Gate, Old City Area, Athwa Lines, City Light Road, etc, and increase in residential & textile load in Ved, Singanpore & Dabholi. As a result the existing power transformer would not be able to cater the additional load and therefore, the TPL has planned to install two 25 MVA power transformers at 66kV level to cater to the additional load with an expenditure of Rs 8.80 crore.

Commissioning of Additional 66 kV connectivity Between Receiving Stations: The present GETCO connection has been used to provide N -1 redundancy for the incoming lines of the existing 66 kV receiving stations in normal conditions. The existing 12 nos. 66 kV receiving stations are taking a load of more than 70% of the capacity and won't be able to cater to the additional load growth and have constraints of transferring load during breakdown and maintenance work. Therefore, TPL has planned to carry out the inter-connectivity of these substations to ensure redundancy and cater to the load growth.

The proposed interconnectivity works proposed are as below:

Single Circuit Puna (220 kV R/S) to C (66 kV R/S) - 4.7KM
4th Single Circuit Cable for ICT at Bhatar & Puna 220 kV Receiving station
Double Circuit FGIS (220 kV R/S) to E (66 kV R/S) via B (66 kV R/S) (Partial) - 6 KM
Double Circuit FGIS (220 kV R/S) to E (66 kV R/S) via B (66 kV R/S) (Partial) - 6 KM
Single Circuit F (66 kV R/S) to F2 (66 kV R/S) - 2.7 KM
Double Circuit Bhatar (220 kV R/S) to D (66 kV R/S) - 0.3 KM

Other EHV capital expenditure: The other necessary requirements for capital expenditure are replacement of EHV equipment and power transformer, automation/upgradation of hardware & software, procurement of protection systems, besides the testing & measuring equipments.

HV Network: With the growth of load there is a need to incur capital expenditure in HT cables & Accessories, new substations and upgradation of existing substations. TPL needs to lay 12-16 kM of HT cables every year to connect new consumers. Additionally, the new distribution transformers and associated switch gears, panels, civil work, etc are required to be undertaken. The TPL has planned to incur an expenditure of Rs 90.08 Crores in HV network, out of which majority of the expenditure would be done in HT cables & accessories amounting to Rs 31.31 Crores and in installation of distribution of transformer including 11 kV switchgears/panels amounting to Rs 20.78 crore.

LT Network: The TPL plans to incur expenditure in LT cable & accessories including the related equipments. This expenditure is dependent on the no. of new connections as well as load extension/reduction applications anticipated every year. The expenditure under this head is estimated on the basis of the inflow of applications every year.

Meters and Metering Equipment: Metering expenditure is a vital component for the licensee to ensure proper revenue recovery. This expenditure is thus mostly dependent on the new consumer applications and also replacement of defective meters. Therefore, TPL has planned to incur expenditure in installation of new meters, replacement of old & defective meters, procurement of reference standard energy meter, commissioning of test benches, etc.

Others: TPL has also planned to incur capital expenditure in other related items such as the Customer Relationship Management, Civil Works, implementation of IT systems, etc.

Petitioner's submission

The TPL has considered a normative debt equity of 70:30 for funding the capital expenditure. The details of sources of funding are as given in the table below:

Table 6.124: Projected capital expenditure and capitalization for the control period FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Capex of the year	83.53	69.89	50.38	52.15	42.45
Capitalization	83.53	69.89	50.38	52.15	42.44
Less: SLC Additions	9.90	9.91	9.96	10.04	10.09
Less: Grant in aid	-	-	-	-	-
Balance capitalization	73.63	59.98	40.42	42.11	32.35
Normative Debt @ 70%	39.27	42.00	28.00	29.00	23.00
Normative Equity @ 30%	22.12	17.99	12.12	12.63	9.70

The capital investment is required to be made by TPL Distribution for various purposes like the creation of new infrastructure to meet the load growth, to meet statutory requirements, to strengthen the existing system and increase its operational efficiency and to replace old and obsolete assets etc.

Commission's Analysis

Having considered various works programmed for augmenting the transmission and distribution network to meet the growing load growth to meet the operation efficiency etc. the Commission approves the capital expenditure as proposed by TPL for Surat Supply Area for the control period.

The TPL has proposed to capitalize the proposed capital expenditure in the same year of investment. As the expenditure projected is mostly for the network expansion and installation of additional equipment besides replacement of equipments the Commission approves the capitalization as proposed by TPL.

The Capex and capitalization and funding approved by the Commission are as given in the table below:

Table 6.125 : Approved capital expenditure and capitalization and funding for the control period FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Opening balance		**0**	**0**	**0**	**0**
Add: New investment	83.53	69.89	50.38	52.15	42.45
Total	**83.53**	**69.89**	**50.38**	**52.15**	**42.45**
Less: Investment capitalized	83.53	69.89	50.38	52.15	42.44
Closing balance	**0**	**0**	**0**	**0**	**0**
Funding of Capex					
Capitalization	83.53	69.89	50.38	52.15	42.44
Less: SLC	9.9	9.91	9.96	10.04	10.09
Balance capitalization	73.63	59.98	40.42	42.11	32.35
Normative Debt @ 70%	51.54	41.99	28.29	29.48	22.65
Normative Equity @ 30%	22.09	17.99	12.13	12.63	9.71

The Commission has arrived at the opening and closing balance of GFA taking into consideration the capitalization approved in the above table and also as detailed in the table below:

Table 6.126: Gross Fixed Assets for the control period FY 2011-12 to FY 2015-16

(Rs. crore)

Year	Opening balance	Additions during the year	Closing balance
FY 2011-12	1321.44	73.63	1395.07
FY 2012-13	1395.07	59.98	1455.05
FY 2013-14	1455.05	40.42	1495.47
FY 2014-15	1495.47	42.11	1537.58
FY 2015-16	1537.58	32.35	1569.93

The gross fixed assets as mentioned in the above table are taken into consideration for computation of depreciation charges.

6.3.10.3 Interest expenses

The TPL has projected the interest expenses at Rs. 165.97 crore for the control period FY 2011-12 to FY 2015-16 as detailed in the table below:

Table 6.127: Interest expenses projected by TPL-D Surat area for the control period FY 2011-12 to FY 2015-16

(Rs. crore)

Loan Heads	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Surat Supply Area					
APDRP					
Opening Balance	22.52	21.32	20.11	18.90	17.70
Repayments	1.21	1.21	1.21	1.21	1.21
Closing Balance	21.32	20.11	18.90	17.70	16.49
Interest Rate	9.00%	9.00%	9.00%	9.00%	9.00%
Interest on loan	2.05	1.99	1.93	1.87	1.81

Loan Heads	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
IDFC I					
Opening Balance	21.43	7.14	-	-	-
Repayments	14.29	7.14	-	-	-
Closing Balance	7.14	-	-	-	-
Interest Rate	8.23%	8.23%	-	-	-
Interest on loan	1.81	0.61	-	-	-
IDBI					
Opening Balance	60.01	45.01	30.01	15.01	-
Repayments	15.00	15.00	15.00	15.00	-
Closing Balance	45.01	30.01	15.01	0.01	
Interest Rate	11.00%	11.00%	11.00%	11.00%	-
Interest on loan	5.85	4.23	2.62	1.01	-
HDFC II					
Opening Balance	25.00	17.31	9.62	1.92	-
Repayments	7.69	7.69	7.69	1.92	-
Closing Balance	17.31	9.62	1.92	-	-
Interest Rate	11.50%	11.50%	11.50%	11.50%	-
Interest on loan	2.27	1.44	0.61	0.02	-
LIC					
Opening Balance	77.50	67.50	57.50	47.50	37.50
Repayments	10.00	10.00	10.00	10.00	10.00
Closing Balance	67.50	57.50	47.50	37.50	27.50
Interest Rate	11.00%	11.00%	11.00%	11.00%	11.00%
Interest on loan	8.03	6.93	5.83	4.73	3.63
IDFC II					
Opening Balance	200.00	175.00	150.00	125.00	100.00
Repayments	25.00	25.00	25.00	25.00	25.00
Closing Balance	175.00	150.00	125.00	100.00	75.00
Interest Rate	11.00%	11.00%	11.00%	11.00%	11.00%
Interest on loan	16.92	14.92	12.90	8.41	6.51
New loan in FY 2010-11					
Opening Balance	22.27	15.00	-	-	-
Repayments	20.00	15.00	-	-	-
Closing Balance	2.27	-	-	-	-
Interest Rate	10.75%	10.75%	-	-	-
Interest on loan	3.20	0.80	-	-	-
Interest Expense on existing loan	**40.13**	**30.92**	**23.83**	**16.04**	**11.95**
Interest expenses for loan against capital expenditure					
Capitalization during the year	83.53	69.89	50.38	52.15	42.44
Less: SLC Additions	9.80	9.91	9.96	10.04	10.09
Less: Grant in aid	-	-	-	-	-
Normative Debt @ 70%	52.00	42.00	28.00	29.00	23.00
Opening balance	-	39.27	77.35	97.22	115.29
New borrowings	39.27	42.00	28.00	29.00	23.00
Repayments	-	3.93	8.13	10.93	13.83
Closing balance	39.27	77.35	97.22	115.29	124.46
Interest expenses on new loan	**2.16**	**6.41**	**9.60**	**11.69**	**13.19**

Loan Heads	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Total interest	**42.29**	**37.33**	**33.49**	**27.73**	**25.13**

Petitioner's submission

The TPL has submitted that the interest expenses on loans would be on account of two types of loans.

(c) Opening balance of loans i.e. existing loans drawn at the starting of the FY 2011-12 and
(d) New loans drawn against the capital expenditure planned for each of the year in the control period FY 2011-12 to FY 2015-16.

It is further submitted that the capital expenditure for the control period is proposed to be funded through a normative debt-equity ratio of 70:30 as per the GERC (Terms and Conditions of Tariff) Regulations, 2005.

Commission's Analysis

The opening balance of loans for FY 2011-12 is as per the closing balance of loans considered in the APR for FY 2010-11. The repayment of existing loan is taken by the TPL as per the terms and conditions of existing loans, and for the new loans a 10 year period is considered.

In accordance with the Regulation 39 of GERC (MYT) Regulations, 2011 the repayment for the year during the tariff period from FY 2011-12 to FY 2015-16 shall be deemed to be equal to the depreciation allowed for that year (Regulation 39.3) and the rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio at the beginning of each year which is applicable to the Distribution Licensee (Regulation 39.5).

The weighted average rate of interest on the loans for the year FY 2010-11 (APR) has worked out to 10.05%.

The interest on loans for the control period is arrived at in accordance with the Regulation 39 of GERC (MYT) Regulations, 2011 as detailed in the table below:

Table 6.128: Approved interest on loans for the control period FY 2011-12 to FY 2015-16

(Rs. crore)

Sl. No.	Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
1.	Opening loan	427.64	433.98	427.12	403.80	379.33
2.	Loan addition during the year	51.54	41.99	28.29	29.48	22.65
3.	Repayment during the year	45.20	48.85	51.61	53.95	56.05
4.	Closing loan	433.98	427.12	403.80	379.33	345.92
5.	Average loan	430.81	430.55	415.46	391.56	362.63
6.	Weighted average rate of interest	10.05%	10.05%	10.05%	10.05%	10.05%
7.	Interest expenses	**43.31**	**43.28**	**41.76**	**39.36**	**36.45**

The Commission, accordingly, approves the interest expenses as detailed in the above table for the control period FY 2011-12 to FY 2015-16.

6.3.10.4 Interest on working capital

The TPL has projected the interest on working capital at Rs. 216.15 crore for the control period FY 2011-12 to FY 2015-16, which are as detailed in the table below:

Table 6.129: Projected Interest on working capital for TPL-D Surat area for the control period FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
O&M expense	8.41	9.27	10.20	11.26	12.42
Spares as a% of stores	14.05	14.75	15.25	15.77	16.20
Receivables	280.23	301.71	322.56	344.01	353.08
Working capital	302.69	325.73	348.02	371.04	381.69
Interest on Working Capital	37.84	40.72	43.50	46.38	47.71

Petitioner's submission

The TPL has submitted that the interest on working capital is computed as per the GERC (Terms and Conditions of Tariff) Regulations, 2005. The interest rate of 12.50% being the SBI PLR rate on 15th December, 2010 is applied on the working capital requirement arrived at in accordance with the Regulations.

Commission's Analysis

The Commission has noted that the parameters adopted by the TPL are different from the normative parameters notified in the MYT Regulations, 2011. The TPL has considered the interest on working capital at 12.50% being the SBI PLR on 15th

December, 2010. As per the GERC (MYT) Regulation 41.4 (b) the interest on working capital shall be allowed only at the rate equal to State Bank Advance Rate (SBAR) as on 1st April of the financial year in which the petition is filed. The TPL has filed the petition on 24th February, 2011 in the FY 2010-1 and hence the applicable rate of SBI PLR as on 1st April, 2010 is 11.75%. The TPL has considered two (2) months receivables less receivables considered for generation business. In accordance to the Regulation 41.4 (iii) only the specified receivables equivalent to only one month's expected revenue from sale of power at the prevailing tariffs minus the amount held as security deposit from consumer are considered.

The Commission has calculated the working capital and the interest on working capital for the control period FY 2011-12 to FY 2015-16 in accordance with Regulation 41 of (MYT) Regulations, 2011 for the retail supply of electricity which are as detailed in the table below:

Table 6.130: Interest on working capital approved for TPL-D Surat area for the control period FY 2011-12 to FY 2015-16

(Rs. crore)

Sl. No.	Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
1.	O&M expenses for one month	7.22	7.63	8.07	8.53	9.02
2.	Maintenance spares 1% of GFA	13.21	13.95	14.55	14.95	15.38
3.	Receivables for 1 month sales revenue at the prevailing tariffs	125.93	130.26	134.79	139.53	144.50
4.	Less: Amount held as security deposit from consumers	(148.71)	(155.25)	(161.85)	(168.49)	(175.17)
5.	Total Working Capital Requirement	(2.34)	(3.41)	(4.44)	(5.47)	(6.81)
6.	Interest Rate	11.75%	11.75%	11.75%	11.75%	11.75%
7.	**Interest on Working Capital**	-	-	-	-	-

The Commission, accordingly, approves the interest on working capital as nil for the control period for FY 2011-12 to FY 2015-16 as detailed in the table above.

6.3.10.5 Interest on Security Deposit

The TPL has claimed Rs. 49.56 crore towards interest on security deposit for the control period FY 2011-12 to FY 2015-16 as detailed in the table below:

Table 6.131: Interest on security deposit claimed by TPL-D Surat area for the control period FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Opening balance of security deposit	148.71	155.25	161.85	168.49	175.17
Closing balance of security deposit	155.25	161.85	168.49	175.17	181.87
Interest cost	9.12	9.51	9.91	10.31	10.71

Petitioner's submission

The TPL has submitted that it has estimated the interest on security deposit for each year considering the interest rate at 6% consistent with the approved rate on the average of opening and closing balances of security deposit for Surat Supply Area. The addition of deposit has been projected on the basis of growth during FY 2010-11.

Commission's Analysis

The Commission noted that the TPL has calculated the interest on security deposits @ 6% P.A. on the average of opening and closing balances for the year and this is found correct.

The Commission, accordingly, approves the interest on security deposit for the control period FY 2011-12 to FY 2015-16 which are as detailed in the table below:

Table 6.132 : Approved Interest on Security Deposit for control period FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Opening balance of security deposit	148.71	155.25	161.85	168.49	175.17
Closing balance of security deposit	155.25	161.85	168.49	175.17	181.87
Interest cost	9.12	9.51	9.91	10.31	10.71

6.3.10.6 Depreciation

The TPL has claimed a sum of Rs. 255.66 crore towards depreciation for the control period FY 2011-12 to FY 2015-16 as detailed in the table below:

Table 6.133: Depreciation claimed by TPL-D Surat area for control period FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Depreciation	45.20	48.85	51.61	53.95	56.05

Petitioner's submission

The TPL has submitted that the depreciation rates as per CERC (Terms and Conditions of Tariff) Regulations, 2004 are applied on opening GFA of FY 2009-10 and for addition of assets from 1st April, 2009 onwards and the depreciation has been computed at depreciation rates specified in the Appendix III to the CERC (Terms and Conditions of Tariff) Regulations, 2009.

Commission's Analysis

The commission noted that the petitioner has computed the depreciation for the control period FY 2011-12 to FY 2015-16 using CERC depreciation rates asset classification wise as submitted by TPL. The details of opening balance of assets as on 01/04/2011, addition and deduction to the Gross Block during each year of the control period and the depreciation on the assets, asset classification wise are given in Form D – 2 F (TPL-D Surat License Area) P 339 to 341 of the petition. The TPL has considered the projected capital expenditure for the control period by proposing the entire investment for the year as capitalization.

The Commission approves the depreciation for the control period FY 2011-12 to FY 2015-16 which are as detailed in the table below:

Table 6.134: Approved Depreciation for control period FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Depreciation	45.20	48.85	51.61	53.95	56.05

The Commission, accordingly, approves the depreciation for the control period FY 2011-12 to FY 2015-16 as detailed in the above table.

6.3.10.7 Return on equity

The TPL has claimed Rs. 377.37 crore towards return on equity for the control period FY 2011-12 to FY 2015-16 as detailed in the table below:

Table 6.135: Return on equity claimed by TPL-D Surat area for the control period FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Opening equity and reserves	513.70	524.76	533.75	539.82	546.13
Additions to equity towards capital investments	22.12	17.99	12.12	12.63	9.70
Closing balance of equity and reserves	535.82	542.76	545.88	552.45	555.84
Return on equity @ 14% on the average balance	73.47	74.73	75.57	76.46	77.14

Petitioner's submission

The TPL has submitted that the return on equity has been based on the opening and closing balance of equity considering the estimated capitalization in each year of the control period. The return on equity is claimed at 14% on the average of opening and closing balance of equity.

Commission's Analysis

The Commission has examined the submission made by TPL and found that the opening balance of equity as on 01/04/2011 is not the same as closing balance of equity as on 31/03/2011 considered in the APR for FY 2010-11. The closing balance of equity as on 31/03/2011 is Rs. 520.87 crore while the TPL has considered the opening balance of equity as on 01/04/2011 as Rs. 513.70 crore.

The Commission has considered the opening balance of equity as on 01/04/2011 at Rs. 520.57 crore.

The capitalization of capital expenditure is approved in table 6.125. Based on the capitalization, the Commission has estimated the return on equity as detailed in the table below:

Table 6.136 : Return on equity approved for control period FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Opening equity	520.87	542.96	560.96	573.09	585.72
Equity addition	22.09	18.00	12.13	12.63	9.71
Closing equity	542.96	560.96	573.09	585.72	595.43
Average equity	531.92	551.96	567.03	579.41	590.58
Return on equity @ 14%	74.47	77.27	79.38	81.12	82.68

The Commission, accordingly, approves the return on equity as detailed in the above table for the control period FY 2011-12 to FY 2015-16.

6.3.10.8 Income Tax

The TPL has estimated that the income tax at Rs. 93.93 crore for the control FY 2011-12 to FY 2015-16 as detailed in the table below:

Table 6.137: Income Tax claimed for TPL-D Surat area for the control period FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Income Tax	18.29	18.60	18.81	19.03	19.20

Petitioner's submission

The TPL has submitted that, for the purpose of the estimate, it has considered TPL-D as a separate entity. The TPL has estimated the income tax at an income tax rate of 19.93% on the grossed up ROE so as to earn post tax ROE at 14% as per the GERC (Terms and Conditions of Tariff) Regulations, 2005.

Commission's Analysis

The Regulation 42.1 of GERC (MYT) Regulations, 2011 specifies that the Commission in its MYT order shall provisionally approve income tax payable for each year of the control period, if any, based on the actual income tax paid as per the latest audited accounts available for the applicant, subject to prudence check. The latest audited accounts available in the case of TPL are for FY 2009-10 and the income tax admitted in the Truing Up for FY 2009-10 is Rs. 4.98 crore.

The Commission, accordingly, considers the provision for income tax for the control period for FY 2011-12 to FY 2015-16 as approved in the Truing Up for FY 2009-10.

Any variation in income tax actually paid and approved shall be considered based on the documentary evidence at the time of Truing Up for each year of the control period in accordance with Regulation 42.2 of GERC (MYT) Regulations, 2011.

The Commission, accordingly, approves the income tax for the control period for FY 2011-12 to FY 2015-16 as detailed in the table below:

Table 6.138: Approved Income tax for the control period FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2011-12	FY 2011-12	FY 2011-12	FY 2011-12
Income Tax	4.98	4.98	4.98	4.98	4.98

6.3.10.9 Non-Tariff income

The TPL has estimated the non-tariff income at Rs. 115.33 crore for the control period FY 2011-12 to FY 2015-16 as detailed in the table below:

Table 6.139: Non-Tariff income projected by TPL-D Surat area for FY 2010-11 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Non-Tariff income	21.93	22.40	22.95	23.63	24.42

Petitioner's submission

The petitioner has submitted that the non-tariff income consists of income mainly from meter rent, street light maintenance, sale of scrap, DPC recovery and bad debt recovery etc.

Commission's Analysis

The Commission has observed that the actual non-tariff income in FY 2009-10 was Rs. 19.59 crore and the projection for the control period is in accordance with the actual for FY 2009-10.

The Commission, accordingly approves the non-tariff income for the control period for FY 2011-12 to FY 2015-16 as detailed in the table below:.

Table 6.140: Approved Non-tariff income for the control period FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Non-Tariff income	21.93	22.40	22.95	23.63	24.42

6.3.10.10 Provision for Bad Debts

The TPL has estimated the bad debts at Rs. 9.61 crore for the control period FY 2011-12 to FY 2015-16 which are as detailed in the table below:

Table 6.141: Bad debts projected by TPL-D Surat area for the control period FY 2010-11 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Bad debts	1.68	1.81	1.94	2.06	2.12

Petitioner's submission

The TPL has submitted that bad debts have been estimated at 0.10% of the estimated revenue from sale of power in respect of Surat Supply Area for the control period FY 2011-12 to FY 2015-16 and requested the Commission to approve the bad debts as estimated by TPL and the actual bad debts written off will be considered at the time of truing up.

Commission's Analysis

The Regulation 98.8 of GERC (MYT) Regulations, 2011 specifies that the Commission may allow bad debts written off as a pass through in the aggregate revenue requirement subject to prudence check. The actual bad debts written off during FY 2009-10 as per the segregated audited accounts are Rs.0.36 crore.

The Commission, accordingly, approves the provision for bad debts at Rs. 0.36 crore for each year of the control period for FY 2011-12 to FY 2015-16 based on the actual bad debts written off as per the audited accounts for FY 2009-10 as detailed in the table below:

Table 6.142: Approved bad debts for the control period FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Bad debts	0.36	0.36	0.36	0.36	0.36

6.3.10.11 Contingency Reserve

Petitioner's submission

The TPL has submitted that it has been proposed the contingency reserve at Rs. 0.40 crore P.A for each year of control period FY 2011-12 to FY 2015-16.

Commission's Analysis

The proposed contribution to contingency reserve is in accordance with Regulation 85.6 of GERC (MYT) Regulations, 2011.

The Commission, accordingly approves the contingency reserve for the control period for FY 2011-12 to FY 2015-16 as detailed in the table below:

Table 6.143: Approved contingency reserve for the control period FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Contingency reserve	0.40	0.40	0.40	0.40	0.40

6.3.11 Revenue from sale of power

The TPL has estimated the revenue from sale of power with the existing tariff for FY 2011-12 at Rs. 1291.36 crore.

Petitioner's submission

TPL has submitted that revenue from sale of power has been computed considering the sales and at existing tariff rates for different categories of consumers which are detailed in the respective formats.

Commission's Analysis

The Commission has analyzed the sales projected by TPL for the Surat Supply Area and estimated the sales category-wise in the table 6.144.

The Commission has computed the revenue from sale of power with existing tariff rates as detailed in the table below:

Table 6.144: Revenue with existing tariff for the Control Period FY 2011-12 to FY 2015-16

Sl. No	Category	Average Tariff (Rs/kWH)	FY 2011-12		FY 2012-13		FY 2013-14		FY 2014-15		FY 2015-16	
			MU	Rs. Crore	MU	Rs. Crore	MU	Rs. Crore	MU	Rs. Crore	MU	Rs. Crore
1	Residential	3.35	620	207.77	653	218.78	688	230.37	724	242.57	762	255.43
2	Commercial	4.59	532	244.00	569	260.99	608	279.16	651	298.59	696	319.37
3	LTP	3.63	871	316.27	888	322.28	905	328.41	922	334.66	939	341.03
4	LTMD	4.07	976	397.32	995	404.88	1014	412.58	1033	420.43	1053	428.42
5	HTMD	4.35	246	106.96	251	109.13	256	111.34	261	113.59	266	115.90
6	Others	3.32	29	9.67	30	10.06	32	10.46	33	10.88	34	11.32
7	**Total**		**3274**	**1281.99**	**3385**	**1326.11**	**3502**	**1372.32**	**3623**	**1420.72**	**3751**	**1471.46**
8	FPPPA @ 70 paise / kWH	0.70		229.20		236.98		245.12		253.64		262.56
9	Total Revenue			**1511.19**		**1563.09**		**1617.44**		**1674.36**		**1734.02**

The Commission, accordingly, approves the revenue from sale of power Rs.1511.19 crore with existing tariff rates for the FY 2011-12, the first year of the control period FY 2011-12 to FY 2015-16.

6.3.12 Aggregate Revenue Requirement

The aggregate revenue requirement for the control period as projected by TPL and as approved by the Commission is given in the following two tables.

Table 6.145 : ARR as projected by TPL-Surat area for the control period FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Power Purchase cost	1374.04	1489.49	1600.84	1716.31	1755.46
O&M expenses	100.97	111.22	122.45	135.09	148.99
Depreciation	45.20	48.85	51.61	53.95	56.05
Interest on loan	42.29	37.33	33.49	27.73	25.13
Interest on security deposit	9.12	9.51	9.91	10.31	10.71
Interest on working capital	37.84	40.72	43.50	46.38	47.71
Bad Debts	1.68	1.81	1.94	2.06	2.12
Contingency Reserve	0.40	0.40	0.40	0.40	0.40
Return on equity	73.47	74.73	75.57	76.46	77.14
Income Tax	18.29	18.60	18.81	19.03	19.20
Less: Non-tariff income	21.93	22.40	22.95	23.63	24.42
Net ARR	**1681.36**	**1810.26**	**1935.38**	**2064.07**	**2118.48**

Table 6.146: Approved ARR for TPL-D Surat area for the control period FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Power Purchase cost*	1250.23	1332.43	1430.09	1546.81	1570.96
O&M expenses	86.63	91.58	96.82	102.36	108.22
Depreciation	45.20	48.85	51.61	53.95	56.05
Interest on loan	43.31	43.28	41.76	39.36	36.45
Interest on security deposit	9.12	9.51	9.91	10.31	10.73
Interest on working capital	-	-	-	-	-
Return on equity	74.47	77.27	79.38	81.12	82.68
Income Tax	4.98	4.98	4.98	4.98	4.98
Bad Debts	0.36	0.36	0.36	0.36	0.36
Contingency Reserve	0.40	0.40	0.40	0.40	0.40
Less: Non-tariff income	21.93	22.4	22.95	23.63	24.42
Net ARR	**1492.76**	**1,586.27**	**1,692.38**	**1,816.02**	**1,846.41**

*Refer to table 6.161.

6.3.13 Revenue gap for FY 2011-12

The ARR for FY 2011-12 is approved at Rs. 1492.76 crore and the revenue from sale of power with approved sales and with existing tariff is Rs. 1511.19 crore including FPPPA. The estimated gap for FY 2011-12 is given in the table below:

Table 6.147: Revenue gap of TPL-D Surat Area for FY 2011-12

(Rs. crore)

Sl. No.	Particulars	FY 2011-12	
		Projected by TPL	Approved by the Commission
1.	Net: Aggregate Revenue Requirement	1681.36	1492.76
2.	Revenue from sale of power at existing tariff rates	1291.36	1281.99
3.	FPPPA revenue @ Rs. 0.70 per unit	230.82	229.20
4.	**Net surplus / (gap [(2 + 3) -1]**	**(159.18)**	**18.43**
5	Add: Gap due to truing up of FY 2009-10		(4.17)
6	Add: Gap arrived in the GERC Order considering APTEL judgment for FY 2008-09.		(53.00)
7	**Total gap**		**(38.74)**

6.4 TPL Distribution (Ahmedabad and Surat)

6.4.1 Energy requirement for TPL-D

Petitioner's submission

The TPL has submitted that the estimated energy requirement and corresponding power purchase cost are arrived at on a pooled basis keeping in mind the overall demand requirement of Ahmedabad and Surat supply areas and to optimize the cost, load management and risk mitigation factors

The requirement is arrived at by TPL as below:

Table 6.148: Energy requirement projected by TPL-D for the control period FY 2011-12 to FY 2015-16

(MU)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Energy requirement at Distribution periphery					
Ahmedabad area	6124	6495	6894	7321	7780
Surat area	3508	3655	3806	3972	4144
Total	9632	10150	10700	11293	11924
Transmission losses	174	217	207	235	256
Total energy required by TPL-D	9806	10367	10907	11528	12180

Commission's Analysis

The Commission has examined the energy requirement projected by TPL-D on pooled basis for Ahmedabad and Surat areas.

The Commission approves, in principle, the proposal of TPL-D to pool the requirement of Ahmedabad and Surat areas to optimize the power purchase cost, load management etc.

The Commission has arrived at the energy requirement for TPL-D based on the energy sales and distribution loss approved by the Commission and shown in tables 6.70 and 6.118 as given below:

Table 6.149: Energy requirement approved for TPL-D for the control period FY 2011-12 to FY 2015-16

(MU)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Energy requirement at Distribution periphery					
Ahmedabad area	6320	6816	7356	7944	8584
Surat area	3452	3569	3692	3820	3955
Total	**9772**	**10385**	**11048**	**11764**	**12539**
Transmission losses	174	217	207	235	256
Total energy required by TPL-D	**9946**	**10602**	**11255**	**11999**	**12795**

The transmission loss, which works out to about 2%, is considered by the Commission.

The Commission approves the total energy required by TPL-D for Ahmedabad and Surat areas as given in the table 6.149 above.

6.4.2 Energy availability

Petitioner's submission

The TPL has submitted that the energy sourcing is planned from two types of sources i.e. (a) confirmed sources and (b) estimated sources. The confirmed sources include TPL-G (APP) and SUGEN, whereas the estimated sources include UNO SUGEN+D-GEN, medium term / bilateral source and balance shortfall to be met from short-term power.

The TPL has further submitted that it has been making consistent efforts to optimize the power purchase cost by contracting with long term sources and thereby trying to eliminate the uncertainty in price and the availability. The TPL is adding up to its own generation capacities to meet its power requirement.

The contracted capacity by TPL for the control period FY 2011-12 to FY 2015-16 is given in the table below:

Table 6.150: Contracted capacity of TPL for the control period FY 2011-12 to FY 2015-16

(MW)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
TPL-G (APP)*	457	467	477	423	423
SUGEN	835	835	835	835	835
UNO-SUGEN+DGEN**	-	-	665	665	665
Total	**1292**	**1302**	**1977**	**1923**	**1923**

* C station is planed to be taken out of operation from FY 2014-15
** Available from January, 2014

The balance power would be procured from short term sources as and when required. Further, TPL has considered the power sourcing through Merit order Despatch (MoD) for the control period subject to minimum technical / must run criteria as well the ageing of plants.

Based on the above, TPL has proposed to purchase power from various sources as detailed below:

Table 6.151 : Power purchase quantum projected by TPL for the control period FY 2011-12 to FY 2015-16

(MU)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
TPL-G (APP)	3370.49	3059.11	3354.33	2901.14	2835.05
SUGEN	5867.71	6173.76	6093.98	5797.68	6235.87
UNO-SUGEN+D-GEN	-	-	281.59	2623.86	2786.54
Bilateral power purchase	430.83	842.19	666.74	-	-
Power Exchange/Market	136.53	292.56	510.60	205.84	322.83
Total	**9805.56**	**10367.62**	**10907.24**	**11528.52**	**12180.29**

It is further submitted by TPL that the existing regulations exempt the wind and solar generators from scheduling as the power generation from such sources is infirm and cannot be scheduled ahead at actual generation and therefore kept them out of the energy balance. However, the cost of renewable power has been considered by TPL as it is required to pay for the injection of power by the renewable sources to meet the Renewable Purchase Obligation (RPO).

Commission's Analysis

The Commission has examined the power purchase proposal of TPL from various sources and approves the purchase from TPL-G, SUGEN, TPL-G (UNO SUGEN+D-GEN), bilateral and power exchange / market. However the commission does not approve TPL's proposal to keep the renewable power out of energy balance on the plea that such energy cannot be scheduled.

In regard to bilateral purchase, TPL has entered into an agreement with GUVNL for supply of 140 MW on round the clock (RTC) basis. The power to be supplied is with 'Take or Pay' liability on either side. In case TPL fails to offtake 70% of contracted quantity, TPL will have to pay to GUVNL @ Rs.1/- for quantum of power that fall short of 70% of contracted quantity. TPL has to draw 140 MW to meet the contracted obligation. The energy from 140 MW based on round the clock contract would be 1226 MU of which, TPL has to draw 70% as minimum offtake. The minimum offtake to meet the contracted obligation of 70% without additional cost of Rs.1.0 per unit would be : 861 MU during 2011-12 and 858 MU during 2012-13. TPL has to draw this minimum quantum under bilateral contract.

This agreement is approved by the Commission in the order dated 22nd July, 2011 on petition No.1090/2011. Though the agreement is for FY 2011-12 and FY 2012-13 the agreement terms are applied for FY 2013-14 also.

The TPL has not considered the power from renewable source under availability / energy balance stating that it is infirm power and cannot be scheduled. The Commission is of the view that, since the cost for renewable energy would be paid, it should be included in energy balance. It is submitted by TPL that they have signed the PPA for procuring 50 MW power from the solar generation. The same is expected to commence the generation of electricity from 31st December, 2011. In view of this the Commission has considered 12 MU from solar against 49.03 MU proposed by TPL and total 551.31 MU under RPO against 588.33 MU projected by TPL for FY 2011-12. However, TPL shall schedule power from contracted sources to meet the demand in full and the renewable power, as and when generated and dispatched by the generator, such power may become surplus and could be sold under UI.

The financial implication of such transaction, if any, would be dealt with in Truing up for the year and that the share of renewable power should be as per the quantum fixed by the Commission.

The Commission, accordingly, computed the energy purchase for the control period FY 2011-12 to FY 2015-16 as given in table below:

Table 6.152 : Quantum of power purchase approved for TPL-D for the control period FY 2011-12 to FY 2015-16

(MU)

Particulars	FY 2011-12	FY 2012-13	**FY 2013-14**	**FY 2014-15**	**FY 2015-16**
TPL-G (APP)*	3370.46	3072.95	3354.26	2901.14	2835.10
SUGEN	5867.71	6173.76	6093.98	5797.68	6235.87
UNO-SUGEN+D-GEN	-	-	281.59	2623.86	2786.54
RPO	551.31	725.73	763.51	807.00	852.62
Wind	490.28				
Biomass	49.03				
Solar	12				
Bilateral power purchase	861.00	858.00	858.00	-	-
Power Exchange / Market	136.53	292.56	510.60	205.84	322.83
Total	**10787.01**	**11122.68**	**11862.01**	**12335.52**	**13032.91**

* Approved generation for TPL-G for the control period

The surplus power, if any, due to inclusion of renewable energy in the quantum of power purchase which is not scheduled, may be injected into the system as and when generated and also the energy purchase from GUVNL to meet the contract obligation of 70% minimum off take may be sold in the market.

6.4.3 Power Purchase

Petitioner's submission

The TPL has submitted that based on the estimated quantum of power in the previous paragraphs, the power purchase cost for each of the sources is computed as detailed in the following sections.

TPL-G (APP): The power purchase cost of TPL-G (APP) is based on the costing arrived from the ARR computation as provided in Table 145 of the petition.

SUGEN Plant: The power purchase cost is as per the CERC approved tariff from time to time.

UNO SUGEN + D-GEN Plant: The power purchase cost from this source is based on the provisional costing of the plants. These plants are interstate generating stations and the tariff for these stations would be as determined by CERC.

Bilateral sources: The power purchase cost for this source is arrived at after considering the proposed percentage of utilization of the estimated contracted capacity and applicable terms on the minimum guaranteed offtake. The power purchase rate is considered in accordance with the recent offer received from the bilateral sources. Accordingly the net rate works out to Rs. 6.69 per unit for the FY 2011-12 and Rs. 5.63 per kWh for the balance of control period of FY 2012-13 to FY 2015-16.

Power exchange / Market: In view of the fact that the power exchange rate is volatile and the future prices remain uncertain, the TPL has proposed to keep the rates for procuring the power from exchange / market the same as that of bilateral purchase. Therefore the rates would be Rs. 6.69 Rs/Unit for FY 2011-12 and Rs. 5.63 / Unit for FY 2012-13 to FY 2015-16.

Renewable power purchase: The TPL has estimated the purchase of power from the renewable energy sources to fulfill the renewable power purchase obligation in accordance with GERC Regulations, 2011. Accordingly, TPL has arrived at the renewable power purchase cost at the tariff rate approved by the Commission vide respective Tariff order.

The capacity and variable charges: The capacity charges and the variable rates for each of the sources and power purchase cost are as given in the tables below:

Table 6.153 : Projected capacity charges for TPL-D for the control period FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
TPL-G(APP)	300.14	345.06	387.21	380.16	384.27
TPL-G(SUGEN)	687.27	696.23	690.48	677.10	668.08
TPL-G (UNO SUGEN + D-GEN)	-	-	161.80	779.20	769.74
Capacity Charges	987.41	1,041.29	1,239.49	1,836.46	1,822.09
Transmission cost	104.67	102.97	117.61	177.95	175.27
Total	**1092.08**	**1144.26**	**1357.1**	**2014.41**	**1997.36**

Table 6.154: Projected variable purchase rate for TPL-D for the control period FY 2011-12 to FY 2015-16

(Rs./kWh)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
TPL-G (APP)	2.58	2.50	2.46	2.29	2.28
SUGEN	2.04	2.04	2.04	2.04	2.04
UNO-SUGEN+D-GEN	-	-	2.04	2.04	2.04
Bilateral power purchase	6.69	5.63	5.63	-	-
Power Exchange/Market	6.69	5.63	5.63	5.63	5.63
RPO					
Wind	3.52	3.52	3.52	3.53	3.53
Biomass	4.40	4.40	4.40	4.40	4.40
Solar	15.00	15.00	15.00	15.00	15.00

Table 6.155: Projected power purchase cost for TPL-D for the control period FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
TPL-G (APP)	1169.07	1109.11	1211.96	1045.96	1031.69
SUGEN	1988.95	2058.65	2034.93	1959.33	2038.04
UNO-SUGEN+D-GEN	-	-	235.58	1392.91	1415.61
Bilateral power purchase	288.23	474.15	375.37	-	-
Power Exchange/Market	91.34	164.72	287.47	115.89	181.75
RPO	267.50	379.17	399.02	421.87	445.84
Total	**3805.09**	**4185.80**	**4544.34**	**4935.96**	**5112.94**

Commission's Analysis

The capacity charges, variable cost and power purchase cost projected by TPL for purchase of power from various sources have been examined by the Commission. The Commission has considered the power purchase cost from TPL-G as approved by the Commission for the control period as in table 6.157 of this order. With regard to the purchase of power from (i) SUGEN, UNO SUGEN and D-GEN the costs of which are approved / to be approved by CERC are considered as provided by TPL.

Bilateral source: As discussed earlier, TPL has entered into an arrangement / agreement with GUVNL for supply of 140 MW with minimum off take of 70% at Rs.4.35 per unit on round the clock basis. The power purchase cost (at Rs.4.35 per unit) for minimum of offtake is considered against Rs.6.69 per unit claimed for FY 2011-12 and Rs.5.63 per unit. The power is delivered at PGVCL periphery. The transmission cost from PGVCL periphery to TPL has to be paid by TPL for this power.

Power exchange: TPL has claimed Rs.6.69 per unit for FY 2011-12 and Rs.5.63 per unit for the year FY 2012 to FY 2015-16.

It is observed from the report of "Market Monitoring Cell of CERC" for FY 2010-11, that the weighted average price for power exclusively procured during peak hours is Rs.5.59/kWh. This rate is applied for the FY 2011-12 and subsequent years of the control period.

For a variation in the prices, TPL may claim the costs under FPPPA formula approved by the Commission. The capacity charges, variable cost per unit and the power purchase cost approved by the Commission are as given in the tables below:

Table 6.156 : Power purchase cost approved by the Commission for TPL-D for the control period FY 2011-12 to FY 2015-16

1. Capacity charges

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
TPL-G(APP)	264.81	303.67	337.40	334.68	338.83
TPL-G(SUGEN)	687.27	696.23	690.48	677.10	668.08
TPL-G (UNO SUGEN + D-GEN)	-	-	161.80	779.20	769.74
Total Capacity Charges	**952.08**	**999.90**	**1189.68**	**1790.98**	**1776.65**
Transmission cost	104.67	102.97	117.61	177.95	175.27
Total	**1056.75**	**1102.87**	**1307.29**	**1968.93**	**1951.92**

2. Variable costs

(Rs./kWh)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
TPL-G (APP)	2.59	2.52	2.47	2.32	2.31
SUGEN	2.04	2.04	2.04	2.04	2.04
UNO-SUGEN+D-GEN	-	-	2.04	2.04	2.04
Bilateral power purchase	4.35	4.35	4.35	-	-
Power Exchange market	5.59	5.59	5.59	5.59	5.59
RPO					
Wind	3.52	3.52	3.52	3.52	3.52
Biomass	4.40	4.40	4.40	4.40	4.40
Solar	15.00	15.00	15.00	15.00	15.00

6.4.4 Power purchase cost

The power purchase cost approved by the Commission based on the above capacity charges and variable costs are as given in the table below:

Table 6.157: Power purchase cost approved by the Commission for the control period FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
TPL-G (APP)	1138.68	1077.84	1165.00	1007.74	993.81
SUGEN	1988.95	2058.65	2034.93	1959.33	2038.04
UNO-SUGEN+D-GEN	-	-	235.58	1392.91	1415.61
Bilateral power purchase	374.50	373.23	373.23	-	-
Power Exchange/Market	76.32	163.50	285.90	115.06	180.46
RPO	211.96	379.17	399.02	421.87	445.84
Wind	172.39				
Biomass	21.57				
Solar	18				
Transmission charges for bilateral power 140 MW	14.18	15.09	16.58	-	-
Total	**3804.59**	**4067.48**	**4510.24**	**4896.91**	**5073.76**
Per unit average power purchase cost (Rs./kWh)	**3.53**	**3.66**	**3.80**	**3.97**	**3.89**

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The Commission approves the power purchase cost for the control period FY 2011-12 to FY 2015-16 as given in the above table.

The CERC has since revised the transmission charges for PGCIL transmission system. The impact of this revision shall be reported to the Commission every quarter.

As detailed in the table 6.157 above, the total power purchase costs from various sources are arrived at for the control period FY 2011-12 to 2015-16. This power purchase cost which includes transmission charges is apportioned between the Ahmedabad supply area and Surat supply area given in tables below.

Table 6.158: Approved Energy requirement for TPL-D

(MU)

Distribution	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Ahmedabad	6320	6816	7356	7944	8584
Surat	3452	3569	3692	3820	3955
Transmission loss	174	217	207	235	256
Total Energy requirement for TPL-D	**9946**	**10603**	**11255**	**11999**	**12795**

Surplus Power

As mentioned earlier TPL has to draw minimum energy from GUVNL to meet the contract obligation of 70% of contracted quantum per annum and also entire energy under RPO. This would result in surplus energy after meeting the total requirement for Ahmedabad and Surat areas. This surplus is to be sold at the average cost of power which is about Rs.3.53 per unit for 2011-12.

Table 6.159: Surplus Power

Sl. No.	Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
1	Energy available (MU)*	10787	11123	11862	12336	13033
2	Energy requirement (MU)	9946	10603	11255	11999	12795
3	Surplus energy to be sold in market (MU)	841	520	607	337	238
4	Price(Rs. /kWh)	**3.53**	**3.66**	**3.80**	**3.97**	**3.89**
5	**Revenue from surplus power (3x4) (Rs. Crore)**	**296.52**	**190.05**	**230.16**	**133.42**	**92.47**

* Refer table 6.152

Net power purchase cost

After considering the revenue from sale of surplus power the net power purchase cost would be as given in table below:

Table 6.160: Net power purchase cost

(Rs. crore)

Sl. No.	Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
1	Power purchase cost	3804.59	4067.48	4510.24	4896.91	5073.76
2	Revenue from sale of surplus power	296.52	190.05	230.16	133.42	92.47
3	**Net power purchase cost**	3508.07	3877.43	4280.08	4763.49	4981.29

The approved power purchase cost is allocated to Ahmedabad and Surat distributions as given in Table below:

Table 6.161: Approved Power Purchase Cost for TPL-D

(Rs. crore)

Distribution	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Total Power Purchase cost	3508.07	3877.43	4280.08	4763.49	4981.29
For Ahmedabad	2257.84	2545.00	2849.99	3216.68	3410.33
For Surat	1250.23	1332.43	1430.09	1546.81	1570.96

Annexure 6.1

C – Station: Fuel cost during Control Period FY 2011-12 to FY 2015-16

Sl. No.	Item	Derivation	Unit	2011-12	2012-13	2013-14	2014-15	2015-16
1	Capacity	A	MW	60	60	60	60	60
2	PLF	B	%	78.54	80.18	78.19	0	0
3	Gross Generation	C	MUs	413.94	421.43	410.97	0.00	0.00
4	Auxiliary Consumption	E	%	9.50%	9.50%	9.50%		
5	Auxiliary Consumption	D=C*E	MUs	39.32	40.04	39.04	0.00	0.00
6	Net Generation	Y=C-D	MUs	374.61	381.39	371.92	0	0
7	Station Heat Rate	F	KCal/KWH.	3,150.00	3,150.00	3,150.00		
8	Sp. Oil Consumption	G	ml/kWh	2.00	2.00	2.00		
9	Gross Calorific Value of Coal	H	kcal/kg	4,251	4,251	4,251		
10	Calorific value of Oil	I	kcal/L	9,909	9,909	9,909		
11	Overall Heat	J=C*F	G Cal	1303902.23	1327492.2	1294544.92	0	0
12	Heat from Oil	K=(C*G*I)/1000	G Cal	8203	8352	8145	0	0
13	Heat from Coal	L=J-K	G Cal	1295699	1319140	1286400	0	0
14	Transit loss of coal	M	%	1.40%	1.20%	1.00%		
15	Coal Blend							
16	A) Indigenous Coal	X1	%	100.00%	100.00%	100.00%		
17	B) Imported Coal	X2	%	0.00%	0.00%	0.00%		
18	Actual Oil Consumption	N=C*G	KL	828	843	822	0	0
19	Actual Coal Consumption	O=(L*1000)/H	MT	304799	310313	302611		
20	A) Indigenous Coal	Q1=O*X1/(1-M)	MT	309126.36	314081.93	305667.92		
21	B) Imported Coal	Q2=O*X2	MT	0.00	0.00	0.00		
22	Price of Coal							
23	A) Indigenous Coal	P1	Rs/MT	3385.00	3385.00	3385.00		
24	b) Imported Coal	P2	Rs/MT					
25	Price of Oil	P3	Rs/Kl	30092	30092	30092		
26	Coal cost							
27	A) Indigenous Coal	N1=Q1*P1/10^5	Rs Lakh	10463.93	10631.67	10346.86		
28	B) Imported Coal	N2=Q2*P2/10^5	Rs Lakh	0	0	0		
29	Total Coal Cost	N3=N1+N2	Rs Lakh	10464	10632	10347		
30	Oil Cost	N4=P3*N/10^5	Rs Lakh	249	254	247		
31	Total Fuel Cost	P=N3+N4	Rs Lakh	10713	10885	10594		
32	Fuel Cost/Unit Gross	Q=P/(C*10)	Rs/kWh	2.59	2.58	2.58		
33	Fuel Cost/Unit Net	R=P/(Y*10)	Rs/kWh	2.86	2.85	2.85		
34	Cost of fuel/G.Cal	S=(P/J)*10^5	Rs/Gcal	822	820	818		

Annexure 6.2

D - Station: Fuel cost during Control Period FY 2011-12 to FY 2015-16

Sl. No.	Item	Derivation	Unit	2011-12	2012-13	2013-14	2014-15	2015-16
1	Capacity	A	MW	120	120	120	120	120
2	PLF	B	%	83.59	85.41	79.88	77.56	70.44
3	Gross Generation	C	MUs	881.11	897.83	839.70	815.31	742.49
4	Auxiliary Consumption	E	%	9.00%	9.00%	9.00%	9.00%	9.00%
5	Auxiliary Consumption	D=C*E	MUs	79.30	80.80	75.57	73.38	66.82
6	Net Generation	Y=C-D	MUs	801.81	817.03	764.13	741.93	675.67
7	Station Heat Rate	F	KCal/KWH.	2,450.00	2,450.00	2,450.00	2,450.00	2,450.00
8	Sp. Oil Consumption	G	ml/kWh	1.00	1.00	1.00	1.00	1.00
9	Gross Calorific Value of Coal	H	kcal/kg	4,550.00	4,469.00	4,532.00	4,333.00	4,314.00
10	Calorific value of Oil	I	kcal/L	9,909	9,909	9,909	9,909	9,909
11	Overall Heat	J=C*F	G Cal	2158708	2199683.3	2057261	1997511	1819110.2
12	Heat from Oil	K=(C*G*I)/1000	G Cal	8731	8897	8321	8079	7357
13	Heat from Coal	L=J-K	G Cal	2149978	2190787	2048941	1989432	1811753
14	Transit loss of coal	M	%	1.40%	1.20%	1.00%	0.90%	0.80%
15	Coal Blend							
16	A) Indigenous Coal	X1	%	67.00%	76.00%	69.00%	91.00%	93.00%
17	B) Imported Coal	X2	%	33.00%	24.00%	31.00%	9.00%	7.00%
18	Actual Oil Consumption	N=C*G	Kl	881	898	840	815	742
19	Actual Coal Consumption	O=(L*1000)/H	MT	472523	490219	452105	459135	419971
20	A) Indigenous Coal	Q1=O*X1/(1-M)	MT	321085.29	377091.19	315103.64	421607.40	393722.36
21	B) Imported Coal	Q2=O*X2	MT	155932.44	117652.45	140152.62	41322.16	29397.94
22	Price of Coal							
23	A) Indigenous Coal	P1	Rs/MT	3385.00	3385.00	3385.00	3385.00	3385.00
24	C) Imported Coal	P2	Rs/MT	5162.00	5162.00	5162.00	5162.00	5162.00
25	Price of Oil	P3	Rs/Kl	30092	30092	30092	30092	30092
26	Coal cost							
27	A) Indigenous Coal	N1=Q1*P1/10^5	Rs Lakh	10868.74	12764.54	10666.26	14271.41	13327.50
28	B) Imported Coal	N2=Q2*P2/10^5	Rs Lakh	8049	6073	7235	2133	1518
29	Total Coal Cost	N3=N1+N2	Rs Lakh	18918	18838	17901	16404	14845
30	Oil Cost	N4=P3*N/10^5	Rs Lakh	265	270	253	245	223
31	Total Fuel Cost	P=N3+N4	Rs Lakh	19183	19108	18154	16650	15068
32	Fuel Cost/Unit Gross	Q=P/(C*10)	Rs/kWh	2.18	2.13	2.16	2.04	2.03
33	Fuel Cost/Unit Net	R=P/(Y*10)	Rs/kWh	2.39	2.34	2.38	2.24	2.23
34	Cost of fuel/G.Cal	S=(P/J)*10^5	Rs/Gcal	889	869	882	834	828

Annexure 6.3

E – Station: Fuel cost during Control Period FY 2011-12 to FY 2015-16

Sl. No.	Item	Derivation	Unit	2011-12	2012-13	2013-14	2014-15	2015-16
1	Capacity	A	MW	110	113.73	120	120	120
2	PLF	B	%	80.74	64.25	81.33	78.03	77.92
3	Gross Generation	C	MUs	780.14	640.11	854.94	820.25	821.34
4	Auxiliary Consumption	E	%	9.00%	9.00%	9.00%	9.00%	9.00%
5	Auxiliary Consumption	D=C*E	MUs	70.21	57.61	76.94	73.82	73.92
6	Net Generation	Y=C-D	MUs	709.93	582.50	778.00	746.43	747.42
7	Station Heat Rate	F	KCal/KWH.	2,725.00	2,590.00	2,455.00	2,455.00	2,455.00
8	Sp. Oil Consumption	G	ml/kWh	1.00	1.00	1.00	1.00	1.00
9	Gross Calorific Value of Coal	H	kcal/kg	4,550.00	4,469.00	4,532.00	4,333.00	4,314.00
10	Calorific value of Oil	I	kcal/L	9,909	9,909	9,909	9,909	9,909
11	Overall Heat	J=C*F	G Cal	2125887.4	1657875.988	2098880.06	2013717.09	2016387.58
12	Heat from Oil	K=(C*G*I)/1000	G Cal	7730	6343	8472	8128	8139
13	Heat from Coal	L=J-K	G Cal	2118157	1651533	2090408	2005589	2008249
14	Transit loss of coal	M	%	1.40%	1.20%	1.00%	0.90%	0.80%
15	Coal Blend							
16	A) Indigenous Coal	X1	%	67.00%	76.00%	69.00%	91.00%	93.00%
17	B) Imported Coal	X2	%	33.00%	24.00%	31.00%	9.00%	7.00%
18	Actual Oil Consumption	N=C*G	kl	780	640	855	820	821
19	Actual Coal Consumption	O=(L*1000)/H	MT	465529	369553	461255	462864	465519
20	A) Indigenous Coal	Q1=O*X1/(1-M)	MT	316333.10	284271.68	321480.88	425031.42	436424.05
21	B) Imported Coal	Q2=O*X2	MT	153624.57	88692.76	142989.10	41657.75	32586.33
22	Price of Coal							
23	A) Indigenous Coal	P1	Rs/MT	3385.00	3385.00	3385.00	3385.00	3385.00
24	C) Imported Coal	P2	Rs/MT	5162.00	5162.00	5162.00	5162.00	5162.00
25	Price of Oil	P3	Rs/kl	30092.00	30092.00	30092.00	30092.00	30092.00
26	Coal cost							
27	A) Indigenous Coal	N1=Q1*P1/10^5	Rs Lakh	10707.88	9622.60	10882.13	14387.31	14772.95
28	B) Imported Coal	N2=Q2*P2/10^5	Rs Lakh	7930	4578	7381	2150	1682
29	Total Coal Cost	N3=N1+N2	Rs Lakh	18638	14201	18263	16538	16455
30	Oil Cost	N4=P3*N/10^5	Rs Lakh	235	193	257	247	247
31	Total Fuel Cost	P=N3+N4	Rs Lakh	18873	14394	18520	16785	16702
32	Fuel Cost/Unit Gross	Q=P/(C*10)	Rs/kWh	2.42	2.25	2.17	2.05	2.03
33	Fuel Cost/Unit Net	R=P/(Y*10)	Rs/kWh	2.66	2.47	2.38	2.25	2.23
34	Cost of fuel/G.Cal	S=(P/J)*10^5	Rs/Gcal	888	868	882	834	828

Annexure 6.4

F. Station: Fuel cost during Control Period FY 2011-12 to FY 2015-16

Sl. No.	Item	Derivation	Unit	2011-12	2012-13	2013-14	2014-15	2015-16
1	Capacity	A	MW	110	113.73	120	120	120
2	PLF	B	%	82.97	65.77	82.62	78.51	78.89
3	Gross Generation	C	MUs	801.69	655.25	868.50	825.30	831.56
4	Auxiliary Consumption	E	%	9.00%	9.00%	9.00%	9.00%	9.00%
5	Auxiliary Consumption	D=C*E	MUs	72.15	58.97	78.17	74.28	74.84
6	Net Generation	Y=C-D	MUs	729.54	596.28	790.34	751.02	756.72
7	Station Heat Rate	F	KCal/KWH.	2,705.00	2,668.00	2,455.00	2,455.00	2,455.00
8	Sp. Oil Consumption	G	ml/kWh	1.00	1.00	1.00	1.00	1.00
9	Gross Calorific Value of Coal	H	kcal/kg	4,550.00	4,469.00	4,532.00	4,333.00	4,314.00
10	Calorific value of Oil	I	kcal/kl	9,909	9,909	9,909	9,909	9,909
11	Overall Heat	J=C*F	G Cal	2168569.632	1748206.83	2132171	2026104.4	2041489
12	Heat from Oil	K=(C*G*I)/1000	G Cal	7944	6493	8606	8178	8240
13	Heat from Coal	L=J-K	G Cal	2160626	1741714	2123565	2017927	2033249
14	Transit loss of coal	M	%	1.40%	1.20%	1.00%	0.90%	0.80%
15	Coal Blend							
16	A) Indigenous Coal	X1	%	67.00%	76.00%	69.00%	91.00%	93.00%
17	B) Imported Coal	X2	%	33.00%	24.00%	31.00%	9.00%	7.00%
18	Actual Oil Consumption	N=C*G	KL	802	655	869	825	832
19	Actual Coal Consumption	O=(L*1000)/H	MT	474863	389732	468571	465711	471314
20	A) Indigenous Coal	Q1=O*X1/(1-M)	MT	322675.53	299794.13	326579.99	427645.99	441856.95
21	B) Imported Coal	Q2=O*X2	MT	156704.72	93535.77	145257.10	41914.01	32991.99
22	Price of Coal							
23	A) Indigenous Coal	P1	Rs/MT	3385.00	3385.00	3385.00	3385.00	3385.00
24	C) Imported Coal	P2	Rs/MT	5162.00	5162.00	5162.00	5162.00	5162.00
25	Price of Oil	P3	Rs/Kl	30092.00	30092.00	30092.00	30092.00	30092.00
26	Coal cost							
27	A) Indigenous Coal	N1=Q1*P1/10^5	Rs Lakh	10922.57	10148.03	11054.73	14475.82	14956.86
28	B) Imported Coal	N2=Q2*P2/10^5	Rs Lakh	8089	4828	7498	2164	1703
29	Total Coal Cost	N3=N1+N2	Rs Lakh	19012	14976	18553	16639	16660
30	Oil Cost	N4=P3*N/10^5	Rs Lakh	241	197	261	248	250
31	Total Fuel Cost	P=N3+N4	Rs Lakh	19253	15174	18814	16888	16910
32	Fuel Cost/Unit Gross	Q=P/(C*10)	Rs/kWh	2.40	2.32	2.17	2.05	2.03
33	Fuel Cost/Unit Net	R=P/(Y*10)	Rs/kWh	2.64	2.54	2.38	2.25	2.23
34	Cost of fuel/G.Cal	S=(P/J)*10^5	Rs/Gcal	888	868	882	834	828

Annexure 6.5

Vatva – CCPP: Fuel cost during Control Period FY 2011-12 to FY 2015-16

S.No	Particulars	Deviation	UOM	2011-12	2012-13	2013-14	2014-15	2015-16
1	Capacity	A	MW	100	100	100	100	100
2	PLF	B	%	88.56%	81.88%	76.48%	77.88%	76.91%
3	Generation (gross)	C=A*8760*B /1000	MU	777.91	717.27	669.96	682.23	675.58
4	Auxilary Consumption	D	%	3.00%	3.00%	3.00%	3.00%	3.00%
5	Auxilary Consumption	E	MU	23.34	21.52	20.10	20.47	20.27
6	Net Generation	F	MU	754.57	695.75	649.87	661.76	655.31
7	Heat Rate	G	kcal/kwh	2165	2165	2165	2165	2165
8	Total Heat	H=(C*G)	M kcal	1684177.4	1552886.952	1450473.792	1477025.352	1462625.16
9	Specific Gas Consumption	I	kcal/MMBtu	252	252	252	252	252
10	Actual Gas Consumption	J=(H/I)	MMBtu	6683.24	6162.25	5755.85	5861.21	5804.07
11	Cost of Gas per MMBtu	K	Rs./MMBtu	289.76	289.76	289.76	289.76	289.76
12	Total Cost of Gas	L=(J*K)/100	Rs. lakhs	19365.37	17855.74	16678.15	16983.45	16817.87
13	Fuel cost / unit gross	M=L/C*10	Rs/kWH	2.49	2.49	2.49	2.49	2.49
14	Fuel cost / unit net	N=L/F*10	Rs/Kcal	2.57	2.57	2.57	2.57	2.57
15	Cost of fuel/G.Cal	S=(P/J)*10^5	Rs/Gcal	1149.84	1149.84	1149.84	1149.84	1149.84

7. Directives

7.1 Compliance of earlier Directives

The Commission, in its Tariff Order dated 31st December, 2010, had issued various directives to TPL. TPL has submitted a compliance report on the directives issued in the current petition for approval of ARR for the control period FY 2011-12 to FY 2015-16 and determination of tariff for FY 2011-12.

The Commission's comments on the status of compliance of the directives by the TPL are given below. The Commission has also given fresh directives to the licensee wherever required:

Directive 1: Quality of Service

TPL is directed to re-submit an updated version of the Customer Charter as the earlier submission was more than two years ago.

Compliance

TPL has complied with the directive and submitted the Customer Charter for the approval. It is stated that TPL is giving wide publicity to the approved Customer Charter in accordance with the direction given by the Commission.

Commission's comments

TPL is directed to submit the updated Customer Charter every year.

Directive 2: Capital Expenditure

TPL is directed to submit cost benefit analysis of capital expenditure schemes to be undertaken during the FY 2010-11.

Compliance

It is submitted by the TPL that it has submitted the details of the CAPEX along with the cost benefit analysis.

Commission's comments

TPL has submitted only the status report on the works and not submitted the cost-benefit analysis for the FY 2010-11. TPL shall submit the cost-benefit analysis for FY 2010-11 and also cost-benefit analysis for the FY 2011-12 to FY 2015-16 by November, 2011.

Directive 3: Cost of Supply

TPL is directed to submit the cost of supply for each category of consumers as the cost of supply depends on the contribution to peak load and load usage pattern of each category and it would be different for each category of consumers.

Compliance

It is submitted by the TPL that it will endeavour to conduct a study to provide category-wise cost of supply.

Commission's Comments

TPL is directed to expedite the study and provide the category-wise cost of supply by December, 2011.

Directive 4: Business Plan

The TPL is directed to submit Business Plan for the five-year period FY 2011-12 to FY 2015-16 while filing the petition for the next year of the control period.

Compliance

The TPL has compiled with the Commission's direction.

Commission's comments

TPL has complied with the directive. The Business Plan submitted for the control period FY 2011-12 to FY 2015-16 along with ARR petition for the control period is being studied and the comments of the Commission on the Business Plan will be communicated separately.

Directive 5: Separate Books of Account

TPL should submit separate audited accounts for Generation, Ahmedabad Distribution and Surat Distribution as part of the annual submission to the

Commission. Clause 5.2 of MYT Regulations provide that the Generating Company or Licensee shall file '**separate**' accounting statements with the petition for ARR or the annual review of performance. Accounting Statement has been defined under clause 2.1 (a) of the MYT Regulations so as to consist of Balance Sheet, Profit and Loss account and the Cash Flow Statement along with all necessary schedules.

Compliance

TPL has complied the segregated audited accounts for Ahmedabad distribution and Surat distribution.

Commission's comments

TPL have not submitted the separate accounts duly audited for Ahmedabad distribution and Surat distribution for FY 2010-11. They should submit the segregated accounts immediately, as auditing of the accounts would have been completed by this time.

Directive 6: Voltage Fluctuations, Installations of Capacitors and Reactive Compensation

TPL to guide the consumers about the capacitor requirement and its benefits. The Commission has to be appraised about the steps TPL has taken to create awareness amongst the consumers.

Compliance

It is submitted by TPL that it has made serious efforts to create awareness amongst the consumers about the benefits of capacitor. The details are as under:

- Conveyed the benefits to the HT and LTMD consumers through letters and using special envelops.
- Conducted group meetings and made the presentations before the industrial consumer groups.

Commission's comments

The action taken is noted. Such awareness programmes may be conducted periodically for awareness amongst the existing consumers and the new consumers and appraise the Commission on the action taken.

Directive 7: Own Meters

The Commission directs by the TPL to give wide publicity to the procedure for availing the facility of own meters by customers.

Compliance

TPL has specified the procedure for availing the facility of installing own meters by consumers. The same is made available on the website as well as at the consumers centres.

Commission's comments

The compliance is noted.

Directive 8: Improvement in Blending Ratio of coal

TPL is directed to submit steps it proposes to take to improve the blending ratio from the actual achievement of 58:42 in H_1 of FY 2009-10.

Compliance

It is submitted by the TPL that it has made various efforts to improve the blending ratio of the indigenous and imported coal.

- To avail timely and higher quantum of coal from linkage given for the indigenous coal.
- To avail higher calorific value indigenous coal.

In this regard, the TPL has submitted that it has taken up issues at various levels to increase the availability of good quality coal from M/s SECL. TPL will continue its efforts in this regard.

Commission's comments

The action taken is noted.

Directive 9: SHR and Fuel Calorific Value

The Commission directs the TPL to estimate SHR on GCV basis and gross calorific value (GCV) of coal on as fired basis in future tariff petitions.

Compliance

TPL has submitted that SHR furnished is in accordance with Commission's directives.

Commission's comments

It is noted that the TPL has submitted the SHR and CV of coal on GCV basis in accordance with the directive of the Commission.

Directive 10: Cumulative depreciation on SLC Financed Assets

The Commission directs the TPL to maintain a separate cumulative account of depreciation, which would show the accumulated depreciation on all SLC financed assets starting from the year FY 2008-09. TPL should subtract the accumulated depreciation of SLC assets from depreciation of total assets each year to estimate the amount of depreciation expenses.

Compliance

TPL has submitted that it has compiled with the directive of the Commission and claims depreciation in accordance with the Regulations.

Commission's comments

Compliance is noted.

7.2 Fresh Directives

Directive 1: Capital expenditure for the FY 2011-12 to FY 2015-16

The TPL has projected capital expenditure of Rs.4037.36 crore for the control period FY 2011-12 to FY 2015-16. This is analyzed in paragraph 6.2.10.2. The Commission has not pruned the capital expenditure pending review. TPL is directed to submit cost-benefit analysis for the control period, year-wise, along with detailed justification for the proposed investment, particularly, the investment in special initiative on safety and the existing and proposed network plan. TPL is also directed to examine whether the proposed investment on special initiative on safety could be spread out partly to the next control period, as the investment is not related to meeting the additional demand.

Directive 2: Secondary Fuel Oil consumption

TPL is directed to indicate the secondary fuel oil consumption in terms of **ml/kWh** and the price of secondary fuel oil in terms of **Rs./kl.**

8. Fuel Price and Power Purchase Cost Adjustment

8.1 Fuel Price and Power Purchase Cost Adjustment

The Commission has approved the formula for Fuel Price and Power Purchase Adjustment for TPL separately vide order under case No. 915/2007 dated 31st July, 2007.

8.2 The TPL in its MYT tariff petition has requested that with the segregation of business activities and costs into generation business TPL-G (APP) and TPL-G (SUGEN) and distribution business (TPL-D) as per provisions of MYT Regulation, the existing formula may be modified to account for the fuel price adjustment (FPA) in the generation business and power purchase adjustment (PPA) in the distribution business separately. TPL has submitted the following formula:

8.3 Formula

The amount eligible for recovery through the power purchase adjustment formula is for the price and mix variation in the quantity of energy to be purchased as per the tariff order during quarter 'i'. This is to be computed for each of the month and aggregated for the quarter 'i'.

$$F_i = \left[(P_i \times E_i \times 10) + FC_i + REC_i + I_i\right] / \left[E_i \times (1 - T\&D\ Losses) \times 10\right]$$

Where:

F_i	The FPPPA per kWh (Rs./kWh)
P_i	The difference between the weighted average variable cost (Rs./kWh), at approved parameters wherever applicable, of power procured per kWh in quarter i and the weighted average variable cost of power procurement adopted in tariff order. The weighted average tariff referred above is exclusive of UI charges. In case of single part tariff, the entire cost is to be considered as variable cost in above calculation.
E_i	Total energy procured during the quarter in MU.

FC_i	Difference in actual total fixed charges (Rs. lakhs) of power procured from the base value adopted in the tariff order on pro-rata basis for that quarter.
REC_i	Actual cost incurred (Rs.lakhs) for purchasing Renewable Energy Certificate during the quarter for the compliance of Renewable Purchase Obligation
I_i	Impact of change in Interest on Working Capital on account of change in power procurement cost in relevant quarter. (Rs. lakhs)
T&D losses	Transmission and Distribution losses (%age)

8.4 The Commission has examined the request of TPL and it is considered that the formula already approved by the Commission covers both fuel price adjustment and power purchase adjustment components and could be applied to the extent required for fuel price adjustment or power purchase adjustment or both and it is not required to be modified.

The FPPPA formula approved by the Commission vide its order dated 31st July, 2007 is reproduced below:

FPPPA = [F_{OT}+PPP_1 + PPP_2] ÷ [S.E]
Where,

F_{OT}	Adjustment on account of variations in delivered cost of Fuel at TPL's thermal power stations (Rs. Millions).
PPP_1	Adjustment on account of variable cost of power purchased in (Rs. Millions).
PPP_2	Adjustment on account of fixed cost of power purchased in (Rs. Millions).
S.E. (in mU)	[Total sales in MU + Excess T&D loss in MU]

(a) Fuel cost adjustment of own generating stations:

$$F_{OT} = \sum_{n=1}^{k} \left[(H_B \text{ X } OTD_A) \text{ X } (\text{Fuel } C_A - \text{Fuel } C_B)\right]$$

where,

n	1 to k, the thermal power station in TPL
OTD_A	is the actual level of delivered energy at the bus bar (net generation) from TPL's thermal plants in million units during the control period.
H_B	is the base station heat rate in K.Cal./kWh calculated on the net output using permitted auxiliary consumption.
Fuel/C_A	is the new landed price of fuel at relevant TPL's generating stations, expressed in Rs./K.Cal calculated after allowing increase (or decreases) in the price of fuel/railway freight, taxes and duties on fuel as well as fuel price increase by fuel suppliers.
Fuel/C_B	is the base## landed price of fuel at relevant TPL's generating stations, expressed in Rs./K.Cal calculated using the base data. This parameter is constant (frozen) for the various quarters (periods) for which increases in fuel price is being permitted.

Base year for this order is FY 2010-11.

(b) Power purchase cost adjustment formula:

$$= [PPP_1 + PPP_2] \div [S.E]$$

TPL has proposed to include change in working capital costs on account of change in power procurement costs mechanism.

Working capital costs approved as per norms provide adequate margin with reference to the actual working capital required and there is no case to include this element, which is not significant in power purchase adjustment formula.

Purchase under REC could be part of power purchase cost. Hence not covered separately.

8.5 Base Price of Fuel of TPL Stations

The fuel costs of TPL's generating stations approved in this order are based on weighted average price and weighted average GCV of fuels (coal and secondary fuel oil) and cost of gas / MMBTU. These are as per the actuals for the FY 2010-11. The mix of the indigenous and imported coal for different stations is considered as approved in the tariff order for the FY 2011-12. The station-wise weighted average delivered price of fuel for main line coal and imported coal, secondary fuel, and the weighted average calorific value and the mix of indigenous and imported coal as approved for 2011-12 are given below: In the case of gas cost of gas /MMBTU as approved is given below:

Sl. No.	Station	Mix of indigenous and imported coal (ratio)	Weighted Average Cost of Coal		Weighted average calorific value of Coal (K.Cal/ kg)	Calorific value of secondary oil (K.cal/ Litre)	Cost of secondary fuel (Rs./KL)	Cost of gas (Rs./ MMBU)
			Main line indigenous Coal (Rs./MT)	Imported Coal (Rs./ MT)				
	Coal Based Stations							
1	C. Station	100:00	3385.00	-	4251	9909	30092.00	
2	D. Station	67:33	3385.00	5162.00	4550	9909	30092.00	
3	E. Station	67:33	3385.00	5162.00	4550	9909	30092.00	
4	F. Station	67:33	3385.00	5162.00	4550	9909	30092.00	
	Gas Based Station							
5	Vatawa	-	-	-	-	-	-	289.76

The cost per MT for mainline indigenous coal is exclusive of Transit loss. The fuel costs are to be arrived at based on the operational parameters, station heat rate, specific oil consumption of secondary fuel, transit loss etc., approved by the Commission in this order.

The TPL may claim fuel price increase from the consumers in accordance with the formula approved by the Commission in the order referred to above. Prior approval of the Commission shall be taken, if any change is required in station operational parameters approved by the Commission in calculating adjustments of fuel cost.

The calorific values mentioned in column 6 of the aforesaid table are in terms of GCV (as claimed by TPL).

The weighted average calorific values indicated above for each station is based on assumed quantity of mainline indigenous coal, and imported coal as indicated in the tariff order for the year 2011-12.

8.6 Power Purchase Adjustment

The company has an arrangement with GUVNL for supply of required power to meet the demand of its consumers. The company has entered into an arrangement / agreement for supply of power by GUVNL and the same is approved by the Commission. The power purchase costs, according to the agreement are projected at

Rs.4.35/unit, which should be the base price for power purchase. TPL may claim the increase in the power purchase cost, if any, in accordance with the formula approved by the Commission, in the order referred to above. The rate of Rs.4.35/unit includes variable and fixed costs and other charges.

Similarly, TPL may claim the difference between the tariff to be determined by CERC for SUGEN, UNO-SUGEN+D-SUGEN and the rate indicated in the present order as per formula approved by the CERC.

The TPL may also claim any variation in the cost of power purchased from renewable sources including certificate obtained from such purchase.

Apart from the above sources, TPL proposes to purchase power from power exchange to meet the peak demand. The power is considered at Rs.5.59/kWh in the order. TPL may claim the difference between the actual purchase price and the price indicated in this order as per approved formula.

8.7 Base FPPPA charge is fixed at 70 paise/unit.

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

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.

For any claim of FPPPA, the documents for approval of FPPPA shall be submitted to the Commission within one month from end of the relevant quarter.

9. Wheeling charges and cross subsidy surcharge

9.1 Regulation 88.1 of MYT Regulations, 2011, stipulates that the Commission shall specify the wheeling charges of distribution wires business of the distribution licensee in its ARR & Tariff order.

The TPL has allocated the total ARR expenditure of TPL-D to wheeling and retail supply business considering the distribution infrastructure up to the service line as part of wheeling business and the distribution infrastructure from service line to consumer premises as part of the retail supply business. The segregation of components into wheeling and retail supply business has been done by TPL based on the following allocation matrix:

Table 9.1: Allocation matrix for segregation to "Wheeling and Retail Supply" submitted by TPL-D for FY 2011-12

ARR components	Wire business (%)	Retail business (%)
Power purchase expenses	0	100
O&M	90	10
Depreciation	90	10
Interest on long term loan capital	90	10
Interest on working capital and consumer security deposit	10	90
Bad debts written off	10	90
Income tax	90	10
Transmission charges intra-state	0	100
Contribution to contingency reserve	90	10
Return on equity	90	10
Non-tariff income	10	90

The TPL has not bifurcated the O&M expenses into employee, R&M and A&G expenses, instead it has provided O&M expenses at a composite level.

The Commission, in order to compute the wheeling charges and cross subsidy surcharges, has considered the allocation matrix between the wheeling and retail supply business as per GERC (MYT) Regulations, 2011.

The allocation matrix and the basis of allocation of various cost components of the ARR as per GERC (MYT) Regulations, 2011 are shown below:

Table 9.2: Allocation matrix for segregation to "Wheeling and Retail Supply" for TPL-D for FY 2011-12 as per GERC Regulations

ARR components	Wire business (%)	Retail business (%)
Power purchase expenses	0	100
O&M		
(i) Employee expenses	60	40
(ii) A&G expenses	50	50
(iii) R&M expenses	90	10
Depreciation	90	10
Interest on long term loan capital	90	10
Interest on working capital and consumer security deposit	10	90
Bad debts written off	0	100
Income tax	90	10
Contribution to contingency reserve	100	0
Return on equity	90	10
Non-tariff income	10	90

Based on the above allocation, the approved ARR for wires business and retail supply business are computed as shown below. The O&M expenses are segregated into employee, A&G and R&M expenses in the ratio of average of 2007-08, 2008-09 and 2009-10 actual expenses.

Table 9.3: Allocation of ARR between wheeling and retail supply business for Ahmedabad supply area for FY 2011-12

Cost components	Ahmedabad area for FY 2011-12		
	Total	Wheeling	Retail supply
Power purchase expenses	2257.84	0	2257.84
O&M			
(i) Employee expenses	68.64	41.18	27.46
(ii) A&G expenses	35.36	17.68	17.68
(iii) R&M expenses	82.51	74.26	8.25
Depreciation	106.41	95.77	10.64
Interest on loan	70.57	63.51	7.06
Interest on security deposit	13.04	1.30	11.74
Interest on working capital	6.95	0.70	6.26
Return on equity	146.93	132.24	14.69
Bad debts written off	1.09	0.98	0.11
Income tax	8.52	0.00	8.52
Contingency reserve	0.6	0.60	0.00
Prompt payment rebate	27.17	0.00	27.17
Less: Non-tariff income	51.7	5.17	46.53
Net ARR	**2877.33**	**433.39**	**2443.94**

Table 9.4: Allocation ARR between wheeling and retail supply business for Surat for FY 2011-12

Cost components	Surat area for FY 2011-12		
	Total	Wheeling	Retail supply
Power purchase expenses	1250.23	0.00	1250.23
O&M			
(i) Employee expenses	37.45	22.47	14.98
(ii) A&G expenses	23.86	11.93	11.93
(iii) R&M expenses	25.32	22.79	2.53
Depreciation	45.20	40.68	4.52
Interest on loan	43.31	38.98	4.33
Interest on security deposit	9.12	0.91	8.21
Interest on working capital	0.00	0.00	0.00
Return on equity	74.47	67.02	7.45
Bad debts written off	4.98	4.48	0.50
Income tax	0.36	0.00	0.36
Contingency reserve	0.40	0.40	0.00
Less: Non-tariff income	21.93	2.19	19.74
Net ARR	**1492.77**	**207.47**	**1285.30**

The above allocations of ARR are used for determination of charges and cross subsidy surcharge for FY 2011-12.

9.2 Wheeling charges

The wheeling charges at 11kV voltage level for FY 2011-12 are given in the table below:

Table 9.5: Wheeling charges for 11kV voltage level

Sl. No.	Particulars	Ahmedabad area	Surat area
1	Energy input into 11kV system (MU)	6320	3452
2	Total distribution cost Wired Business (Rs. crore)	433.39	207.47
3	Distribution cost for wheeling at 11kV (HT) (Rs. crore) at 30% of total distribution cost	130.02	62.24
4	Wheeling charge at 11kV (Paise / kWh) (3/1)	21	18

Accordingly, the Commission approves the wheeling charges of 21 paise / kWh for FY 2011-12 for Ahmedabad area and 18 paise / kWh for Surat area. In addition 4% of energy in kind will be deducted from the energy input towards assumed loss in EHT / HT network of distribution licensee.

Wheeling charges worked out for LT voltage level for FY 2011-12 for Ahmedabad and Surat areas are given in the table below:

Table 9.6: Wheeling charges at LT voltage level

Sl. No.	Particulars	Ahmedabad area	Surat area
1.	Energy in put into 11kV system (MU)	6320	3452
2.	Losses in 11kV system (at 4%) (MU)	253	138
3.	Energy sales in 11kV system (MU)	1555	246
4.	Energy input into LT system (MU) [1-(2+3)]	4512	3068
5.	Total distribution cost for wheeling business (Rs. crore)	433.39	207.47
6.	Distribution cost at 11kV voltage (HT) level (Rs. crore) (at 30%)	130.02	62.24
7.	Distribution cost at LT voltage level (Rs. crore) (5-6)	303.37	145.23
8.	Wheeling charges at LT voltage level (paise / kWh)	67	47

The open access consumer will also have to bear the following losses in addition to the wheeling charges.

Table 9.7: Wheeling charges in kind

Particulars	FY 2011-12	
	Ahmedabad area	Surat area
HT category	4.00%	4.00%
LT category	8.5%	5.15%

9.3 Cross subsidy surcharge

The cross subsidy surcharge is based on the formula given in the Tariff Policy as below:

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

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 charges

L is the System losses for the applicable voltage level, expressed as percentage.

The cross subsidy surcharge based on the above formula is worked out as shown in the Table below:

Table 9.8: Cross subsidy surcharge for FY 2011-12

S No.	Particulars	Ahmedabad	Surat
1	T	Rs. 4.88/kWh	Rs. 5.05/kWh
2	C	Rs. 4.69/kWh	Rs. 4.69/kWh
3	D	0.21 Rs/kWh	0.18 Rs/kWh
4	L	4%	4%
5	**S= cross subsidy surcharge**	**(-) 20 Ps/kWh**	**(-) 1 Ps/kWh**

Hence, the cross subsidy surcharge is nil.

Computation

1. HT Tariff

Particulars	Rs/kWh	FPPPA	Total
Ahmedabad	4.18	0.70	4.88
Surat	4.35	0.70	5.05

2. Wt. average Power Purchase cost of top 5% at the margin excluding fuel base generation and renewable power.

Particulars	Energy procured (MU)	Avg. Rate (Rs./kWh)	Total cost of power (Rs. cr.)
Power Exchange	136.53	5.59	76.32
Bilateral	363	4.35	157.90
Total	499.53		234.32

Average cost = (234.32/499.53)*10 = Rs. 4.69 /kWh

3. Cross Subsidy Surcharge

Ahmedabad S=4.88-[4.69(1+4/100)+0.2]
= (-) 20 Paise/kWh

Surat S=5.05-[4.69(1+4/100)+0.18]
= (-) 1 Paise/kWh

10. Tariff Philosophy and Tariff Proposals

10.1 Introduction

The Commission is guided by the provisions of the Electricity Act 2003, the National Electricity Policy (NEP), Tariff Policy, the Regulations on Terms and Conditions of Tariff issued by the Central Electricity Regulatory Commission (CERC) 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, and guidelines for determination of retail supply tariff. The basic principle is to ensure that the tariff should progressively reflect the cost of supply of electricity and reduce the cross subsidies amongst categories within a period to be specified by the Commission.

The Commission notified the Multi-Year Tariff (MYT) Regulations, 2011 for determination of tariff from 1st April, 2011. The ARR approved in this order is for the control period FY 2011-12 to FY 2015-16 and the retail supply tariffs are determined for the year FY 2011-12, 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 Commission has also tried to address operational and field level issues – keeping in view the interest of consumers – while rationalizing tariff structure.

For example, tariff rate commonly known as commercial tariff was applied to commercial establishments in respect of lighting and fan. Such establishments had to pay at the industrial rate in respect of motive power. A consumer had to keep two meters, which means avoidable cost and inconvenience to both the consumer and the utility. The commercial tariff was also applied to a range of consumers including shops, restaurants, theatres, IT units, telecom units, and even offices, hospitals and educational institutions. In other words, it was applied to almost the entire service sector. In recent times, the structure of the economy has changed; the tertiary or service sector has been playing a dominant role in economic growth. In the context of development policy, a number of such activities are treated as industrial activities and given priority. Thus, the tariff structure, which was designed in the past, has become anachronistic; in practice and very often it become difficult to distinguish between industrial activities and so called commercial activities, which are mostly service activities at present. This also results in confusion and ambiguity for field level officials of the utilities. In order to address these issues, the Commission has restructured the tariff in respect of High Tension power supply in the tariff order of 31st March 2010. It greatly helped to simplify the processes and procedures, particularly in field and was well received by the utilities and consumers. As a sequel to the process of rationalization, the Commission has, in the present order, attempted to rationalize the tariff structure in respect of Low Tension power supply.

The mandate of the NTP that the tariff should be within plus or minus 20% of the average cost of supply by FY 2010-11 has been the guiding principle. In working out the cost of supply the Commission has worked out on the basis of average cost of supply, in the absence of relevant data for working out consumer category-wise cost of supply.

10.2 Retail tariffs and restructuring of the tariff categories proposed by the TPL

10.2.1 Retail tariffs

The TPL has submitted that the existing tariffs do not allow recovery of the estimated gap. Therefore, it has proposed to recover the estimated revenue gap through revision in tariffs for FY 2011-12. TPL, therefore, requested the Commission to allow necessary increase in tariff rates to meet the Aggregate Revenue Requirement (ARR) and the consequent revenue gap.

10.2.2 Restructuring of the tariff categories

TPL has submitted that while proposing the restructuring of the tariff categories, it has taken into consideration certain widely recognized best practices for design of tariff. The basic principles followed while designing tariff are as follows:

- Consider capacity to pay of the consumers
- Promote efficient use of electricity
- Tariff rationalization

- Enable efficient monitoring of usage and payment

It is further submitted that the restructuring of existing tariff categories into residential, commercial and industrial categories is necessitated on account of difficulties in terms of monitoring and ineffectiveness of tariff structure as mentioned below:

10.2.2.1 TPL's proposal

(i) **Different tariffs for same consumers:** In the present scenario a consumer will have different tariffs for lighting use and motive use although the end use is the same. It may be noted that this differentiation is not supported by any logic.

(ii) **Misuse of multiple connections:** Categorization on the basis of lighting and motive use resulted in multiple connections for a single consumer. This leaves a possibility of misuse and diversion of power usage to connect with lower tariff. TPL has submitted that monitoring connections becomes difficult and incidence of theft or misuse increases.

(iii) **Higher capital expenditure and O&M expenses:** Installation of two meters instead of one meter for a single consumer increases the capital expenditure. Besides, maintenance, monitoring and billing for multiple connections increases the O&M expenses.

10.2.2.2 New Tariff categories

Based on the above TPL proposes to modify the existing tariff categories into new tariff categories for the control period as below:

Table 10.1: Major tariff categories and revised definition (applicability) of these categories for the control period

Sl. No.	Tariff categories	Applicability
	LT categories	
1.	Residential – non demand based (including BPL)	Applicable up to and including 15 KW of connected load in residential premises
2.	Residential - demand based	Applicable above 15 KW of connected load in residential premises (with demand based fixed charges)
3.	Residential pumping and common services – non demand based	Applicable up to including 15 KW of connected load for pumping and common services like water supply, common lights in corridors and supply for lifts in multi-storeyed buildings in residential housing townships/ colonies

Sl. No.	Tariff categories	Applicability
		including pumping stations run by local authorities
4.	Residential pumping and common services – demand based	Applicable above 15 KW of connected load for pumping and common services like water supply, common lights in corridors and supply for lifts in multi-storeyed buildings in residential housing townships/ colonies including pumping stations run by local authorities (with demand based fixed charges)
5.	Commercial – non demand based	Applicable up to and including 15 KW of connected load in premises other than residential, industrial, agricultural, streetlight , temporary and GLP
6.	Commercial – demand based	Applicable above 15 KW of connected load in premises other than residential, industrial, agricultural streetlight and temporary (with demand based fixed charges)
7.	Industrial – non demand based	Applicable upto and including 15 KW of connected load in industrial premises (as defined under the Bombay Electricity Duty Act, 1958)
8.	Industrial – demand based	Applicable above 15kW of connected load in industrial premises (as defined under the Bombay Electricity Duty Act, 1958) (with demand based fixed charges).
9.	Others (GLP, Agriculture, street lights, temporary)	Applicable for use of energy upto and including 100 kW connected load in premises used for charitable purposes including Charitable Institutions like hospital, dispensary, educational and research institute and hostel attached to such institution, religious premises exclusively used for worship or community prayers, registered with charity commissioner and specifically exempted from levy of general tax under section 2 (13) of Bombay Trust Act, 1950 read with section 9 of the Income Tax Act, 1961.
10.	Agriculture	Applicable to installation for agricultural purpose.
11.	Street lighting	Applicable to lighting system for illumination of public roads.
12.	Temporary	Applicable to installation for temporary requirement of electricity supply.
	HT categories	
1.	HTMD – I (Industrial)	Applicable for supply of energy to High Tension consumers contracting maximum demand of 100 kW and above for industrial purposes (as defined under the Bombay Electricity Duty Act, 1958)
2.	HTMD - II (Commercial)	Applicable for supply of energy to High Tension consumers contracting for maximum demand of 100 kW and above for purposes other than HTMD - I and HTMD – III.
3.	HTMD - III (Pumping)	Applicable for supply of energy to Water and Sewage

Sl. No.	Tariff categories	Applicability
		Pumping Stations run by local authorities and contracting for maximum demand of 100 kW and above

Commission's Analysis and decision

With the existing structure of the tariff categories there are different tariff rates for lighting consumption and for motive power consumption. In view of this, a consumer is required to put separate meters for recording separate consumption of lighting and motive power in same premises. Further, due to ignorance or oversight there are chances that the consumers may connect small appliances/gadgets in motive power circuts intentionally or other-wise and this can be considered as 'theft of Electricity' under the Electricity Act, 2003. Some of the Consumer Associations have requested the Commission to remove this differentiation between lighting tariff rates and motive power tariff rates in single premises.

In view of the above, the Commission has decided to remove this differentiation between tariff rates of lighting consumption and motive power consumption.

The proposal of TPL regarding non-demand based (upto 15kW) and demand based (Above 15kW) tariff categories, based on the connected load is approved by the Commission.

In TPL-Ahmedabad area

The existing RGP tariff category provides tariff rates for lighting consumption of Residential premises and the existing LTP-I category provides tariff rates for motive power (up to 15BHP) consumption of Residential premises and water works operated by local authorities. Both the tariff categories are now merged and cover installations having connected load up to 15kW and named as tariff category "RGP".

Installations having aggregate connected load above 15 kW in Residential premises and water works operated by local authorities are now covered under the existing LTMD-I tariff category.

The existing CGP/IGP category provides tariff rates for lighting consumption of Commercial/Industrial premises and existing LTP-II category provides tariff rates for motive power (up to 15 BHP) consumption of Commercial/Industrial premises. Both these categories are now merged and installations having connected load up to 15 kW in all non-residential premises, including Commercial, Industrial, office premises, institutional and other non-residential installations are combined to one category named as "Non-RGP".

Installations having aggregate connected load above 15 kW of Commercial, premises, institutional and other non-residential premises are now covered under existing LTMD-II tariff category.

In TPL-Surat area

The existing Residential tariff category provides tariff rates for lighting consumption of residential premises and existing LTP category provides tariff rates for motive power (up to 15 BHP) consumption of residential premises. Now, the existing Residential category is modified to cover aggregate consumption of residential premises having connected load up to 100 kVA, and renamed as "RGP".

The existing Commercial category provides tariff rates for lighting consumption of Commercial/Industrial and several other premises and existing LTP category provides tariff rates for motive power (up to 15 BHP) consumption of such premises premises. Both the categories are now merged and installations having connected load up to 15 kW of Commercial, Industrial, office premises, institutional and other Non-residential are included in one category named as "Non-RGP".

Installations having aggregate connected load above 15 kW of Commercial, Industrial, office premises, institutional, and other Non-residential premises are now covered under existing LTMD tariff category.

10.3 Proposed changes in other tariff components

The TPL has submitted that it has been taking initiatives on Demand Side Management (DSM) and made efforts to spread consumer awareness on the importance of DSM. However, TPL recognizes the fact that effective tariff signals would also have to be provided to improve the system utilisation and optimize the network usage.

(i) Time of use (ToU) charges

TPL's submission:

ToU charges are currently applicable to HTMD consumers in Ahmedabad and for consumer with > 500 KVA contract demand in Surat. TPL proposes to introduce ToU charges for HT consumers with < 500 KVA contract demand at Surat area.

Commission's view

The proposal to implement ToU for HT consumer with less than 500 kVA in Surat area is approved.

(ii) Night time concessional tariffs (NTCT)

TPL's submission

It is submitted by TPL that NTCT for energy consumed during night hours is currently applicable in Surat area. TPL now proposes to introduce a separate category for exclusive night time consumption for HT consumers of Ahmedabad area also. Besides NTCT category, the night time concession will also be available for night time consumption in excess of 33% of total assumption in case of HT consumers. This would provide some incentive to the consumers for shifting their peak hour demand to night hours and thereby help in addressing the overall shortage of power during peak hours.

Commission's view

The proposal of TPL to introduce NTCT for HT consumers in Ahmedabad area and also to give concession to HT consumers who consume more than excess of 33% of total consumption during night hours in order to reduce the demand during peak hours is approved.

(iii) Load factor incentive

TPL's submission

TPL proposes to maintain the load factor incentive (for HT consumers) that is currently applicable to provide price signals to flatten the load curve and thereby to improve the system utilisation.

Commission's view

The proposal is accepted.

(iv) Prompt payment discount

TPL's submission

It is submitted by TPL that TPL-D provides for prompt payment discount in Ahmedabad area and does not provide similar discount in Surat area. It is submitted that the discount offered is not commensurate with the benefit accrued on account of early payment and, moreover, the discount is a pass through and to be recovered from consumer. TPL, therefore, proposes to do away with prompt payment discount for both Ahmedabad and Surat areas.

Commission's view

The arrangement of prompt payment discount enables consumer to pay within the stipulated time. So Commission decided to continue this arrangement with a prompt payment discount rate of 1% for all categories.

10.4 The proposed tariff rates and tariff schedule

10.4.1 Proposed retail tariffs

The retail tariffs determined by the Commission FY 2011-12 as discussed above are shown in the Tariff Schedule.

10.4.2 Change in Tariff Rates

<u>TPL-Ahmedabad area</u>

- For 'RGP' tariff category, fixed charge is increased by Rs. 5 per installation per month for single-phase consumers and by Rs. 15 per installation per month for three-phase consumers. Energy charge is increased by 20 paise per unit for monthly consumption up to 200 units. For monthly consumption 201 onwards energy charge is increased by 15 paise/unit.

- For 'Non-RGP' tariff category, fixed charge for connected load up to 5 BHP is increased from existing rate of Rs. 20 per BHP per month to Rs. 35 per kW per month and made applicable for single-phase consumers. For connected load above 5 BHP, the existing rate of Rs. 25 per BHP per month is increased to Rs. 45 per kW per month for three-phase consumers. Energy charge for this category is increased by 15 paise per unit.

- For 'LTMD-1' category, demand charges are revised as given below:

Billing Demand	Existing Rate	Revised Rate
Upto 50 kW	Rs. 70 per kW	Rs. 100 per kW
Next 30 kW	Rs. 90 per kW	Rs. 130 per kW
Remaining	Rs. 120 per kW	Rs. 170 per kW

Energy charge for this category is increased by 20 paise for both the slabs.

- For 'LTMD-2' category, demand charges are revised as given below:

Billing Demand	Existing Rate	Revised Rate
Upto 50 kW	Rs. 80 per kW	Rs. 100 per kW
Next 30 kW	Rs. 110 per kW	Rs. 140 per kW
Remaining	Rs. 150 per kW	Rs. 185 per kW

Energy charge for this category is increased by 20 paise in both the slabs.

- For 'HTMD' category, demand charge is increased from the existing rate of Rs. 140 per kW per month to Rs. 180 per kW per month. Energy charge for this category is increased by 25 paise for both the slabs.

- For 'HT Pumping Stations' category, demand charge is increased from the existing rate of Rs. 140 per kW per month to Rs. 180 per kW per month. Energy charge for this category is increased by 10 paise for both the slabs

TPL-Surat area

- For 'RGP' tariff category, fixed charge is increased by Rs. 5 per installation per month for single-phase consumers and by Rs. 15 per installation per month for three-phase consumers. Energy charge is increased by 20 paise per unit for monthly consumption up to 250 units. For monthly consumption 251 onwards energy charge is increased by 5 paise/unit.

- For 'Non-RGP' tariff category, fixed charge for connected load of the first 10 BHP is increased from the existing rate of Rs. 20 per BHP per month to Rs. 35 per kW per month. For connected load above 5 BHP, the existing rate of

Rs. 30 per BHP per month is increased to Rs. 50 per kW per month for three-phase consumers. Energy charge for this category is increased by 25 paise per unit.

- For 'LTMD' category, demand charges are revised as given below:

Billing Demand	Existing Rate	Revised Rate
Upto 20 kVA	Rs. 30 per kVA	Rs. 45 per kVA
Next 30 kVA	Rs. 50 per kVA	Rs. 75 per kVA
Next 10 kVA	Rs. 60 per kVA	Rs. 90 per kVA
Above 60 kVA	Rs. 70 per kVA	Rs. 105 per kVA

Energy charge for this category is increased by 20 paise.

- For 'Temporary' category, Fixed charge is now introduced as Rs. 14 per kW per day and the energy charge is fixed as Rs. 4.25 per unit.
- For 'HTMD-1' category, demand charge for billing demand above 500 kVA is increased from the existing rate of Rs. 130 per kVA per month to Rs. 180 per kVA per month. Energy charge for this category is increased by 15 paise for both the slabs.

- For 'HTMD-2' category, demand charges are revised as given below:

Billing Demand	Existing Rate	Revised Rate
First 500 kVA	Rs. 80 per kVA	Rs. 80 per kVA
Next 500 kVA	Rs. 110 per kVA	Rs. 165 per kVA
Above 1000 kVA	Rs. 125 per kVA	Rs. 165 per kVA

Energy charge for this category is increased by 15 paise.

- 'Time of Use' charge of 35 paise per unit is introduced for HT consumers having billing demand up to 500 kVA.
- Energy charges for other LT categories except Agriculture category is increased by 25 paise/unit.

10.5 Revenue Gap / Surplus

10.5.1 Gap / Surplus of TPL – Ahmedabad for FY 2011-12

The total revenue based on the existing tariff for FY 2011-12 is Rs. 2716.99 crore and the net gap is Rs. 125.84 crore. The Commission has revised the tariff which brings in additional revenue of Rs. 127.20 crore resulting into surplus of Rs. 1.36 crore. The Commission has decided that it will review the same during true up for FY 2011-12 when the audited accounts would be made available to the Commission.

10.5.2 Gap / Surplus of TPL – Surat for FY 2011-12

The total revenue based on the existing tariff for FY 2011-12 is Rs. 1511.19 crore and the net gap is Rs. 38.74 crore. The Commission has revised the tariff which brings in additional revenue of Rs. 39.79 crore resulting into surplus of Rs. 1.05 crore. The Commission has decided that it will review the same during true up for FY 2011-12 when the audited accounts would be made available to the Commission.

10.6 Impact of Electricity Duty

During the public hearing, several consumer organizations and others brought to the notice of the Commission the high rates of Electricity Duty in Gujarat. It may be noted that imposition of Electricity Duty is the prerogative of the Government. However, the Commission has noted the issue and observes that there is a need to rationalize Electricity Duty. The Commission feels that the system of *ad-valorem* duty increases the impact of any tariff increase even further.

The *ad-valorem* structure increases the burden on the consumers, impacts on the finances of the utilities and distorts the tariff structure. With the rationalization of the tariff structure by the Commission, there is a need to revisit the structure of electricity duty. The Commission has therefore, suggested that the Government should consider rationalizing Electricity Duty, keeping in view the above aspects and the practices in other States, so that it becomes reasonable, stable and predictable.

COMMISSION'S ORDER

The Commission approves the Aggregate Revenue Requirement for FY 2011-12 to FY 2015-16 for TPL-G (APP), TPL-Ahmedabad and TPL-Surat as shown in the tables below:

Approved ARR for TPL-G (APP) for the control period FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Variable cost	873.87	774.17	827.60	673.06	654.98
O&M expenses	132.26	139.82	147.82	156.28	165.22
Water Charges	8.59	8.59	8.59	8.59	8.59
Depreciation	34.23	45.23	54.48	51.48	52.44
Interest on loan	13.79	26.05	33.83	29.29	25.12
Interest on working capital	14.20	13.02	14.33	12.14	11.86
Return on equity	49.40	58.70	66.08	64.63	63.33
Income Tax	26.45	26.45	26.45	26.45	26.45
Less: Non-tariff income	14.18	14.18	14.18	14.18	14.18
Net ARR	**1138.68**	**1077.84**	**1165.00**	**1007.74**	**993.81**

Approved ARR for TPL-D Ahmedabad for the control period FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Power Purchase cost	2257.84	2545.00	2849.99	3216.68	3410.33
O&M expenses	186.51	197.18	208.46	220.38	232.99
Depreciation	106.41	140.85	173.10	190.78	207.57
Interest on loan	70.57	105.40	130.95	132.19	130.71
Interest on security deposit	13.04	14.43	15.95	17.63	19.47
Interest on working capital	6.95	7.13	7.77	7.62	7.42
Return on equity	146.93	174.27	198.30	209.93	221.03
Income Tax	8.52	8.52	8.52	8.52	8.52
Bad Debts	1.09	1.09	1.09	1.09	1.09
Contingency Reserve	0.6	0.6	0.6	0.6	0.6
Prompt payment rebate	27.17	29.31	31.64	34.18	36.95
Less: Non-tariff income	51.7	53.25	54.84	56.49	58.18
Net ARR	**2773.93**	**3170.60**	**3571.50**	**3983.12**	**4218.51**

Approved ARR for TPL-D Surat area for the control period FY 2011-12 to FY 2015-16

(Rs. crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Power Purchase cost*	1250.23	1332.43	1430.09	1546.81	1570.96
O&M expenses	86.63	91.58	96.82	102.36	108.22
Depreciation	45.20	48.85	51.61	53.95	56.05
Interest on loan	43.31	43.28	41.76	39.36	36.45
Interest on security deposit	9.12	9.51	9.91	10.31	10.73
Interest on working capital	-	-	-	-	-
Return on equity	74.47	77.27	79.38	81.12	82.68
Income Tax	4.98	4.98	4.98	4.98	4.98
Bad Debts	0.36	0.36	0.36	0.36	0.36
Contingency Reserve	0.40	0.40	0.40	0.40	0.40
Less: Non-tariff income	21.93	22.4	22.95	23.63	24.42
Net ARR	**1492.76**	**1586.27**	**1692.38**	**1816.02**	**1846.41**

The retail supply tariffs for Ahmedabad distribution area and Surat distribution area for FY 2011-12 approved by the Commission are annexed to this order.

The order shall come into force with effect from 1st September, 2011.

Sd/-	Sd/-	Sd/-
DR. M.K. IYER	**SHRI PRAVINBHAI PATEL**	**DR. P.K. MISHRA**
Member	Member	Chairman

Place : Ahmedabad

Date : 06.09.2011

ANNEXURE: TARIFF SCHEDULE

TARIFF SCHEDULE EFFECTIVE FROM 1ST SEPTEMBER, 2011

(A) Tariff Schedule for Ahmedabad - Gandhinagar License area of Torrent Power Limited- Ahmedabad

GENERAL CONDITIONS

1. This tariff schedule is applicable to all the consumers of TPL in Ahmedabad-Gandhinagar area.
2. All these tariffs for power supply are applicable to only one point of supply.
3. 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.
4. The energy supplied under these tariffs can be utilized only within the compact area of the premises not intervened by any area/road belonging to any person or authority other than the consumer.
5. Except in cases where the supply is used for purposes for which TPL has permitted lower tariff, the power supplied to any consumer shall be utilized only for the purpose for which supply is taken and as provided for in the tariff.
6. The charges specified in the tariff are on monthly basis, TPL shall adjust the rates according to billing period applicable to consumer.
7. The various provisions of the GERC (licensee's power to recover expenditure incurred in providing supply and other miscellaneous charges) Regulations will continue to apply.
8. Conversion of Ratings of electrical appliances and equipments from kilowatt to B.H.P. or vice versa will be done, when necessary, at the rate of 0.746 kilowatt equal to 1 B.H.P.
9. The billing of fixed charges based on contracted load or maximum demand shall be done in multiples of 0.5 (one half) Horse Power or kilo watt (HP or kW) as the case may be. The fraction of less than 0.5 shall be rounded to next 0.5. The billing of energy charges will be done on complete one kilo-watt-hour (kWh).
10. The Connected Load for the purpose of billing will be taken as the maximum load connected during the billing period.
11. Contract Demand shall mean the maximum kW for the supply of which TPL undertakes to provide facilities to the consumer from time to time.
12. Maximum Demand in a month means the highest value of average kW as the case may be, delivered at the point of supply of the consumer during any consecutive 15/30 minutes in the said month.
13. 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.

14. The Fixed charges, minimum charges, demand charges, meter rent and the slabs of consumption of energy for energy charges mentioned shall not be subject to any adjustment on account of existence of any broken period within billing period arising from consumer supply being connected or disconnected any time within the duration of billing period for any reason.
15. Prompt payment discount on the total bill excluding all types of levies, duties or taxes levied by the Government or any other competent authorities and meter rent but including fixed charges, energy charges and minimum charge shall be allowed at the 1% rate for all tariff categories except tariff category 'Rate: TMP', provided that the bill is paid (i) within 14 days of the date thereof for LT consumers and (ii) within 10 days of the date thereof for HT consumers, provided that no previous account is outstanding as on the date of the bill.
16. The energy bills shall be paid by the consumer within 14 days from the date of billing, failing which the consumer shall be liable to pay the delayed payment charges @15% p.a. for the number of days from the due date to the date of payment of bill.
17. Fuel Price and Power Purchase Adjustment (FPPPA) charges shall be applicable in accordance with the formula approved by the Gujarat Electricity Regulatory Commission from time to time.
18. Statutory Levies: These tariffs are exclusive of Electricity Duty, Tax on Sales of Electricity, Taxes and other Charges levied/may be levied or such other taxes as may be levied by the Government or other Competent Authorities on bulk/retail supplies from time to time.
19. The payment of power factor penalty does not exempt the consumer from taking steps to improve the power factor to the levels specified in the Regulations notified under the Electricity Act, 2003 and TPL shall be entitled to take any other action deemed necessary and authorized under the Act.

PART- I

SUPPLY DELIVERED AT LOW OR MEDIUM VOLTAGE (230 VOLTS- SINGLE PHASE, 400 VOLTS- THREE PHASE, 50 HERTZ)

1. Rate: RGP

Applicable for supply of electricity to residential premises and pumping stations run by local authorities, upto and including 15 kW of connected load.

1.1. FIXED CHARGE

For Other than BPL consumers

(a)	Single Phase Supply	Rs. 10 per month per installation
(b)	Three Phase Supply	Rs. 30 per month per installation

For BPL household consumers*

(a)	Fixed Charges	Rs. 5 per month per installation

1.2. ENERGY CHARGE

For Other than BPL consumers

(i)	First 50 units consumed per month	300 Paise per Unit
(ii)	For the next 150 units consumed per month	340 Paise per Unit
(iii)	Remaining units consumed per month	420 Paise per Unit

For BPL household consumers*

(i)	First 30 units consumed per month	150 Paise per Unit
(ii)	For remaining units consumed per month	Rate as per RGP

** 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 zonal office of the Distribution Licensee. The concessional tariff is only for 30 units per month.*

2. Rate: GLP

Applicable for supply of electricity to ‘other than residential’ premises used for charitable purposes like: public hospitals, dispensaries, educational and research institutions and hostels attached to such institutions, youth hostels run by Government, religious premises exclusively used for worship or community prayers, electric crematorium etc. Such premises should be in the use of 'Public Trust" as defined under section 2(13) of the Bombay Public Trust Act, 1950.

2.1. FIXED CHARGE

(a)	Single Phase Supply	Rs. 10 per month per installation
(b)	Three Phase Supply	Rs. 30 per month per installation

2.2. ENERGY CHARGE

(i)	First 200 units consumed per month	355 Paise per Unit
(ii)	Remaining units consumed per month	425 Paise per Unit

3. <u>Rate: Non-RGP</u>

Applicable for supply of electricity to premises which are not covered in any other LT tariff categories, upto and including 15 kW of connected load.

3.1. FIXED CHARGE

(a)	For installations having Connected Load upto and including 5 kW	Rs. 35 per kW per month
(b)	For installations having Connected Load more than 5 kW and upto 15 kW	Rs. 45 per kW per month

3.2. ENERGY CHARGE

A flat rate of	375 Paise per Unit

4. <u>Rate: LTP (AG)</u>

Applicable to motive power installations for agricultural purposes

4.1. ENERGY CHARGE

A flat rate of	318 Paise per Unit

4.2. MINIMUM CHARGE

Minimum Charge per BHP of Connected Load	Rs.10 per BHP per Month

Note:

1. The agricultural consumers shall be permitted to utilize one bulb or CFL up to 40 watts in the Pump House. Any further extension or addition of load will amount to unauthorized extension.
2. No machinery other than pump for irrigation will be permitted under this tariff.

5. Rate: LTMD-1

Applicable for supply of electricity to installations above 15kW of connected load used for residential purpose and pumping stations run by local authorities.

5.1. FIXED CHARGE

1. For Billing Demand upto and including Contract Demand

(a)	First 50 kW of Billing Demand per month	Rs. 100 per kW
(b)	Next 30 kW of Billing Demand per month	Rs. 130 per kW
(c)	Rest of Billing Demand per month	Rs. 170 per kW

2. For Billing Demand in excess of the Contract Demand

Fixed Charge per kW of Billing Demand per month	Rs. 325 Per kW

NOTE: The Billing Demand will be taken as under:

i. The Maximum Demand recorded during the month OR
ii. 85% of the Contract Demand OR
iii. 6 KW

Whichever is the highest.

5.2. ENERGY CHARGE

i)	For Billing Demand upto and including 50 KW	380 Paise per unit
ii)	For Billing Demand above 50 KW	395 Paise per unit

5.3. POWER FACTOR ADJUSTMENT CHARGE

A. Where the average Power Factor during the Billing period exceeds 90%

For each 1% improvement in the Power Factor from 90% to 95%	Rebate of 0.15 Paise per Unit
For each 1% improvement in the Power Factor above 95%	Rebate of 0.27 Paise per Unit

B. Where the average Power Factor during the Billing period is below 90%

For each 1% decrease in the Power Factor below 90%	Penalty of 3.00 Paise per Unit

6. Rate: LTMD-2

Applicable for supply of electricity to premises which are not covered in any other LT tariff categories, having above 15 kW of connected load.

6.1. FIXED CHARGE

A. For Billing Demand upto and including Contract Demand

(a)	First 50 kW of Billing Demand per month	Rs. 100 per kW
(b)	Next 30 kW of Billing Demand per month	Rs. 140 per kW
(c)	Rest of Billing Demand per month	Rs. 185 per kW

B. For Billing Demand in excess of the Contract Demand

Fixed Charge per kW of Billing Demand per month	Rs. 350 Per kW

NOTE: The Billing Demand will be taken as under:

i. The Maximum Demand recorded during the month OR
ii. 85% of the Contract Demand OR
iii. 6 KW

Whichever is the highest.

6.2. ENERGY CHARGE

i)	For Billing Demand upto and including 50 KW	395 Paise per unit
ii)	For Billing Demand above 50 KW	415 Paise per unit

6.3. POWER FACTOR ADJUSTMENT CHARGE

A. Where the average Power Factor during the Billing period exceeds 90%

For each 1% improvement in the Power Factor from 90% to 95%	Rebate of 0.15 Paise per Unit
For each 1% improvement in the Power Factor above 95%	Rebate of 0.27 Paise per Unit

B. Where the average Power Factor during the Billing period is below 90%

For each 1% decrease in the Power Factor below 90%	Penalty of 3.00 Paise per Unit

7. Rate: SL

Applicable to lighting systems for illumination of public roads.

7.1. ENERGY CHARGE

A flat rate of	355 Paise per Unit

7.2. OPTIONAL kVAh CHARGE

For all the kVAh units consumed during the month	270 Paise per Unit

8. Rate: TMP

Applicable to installations for temporary requirement of electricity supply.

8.1. FIXED CHARGE

Fixed Charge per Installation	Rs.14 per kW per Day

8.2. ENERGY CHARGE

A flat rate of	425 Paise per Unit

PART- II

SUPPLY DELIVERED AT HIGH VOLTAGE
(11000 VOLTS- THREE PHASE, 50 HERTZ)

9. Rate: HTMD-1

Applicable for supply of energy to High Tension consumers contracting for maximum demand of 100 kW and above for purposes other than pumping stations run by local authorities.

9.1. FIXED CHARGE

A. For Billing Demand upto and including Contract Demand

Fixed Charge per kW of Billing Demand per Month	Rs. 180 per kW

B. For Billing Demand in excess of the Contract Demand

Fixed Charge per kW of Billing Demand per month	Rs. 275 per kW

NOTE: The Billing Demand will be taken as under:

i. The Maximum Demand recorded during the month OR
ii. 85% of the Contract Demand OR
iii. 100 KW

Whichever is the highest.

9.2. ENERGY CHARGE

i)	First 400 units consumed per kW of Billing Demand per Month	370 Paise per unit
ii)	Remaining Units consumed per Month	360 Paise per unit

9.3. TIME OF USE (TOU) CHARGE

For the Consumption during specified hours as mentioned here below: (i) For April to October period- 1200 Hrs. to 1700 Hrs. & 1830 Hrs. to 2130 Hrs. (ii) For November to March period- 0800 Hrs. to 1200 Hrs. & 1800 Hrs. to 2200 Hrs.	
(a) For Billing Demand upto 300 kW	50 Paise per Unit
(b) For Billing Demand Above 300 kW	70 Paise per Unit

9.4. NIGHT TIME CONCESSION

The energy consumed during night hours between 22.00 hours and 06.00 hours next day recorded by the tariff meter having built in feature of time segments, in excess of one third of total energy consumed during the month, shall be eligible for rebate at the rate of 50 Paise per KWH.

9.5. POWER FACTOR ADJUSTMENT CHARGE

A. Where the average Power Factor during the Billing period exceeds 90%

For each 1% improvement in the Power Factor from 90% to 95%	Rebate of 0.15 Paise per Unit
For each 1% improvement in the Power Factor above 95%	Rebate of 0.27 Paise per Unit

B. Where the average Power Factor during the Billing period is below 90%

For each 1% decrease in the Power Factor below 90%	Penalty of 3.00 Paise per Unit

10. Rate: HTMD-2

Applicable for supply of energy to Water and Sewage Pumping Stations run by local authorities and contracting for maximum demand of 100 kW and above.

10.1. FIXED CHARGE

A. For Billing Demand upto and including Contract Demand

Fixed Charge per kW of Billing Demand per Month	Rs. 180 per kW

B. For Billing Demand in excess of the Contract Demand

Fixed Charge per kW of Billing Demand per month	Rs. 275 Per kW

NOTE: The Billing Demand will be taken as under:

i. The Maximum Demand recorded during the month OR
ii. 85% of the Contract Demand OR
iii. 100 KW

Whichever is the highest.

10.2. ENERGY CHARGE

A flat rate of	325 Paise per unit

10.3. TIME OF USE (TOU) CHARGE

For the Consumption during specified hours as mentioned here below- (i) For April to October period- 1200 Hrs. to 1700 Hrs. & 1830 Hrs. to 2130 Hrs. (ii) For November to March period- 0800 Hrs. to 1200 Hrs. & 1800 Hrs. to 2200 Hrs.	50 Paise per unit

10.4. POWER FACTOR ADJUSTMENT CHARGE

A. Where the average Power Factor during the Billing period exceeds 90%

For each 1% improvement in the Power Factor from 90% to 95%	Rebate of 0.15 Paise per Unit
For each 1% improvement in the Power Factor above 95%	Rebate of 0.27 Paise per Unit

B. Where the average Power Factor during the Billing period is below 90%

For each 1% decrease in the Power Factor below 90%	Penalty of 3.00 Paise per Unit

11. Rate: NTCT (NIGHT TIME CONCESSIONAL TARIFF)

This is night time concessional tariff for consumers for regular power supply who opt to use electricity EXCLUSIVELY during night hours between 22.00 hours and 06.00 hours next day.

11.1. FIXED CHARGE

Fixed Charges	30% of the Demand Charges under relevant Tariff Category

11.2. ENERGY CHARGE

A flat rate of	310 Paise per unit

11.3. POWER FACTOR ADJUSTMENT CHARGE

C. Where the average Power Factor during the Billing period exceeds 90%

For each 1% improvement in the Power Factor from 90% to 95%	Rebate of 0.15 Paise per Unit
For each 1% improvement in the Power Factor above 95%	Rebate of 0.27 Paise per Unit

D. Where the average Power Factor during the Billing period is below 90%

For each 1% decrease in the Power Factor below 90%	Penalty of 3.00 Paise per Unit

NOTE:

1. *10% of total units consumed and 15% of the contract demand can be availed beyond the prescribed hours.*
2. *This tariff shall be applicable if the consumer so opts to be charged in place of HTMD tariff by using electricity exclusively during night hours as above.*
3. *The option can be exercised to switch over from HTMD tariff to this category and vice versa twice in a calendar year by giving not less than one month's notice in writing.*
4. *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 HTMD.*

TARIFF SCHEDULE EFFECTIVE FROM 1ST SEPTEMBER, 2011

(B) Tariff Schedule for Surat License Area of Torrent Power Limited

TARIFF FOR SUPPLY OF ELECTRICITY AT LOW TENSION, HIGH TENSION AND EXTRA HIGH TENSION

GENERAL CONDITIONS

1. This tariff schedule is applicable to all the consumers of TPL in Surat Area.
2. All these tariffs for power supply are applicable to only one point of supply.
3. 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.
4. The energy supplied under these tariffs can be utilized only within the compact area of the premises not intervened by any area/road belonging to any person or authority other than the consumer.
5. Except in cases where the supply is used for purposes for which TPL has permitted lower tariff, the power supplied to any consumer shall be utilized only for the purpose for which supply is taken and as provided for in the tariff.
6. The charges specified in the tariff are on monthly basis; TPL may decide the period of billing and adjust the rates accordingly.
7. The various provisions of the GERC (licensee's power to recover expenditure incurred in providing supply and other miscellaneous charges) Regulations will continue to apply.
8. Conversion of Ratings of electrical appliances and equipments from kilowatt to B.H.P. or vice versa will be done, when necessary, at the rate of 0.746 kilowatt equal to 1 B.H.P.
9. The billing of fixed charges based on contracted load or maximum demand shall be done in multiples of 0.5 (one half) Horse Power, kilo -Watt, kilo- Volt -Ampere (HP, kW, kVA), as the case may be. The fraction of less than 0.5 shall be rounded to next 0.5. The billing of energy charges will be done on complete 1.0 (one) kilo-watt-hour (kWh) or kilo-volt-ampere-hour (kVAh) or kilo-volt-ampere-reactive hour (kVArh), as the case may be.
10. Contract Demand shall mean the maximum kW or kVA for the supply of which TPL undertakes to provide facilities to the consumer from time to time.
11. Maximum Demand in a month means the highest value of average kVA or kW as the case may be, delivered at the point of supply of the consumer during any consecutive 15/30 minutes in the said month.
12. TPL may install KWh and kVArh meter for ascertaining power factor, reactive units and KWh units.
13. 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.

14. The Fixed charges, minimum charges, demand charges, meter rent and the slabs of consumption of energy for energy charges mentioned shall not be subject to any adjustment on account of existence of any broken period within billing period arising from consumer supply being connected or disconnected any time within the duration of billing period for any reason.
15. ToU charges wherever applicable unless otherwise notified shall be levied for the energy consumption during the period between 07.00 hours and 11.00 hours; and between 18.00 hours and 22.00 hours, termed as PEAK HOURS. Night hours concession wherever applicable will be given for the energy consumption during the period between 22.00 hours and 06.00 hours next day, termed as 'OFF PEAK HOURS'.
16. Fuel Price and Power Purchase Adjustment (FPPPA) charges shall be applicable in accordance with the formula approved by the Gujarat Electricity Regulatory Commission from time to time.
17. Delayed Payment Charges
    a. No delayed payment charges will be levied if the bill is paid on or before due date indicated in the bill.
    b. Delayed payment charges, if the bill is paid after due date, will be levied at the rate of 15% per annum (computed on daily basis) on the outstanding bill from the due date till the date of payment.
18. Statutory Levies:
    a. These tariffs are exclusive of Electricity Duty, Tax on Sales of Electricity, Taxes and other Charges levied/may be levied or such other taxes as may be levied by the Government or other Competent Authorities on bulk/retail supplies from time to time.
19. The payment of power factor penalty does not exempt the consumer from taking steps to improve the power factor to the levels specified in the Regulations notified under the Electricity Act-2003 and TPL shall be entitled to take any other action deemed necessary and authorized under the Act.

PART-I

RATE SCHEDULE - LOW /MEDIUM TENSION
230/400 Volts

1. Rate: RGP

This tariff is applicable for supply of electricity to residential premises.

Single-phase supply- Aggregate load upto 6kW

Three-phase supply- Aggregate load above 6kW

1.1 FIXED CHARGES:

For Other than BPL consumers

A	Single Phase Supply	Rs. 10 per installation per month
B	Three Phase Supply	Rs. 30 per installation per month

For BPL household consumers*

A	Fixed Charges	Rs. 5.00 per month per installation

PLUS

1.2 ENERGY CHARGES: -

For Other than BPL consumers

i	First 50 units during the month	300 Paise/unit
ii	Next 50 units during the month	320 Paise/unit
iii	Next 150 units during the month	370 Paise/unit
iv	Above 250 units during the month	435 Paise/unit

For BPL household consumers*

i	First 30 units consumed per month	150 Paise per Unit
ii	For remaining units consumed per month	Rate as per Residential

** 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 zonal office of the Distribution Licensee. The concessional tariff is only for 30 units per month.*

2. Rate: GLP

This tariff will be applicable for use of energy for lights, fans, heating, general load and motive power in premises: -

i. Crematoriums and Government and Municipal Hospitals.
ii. Charitable Institutions like hospital, dispensary, educational and Research Institute and Hostel attached to such Institution, religious premises exclusively used for worship or community prayers, registered with Charity Commissioner and specifically exempted from levy of general tax under section 2 (13) of Bombay Trust Act, 1950 read with section 9 of The Income Tax Act, 1961.
iii. Public streets Lights, gardens and conveniences.
iv. Water works and sewerage pumping services operated by Municipal Corporations.

Note: Halls or gardens or any portion of the above premises let out for consideration or used for commercial activities at any time shall be charged at Non-RGP tariff.

Single-phase supply- Aggregate load upto 6kW

Three-phase supply- Aggregate load above 6kW

2.1 FIXED CHARGES:

A	Fixed Charges	Rs.20.00 per installation per month

PLUS

2.2 ENERGY CHARGES:

i	Energy Charges	350 Paise/unit

3. Rate: Non-RGP

This tariff is applicable for supply of electricity to premises which are not covered in any other LT tariff categories, upto and including 15 kW of connected load.

3.1 FIXED CHARGES:

A	First 10 kW	Rs. 35/- Per kW per month
B	Next 5 kW	Rs. 50/- Per kW per month

3.2 ENERGY CHARGES:

i	For installations having connected load upto 10 kW	370 Paise/unit
ii	For installations having connected load above 10kW and upto 15 kW	390 Paise/unit

4. Rate: LTMD

This tariff is applicable for supply of electricity to premises which are not covered in any other LT tariff categories, having connected load above 15kW.

4.1 DEMAND CHARGES:

A	Up to 20 KVA of billing demand	Rs. 45/- per KVA/month
B	Above 20 KVA & up to 50 KVA billing demand	Rs. 75/- per KVA/month
C	Above 50 KVA & up to 60 KVA billing demand	Rs. 90/- per KVA/month
D	Above 60 KVA of billing demand	Rs.105/- per KVA/month
E	In excess of contract demand	Rs. 180/- per KVA/month

Note: BILLING DEMAND: - Billing demand during the month shall be the highest of the following:

i) Maximum demand recorded during the month.

ii) 85 % of the contract demand.

iii) 6 KVA

PLUS

4.2 ENERGY CHARGES:

i	Energy charges	410 Paise/unit

PLUS

4.3 REACTIVE ENERGY CHARGES (KVARH units):

For installation having contracted load of 40 kVA and above

(a)	For all the reactive units drawn during the month	10 Paise/kVArh

5. Rate: TMP

Applicable to installations for temporary requirement of electricity supply.

16.1. FIXED CHARGE

Fixed Charge per Installation	Rs.14 per kW per Day

16.2. ENERGY CHARGE

A flat rate of	425 Paise per Unit

6. Rate: AGP

This tariff is applicable to motive power services used for irrigation purpose.

The rates for following group are as under

6.1 FIXED CHARGES:

A	Fixed Charges	Rs. 10.00 per BHP per month

PLUS

6.2 ENERGY CHARGES:

i	Energy Charges	50 Paise/unit

Note:

1. The agricultural consumers shall be permitted to utilize one bulb or CFL up to 40 watts in the Pump House without recovering any charges. Any further extension or addition of load will amount to unauthorized extension.
2. No machinery other than pump for irrigation will be permitted under this tariff.

PART-II

RATE SCHEDULE FOR SERVICE AT HIGH TENSION

7 Rate HTMD-1

This tariff shall be applicable for supply of energy to consumers at 3.3 KV and above for contracting the demand of 100 KVA and above for purposes other than pumping stations run by Local Authorities.

7.1 DEMAND CHARGES:

7.1.1 For billing demand up to contract demand

A	First 500 KVA of billing demand	Rs 100/-per KVA
B	Above 500 KVA	Rs 180/- per KVA

7.1.2 For billing demand in excess over contract demand

For billing demand in excess over contract demand	Rs.360/- per KVA

Note: BILLING DEMAND: Billing demand shall be the highest of the following: -

a. Actual maximum demand established during the month
b. 85 per cent of the Contract Demand, and
c. 100 KVA

PLUS

7.2 ENERGY CHARGES:

I	First 400 units per kVA billing demand per month	405 Paise/unit
Ii	Remaining units consumed per month	395 Paise/unit

PLUS

7.3 TIME OF USE CHARGE:

For energy consumption during the two peak periods, viz, 0700 Hrs to 1100 Hrs and 1800 Hrs to 2200 Hrs.	
(a) For Billing Demand upto 500kVA	35 Paise per Unit
(b) For Billing Demand above 500kVA	70 Paise per Unit

PLUS

7.4 **POWER FACTOR:**

7.4.1 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 “Energy Charges “ for every 1% drop or part thereof in the average power factor during the month below 90% up to 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 “Energy Charges “, will be charged.

7.4.2 Power Factor Adjustment Rebate: -

If the average 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 1% in excess of 95% power factor on the total amount of electricity bill for that month under the head “Energy Charges “, for every 1% rise or part thereof in the average power factor during the month above 95%.

7.5 **NIGHT TIME CONCESSION:**

The energy consumed during night hours between 22.00 hours and 06.00 hours next day (recorded by the tariff meter operated through time switch or built in feature of time segments, if incorporated) as is in excess of one third of total energy consumed during the month, shall be eligible for concession of 50 Paise per KWH. The meter and time switch shall be procured and installed by consumer at his cost, if required by TPL-Surat. In such case, TPL-Surat will seal the metering equipment.

7.6 REBATE FOR SUPPLY AT EHV:

Sr. No.	**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 %

8 Rate: HTMD-2

This tariff shall be applicable for supply of energy at 3.3KV and above and contracting for demand of 100 KVA and above for water works and pumping stations run by Local Authorities.

8.1 DEMAND CHARGES:

8.1.1 For billing demand up to contract demand

A	First 500 KVA of billing demand	Rs. 80/- per KVA per month
B	Above 500 KVA of billing demand	Rs 165/- per KVA per month

8.1.2 For billing demand in excess of contract demand

a)	For Billing demand in excess over Contract demand	b)	Rs. 335/- per KVA per month

Note: BILLING DEMAND: Billing demand shall be the highest of the following: -

a. Actual maximum demand established during the month
b. 85 per cent of the Contract Demand, and
c. 100 KVA

PLUS

8.2 ENERGY CHARGES:

i	First 400 units per kVA billing demand per month	400 Paise/unit
ii	Remaining units consumed per month	395 Paise/unit

PLUS

8.3 TIME OF USE CHARGES:

For energy consumption during the two peak periods, viz, 0700 Hrs to 1100 Hrs and 1800 Hrs to 2200 Hrs.	
(a) For Billing Demand upto 500kVA	35 Paise per Unit
(b) For Billing Demand above 500kVA	70 Paise per Unit

PLUS

8.4 POWER FACTOR:

Power Factor Adjustment Charges:

1. 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 "Energy Charges " for every 1% drop or part thereof in the average power factor during the month below 90% up to 85 %.
2. 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 "Energy Charges ", will be charged.

Power Factor Adjustment Rebate:

If the average 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 1% in excess of 95% power factor on the total amount of electricity bill for that month under the head "Energy Charges ", for every 1% rise or part thereof in the average power factor during the month above 95%.

8.5 NIGHT TIME CONCESSION:

The energy consumed during night hours between 22.00 hours and 06.00 hours next day (recorded by the tariff meter operated through time switch or built in feature of time segments, if incorporated) as is in excess of one third of total energy consumed during the month, shall be eligible for concession of 50 Paise per KWH. The meter and time switch shall be procured and installed by consumer at his cost, if required by TPL-Surat. In such case, TPL-Surat will seal the metering equipment.

8.6 REBATE FOR SUPPLY AT EHV:

Sr. No.	**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 %

9 Rate- NTCT (NIGHT TIME CONCESSIONAL TARIFF)

This is night time concessional tariff for consumers for regular power supply who opt to use electricity **EXCLUSIVELY** during night hours between 22.00 hours and 06.00 hours next day. The consumer shall provide the switching arrangement as shall be acceptable to TPL-Surat to regulate supply hours.

9.1 **FIXED CHARGE**

Fixed Charges	30% of the Demand Charges under relevant Tariff Category

9.2 ENERGY CHARGE

A flat rate of	310 Paise per unit

9.3 POWER FACTOR ADJUSTMENT CHARGE

E. Where the average Power Factor during the Billing period exceeds 90%

For each 1% improvement in the Power Factor from 90% to 95%	Rebate of 0.15 Paise per Unit
For each 1% improvement in the Power Factor above 95%	Rebate of 0.27 Paise per Unit

F. Where the average Power Factor during the Billing period is below 90%

For each 1% decrease in the Power Factor below 90%	Penalty of 3.00 Paise per Unit

NOTE:

1. *10% of total units consumed and 15% of the contract demand can be availed beyond the prescribed hours.*
2. *This tariff shall be applicable if the consumer so opts to be charged in place of HTMD tariff by using electricity exclusively during night hours as above.*
3. *The option can be exercised to switch over from HTMD tariff to this category and vice versa twice in a calendar year by giving not less than one month's notice in writing.*
4. *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 HTMD.*