GUJARAT ELECTRICITY REGULATORY COMMISSION

Tariff Order

Truing up for FY 2011-12 and

Determination of Tariff for FY 2013-14

For

Torrent Power Limited - Generation Ahmedabad

Case No. 1269 of 2012

16th April 2013

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(GERC)

AHMEDABAD

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ABBREVIATIONS

APP	Ahmedabad Power Plant
APR	Annual Performance Review
APTEL	Appellate Tribunal for Electricity
ARR	Aggregate Revenue Requirement
A & G	Administrative and General
CAPEX	Capital Expenditure
CCPP	Combined Cycle Power Plant
CERC	Central Electricity Regulatory Commission
CHP	Coal Handling Plant
CIL	Coal India Limited
CoD	Commercial Operation Date
CPP	Captive Power Plant
CV	Calorific Value
ESP	Electro Static Precipitator
FSA	Fuel Supply Agreement
FY	Financial Year
GCV	Gross Calorific Value
GERC	Gujarat Electricity Regulatory Commission
GFA	Gross Fixed Asset
GT	Gas Turbine
GTG	Gas Turbine Generator
GUVNL	Gujarat Urja Vikas Nigam Ltd.
HDFC	Housing Development Finance Corporation
IDCT	Induced Draft Cooling Tower
IDFC	Infrastructure Development Finance Corporation
Kcal	Kilo Calorie
Kg	Kilo Gram
Km	Kilometre
kV	Kilo Volt
kWh	Kilo Watt Hour
LIC	Life Insurance Corporation
MAT	Minimum Alternate Tax
MMBTU	Million British Thermal Unit
MOD	Merit Order Despatch
MT	Metric Tonne
MU	Million Units
MW	Mega Watt
MYT	Multi-Year Tariff
NCV	Net Calorific Value
NDCT	Natural Draft Cooling Tower

NTPC	National Thermal Power Corporation
O&M	Operations and Maintenance
OEM	Original Equipment Manufacturer
PAF	Plant Availability Factor
PBT	Profit Before Tax
PGCIL	Power Grid Corporation of India Limited
PLF	Plant Load Factor
PPA	Power Purchase Agreement
R&M	Repair and Maintenance
REC	Renewable Energy Certificate
RFO	Residual Fuel Oil
RoE	Return on Equity
RPO	Renewable Purchase Obligation
SBI	State Bank of India
SCADA	Supervisory Control And Data Acquisition
SCM	Standard Cubic Meter
SECL	South Eastern Coal Fields Limited
SFC	Secondary Fuel Consumption
SHR	Station Heat Rate
STG	Steam Turbine Generator
TPL	Torrent Power Limited
TPL-G	TPL Generation
TPL-D	TPL Distribution
TPL-G(APP)	TPL-G (Ahmedabad Power Plants)
UG cable	Underground Cable
UI	Unscheduled Interchange
Wt. Av.	Weighted Average

Before the Gujarat Electricity Regulatory Commission at Ahmedabad

Case No. 1269 of 2012

Date of the Order: 16/04/2013

CORAM

Dr. P. K. Mishra, Chairman

Shri Pravinbhai Patel, Member

Dr. M. K. Iyer, Member

ORDER

1. Background and Brief History

1.1 Background

Torrent Power Limited (hereinafter referred to as TPL or petitioner) has filed petition under section 62 of the Electricity Act, 2003 read with Gujarat Electricity Regulatory Commission (Multi-Year Tariff) Regulations, 2011 for the True up of FY 2011-12, and for determination of tariff for its generation business at Ahmedabad for the FY 2013-14 on 31st December, 2012.

The Commission admitted the petition on 1st January, 2013.

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. The present petition has been filed by TPL-Generation (Ahmedabad) for its generation business in Ahmedabad.

TPL had assumed the business consequent upon the amalgamation of Torrent Power Ahmedabad 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 purview of the Commission.

TPL has existing generation facilities with a total installed capacity of 500 MW at Ahmedabad and has commissioned a Combined Cycle Power Plant (CCPP) of 1147.5 MW (SUGEN) capacities near Surat in FY 2009-10. The generation facilities at Ahmedabad consist of 400 MW coal based Thermal Power Plant at Sabarmati and a 100 MW gas based CCPP at Vatva.

1.3 Commission's Order for the second control period

TPL filed its petition under the Multi-Year Tariff Framework for the control period from FY 2011-12 to FY 2015-16 on 24th February, 2011 in accordance with Gujarat Electricity Regulatory Commission (Multi-Year Tariff Framework) Regulations, 2007 notified by the Commission.

The Commission issued the new MYT Regulations notified as GERC (Multi-Year Tariff) Regulations, 2011 on March 22, 2011.

Regulation 1.4 (a) of GERC (Multi-Year Tariff) 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."

The Commission, in exercise of the powers vested in it under sections 61, 62 and 64 of the Electricity Act, 2003 and all other powers enabling it in this behalf, and after taking into consideration the submissions made by TPL, the objections by various stakeholders, response of TPL, issues raised during the public hearing and all other relevant material, issued the Multi-Year Tariff order on 6th September, 2011 for the control period from FY 2011-12 to FY 2015-16 based on the MYT Regulations, 2011. The Commission issued orders for Truing-up for FY 2010-11 and Tariff for FY 2012-13 on 2nd June, 2012.

1.4 Admission of the current petition and public hearing process

TPL submitted the current petition for 'Truing up' of FY 2011-12 and determination of tariff for FY 2013-14 on 31st December, 2012. The Commission admitted the petition (Case No. 1269 / 2012) on1st January, 2013.

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 08.01.2013 inviting objections / suggestions from its stakeholders on the petition filed by it.

Sl. No.	Name of the Newspaper	Language	Date of publication
1	The Indian Express (Ahmedabad)	English	08.01.2013
2	The Times of India (Surat)	English	08.01.2013
3	Sandesh (Ahmedabad)	Gujarati	08.01.2013
4	Gujarat Samachar (Ahmedabad)	Gujarati	08.01.2013
5	Divya Bhaskar (Ahmedabad)	Gujarati	08.01.2013
6	Sambhav Metro (Ahmedabad)	Gujarati	08.01.2013
7	Jai Hind (Ahmedabad)	Gujarati	08.01.2013
8	Loksatta / Jansatta (Ahmedabad)	Gujarati	08.01.2013
9	Gujarat Mitra (Surat)	Gujarati	08.01.2013

The petitioner also placed the public notice and the petition on its website (www.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 07.02.2013.

The Commission received objections / suggestions from 5 consumers / consumer organisations. The Commission examined the objections / suggestions received and fixed the date of public hearing for TPL to be held at Ahmedabad on 01.03.2013 and Surat on 13.03.2013. 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 at Ahmedabad and Surat, as scheduled.

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

A short note on the main issues raised by the objectors in their written submissions and 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 Contents of this order

The order is divided into six chapters as under:

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's 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 2011-12.
5. The **fifth** chapter deals with the determination of tariff for FY 2013-14.
6. The **sixth** chapter deals with compliance of directives and issue of fresh directives.

1.6 Approach of this order

The Multi-Year Tariff Regulations, 2011 provide for truing up of the previous year, and determination of tariff for the ensuing year. The Commission had approved the ARR for the Five-years of the second control period from FY 2011-12 to FY 2015-16 in the MYT order dated 6th September, 2011. The Commission had approved the 'Truing up' of the FY 2010-11 in the tariff order dated 2nd June 2012.

TPL has approached the Commission with the present petition for 'Truing up' for the FY 2011-12 and determination of Tariff for FY 2013-14 under GERC MYT Regulations, 2011.

The Commission has undertaken truing up for the FY 2011-12 including computation of gains and losses for the FY 2011-12 based on the submissions of the petitioner and the segregated audited annual accounts made available by the petitioner.

While truing up of FY 2011-12, the Commission has been primarily guided by the following principles:

1. Controllable parameters have been considered at the level as approved 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 for the FY 2011-12 has been considered based on the GERC MYT Regulations, 2011. For the determination of the ARR for FY 2013-14, the Commission has considered the ARR for FY 2013-14 as approved in the MYT order dated 6th September, 2011.

Annexure 1.1

List of Organizations and Individuals who filed objections / suggestions

Sl. No	Name
1	Consumer Education and Research Society
2	Utility Users Welfare Association
3	Gandhinagar Shaher Vasahat Mahamandal
4	Shri Amarsinh Chavda
5	Gujarat Chamber of Commerce & Industry

Annexure 1.2

List of participants in public hearing

Sl. No	Name
1	Consumer Education and Research Society
2	Utility Users Welfare Association
3	Gandhinagar Shaher Vasahat Mahamandal
4	Shri Amarsinh Chavda
5	Gujarat Chamber of Commerce & Industry

2. Summary of TPL's Petition

2.1 Actuals for FY 2011-12 submitted by TPL

Torrent Power Limited (TPL) submitted the current petition seeking approval of True up for ARR of FY 2011-12. The details of expenses under various heads of ARR are given in Table 2.1 below:

Table 2.1: Actuals claimed by TPL for FY 2011-12

(Rs. crore)

Sl. No.	ARR	MYT Order	Actuals FY 2011-12
1	Fuel Cost	873.83	935.83
2	**O & M Expense**	**132.26**	**133.16**
3	Employee Cost	56.38	55.65
4	R & M Cost	55.53	56.86
5	A & G Cost	20.35	20.66
6	Water Charges	8.59	9.31
7	Depreciation	34.23	31.05
8	Interest Cost on Long-Term Capital Loans	13.79	7.88
9	Interest on Working Capital	14.20	19.47
10	Return on Equity	49.40	45.30
11	Income Tax	26.45	22.41
12	Incentive	-	29.89
13	Less: Non-Tariff Income	14.18	23.78
14	**Annual Revenue Requirement**	**1138.59**	**1210.54**

2.2 Revised Estimate for FY 2013-14

TPL in its petition has also furnished the ARR approved in MYT Order and revised estimates of FY 2013-14 which is given in the table below:

Table 2.2: Revised ARR of TPL-G (APP) for FY 2013-14

(Rs. crore)

Sl. No.	ARR	MYT Order	Revised Estimate for FY 2013-14
1	Variable Cost	827.60	701.45
2	O & M Expense	147.82	147.83
3	Water Charges	8.59	8.59
4	Depreciation	54.48	48.84
5	Interest on Loan	33.83	33.59
6	Interest on Working Capital	14.33	16.16
7	Return on Equity	66.08	61.88
8	Income Tax	26.45	20.58
9	Less: Non-Tariff Income	14.18	14.18
10	**Total**	**1165.00**	**1024.74**

2.3 TPL's request to the Commission:

a) To admit the petition for truing up for FY 2011-12.

b) To approve the ARR of FY 2011-12 as per the final truing up.

c) To approve the sharing of gains / (losses) proposed by TPL for FY 2011-12.

d) To consider the revised estimates of FY 2013-14.

e) To allow the Petitioner to make additions/ alterations/ changes/ modifications to the application at a future date.

f) 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.

g) To condone the delay in filing the present petition.

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

i) To condone any inadvertent omissions/errors/rounding off difference / short comings.

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

3.1 Public response to the petition

In response to the public notice, inviting objections/suggestions of the stakeholders on the petition filed by TPL for "Truing up" of FY 2011-12 and determination of tariff for FY 2013-14, a number of consumers / consumer organizations 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. The Commission has, therefore, addressed 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.

3.2 Low Plant Load Factor

Objection:

The objector has stated that the Petitioner has stated that due to non-availability of gas for Vatva plant, it has to purchase power from outside at higher rates which shall put additional burden on consumers via FPPPA.

The objector is concerned about the poor performance of "C" Station and Vatva Plant where PLF is 76.39% and 52.08% respectively in 2011-12.

The Commission is requested to direct the Petitioner to arrange for alternative source for gas supply to avoid burden on consumers.

TPL's Response:

The issue of non-availability of gas is beyond the control of the Petitioner as the gas allocation is controlled by the Central Government. The Petitioner has the necessary arrangements with the Gas Supplier for Domestic Gas.

Presently R-LNG is available as an alternative fuel. However, the present rate of RLNG is higher. Accordingly, it will take appropriate decision depending upon market conditions of gas and power.

Regarding the lower PLF of 'C' station, PLF is an uncontrollable factor and varies based on the variation in the consumer demand and system loading conditions. Further, the Petitioner operates its plants in conformity to the principles of Merit Order Despatch (MoD).

Commission's View:

The Commission has noted the view of the objector and the response of TPL.

3.3 Inferior Quality of Coal

Objection:

The objector has stated that the Petitioner has requested the Commission to approve increase in fuel cost which is due to Inferior quality of coal. This is objectionable. The Petitioner should not have paid higher charges for receipt of inferior quality of coal and transfer the burden on consumers. The Petitioner should make efforts to recover this loss from Coal India Ltd. or any other coal supplier.

TPL's response:

TPL does not have any control on the calorific value of the coal because it has to take the coal as supplied by M/s SECL, the subsidiary of CIL. The fuel supply agreement (FSA) signed with CIL is the standard agreement applicable across the sector. However, the Petitioner makes all efforts to avail better quality of coal. The matter has been brought to the notice of the Commission over a period of time.

Commission's View:

TPL should make efforts to ensure the receipt of quality coal as per the billing.

3.4 Low GCV for Imported Coal

Objection:

The objector has stated that it is shocking to note that Petitioner has reported receipt of low GCV for imported coal also.

TPL's response:

The payment for the imported coal is based on the quality of coal received. Thus, the payment is released only after the quality check. However, it may kindly be noted that the Petitioner adheres to the environment norms while ensuring reasonable cost.

Accordingly, it strikes a balance between the quality of coal and the corresponding cost.

Commission's View:

Response of TPL is noted.

3.5 Higher Transit Loss

Objection:

The objector has stated that the petitioner has been allowed higher Transit Loss vis-à-vis normative transit loss. The Transit Loss should be reduced, as it is a controllable item.

TPL's response:

All efforts are being made to contain the transit loss and in this endeavour has reduced it from a high of 8% to the present 2.43% in FY 2011-12. It has been already brought to the kind notice of the Commission that the Petitioner has been outperforming in most of the operational efficiency parameters being one of the efficient utilities. The reduction in the coal transit loss to current levels has become possible only due to the consistent efforts made by the Petitioner and any further reduction is beyond its control.

However, the Commission has specified the trajectory to attain the normative transit loss of 0.80% in the GERC (MYT) Regulations, 2011 as per the MYT philosophy. Accordingly, the Commission has also issued the MYT order in accordance with the MYT Regulations. In the present petition, the Petitioner has followed the MYT Order read with the MYT Regulations.

Commission's View:

The Commission has allowed a transit loss as per Regulations.

3.6 High Profits for the company

Objection:

The objector has stated that the Petitioner is a profit making company and profits have increased beyond the reasonable limits and allegedly due to fabricated expenditure. The petitioner has multiple activities in the form of franchisee outside the state of Gujarat and other non-utility, non-regulated activities. In the petition, there is no independent corroboration of the delineations of expenses and revenue.

TPL's response:

The Annual Accounts of the Company pertain to the Company's all businesses including regulated and non-regulated businesses, while the petition is only related to the regulated business of the Petitioner, which is within the jurisdiction of the Commission. Thus, it is not correct to compare financials as per annual accounts of the Company and the petition filed by the Company. Further, it would like to clarify that the profit shown in the Statement of Accounts of the Company can in no way be related to the present Petition, since the existing petition and the Annual Reports are different under different statutes. Annual Report is prepared as per provisions of the Companies Act, 1956 and in accordance with Accounting Standards and are duly audited by statutory auditors of the Company, whilst the Tariff Petition is made in accordance with the various Regulations specified by the Commission from time to time.

Commission's View:

TPL's response is noted.

3.7 Sharing of gains

Objection:

The objector has stated that the TPL has been operating very efficiently and even then the gains or excess returns required to be passed through the tariff to the consumers has not been done.

TPL's response:

The sharing of Gains & Losses is being proposed in the present petition in accordance with the provisions of Regulation 24 and 25 of the GERC (MYT) Regulations, 2011. Therefore, the contention of retaining excess returns by the Petitioner is incorrect.

Commission's View:

TPL's response is noted.

3.8 Trajectory for PLF, Transit loss, SHR etc.

Objection:

The objector has stated that the Commission has not specified the trajectory for controllable elements like PLF, transit loss, SHR, Auxiliary Consumption etc.

TPL's response:

The Commission has specified the trajectories for various performance parameters in the GERC (MYT) Regulations, 2011.

Commission's View:

The Commission agrees with the response of TPL.

3.9 Petition not filed in time

Objection:

The objector has requested the Commission not to allow the petition because the Petitioner has not filed the petition within the timeframe.

TPL's response:

The finalization of data and analysis necessitated time to firm up the figures. However, the Petitioner has made its best efforts to expedite the submission of petition.

Commission's View:

Request of the petitioner for extension of time limit of 30 days, for submission of tariff petition, was granted by the Commission vide letter dated 4th December, 2012.

3.10 Equity Determination and RoE:

Objection:

The objector has stated that the equity determination and the corresponding RoE calculation are not correct.

TPL's response:

The equity determination and the corresponding RoE computation is as per GERC (MYT) Regulations, 2011. The Petitioner further submits that the increase in equity is considered as 30% of capitalization of the asset and not the capital expenditure incurred during the year.

Commission's View:

Response of TPL is noted.

3.11 Not to allow Incentive for PAF, as claimed

Objection:

The objector has requested the Commission not to allow incentive as TPL-G has failed to achieve the approved trajectory of PAF. It is also requested to reduce the recovery of fixed cost to the tune of difference of PAF approved and actual PAF.

TPL's response:

It has claimed incentive only for PAF of above 85% in accordance with the provisions of GERC (MYT) Regulations, 2011.

Commission's View:

GERC (MYT) Regulations, 2011 provides for recovery of fixed charge on the basis of actual PAF vis-à-vis normative PAF.

3.12 Non-achievement of approved PLF

Objection:

The objector has requested the Commission not to allow recovery of full cost as the PLF for TPL-G (APP) is 77% against the approved trajectory of 82.77%.

TPL's response:

Availability of plant is a controllable parameter and accordingly, the GERC (MYT) Regulation, 2011 has linked the recovery of annual fixed cost with the PAF. However, the PLF is uncontrollable parameter as it mainly depends upon the consumer demand.

Commission's View:

The fixed cost recovery is not related to achievement of PLF as per Regulations.

3.13 High Fuel cost for TPL-G (APP)

Objection:

The objector has stated that the unit Fuel Cost of TPL-G (APP) is higher than SUGEN. Also the Energy charge rate of TPL-G is higher than the power stations of GSECL.

TPL's response:

In terms of performance parameters like PAF, SHR, Auxiliary and Secondary Fuel Consumption, the Petitioner's generating stations are amongst the best in the category of similar size and vintage of the generating station. The variable cost also depends upon the cost & quantity of usage of indigenous & imported coal.

Commission's View:

The fuel costs are approved according to approved performance parameters, cost of coal and GCV of coal as provided in the Regulations.

3.14 Employee cost:

Objection:

The objector has stated that the employee cost is higher and the Petitioner employs skilled workers in non-regulated areas like Bhiwandi, Agra and Kanpur and their expenditure is booked in regulated area.

TPL's response:

Separate accounts are being maintained for its regulated business and the same has been made available, duly certified by the Statutory Auditors' of the Company, along with the petition.

Commission's View:

TPL's response is noted.

3.15 Delay in uprating program of E and F stations

Objection:

The objector has stated that the delay in uprating program of E and F station is a matter of concern. The Capital investment incurred by TPL-G (APP), in the last three years is more than the cost of new plant and machinery.

TPL's response:

The Capex for E and F station has been deferred and delayed due to delay in response from EPC Contractors and longer implementation cycle. Thus, the delay in execution of E and F Station up rating is beyond its control. Regarding the benefits of incurring the capital investments, the Petitioner submits that it has furnished the details for capital expenditure along with reasoning.

Commission's View:

TPL is directed to expedite the uprating work.

3.16 Income Tax

The objector has stated that the actual income tax paid, may be apportioned by the Commission.

TPL's response:

Objection:

It has computed the income tax amount at the MAT rate applicable for the Company as a whole on the audited PBT. The same is in line with the Objector's suggestion.

Commission's View:

The response of TPL is noted.

4. Truing up of FY 2011-12

This chapter of the order deals with the truing up of FY 2011-12 for TPL-Generation, Ahmedabad.

The Commission has studied and analysed each component of the ARR for the FY 2011-12 in the following paragraphs.

4.1 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, 2011 along with their capacities and dates of commissioning are given in the table below:

Table 4.1: Capacity, COD and age of TPL-G (APP) Stations as on 1st April, 2011

Name of the Station	Capacity in MW	Year of COD	Age / Years
Sabarmati Thermal Power Plant (Coal based)			
C Station	2 X 30 MW	1961/1997* *(year of turbine retrofitting)	50
D Station	1 X 120 MW	1978/2004* *(Up-rating capacity)	33
E Station	1 X 110 MW	1984	27
F Station	1 X 110 MW	1988	23
Vatva Combined Cycle Gas based Power Plant			
Gas turbine	2 X 32.5 MW	1990 & 1991	21
Steam Turbine	1 X 35 MW	1991	20

4.2 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 based 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, Specific Oil Consumption and coal transit loss for FY 2011-12 for the individual stations. The Commission has taken up the truing up of the annual performance parameters for FY 2011-12, which are discussed in the following sections.

4.2.1 Plant Availability Factor (PAF)

Petitioner's submission

The TPL has submitted the actuals of plant availability factor for different stations for FY 2011-12. The PAF (i) approved in the MYT Order dated 6th September, 2011 and (ii) 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 2011-12

(%)

Sl. No	Station	Approved for FY 2011-12 in MYT order	Actuals for FY 2011-12
A	**Sabarmati**		
1	C Station	98.10	93.11
2	D Station	91.80	94.22
3	E Station	97.50	94.27
4	F Station	97.50	96.60
B	**Vatva Gas Station**	98.10	98.01

TPL has submitted that the reduction in the annual shutdown days of D Station has resulted in higher PAF compared to approved PAF; whereas in E Station, the extended annual shutdown for chemical cleaning of the boiler resulted in lower PAF. Additionally, the forced outages were not considered in the MYT projections. The forced outages in the units contributed in reduction of PAF compared to approved PAF. The actual availability of units has been computed considering the annual planned shutdown and the forced outages of the units during FY 2011-12.

Commission's Analysis:

It is found in the analysis that the PAF level is lower than the approved levels of the MYT Order except D station. However, it may be mentioned that according to clause 54.1 of GERC (MYT) Regulations, 2011 Normative Annual Plant Availability Factor for full recovery of annual fixed charges shall be 85% for all thermal generating stations. As the actual PAF for all the stations of TPL is more than 85%, they are eligible for recovery of fixed charges as per MYT Regulations, 2011.

The Commission considers the Plant Availability Factor for various stations as in the MYT order dated 6th September, 2011 for FY 2011-12, for truing up purpose as it is a controllable parameter.

Hence, for the purpose of truing up for the FY 2011-12, the PAF level is considered as given in the table below:

Table 4.3: Plant Availability Factor of TPL-G (APP) considered for truing up for FY 2011-12

(%)

Sl. No	Stations	Approved for FY 2011-12 in MYT order	Actuals for FY 2011-12	Considered for Truing-up for FY 2011-12
A	**Sabarmati**			
1	C Station	98.10	93.11	98.10
2	D Station	91.80	94.22	91.80
3	E Station	97.50	94.27	97.50
4	F Station	97.50	96.60	97.50
B	**Vatva Gas Station**	98.10	98.01	98.10

4.2.2 Plant Load Factor (PLF)

Petitioner's submission

The TPL has submitted the actuals of plant load factor (PLF) of different stations for FY 2011-12.

The PLF (i) approved in the MYT Order dated 6th September, 2011 and (ii) 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 2011-12

(%)

Sl. No	Station	Approved for FY 2011-12 in MYT order	Actuals for FY 2011-12
A	**Sabarmati**		
1	C Station	78.54	76.39
2	D Station	83.59	85.13
3	E Station	80.74	84.75
4	F Station	82.97	87.01
B	**Vatva Gas Station**	88.56	52.08

TPL has submitted that the PLF for CCPP Vatva station is lower than the approved PLF of the MYT order due to reduction in allocation of gas by the Central Government owing to lower gas availability from KG basin. It is also submitted that the PLF is dependent on the actual system demand which in turn depends upon drawal of consumers, which is beyond the control of the petitioner.

Commission's Analysis

The Commission has analysed the submissions made by the Petitioner.

The Commission has taken note of the above marginal reduction in PLF for C station and substantial reduction for CCPP Vatva station. For the other stations, the PLF achieved is more than that approved in the MYT order.

The Commission considers the Plant Load Factor for various stations as actuals for FY 2011-12, for truing up purpose as it is an uncontrollable parameter.

Table 4.5: Plant Load Factor of TPL-G (APP) considered for truing up for FY 2011-12

(%)

Sl. No	Stations	Approved for FY 2011-12 in MYT order	Actuals for FY 2011-12	Considered for Truing-up for FY 2011-12
A	**Sabarmati**			
1	C Station	78.54	76.39	76.39
2	D Station	83.59	85.13	85.13
3	E Station	80.74	84.75	84.75
4	F Station	82.97	87.01	87.01
B	**Vatva Gas Station**	88.56	52.08	52.08

4.2.3 Auxiliary consumption

Petitioner's submission

The TPL has submitted the actuals of auxiliary consumption of different stations for FY 2011-12.

The auxiliary consumption (i) approved in the MYT Order dated 6th September, 2011 and (ii) 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 2011-12

(%)

Sl. No	Station	Approved for FY 2011-12 in MYT order	Actuals for FY 2011-12
A	**Sabarmati**		
1	C Station	9.50	10.01
2	D Station	9.00	8.86
3	E Station	9.00	8.88
4	F Station	9.00	9.78
B	**Vatva Gas Station**	3.00	3.04

TPL submitted that it has made substantial efforts to maintain the auxiliary consumption at approved level but the auxiliary consumption is at a higher level than that approved due to the change in the grade of coal being used for its generating stations at Sabarmati.

Earlier TPL used to operate its plants with coal having grade A or B. However, due to the steep increase in the prices of Grade A and B coal, TPL has shifted to Grade C and D in order to reduce the cost. Since Grade C and D have higher ash content and lower calorific value, TPL had to handle higher tonnage of coal to fulfil the heat energy requirement of the plant. Due to higher quantity of coal, the total power requirement has increased for coal handling plant, Milling plant and other associated system like air, gas and ash handling system.

Further the additional path of ESP has been commissioned at D station to fulfil statutory requirement of stack emission which resulted in higher auxiliary consumption during the year 2011-12. The replacement of aged NDCT by new IDCT at C station has also contributed to higher auxiliary power consumption.

Additionally, due to the Merit Order Dispatch (MOD), TPL has had to operate its plant at lower level during the low demand hours which has resulted in the increase in auxiliary consumption.

However, in the present petition for the purpose of quantification of gain / loss, the TPL has considered the entire variation in Auxiliary Consumption as controllable parameter. The gains / (losses) on account of this variation needs to be computed based on the approved and actual achievement of the parameters.

Commission's Analysis

It is noted that for the C and F stations the actual auxiliary consumption is more than that of the approved levels in the MYT order.

The Commission approves the auxiliary consumption for various stations as in the MYT order dated 6th September, 2011 for FY 2011-12, 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 2011-12 is given in Table below:

Table 4.7: Auxiliary consumption of TPL-G (APP) approved for truing up for FY 2011-12

(%)

Sl. No	Stations	Approved for FY 2011-12 in MYT order	Actuals for FY 2011-12	Approved for Truing-up for FY 2011-12
A	**Sabarmati**			
1	C Station	9.50	10.01	9.50
2	D Station	9.00	8.86	9.00
3	E Station	9.00	8.88	9.00
4	F Station	9.00	9.78	9.00
B	**Vatva Gas Station**	3.00	3.04	3.00

4.2.4 Station Heat Rate (SHR)

Petitioner's submission

TPL has furnished the actual SHR attained for different stations during FY 2011-12. The station heat rate (i) approved in the MYT Order dated 6th September, 2011 and (ii) 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 2011-12

(kCal / kWh)

Sl. No	Station	Approved for FY 2011-12 in MYT order	Actuals for FY 2011-12
A	**Sabarmati**		
1	C Station	3150	3124
2	D Station	2450	2422
3	E Station	2725	2701
4	F Station	2705	2686
B	**Vatva Gas Station**	2165	2149

Commission's Analysis

The SHR for all the stations is less than that approved in the MYT order dated 6th September, 2011. For the purpose of True up for FY 2011-12, the Commission approves the SHR as approved in the MYT order dated 6th September, 2011 as given in the Table below:

Table 4.9: Station Heat Rate approved for truing up for FY 2011-12

(kCal / kWh)

Sl. No.	Stations	Approved for FY 2011-12 in MYT order	Actuals for FY 2011-12	Approved for Truing-up for FY 2011-12
A	**Sabarmati**			
1	C Station	3150	3124	3150
2	D Station	2450	2422	2450
3	E Station	2725	2701	2725
4	F Station	2705	2686	2705
B	**Vatva Gas Station**	2165	2149	2165

The Commission approves the SHR for various stations as in the MYT order dated 6th September, 2011 for FY 2011-12, for truing up purpose as it is a controllable parameter.

4.2.5 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 2011-12.

The Secondary Fuel Oil Consumption (i) approved in the MYT Order dated 6th September, 2011 and (ii) the actuals as furnished by TPL in the present petition for the period are given in the table below:

Table 4.10: Secondary Fuel Oil Consumption of TPL-G (APP) for FY 2011-12

(ml / kWh)

Sl. No	Station	Approved for FY 2011-12 in MYT order	Actuals for FY 2011-12
A	**Sabarmati**		
1	C Station	2.00	2.20
2	D Station	1.00	0.47
3	E Station	1.00	0.35
4	F Station	1.00	0.45

Commission's Analysis

The actual Secondary Fuel Consumption (SFC) as submitted by TPL for FY 2011-12 is much lower than the SFC approved by the Commission in the MYT order dated 6th September, 2011, for all stations, except C station.

As the SFC is a controllable performance parameter, the Commission approves, for truing up purpose, the SFC values as mentioned in the MYT order for FY 2011-12.

Accordingly, the SFC approved for FY 2011-12, for truing up purpose is given in the table below:

Table 4.11: Secondary Fuel Oil Consumption approved for truing up for FY 2011-12

(ml / kWh)

Sl. No.	Stations	Approved for FY 2011-12 in MYT order	Actuals for FY 2011-12	Approved for Truing-up for FY 2011-12
A	**Sabarmati**			
1	C Station	2.00	2.20	2.00
2	D Station	1.00	0.47	1.00
3	E Station	1.00	0.35	1.00
4	F Station	1.00	0.45	1.00

4.2.6 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 2011-12.

The transit loss of coal (i) approved in the MYT Order dated 6th September, 2011 and (ii) the actuals as furnished by TPL in the present petition for the period are given in the table below:

Table 4.12: Transit Loss of TPL-G (APP) for FY 2011-12

(%)

Sl. No	Station	Approved for FY 2011-12 in MYT order	Actuals for FY 2011-12
1	All coal based stations	1.40	2.43

The TPL submitted that the actual transit loss achieved for FY 2011-12 is higher at 2.43% 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.

In its petition, the TPL submitted that it has reduced the transit loss from a high of 8% to the present level of 2.43%. TPL has further submitted that it has considered transit loss as a controllable parameter in its calculations but requests the commission to consider it as an uncontrollable parameter while truing up for FY 2011-12, due to the factors beyond its control.

Commission's Analysis

Keeping in view the historical data, the Commission has prescribed trajectory for higher transit loss in MYT Regulations, 2011 compared to the norms set for transit loss in the GERC (Terms and Conditions of Tariff) Regulations, 2005.

Based on the above observation, the percentage of transit loss for truing up for FY 2011-12 is approved as given in the table below:

Table 4.13: Transit loss approved for truing up for FY 2011-12

(%)

Sl. No.	Stations	Approved for FY 2011-12 in MYT order	Actuals for FY 2011-12	Approved for Truing-up for FY 2011-12
1	All coal based stations	1.40	2.43	1.40

4.2.7 Summary of performance parameters approved for truing up for FY 2011-12

Based on the analysis in the preceding paragraphs, the performance parameters approved for different power generation stations of TPL-G (APP) for the FY 2011-12, for truing up purpose are listed in the table below:

Table 4.14: Performance parameters for TPL-G (APP) stations approved/considered for truing up for the FY 2011-12

Sl. No	Station	PAF (%)	PLF (%)	Auxiliary Consumption (%)	SHR (Kcal/kWh)	Secondary oil Consumption (ml / kWh)	Transit loss of coal (%)
A	**Sabarmati**						
1	C Station	98.10	76.39	9.50	3150	2.00	1.40
2	D Station	91.80	85.13	9.00	2450	1.00	1.40
3	E Station	97.50	84.75	9.00	2725	1.00	1.40
4	F Station	97.50	87.01	9.00	2705	1.00	1.40
B	**Vatva Gas Station**	98.10	52.08	3.00	2165		

4.3 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 2011-12 are given in the table below:

Table 4.15: The gross and net generation of power for truing up for FY 2011-12

Sl. No	Stations	As per actual submitted by TPL				As approved by the Commission			
		Gross generation (MU)	Aux Cons (%)	Aux Cons (MU)	Net generation (MU)	Gross generation (MU)	Aux Cons (%)	Aux Cons (MU)	Net generation (MU)
A	**Sabarmati**								
1	C Station	402.59	10.01%	40.30	362.29	402.59	9.50%	38.25	364.34
2	D Station	897.39	8.86%	79.51	817.88	897.39	9.00%	80.77	816.62
3	E Station	818.87	8.88%	72.72	746.15	818.87	9.00%	73.70	745.17
4	F Station	840.71	9.78%	82.22	758.49	840.71	9.00%	75.66	765.05
B	**Vatva Gas Station**	457.43	3.04%	13.91	443.52	457.43	3.00%	13.72	443.71
	Total	**3416.99**			**3128.34**	**3416.99**			**3134.89**

4.4 Cost Parameters

The cost parameters include 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. GCV of mix of coal and Wt Av price of fuel for different stations as discussed below for FY 2011-12:

4.4.1 Wt. Av. Gross Calorific Value (GCV) of fuel

The TPL has furnished the actuals of Wt. Av. Calorific Value of fuels for all the stations put together for FY 2011-12, as given in the table below:

Table 4.16: Actual Wt. Av. Gross Calorific value (GCV) of different fuels for coal based stations for FY 2011-12

Particulars	Calorific Value
Wt. Av. GCV of Indigenous coal (kcal / kg)	3895
Wt. Av. GCV of Imported coal (kcal / kg)	4893
Wt. Av. GCV of secondary fuel oil (kcal / L)	10001

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 sent by the Commission, TPL furnished additional information vide in its letter of 2nd February, 2013, wherein the details of fuel consumption and cost for each station are furnished. From these details the Wt. Av. GCV of fuel consumed in each power station are as given in the table below:

Table 4.17: Wt. Av. Calorific value (CV) of fuels for different stations for FY 2011-12

Sl. No.	Station	Wt. Av. GCV of mix of coal as fed into the boiler (kcal / kg)	Wt. Av. GCV of Secondary fuel oil (kcal / L)	Wt. Av. GCV of Gas (kcal/ MMbtu)
A	**Sabarmati**			
1	C Station	3891.77	9994.44	
2	D Station	4285.70	10012.78	
3	E Station	4238.15	10011.16	
4	F Station	4236.96	9995.97	
B	**Vatva Gas Station**			252000.00

4.4.2 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 2011-12, as given in the table below:

Table 4.18: The mix of different types of coal for FY 2011-12*

Sl. No.	Station	Indigenous coal %	Imported coal %
A	**Sabarmati**		
1	C Station	100	0.00
2	D Station	61.42	38.58

Sl. No.	Station	Indigenous coal %	Imported coal %
3	E Station	65.16	34.84
4	F Station	65.85	34.15

Note: The mix of coal for different stations is as per the additional information furnished by TPL, in its letter dated 02.02.2013.

4.4.3 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 2011-12, as given in the table below:

Table 4.19: Wt. Av. Price / unit of fuels for FY 2011-12 (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 oil (Rs /kL)	Wt. Av. Cost of Gas (Rs./ MMBTU)
1	Sabarmati Coal Stations	3530.63	5857.90	39184.24	
2	Vatva Gas station				302.73

In its communication dated 02.02.2013, TPL has furnished the actual Wt. Av. cost / MT of different fuels for different stations for FY 2011-12 as given in the table below:

Table 4.20: Av. Price / unit of fuels for FY 2011-12 (Actuals) for different stations

Sl. No.	Station	Av. Cost of Indigenous coal (Rs /MT)	Av. Cost of Imported coal (Rs /MT)	Av. Cost of Secondary oil (Rs /kL)	Av. Cost of Gas (Rs./ MMBTU)
A	**Sabarmati**				
1	C Station	3477.09	-	38399.89	-
2	D Station	3515.09	5931.02	39859.86	-
3	E Station	3519.33	5934.42	38581.10	-
4	F Station	3500.16	5951.46	40716.92	-
B	**Vatva Gas Station**				302.73

Commission's Analysis

The Commission, after due validation approves the Wt. Av. GCV of fuels, percentage mix of coal and prices of fuels (actuals) as furnished by TPL for truing up purpose for FY 2011-12, as they are uncontrollable items.

4.5 Fuel Costs

Based on the performance and cost parameters, the normative fuel costs for each of the stations along with actuals furnished by TPL are given in the table below:

Table 4.21: Fuel cost of TPL-G (APP) for truing up for FY 2011-12

Sl. No	Stations	As per actual submitted by TPL				Normative Fuel cost			
		Gross generation (MU)	Net Gen (MU)	Fuel cost (Rs. Crore)	Fuel cost per unit net (Rs/kWh)	Gross generation (MU)	Net Gen (MU)	Fuel cost (Rs. Crore)	Fuel cost per unit net (Rs/kWh)
A	**Sabarmati**								
1	C Station	402.59	362.29	118.70	3.28	402.59	364.34	117.26	3.22
2	D Station	897.39	817.88	228.91	2.80	897.39	816.62	232.34	2.85
3	E Station	818.87	746.15	230.78	3.09	818.87	745.17	233.62	3.14
4	F Station	840.71	758.49	234.83	3.10	840.71	765.05	237.11	3.10
B	**Vatva Gas Station**	457.43	443.52	118.08	2.66	457.43	443.71	118.97	2.68
	Total	**3416.99**	**3128.34**	**931.30**		**3416.99**	**3134.89**	**939.30**	

Detailed computation of the fuel cost for each of the stations has been given in Annexure 4.1 to 4.5 at the end of this chapter.

4.5.1 Approved fuel cost

The Commission has computed normative fuel cost for the purpose of computing the gain/loss due to the controllable factors.
The actual fuel costs of all the stations except C station of TPL are less than the normative costs.

The Commission has verified the actual fuel cost submitted by TPL with the segregated audited accounts and it was found in order.

The comparison between the fuel costs of all stations put together as per audited annual accounts for FY 2011-12 and the cost approved for truing up purpose are as given in the table below:

Table 4.22: Fuel cost approved for truing up for FY 2011-12

(Rs. crore)

Particulars	As per actuals	Approved for FY 2011-12
Total Fuel Cost	931.30	931.30

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

TPL has arrived at the fuel expenses incurred for FY 2011-12, 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 4.23: Approved gains / (losses) from fuel expenses (due to controllable factors) for FY 2011-12

(Rs. crore)

Sl. No.	Station	Fuel cost arrived at with approved parameters for actual net generation for FY 2011-12*	Actual fuel cost approved for Truing up for FY 2011-12	Gains / (Losses) due to controllable factors
A	**Sabarmati**			
1	C Station	116.60	118.70	(2.10)
2	D Station	232.70	228.91	3.79
3	E Station	233.93	230.78	3.15
4	F Station	235.08	234.83	0.25
B	**Vatva Gas Station**	118.92	118.08	0.84
	Total	**937.23**	**931.30**	**5.93**

**Note: Detailed computation of the fuel cost for each of the stations with approved parameters for actual net generation has been given in Annexure 4.1 to 4.5 at the end of this chapter.*

4.6 Fixed Charges

4.6.1 Operations and Maintenance (O&M) expenses

TPL has claimed Rs. 133.16 crore on O&M expenses consisting of Rs. 55.65 crore on employee cost, Rs. 56.86 crore on R&M expense, Rs. 20.66 crore on A&G expense against Rs. 132.26 crore of composite O&M expenses approved for FY 2011-12 in the MYT order.

Petitioner's submission

TPL has submitted that the approved O&M expenses have been arrived at considering the escalation factor of 4% over the actual normalized O&M expenses of three years FY 2007-08, 2008-09 and FY 2009-10, while the actual weighted average inflation rate is 7.54%, 9.96% and 8.66% for FY 2009-10, FY 2010-11 and FY 2011-12 respectively, considering 60% weight to WPI and 40% weight to CPI. TPL has mentioned that, despite all its efforts to contain the O&M expenses, they are almost at par with approved expenses. TPL has further submitted that the employee expenses of Ahmedabad Generation is marginally lower than approved, despite the effect of wage revision carried out under section 12 (3) of the industrial Dispute Act

1947, due to transfer of manpower from TPL-G (APP) to TPL-D (A) to reduce the cost. TPL has mentioned that wage revision is the uncontrollable factor and needs to True-up at actual. The variance in R & M expenses of Rs. 3.59 crore incurred for demolition of cooling towers on account of safety consideration and requested to consider as uncontrollable.

TPL has claimed a sum of Rs. 133.16 crore towards actual O&M expenses in the truing up for FY 2011-12 as shown in table below:

Table 4.24: O&M expenses of TPL-G (APP) claimed for FY 2011-12

(Rs. crore)

Sl. No.	Particulars	Actual claimed in Truing-up for FY 2011-12
1	Employee Cost	55.65
2	R&M Expense	56.86
3	A&G Expense	20.66
4	Total O&M Expense	133.16

Commission's Analysis

The Commission had approved the O&M expenses at 132.26 crore as a composite expense for FY 2011-12 in the MYT order dated 6th September 2011. But TPL has split the O&M expenses component wise viz. Employee cost, R&M expenses and A&G expense. Further, TPL also claimed part variation in O&M expenses as uncontrollable. However, in view of the Regulations 23.2 (h) of GERC (MYT) Regulations, 2011, the Commission considers the entire variation in O&M expenses as controllable. The O&M expenses claimed by TPL are verified with segregated annual accounts.

The Commission, accordingly, approves the O&M expenses at Rs. 133.16 crore as claimed by the petitioner for truing up for FY 2011-12.

The O&M expenses and the Gains / (Losses) approved in the truing up for FY 2011-12 are given in the Table below:

Table 4.25: O&M expenses and Gains / (Losses) approved in truing up for FY 2011-12

(Rs. crore)

Sl. No.	Particulars	Approved for FY 2011-12 in MYT order	Approved in Truing –up for FY 2011-12	Deviation + / (-)	Gains / (losses) due to Controllable factor	Gains / (losses) due to uncontrollable factor
1	O&M Expense	132.26	133.16	(0.90)	(0.90)	-

4.6.2 Water Charges

TPL has claimed Rs. 9.31 crore towards actual water charges in the truing up for FY 2011-12 as against Rs. 8.59 crore approved in the MYT order for FY 2011-12. The details are given in the Table below:

Table 4.26: Water charges claimed in truing up by TPL-G (APP) for FY 2011-12

(Rs. crore)

Sl. No.	Particulars	Approved for FY 2011-12 in MYT order	Actual claimed in Truing–up for FY 2011-12
1	Water Charges	8.59	9.31

Petitioner's Submission

TPL has not shown the water charges separately in the truing-up petition, however, on a query from the Commission, TPL has submitted in its letter dated 2nd February, 2013 that water charges of Rs. 9.31 crore is included in total miscellaneous expenses of Rs. 16.19 crore shown under the head of operation and other expenses at note 15 of the accounting statement. TPL has submitted the details break up of Rs. 16.19 crore which includes Rs. 9.31 crore towards water charges.

Commission's Analysis

The Commission accordingly approves the water charges at Rs. 9.31 crore in the truing-up as per the audited segregated annual accounts.

The deviation is considered as uncontrollable and the gains and (losses) are considered as detailed below:

Table 4.27: Gains / (losses) approved in the truing up for FY 2011-12

(Rs. crore)

Sl. No.	Particulars	Approved for FY 2011-12 in MYT order	Approved for Truing – up for FY 2011-12	Deviation +/(-)	Gains / (losses) due to uncontrollable factor
1	Water Charges	8.59	9.31	(0.72)	(0.72)

4.6.3 Capital expenditure, Capitalization and Sources of Funding

TPL has claimed Rs. 67.83 crore towards actual capital expenditure in the truing up for FY 2011-12 as against Rs. 312.58 crore approved in the MYT order for FY 2011-12. The details are given in the Table below:

Table 4.28: Capital expenditure claimed by TPL-G (APP) for FY 2011-12

(Rs. crore)

Sl. No.	Particulars	Approved for FY 2011-12 in MYT order	Actual claimed in Truing–up for FY 2011-12
1	F Station upgradation	97.81	19.50
2	E station upgradation	101.12	26.80
3	Renovation and refurbishment of civil structure / building for C station	7.00	0.51
4	Pollution control scheme	11.00	0.12
5	Installation of New Conveyor N4B discharge end	4.00	0.05
6	D Station boiler refurbishment	12.00	-
7	Construction of new cooling towers	10.00	-
8	Normal capital expenditure - Sabarmati	19.81	6.60
9	Normal Capital Expenditure- Vatva	22.97	0.45
10	Miscellaneous terms	26.87	13.81
	Total Cost	312.58	67.83

Petitioner's Submission

The main reasons for variation in the capital expenditure against the approved items are described below:

- **E and F Stations up gradation**: E and F Stations upgradation were planned in FY 2011-12 and FY 2012-13. However, due to delay in response from OEMs and longer implementation cycle, the project has been deferred to FY 2012-13 & 2013-14 for F and E station, respectively.
- **Renovation and refurbishment of civil structure/building:** The project has been deferred as the scheme for refurbishment was under discussion with M/s Tata Consultancy Engineers (TCE) to take the holistic view. The same has been concluded during later part of FY 2011-12 and execution is expected to be completed by FY 2013-14.
- **Pollution control scheme/Waste Water Management Scheme**: The Scheme was finalized with M/s Tata Consulting Engineers and offers were invited for execution. The bidders raised the issue of space constraints to accommodate the proposed plant in the earmarked area. Additionally, there is also a requirement of availing Right of Way to lay return water pipe line from the ash pond to the plant. In view of the above , the cost of the project is likely to go up. However, the same is yet to be firmed up after discussions with the bidders.
- **D station boiler refurbishment**: It was planned to refurbish the economizer and air pre heater located in the second pass of D station boiler. As per the offers received from the different bidders, the requirement of the unit shutdown is to the

tune of 50 to 60 days. Hence the project has been deferred to FY 2013-14 along with major overhauling of the D station turbine.

- **Construction of new cooling towers**: It was planned to replace Induced Draft Cooling tower (IDCT) of D station with new IDCT at different location. TPL had appointed Tata Consultancy engineers (TCE) to suggest new location of IDCT. During feasibility study, it was revealed that it was not feasible to construct new cooling tower. Hence, it was decided to carry out refurbishment of existing cooling tower based on RLA studies. Accordingly, the order for refurbishment of civil structure has been placed.
- Normal Capital Expenditure in Sabarmati has been Rs. 6.60 crore against approval of Rs. 19.81 crore primarily due to deferment. Similarly, Normal Capital Expenditure in Vatva has been Rs. 0.45 crore against approval of Rs. 22.97 crore as the procurement of capital spares is deferred to FY 2013-14 due to lower gas supply resulting into single machine operation.
- In the Miscellaneous Item, the actual expenditure is Rs. 13.81 crore against an estimate of Rs. 26.87 crore. The land acquisition of parking was completed in FY 2011-12. The main entry area development, access control and common parking shall be executed in phased manner in FY 2013-14

Commission's Analysis:

TPL has claimed a capitalization of Rs. 20.79 crore against the actual capital expenditure of Rs. 67.83 crore.

The TPL has estimated that the quantum of debt and equity as detailed in the Table below:

Table 4.29: Capitalization and sources of funding claimed in truing up for FY 2011-12

(Rs. crore)

Sl. No.	Particulars	Approved for FY 2011-12 in MYT order	Actual claimed in Truing-up for FY 2011-12
1	Capital Expenditure	312.58	67.73
2	Gross Capitalization during the year	113.65	20.79
3	Net Capitalization during the year		18.50
4	Normative debt (70% of Gross capitalization)	79.56	14.55
5	Normative Equity (30% of Net capitalization)	33.50	5.55

The Commission observes that the actual capital expenditure achieved is far lower than the capital expenditure approved in the MYT order for FY 2011-12. 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 net capitalization as verified from the audited annual accounts is Rs. 18.50 crore. TPL has calculated the normative debt as 70% of the gross capitalization of Rs. 20.79 crore and normative equity as 30% of the net capitalization of Rs. 18.50 crore. However, the Commission has considered the normative debt and equity on the basis of net capitalization of Rs. 18.50 crore.

The Commission approves the capitalization and sources of funding as shown in the Table below in the truing up for FY 2011-12.

Table 4.30: Approved capitalization and sources of funding in truing up for FY 2011-12

(Rs. crore)

Sl. No.	Particulars	Actual claimed in Truing-up for FY 2011-12	Approved in Truing-up for FY 2011-12
1	Capital Expenditure	67.73	
2	Net Capitalization during the year	18.50	18.50
3	Normative debt (70%)	14.55	12.95
4	Normative Equity (30%)	5.55	5.55

4.6.4 Interest Expenses

TPL has claimed a sum of Rs. 7.88 crore towards actual interest expenses in the truing up for FY 2011-12 against Rs. 13.79 crore approved in the MYT Order for FY 2011-12 as detailed in the Table below:

Table 4.31: Total Interest expenses claimed in Truing-up for TPL – G (APP) for FY 2011-12

(Rs. crore)

Sl. No.	Particulars	Approved for FY 2011-12 in MYT order	Actual claimed in Truing-up for FY 2011-12
1	Interest Expenses	13.79	7.88

Petitioner's Submission

TPL has submitted that it has considered the interest expenses for the existing loans availed for the earlier capitalization at actuals and for the capitalization carried out during the FY 2011-12, it has calculated the interest expenses by applying weighted average rate of interest on the eligible additional loan component while repayment has been considered equal to the depreciation for the year.

TPL has submitted that there is operational difficulty especially for green field project in maintaining and calculating the repayment of loans on normative basis and it creates difficulty in calculating the interest expenses on normative loans. The loan outstanding and interest thereon institution wise as furnished by TPL are given in Table below:

Table 4.32: Interest claimed in the truing up for FY 2011-12

(Rs. crore)

Sl. No.	Loan Heads Existing Loans	Actual claimed in Truing-up for FY 2011-12
1	**LIC I**	
	Opening Balance	37.09
	Repayments	4.79
	Closing Balance	32.31
	Interest Rate	11.00%
	Interest on Loan	3.85
2	**IDFC Term Loan II**	
	Opening Balance	3.57
	Repayments	3.57
	Closing Balance	-
	Interest Rate	8.17%
	Interest on Loan	0.05
3	**Bank of Baroda Term Loan**	
	Opening Balance	11.17
	Repayments	1.28
	Closing Balance	9.89
	Interest Rate	12.90%
	Interest on Loan	1.37
	Total	
4	**IDFC Term Loan**	
	Opening Balance	19.48
	Repayments	2.20
	Closing Balance	17.29
	Interest Rate	9.92%
	Interest on Loan	1.82
5	**Loans drawn during FY 2011-12**	
	Capitalization During the year	20.79
	Normative debt@70%	14.55
	Opening Balance	-
	New Borrowings	14.55
	Repayments	0.07
	Closing Balance	14.48
	Interest Expense @ 10.85%	0.79
	Total Interest Expense	7.88

Commission's Analysis

The existing loans outstanding as on 1st April, 2011 and the details of repayment and interest charges on these loans are verified and found to be correct. The additional loan considered by the Commission is of Rs. 12.95 crore for FY 2011-12 and is in accordance with the capitalization and source of funding as approved in table 4.30.

The Commission has re-computed the allowable interest charges adopting the weighted average rate of 10.84% for FY 2011-12 as detailed in the Table below in accordance with the provisions of GERC (MYT) Regulations, 2011.

Table 4.33: Interest approved by the Commission in the truing up for FY 2011-12

(Rs. crore)

Sl. No.	Particulars	Approved for FY 2011-12 in MYT order
1	Opening Loan	67.44
2	New loan during the year	12.95
3	Repayment during the year	31.05
4	Closing loan	49.34
5	Average loan	58.39
6	Rate of interest	10.84%
7	Interest	6.33
8	Interest on security deposit	-
9	Other borrowing costs	0.03
10	Total interest and finance charges	6.36

The Commission, accordingly, approves the interest and finance charges at Rs. 6.36 crore in the truing up for FY 2011-12.

With regard to the computation of gains / losses, the Regulation 23.2 considers variation in capitalization on account of time and/or cost overruns / efficiencies in the implementation of capital expenditure project, not attributable to an approved change in scope of such project, change in statutory levies or force majeure events, as a controllable factor. If the gain is on account of lesser capital expenditure and capitalisation, it cannot be attributed to the efficiency of the utility to allow 2/3^{rds} of gain to the utility. Similarly, if the loss is on account of more capital expenditure and capitalisation due to bonafide reasons, the utility cannot be penalised by allowing only 1/3rd of the loss in the ARR. Accordingly, the Commission decides to consider variation in capitalization as uncontrollable. Hence, the components of ARR related to capitalization, like interest and finance charges, depreciation and return on equity, are considered as uncontrollable.

The Commission, accordingly, approves the gains / losses on account of interest and finance charges as uncontrollable, in the truing up for FY 2011-12 as detailed in the table below:

Table 4.34: Gains / (losses) approved in the truing up for FY 2011-12

(Rs. crore)

Sl. No.	Particulars	Approved for FY 2011-12 in MYT order	Actual claimed in Truing –up for FY 2011-12	Approved in Truing-up for FY 2011-12	Deviation +/(-)	Gains / (losses) due to uncontrollable factor
1	Interest and Finance Charges	13.79	7.88	6.36	7.43	7.43

4.6.5 Interest on working capital

TPL has claimed a sum of Rs. 19.47 crore towards interest on working capital in the truing up of FY 2011-12 as against Rs. 14.20 crore approved in the MYT Order for FY 2011-12 as detailed in the Table below:

Table 4.35: Interest on working capital of TPL-G (APP) claimed for FY 2011-12

(Rs. crore)

Sl. No.	Particulars	Approved for FY 2011-12 in MYT order	Actual claimed in Truing-up for FY 2011-12
1	Coal for 1.5 Month	83.79	101.18
2	Secondary fuel for 2 months	1.65	1.29
3	Gas for 1 month	16.14	9.89
4	O&M expenses for 1 month	11.02	11.87
5	1% of GFA for Maintenance spares	8.29	7.79
6	Receivables for 2months	-	-
7	Normative Working Capital	120.89	132.02
8	Interest Rate	11.75%	14.75%
9	Interest on working Capital	14.20	19.47

Petitioner's Submission

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 interest on working capital claimed by TPL for FY 2011-12. The Commission has observed that TPL has worked out the interest on working capital considering 14.75% the SBAR as on 01.04.2012.

Regulation 41.2 (b) specifies that interest shall be allowed at a rate equal to the State Bank Advance Rate (SBAR) as on 1st April of the Financial year in which the petition is filed. TPL has submitted with reference to a query from the Commission that being truing up petition for FY 2011-12 the same is calculated as per the MYT Regulations, 2011. The Commission had taken into consideration the rate of Interest at 11.75% prevailing at the time the MYT Petition was filed. The Commission does not see any justification in TPL claiming the rate of 14.75% prevailing as on 01.04.2012 in Truing up for FY 2011-12. The Commission decides to consider the rate (SBAR) prevailing as on 1st April of the financial year for which Truing up is being done. The SBAR as on 1st April, 2011 is 13%. The Commission, accordingly, takes into consideration the SBAR of 13% in computation of Interest in Working Capital for FY 2011-12.

The Commission has computed the Working Capital and interest thereon, as detailed in Table below:

Table 4.36: Interest on working Capital approved in truing up for FY 2011-12

(Rs. crore)

Sl. No.	Particulars	Approved for FY 2011-12 in MYT order	Actual claimed in Truing-up for FY 2011-12	Approved in Truing-up for FY 2011-12
1	Coal cost 1.5 Month	83.79	101.18	100.89
2	Secondary fuel for 2 Months	1.65	1.29	2.21
3	Gas for 1 month	16.14	9.89	9.91
4	O&M expenses for 1 month	11.02	11.87	11.10
5	1% of GFA for Maintenance spares	8.29	7.79	7.79
6	Receivables for 2months	-	-	-
7	Normative Working Capital	120.89	132.02	131.90
8	Interest Rate	11.75%	14.75%	13.00%
9	Interest on working Capital	14.20	19.47	17.15

The Commission, accordingly, approves the interest on working capital at Rs.17.15 crore in the truing up for FY 2011-12.

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 has treated the interest as uncontrollable cost for the purpose of estimating Gains / (losses).

The Commission, accordingly, approves the Gains / (losses) on account of interest on working capital in the truing up for FY 2011-12 as detailed in the Table below:

Table 4.37: Gains / (Losses) in Interest on working capital approved in the truing up for FY 2011-12

(Rs. crore)

Sl. No.	Particulars	Approved for FY 2011-12 in MYT order	Approved in Truing – up for FY 2011-12	Deviation +/(-)	Gains /(losses) due to controllable factor	Gains /(losses) due to uncontrollable factor
1	Interest on Working Capital	14.20	17.15	(2.95)	-	(2.95)

4.6.6 Depreciation

TPL has claimed a sum of Rs. 31.05 crore towards depreciation in the truing up for FY 2011-12 as against Rs. 34.23 crore approved in the MYT Order for FY 2011-12 as detailed in the Table below :

Table 4.38: Depreciation of TPL-G (APP) claimed for FY 2011-12

(Rs. crore)

Sl. No.	Particulars	Approved for FY 2011-12 in MYT order	Actual claimed in Truing-up for FY 2011-12
1	Depreciation	34.23	31.05

Petitioner's submission

TPL has submitted that the depreciation rates as per CERC (Terms and Conditions of Tariff) Regulations, 2004 are applied on opening GFA as on 1st April, 2009 and for addition of assets from 1st April, 2009 onwards it is computed at rates specified in the Depreciation schedule at Annexure I of the GERC (MYT) Regulations,2011.

Commission's Analysis

The details of opening balance of assets as on 1st April, 2011 including addition and deduction to the Gross Block during FY 2011-12 and the depreciation on the assets, classification wise, are given in Form 12, Part 2 of Appendix A of the petition. The opening and closing balances of assets are as per the segregated and audited accounts for FY 2011-12.

The Commission, accordingly, approves the depreciation at Rs. 31.05 crore in the truing up for FY 2011-12.

As noted in para 4.6.4 above, the Commission is of the view that the depreciation should be treated as uncontrollable. The Commission, accordingly, approves the

Gain / Losses on account of depreciation in the Truing up for FY 2011-12, as detailed in table below:

The Commission, accordingly, approves the Gains / (losses) on account of depreciation in the truing up for FY 2011-12 as detailed in the Table below:

Table 4.39: Gains / (Losses) due to depreciation approved in the truing up for FY 2011-12

(Rs. crore)

Sl. No.	Particulars	Approved for FY 2011-12 in MYT order	Approved in Truing –up for FY 2011-12	Deviation +/(-)	Gains / (losses) due to uncontrollable factor
1	Depreciation	34.23	31.05	3.18	3.18

4.6.7 Return on equity

TPL has claimed a sum of Rs. 45.30 crore towards return on equity in the truing up for FY 2011-12 against Rs. 49.40 crore approved in the MYT Order for FY 2011-12 as detailed in the Table below:

Table 4.40: Return on equity of TPL-G (APP) claimed for FY 2011-12

(Rs. crore)

Sl. No.	Particulars	Approved for FY 2011-12 in MYT order	Actual claimed in Truing –up for FY 2011-12
1	Opening Equity	335.81	320.81
2	Equity addition	34.09	5.55
3	Closing equity	369.90	326.36
4	Return on equity	49.40	45.30

Petitioner's submission

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 2011-12.

Commission's Analysis

The opening equity for FY 2011-12 is as per the closing equity for FY 2010-11 approved in the True up for FY 2010-11. The addition of equity of Rs. 5.55 crore during FY 2011-12 is as per the capitalization approved in the truing-up for FY 2011-12 in the Table 4.28 above.

The Commission, accordingly, approves the return on equity at Rs. 45.30 crore in the truing up for FY 2011-12 as detailed in the Table below:

Table 4.41: Return on Equity approved in the truing up for FY 2011-12

(Rs. crore)

Sl. No.	Particulars	Approved for FY 2011-12 in MYT order	Approved in truing-up for FY 2011-12
1	Opening Equity	335.81	320.81
2	Equity addition	34.09	5.55
3	Closing equity	369.90	326.36
4	Average Equity	352.86	323.59
5	Return on equity	49.40	45.30

As noted in para 4.6.4 above, the Commission is of the view that the return on equity should be treated as uncontrollable. The Commission, accordingly, approves the gain / losses on account of return on equity in the Truing up for FY 2011-12, as detailed in table below:

The Commission, accordingly, approves the Gains / losses on account of return on equity in the truing up for FY 2011-12 as detailed below.

Table 4.42: Return on equity and Gains / (Losses) approved in the truing up for FY 2011-12

(Rs. crore)

Sl. No.	Particulars	Approved for FY 2011-12 in MYT order	Approved in Truing –up for FY 2011-12	Deviation +/(-)	Gains / (losses) due to uncontrollable factor
1	Return on Equity	49.40	45.30	4.10	4.10

4.6.8 Income Tax

TPL has claimed a sum of Rs. 22.41 crore towards income tax in the truing up for FY 2011-12 against Rs. 26.45 crore approved in the MYT Order for FY 2011-12 as detailed in the Table below :

Table 4.43: Income Tax claimed for TPL-G (APP) for FY 2011-12

(Rs. crore)

Sl. No.	Particulars	Approved for FY 2011-12 in MYT order	Actual claimed in Truing-up for FY 2011-12
1	Income Tax	26.45	22.41

Petitioner's submission

TPL has submitted that it has calculated the income tax by applying the MAT rate of 20.01% on the PBT as per audited accounts. Further, it has submitted that the deviation in the income tax be considered as uncontrollable.

Commission's Analysis

The Commission has directed the TPL to furnish the details of segregation of income tax paid by TPL in respect of TPL Generation, TPL Distribution Ahmedabad supply area and Surat supply area duly certified by the Auditors along with copy of challans of income tax paid vide GERC letter no. 189 dated 21st January, 2013. TPL has submitted in its reply vide its letter dated 2nd February, 2013 that TPL being the single corporate entity, income tax is paid for the company as a whole. TPL has also submitted that it has computed the income tax by applying the MAT rate of 20.01% on the PBT as per the audited accounts and submitted the copy of challans of advance tax paid towards income tax. The advance tax paid for the entire TPL is Rs. 333.55 crore as verified from the challans for FY 2011-12.

The Commission verified the PBT figures with the segregated and audited accounts for FY 2011-12 and has found that the petitioner has shown a PBT of Rs. 112.03 crore. The Commission has computed the income tax for the petitioner based on the proportion of PBT. The income tax apportioned to the TPL Generation is Rs. 22.25 crore for FY 2011-12.

The Commission, accordingly, approves the income tax at Rs.22.25 crore in the truing up for FY 2011-12.

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 2011-12 as detailed in the Table below:

Table 4.44: Income Tax and Gains / (losses) due to income tax approved in the truing up for FY 2011-12

(Rs. crore)

Sl. No.	Particulars	Approved for FY 2011-12 in MYT order	Approved in Truing – up for FY 2011-12	Deviation +/(-)	Gains / (losses) due to controllable factor	Gains / (losses) due to uncontrollable factor
1	Income Tax	26.45	22.25	4.20	-	4.20

4.6.9 Non-Tariff income

Petitioner's submission

TPL has submitted that the actual non-tariff income was Rs. 23.78 crore in the truing up for FY 2011-12 as against Rs. 14.18 crore approved in the MYT order for FY 2011-12 as detailed in the Table below:

Table 4.45: Non-tariff income for TPL-G (APP) claimed for FY 2011-12

(Rs.crore)

Sl. No.	Particulars	Approved for FY 2011-12 in MYT order	Actual claimed in Truing-up for FY 2011-12
1	Non-Tariff Income	14.18	23.78

Commission's Analysis

The non-tariff income of TPL is put at Rs. 23.78 crore as per the segregated and audited annual accounts.

The Commission, accordingly, approves the non-tariff income at Rs. 23.78 crore in the truing up for FY 2011-12.

The deviation in non-tariff income is at Rs**.** 9.60 crore, which is a gain 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 2011-12 as detailed below.

Table 4.46: Non-tariff income and Gains / (losses) approved in the truing up for FY 2011-12

(Rs. crore)

Sl. No.	Particulars	Approved for FY 2011-12 in MYT order	Approved in Truing –up for FY 2011-12	Deviation +/(-)	Gains / (losses) due to uncontrollable factor
1	Non.-Tariff income	14.18	23.78	9.60	9.60

4.6.10 Incentive

TPL has claimed a sum of Rs. 29.89 crore towards incentive in the truing up for FY 2011-12 as detailed in the table below:

Table 4.47: Incentive claimed for TPL-G (APP) in FY 2011-12

Particulars	Actual
Total fixed charges (in Rs. Crore)	244.82
Actual annual PAF (in %)	95.38%
Normative Annual PAF (NAPAF) (in %)	85.00%
Allowable Fixed Charges incl. Incentive (in Rs. Crore)	274.71
Incentive / disincentive (in Rs. Crore)	29.89

Petitioner's submission

TPL has submitted that as per GERC (MYT) Regulations, 2011, the incentive is payable to a thermal generating station shall be calculated in accordance with the Plant Availability Factor of 85%.

Commission's Analysis

The Annual fixed charges are recoverable as specified in Regulation 59 of the GERC (MYT) Regulations, 2011.

4.7 Revised ARR for FY 2011-12

The Commission has reviewed the performance of TPL-G (APP) under Regulation 23 of MYT Regulations, 2011 with reference to segregated and audited annual accounts for FY 2011-12.

Accordingly, the Commission has computed the sharing of gains and losses for FY 2011-12 based on the truing up for each of the components discussed in the above paragraphs.

The ARR approved in the MYT order dated 6th September, 2011 as claimed by TPL in truing up for FY 2011-12 along with sharing of gains / losses computed in accordance with MYT Regulations, 2011 are given in the Table below:

Table 4.48: ARR approved in truing up for FY 2011-12

(Rs. crore)

Sl. No	Annual Revenue Requirement	Approved for FY 2011-12 in MYT order	Claimed in Truing-up for FY 2011-12	Approved in Truing up for FY 2011-12	Deviation +/(-)	Gains/ (Losses) due to controllable factors	Gains/ (Losses) due to uncontrollable factors
1	**2**	**3**	**4**	**5**	**6=(3-5)**	**7**	**8**
1	Fuel cost	873.87	935.83	931.30	(57.43)	5.93	(63.36)
2	O&M expenses	132.26	133.16	133.16	(0.90)	(0.90)	
3	Water Charges	8.59	9.31	9.31	(0.72)		(0.72)
4	Depreciation	34.23	31.05	31.05	3.18		3.18
5	Interest Cost on long-term capital Loans	13.79	7.88	6.36	7.43		7.43
6	Interest on Working Capital Loans	14.20	19.47	17.15	(2.95)		(2.95)
7	Return on Equity	49.40	45.30	45.30	4.10		4.10
8	Income Tax	26.45	22.41	22.25	4.20		4.20
9	Incentive	0.00	29.89	0.00	0.00		0.00
10	**Total expenditure**	**1152.79**	**1234.30**	**1195.88**	**(43.09)**	**5.03**	**(48.12)**
11	Less: Non-Tariff income	14.18	23.78	23.78	(9.60)		(9.60)
12	**Aggregate Revenue Requirement**	**1138.61**	**1210.52**	**1172.10**	**(33.49)**	**5.03**	**(38.52)**

4.8 Green Cess

As per the clarification submitted by TPL, Rs. 935.83 crores claimed in truing up as fuel cost is including the Green Cess of Rs. 4.53 crores. However, the Green Cess is not taken into consideration in view of the judgment pronounced by Hon'ble High Court against Green Cess. Therefore, the fuel cost approved in truing up is Rs. 931.30 crores.

4.9 Sharing of Gains / losses for FY 2011-12

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

The relevant Regulations are extracted below:

Regulation 24. Mechanism for pass-through of gains or losses on account of uncontrollable factors

24.1 The approved aggregate gain or loss to the Generating Company or Transmission Licensee or Distribution Licensee on account of uncontrollable factors shall be passed through as an adjustment in the Tariff of the Generating Company or Transmission Licensee or Distribution Licensee over such period as may be specified in the Order of the Commission passed under these Regulations.

24.2 The Generating Company, or Transmission Licensee or Distribution Licensee shall submit such details of the variation between expenses incurred and revenue earned and figures approved by the Commission, in the prescribed format to the Commission, along with detailed computations and supporting documents as may be required for verification by the Commission.

24.3 Nothing contained in this Regulation 24 shall apply in respect of any gain or loss arising out of variations in the price of fuel and power purchase which shall be dealt with as specified by the Commission from time to time.

Regulation 25. Mechanism for sharing of gains or losses on account of controllable factors

25.1 The approved aggregate gain to the Generating Company or Transmission Licensee or Distribution Licensee on account of controllable factors shall be dealt with in the following manner:
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 22.6;
The balance amount, which will amount to two-thirds of such gain, may be utilised at the discretion of the Generating Company or Transmission Licensee or Distribution Licensee.

25.2 The approved aggregate loss to the Generating Company or Transmission Licensee or Distribution Licensee on account of controllable factors shall be dealt with in the following manner:
One-third of the amount of such loss may be passed on as an additional charge in Tariffs over such period as may be specified in the Order of the Commission under Regulation 22.6; and

The balance amount, which will amount to two-thirds of such loss, shall be absorbed by the Generating Company or Transmission Licensee or Distribution Licensee."

Accordingly, the gain on account of controllable factors is arrived at Rs. 5.03 crore for FY 2011-12. Out of this 1/3rd gain, i.e. Rs. 1.68 crore is to be passed on to the consumers. Similarly, the total loss of Rs. 38.56 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 4.49: Revised ARR approved for TPL-G (APP) for FY 2011-12

(Rs. crore)

Sl. No.	Particulars	FY 2011-12
1	ARR approved in the MYT for FY 2011-12 (dated 6th September, 2011)	1138.61
2	Less: Gain on account of controllable factor to be passed on to the consumers (1/3rd)	1.68
3	Add: Loss on account of uncontrollable factor to be passed on to consumers	38.52
4	Revised ARR for FY 2011-12 (True up)	1175.45

4.10 Additional capacity charge due to better PAF

The MYT Regulations, 2011 provides the formula for the capacity charges payable to generating stations in accordance with the PAF achieved against the normative PAF of 85%. Accordingly, the Commission computed the additional capacity charges due to better PAF as detailed in the table below.

Table 4.50: Additional capacity charges for TPL-G (APP) for FY 2011-12

Particulars	Approved for truing up for FY 2011-12
Total Capacity charges (in Rs. Crore)	240.80
Actual Wt. Avg. Annual PAF of TPL-G (APP) (in %)	95.38
Normative Annual PAF (NAPAF) (in %)	85
Allowable Capacity charges (in Rs. Crore)	270.21
Additional Capacity charges (in Rs. Crore)	29.41

The Commission approves the total ARR of Rs. 1204.86 crores (1175.45 + 29.41) of TPL-G (APP) for FY 2011-12. The same is considered as actual power purchase cost of power purchased from TPL-G (APP) for FY 2011-12 in ARR of TPL Distribution.

Annexure 4.1

Approved Fuel costs for FY 2011-12 for True-up

Fuel costs (Coal & Secondary Oil) - C Station

Sl.No.	Item	Derivation	Unit	2011-12
1	Gross Generation	A	MUs	402.59
2	Auxiliary Consumption	C	%	9.50%
3	Auxiliary Consumption	B = A * C	MUs	38.25
4	Net Generation	Y=A - B	MUs	364.34
5	Capacity	T	MW	60.00
6	PLF	V	%	76.39
7	Station Heat Rate	D	KCal/KWH.	3150.00
8	Sp. Oil Consumption	E	ml/kWh	2.00
9	Gross Calorific Value of Coal	F	kcal/kg	3891.77
10	Calorific value of Oil	G	kcal/l	9994.44
11	Overall Heat	H=A x D	G Cal	1268158.50
12	Heat from Oil	I=(A x E x G)/1000	G Cal	8047
13	Heat from Coal	J=H-I	G Cal	1260111
14	Transit losses	K	%	1.4%
15	Coal Blend			
16	A) Indigenous Coal	X1	%	100.00%
17	C) Imported Coal	X3	%	0.00%
18	Actual Oil Consumption	L=A x E	kl	805
19	Actual Coal Consumption	M=(J X 1000)/F	MT	323789
20	A) Indigenous Coal	Q1=M* x X1/(1-K)	MT	328386
21	C) Imported Coal	Q3=M* X X3	MT	0.00
22	Price of Coal			
23	A) Indigenous Coal	P1	Rs/MT	3477.09
24	C) Imported Coal	P3	Rs/MT	0.00
25	Price of Oil	P4	Rs/Kl	38399.89
26	Coal cost			
27	A) Indigenous Coal	N1=Q1 X P1	Rs Lakh	11418
28	C) Imported Coal	N3=Q3 X P3	Rs Lakh	0
29	Total Coal Cost	N4=N1+N3	Rs Lakh	11418
30	Oil Cost	N5=P4 x L/10^5	Rs Lakh	308
31	Total Fuel Cost	O=N4 + N5	Rs Lakh	11726
32	Fuel Cost/Unit Gross	P=O/(A*10)	Rs/kWh	2.91
33	Fuel Cost/Unit Net	Q=O/(Y*10)	Rs/kWh	3.22
34	Actual Net Generation	Z	MUs	362.29
35	Normative Fuel cost for actual net generation	Z1 = Z * Q * 10	Rs Lakh	11660.31

Annexure 4.2

Approved Fuel costs for FY 2011-12 for True-up

Fuel costs (Coal & Secondary Oil) - D Station

Sl.No.	Item	Derivation	Unit	2011-12
1	Gross Generation	A	MUs	897.39
2	Auxiliary Consumption	C	%	9.00%
3	Auxiliary Consumption	B = A * C	MUs	80.77
4	Net Generation	Y=A - B	MUs	816.62
5	Capacity	T	MW	120.00
6	PLF	V	%	85.13
7	Station Heat Rate	D	KCal/KWH.	2450.00
8	Sp. Oil Consumption	E	ml/kWh	1.00
9	Gross Calorific Value of Coal	F	kcal/kg	4285.70
10	Calorific value of Oil	G	kcal/l	10102.78
11	Overall Heat	H=A x D	G Cal	2198605.5
12	Heat from Oil	I=(A x E x G)/1000	G Cal	9066
13	Heat from Coal	J=H-I	G Cal	2189539
14	Transit losses	K	%	1.4%
15	Coal Blend			
16	A) Indigenous Coal	X1	%	61.42%
17	C) Imported Coal	X3	%	38.58%
18	Actual Oil Consumption	L=A x E	kl	897
19	Actual Coal Consumption	M=(J X 1000)/F	MT	510894
20	A) Indigenous Coal	Q1=M* x X1/(1-K)	MT	318247
21	C) Imported Coal	Q3=M* X X3	MT	197102.99
22	Price of Coal			
23	A) Indigenous Coal	P1	Rs/MT	3515.09
24	C) Imported Coal	P3	Rs/MT	5931.02
25	Price of Oil	P4	Rs/kl	39859.86
26	Coal cost			
27	A) Indigenous Coal	N1=Q1 X P1	Rs Lakh	11187
28	C) Imported Coal	N3=Q3 X P3	Rs Lakh	11690
29	Total Coal Cost	N4=N1+N3	Rs Lakh	22877
30	Oil Cost	N5=P4 x L/10^5	Rs Lakh	357
31	Total Fuel Cost	O=N4 + N5	Rs Lakh	23234
32	Fuel Cost/Unit Gross	P=O/(A*10)	Rs/kWh	2.59
33	Fuel Cost/Unit Net	Q=O/(Y*10)	Rs/kWh	2.85
34	Actual Net Generation	Z	MUs	817.88
35	Normative Fuel cost for actual net generation	Z1 = Z * Q * 10	Rs Lakh	23269.99

Annexure 4.3

Approved Fuel costs for FY 2011-12 for True-up

Fuel costs (Coal & Secondary Oil) - E Station

Sl.No.	Item	Derivation	Unit	2011-12
1	Gross Generation	A	MUs	818.87
2	Auxiliary Consumption	C	%	9.00%
3	Auxiliary Consumption	B = A * C	MUs	73.70
4	Net Generation	Y=A - B	MUs	745.17
5	Capacity	T	MW	110.00
6	PLF	V	%	84.75
7	Station Heat Rate	D	KCal/KWH.	2725.00
8	Sp. Oil Consumption	E	ml/kWh	1.00
9	Gross Calorific Value of Coal	F	kcal/kg	4238.15
10	Calorific value of Oil	G	kcal/l	10,011.16
11	Overall Heat	H=A x D	G Cal	2231420.75
12	Heat from Oil	I=(A x E x G)/1000	G Cal	8198
13	Heat from Coal	J=H-I	G Cal	2223223
14	Transit losses	K	%	1.4%
15	Coal Blend			
16	A) Indigenous Coal	X1	%	65.16%
17	C) Imported Coal	X3	%	34.84%
18	Actual Oil Consumption	L=A x E	kl	819
19	Actual Coal Consumption	M=(J X 1000)/F	MT	524574
20	A) Indigenous Coal	Q1=M* x X1/(1-K)	MT	346666
21	C) Imported Coal	Q3=M* X X3	MT	182761.55
22	Price of Coal			
23	A) Indigenous Coal	P1	Rs./MT	3519.33
24	C) Imported Coal	P3	Rs./MT	5934.42
25	Price of Oil	P4	Rs./kl	38581.10
26	Coal cost			
27	A) Indigenous Coal	N1=Q1 X P1	Rs. Lakh	12200
28	C) Imported Coal	N3=Q3 X P3	Rs. Lakh	10846
29	Total Coal Cost	N4=N1+N2+N3	Rs. Lakh	23046
30	Oil Cost	N5=P4 x L/10^5	Rs. Lakh	316
31	Total Fuel Cost	O=N4 + N5	Rs. Lakh	23362
32	Fuel Cost/Unit Gross	P=O/(A*10)	Rs./kWh	2.85
33	Fuel Cost/Unit Net	Q=O/(Y*10)	Rs./kWh	3.14
34	Actual Net Generation	Z	MUs	746.15
35	Normative Fuel cost for actual net generation	Z1 = Z * Q * 10	Rs Lakh	23392.75

Annexure 4.4

Approved Fuel costs for FY 2011-12 for True-up

Fuel costs (Coal & Secondary Oil) - F Station

Sl.No.	Item	Derivation	Unit	2011-12
1	Gross Generation	A	MUs	840.71
2	Auxiliary Consumption	C	%	9.00%
3	Auxiliary Consumption	B = A * C	MUs	75.66
4	Net Generation	Y=A - B	MUs	765.05
5	Capacity	T	MW	110.00
6	PLF	V	%	87.01
7	Station Heat Rate	D	KCal/KWH.	2705.00
8	Sp. Oil Consumption	E	ml/kWh	1.00
9	Gross Calorific Value of Coal	F	kcal/kg	4236.97
10	Calorific value of Oil	G	kcal/l	9995.97
11	Overall Heat	H=A x D	G Cal	2274120.55
12	Heat from Oil	I=(A x E x G)/1000	G Cal	8404
13	Heat from Coal	J=H-I	G Cal	2265717
14	Transit losses	K	%	1.4%
15	Coal Blend			
16	A) Indigenous Coal	X1	%	65.85%
17	C) Imported Coal	X3	%	34.15%
18	Actual Oil Consumption	L=A x E	kl	841
19	Actual Coal Consumption	M=(J X 1000)/F	MT	534749
20	A) Indigenous Coal	Q1=M* x X1/(1-K)	MT	357132
21	C) Imported Coal	Q3=M* X X3	MT	182616.89
22	Price of Coal			
23	A) Indigenous Coal	P1	Rs./MT	3500.16
24	C) Imported Coal	P3	Rs./MT	5951.46
25	Price of Oil	P4	Rs./kl	40716.92
26	Coal cost			
27	A) Indigenous Coal	N1=Q1 X P1	Rs. Lakh	12500
28	C) Imported Coal	N3=Q3 X P3	Rs. Lakh	10868
29	Total Coal Cost	N4=N1+N3	Rs. Lakh	23369
30	Oil Cost	N5=P4 x L/10^5	Rs. Lakh	342
31	Total Fuel Cost	O=N4 + N5	Rs. Lakh	23711
32	Fuel Cost/Unit Gross	P=O/(A*10)	Rs./kWh	2.82
33	Fuel Cost/Unit Net	Q=O/(Y*10)	Rs./kWh	3.10
34	Actual Net Generation	Z	MUs	758.49
35	Normative Fuel cost for actual net generation	Z1 = Z * Q * 10	Rs. Lakh	23507.69

Annexure 4.5

Approved Fuel costs for FY 2011-12 for True-up

Fuel costs (Gas) - Vatva Gas Station

Sl.No	Item	Derivation	Unit	2011-12
1	Gross Generation	A	MUs	457.43
2	Auxiliary Consumption	C	%	3.00%
3	Auxiliary Consumption	B = A * C	MUs	14
4	Net Generation	Y=A - B	MUs	443.71
5	Capacity	T	MW	100.00
6	PLF	V	%	52.08
7	Station Heat Rate	D	KCal/KWH.	2165.00
8	Calorific value of Gas	F	kcal/MMBtu	252,000
9	Overall Heat from Gas	H=A x D	M Kcal	990336
10	Actual Gas Consumption	M=(H x 1000)/F	MMBtu	3929905
11	Price of Gas	P1	Rs./MMBtu	302.73
12	Cost of Gas	N=P1 x M/10^5	Rs. Lakh	11897
13	Total Fuel Cost	N	Rs. Lakh	11897
14	Fuel Cost/Unit Gross	P=N/(A*10)	Rs./kWh	2.60
15	Fuel Cost/Unit Net	Q=N/(Y*10)	Rs./kWh	2.68
16	Actual Net Generation	Z	MUs	443.52
17	Normative Fuel cost for actual net generation	Z1 = Z * Q * 10	Rs. Lakh	11891.98

5. Determination of Generation Charges for FY 2013-14

5.1 Introduction

This chapter deals with the determination of the fixed and variable charges for the FY 2013-14 for TPL. TPL has submitted revised estimates of ARR for FY 2013-14 and requested to (i). Consider the revised estimate of ARR. (ii). Allow variations in terms of performance parameters and expenses during the truing-up exercise. With reference to a query from the Commission to clarify under what provisions the revised ARR is proposed for FY 2013-14, TPL has submitted that the Commission has powers under Regulations 7.2 read with Regulation 12 of the MYT Regulations, 2011 to consider the revised estimates.

The Commission is of the view that the existing GERC MYT regulations 2011 do not provide for any revision of ARR approved for the MYT period and the circumstances do not warrant any special relaxation when the ARR approved for each year of the MYT period is subject to truing up based on audited annual accounts.

The Commission has accordingly considered the ARR approved in the MYT order dated September 6, 2011 for FY 2013-14 while determining the generation tariff for FY 2013-14.

5.2 Determination of Fixed Charges for FY 2013-14

The Table below summarizes the fixed charges as approved by the Commission for the FY 2013-14 in the MYT Order dated 6th September, 2011. Detailed analysis of each expense head has already been provided in the MYT Order.

Table 5.1: Approved fixed charges for TPL-G (APP) for FY 2013-14

(Rs. crore)

Sl. No.	Particulars	FY 2013-14
1	O & M Expenses	147.82
2	Water Charges	8.59
3	Depreciation	54.48
4	Interest on Loan	33.83
5	Interest on Working Capital	14.33
6	Return on Equity	66.08

Sl. No.	Particulars	FY 2013-14
7	Income Tax	26.45
8	Less: Non-tariff Income	14.18
9	**Net ARR**	**337.40**

5.3 Determination of Variable Charges for FY 2013-14

The Table below gives the energy charges for FY 2013-14 approved in the MYT order dated September 6, 2011.

Table 5.2: Approved variable charges for TPL-G (APP) for FY 2013-14

Sl. No	Stations	Approved Fuel Cost for FY 2013-14 (Rs. crore)	Fuel cost per unit gross (Rs / KWH)	Fuel cost per unit net (Rs / KWH)
A	**Sabarmati**			
1	C Station	105.94	2.58	2.85
2	D Station	181.54	2.16	2.38
3	E Station	185.20	2.17	2.38
4	F Station	188.14	2.17	2.38
B	**Vatva Gas Station**	166.78	2.49	2.57
	Total	827.60	2.27	2.47

The Table below gives the ARR for FY 2013-14 as approved in the MYT order dated September 6, 2011.

Table 5.3: Approved ARR for TPL-G (APP) for FY 2013-14

Sl. No.	Particulars	FY 2013-14
1	Variable Cost	827.60
2	O & M Expenses	147.82
3	Water Charges	8.59
4	Depreciation	54.48
5	Interest on Loan	33.83
6	Interest on Working Capital	14.33
7	Return on Equity	66.08
8	Income Tax	26.45
9	Less: Non-tariff Income	14.18
10	**Net ARR**	**1165.00**

Annexure 5.1

Approved Fuel costs for FY 2013-14

Fuel costs (Coal & Secondary Oil) - C Station

Sl.No.	Item	Derivation	Unit	2013-14
1	Gross Generation	A	MUs	410.97
2	Auxiliary Consumption	C	%	9.50%
3	Auxiliary Consumption	B = A * C	MUs	39
4	Net Generation	Y=A - B	MUs	372
5	Capacity	T	MW	60.00
6	PAF	U	%	0.00
7	PLF	V	%	78.19
8	Station Heat Rate	D	KCal/KWH.	3150.00
9	Sp. Oil Consumption	E	ml/kWh	2.00
10	Gross Calorific Value of Coal	F	kcal/kg	4251.00
11	Calorific value of Oil	G	kcal/l	9909.00
12	Overall Heat	H=A x D	G Cal	1294555.50
13	Heat from Oil	I=(A x E x G)/1000	G Cal	8145
14	Heat from Coal	J=H-I	G Cal	1286411
15	Transit losses	K	%	1.0%
16	Coal Blend			
17	A) Indigenous Coal	X1	%	100.00%
18	B) Washed Coal	X2	%	0.00%
19	C) Imported Coal	X3	%	0.00%
20	Actual Oil Consumption	L=A x E	kl	822
21	Actual Coal Consumption	M=(J X 1000)/F	MT	302614
22	A) Indigenous Coal	Q1=M* x X1/(1-K)	MT	305670
23	B) Washed Coal	Q2=M* x X2 / (1-K)	MT	0
24	C) Imported Coal	Q3=M* X X3	MT	0.00
25	Price of Coal			
26	A) Indigenous Coal	P1	Rs/MT	3385.00
27	B) Washed Coal	P2	Rs/MT	0.00
28	C) Imported Coal	P3	Rs/MT	0.00
29	Price of Oil	P4	Rs/kl	30092
30	Coal cost			
31	A) Indigenous Coal	N1=Q1 X P1	Rs Lakh	10347
32	B) Washed Coal	N2=Q2 X P2	Rs Lakh	0
33	C) Imported Coal	N3=Q3 X P3	Rs Lakh	0
34	Total Coal Cost	N4=N1+N2+N3	Rs Lakh	10347
35	Oil Cost	N5=P4 x L/10^5	Rs Lakh	247
36	Total Fuel Cost	O=N4 + N5	Rs Lakh	10594
37	Fuel Cost/Unit Gross	P=O/(A*10)	Rs/kWh	2.58
38	Fuel Cost/Unit Net	Q=O/(Y*10)	Rs/kWh	2.85
39	Cost of fuel/G.Cal	R=(O/H)*10^5	Rs/Gcal	818

Annexure 5.2

Approved Fuel costs for FY 2013-14

Fuel costs (Coal & Secondary Oil) - D Station

Sl.No.	Item	Derivation	Unit	2013-14
1	Gross Generation	A	MUs	839.70
2	Auxiliary Consumption	C	%	9.00%
3	Auxiliary Consumption	B = A * C	MUs	76
4	Net Generation	Y=A - B	MUs	764
5	Capacity	T	MW	120.00
6	PAF	U	%	0.00
7	PLF	V	%	79.88
8	Station Heat Rate	D	KCal/KWH.	2450.00
9	Sp. Oil Consumption	E	ml/kWh	1.00
10	Gross Calorific Value of Coal	F	kcal/kg	4532.00
11	Calorific value of Oil	G	kcal/l	9909.00
12	Overall Heat	H=A x D	G Cal	2057265
13	Heat from Oil	I=(A x E x G)/1000	G Cal	8321
14	Heat from Coal	J=H-I	G Cal	2048944
15	Transit losses	K	%	1.0%
16	Coal Blend			
17	A) Indigenous Coal	X1	%	69.00%
18	B) Washed Coal	X2	%	0.00%
19	C) Imported Coal	X3	%	31.00%
20	Actual Oil Consumption	L=A x E	kl	840
21	Actual Coal Consumption	M=(J X 1000)/F	MT	452106
22	A) Indigenous Coal	Q1=M* x X1/(1-K)	MT	315104
23	B) Washed Coal	Q2=M* x X2 / (1-K)	MT	0
24	C) Imported Coal	Q3=M* X X3	MT	140152.86
25	Price of Coal			
26	A) Indigenous Coal	P1	Rs/MT	3385.00
27	B) Washed Coal	P2	Rs/MT	0.00
28	C) Imported Coal	P3	Rs/MT	5162
29	Price of Oil	P4	Rs/kl	30092
30	Coal cost			
31	A) Indigenous Coal	N1=Q1 X P1	Rs Lakh	10666
32	B) Washed Coal	N2=Q2 X P2	Rs Lakh	0
33	C) Imported Coal	N3=Q3 X P3	Rs Lakh	7235
34	Total Coal Cost	N4=N1+N2+N3	Rs Lakh	17901
35	Oil Cost	N5=P4 x L/10^5	Rs Lakh	253
36	Total Fuel Cost	O=N4 + N5	Rs Lakh	18154
37	Fuel Cost/Unit Gross	P=O/(A*10)	Rs/kWh	2.16
38	Fuel Cost/Unit Net	Q=O/(Y*10)	Rs/kWh	2.38
39	Cost of fuel/G.Cal	R=(O/H)*10^5	Rs/Gcal	882

Annexure 5.3

Approved Fuel costs for FY 2013-14

Fuel costs (Coal & Secondary Oil) - E Station

Sl.No.	Item	Derivation	Unit	2013-14
1	Gross Generation	A	MUs	854.94
2	Auxiliary Consumption	C	%	9.00%
3	Auxiliary Consumption	B = A * C	MUs	77
4	Net Generation	Y=A - B	MUs	778
5	Capacity	T	MW	120.00
6	PAF	U	%	0.00
7	PLF	V	%	81.33
8	Station Heat Rate	D	KCal/KWH.	2455.00
9	Sp. Oil Consumption	E	ml/kWh	1.00
10	Gross Calorific Value of Coal	F	kcal/kg	4532.00
11	Calorific value of Oil	G	kcal/l	9,909.00
12	Overall Heat	H=A x D	G Cal	2098877.7
13	Heat from Oil	I=(A x E x G)/1000	G Cal	8472
14	Heat from Coal	J=H-I	G Cal	2090406
15	Transit losses	K	%	1.0%
16	Coal Blend			
17	A) Indigenous Coal	X1	%	69.00%
18	B) Washed Coal	X2	%	0.00%
19	C) Imported Coal	X3	%	31.00%
20	Actual Oil Consumption	L=A x E	kl	855
21	Actual Coal Consumption	M=(J X 1000)/F	MT	461255
22	A) Indigenous Coal	Q1=M* x X1/(1-K)	MT	321481
23	B) Washed Coal	Q2=M* x X2 / (1-K)	MT	0
24	C) Imported Coal	Q3=M* X X3	MT	142988.94
25	Price of Coal			
26	A) Indigenous Coal	P1	Rs/MT	3385.00
27	B) Washed Coal	P2	Rs/MT	0.00
28	C) Imported Coal	P3	Rs/MT	5162
29	Price of Oil	P4	Rs/kl	30092.00
30	Coal cost			
31	A) Indigenous Coal	N1=Q1 X P1	Rs Lakh	10882
32	B) Washed Coal	N2=Q2 X P2	Rs Lakh	0
33	C) Imported Coal	N3=Q3 X P3	Rs Lakh	7381
34	Total Coal Cost	N4=N1+N2+N3	Rs Lakh	18263
35	Oil Cost	N5=P4 x L/10^5	Rs Lakh	257
36	Total Fuel Cost	O=N4 + N5	Rs Lakh	18520
37	Fuel Cost/Unit Gross	P=O/(A*10)	Rs/kWh	2.17
38	Fuel Cost/Unit Net	Q=O/(Y*10)	Rs/kWh	2.38
39	Cost of fuel/G.Cal	R=(O/H)*10^5	Rs/Gcal	882

Annexure 5.4

Approved Fuel costs for FY 2013-14

Fuel costs (Coal & Secondary Oil) - F Station

Sl.No.	Item	Derivation	Unit	2013-14
1	Gross Generation	A	MUs	868.50
2	Auxiliary Consumption	C	%	9.00%
3	Auxiliary Consumption	B = A * C	MUs	78
4	Net Generation	Y=A - B	MUs	790
5	Capacity	T	MW	120.00
6	PAF	U	%	0.00
7	PLF	V	%	82.62
8	Station Heat Rate	D	KCal/KWH.	2455.00
9	Sp. Oil Consumption	E	ml/kWh	1.00
10	Gross Calorific Value of Coal	F	kcal/kg	4532.00
11	Calorific value of Oil	G	kcal/l	9909.00
12	Overall Heat	H=A x D	G Cal	2132167.5
13	Heat from Oil	I=(A x E x G)/1000	G Cal	8606
14	Heat from Coal	J=H-I	G Cal	2123562
15	Transit losses	K	%	1.0%
16	Coal Blend			
17	A) Indigenous Coal	X1	%	69.00%
18	B) Washed Coal	X2	%	0.00%
19	C) Imported Coal	X3	%	31.00%
20	Actual Oil Consumption	L=A x E	kl	869
21	Actual Coal Consumption	M=(J X 1000)/F	MT	468571
22	A) Indigenous Coal	Q1=M* x X1/(1-K)	MT	326579
23	B) Washed Coal	Q2=M* x X2/(1-K)	MT	0
24	C) Imported Coal	Q3=M* X X3	MT	145256.86
25	Price of Coal			
26	A) Indigenous Coal	P1	Rs/MT	3385.00
27	B) Washed Coal	P2	Rs/MT	0.00
28	C) Imported Coal	P3	Rs/MT	5162
29	Price of Oil	P4	Rs/kl	30092
30	Coal cost			
31	A) Indigenous Coal	N1=Q1 X P1	Rs Lakh	11055
32	B) Washed Coal	N2=Q2 X P2	Rs Lakh	0
33	C) Imported Coal	N3=Q3 X P3	Rs Lakh	7498
34	Total Coal Cost	N4=N1+N2+N3	Rs Lakh	18553
35	Oil Cost	N5=P4 x L/10^5	Rs Lakh	261
36	Total Fuel Cost	O=N4 + N5	Rs Lakh	18814
37	Fuel Cost/Unit Gross	P=O/(A*10)	Rs/kWh	2.17
38	Fuel Cost/Unit Net	Q=O/(Y*10)	Rs/kWh	2.38
39	Cost of fuel/G.Cal	R=(O/H)*10^5	Rs/Gcal	882

Annexure 5.5

Approved Fuel costs for FY 2013-14

Fuel costs (Gas) - Vatva Gas Station

Sl.No	Item	Derivation	Unit	2013-14
1	Gross Generation	A	MUs	669.96
2	Auxiliary Consumption	C	%	3.00%
3	Auxiliary Consumption	B = A * C	MUs	20
4	Net Generation	Y=A - B	MUs	650
5	Capacity	T	MW	100.00
6	PLF	V	%	76.48
7	Station Heat Rate	D	KCal/KWH.	2165.00
8	Calorific value of Gas	F	kcal/MMBtu	252,000
9	Overall Heat from Gas	H=A x D	M KCal	1450463
10	Actual Gas Consumption	M=(H x 1000)/F	MMBtu	5755807
11	Price of Gas	P1	Rs./MMBtu	289.76
12	Cost of Gas	N=P1 x M/10^5	Rs. Lakh	16678
13	Total Fuel Cost	N	Rs. Lakh	16678
14	Fuel Cost/Unit Gross	P=N/(A*10)	Rs./kWh	2.49
15	Fuel Cost/Unit Net	Q=N/(Y*10)	Rs./kWh	2.57
16	Cost of fuel/G.Cal	R=(N/H)*10^5	Rs./Gcal	1149.84

6. Compliance of Directives

6.1 Compliance of Directives issued by the Commission

The Commission in its Tariff order dated 2nd June 2012 had issued a directive to TPL-G (APP). TPL-G (APP) has submitted the compliance report on the directive issued by the Commission. The comment of the Commission on the submission of compliance of the TPL-G (APP) is given below.

Directive:

TPL-G (APP) is directed to submit separate details of fixed costs for Sabarmati station and Vatva station in the ensuring year's ARR, i.e. FY 2013 -14 and onwards.

Compliance of TPL-G (APP):

TPL-G (APP) has noted the directive and would comply with the same in truing up exercise.

Commission's view:

Separate details of fixed costs for Sabarmati and Vatva stations to be submitted in the truing up of FY 2012-13 positively.

COMMISSION'S ORDER

The Commission reiterates the Aggregate Revenue Requirement for FY 2013-14 as approved in MYT Order dated 6th September, 2011 for TPL-G (APP) as shown in the table below:

Approved ARR for TPL-G (APP) for FY 2013-14

(Rs. Crore)

Sl. No.	Particulars	FY 2013-14
1	Variable Charges	827.60
2	O&M Expenses	147.82
3	Water Charges	8.59
4	Depreciation	54.48
5	Interest on Loan	33.83
6	Interest on Working Capital	14.33
7	Return on Equity	66.08
8	Income Tax	26.45
9	Less: Non-tariff Income	14.18
10	**Net ARR**	**1165.00**

This order shall come into force with effect from the 1st April, 2013.

Sd/-	Sd/-	Sd/-
DR. M.K. IYER	**SHRI PRAVINBHAI PATEL**	**DR. P.K. MISHRA**
Member	Member	Chairman

Place: Ahmedabad
Date: 16/04/2013