GUJARAT ELECTRICITY REGULATORY COMMISSION

Tariff Order

Truing up for FY 2012-13 and

Determination of Tariff for FY 2014-15

For

Torrent Power Limited - Generation Ahmedabad

Case No. 1378 of 2013

29th April 2014

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(GERC)

GANDHINAGAR

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ABBREVIATIONS

A&G	Administration and General Expenses
ARR	Aggregate Revenue Requirement
CAPEX	Capital Expenditure
CERC	Central Electricity Regulatory Commission
Control Period	FY 2011-12 to FY 2015-16
DGVCL	Dakshin Gujarat Vij Company Limited
DISCOM	Distribution Company
EA	Electricity Act, 2003
EHV	Extra High Voltage
FPPPA	Fuel and Power Purchase Price Adjustment
FY	Financial Year
GEB	Gujarat Electricity Board
GERC	Gujarat Electricity Regulatory Commission
GETCO	Gujarat Energy Transmission Corporation Limited
GFA	Gross Fixed Assets
GoG	Government of Gujarat
GSECL	Gujarat State Electricity Corporation Limited
GUVNL	Gujarat Urja Vikas Nigam Limited
HT	High Tension
JGY	Jyoti Gram Yojna
kV	Kilo Volt
kVA	Kilo Volt Ampere
kVAh	Kilo Volt Ampere Hour
kWh	Kilo Watt Hour
LT	Low Tension Power
MGVCL	Madhya Gujarat Vij Company Limited
MU	Million Units (Million kWh)
MW	Mega Watt
MYT	Multi-Year Tariff
O&M	Operations & Maintenance
p.a.	Per Annum
PF	Power Factor
PGCIL	Power Grid Corporation of India Limited
PGVCL	Paschim Gujarat Vij Company Limited
PPA	Power Purchase Agreement
R&M	Repair and Maintenance
RLDC	Regional Load Despatch Centre
SBI	State Bank of India
SLDC	State Load Despatch Centre
UGVCL	Uttar Gujarat Vij Company Limited
WRLDC	Western Regional Load Despatch Centre

Before the Gujarat Electricity Regulatory Commission at Gandhinagar

Case No. 1378 of 2013

Date of the Order: 29/04/2014

CORAM

Shri Pravinbhai Patel, Chairman

Dr. M. K. Iyer, Member

ORDER

1. Background and Brief History

1.1 Background

Torrent Power Limited (hereinafter referred to as TPL or the petitioner) has filed petition under Section 62 of the Electricity Act, 2003, read in conjunction with Gujarat Electricity Regulatory Commission (Multi-Year Tariff) Regulations, 2011, for the True-up of FY 2012-13, and for determination of tariff for its generation business at Ahmedabad for the FY 2014-15 on 2nd December 2013.

The Commission admitted the Petition on 4th December, 2013.

1.2 Torrent Power Limited (TPL)

The Torrent Power Limited (TPL) is a company incorporated under the Companies Act, 1956 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 a Combined Cycle Power Plant (CCPP) of 1147.5 MW (SUGEN) capacity near Surat out of which a share of 835 MW. The generation facilities at Ahmedabad consist of a 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 GERC (MYT) Regulations, 2011. The Commission issued the following Orders on the dates shown against each:

- For truing up for FY 2010-11 and Tariff determination for FY 2012-13 on 2nd June, 2012.
- For truing up for FY 2011-12 and Tariff determination for FY 2013-14 on 16th April, 2013.

1.4 Admission of the Current Petition and Public Hearing Process

TPL has submitted the current Petition for ”truing up‟ of FY 2012-13 and determination of tariff for FY 2014-15 on 2nd December 2013. The Commission admitted the Petition (Case No. 1378/2013) on 4th December 2013.

In accordance with section 64 of the Electricity Act, 2003, the Commission directed TPL to publish its application in an abridged form to ensure public participation. The Public Notice, inviting objections / suggestions from its stakeholders on the petition filed by it, was published in the following newspapers on 11th December, 2013.

Sl. No.	Name of the Newspaper	Language	Date of Publication
1	The Times of India	English	11.12.2013
2	Divya Bhaskar	Gujarati	11.12.2013

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 10th January, 2014.

The Commission received objections / suggestions from 5 stakeholder. The Commission examined the objections / suggestions received and fixed the date for public hearing for the petition on 21st February, 2014 at the Commission’s Office, Gandhinagar, and subsequently a communication was sent to the objectors to take part in the public hearing process for presenting their views in person before the Commission. The public hearing was conducted in the Commission’s Office at Gandhinagar as scheduled on the above date.

The names of the stakeholders who filed their objections and the objectors who participated in the public hearing for presenting their objections are given below:

Sl. No.	Name of Stakeholders	Participated in the Public Hearing
1	CERS - Consumer Education and Research Society	Yes
2	Gandhinagar Shaher Vasahat Mahamandal	Yes
3	Shri Amarsinh Chavda	No
4	Utility Users' Welfare Association (UUWA)	Yes
5	Socialist Unity Centre of India (Communist) [SUCI(C)]	Yes

A short note on the main issues raised by the objector in the submissions in respect to the Petition, along with the response of TPL-G (APP) and the Commission's views on the response, are briefly 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 for FY 2012-13.

5. The fifth chapter deals with the determination of tariff for FY 2014-15.

6. The sixth chapter deals with compliance of directives and issue of fresh directives.

1.6 Approach of this Order

The GERC (MYT) Regulations, 2011, provide for truing up of the previous year, and determination of tariff for the ensuing year. The Commission has approved the ARR for the two 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" for the FY 2011-12 in the Tariff Order dated 16th April, 2013.

TPL has approached the Commission with the present petition for "truing up" for the FY 2012-13 and determination of Tariff for FY 2014-15, under GERC (MYT) Regulations, 2011.

The Commission has undertaken truing up for the FY 2012-13, including computation of gains and losses for the FY 2012-13, based on the submissions of the petitioner and the audited annual accounts made available by the petitioner.

While truing up for 2012-13, the Commission has been primarily guided by the following principles:

1. Controllable parameters have been considered at the level 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 2012-13 has been considered, based on the GERC (MYT) Regulations, 2011. For determination of the ARR for FY 2014-15, the Commission has considered the ARR for FY 2014-15, as approved in the Mid -term Review Order.

2. A Summary of TPL's Petition

2.1 Actuals for FY 2012-13 submitted by TPL – G (APP)

Torrent Power Limited (TPL) submitted the current petition seeking approval of True-up for ARR of FY 2012-13. 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 2012-13

(Rs. Crore)

Sl. No.	Particulars	MYT Order	Actuals FY 2012-13
1	Fuel Cost (Variable Cost)	774.17	931.49
2	O&M Expense		120.06
2.1	Employee Cost		55.93
2.2	R&M Cost	139.82	45.96
2.3	A&G Cost		18.17
3	Water Charges	8.59	8.37
4	Depreciation	45.23	30.76
5	Interest Cost on Long-Term Capital Loans	26.05	8.52
6	Interest on Working Capital	13.02	19.65
7	Return on Equity	58.70	46.14
8	Income Tax	26.45	18.51
9	Incentive	-	12.47
10	Less: Non-Tariff Income	14.18	22.71
11	**Annual Revenue Requirement**	**1077.85**	**1173.27**

2.2 Revised Estimate for FY 2014-15

TPL, in its petition, has also furnished the ARR approved in MYT Order and revised estimates of FY 2014-15 which are given in the Table below, based on the Mid-term Review Petition.

Table 2.2: Revised ARR of TPL-G (APP) for FY 2014-15

(Rs. Crore)

Sl. No.	ARR	MYT Order	Revised Estimate for FY 2014-15
1	Variable Cost	673.06	932.12
2	O&M Expense	156.28	153.78
3	Water Charges	8.59	9.28
4	Depreciation	51.48	49.94
5	Interest on Loan	29.29	41.05
6	Interest on Working Capital	12.14	20.70
7	Return on Equity	64.63	63.88
8	Income Tax	26.45	18.51
9	Less: Non-Tariff Income	14.18	12.00
10	**Total**	**1007.74**	**1277.26**

2.3 TPL's request to the Commission:

a) Admit the petition for truing up for FY 2012-13 and determination of tariff for FY 2014-15

b) Approve the ARR of FY 2012-13, as per the final truing up.

c) Approve the sharing of gains / (losses) proposed for FY 2012-13.

d) Approve ARR for FY 2014-15, based on the Mid-term Review Petition.

e) Allow recovery of the costs, as per the Judgements of the Hon'ble Tribunal on the Appeals filed by the Petitioner.

f) Allow the petitioner to make additions / alterations / changes / modifications to the application at a future date.

g) 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.

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

i) Condone any inadvertent omissions / errors / rounding off difference / shortcomings.

3. Brief outline of Objections Raised, Response from TPL-G and the Commission's View

3.0 Public Response to Petition

In response to the public notice inviting objections/suggestions from stakeholders on the Petition filed by TPL for Truing up of FY 2012-13 and determination of Tariff for FY 2014-15 a number of Consumers/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 the consumer/consumers organizations, the response from the Petitioner and the view of the Commission are as given below:

3.1 Performance in FY 2012-13

Objection

The non-availability of gas and Poor Plant Load Factor of 100 MW gas based Vatva Plant is a matter of concern. This has compelled Petitioner to buy power from external sources. It is surprising to note that Petitioner has not signed any long tern or Short-Term Power Purchase Agreement and depends on power purchase from market.

Burden of Low PLF (14.29%) of Vatva plant has put burden on consumers and therefore Petitioner should be directed to find out other sources for procurement of gas to run Vatva Plant at least above 50% PLF.

Response of TPL

The allocation of gas by the Government to Vatva Plant has been reduced considerably in FY 2012-13 and from March 2013 the allocation is reduced to zero due to reduction in availability of gas in KG basin. Further, as the cost of using RLNG was higher, the Petitioner has decided not to run the plant using RLNG. This has resulted into lower generation at Vatva station and in turn, resulted into lower PLF. Regarding the Objector's contention that the Petitioner has not signed any power purchase agreements; the Petitioner would like to submit that it had signed the Short-Term power purchase agreements during the FY 2012-13 duly approved by the

Commission. It may further be noted that the Petitioner makes necessary Short-Term arrangement for purchase of power to cater to the demand of its consumers in addition to the existing long term arrangement.

Commission's View

The Commission agrees with the response of the Petitioner. The Vatva generation facilities any how are retired from FY 2014-15 onwards.

3.2 Increased ARR in FY 2012-13

Objection

The Respondent objects to increase in ARR for FY 2012-13 by Rs. 95.42 Crore which amounts to 8.85% of approved ARR by Commission. Large amount has increased due to uncontrollable factors. There is hardly any gain to consumers due to controllable factors.

Response of TPL

True-up of FY 2012-13 has been proposed based on the actual performance of the business as per the GERC (MYT) Regulations, 2011. The segregation of under recovery and attribution of variation to controllable & uncontrollable factors has been done with respect to the approved estimates for FY 2012-13 in accordance with the provisions the GERC (MYT) Regulations, 2011. The sharing mechanism of gains & losses on account of controllable and uncontrollable factors has also been defined in the MYT Regulations. The same has been followed by the Petitioner.

Commission's View

The Commission approves the true-up ARR for FY 2012-13 according to the GERC (MYT) Regulations, 2011 after prudence check of all expenditure items.

3.3 Fall in Generation, compared to earlier years

Objection

TPL-G's generation has reduced compared to past years and despite that it has claimed incentive. The Commission should disallow it.

Response of TPL

The Petitioner has detailed the reason for variation in the generation level in its petition. Further, the Petitioner has claimed incentive in accordance with the provisions of GERC (MYT) Regulations, 2011.

Commission's View

The incentive is approved according to the provisions of GERC (MYT) Regulations, 2011.

3.4 Incentive not to be allowed

Objection

The Commission is requested not to allow incentive to TPL-G as it 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.

Response of TPL

Detailed reasons are given for variation in the PAF for FY 2012-13 in the petition. Further, the incentive is claimed in accordance with the provisions of GERC (MYT) Regulations, 2011.

Commission's View

The incentive is allowed according to the provisions of GERC (MYT) Regulations, 2011.

3.5 Lower PLF

Objection

The Commission is requested not to allow recovery of full cost as the PLF for TPL-G (APP) is 67.84% against the approved trajectory of 74.95%.

Response of TPL

The GERC (MYT) Regulation, 2011 has linked the recovery of annual fixed cost with the PAF and not with the PLF.

Commission's View

The Commission agrees with the response of the Petitioner.

3.6 TPL-G generation cost is compared with that of GSECL

Objection

Comparing TPL's generation cost with the generation cost of GSECL, it is seen that the Energy charge rate of TPL-G is higher.

Response of TPL

The comparison drawn by the Objector is incorrect since the size and vintage of the generating stations of the Petitioner and GSECL are different. In terms of performance parameters like PAF, SHR, Aux and Secondary Fuel Consumption, the Petitioner's generating stations are amongst the best in its category of similarly situated generating plants.

Commission's View

The response of the petitioner is noted.

3.7 Delay in up-rating program of E and F stations

Objection

There is the delay in uprating program of E and F stations which is a matter of concern.

Response of TPL

The Petitioner has already clarified in the past that there was a delay in response from the OEM. Therefore, the uprating of F station was initiated in FY 2012-13. However, the plant shutdown to carry out the work for uprating was delayed due to delay in turbine assembly work for matching old components with new components. The unit has now been synchronized with the grid after completion of uprating and modernization in FY 2013-14. Further, since the uprating work of F station was underway, the uprating of E station was deferred to FY 2013-14.

Commission's View

The Commission has noted the response of the petitioner.

3.8 Station Wise Fuel Costs

Objection

The Petitioner has not provided the station wise fuel cost details.

Response of TPL

The Petitioner has provided separate details of both the stations i.e. Sabarmati Station and Vatva Station. Further, the Petitioner submits that it has filed the petition in accordance with the provisions of Section 62 and 64 of the Electricity Act, 2003 read with the GERC (MYT) Regulations, 2011.

Commission's View

The station wise fuel costs are provided as additional information.

3.9 Providing details of projections of variable and Fixed Costs for FY 2014-15

Objection

The Commission is requested to direct the Petitioner to provide the details of projections of Variable as well as fixed cost component of FY 2014-15.

Response of TPL

The Petitioner has furnished all the details of projections of Variable as well as fixed cost component in its petition for Mid-term review filed before the Commission vide Case no 1368/2013 in accordance with the provisions of GERC (MYT) Regulations, 2011.

Commission's View

The response of the petitioner is noted.

3.10 Calorific value and Transit Loss of Coal

Objection

The Petitioner is careless regarding the Calorific Value (CV) of coal and should procure coal with higher CV. The transit loss of 5% should be reduced.

Response of TPL

The Petitioner is procuring coal from M/s SECL, the subsidiary of CIL. The fuel supply agreement (FSA) signed with CIL is the standard agreement applicable across the sector. As per the FSA, the Joint sampling of coal at the receiving end has been abolished. Further, the sampling of coal at loading end is not yielding the desired result. This has resulted in deterioration in the quality of coal being received. Due to steep rise in the coal prices of A & B grade, the Petitioner has been forced to procure the Grade C and D coal. This has resulted in the deterioration of calorific value of coal.

With respect to the issue of Transit Loss, the Petitioner would like to submit that it has been making all its efforts to contain the transit loss. In this endeavour, it has reduced the transit loss from one time high of 8% to present 1.99% in FY 2012-13. It has been already brought to the notice of the Commission that the Petitioner has been outperforming in most of the operational efficiency parameters being one of the efficient utility. The reduction in the coal transit loss to current levels has become possible only due to the consistent efforts made by the Petitioner.

Commission's View

The response of the Petitioner is noted.

4. Truing up for FY 2012-13

This chapter of the Order deals with the truing up for FY 2012-13 for TPL-Generation, Ahmadabad.

The Commission has studied and analysed each component of the ARR for the FY 2012-13 in the succeeding 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 a 400 MW coal-based thermal power plant at Sabarmati and a 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 the balance from other sources.

The generation cost of the SUGEN Plant is decided by CERC and shall be taken as the 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 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, 2012, 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, 2012

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)	51

Name of the Station	Capacity in MW	Year of COD	Age / Years
D Station	1 X 120 MW	1978/2004* *(Up-rating capacity)	34
E Station	1 X 110 MW	1984	28
F Station	1 X 110 MW	1988	24
Vatva Combined Cycle Gas based Power Plant			
Gas turbine	2 X 32.5 MW	1990 & 1991	22
Steam Turbine	1 X 35 MW	1991	21

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), and (ii) cost parameters, such as Gross Calorific Value of the 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 transit loss of coal for FY 2012-13 for the individual stations. The Commission has taken up the truing up of the annual performance parameters for FY 2012-13, 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 2012-13. The PAF approved in the MYT Order dated 6th September, 2011 and 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 2012-13

(%)

Sl. No	Station	Approved for FY 2012-13 In MYT order	Actuals for FY 2012-13
A	**Sabarmati**		
1	C Station	97.50	95.78
2	D Station	97.50	94.24
3	E Station	75.30	95.62
4	F Station	75.30	66.18
B	**Vatva Gas Station**	95.10	99.58

TPL has submitted as follows:

- The availability of almost all the generating units, except F Station, remained above 94% for FY 2012-13. The major variation has been observed in F Station, where the up-rating and modernisation work was carried out in FY 2012-13, resulting in lower PAF for FY 2012-13. The balance work has been completed in FY 2013-14.

- With respect to the variation in actual and approved PAF for E Station, the up-rating and modernisation work of this Station has been deferred from FY 2012-13 to FY 2013-14, as up-rating and modernisation work for F station was under way. This has resulted in reduction in the annual planned shutdown days for E Station, which, has in turn, resulted in higher PAF.

- For Vatva CCPP, though allocation of gas was reduced by the Government due to lower availability of domestic gas from KG basin, the plant was available during FY 2012-13.

- The actual availability of units has been computed, considering the annual planned shutdown and the forced outages of the units during FY 2012-13.

Commission's Analysis

It is found in the analysis that the PAF level is lower than the approved levels mentioned in the MYT Order in respect of C, D and F stations. 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. Since the actual PAF for all the stations of TPL, except F Station, has been more than 85%, they are eligible for recovery of fixed charges, as per GERC (MYT) Regulations, 2011. In the case of F Station, the PAF is substantially lower than that approved in the MYT Order.

The Commission considers the Plant Availability Factor for various stations, as in the MYT order dated 6th September, 2011, for FY 2012-13, for truing up purpose, since this is a controllable parameter.

Hence, for the purpose of truing up for the FY 2012-13, the PAF level is considered is as given in the Table below:

Table 4.3: Plant Availability Factor of TPL-G (APP) Considered for truing up for FY 2012-13

(%)

Sl. No	Stations	Approved for FY 2012-13 in MYT Order	Actuals for FY 2012-13	Considered for truing up for FY 2012-13
A	**Sabarmati**			
1	C Station	97.50	95.78	97.50

Sl. No	Stations	Approved for FY 2012-13 in MYT Order	Actuals for FY 2012-13	Considered for truing up for FY 2012-13
2	D Station	97.50	94.24	97.50
3	E Station	75.30	95.62	75.30
4	F Station	75.30	66.18	75.30
B	**Vatva Gas Station**	95.10	99.58	95.10

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 2012-13.

The PLF approved in the MYT Order dated 6th September, 2011 and 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 2012-13

(%)

Sl. No	Station	Approved for FY 2012-13 in MYT order	Actuals for FY 2012-13
A	**Sabarmati**		
1	C Station	80.18	86.06
2	D Station	85.41	90.33
3	E Station	64.25	87.67
4	F Station	65.77	62.21
B	**Vatva Gas Station**	81.88	14.29

TPL has submitted that the PLF for CCPP Vatva Station is substantially lower, as compared to the approved PLF of the MYT Order on account of reduction in allocation of gas by the Government due 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 F Station and substantial reduction for CCPP Vatva station. For the C, D & E Stations, the PLF achieved is more than that approved in the MYT Order. The PLF of F Station is less, as up-rating and modernisation work was being undertaken in the Unit.

The Commission considers the Plant Load Factor for various stations at actuals for FY 2012-13, for truing up purposes, as it is an uncontrollable parameter.

Table 4.5: Plant Load Factor of TPL-G (APP) Considered for truing up for FY 2012-13

(%)

Sl. No	Stations	Approved for FY 2012-13 in MYT Order	Actuals for FY 2012-13	Considered for truing up for FY 2012-13
A	**Sabarmati**			
1	C Station	80.18	86.06	86.06
2	D Station	85.41	90.33	90.33
3	E Station	64.25	87.67	87.67
4	F Station	65.77	62.21	62.21
B	**Vatva Gas Station**	81.88	14.29	14.29

4.2.3 Auxiliary Consumption

Petitioner's Submission

The TPL has submitted the actuals of auxiliary consumption of different stations for FY 2012-13.

The auxiliary consumption approved in the MYT Order dated 6th September, 2011, and 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 2012-13

(%)

Sl. No	Station	Approved for FY 2012-13 in MYT Order	Actuals for FY 2012-13
A	**Sabarmati**		
1	C Station	9.50	9.80
2	D Station	9.00	8.91
3	E Station	9.00	9.30
4	F Station	9.00	9.83
B	**Vatva Gas Station**	3.00	5.30

TPL has submitted that it has made substantial efforts to maintain the auxiliary consumption at the approved level, but the auxiliary consumption is at a higher level than that approved due to the following reasons;

a) Change in the grade of coal at Sabarmati

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

Further, TPL has to operate its plants at a lower level during the lower demand hours. This has resulted in the increase in percentage Auxiliary Consumption.

b) Lower availability of Gas at Vatva

Due to lower availability of allocated gas at Vatva generating station, the plant was operated on partial loading. This has resulted in higher auxiliary consumption.

However, in the present Petition for the purpose of quantification of gains / losses, the TPL has considered the entire variation in Auxiliary Consumption as a 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, except for the D station, the actual Auxiliary Consumption is more than that approved in the MYT Order.

The Commission approves the auxiliary consumption for various stations, as approved in the MYT Order dated 6th September, 2011 for FY 2012-13, 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 2012-13 is given in Table below:

Table 4.7: Auxiliary Consumption of TPL-G (APP) Approved for truing up for FY 2012-13

(%)

Sl. No	Stations	Approved for FY 2012-13 in MYT Order	Actuals for FY 2012-13	Approved for truing up for FY 2012-13
A	**Sabarmati**			
1	C Station	9.50	9.80	9.50
2	D Station	9.00	8.91	9.00
3	E Station	9.00	9.30	9.00
4	F Station	9.00	9.83	9.00
B	**Vatva Gas Station**	3.00	5.30	3.00

4.2.4 Station Heat Rate (SHR)

Petitioner's submission

TPL has furnished the actual SHR attained for different stations during FY 2012-13. The station heat rate approved in the MYT Order dated 6th September, 2011 and 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 2012-13

(kCal / kWh)

Sl. No	Station	Approved for FY 2012-13 in MYT order	Actuals for FY 2012-13
A	**Sabarmati**		
1	C Station	3150	3130
2	D Station	2450	2420
3	E Station	2725*	2724
4	F Station	2705*	2698
B	**Vatva Gas Station**	2165	2321

*Approved SHR prior to up rating and modernisation

TPL has submitted that the Commission approved SHR for E Station, considering the improvement in heat rate, due to up rating and modernisation of E Station during FY 2012-13. However, the up rating and modernisation activity has been deferred from FY 2012-13 to FY 2013-14. Therefore, the actual SHR of E station is to be compared with the approved SHR prior to up rating and modernisation.

For F Station, the plant shutdown was delayed due to delay in turbine assembly work for matching old components with new components and the Unit was re-synchronised with the grid after completion of up rating and modernisation in FY 2013-14. Thus, F Station remained in operation during the initial part of FY 2012-13, i.e. prior to up rating and modernisation. Therefore, the actual SHR has to be compared with the approved SHR, prior to the up rating and modernisation.

With regard to Vatva, due to the lower availability of allocated gas by the Central Government, the plant was operated at partial load. This has resulted in higher SHR than that approved.

Commission's Analysis

The Commission had actually approved the SHR of 2590 Kcal/kWh and 2668 Kcal / kWh for E and F Stations for FY 2012-13 considering the R&M envisaged. But, as submitted by TPL due to various reasons R&M could not be done. Hence, the Commission approves SHR at the level of the approved SHR prior to R&M as requested by TPL.

For the purpose of True-up for FY 2012-13, the Commission approves the SHR as given in the Table below:

Table 4.9: Station Heat Rate Approved for truing up for FY 2012-13

(kCal / kWh)

Sl. No.	Stations	Approved for FY 2012-13 in MYT order	Actuals for FY 2012-13	Approved for truing up for FY 2012-13
A	**Sabarmati**			
1	C Station	3150	3130	3150
2	D Station	2450	2420	2450
3	E Station	2590	2724	2725
4	F Station	2668	2698	2705
B	**Vatva Gas Station**	2165	2321	2165

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 2012-13.

The Secondary Fuel Oil Consumption approved in the MYT Order dated 6th September, 2011 and 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 2012-13

(ml/ kWh)

Sl. No	Station	Approved for FY 2012-13 in MYT Order	Actuals for FY 2012-13
A	**Sabarmati**		
1	C Station	2.00	1.16
2	D Station	1.00	0.36
3	E Station	1.00	0.44
4	F Station	1.00	0.44

Commission's Analysis

The actual Secondary Fuel Consumption (SFC), as submitted by TPL for FY 2012-13, is much lower than the SFC approved by the Commission in the MYT order dated 6th September, 2011 for all stations.

Since 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 2012-13.

Accordingly, the SFC approved for FY 2012-13, for truing up purpose, is given in the Table below:

Table 4.11: Secondary Fuel Oil Consumption Approved for truing up for FY 2012-13

(ml/ kWh)

Sl. No.	Stations	Approved for FY 2012-13 in MYT Order	Actuals for FY 2012-13	Approved for truing up for FY 2012-13
A	**Sabarmati**			
1	C Station	2.00	1.16	2.00
2	D Station	1.00	0.36	1.00
3	E Station	1.00	0.44	1.00
4	F Station	1.00	0.44	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 2012-13.

The transit loss of coal approved in the MYT Order dated 6th September, 2011 and 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 2012-13

(%)

Sl. No	Station	Approved for FY 2012-13 in MYT Order	Actuals for FY 2012-13
1	All coal- based stations	1.20	1.99

TPL has submitted as follows:

- Even this much reduction in transit loss has been possible due to continuous efforts made by TPL to contain the transit losses and hence it has reduced from a one time high of 8% to 1.99% in FY 2012-13. TPL has undertaken various pro-active steps in this regard. These include: constant follow up at the loading end with the site in-charge, security agency and supervisor, along with regular follow up with M/s SECL.

- TPL has apprised the Commission of its efforts in its earlier submissions. However, it is pertinent to mention that there are various uncontrollable factors, due to which transit loss is still higher. Hence, further reduction is beyond the control of TPL.

- TPL submits that it has considered the transit loss as a controllable parameter in its calculations, as per GERC (MYT) Regulations, 2011. However, it requests the Commission to kindly consider the transit loss as uncontrollable, due to the factors beyond its (TPL's) control.

Commission's Analysis

Keeping in view the historical data, the Commission has prescribed the trajectory for higher transit loss in GERC (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 2012-13 is approved, as given in the Table below:

Table 4.13: Transit loss approved for truing up for FY 2012-13

(%)

Sl. No.	Stations	Approved for FY 2012-13 in MYT Order	Actuals for FY 2012-13	Approved for truing up for FY 2012-13
1	All coal- based stations	1.20	1.99	1.20

4.2.7 Summary of Performance Parameters Approved for truing up for FY 2012-13

Based on the analysis in the preceding paragraphs, the performance parameters approved for different power generation stations of TPL-G (APP) for the FY 2012-13, 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 2012-13

Sl. No	Station	PAF (%)	PLF (%)	Auxiliary Consumption (%)	SHR (Kcal/kWh)	Secondary oil Consumption (ml / kWh)	Transit loss of coal (%)
A	**Sabarmati**						
1	C Station	97.50	86.06	9.50	3150	2.00	1.20
2	D Station	97.50	90.33	9.00	2450	1.00	1.20
3	E Station	75.30	87.67	9.00	2725	1.00	1.20
4	F Station	75.30	62.21	9.00	2705	1.00	1.20
B	**Vatva Gas Station**	95.10	14.29	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 2012-13, are given in the Table below:

Table 4.15: The Gross and Net Generation of Power for truing up for FY 2012-13

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	452.34	9.80	44.31	408.02	452.34	9.50	42.97	409.37
2	D Station	949.51	8.91	84.62	864.89	949.51	9.00	85.46	864.05
3	E Station	844.76	9.30	78.59	766.17	844.76	9.00	76.03	768.73
4	F Station	599.43	9.83	58.91	540.53	599.43	9.00	53.95	545.48
B	**Vatva Gas Station**	**125.19**	**5.30**	**6.63**	**118.56**	**125.19**	**3.00**	**3.76**	**121.43**
	Total	**2971.24**		**273.07**	**2698.17**	**2971.23**		**262.17**	**2709.06**

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 the base fuel. A mix of indigenous and imported coal is used in these stations, except C station.

The Vatva Gas Station (CCPP) is run by gas as the 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 2012-13:

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 2012-13, 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 2012-13

Particulars	Calorific Value
Wt. Av. GCV of Indigenous coal (kcal / kg)	3794
Wt. Av. GCV of Imported coal (kcal / kg)	4995
Wt. Av. GCV of secondary fuel oil (kcal / L)	9941

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 21st January, 2014, wherein the details of fuel consumption and cost for each station were furnished. From these details, the Wt. Av. GCV of fuel consumed in each power station is as given in the Table below:

Table 4.17: Wt. Av. Calorific Value (CV) of Fuels for Different Stations for FY 2012-13

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	3782.47	9955.69	
2	D Station	4328.14	9934.29	
3	E Station	4249.00	9940.61	
4	F Station	4288.11	9919.22	
B	**Vatva Gas Station**			2,52,000.00

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 2012-13, as given in the Table below:

Table 4.18: The Mix of Different Types of Coal for FY 2012-13*

Sl. No.	Station	Indigenous coal %	Imported coal %
A	**Sabarmati**		
1	C Station	100.00	0.00
2	D Station	56.54	43.46
3	E Station	62.29	37.71
4	F Station	58.07	41.93

Note: The mix of coal for different stations is as per the additional information furnished by TPL vide its letter dated 21st January, 2014.

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 2012-13, as given in the Table below:

Table 4.19: Wt. Av. Price / Unit of Fuels for FY 2012-13 (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	3850.92	6591.08	43509.73	
2	Vatva Gas station				450.91

In its communication dated 20th January, 2014, TPL has furnished the actual Wt. Av. cost / MT of different fuels for different stations for FY 2012-13, as given in the Table below:

Table 4.20: Av. Price / Unit of Fuels for FY 2012-13 (Actuals) for Different Stations

Sl. No.	Station	Av. Price of Indigenous coal (Rs. /MT)	Av. Price of Imported coal (Rs. /MT)	Av. Price of Secondary oil (Rs. /kL)	Av. Price of Gas (Rs./MMBTU)
A	**Sabarmati**				
1	C Station	3810.46	-	47219.79	-
2	D Station	3822.69	6210.88	41651.06	-
3	E Station	3812.26	6204.56	40772.11	-
4	F Station	3781.50	6411.19	42394.51	-
B	**Vatva Gas Station**	-	-	-	450.91

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 individual stations are considered for truing up purpose for FY 2012-13, as these 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 as given in the Table below:

Table 4.21: Fuel Cost of TPL-G (APP) for truing up for FY 2012-13

Sl. No.	Stations	As per actual submitted by TPL				Approved by the Commission			
		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	452.34	408.02	149.07	3.653	452.34	409.37	150.23	3.67
2	D Station	949.51	864.89	272.65	3.152	949.51	864.05	276.72	3.20
3	E Station	844.76	766.17	270.23	3.527	844.76	768.73	270.65	3.52
4	F Station	599.43	540.53	187.56	3.471	599.43	545.48	188.39	3.45
B	**Vatva Gas Station**	125.19	118.56	51.99	4.385	125.19	121.43	48.5	3.99
	Total	**2971.23**	**2698.17**	**931.50**	**3.452**	**2971.23**	**2709.06**	**934.48**	**3.449**

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 the normative fuel cost for the purpose of computing the gains/losses, due to the controllable factors.

The actual fuel costs of all the stations of TPL are more than the normative costs.

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

The comparison between the fuel costs of all stations put together, as per audited annual accounts for FY 2012-13 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 2012-13

(Rs. Crore)

Particulars	As per actuals	Approved for FY 2012-13
Total Fuel Cost	931.50	931.50

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

TPL has arrived at the fuel expenses incurred for FY 2012-13, 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 2012-13

(Rs. Crore)

Sl. No.	Station	Fuel cost arrived at with approved parameters for actual net generation for FY 2012-13*	Actual fuel cost approved for truing up for FY 2012-13	Gains / (Losses) due to controllable factors
A	**Sabarmati**			
1	C Station	149.74	149.07	0.67
2	D Station	267.98	272.65	(4.67)
3	E Station	269.75	270.23	(0.48)
4	F Station	188.68	187.56	1.12
B	**Vatva Gas Station**	47.35	51.99	(4.64)
	Total	**921.50**	**931.50**	(8.00)

**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. 120.06 Crore as O&M expenses. The expenses consist of Rs. 55.93 Crore on employee cost, Rs. 45.96 Crore on R&M expense and Rs. 18.17 Crore on A&G expense, as against Rs. 139.82 Crore of composite O&M expenses approved for FY 2012-13 in the MYT Order.

Petitioner's submission

TPL has submitted that the O&M expenses of TPL- G (APP) are lower than approved due to:

(a) Transfer of certain manpower from Generation to Distribution and due to lower recruitment against the vacancies arising out of retirement of officers and staff. However, TPL is making all efforts to recruit the skilled man power to maintain high level of operations.

(b) Non-Execution of certain activities resulted in lower R&M and A&G Expenses, since the main focus was on major work of F Station up rating and modernisation.

TPL has claimed a sum of Rs. 120.06 Crore towards actual O&M expenses in the truing up for FY 2012-13, as shown in Table below:

Table 4.24: O&M Expenses of TPL-G (APP) Claimed for FY 2012-13

(Rs. Crore)

Sl. No.	Particulars	Actual claimed in truing up for FY 2012-13
1	Employee Cost	55.93
2	R&M Expenses	45.96
3	A&G Expenses	18.17
4	**Total O&M Expenses**	**120.06**

Commission's Analysis

The Commission had approved the O&M expenses of Rs. 139.82 Crore as a composite expense for FY 2012-13 in the MYT Order dated 6th September 2011. However, TPL has split the O&M expenses component-wise, viz., Employee cost, R&M expenses and A&G expenses. Further, TPL also claimed part variation in O&M expenses as uncontrollable. However, in accordance with the provisions of Regulation 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 have been verified with the audited annual accounts.

The Commission, accordingly, approves the O&M expenses at Rs. 120.06 Crore, as claimed by the Petitioner for truing up for FY 2012-13.

The O&M expenses and the Gains / (Losses) approved in the truing up for FY 2012-13 are given in the Table below:

Table 4.25: O&M Expenses and Gains / (Losses) Approved in truing up for FY 2012-13

(Rs. Crore)

Particulars	Approved for FY 2012-13 in MYT Order	Approved in truing up for FY 2012-13	Deviation + / (-)	Gains / (Losses) due to Controllable factor	Gains / (Losses) due to uncontrollable factor
O&M Expense	139.82	120.06	19.76	19.76	-

4.6.2 Water Charges

TPL has claimed Rs. 8.37 Crore towards actual water charges in the truing up for FY 2012-13, as against Rs. 8.59 Crore approved in the MYT Order for FY 2012-13. The details are given in the Table below:

Table 4.26: Water Charges Claimed in the truing up by TPL-G APP for FY 2012-13

(Rs. Crore)

Sl. No.	Particulars	Approved for FY 2012-13 in MYT Order	Actual claimed in truing up for FY 2012-13
1	Water Charges	8.59	8.37

Petitioner's Submission

TPL has not shown the water charges separately in the truing up petition. The Water Charges of Rs. 8.37 Crore are not separately indicated in the annual accounts, but included in the total miscellaneous expenses of Rs. 14.98 Crore shown under the head of operation and other expenses at Note 15 of the accounting statement.

Commission's Analysis

The Commission, accordingly, approves the water charges at Rs. 8.37 Crore in the truing up, as per the audited 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 2012-13

(Rs. Crore)

Sl. No.	Particulars	Approved for FY 2012-13 in MYT Order	Approved for truing up for FY 2012-13	Deviation +/(-)	Gains / (Losses) due to uncontrollable factor
1	Water Charges	8.59	8.37	0.22	0.22

4.6.3 Capital expenditure, Capitalisation and Sources of Funding

TPL has claimed Rs. 171.96 Crore towards actual capital expenditure in the truing up for FY 2012-13, as against Rs. 104.18 Crore approved in the MYT order for FY 2012-13. The details are given in the Table below:

Table 4.28: Capital Expenditure Claimed by TPL-G (APP) For FY 2012-13

(Rs. Crore)

Sl. No.	Particulars	MYT Order	Actual
1	F Station Upgradation	48.98	137.88
2	E station Up-gradation	47.02	10.04
3	Modification in CHP	-	0.09
4	Renovation & Refurbishment of Civil Structure / Buildings	-	1.26
5	Refurbishment of the Cooling Tower at D Station	-	1.18
6	Refurbishment of Cooling Tower at F Station	-	1.60
7	Normal Capital Expenditure - Sabarmati	7.73	14.61
8	Normal Capital Expenditure- Vatva	0.36	0.76
9	Miscellaneous items	0.09	4.54
10	**Total Cost**	**104.18**	**171.96**

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 station up-rating and modernisation were planned in FYs 2011-12 and 2012-13. However, due to delay in response from OEMs and longer implementation cycle, the project had been deferred to FY 2012-13 and FY 2013-14 for F and E Stations, respectively. The estimate of Rs. 163.25 Crore was made for up rating and modernisation of F station. Due to increase in foreign exchange rate, the project cost has increased to Rs. 173.43 Crore. The up rating and modernisation was successfully completed and F station came into operation on 30th April, 2013. Similarly, the estimate of Rs. 164.60 Crore was made for carrying out the up rating and modernisation of E Station in the span of three years (FY 2010-11 to FY 2012-13). Due to further increase in foreign exchange rate, there is an upward revision in estimate to Rs. 182.23 Crore. As up rating and modernisation of F Station were under progress during FY 2012-13, the work of up rating and modernisation of E station was deferred to FY 2013-14. Therefore, major expenditure of Rs. 145.29 Crore has been incurred during FY 2013-14.
- **Modification in Coal Handling Plant (CHP):** In this scheme, TPL- G (APP) had planned the modifications in the CHP, to enhance operational flexibility. Based on

the studies by M/s. Tata Consultancy Engineers (TCE) and preliminary discussion with OEM and other bidders, issues like space constraints were highlighted. Therefore, it is necessary to evaluate various options. Accordingly, this project has been deferred to FY 2015-16.

- **Renovation and Refurbishment of Civil Structure/ Buildings of all Stations**: The project has been under execution from FY 2012-13 and the refurbishment is going on, based on the availability of the running plant. Due to feasibility issues at many locations, TPL- G (APP) needs to change the refurbishment plan/scheme, in consultation with M/s. TCE. The project is likely to be completed in FY 2014-15.
- **Refurbishment of cooling Tower at D station:** A provision of Rs. 10 Crore was made for this project in MYT. Earlier, it was planned to construct a new cooling tower for D Station at a different location to replace the existing one. Due to: (a) the space constraint near the existing cooling tower, (b) higher cost for placing the cooling tower at a distant location; and (c) based on RLA studies carried out by M/s. TCE: it was decided to refurbish the existing cooling tower, instead of replacing it. Accordingly, the refurbishment activity has been commenced in FY 2012-13. Since, most of the refurbishment work requires shutdown of the cooling tower at D Station, it is being executed in a phased manner during the annual shutdown of the Station. The refurbishment work is expected to be completed by FY 2014-15.
- **Refurbishment of Cooling Tower at F Station:** Earlier, it was planned to construct a new cooling tower for F Station at a different location to replace the existing one at a total cost of Rs. 12 Crore. Since in FY 2012-13, TPL- G (APP) had taken a long shutdown time for up rating and modernisation of F Station, TPL- G decided to refurbish the existing cooling tower, instead of replacing it. This had helped to reduce the Capex to Rs. 7 Crore. The remaining work which can be carried out during the operation of the cooling tower will be completed in FY 2013-14.
- **Normal Capital Expenditure in Sabarmati:** TPL-G (APP) has incurred an expenditure of Rs. 14.61 Crore, as against the approved amount of Rs. 7.73 Crore. The major variation is on account of expenditure incurred due to execution of projects deferred from the previous years.

- **Normal Capital Expenditure in Vatva:** TPL- G (APP) has not incurred any expenditure for Vatva, since the plant was operated on partial loading, due to non-availability of allocated gas by the Central Government.
- **Miscellaneous Item:** The actual expenditure incurred was Rs. 2.76 Crore.

Commission's Analysis

TPL has claimed a capitalisation of Rs. 24.28 Crore, as against the actual capital expenditure of Rs. 171.96 Crore.

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

Table 4.29: Capitalisation and Sources of Funding Claimed in truing up for FY 2012-13

(Rs. Crore)

Sl. No.	Particulars	Approved for FY 2012-13 in MYT Order	Actual claimed in truing up for FY 2012-13
1	Capital Expenditure	104.18	171.96
2	Gross Capitalisation During the Year	329.03	24.28
3	Net Capitalisation During the Year	-	21.36
4	Normative Debt (70% of Gross Capitalisation)	230.32	16.99
5	Normative Equity (30% of Net Capitalisation)	98.45	6.41

The Commission observes that the actual capital expenditure incurred was far lower than the capital expenditure approved in the MYT Order for FY 2012-13. The net capitalisation, as verified from the audited annual accounts, is Rs. 21.36 Crore. TPL has calculated the normative debt as 70% of the gross capitalisation of Rs. 20.79 Crore and normative equity as 30% of the net capitalisation of Rs. 21.36 Crore. However, the Commission has considered the normative debt and equity on the basis of net capitalisation of Rs. 21.36 Crore.

The Commission approves the capitalisation and sources of funding, as shown in the Table below in the truing up for FY 2012-13.

Table 4.30: Approved Capitalisation and Sources of Funding in truing up for FY 2012-13

(Rs. Crore)

Sl. No.	Particulars	Actual claimed in truing up for FY 2012-13	Approved in truing up for FY 2012-13
1	Capital Expenditure	171.96	
2	Gross Capitalisation	24.28	
3	Net Capitalisation During the Year	21.36	21.36
4	Normative Debt (70%)	14.55	14.95
5	Normative Equity (30%)	5.55	6.41

4.6.4 Interest Expenses

TPL has claimed a sum of Rs. 8.52 Crore towards actual interest expenses in the truing up for FY 2012-13, as against Rs. 26.05 Crore approved in the MYT Order for FY 2012-13, as detailed in the Table below:

Table 4.31: Total Interest Expenses Claimed in truing up for TPL-G (APP) for FY 2012-13

(Rs. Crore)

Sl. No.	Particulars	Approved for FY 2012-13 in MYT Order	Actual claimed in truing up for FY 2012-13
1	Interest Expenses	26.05	8.52

Petitioner's Submission

TPL has submitted that it has considered the interest expenses for the existing loans availed for the earlier capitalisation at actuals and for the capitalisation carried out during the FY 2012-13. 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 are operational difficulties, especially for green field projects in maintaining and calculating the repayment of loans on normative basis and it creates problems 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 2012-13

(Rs. Crore)

Sl. No.	Loan Heads Existing Loans	Actual claimed in truing up for FY 2012-13
1	**LIC I**	
	Opening Balance	32.31
	Repayments	4.79
	Closing Balance	27.52
	Interest on Loan	3.53
2	**IDFC Term Loan**	
	Opening Balance	13.51
	Repayments	1.46
	Closing Balance	12.05
	Interest on Loan	1.27
3	**Bank of Baroda Term Loan**	
	Opening Balance	9.89
	Repayments	1.28
	Closing Balance	8.62
	Interest on Loan	1.11
	Total	**5.91**
4	**Other Borrowing Cost**	**0.03**

Sl. No.	Loan Heads Existing Loans	Actual claimed in truing up for FY 2012-13
5	**Loans drawn during FY 2012-13**	
	Capitalisation During the year	24.28
	Normative Debt @70%	16.99
	Opening Balance	14.48
	New Borrowings	16.99
	Repayments	1.03
	Closing Balance	30.45
	Interest Expense	2.58
6	**Total Interest and Finance Charges**	**8.52**

Commission's Analysis

The existing loans outstanding as on 1st April, 2012 and the details of repayment and interest charges on these loans have been verified and found to be correct. The additional loan considered by the Commission is of Rs. 14.95 Crore for FY 2012-13 and is in accordance with the capitalisation 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 11.38% for FY 2012-13, in accordance with the provisions of GERC (MYT) Regulations, 2011, as detailed in the Table below:

Table 4.33: Interest Approved by the Commission in the truing up for FY 2012-13

(Rs. Crore)

Sl. No.	Particulars	Approved for FY 2012-13 in MYT Order
1	Opening Loan	49.34
2	New loan During the Year	14.95
3	Repayment During the Year	30.76
4	Closing Loan	33.53
5	Average Loan	41.44
6	Rate of Interest	11.38%
7	Interest	4.72
8	Interest on Security Deposit	-
9	Other Borrowing Costs	0.03
10	Total Interest and Finance Charges	4.75

The Commission, accordingly, approves the interest and finance charges of Rs. 4.75 Crore in the truing up for FY 2012-13.

With regard to the computation of gains / losses, Regulation 23.2 considers variation in capitalisation, 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 2/3rd of the 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 has decided to consider variation in capitalisation as uncontrollable. Hence, the components of ARR related to capitalisation, 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 2012-13, as detailed in the Table below:

Table 4.34: Gains / (Losses) Approved in the truing up for FY 2012-13

(Rs. Crore)

Particulars	Approved for FY 2012-13 in MYT Order	Actual claimed in truing up for FY 2012-13	Approved in truing up for FY 2012-13	Deviation +/(-)	Gains / (Losses) due to uncontrollable factor
Interest and Finance Charges	26.05	8.52	4.75	21.30	21.30

4.6.5 Interest on Working Capital

TPL has claimed a sum of Rs. 19.65 Crore towards interest on working capital in the truing up of FY 2012-13, as against Rs. 13.02 Crore approved in the MYT Order for FY 2012-13, as detailed in the Table below:

Table 4.35: Interest on Working Capital of TPL-G (APP) Claimed for FY 2012-13

(Rs. Crore)

Sl. No.	Particulars	Approved for FY 2012-13 in MYT Order	Actual claimed in truing up for FY 2012-13
1	Coal for 1.5 Month	73.31	109.12
2	Secondary Fuel for 2 months	1.52	1.09
3	Gas for 1 Month	14.88	4.33
4	O&M Expenses for 1 Month	11.65	10.70
5	1% of GFA for Maintenance Spares	9.41	7.98
6	Receivables for 1 Months	-	-
7	Normative Working Capital	110.77	133.22
8	Interest Rate	11.75%	14.75%
9	Interest on Working Capital	13.02	19.65

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 2012-13. 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. While approving the interest on working capital in the truing up for FY 2011-12, the Commission decided 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, 2012 was 14.75%. The Commission, accordingly, takes into consideration the SBAR of 14.75% in computation of Interest in Working Capital for FY 2012-13.

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

Table 4.36: Interest on Working Capital Approved in the truing up for FY 2012-13

(Rs. Crore)

Sl. No.	Particulars	Actual claimed in truing up for FY 2012-13	Approved in truing up for FY 2012-13
1	Coal cost 1.5 Month	109.12	109.12
2	Secondary fuel for 2 Months	1.09	1.09
3	Gas for 1 Month	4.33	4.33
4	O&M expenses for 1 Month	10.70	10.01
5	1% of GFA for Maintenance Spares	7.98	7.98
6	Receivables for 1 Month	-	0.00
7	Normative Working Capital	133.22	132.53
8	Interest Rate	14.75%	14.75%
9	Interest on working Capital	19.65	19.55

The Commission, accordingly, approves the interest on working capital at Rs. 19.55 Crore in the truing up for FY 2012-13.

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 an 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 2012-13, as detailed in the Table below:

Table 4.37: Gains / (Losses) in Interest on Working Capital Approved in the truing up for FY 2012-13

(Rs. Crore)

Particulars	Approved for FY 2012-13 in MYT Order	Approved in truing up for FY 2012-13	Deviation +/(-)	Gains /(Losses) due to Controllable Factors	Gains /(Losses) due to Uncontrollable Factors
Interest on Working Capital	13.02	19.55	(6.53)	-	(6.53)

4.6.6 Depreciation

TPL has claimed a sum of Rs. 30.76 Crore towards depreciation in the truing up for FY 2012-13, as against Rs. 45.23 Crore approved in the MYT Order for FY 2012-13, as detailed in the Table below:

Table 4.38: Depreciation of TPL-G (APP) Claimed for FY 2012-13

(Rs. Crore)

Sl. No.	Particulars	Approved for FY 2012-13 in the MYT Order	Actual claimed in truing up for FY 2012-13
1	Depreciation	45.23	30.76

Petitioner's Submission

TPL has submitted that the depreciation rates, as per CERC (Terms and Conditions of Tariff) Regulations, 2004, have been applied on the opening GFA as on 1st April, 2009, and for addition of assets from 1st April, 2009 onwards these have been 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 2012-13 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 audited accounts for FY 2012-13.

The Commission, accordingly, approves the depreciation at Rs. 30.76 Crore in the truing up for FY 2012-13.

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 Gains / Losses on account of depreciation in the truing up for FY 2012-13, as detailed in the Table below:

The Commission, accordingly, approves the Gains / (Losses) on account of depreciation in the truing up for FY 2012-13, as detailed in the Table below:

Table 4.39: Gains / (Losses) due to Depreciation Approved in the truing up for FY 2012-13

(Rs. Crore)

Particulars	Approved for FY 2012-13 in MYT Order	Approved in truing up for FY 2012-13	Deviation +/(-)	Gains / (Losses) due to Uncontrollable Factors
Depreciation	45.23	30.76	14.47	14.47

4.6.7 Return on Equity

TPL has claimed a sum of Rs. 46.14 Crore towards return on equity in the truing up for FY 2012-13, as against Rs. 58.70 Crore approved in the MYT Order for FY 2012-13, as detailed in the Table below:

Table 4.40: Return on Equity of TPL-G (APP) Claimed for FY 2012-13

(Rs. Crore)

Sl. No.	Particulars	Approved for FY 2012-13 in the MYT Order	Actual claimed in truing up for FY 2012-13
1	Opening Equity	369.90	326.36
2	Equity Addition	98.71	6.41
3	Closing Equity	468.61	332.77
4	Return on Equity	58.70	46.14

Petitioner's submission

TPL has submitted that the return on equity has been computed at 14% on the average of the opening and closing balance of equity for FY 2012-13.

Commission's Analysis

The opening equity for FY 2012-13 is as per the closing equity for FY 2011-12 approved in the True-up for FY 2011-12. The addition of equity of Rs. 6.41 Crore during FY 2012-13 is as per the capitalisation approved in the truing up for FY 2012-13 in Table 4.29 above.

The Commission, accordingly, approves the return on equity of Rs. 46.14 Crore in the truing up for FY 2012-13, as detailed in the Table below:

Table 4.41: Return on Equity approved in the truing up for FY 2012-13

(Rs. Crore)

Sl. No.	Particulars	Claimed in truing up for FY 2012-13	Approved in truing up for FY 2012-13
1	Opening Equity	326.36	326.36
2	Equity Addition	6.41	6.41
3	Closing Equity	332.77	332.77
4	Average Equity	329.37	329.57
5	Return on Equity	46.14	46.14

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 gains /losses on account of return on equity in the truing up for FY 2012-13, as detailed in the Table below:

The Commission, accordingly, approves the Gains / Losses on account of return on equity in the truing up for FY 2012-13, as detailed below.

Table 4.42: Return on Equity and Gains / (Losses) Approved in the truing up for FY 2012-13

(Rs. Crore)

Particulars	Approved for FY 2012-13 in MYT Order	Approved in truing up for FY 2012-13	Deviation +/(-)	Gains / (Losses) due to uncontrollable factors
Return on Equity	58.70	46.14	12.56	12.56

4.6.8 Income Tax

TPL has claimed a sum of Rs. 18.51 Crore towards income tax in the truing up for FY 2012-13, as against Rs. 8.52 Crore approved in the MYT Order for FY 2012-13, as detailed in the Table below:

Table 4.43: Income Tax Claimed for TPL-G (APP) for FY 2012-13

(Rs. Crore)

Sl. No.	Particulars	Approved for FY 2012-13 in the MYT Order	Actual claimed in truing up for FY 2012-13
1	Income Tax	26.45	18.51

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 had directed the TPL to furnish the details of segregation of income tax paid by TPL in respect of TPL Generation along with copies of challans of income tax paid. In its reply, vide e-mail dated 1st March 2014, TPL submitted 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 income tax paid. TPL has also submitted that over and above advance tax of Rs. 124.50 Crore, tax paid through TDS is Rs. 6.79 Crore for FY 2012-13.

The Commission verified the PBT figures with the audited accounts for FY 2012-13 and has found that the petitioner has shown a PBT of Rs. 92.5 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. 18.51 Crore for FY 2012-13.

The Commission, accordingly, approves the income tax at Rs. 18.51 Crore in the truing up for FY 2012-13.

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 2012-13, 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 2012-13

(Rs. Crore)

Particulars	Approved for FY 2012-13 in the MYT Order	Approved in truing up for FY 2012-13	Deviation +/(-)	Gains / (Losses) due to controllable factors	Gains / (Losses) due to uncontrollable factors
Income Tax	26.45	18.51	7.94	-	7.94

4.6.9 Non-Tariff income

Petitioner's Submission

TPL has submitted that the actual Non-Tariff income was Rs. 22.71 Crore in the truing up for FY 2012-13, as against Rs. 14.18 Crore approved in the MYT Order for FY 2012-13, as detailed in the Table below:

Table 4.45: Non-Tariff Income for TPL-G (APP) Claimed for FY 2012-13

(Rs. Crore)

Sl. No.	Particulars	Approved for FY 2012-13 in the MYT Order	Actual claimed in truing up for FY 2012-13
1	Non-Tariff Income	14.18	22.71

Commission's Analysis

The Non-Tariff income submitted by TPL is Rs. 22.71 Crore for FY 2012-13. The Non-Tariff income, as per audited annual accounts, is Rs. 25.25 Crore.

The Commission, accordingly, approves the Non-Tariff income at Rs. 25.25 Crore in the truing up for FY 2012-13.

The deviation in Non-Tariff income is at Rs**.** 11.07 Crore, which is considered as an uncontrollable factor.

The Commission, accordingly, approves the Gains / (Losses) on account of Non-Tariff income in the truing up for FY 2012-13, as detailed below:

Table 4.46: Non-Tariff Income and Gains / (Losses) Approved in the truing up for FY 2012-13

(Rs. Crore)

Sl. No.	Particulars	Approved for FY 2012-13 in the MYT Order	Approved in truing up for FY 2012-13	Deviation +/(-)	Gains / (Losses) due to Uncontrollable Factors
1	Non.-Tariff Income	14.18	25.25	11.07	11.07

4.6.10 Incentive

TPL has claimed a sum of Rs. 12.47 Crore towards incentive in the truing up for FY 2012-13, as detailed in the Table below:

Table 4.47: Incentive claimed for TPL-G (APP) in FY 2012-13

Particulars	Actual
Total Fixed Charges (in Rs. Crore)	229.30
Actual Annual PAF (in %)	89.62%
Normative Annual PAF (NAPAF) (in %)	-
Allowable Fixed Charges incl. Incentive (in Rs. Crore)	241.78
Incentive / Disincentive (in Rs. Crore)	12.47

Petitioner's Submission

TPL has submitted that, as per GERC (MYT) Regulations, 2011, the incentive 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 2012-13

The Commission has reviewed the performance of TPL-G (APP) under Regulation 23 of GERC (MYT) Regulations, 2011, with reference to the audited annual accounts for FY 2012-13.

Accordingly, the Commission has computed the sharing of gains and losses for FY 2012-13, 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 2012-13, along with sharing of gains / losses computed in accordance with GERC (MYT) Regulations, 2011, as given in the Table below:

Table 4.48: ARR Approved in truing up for FY 2012-13

(Rs. Crore)

Sl. No.	Annual Revenue Requirement	Approved for FY 2012-13 in MYT Order	Claimed in truing up for FY 2012-13	Approved in truing up for FY 2012-13	Deviation +/(-)	Gains/ (Losses) due to controllable factors	Gains/ (Losses) due to uncontrollable factors
1	**2**	**3**	**4**	**5**	**6=(3-5)**	**7**	**8**
1	Variable Cost	774.17	931.49	931.49	(157.32)	(8.00)	(149.32)
2	O&M Expenses	139.82	120.06	120.06	19.76	19.76	
3	Water Charges	8.59	8.37	8.37	0.22		0.22
4	Depreciation	45.23	30.76	30.76	14.47		14.47
5	Interest on Loan	26.05	8.52	4.75	21.30		21.30
6	Interest on Working Capital Loans	13.02	19.65	19.55	(6.53)		(6.53)
7	Return on Equity	58.70	46.14	46.14	12.56		12.56
8	Income Tax	26.45	18.51	18.51	7.94		7.94
9	Incentive	0.00	12.47	0.00	0.00		0.00
10	**Total expenditure**	**1092.03**	**1195.97**	**1179.63**	**(87.60)**	**11.76**	**(99.36)**
11	Less: Non-Tariff Income	14.18	22.71	25.25	(11.07)		(11.07)
12	**Aggregate Revenue Requirement**	**1077.85**	**1173.26**	**1154.38**	**(76.53)**	**11.76**	**(88.29)**

4.8 Sharing of Gains / Losses for FY 2012-13

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 loss on account of controllable factors is arrived at Rs. 21.17 Crore for FY 2012-13. Out of this 1/3rd loss, i.e., Rs. 7.06 Crore is to be passed on to the consumers. Similarly, the total loss of Rs. 54.74 Crore, on account of uncontrollable factors, shall also be passed on to the consumers through an adjustment in the tariff. The details are given in the Table below:

Table 4.49: Revised ARR approved for TPL-G (APP) for FY 2012-13

(Rs. Crore)

Sl. No.	Particulars	FY 2012-13
1	ARR approved in the MYT for FY 2012-13 (dated 6th September, 2011)	1077.85
2	Less: Gain on account of controllable factor to be passed on to the consumers (1/3rd)	3.92
3	Add: Loss on account of uncontrollable factor to be passed on to consumers	(88.29)
4	Revised ARR for FY 2012-13 (True-up)	1162.22

The Commission approved the ARR at Rs. 1162.22 Crore in the True-up for FY 2012-13. The same is considered as the actual power purchase cost of power purchased from TPL- (G) (APP) for FY 2012-13 in the ARR of TPL Distribution.

4.9 Additional capacity charge due to better PAF

The GERC (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 2012-13

Particulars	Approved for truing up for FY 2012-13
Total Capacity charges (in Rs. Crore)	222.89
Actual Wt. Avg. Annual PAF of TPL-G (APP) (in %)	89.62%
Normative Annual PAF (NAPAF) (in %)	85%
Additional Capacity charges (in Rs. Crore)	10.59
Allowable Capacity charges (in Rs. Crore)	233.48

The Commission approves the total ARR of Rs. 1172.81 Crore (1162.22 + 10.59) of TPL-G (APP) for FY 2012-13. The same is considered as actual power purchase cost of power purchased from TPL-G (APP) for FY 2012-13 in ARR of TPL Distribution.

Annexure 4.1

Approved Fuel costs for FY 2012-13 for True-up
Fuel costs (Coal, Lignite & Secondary Oil) - C Station

Sl. No.	Item	Derivation	Unit	2012-13
1	Gross Generation	A	MUs	452.34
2	Auxiliary Consumption	C	%	9.50%
3	Auxiliary Consumption	B = A * C	MUs	42.97
4	Net Generation	Y=A - B	MUs	409.37
5	Capacity	T	MW	60.00
6	PLF	V	%	86.06
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	3782.47
10	Calorific value of Oil	G	kcal/l	9955.69
11	Overall Heat	H=A x D	G Cal	1424871.00
12	Heat from Oil	I=(A x E x G)/1000	G Cal	9007
13	Heat from Coal	J=H-I	G Cal	1415864
14	Transit losses	K	%	1.2%
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	kg	905
19	Actual Coal Consumption	M=(J X 1000)/F	MT	374323
20	A) Indigenous Coal	Q1=M x X1/(1-K)	MT	378869
21	C) Imported Coal	Q3=M x X3	MT	0.00
22	Price of Coal			
23	A) Indigenous Coal	P1	Rs./MT	3810.46
24	C) Imported Coal	P3	Rs./MT	0.00
25	Price of Oil	P4	Rs./MT	47219.79
26	Coal cost			
27	A) Indigenous Coal	N1=Q1 X P1	Rs. Lakh	14437
28	C) Imported Coal	N3=Q3 X P3	Rs. Lakh	0
29	Total Coal Cost	N4=N1+N3	Rs. Lakh	14437
30	Oil Cost	N5=P4 x L/10^5	Rs. Lakh	427
31	Other Charges	N6*	Rs. Lakh	159.36
32	Total Fuel Cost	O=N4 + N5+N6	Rs. Lakh	15023.2069
33	Fuel Cost/Unit Gross	P=O/(A*10)	Rs./kWh	3.32
34	Fuel Cost/Unit Net	Q=O/(Y*10)	Rs./kWh	3.67
35	Actual Net Generation	Z	MUs	408.02
36	Normative Fuel cost for actual net generation	Z1 = Z * Q * 10	Rs. Lakh	14973.75

N6* = custom duty and railway freight and demurrage

Annexure 4.2

Approved Fuel costs for FY 2012-13 for True-up
Fuel costs (Coal, Lignite & Secondary Oil) - D Station

Sl. No.	Item	Derivation	Unit	2012-13
1	Gross Generation	A	MUs	949.51
2	Auxiliary Consumption	C	%	9.00%
3	Auxiliary Consumption	B = A * C	MUs	85.46
4	Net Generation	Y=A - B	MUs	864.05
5	Capacity	T	MW	120.00
6	PLF	V	%	90.33
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	4328.14
10	Calorific value of Oil	G	kcal/l	9934.29
11	Overall Heat	H=A x D	G Cal	2326299.5
12	Heat from Oil	I=(A x E x G)/1000	G Cal	9433
13	Heat from Coal	J=H-I	G Cal	2316867
14	Transit losses	K	%	1.2%
15	Coal Blend			
16	A) Indigenous Coal	X1	%	56.54%
17	C) Imported Coal	X3	%	43.46%
18	Actual Oil Consumption	L=A x E	kg	950
19	Actual Coal Consumption	M=(J X 1000)/F	MT	535303
20	A) Indigenous Coal	Q1=M x X1/(1-K)	MT	306336
21	C) Imported Coal	Q3=M x X3	MT	232642.73
22	Price of Coal			
23	A) Indigenous Coal	P1	Rs./MT	3822.69
24	C) Imported Coal	P3	Rs./MT	6210.88
25	Price of Oil	P4	Rs./MT	41651.06
26	Coal cost			
27	A) Indigenous Coal	N1=Q1 X P1	Rs. Lakh	11710
28	C) Imported Coal	N3=Q3 X P3	Rs. Lakh	14449
29	Total Coal Cost	N4=N1+N3	Rs. Lakh	26159
30	Oil Cost	N5=P4 x L/10^5	Rs. Lakh	395
31	Other Charges	N6*	Rs. Lakh	1,116.68
32	Total Fuel Cost	O=N4 + N5+N6	Rs. Lakh	27672
33	Fuel Cost/Unit Gross	P=O/(A*10)	Rs./kWh	2.91
34	Fuel Cost/Unit Net	Q=O/(Y*10)	Rs./kWh	3.20
35	Actual Net Generation	Z	MUs	864.89
36	Normative Fuel cost for actual net generation	Z1 = Z * Q * 10	Rs. Lakh	27698.39

N6* = custom duty and railway freight and demurrage

Annexure 4.3

Approved Fuel costs for FY 2012-13 for True-up
Fuel costs (Coal, Lignite & Secondary Oil) - E Station

Sl. No.	Item	Derivation	Unit	2012-13
1	Gross Generation	A	MUs	844.76
2	Auxiliary Consumption	C	%	9.00%
3	Auxiliary Consumption	B = A * C	MUs	76.03
4	Net Generation	Y=A - B	MUs	768.73
5	Capacity	T	MW	110.00
6	PLF	V	%	87.67
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	4249.00
10	Calorific value of Oil	G	kcal/l	9,940.61
11	Overall Heat	H=A x D	G Cal	2301971
12	Heat from Oil	I=(A x E x G)/1000	G Cal	8397
13	Heat from Coal	J=H-I	G Cal	2293574
14	Transit losses	K	%	1.2%
15	Coal Blend			
16	A) Indigenous Coal	X1	%	62.29%
17	C) Imported Coal	X3	%	37.71%
18	Actual Oil Consumption	L=A x E	kg	845
19	Actual Coal Consumption	M=(J X 1000)/F	MT	539791
20	A) Indigenous Coal	Q1=M x X1/(1-K)	MT	340320
21	C) Imported Coal	Q3=M x X3	MT	203555.33
22	Price of Coal			
23	A) Indigenous Coal	P1	Rs./MT	3812.26
24	C) Imported Coal	P3	Rs./MT	6204.56
25	Price of Oil	P4	Rs./MT	40772.11
26	Coal cost			
27	A) Indigenous Coal	N1=Q1 X P1	Rs. Lakh	12974
28	C) Imported Coal	N3=Q3 X P3	Rs. Lakh	12630
29	Total Coal Cost	N4=N1+N2+N3	Rs. Lakh	25604
30	Oil Cost	N5=P4 x L/10^5	Rs. Lakh	344
31	Other Charges	N6*	Rs. Lakh	1,116.68
32	Total Fuel Cost	O=N4 + N5+N6	Rs. Lakh	27065
33	Fuel Cost/Unit Gross	P=O/(A*10)	Rs./kWh	3.20
34	Fuel Cost/Unit Net	Q=O/(Y*10)	Rs./kWh	3.52
35	Actual Net Generation	Z	MUs	766.17
36	Normative Fuel cost for actual net generation	Z1 = Z * Q * 10	Rs. Lakh	26974.52

N6* = custom duty and railway freight and demurrage

Annexure 4.4

Approved Fuel costs for FY 2012-13 for True-up

Fuel costs (Coal, Lignite & Secondary Oil) - F Station

Sl. No.	Item	Derivation	Unit	2012-13
1	Gross Generation	A	MUs	599.43
2	Auxiliary Consumption	C	%	9.00%
3	Auxiliary Consumption	B = A * C	MUs	53.95
4	Net Generation	Y=A - B	MUs	545.48
5	Capacity	T	MW	110.00
6	PLF	V	%	62.21
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	4288.11
10	Calorific value of Oil	G	kcal/l	9919.22
11	Overall Heat	H=A x D	G Cal	1621458.15
12	Heat from Oil	I=(A x E x G)/1000	G Cal	5946
13	Heat from Coal	J=H-I	G Cal	1615512
14	Transit losses	K	%	1.2%
15	Coal Blend			
16	A) Indigenous Coal	X1	%	58.07%
17	C) Imported Coal	X3	%	41.93%
18	Actual Oil Consumption	L=A x E	kg	599
19	Actual Coal Consumption	M=(J X 1000)/F	MT	376742
20	A) Indigenous Coal	Q1=M x X1/(1-K)	MT	221431
21	C) Imported Coal	Q3=M x X3	MT	157968.03
22	Price of Coal			
23	A) Indigenous Coal	P1	Rs./MT	3781.50
24	C) Imported Coal	P3	Rs./MT	6411.19
25	Price of Oil	P4	Rs./MT	42394.51
26	Coal cost			
27	A) Indigenous Coal	N1=Q1 X P1	Rs. Lakh	8373
28	C) Imported Coal	N3=Q3 X P3	Rs. Lakh	10128
29	Total Coal Cost	N4=N1+N3	Rs. Lakh	18501
30	Oil Cost	N5=P4 x L/10^5	Rs. Lakh	254
31	Other Charges	N6*	Rs. Lakh	83.51
32	Total Fuel Cost	O=N4 + N5+N6	Rs. Lakh	18839
33	Fuel Cost/Unit Gross	P=O/(A*10)	Rs./kWh	3.14
34	Fuel Cost/Unit Net	Q=O/(Y*10)	Rs./kWh	3.45
35	Actual Net Generation	Z	MUs	540.53
36	Normative Fuel cost for actual net generation	Z1 = Z * Q * 10	Rs. Lakh	18667.70

N6* = custom duty and railway freight and demurrage

Annexure 4.5

Approved Fuel Costs for FY 2012-13 for True-up
Fuel Costs (Gas) - Vatva Gas Station

Sl. No.	Item	Derivation	Unit	2012-13
1	Gross Generation	A	MUs	125.19
2	Auxiliary Consumption	C	%	3.00%
3	Auxiliary Consumption	B = A * C	MUs	4
4	Net Generation	Y=A - B	MUs	121.43
5	Capacity	T	MW	100.00
6	PLF	V	%	14.29
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	G Cal	271036.4
10	Actual Gas Consumption	M=(H x 1000)/F	M. scm	1075541
11	Price of Gas	P1	Rs./scm	450.91
12	Cost of Gas	N5=P1 x M/10^5	Rs. Lakh	4850
13	Total Fuel Cost	N5	Rs. Lakh	4850
14	Fuel Cost/Unit Gross	P=N5/(A*10)	Rs./kWh	3.87
15	Fuel Cost/Unit Net	Q=N5/(Y*10)	Rs./kWh	3.99
16	Actual Net Generation	Z	MUs	118.56
17	Normative Fuel Cost For Actual Net Generation	Z1 = Z * Q * 10	Rs. Lakh	4849.35

5. Determination of Generation Charges for FY 2014-15

5.1 Introduction

This chapter deals with the determination of fixed, as well as variable, charges for the FY 2014-15 for TPL- G (APP). The Commission has considered the fixed and variable charges approved in the Mid-term Review for FY 2014-15 and the adjustment on account of True-up for FY 2012-13, while determining the Generation Tariff for FY 2014-15.

5.2 Approved ARR for FY 2014-15

Based on the above approach, the Table below summarises the fixed and variable charges, as approved by the Commission in the Mid-term Review for the FY 2014-15. Detailed analysis of each expense head has already been provided in the Mid-term Review.

Table 5.1: Approved Fixed Charges for FY 2014-15

(Rs. Crore)

Sl. No	Particulars	Approved in the MYT Order	Projected by TPL-G in the Mid-term Review	Approved for Mid-term Review
		FY 2014-15	FY 2014-15	FY 2014-15
1	O&M Expenses	156.28	153.78	134.19
2	Water Charges	8.59	9.28	8.37
3	Depreciation	51.48	49.94	45.80
4	Interest on Loan	29.29	41.05	0
5	Interest on working Capital	12.14	20.7	20.32
6	Return on Equity	64.63	63.88	46.16
7	Income Tax	26.45	18.51	18.51
8	Less: Non-Tariff Income	14.18	12.00	25.25
9	**Total**	**334.68**	**345.14**	**248.10**

5.3 Determination of Variable Charges for FY 2014-15

The Table below gives the energy charges for FY 2014-15 approved in the Mid-term Review Order.

Table 5.2: Approved Variable Charges for TPL-G (APP) for FY 2014-15

Sl. No	Station	Approved Fuel Cost for FY 2014-15 (Rs. Crore)	Fuel cost per unit gross (Rs. / kWh)	Fuel cost per unit net (Rs. / kWh)
A	**Sabarmati**			
1	C Station	150.88	3.27	3.62
2	D Station	237.90	2.79	3.07

Sl. No	Station	Approved Fuel Cost for FY 2014-15 (Rs. Crore)	Fuel cost per unit gross (Rs. / kWh)	Fuel cost per unit net (Rs. / kWh)
3	E Station	268.39	2.76	3.04
4	F Station	273.90	2.84	3.12
	Total	**931.07**		

The Table below gives the ARR for FY 2014-15, as approved in the Mid-term Review Order.

Table 5.3: Approved ARR for TPL-G (APP) for FY 2014-15

(Rs. Crore)

Sl. No.	Particulars	FY 2014-15
1	Variable Cost	931.07
2	O&M Expenses	134.19
3	Water Charges	8.37
4	Depreciation	45.80
5	Interest on Loan	0
6	Interest on Working Capital	20.32
7	Return on Equity	46.16
8	Income Tax	18.51
9	Less: Non-Tariff Income	25.25
10	Total	**1179.17**

6. Compliance of Directives

6.1 Compliance of Directives issued by the Commission

The Commission, in its Tariff Order dated 16th April 2013, 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

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

Compliance

TPL will comply with the directive of the Commission

Commission's comments

The directive was issued in the Tariff Order dated 2nd June 2012 also, directing TPL to submit these details in the ensuring year's ARR, i.e. for FY 2013-14 and onwards. This was not complied with. Even now, this directive has not been complied with.

It is once again reiterated that these details (separate details of fixed cost for Sabarmati and Vatva Stations) shall be submitted to the Commission by 30th April 2014, failing which the matter will be viewed seriously.

Directive:

TPL is directed to submit to the Commission a progress report on the implementation of the recommendations made in fuel audit report for FY 2010-11 of Power Stations of TPL.

COMMISSION'S ORDER

The Commission approves the Aggregate Revenue Requirement for TPL-G (APP) for FY 2014-15, as shown in the Table below:

Approved ARR for TPL-G (APP) for FY 2014-15

(Rs. Crore)

Sl. No.	Particulars	FY 2014-15
1	Variable Cost	931.07
2	O&M Expenses	134.19
3	Water Charges	8.37
4	Depreciation	45.80
5	Interest on loan	0
6	Interest on working Capital	20.32
7	Return on Equity	46.16
8	Income Tax	18.51
9	Less: Non-Tariff Income	25.25
10	**Total**	**1179.17**

This order shall come into force with effect from the 1st May, 2014.

Sd/- Sd/-

DR. M.K. IYER
Member

SHRI PRAVINBHAI PATEL
Chairman

Place: Gandhinagar
Date: 29/04/2014