GUJARAT ELECTRICITY REGULATORY COMMISSION

Tariff Order

Truing up for FY 2013-14 and

Determination of Tariff for FY 2015-16

For

Torrent Power Limited - Generation
Ahmedabad

Case No. 1469 of 2014

31st March, 2015

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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 and 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	Repairs 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. 1469 of 2014

Date of the Order: 31/03/2015

CORAM

Shri Pravinbhai Patel, Chairman

Dr. M. K. Iyer, Member

Shri K. M. Shringarpure, 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 2013-14, and for determination of tariff for its generation business at Ahmedabad for the FY 2015-16 on 29th November, 2014.

The Commission admitted the Petition on 8th December, 2014.

1.2 Torrent Power Limited (TPL)

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 422 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 422 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 Commission's Orders for Mid-term Review of Business plan for TPL-G (APP)

TPL filed its Petition for Mid-term Review of Business Plan and revision of ARR for balance years for FY 2014-15 and FY 2015-16 of the control period in terms of Regulation 16.2(i) of GERC (MYT) Regulations, 2011.

The Commission in exercise of the powers vested in it under section 61, 62 and 64 of the Electricity Act, 2003 and all other powers enabling it in this behalf and after taking into consideration the submission made by TPL, the objections by various stakeholders, response of TPL, issues raised during public hearing and all other relevant material, approved the revised ARR for FY 2014-15 and FY 2015-16 in the Mid-term Review of Business Plan for TPL on 29th April, 2014.

The Commission issued the order for truing up for FY 2012-13 and determination of Tariff for FY 2014-15 on 29th April, 2014.

1.5 Admission of the Current Petition and Public Hearing Process

TPL has submitted the current Petition for "truing up" of FY 2013-14 and determination of tariff for FY 2015-16 on 29th November, 2014. The Commission admitted the Petition (Case No. 1469/2014) on 8th December, 2014.

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 16th December, 2014.

Sl. No.	Name of Newspaper	Language	Date of Publication
1	The Times of India	English	16.12.2014
2	Divya Bhaskar	Gujarati	16.12.2014

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 16th January, 2015.

Some of the consumers/consumer organisations requested for extension of last date for submission of objections. The Commission granted extension of time up to 25th January, 2015.

The Commission received objections / suggestions from 10 consumer / consumer organizations. The Commission examined the objections / suggestions received and scheduled the public hearing on 12th February, 2015 and 19th February, 2015 at the Commission's Office at 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 Commission's Office in Gandhinagar on above dates.

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.	Shri H.J. Patel	No
2.	Consumer Education and Research Society (CERS)	No
3.	Akhil Gujarat Grahak Sewa Kendra	No
4.	Laghu Udyog Bharati - Gujarat	Yes
5.	Shri Amarsinh Chavda	Yes
6.	Shri Manibhai Gigabhai Dangodara	No
7.	Ahmedabad Textile Mills' Association (ATMA)	No
8.	Utility Users' Welfare Association (UUWA)	Yes
9.	Gujarat Wind Farms Ltd.	No
10.	Gandhinagar Shaher Vasahat Mahamandal	Yes

During the hearing Shree Gujarat Vijdi Contractor Mandal and Gujarat Chamber of Commerce & Industry also represented its objections / suggestions on the petition filed by TPL.

A short note on the main issues raised by the objectors in the submissions with 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.

1.6 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 2013-14.
5. The fifth chapter deals with the determination of tariff for FY 2015-16.
6. The sixth chapter deals with compliance of directives and issue of fresh directives.

1.7 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 five years of the second control period from FY 2011-12 to FY 2015-16, in the MYT order dated 6th September, 2011.

TPL has approached the Commission with the present petition for "truing up" for the FY 2013-14 and determination of Tariff for FY 2015-16, under GERC (MYT) Regulations, 2011.

The Commission has undertaken truing up for the FY 2013-14, including computation of gains and losses for the FY 2013-14, based on the submissions of the petitioner and the audited annual accounts made available by the petitioner.

While truing up for 2013-14, 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 2013-14 has been considered, based on the GERC (MYT) Regulations, 2011. For determination of the ARR for FY 2015-16, the Commission has considered the ARR for FY 2015-16, as approved in the Mid-term Review Order.

2. A Summary of TPL's Petition

2.1 Actuals for FY 2013-14 submitted by TPL-G (APP)

Torrent Power Limited (TPL) submitted the current petition seeking approval of True-up for ARR of FY 2013-14. The details of expenses under various heads of ARR are given in Table below:

Table 2.1: Actuals Claimed by TPL for FY 2013-14

(Rs. Crore)

Sl. No.	Particulars	MYT Order	Actuals FY 2013-14
1	Fuel Cost (Variable Cost)	827.59	811.28
2	O&M Expense	155.08	129.11
3	Water Charges	8.59	8.63
4	Depreciation	54.48	44.37
5	Interest Cost on Long-Term Capital Loans	33.83	16.15
6	Interest on Working Capital	14.40	17.42
7	Return on Equity	66.08	53.94
8	Income Tax	26.45	17.27
9	Incentive	-	0.75
10	Less: Non-Tariff Income	14.18	21.68
11	**Annual Revenue Requirement**	**1172.32**	**1077.24**

2.2 Revised Estimate for FY 2015-16

TPL, in its petition, has also furnished the ARR approved in the Mid-term Review for FY 2015-16 which is given in the Table below, based on the Mid-term Review Petition.

Table 2.2: Revised ARR of TPL-G (APP) for FY 2015-16

(Rs. Crore)

Sl. No.	ARR	ARR approved in MTR for FY 2015-16
1	Variable Cost	801.31
2	O&M Expense	141.86
3	Water Charges	8.37
4	Depreciation	44.70
5	Interest on Loan	-
6	Interest on Working Capital	17.96
7	Return on Equity	44.95
8	Income Tax	18.51
9	Less: Non-Tariff Income	25.25
10	**Total**	**1052.41**

2.3 TPL's request to the Commission:

a) Admit the petition for truing up for FY 2013-14 and determination of tariff for FY 2015-16

b) Approve the Trued up ARR of FY 2013-14

c) Approve the sharing of gains / (losses) proposed for FY 2013-14.

d) Consider the ARR for FY 2015-16 as approved by the Commission in Mid-term review.

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

f) Allow 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 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 Stakeholders' suggestions / objections, Petitioner's Response and Commission's Observation

In response to the public notice inviting objections/suggestions from stakeholders on the Petition filed by TPL-G for Truing up of FY 2013-14 and determination of Tariff for FY 2015-16 under GERC (MYT) Regulations, 2011, a number of Consumers / organisations filed their objections / suggestions in writing. Some of these objectors participated in the public hearing also. It is observed that the objections / suggestions filed by and large are repetitive in nature. The Commission has addressed the objections / suggestions by the consumer/consumers organisations, the response from the Petitioner and the view of the Commission as given below:

3.1 Low Plant Load Factor

Objection

i. Vatva CCPP is kept under wet preservation and incurred an expenditure of Rs. 13.12 Crore and consumed 2.37 MU as Auxiliary Consumption, Petitioner should look to another source of Gas supply.
ii. PLF at Sabarmati plant is also very low.
iii. Due to low power factor of the plant, the Petitioner has compelled them to purchase power from other sources at higher prices.

Response of TPL

Vatva CCPP: Domestic gas to Vatva is reduced due to reduction in availability from KG basin. The cost of using RLNG was higher, TPL-D asked the Petitioner not to run the plant of higher cost.

Low PLF of Sabarmati plant: The PLF of plant is low due to up-rating and modernisation of the E station due to rotor earth-fault.

Commission's Observation

The response of TPL is noted.

3.2 Shifting from Higher grade to lower grade coal

Objection

By shifting the grades there is increase in Auxiliary Consumption for handling the inferior quality of coal. Ultimately the cost of generation with low quality of coal will be the same or higher compared to generation with high grade coal.

Response of TPL

The fuel cost of generation with A & B grade coal will be higher compared to C & D grade coal. The Petitioner has exercised the necessary business prudence to reduce overall cost. Further the increase in Auxiliary Consumption is mainly on account of increase in quantity of coal and small size and vintage of the plant.

Commission's Observation

The response of TPL-G is noted.

3.3 Calorific value of coal

Objection

As per MOU between NTPC & CIL, NTPC has to pay CIL as per quantity of coal 'as received' at the power stations and suggested similar provision for the Petitioner.

Response of TPL

FSA signed with CIL, a standard document, FSA does not have any provision for paying the suppliers on the basis of quality and quantity of coal 'as received'. It is submitted that the Petitioner has represented from time to time to SECL for inferior quality of coal supplied to it.

Commission's Observation

TPL-G may explore the possibility of payment on the basis of as received to CIL.

3.4 Up-gradation of E & F Stations

Objection

The details of time taken in number of days for which the unit was shut down for upgradation.

Response of TPL

The 'F' Station was shut down for 150 days during FY 2012-13 and FY 2013-14 while 'E' station was shut down for 113 days during FY 2013-14 for renovation and modernisation along with up-rating.

Commission's Observation

The response of TPL is noted.

3.5 Sharing of Gain and Losses

The performance is appreciated. The petitioner has gained Rs. 22.88 Crore by economical measures. Out of this Rs. 7.63 Crore has been kept reserved for adjustment of tariff. The remaining amount of Rs. 15.25 Crore has been returned by the Petitioner for betterment of its plants.

Response of TPL

Considering the major activities of up-gradation and modernisation carried out in FY 2013-14, the Petitioner has deferred certain expenses which shall be incurred in the future years.

Commission's Observation

The response of TPL-G is noted.

3.6 High cost of Generation

The cost of generation of gas based plant at Vatva and SUGEN is quite high. The average cost of purchase during FY 2013-14 is Rs. 5.30/Unit resulting in FPPPA of Rs. 2.40/Unit which is quite high. The Commission is to control this FPPPA to Rs. 1.80/unit to reduce the burden on consumers.

Response of TPL

The Petitioner is making all efforts to source power at competitive rates. Any variation in the fuel and power purchase is beyond the control of Petitioner. The claim of FPPPA is in accordance with the FPPPA formula approved by the Commission. The Petitioner has claimed the FPPPA as per actual cost.

Commission's Observation

The claim of FPPPA is allowed after due prudence check.

3.7 Cost of SUGEN Generation

Objection

The cost of generation of SUGEN is higher compared to GUVNL cost. The cost of SUGEN can be approved after hearing from consumers.

Response of TPL

The Petitioner has entered long term Power Purchase Agreement (PPA) with SUGEN. SUGEN is supplying power to TPL-D for the contracted quantum. As per the PPA the distribution licensee is liable to pay the fixed cost spread over 25 years irrespective of level of utilisation.

Due to reduced allocation of gas from KG basin, SUGEN plant is not being fully utilised. Under these circumstances comparison of generation cost on per unit basis is not relevant.

Commission's Observation

The response of TPL-G is noted.

3.8 Cost of Generation of GUVNL station

Objection

The Power Purchase Cost from TPL-G is higher than the short-term purchase rate from GUVNL. Hence it is suggested to disallow the same. Further there is no power purchase agreement between TPL-G and the Petitioner.

Response of TPL

TPL-G is the embedded generation and is the approved source of power purchase. The increase in the Power Purchase Cost in TPL-G (APP) is on account of uncontrollable factors, such as fuel and transportation costs. Power from TPL-G (APP) is at regulated tariff and incurred power purchase cost is the legitimate item of expenditure.

Commission's Observation

The response of TPL-G is noted.

3.9 Backing down of TPL Generating Station

Objection

The cost of Generation of GUVNL station is Rs. 3.60/unit against cost of generation of Rs. 4.44/unit of TPL-G (APP) stations. Why not purchase power from GUVNL and TPL-G (APP) generation is back down when GUVNL generating stations are backed down.

Response of TPL

Comparison of total cost of TPL-G (APP) with cost of Rs. 3.60/unit is not correct as generation/power purchase portfolio, demand and variable cost of both entities are different.

Commission's Observation

The response of TPL-G is noted.

3.10 Generation of Cost of TPL-G (APP)

Objection

i. The generation cost of TPL-G (APP) is Rs. 4.44/kWh whereas TPL-D is procuring the power from GUVNL at Rs. 3.60/kWh on short-term period. TPL-D has procured power from renewable sources at Rs. 4.06/unit and from power exchange at Rs. 3.31/unit SUGEN power cost is Rs. 9.55/unit.
ii. The Commission cannot decide the tariff on cost basis as there is no legal relationship between TPL-G and TPL-D.
iii. There is no agreement of TPL-G unit and TPL-D unit and hence there is no obligation on the part of TPL-D to procure power from its own generation division which in fact a separate legal entity.

Response of TPL

TPL-G (APP) is the embedded generation and is the approved source of power purchase as per Commission's Tariff Order. The increase in power purchase cost from TPL-G (APP) is mainly on account of uncontrollable factors such as fuel and transportation cost. Power Purchase Cost as legitimate item of expenditure and hence should be approved as per actuals.

TPL-G (APP) is the separate division of same legal entity.

Commission's Observation

The response of TPL-G is noted.

3.11 Procurement of power by competitive bidding process

Objection

TPL-D is to procure power by competitive bidding process under Section- 63. Instead of procuring power by competitive bidding it is procuring power from its own group on cost plus basis which is not at all in the interest of the consumer and as well as law does not permit to do so. Tariff Petition of TPL-D should be rejected as not maintainable.

Response of TPL

The Section- 63 of the Electricity Act, 2003 gives an option to procure Electricity at Tariff determined in accordance with the competitive bidding guidelines issued by Central Government instead of determining the Tariff in accordance with Section-62. Procurement of power is permissible either at tariff determined under Section-62 or tariff determined under Section- 63.

Commission's Observation

The Commission determines the tariff under Section 62 and adopts the Tariff based on bidding under Section-63 of EA, 2003.

3.12 Truing up of expenses from 2000 to FY 2007-08, FY 2008-09, Truing up for FY 2013-14 and determination of Tariff for FY 2015-16

Objection

The objector has raised the question whether TPL has submitted its Truing up of accounts for previous years and from 2000 to till today to arrive at correct equity. Is 14% return on 30% of asset is permissible under the law?

TPL is allowed to earn more return than the permissible under the provisions of EA 2003 and Regulations.

Response of TPL

The return on Equity is calculated as per the provisions of the GERC (MYT) Regulations, 2011. The Petitioner does not consider the service line contributions received from the consumers as part of the Equity while calculating the return on Equity.

Commission's Observation

The Equity and Return on Equity is allowed as per GERC (MYT) Regulations, 2011.

3.13 Huge Gap in ARR

Objection

TPL has asked for the huge gap in spite of the fact that the uncontrollable costs like fuel and power purchase cost has been recovered through FPPPA mechanism.

Response of TPL

The Petitioner has filed the Petition in accordance with the provisions of Section 62 and 64 of the Electricity Act, 2003 read with GERC (MYT) Regulations, 2011.

The erstwhile FPPPA formula allowed only partial recovery of total incremental cost. Hence the unrecovered cost reflected as gap in Truing exercise.

Commission's Observation

The response of TPL is noted.

3.14 Expenditure of other Franchise are being covered under consumers of Ahmedabad and Surat Licenses

Objection

The expenditure being incurred by the Petitioner in the franchise area of Bhiwandi, Agra and Kanpur is being borne by the consumers of Ahmedabad and Surat licenses.

Response of TPL

Separate accounts are being maintained for Regulated business and the same has been furnished duly verified by the Statutory Auditors of the Company.

Commission's Observation

The response of TPL is noted.

3.15 Accounts Statement of TPL (G), TPL (D) Ahmedabad and Surat

Objection

Segregation of business under TPL and failure to maintain separate accounting statements for TPL-G, TPL-D, Ahmedabad and Surat as per Companies Act, 1956 as mentioned in the GERC (MYT) Regulations, 2011.

Response of TPL

The Petitioner has furnished the separate Accounting statements duly certified by the Statutory Auditors of the Company for FY 2013-14 in accordance with statutory provisions.

Commission's Observation

The response of TPL is noted.

3.16 Trajectories for controllable items like PLF, AT&C losses, transit loss of coal etc.

Objection

The Commission has not given trajectories for controllable items like percentage of PLF, AT&C losses, transit loss of coal, Station Heat Rate, Auxiliary Consumption, Power Purchase Cost etc., based on past record of 10 years for incentive and penalties.

Response of TPL

The Commission has specified the trajectories for various performance parameters in accordance with the provisions of GERC (MYT) Regulations, 2011

Commission's Observation

The trajectory for performance parameters is given in Commission's GERC (MYT) Regulations, 2011.

3.17 Gross and Net Generation of TPL-G (APP)

TPL-G (APP) has submitted ARR at Rs. 1052.41 Crore for FY 2015-16, No projection of net as well as gross generation in MU is given, TPL to be directed to provide this.

Details of projection of each component of variable as well as fixed cost to be given to enable stakeholder to comment.

Response of TPL

The ARR at Rs. 1052.41 Crore in the ARR of TPL-G (APP) is approved by the Commission in the Order dated 29th April, 2014. Details of the ARR are available in the Order.

Commission's Observation

The response of TPL is noted.

3.18 Operating of Stations E & F

Objection

TPL-G (APP) should be asked why stations E & F are not up-rated in FY 2009-10, FY 2010-11 and FY 2011-12 as per Business Plan.

Response of TPL

Up-rating of E & F stations is deferred due to tender issues i.e., higher demand for power equipment manufactured and long lead time. Thus the delay in execution of E & F station up rating is beyond the control of the Petitioner.

Commission's Observation

The response of TPL is noted.

3.19 Power to be procured by competitive bidding

Objection

The generation tariff is being determined on cost plus basis. As it is becoming costlier year on year, TPL to be directed to procure power by competitive bidding as per the tariff policy.

Response of TPL

Determination of Tariff on cost plus basis is in accordance with GERC (MYT) Regulations, 2011 framed under provisions of Electricity Act, 2003.

Commission's Observation

The response of TPL is noted.

3.20 Income Tax

Objection

The Commission should allow Income Tax actually paid by the Petitioner and to apportion on the consolidated profit.

Response of TPL

Income Tax for FY 2013-14 claimed by applying effective MAT rate on PBT as per Audited Accounts.

Commission's Observation

The Income Tax actually paid for regulated business is allowed.

3.21 Recovery of Fixed Charges for Gas based Generating Stations

Objection

TPL gas based station is not in operation, still TPL recovers fixed charges.

Response of TPL

The fixed cost are recovered as per the GERC (MYT) Regulations, 2011. It may be mentioned that the fuel arrangement for gas based stations is governed as per GoI Policy for allocation of gas and price. Allocation of domestic gas by the Government to Vatva Plant was reduced considerably for FY 2012-13 and from March, 2013 the allocation has been reduced to 'zero' due to reduced availability of gas in KG basin. The cost of RLNG is high; the Petitioner has not sourced the power from Vatva Plant using RLNG during FY 2013-14.

Commission's Observation

The response of TPL is noted.

4. Truing up for FY 2013-14

This chapter of the Order deals with the truing up for FY 2013-14 for TPL-Generation, Ahmadabad.

The Commission has studied and analysed each component of the ARR for the FY 2013-14 in the succeeding paragraphs.

4.1 Generating Stations of TPL-G (APP)

TPL has existing power generation facilities, with total installed capacity of 500 MW, at Ahmedabad TPL-G (APP) that consists of a 422 MW coal-based thermal power plant at Sabarmati Ahmedabad TPL-G (APP). TPL has 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 has been 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 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, 2013, 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, 2013

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)	54
D Station	1 X 120 MW	1978/2004*	36

Name of the Station	Capacity in MW	Year of COD	Age / Years
		*(Up-rated capacity)	
E Station	1 X 121 MW	1984/2013 (turbine up-rated)	30
F Station	1 X 121 MW	1988/2013 (turbine up-rated)	26
Vatva Combined Cycle Gas based Power Plant			
Gas turbine	2 X 32.5 MW	1990 & 1991	23
Steam Turbine	1 X 35 MW	1991	22

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.

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 2013-14 for the individual stations. The Commission has taken up the truing up of the annual performance parameters for FY 2013-14, which are discussed in the following sections.

4.2.1 Plant Availability Factor (PAF)

Petitioner's Submission

TPL has submitted the actuals of plant availability factor for different stations for FY 2013-14. 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 2013-14

(%)

Sl. No	Station	Approved for FY 2013-14 In MYT order	Actuals for FY 2013-14
A	**Sabarmati**		
1	C Station	97.50	85.89
2	D Station	97.50	94.65
3	E Station	97.50	60.53
4	F Station	97.50	86.86
B	**Vatva Gas Station**	95.10	100.00

TPL has submitted as follows regarding the major variations in actual and approved availability for the generating stations.

- C station – There was an unforeseen outage of Turbine No-16 of 'C' station due to rotor earth fault during FY 2013-14

- E station – The up-rating and modernization work of E station had been deferred from FY 2012-13 to FY 2013-14. This resulted into lower availability of E station during FY 2013-14 compared to approved estimates.

- F station – The up-rating and modernization work of F station which was initiated in FY 2012-13 was completed during FY 2013-14.

- The actual availability of units has been computed, considering the annual planned shutdown and the forced outages of the units during FY 2013-14.

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 all the coal 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 E Station, has been more than 85%, they are eligible for recovery of fixed charges, as per GERC (MYT) Regulations, 2011. In the case of E 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 2013-14, for truing up purpose, since this is a controllable parameter.

Hence, for the purpose of truing up for the FY 2013-14, the PAF level considered is as given in the Table below:

Table 4.3: Plant Availability Factor of TPL-G (APP) Considered for truing up for FY 2013-14

(%)

Sl. No	Stations	Approved for FY 2013-14 in MYT Order	Actuals for FY 2013-14	Considered for truing up for FY 2013-14
A	**Sabarmati**			
1	C Station	97.50	85.89	97.50
2	D Station	97.50	94.65	97.50
3	E Station	97.50	60.53	97.50
4	F Station	97.50	86.86	97.50
B	**Vatva Gas Station**	95.10	100.00	95.10

4.2.2 Plant Load Factor (PLF)

Petitioner's Submission

TPL has submitted the actuals of plant load factor (PLF) of different stations for FY 2013-14.

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 2013-14

(%)

Sl. No	Station	Approved for FY 2013-14 in MYT order	Actuals for FY 2013-14
A	**Sabarmati**		
1	C Station	78.19	74.80
2	D Station	79.88	87.51
3	E Station	81.33	54.58
4	F Station	82.62	81.27
B	**Vatva Gas Station**	76.48	-

The overall PLF of Sabarmati station was 74.75% which was lower as compared to approved PLF of 80.84%. The variation in PLF at Sabarmati was mainly on account of rescheduling of the uprating and modernization work of E station from FY 2012-13 to FY 2013-14. For Vatva CCPP, allocation of gas was reduced to zero by the Government due to Lower availability of domestic gas from KG basin. As the cost of generation using spot RLNG was higher, though the plant was available during the year, the utilization was zero. Further, due to non-availability of allocated gas from KG basin during the entire FY 2013-14, Vatva CCPP had to be kept on wet preservation mode.

It is also submitted that PLF is dependent on actual system demand which in turn depends upon the drawal by the consumers which is beyond the control of the petitioner. Therefore, the variation in the PLF is uncontrollable.

Commission's Analysis

The Commission has analysed the submissions made by the Petitioner.

The Commission has taken note of the above major reduction in PLF for E Station and 0% PLF for CCPP Vatva station. For the C & F Stations, the PLF achieved is marginally less than that approved in the MYT Order. The PLF of D Station is more than that approved in the MYT order.

The Commission considers the Plant Load Factor for various stations at actuals for FY 2013-14, 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 2013-14

(%)

Sl. No	Stations	Approved for FY 2013-14 in MYT Order	Actuals for FY 2013-14	Considered for truing up for FY 2013-14
A	**Sabarmati**			
1	C Station	78.19	74.80	74.80
2	D Station	79.88	87.51	87.51
3	E Station	81.33	54.58	54.58
4	F Station	82.62	81.27	81.27
B	**Vatva Gas Station**	76.48	-	-

4.2.3 Auxiliary Consumption

Petitioner's Submission

TPL has submitted the actuals of auxiliary consumption of different stations for FY 2013-14.

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 2013-14

(%)

Sl. No	Station	Approved for FY 2013-14 in MYT Order	Actuals for FY 2013-14
A	**Sabarmati**		
1	C Station	9.50	10.44
2	D Station	9.00	8.99
3	E Station	9.00	9.32
4	F Station	9.00	8.98
B	**Vatva Gas Station**	3.00	-

TPL has submitted that it has made several efforts to maintain the auxiliary consumption at the approved levels, but the auxiliary consumption was higher than the approved values 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 in order to reduce the cost. 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 for coal handling Plant, the Milling Plant and other associated system, like air, gas and ash handling systems.

b) Variation in Demand

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

The Petitioner has submitted that the variation in Auxiliary consumption should be considered as uncontrollable.

However, in the present Petition for the purpose of quantification of gains / losses, TPL has considered the entire variation in Auxiliary Consumption as a controllable parameter.

Commission's Analysis

It is noted that, except for the D and F stations, 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 2013-14, 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 2013-14 is given in Table below:

Table 4.7: Auxiliary Consumption of TPL-G (APP) Approved for truing up for FY 2013-14

(%)

Sl. No	Stations	Approved for FY 2013-14 in MYT Order	Actuals for FY 2013-14	Approved for truing up for FY 2013-14
A	**Sabarmati**			
1	C Station	9.50	10.44	9.50
2	D Station	9.00	8.99	9.00
3	E Station	9.00	9.32	9.00
4	F Station	9.00	8.98	9.00
B	**Vatva Gas Station**	3.00	-	3.00

4.2.4 Station Heat Rate (SHR)

Petitioner's Submission

TPL has furnished the actual SHR attained for different stations during FY 2013-14. 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 2013-14

(kCal / kWh)

Sl. No	Station	Approved for FY 2013-14 in MYT order	Actuals for FY 2013-14
A	**Sabarmati**		
1	C Station	3150	3154
2	D Station	2450	2447
3	E Station	2455	2542
4	F Station	2455	2440
B	**Vatva Gas Station**	2165	-

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 was higher than approved SHR for FY 2013-14 as the approved SHR was after considering the up-rating and modernization.

With regard to Vatva, due to zero availability of allocated gas by the Central Government, the plant was kept on wet preservation mode.

Commission's Analysis

The Commission had actually approved the SHR of 2455 Kcal/kWh for E Station for FY 2013-14 considering the R&M envisaged. But, as submitted by TPL due to various reasons R&M has been deferred from FY 2012-13 to FY 2013-14. Since, TPL completed R&M of E station during the FY 2013-14, the full impact of the improvement in SHR can be felt only in FY 2014-15 and hence the Commission approves SHR at the level of the actual SHR i.e. 2542 as requested by TPL, for E station for FY 2013-14.

For the purpose of True-up for FY 2013-14, the Commission approves the SHR as given in the Table below:

Table 4.9: Station Heat Rate Approved for truing up for FY 2013-14

(kCal / kWh)

Sl. No.	Stations	Approved for FY 2013-14 in MYT order	Actuals for FY 2013-14	Approved for truing up for FY 2013-14
A	**Sabarmati**			
1	C Station	3150	3154	3150
2	D Station	2450	2447	2450
3	E Station	2455	2542	2542
4	F Station	2455	2440	2455
B	**Vatva Gas Station**	2165	-	-

4.2.5 Secondary Fuel Oil Consumption (SFC)

Petitioner's Submission

TPL has furnished the actuals of Secondary Fuel Oil Consumption for the different stations of TPL-G (APP) during the FY 2013-14.

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 2013-14

(ml/ kWh)

Sl. No	Station	Approved for FY 2013-14 in MYT Order	Actuals for FY 2013-14
A	**Sabarmati**		
1	C Station	2.00	2.01
2	D Station	1.00	0.99
3	E Station	1.00	1.16
4	F Station	1.00	0.91

It is submitted by TPL that the higher SFC in E station was due to the stabilization of the station after completion of the major activity of uprating and modernization. For C station, the variation was due to vintage of the plant.

It is also submitted by TPL that the SFC may increase from the current levels in future years, due to vintage of the plant and equipment and change in loading pattern of the plant.

Commission's Analysis

The actual Secondary Fuel Consumption (SFC), for C and E stations is marginally higher than the approved ones.

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 2013-14.

Accordingly, the SFC approved for FY 2013-14, for truing up purpose, is given in the Table below:

Table 4.11: Secondary Fuel Oil Consumption Approved for truing up for FY 2013-14

(ml/ kWh)

Sl. No.	Stations	Approved for FY 2013-14 in MYT Order	Actuals for FY 2013-14	Approved for truing up for FY 2013-14
A	**Sabarmati**			
1	C Station	2.00	2.01	2.00
2	D Station	1.00	0.99	1.00
3	E Station	1.00	1.16	1.00
4	F Station	1.00	0.91	1.00

4.2.6 Transit Loss

Petitioner's Submission

In its petition, TPL has submitted the actual percentage of transit loss of coal for all the coal-based stations of TPL-G (APP) during the FY 2013-14.

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 2013-14

(%)

Sl. No	Station	Approved for FY 2013-14 in MYT Order	Actuals for FY 2013-14
1	All coal- based stations	1.00	1.61

TPL has submitted as follows:

- TPL has been making continues efforts to contain the Transit Losses. However, it is pertinent to note that there are various uncontrollable factors such as moisture loss during transit, windage and slippage losses due to which transit loss is still higher. It appears that 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 2013-14 is approved, as given in the Table below:

Table 4.13: Transit loss approved for truing up for FY 2013-14

(%)

Sl. No.	Stations	Approved for FY 2013-14 in MYT Order	Actuals for FY 2013-14	Approved for truing up for FY 2013-14
1	All coal- based stations	1.00	1.61	1.00

4.2.7 Summary of Performance Parameters Approved for truing up for FY 2013-14

Based on the analysis in the preceding paragraphs, the performance parameters approved for different power generation stations of TPL-G (APP) for the FY 2013-14, 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 2013-14

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	74.80	9.50	3150	2.00	1.00
2	D Station	97.50	87.51	9.00	2450	1.00	1.00
3	E Station	97.50	54.58	9.00	2542	1.00	1.00
4	F Station	97.50	81.27	9.00	2455	1.00	1.00
B	**Vatva Gas Station**	95.10	-	3.00	-		

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 2013-14, are given in the Table below:

Table 4.15: The Gross and Net Generation of Power for truing up for FY 2013-14

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	393.14	10.44	41.06	352.08	393.14	9.50	37.35	355.79
2	D Station	919.86	8.99	82.71	837.13	919.86	9.00	82.79	837.07
3	E Station	549.22	9.32	51.21	498.00	549.22	9.00	49.43	499.79
4	F Station	855.13	8.98	76.82	778.30	855.13	9.00	76.96	778.17
B	**Vatva Gas Station**	**-**	**-**	**2.37**	**(2.37)**	**0.00**	**3.00**		
	Total	**2717.34**		**254.18**	**2463.16**	**2717.35**		**246.53**	**2470.82**

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.

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 2013-14:

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

TPL has furnished the actuals of Wt. Av. Calorific Value of fuels for all the stations put together for FY 2013-14, 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 2013-14

Particulars	Calorific Value
Wt. Av. GCV of Indigenous coal (kcal / kg)	3932
Wt. Av. GCV of Imported coal (kcal / kg)	4792
Wt. Av. GCV of secondary fuel oil (kcal / L)	9966

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 its letter of 3rd January, 2015, 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 2013-14

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	3941	9973.92	
2	D Station	4180	9965.81	
3	E Station	4162	9990.43	
4	F Station	4174	9948.40	
B	**Vatva Gas Station**			2,52,000.00

4.4.2 Mix of Coal

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 2013-14, as given in the Table below:

Table 4.18: The Mix of Different Types of Coal for FY 2013-14*

Sl. No.	Station	Indigenous coal %	Imported coal %
A	**Sabarmati**		
1	C Station	100.00	0.00
2	D Station	71.40	28.60
3	E Station	72.73	27.27
4	F Station	71.30	28.70

Note: The mix of coal for different stations is as per the additional information furnished by TPL vide its letter dated 3rd January, 2015.

4.4.3 Wt. Av Prices of Fuel

TPL has furnished the actuals of Wt. Av Price per unit of different fuels for all the stations put together for FY 2013-14, as given in the Table below:

Table 4.19: Wt. Av. Price / Unit of Fuels for FY 2013-14 (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	4184.62	5957.17	51357.04	
2	Vatva Gas station				-

In its communication dated 3rd January, 2015, TPL has furnished the actual Wt. Av. cost / MT of different fuels for different stations for FY 2013-14, as given in the Table below:

Table 4.20: Av. Price / Unit of Fuels for FY 2013-14 (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	4177.98	-	51106.20	-
2	D Station	4195.82	5929.11	50850.83	-
3	E Station	4246.92	5984.69	52286.74	-
4	F Station	4234.33	5982.56	51389.95	-
B	**Vatva Gas Station**	-	-	-	-

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 and considered for truing up purpose for FY 2013-14, as these are uncontrollable items.

4.5 Fuel Costs

On a query from the Commission related to fuel cost for Vatva Gas Station, TPL vide e-mail dated 17.03.2015 clarified that it is the cost related to Gas transportation capacity reservation charge payable to GSPL. Out of total amount of Rs. 13.12 Crore, TPL has paid Rs. 5.95 Crore to GSPL based on invoice raised by them. TPL has made provisions for Rs. 7.17 Crore in their annual accounts for FY 2013-14 based on the tariff determined by the appropriate authority. However, this amount of Rs. 7.17 Crore will be allowed only after the actual payment is made to GSPL.

In view of the above the Commission decides to consider only an amount of Rs. 5.95 Crore as fuel related cost for Vatva Gas station and balance cost of Rs. 7.17 Crore shall be addressed appropriately as and when it is actually paid.

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 2013-14

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	393.14	352.08	135.80	3.86	393.14	355.79	134.8	3.79
2	D Station	919.86	837.15	257.71	3.08	919.86	837.07	257.05	3.07
3	E Station	549.22	498.00	162.82	3.27	549.22	499.79	161.26	3.23
4	F Station	855.13	778.30	241.82	3.11	855.13	778.17	241.98	3.11
B	**Vatva Gas Station**		**(2.37)**	13.12			(2.37)	5.95	
	Total	**2717.34**	**2463.16**	**811.28**	**3.29**	**2717.35**	**2468.45**	**801.04**	**3.25**

Detailed computation of the fuel cost for each of the stations has been given in Annexures 4.1 to 4.4 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 almost equal to the normative costs.

The Commission has verified the actual fuel cost submitted by TPL with the 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 2013-14 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 2013-14

(Rs. Crore)

Particulars	As per actuals	Approved for FY 2013-14
Total Fuel Cost	811.28	801.04

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 2013-14, 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 2013-14

(Rs. Crore)

Sl. No.	Station	Fuel cost arrived at with approved parameters for actual net generation for FY 2013-14*	Actual fuel cost approved for truing up for FY 2013-14	Gains / (Losses) due to controllable factors
A	**Sabarmati**			
1	C Station	133.40	135.80	(2.40)
2	D Station	257.08	257.71	(0.63)
3	E Station	160.69	162.82	(2.13)
4	F Station	242.02	241.82	0.20
B	**Vatva Gas Station**	5.95	5.95	0.00
	Total	**799.14**	**804.10**	**(4.96)**

**Note: Detailed computation of the fuel cost for each of the stations, with approved parameters for actual net generation, has been given in Annexures 4.1 to 4.4 at the end of this chapter.*

4.6 Fixed Charges

4.6.1 Operations and Maintenance (O&M) expenses

TPL has claimed Rs. 129.11 Crore as O&M expenses as against Rs. 155.08 Crore of composite O&M expenses approved for FY 2013-14 in the MYT Order.

Table 4.24: O&M Expenses of TPL-G (APP) Claimed for FY 2013-14

All figures in Rs. Crore	MYT Order	Actual
Operations and Maintenance Expenses	155.08	129.11

Petitioner's Submission

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

(a) Reduction in employee expenses due to transfer of some manpower to TPL-D (A) based in the skill set and in order to optimise the overall cost.

(b) Reduction in the R&M and A&G expenses due to deferment of certain activities as focus was on major work of E & F station up rating and modernisation.

Therefore, despite higher inflation and increase in security expenses, the overall O&M expenses have reduced.
The petitioner has considered the entire O&M expenses as controllable for sharing of gains / Losses.

Commission's Analysis

TPL has submitted the actual O&M expenses at Rs. 129.11 Crore in the truing up for FY 2013-14. The O&M expenses as per audited accounts for FY 2013-14 are Rs. 129.63 Crore which include donations of Rs. 0.51 Crore. The O&M expenses excluding donations are Rs. 129.12 Crore.

The Commission, accordingly, approves the O&M expenses at Rs. 129.12 Crore, as per the audited accounts for truing up for FY 2013-14.

The O&M expenses and the Gains / (Losses) approved in the truing up for FY 2013-14 are given in the Table below:

Table 4.25: O&M Expenses and Gains / (Losses) Approved in truing up for FY 2013-14

(Rs. Crore)

Particulars	Approved for FY 2013-14 in MYT Order	Approved in truing up for FY 2013-14	Deviation + / (-)	Gains / (Losses) due to Controllable factor	Gains / (Losses) due to uncontrollable factor
O&M Expense	155.08	129.12	25.96	25.96	-

4.6.2 Water Charges

TPL has claimed Rs. 8.63 Crore towards actual water charges in the truing up for FY 2013-14, as against Rs. 8.59 Crore approved in the MYT Order for FY 2013-14. The details are given in the Table below:

Table 4.26: Water Charges Claimed in the truing up by TPL-G APP for FY 2013-14

(Rs. Crore)

Sl. No.	Particulars	Approved for FY 2013-14 in MYT Order	Actual claimed in truing up for FY 2013-14
1	Water Charges	8.59	8.63

Petitioner's Submission

TPL has claimed the water Charges of Rs. 8.63 Crore and these water charges are not separately indicated in the annual accounts, but included in the total miscellaneous expenses of Rs. 16.21 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. 8.63 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 2013-14

(Rs. Crore)

Sl. No.	Particulars	Approved for FY 2013-14 in MYT Order	Approved for truing up for FY 2013-14	Deviation +/(-)	Gains / (Losses) due to uncontrollable factor
1	Water Charges	8.59	8.63	(0.04)	(0.04)

4.6.3 Capital expenditure, Capitalisation and Sources of Funding

TPL has claimed Rs. 170.51 Crore towards actual capital expenditure in the truing up for FY 2013-14, as against Rs. 22.39 Crore approved in the MYT order for FY 2013-14. The details are given in the Table below:

Table 4.28: Capital Expenditure Claimed by TPL-G (APP) For FY 2013-14

(Rs. Crore)

Sl. No.	Particulars	MYT Order	Actual
1	F Station Up-gradation	-	10.81
2	E station Up-gradation	-	145.43
3	Renovation & Refurbishment of Civil Structure / Buildings	-	1.53
4	Refurbishment of boiler of D station	-	2.92
5	Normal Capital Expenditure - Sabarmati	12.66	9.73
6	Normal Capital Expenditure- Vatva	9.61	0.00
7	Miscellaneous items	0.12	0.10
	Total Cost	**22.39**	**170.51**

Petitioner's Submission

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

a) <u>E and F Station up-rating and modernisation</u> – E and F Station up-rating and modernisation were planned in FY 2011-12 and FY 2012-13. Due to delay in response from OEMs and longer implementation cycle, the project had been deferred to FY 2012-13 & 2013-14 for F and E station, respectively.

The estimate of Rs. 173.43 Crore was made for up-rating and modernisation of F station. Due to increase in foreign exchange rate, the actual project cost increased to Rs. 169.65 Crore of which Rs. 10.81 Crore was incurred in FY 2013-14. The up-rating and modernisation was successfully completed and F station came into operation from the April 30, 2013.

The estimate of Rs. 182.22 Crore was made for carrying out the up-rating and modernisation of E station. The major activity of up-rating and modernisation was carried out in FY 2013-14 and expenditure of Rs. 145.43 Crore was incurred during the year out of total of Rs. 177.10 Crore. The E station came into operation from the October 21, 2013.

b) Renovation and refurbishment of civil structure/building of all stations - The project is under execution from FY 2011-12. The refurbishment is going on based on the availability of the running plant. The project is likely to be completed in FY 2014-15. During FY 2013-14, TPL-G (APP) incurred the capex of RS. 1.53 Crore towards the project.

c) Refurbishment of boiler of D station – It was planned to incur the capex for refurbishment of boiler of D station in FY 2011-12. However since it necessitated the shutdown of at least 50 days for D station, the capex has been deferred to FY 2014-15. The Petitioner incurred the capex of Rs. 2.92 Crore during FY 2013-14 out of total estimated projected cost of RS. 17 Crore.

d) Normal Capital Expenditure in Sabarmati – TPL-G (APP) has incurred the expenditure of Rs. 9.73 Crore against approval of Rs. 12.66 Crore. The major variation is on account of deferment of major routine capital expenditure like refurbishment of water softening plant and procurement of spares for electrical system.

e) Normal Capital Expenditure in Vatva – TPL-G (APP) has not incurred any expenditure for Vatva as the plant was kept on wet preservation mode due to non-availability of allocated gas by the Government for the entire FY 2013-14.

Commission's Analysis

TPL has claimed a capitalisation of Rs. 360.82 Crore, as against the actual capital expenditure of Rs. 170.51 Crore.

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 2013-14

(Rs. Crore)

All figures in Rs. Crore		Actual submitted by Petitioner
Opening GFA	(a)	819.21
Addition to GFA	(b)	360.82
Deletion to GFA	(c)	10.58
Closing GFA	(d)=(a)+(b)-(c)	1169.46
Capitalization considered for Debt	(e)=(b)	360.82
Capitalization considered for Equity	(f)=(b)-(c)	350.25
Normative Debt @ 70%	(g)=(e)*70%	252.58
Normative Equity @ 30%	(h)=(f)*30%	105.07

The Commission observes that the actual capital expenditure incurred was much higher than the capital expenditure approved in the MYT Order for FY 2013-14. The net capitalisation, as verified from the audited annual accounts, is Rs. 350.24 Crore. TPL has calculated the normative debt as 70% of the gross capitalisation of Rs. 360.82 Crore and normative equity as 30% of the net capitalisation of Rs. 350.25 Crore. However, the Commission has considered the normative debt and equity on the basis of net capitalisation of Rs. 350.24 Crore.

The Commission approves the capitalisation and sources of funding, as shown in the Table below in the truing up for FY 2013-14.

Table 4.30: Approved Capitalisation and Sources of Funding in truing up for FY 2013-14

(Rs. Crore)

Sl. No.	Particulars	Actual claimed in truing up for FY 2013-14	Approved in truing up for FY 2013-14
1	Capital Expenditure	170.51	
2	Gross Capitalisation	360.82	
3	Net Capitalisation During the Year	350.25	350.24
4	Normative Debt (70%)	252.58	245.17
5	Normative Equity (30%)	105.07	105.07

4.6.4 Interest Expenses

TPL has claimed a sum of Rs. 16.15 Crore towards actual interest expenses in the truing up for FY 2013-14, as against Rs. 33.83 Crore approved in the MYT Order for FY 2013-14, as detailed in the Table below:

Table 4.31: Total Interest Expenses Claimed in truing up for TPL-G (APP) for FY 2013-14

(Rs. Crore)

Sl. No.	Particulars	Approved for FY 2013-14 in MYT Order	Actual claimed in truing up for FY 2013-14
1	Interest Expenses	33.83	16.15

Petitioner's Submission

The petitioner has considered the interest expenses as per the GERC (MYT) Regulations, 2011 on normative loans approved by the Commission. The petitioner has calculated the interest expenses by applying the opening Weighted Average Rate of interest, on the actual loan portfolio of the Petitioner at the beginning of the year (i.e. 01.04.2013), on the loan component while repayment has been considered equal to the depreciation of the assets for the year.

The normative loan schedule for FY 2013-14 and the corresponding interest expense is submitted for the approval of the Commission. The interest expense is an uncontrollable item as it depends on the actual capitalization and variation in rate of interest. The interest expense for FY 2013-14 is shown in the table below.

Table 4.32: Interest Claimed in the truing up for FY 2012-13

(Rs. Crore)

Particulars	Actual
Capitalization During the Year	360.82
Normative Debt @ 70%	252.58
Opening Balance	33.53
New Borrowings	252.58
Repayments	44.37
Closing Balance	241.74
Interest Expense @ 11.56%	**15.91**
Other Borrowing Cost	0.24
Total Interest Expenditure	**16.15**

Commission's Analysis

The loan outstanding as on 1st April, 2013 has been verified and found to be correct. The additional loan considered by the Commission is of Rs. 245.17 Crore for FY 2013-14 and is in accordance with the capitalisation and source of funding, as approved in Table 4.30.

The Commission has obtained the details of actual loan portfolio as on 01.04.2013 from TPL and the weighted average rate of interest worked out to 11.56%. The other borrowing cost is Rs. 0.24 Crore as per audited accounts.

The Commission has re-computed the allowable interest charges, adopting the weighted average rate of 11.56% for FY 2013-14, 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 2013-14
(Rs. Crore)

Sl. No.	Particulars	Approved in truing up for FY 2013-14
1	Opening Loan	33.53
2	New loan During the Year	245.17
3	Repayment During the Year	44.37
4	Closing Loan	234.33
5	Average Loan	133.93
6	Rate of Interest	11.56%
7	Interest	15.48
8	Other Borrowing Costs	0.24
9	Total Interest and Finance Charges	15.72

The Commission, accordingly, approves the interest and finance charges of Rs. 15.72 Crore in the truing up for FY 2013-14.

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 2013-14, as detailed in the Table below:

Table 4.34: Gains / (Losses) Approved in the truing up for FY 2013-14

(Rs. Crore)

Particulars	Approved for FY 2013-14 in MYT Order	Actual claimed in truing up for FY 2013-14	Approved in truing up for FY 2013-14	Deviation +/(-)	Gains / (Losses) due to uncontrollable factor
Interest and Finance Charges	33.83	16.15	15.72	18.11	18.11

4.6.5 Interest on Working Capital

TPL has claimed a sum of Rs. 17.42 Crore towards interest on working capital in the truing up of FY 2013-14, as against Rs. 14.40 Crore approved in the MYT Order for FY 2013-14, as detailed in the Table below:

Table 4.35: Interest on Working Capital of TPL-G (APP) Claimed for FY 2013-14

(Rs. Crore)

Sl. No.	Particulars	Approved for FY 2013-14 in MYT Order	Actual claimed in truing up for FY 2013-14
1	Coal for 1.5 Month	81.33	97.61
2	Secondary Fuel for 2 months	1.70	2.88
3	Gas for 1 Month	13.90	1.09
4	O&M Expenses for 1 Month	12.92	10.76
5	1% of GFA for Maintenance Spares	12.69	8.19
6	Receivables for 1 Months	-	-
7	Normative Working Capital	122.54	120.53
8	Interest Rate	11.75%	14.45%
9	Interest on Working Capital	14.40	17.42

Petitioner's Submission

The Petitioner has requested the Commission to approve the above mentioned interest on working capital. The variation in working capital requirement and the variation in interest rate are uncontrollable and therefore, the variation in interest on working capital requirement compared to the approved expenses is to be treated as uncontrollable.

Commission's Analysis

The Commission has examined the interest on working capital claimed by TPL for FY 2013-14. The Commission has observed that TPL has worked out the interest on working capital, considering 14.45% the SBAR as on 01.04.2013.

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, 2013 was 14.45%. The Commission, accordingly, takes into consideration the SBAR of 14.45% in computation of Interest in Working Capital for FY 2013-14.

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 2013-14

(Rs. Crore)

Sl. No.	Particulars	Actual claimed in truing up for FY 2013-14	Approved in truing up for FY 2013-14
1	Coal cost 1.5 Month	97.61	97.86
2	Secondary fuel for 2 Months	2.88	2.66
3	Gas for 1 Month	1.09	0.50
4	O&M expenses for 1 Month	10.76	10.76
5	1% of GFA for Maintenance Spares	8.19	8.19
6	Receivables for 1 Month	-	
7	Normative Working Capital	120.53	119.97
8	Interest Rate	14.45%	14.45%
9	Interest on Working Capital	17.42	17.34

The Commission, accordingly, approves the interest on working capital at Rs. 17.34 Crore in the truing up for FY 2013-14.

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 2013-14, as detailed in the Table below:

Table 4.37: Gains / (Losses) in Interest on Working Capital Approved in the truing up for FY 2013-14

(Rs. Crore)

Particulars	Approved for FY 2013-14 in MYT Order	Approved in truing up for FY 2013-14	Deviation +/(-)	Gains /(Losses) due to Controllable Factors	Gains /(Losses) due to Uncontrollable Factors
Interest on Working Capital	14.40	17.34	(2.94)		(2.94)

4.6.6 Depreciation

TPL has claimed a sum of Rs. 44.37 Crore towards depreciation in the truing up for FY 2013-14, as against Rs. 54.48 Crore approved in the MYT Order for FY 2013-14, as detailed in the Table below:

Table 4.38: Depreciation of TPL-G (APP) Claimed for FY 2013-14

(Rs. Crore)

Sl. No.	Particulars	Approved for FY 2013-14 in the MYT Order	Actual claimed in truing up for FY 2013-14
1	Depreciation	54.48	44.37

Petitioner's Submission

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

Commission's Analysis

The details of opening balance of assets as on 1st April, 2013, and addition and deduction to the Gross Block during FY 2013-14 and the depreciation on the assets, classification wise, are given in Form 12, Part 1 of the petition. The opening and closing balances of assets are as per the audited accounts for FY 2013-14.

The Commission, accordingly, approves the depreciation at Rs. 44.37 Crore in the truing up for FY 2013-14.

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 2013-14, as detailed in the Table below:

The Commission, accordingly, approves the Gains / (Losses) on account of depreciation in the truing up for FY 2013-14, as detailed in the Table below:

Table 4.39: Gains / (Losses) due to Depreciation Approved in the truing up for FY 2013-14

(Rs. Crore)

Particulars	Approved for FY 2013-14 in MYT Order	Approved in truing up for FY 2013-14	Deviation +/(-)	Gains / (Losses) due to Uncontrollable Factors
Depreciation	54.48	44.37	10.11	10.11

4.6.7 Return on Equity

TPL has claimed a sum of Rs. 53.94 Crore towards return on equity in the truing up for FY 2013-14, as against Rs. 66.08 Crore approved in the MYT Order for FY 2013-14, as detailed in the Table below:

Table 4.40: Return on Equity of TPL-G (APP) Claimed for FY 2013-14

(Rs. Crore)

Sl. No.	Particulars	Approved for FY 2013-14 in the MYT Order	Actual claimed in truing up for FY 2013-14
1	Opening Equity	468.61	332.77
2	Equity Addition	6.50	105.07
3	Closing Equity	475.33	437.84
4	Average Equity	471.97	385.30
5	**Return on Equity**	**66.08**	**53.94**

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 2013-14.

Commission's Analysis

The opening equity for FY 2013-14 is as per the closing equity for FY 20112-13 approved in the True-up for FY 2012-13. The addition of equity of Rs. 105.07 Crore during FY 2013-14 is as per the capitalisation approved in the truing up for FY 2013-14 in Table 4.30 above.

The Commission, accordingly, approves the return on equity of Rs. 53.94 Crore in the truing up for FY 2013-14, as detailed in the Table below:

Table 4.41: Return on Equity approved in the truing up for FY 2013-14

(Rs. Crore)

Sl. No.	Particulars	Claimed in truing up for FY 2013-14	Approved in truing up for FY 2013-14
1	Opening Equity	332.77	332.77
2	Equity Addition	105.07	105.07
3	Closing Equity	437.84	437.84
4	Average Equity	385.30	385.31
5	Return on Equity	53.94	53.94

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 2013-14, 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 2013-14, as detailed below:

Table 4.42: Return on Equity and Gains / (Losses) Approved in the truing up for FY 2013-14

(Rs. Crore)

Particulars	Approved for FY 2013-14 in MYT Order	Approved in truing up for FY 2013-14	Deviation +/(-)	Gains / (Losses) due to uncontrollable factors
Return on Equity	66.08	53.94	12.14	12.14

4.6.8 Income Tax

TPL has claimed a sum of Rs. 17.27 Crore towards income tax in the truing up for FY 2013-14, as against Rs. 26.45 Crore approved in the MYT Order for FY 2013-14, as detailed in the Table below:

Table 4.43: Income Tax Claimed for TPL-G (APP) for FY 2013-14

(Rs. Crore)

Sl. No.	Particulars	Approved for FY 2013-14 in the MYT Order	Actual claimed in truing up for FY 2013-14
1	Income Tax	26.45	17.27

Petitioner's Submission

TPL has submitted that it has calculated the income tax, by applying the prevailing MAT rate 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 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 7th January 2015, 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 prevailing MAT rate 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. 12.41 Crore, tax paid through TDS is Rs. 22.50 Crore for FY 2013-14.

The Commission verified the PBT figures with the audited accounts for FY 2013-14 and has found that the petitioner has shown a PBT of Rs. 82.40 Crore. The Commission has computed the income tax for the Petitioner, based on the proportion of PBT. The income tax apportioned to TPL Generation is Rs. 17.27 Crore for FY 2013-14.

The Commission, accordingly, approves the income tax at Rs. 17.27 Crore in the truing up for FY 2013-14.

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 2013-14, 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 2013-14

(Rs. Crore)

Particulars	Approved for FY 2013-14 in the MYT Order	Approved in truing up for FY 2013-14	Deviation +/(-)	Gains / (Losses) due to controllable factors	Gains / (Losses) due to uncontrollable factors
Income Tax	26.45	17.27	9.18	-	9.18

4.6.9 Non-Tariff income

Petitioner's Submission

TPL has submitted that the actual Non-Tariff income was Rs. 21.68 Crore in the truing up for FY 2013-14, as against Rs. 14.18 Crore approved in the MYT Order for FY 2013-14, as detailed in the Table below:

Table 4.45: Non-Tariff Income for TPL-G (APP) Claimed for FY 2013-14

(Rs. Crore)

Sl. No.	Particulars	Approved for FY 2013-14 in the MYT Order	Actual claimed in truing up for FY 2013-14
1	Non-Tariff Income	14.18	21.68

Commission's Analysis

The Non-Tariff income submitted by TPL is Rs. 21.68 Crore for FY 2013-14. The Non-Tariff income, as per audited annual accounts, is Rs. 21.69 Crore.

The Commission, accordingly, approves the Non-Tariff income at Rs. 21.69 Crore in the truing up for FY 2013-14.

The deviation in Non-Tariff income is at Rs**.** 7.51 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 2013-14, as detailed below:

Table 4.46: Non-Tariff Income and Gains / (Losses) Approved in the truing up for FY 2013-14

(Rs. Crore)

Sl. No.	Particulars	Approved for FY 2013-14 in the MYT Order	Approved in truing up for FY 2013-14	Deviation +/(-)	Gains / (Losses) due to Uncontrollable Factors
1	Non-Tariff Income	14.18	21.69	(7.51)	(7.51)

4.6.10 Incentive

TPL has claimed a sum of Rs. 0.75 Crore towards incentive in the truing up for FY 2013-14, as detailed in the Table below:

Table 4.47: Incentive claimed for TPL-G (APP) in FY 2013-14

Particulars	Actual
Total Fixed Charges (in Rs. Crore)	265.21
Actual Annual PAF (in %)	85.24%
Normative Annual PAF (NAPAF) (in %)	85.00%
Allowable Fixed Charges incl. Incentive (in Rs. Crore)	265.96
Incentive / Disincentive (in Rs. Crore)	0.75

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 Regulations 59 of the GERC (MYT) Regulations, 2011.

The additional capacity charges due to better PAF is dealt with in Para 4.9 of the order.

4.7 Revised ARR for FY 2013-14

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 2013-14.

Accordingly, the Commission has computed the sharing of gains and losses for FY 2013-14, 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 2013-14, 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 2013-14

(Rs. Crore)

Sl. No.	Annual Revenue Requirement	Approved for FY 2013-14 in MYT Order	Claimed in truing up for FY 2013-14	Approved in truing up for FY 2013-14	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	827.59	811.28	801.04	26.55	(4.96)	31.51
2	O&M Expenses	155.08	129.11	129.12	25.96	25.96	
3	Water Charges	8.59	8.63	8.63	(0.04)		(0.04)
4	Depreciation	54.48	44.37	44.37	10.11		10.11
5	Interest on Loan	33.83	16.15	15.72	18.11		18.11
6	Interest on Working Capital Loans	14.40	17.42	17.34	(2.94)		(2.94)
7	Return on Equity	66.08	53.94	53.94	12.14		12.14
8	Income Tax	26.45	17.27	17.27	9.18		9.18
9	Incentive	0.00	0.75	0.00	0.00		0.00
10	**Total expenditure**	**1186.50**	**1098.92**	**1087.43**	**99.07**	**21.00**	**78.07**
11	Less: Non-Tariff Income	14.18	21.68	21.69	(7.51)		(7.51)
12	**Aggregate Revenue Requirement**	**1172.32**	**1077.24**	**1065.74**	**106.58**	**21.00**	**85.58**

4.8 Sharing of Gains/Losses for FY 2013-14

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."

The trued up ARR claimed by TPL-G (APP) for FY 2013-14 is given in the Table.

Table 4.49: Revised ARR projected for TPL-G (APP) for FY 2013-14

All figures in Rs. Crore		
ARR as per MYT	(a)	1172.32
Gains / (Losses) due to Uncontrollable Factors	(b)	72.19
Gains / (Losses) due to Controllable Factors	(c)	22.88
Pass through as tariff	d=-(c/3+b)	(79.82)
ARR True-up	**e=a+d**	**1092.50**

The ARR approved for TPL-G (APP) in the truing up for FY 2013-14 is given in the Table below:

Table 4.50: Revised ARR approved for TPL-G (APP) for FY 2013-14

(Rs. Crore)

Sl. No.	Particulars	FY 2013-14
1	ARR approved in the MYT for FY 2013-14 (dated 6th September, 2011)	1172.32
2	Less: Gain on account of controllable factor to be passed on to the consumers (1/3rd)	7.00
3	Less: Gain on account of uncontrollable factor to be passed on to consumers	85.58
4	**Revised ARR approved for FY 2013-14 in the Truing up**	1079.74

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 4.51: Additional capacity charges for TPL-G (APP) for FY 2013-14

Particulars	Approved for truing up for FY 2013-14
Total Capacity charges (in Rs. Crore)	264.70
Actual Wt. Avg. Annual PAF of TPL-G (APP) (in %)	85.24%
Normative Annual PAF (NAPAF) (in %)	85%
Additional Capacity charges (in Rs. Crore)	0.75
Allowable Capacity charges (in Rs. Crore)	265.45

The Commission approves the total ARR of Rs. 1080.49 Crore (1079.74 + 0.75) of TPL-G (APP) for FY 2013-14. The same is considered as actual power purchase cost of power purchased from TPL-G (APP) for FY 2013-14 in ARR of TPL Distribution.

Annexure 4.1

Approved Fuel costs for FY 2013-14 for True-up
Fuel costs (Coal, Lignite & Secondary Oil) - C Station

Sl. No.	Item	Derivation	Unit	2013-14
1	Gross Generation	A	MUs	393.14
2	Auxiliary Consumption	C	%	9.50%
3	Auxiliary Consumption	B = A * C	MUs	37.35
4	Net Generation	Y=A - B	MUs	355.79
5	Capacity	T	MW	60.00
6	PLF	V	%	74.80
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	3940.67
10	Calorific value of Oil	G	kcal/l	9973.92
11	Overall Heat	H=A x D	G Cal	1238391.00
12	Heat from Oil	I=(A x E x G)/1000	G Cal	7842.29
13	Heat from Coal	J=H-I	G Cal	1230549
14	Transit losses	K	%	1.0%
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	786.28
19	Actual Coal Consumption	M=(J X 1000)/F	MT	312268.91
20	A) Indigenous Coal	Q1=M* x X1/(1-K)	MT	315423.14
21	C) Imported Coal	Q3=M* X X3	MT	0.00
22	Price of Coal			
23	A) Indigenous Coal	P1	Rs/MT	4177.98
24	C) Imported Coal	P3	Rs/MT	0.00
25	Price of Oil	P4	Rs/MT	51106.20
26	Coal cost			
27	A) Indigenous Coal	N1=Q1 X P1	Rs. Lakh	13178.32
28	C) Imported Coal	N3=Q3 X P3	Rs. Lakh	0
29	Total Coal Cost	N4=N1+N3	Rs. Lakh	13178.32
30	Oil Cost	N5=P4 x L/10^5	Rs. Lakh	401.84
31	Other Charges	N6	Rs. Lakh	(99.77)
32	Total Fuel Cost	O=N4 + N5 +N6	Rs. Lakh	13480.38
33	Fuel Cost/Unit Gross	P=O/(A*10)	Rs/kWh	3.43
34	Fuel Cost/Unit Net	Q=O/(Y*10)	Rs/kWh	3.79
35	Actual Net Generation	Z	MUs	352.08
36	Normative Fuel cost for actual net generation	Z1 = Z * Q * 10	Rs. Lakh	13339.75

Annexure 4.2

Approved Fuel costs for FY 2013-14 for True-up
Fuel costs (Coal, Lignite & Secondary Oil) - D Station

Sl. No.	Item	Derivation	Unit	2013-14
1	Gross Generation	A	MUs	919.86
2	Auxiliary Consumption	C	%	9.00%
3	Auxiliary Consumption	B = A * C	MUs	82.79
4	Net Generation	Y=A - B	MUs	837.07
5	Capacity	T	MW	120.00
6	PLF	V	%	87.51
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	4179.79
10	Calorific value of Oil	G	kcal/l	9965.81
11	Overall Heat	H=A x D	G Cal	2253657.00
12	Heat from Oil	I=(A x E x G)/1000	G Cal	9167.15
13	Heat from Coal	J=H-I	G Cal	2244489.85
14	Transit losses	K	%	1.0%
15	Coal Blend			
16	A) Indigenous Coal	X1	%	71.40%
17	C) Imported Coal	X3	%	28.60%
18	Actual Oil Consumption	L=A x E	KL	919.86
19	Actual Coal Consumption	M=(J X 1000)/F	MT	536986.27
20	A) Indigenous Coal	Q1=M* x X1/(1-K)	MT	387281.01
21	C) Imported Coal	Q3=M* X X3	MT	153578.07
22	Price of Coal			
23	A) Indigenous Coal	P1	Rs/MT	4195.82
24	C) Imported Coal	P3	Rs/MT	5929.11
25	Price of Oil	P4	Rs/MT	50850.83
26	Coal cost			
27	A) Indigenous Coal	N1=Q1 X P1	Rs. Lakh	16249.61
28	C) Imported Coal	N3=Q3 X P3	Rs. Lakh	9105.81
29	Total Coal Cost	N4=N1+N3	Rs. Lakh	25355.43
30	Oil Cost	N5=P4 x L/10^5	Rs. Lakh	467.76
31	Other Charges	N6	Rs. Lakh	(117.36)
32	Total Fuel Cost	O=N4 + N5 +N6	Rs. Lakh	25705.82
33	Fuel Cost/Unit Gross	P=O/(A*10)	Rs/kWh	2.79
34	Fuel Cost/Unit Net	Q=O/(Y*10)	Rs/kWh	3.07
35	Actual Net Generation	Z	MUs	837.15
36	Normative Fuel cost for actual net generation	Z1 = Z * Q * 10	Rs. Lakh	25708.20

Annexure 4.3

Approved Fuel costs for FY 2013-14 for True-up
Fuel costs (Coal, Lignite & Secondary Oil) - E Station

Sl. No.	Item	Derivation	Unit	2013-14
1	Gross Generation	A	MUs	549.22
2	Auxiliary Consumption	C	%	9.00%
3	Auxiliary Consumption	B = A * C	MUs	49.43
4	Net Generation	Y=A - B	MUs	499.79
5	Capacity	T	MW	110.00
6	PLF	V	%	54.58
7	Station Heat Rate	D	KCal/KWH.	2542.00
8	Sp. Oil Consumption	E	ml/kWh	1.00
9	Gross Calorific Value of Coal	F	kcal/kg	4161.74
10	Calorific value of Oil	G	kcal/l	9,990.43
11	Overall Heat	H=A x D	G Cal	1396117.24
12	Heat from Oil	I=(A x E x G)/1000	G Cal	5486.94
13	Heat from Coal	J=H-I	G Cal	1390630.30
14	Transit losses	K	%	1.0%
15	Coal Blend			
16	A) Indigenous Coal	X1	%	72.73%
17	C) Imported Coal	X3	%	27.27%
18	Actual Oil Consumption	L=A x E	KL	549.22
19	Actual Coal Consumption	M=(J X 1000)/F	MT	334146.37
20	A) Indigenous Coal	Q1=M* x X1/(1-K)	MT	245479.45
21	C) Imported Coal	Q3=M* X X3	MT	91121.71
22	Price of Coal			
23	A) Indigenous Coal	P1	Rs/MT	4246.92
24	C) Imported Coal	P3	Rs/MT	5984.69
25	Price of Oil	P4	Rs/MT	52286.74
26	Coal cost			
27	A) Indigenous Coal	N1=Q1 X P1	Rs. Lakh	10425.32
28	C) Imported Coal	N3=Q3 X P3	Rs. Lakh	5453.35
29	Total Coal Cost	N4=N1+N2+N3	Rs. Lakh	15878.67
30	Oil Cost	N5=P4 x L/10^5	Rs. Lakh	287.17
31	Other Charges	N6	Rs. Lakh	(39.55)
32	Total Fuel Cost	O=N4 + N5 +N6	Rs. Lakh	16126.29
33	Fuel Cost/Unit Gross	P=O/(A*10)	Rs/kWh	2.94
34	Fuel Cost/Unit Net	Q=O/(Y*10)	Rs/kWh	3.23
35	Actual Net Generation	Z	MUs	498.00
36	Normative Fuel cost for actual net generation	Z1 = Z * Q * 10	Rs. Lakh	16068.52

Annexure 4.4

Approved Fuel costs for FY 2013-14 for True-up
Fuel costs (Coal, Lignite & Secondary Oil) - F Station

Sl. No.	Item	Derivation	Unit	2013-14
1	Gross Generation	A	MUs	855.13
2	Auxiliary Consumption	C	%	9.00%
3	Auxiliary Consumption	B = A * C	MUs	76.96
4	Net Generation	Y=A - B	MUs	778.17
5	Capacity	T	MW	110.00
6	PLF	V	%	81.27
7	Station Heat Rate	D	KCal/KWH.	2455.00
8	Sp. Oil Consumption	E	ml/kWh	1.00
9	Gross Calorific Value of Coal	F	kcal/kg	4174.14
10	Calorific value of Oil	G	kcal/l	9948.40
11	Overall Heat	H=A x D	G Cal	2099344.15
12	Heat from Oil	I=(A x E x G)/1000	G Cal	8507.18
13	Heat from Coal	J=H-I	G Cal	2090837
14	Transit losses	K	%	1.0%
15	Coal Blend			
16	A) Indigenous Coal	X1	%	71.30%
17	C) Imported Coal	X3	%	28.70%
18	Actual Oil Consumption	L=A x E	KL	855.13
19	Actual Coal Consumption	M=(J X 1000)/F	MT	500902.46
20	A) Indigenous Coal	Q1=M* x X1/(1-K)	MT	360750.96
21	C) Imported Coal	Q3=M* X X3	MT	143759.00
22	Price of Coal			
23	A) Indigenous Coal	P1	Rs/MT	4234.33
24	C) Imported Coal	P3	Rs/MT	5982.56
25	Price of Oil	P4	Rs/MT	51389.95
26	Coal cost			
27	A) Indigenous Coal	N1=Q1 X P1	Rs. Lakh	15275.39
28	C) Imported Coal	N3=Q3 X P3	Rs. Lakh	8600.47
29	Total Coal Cost	N4=N1+N3	Rs. Lakh	23875.85
30	Oil Cost	N5=P4 x L/10^5	Rs. Lakh	439.45
31	Other Charges	N6	Rs. Lakh	(117.36)
32	Total Fuel Cost	O=N4 + N5 +N6	Rs. Lakh	24197.95
33	Fuel Cost/Unit Gross	P=O/(A*10)	Rs/kWh	2.83
34	Fuel Cost/Unit Net	Q=O/(Y*10)	Rs/kWh	3.11
35	Actual Net Generation	Z	MUs	778.30
36	Normative Fuel cost for actual net generation	Z1 = Z * Q * 10	Rs. Lakh	24202.04

5. Determination of Generation Charges for FY 2015-16

5.1 Introduction

This chapter deals with the determination of fixed, as well as variable, charges for the FY 2015-16 for TPL-G (APP). The Commission has considered the fixed and variable charges approved in the Mid-term Review for FY 2015-16 and the adjustment on account of True-up for FY 2013-14, while determining the Generation Tariff for FY 2015-16.

5.2 Approved ARR for FY 2015-16

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 2015-16. Detailed analysis of each expense head has already been provided in the Mid-term Review.

Table 5.1: Approved Fixed Charges for FY 2015-16

(Rs. Crore)

Sl. No	Particulars	Approved in Mid-term Review of FY 2015-16
1	O&M Expenses	141.86
2	Water Charges	8.37
3	Depreciation	44.70
4	Interest on Loan	0.00
5	Interest on working Capital	17.96
6	Return on Equity	44.95
7	Income Tax	18.51
8	Less: Non-Tariff Income	25.25
9	**Total**	**251.10**

5.3 Determination of Variable Charges for FY 2015-16

The Table below gives the energy charges for FY 2015-16 approved in the Mid-term Review Order.

Table 5.2: Approved Variable Charges for TPL-G (APP) for FY 2015-16

Sl. No	Station	Approved Fuel Cost for FY 2015-16 (Rs. Crore)	Fuel cost per unit gross (Rs. / kWh)	Fuel cost per unit net (Rs. / kWh)
A	**Sabarmati**			
1	C Station	119.63	3.27	3.62
2	D Station	221.05	2.79	3.07
3	E Station	223.71	2.76	3.04
4	F Station	236.92	2.84	3.12
5	**Total**	**801.31**		

The Table below gives the ARR for FY 2015-16, as approved in the Mid-term Review Order.

Table 5.3: Approved ARR for TPL-G (APP) for FY 2015-16

(Rs. Crore)

Sl. No.	**Particulars**	**FY 2015-16**
1	Variable Cost	801.31
2	O&M Expenses	141.86
3	Water Charges	8.37
4	Depreciation	44.70
5	Interest on Loan	0
6	Interest on Working Capital	17.96
7	Return on Equity	44.95
8	Income Tax	18.51
9	Less: Non-Tariff Income	25.25
10	Total	**1052.41**

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 TPL-G (APP) is given below:

Directive: Separate details of Fixed Cost for Sabarmati and Vatva Stations

TPL-G (APP) is directed to submit separate details of fixed costs for Sabarmati and Vatva stations in the truing up of FY 2012-13 positively.

Compliance

TPL has submitted the segregation of relevant components of fixed cost of TPL-G (APP) between Sabarmati and Vatva stations for FY 2013-14 as shown in table below:

Segregation of Fixed Cost of AMGEN for FY 2013-14

(Rs. Crore)

Particulars	Sabarmati	Vatva	TPL-G (APP)
O&M Expenses	125.17	3.96	129.13
Water Charges	8.63	-	8.63
Depreciation	41.58	2.79	44.37
RoE	50.78	3.16	53.94
Interest Expenses	33.87	-	33.87
Total	**260.03**	**9.91**	**269.94**
Other Income	21.21	0.48	21.69
Net Fixed Cost	**238.82**	**9.43**	**248.25**

Commission's comments

Compliance of TPL-G (APP) is noted.

Directive: Fuel Audit

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.

Compliance

TPL has complied with the directive of the Commission vide its submission dated 28th May, 2014.

Commission's comments

Compliance of TPL-G is noted.

COMMISSION'S ORDER

The Commission approves the Aggregate Revenue Requirement for TPL-G (APP) for FY 2015-16, as shown in the Table below:

Approved ARR for TPL-G (APP) for FY 2015-16

(Rs. Crore)

Sl. No.	Particulars	FY 2015-16
1	Variable Cost	801.31
2	O&M Expenses	141.86
3	Water Charges	8.37
4	Depreciation	44.70
5	Interest on loan	0
6	Interest on working Capital	17.96
7	Return on Equity	44.95
8	Income Tax	18.51
9	Less: Non-Tariff Income	25.25
10	**Total**	**1052.41**

This order shall come into force with effect from the 1st April, 2015.

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

Place: Gandhinagar
Date: 31/03/2015