Jharkhand State Electricity Regulatory Commission

Order on

Annual Performance Review Petition

for

FY 2015-16

(Including True up for FY 2013-14 and

True up for FY 2014-15)

for

Tata Power Company Limited

(TPCL)

Ranchi

30 December 2016

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List of Abbreviations

Abbreviation	Description
A&G	Administrative and General
ARR	Aggregate Revenue Requirement
ATE	Appellate Tribunal for Electricity
COD	Date of Commercial Operation
FY	Financial Year
GCV	Gross Calorific Value
GFA	Gross Fixed Assets
GoI	Government of India
JSERC	Jharkhand State Electricity Regulatory Commission
Kcal	Kilocalorie
Kg	Kilogram
kWh	Kilowatt-hour
MAT	Minimum Alternative Tax
MCL	Mahanadi Coalfields Ltd. (IB Valley Coalfields)
Ml	Millilitre
MT	Million Tonnes
MUs	Million Units
MW	Megawatt
O&M	Operations and Maintenance
PLF	Plant Load Factor
PPA	Power Purchase Agreement
RJC	Reprocessed Jig Coal
R&M	Repair and Maintenance
RoE	Return on Equity
Rs	Rupees
SBI	State Bank of India
SERC	State Electricity Regulatory Commission
SLM	Straight Line Method
TPCL	Tata Power Company Limited
TSL	Tata Steel Limited
WB	West Bokaro

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BEFORE

Jharkhand State Electricity Regulatory Commission, Ranchi

Case No.: 03 of 2016 (Tariff)

In the matter of:

Annual Performance Review for FY 2015-16;

And

Petition for True up for FY 2013-14 and FY 2014-15;

And

In the matter:

Tata Power Corporation Limited (TPCL), Jojobera Power Plant, PO Rahargora, Jamshedpur - 831 016

PRESENT

Hon'ble Mr Justice Narendra Nath Tiwari - Chairperson

Hon'ble Mr R. N. Singh - Member (T)

Order dated 30 December 2016

In this Petition, Tata Power Corporation Limited (hereinafter referred to as TPCL) has prayed for Order of True up for FY 2013-14 and FY 2014-15 and Annual Performance Review of FY 2015-16.

A1: INTRODUCTION

Jharkhand State Electricity Regulatory Commission

1.1 The Jharkhand State Electricity Regulatory Commission (hereinafter referred to as the "JSERC" or "the Commission") was established by the Government of Jharkhand under Section 17 of the Electricity Regulatory Commission Act, 1998 on August 22, 2002. The Commission became operational with effect from April 24, 2003. The Electricity Act, 2003 (hereinafter referred to as "the Act" or "EA, 2003") came into force with effect from June 10, 2003; and the Commission is now deemed to have been constituted and functioning under the provisions of the Act.

1.2 The Government of Jharkhand vide its notification dated August 22, 2002 had defined the functions of JSERC as per Section 22 of the Electricity Regulatory Commission Act, 1998 to be the following, namely:-

(a) to determine the tariff for electricity, wholesale, bulk, grid or retail, as the case may be, in the manner provided in section 29;

(b) to determine the tariff payable for the use of the transmission facilities in the manner provided in section 29;

(c) to regulate power purchase and procurement process of the transmission utilities and distribution utilities including the price at which the power shall be procured from the generating companies, generating stations or from other sources for transmission, sale, distribution and supply in the State;

(d) to promote competition, efficiency and economy in the activities of the electricity industry to achieve the objects and purposes of this Act.

1.3 After the Electricity Act, 2003 came into force, the earlier Electricity Regulatory Commission Act of 1998 stands repealed and the functions of SERCs are now defined under Section 86 of the Act.

1.4 In accordance with Section 86 (1) of the Act, the JSERC discharges the following functions: -

(a) determine the tariff for generation, supply, transmission and wheeling of electricity, wholesale, bulk or retail, as the case may be, within the State:

Provided that where open access has been permitted to a category of consumers under section 42, the State Commission shall determine only the wheeling charges and surcharge thereon, if any, for the said category of consumers;

(b) regulate electricity purchase and procurement process of distribution licensees including the price at which electricity shall be procured from the generating companies or licensees or from other sources through agreements for purchase of power for distribution and supply within the State;

(c) facilitate intra-state transmission and wheeling of electricity;

(d) issue licences to persons seeking to act as transmission licensees, distribution licensees and electricity traders with respect to their operations within the State;

(e) promote cogeneration and generation of electricity from renewable sources of energy by providing suitable measures for connectivity with the grid and sale of electricity to any person, and also specify, for purchase of electricity from such sources, a percentage of the total consumption of electricity in the area of a distribution licensee;

(f) adjudicate upon the disputes between the licensees and generating companies; and to refer any dispute for arbitration;

(g) levy fee for the purposes of this Act;

(h) specify State Grid Code consistent with the Grid Code specified under Clause (h) of sub-section (1) of Section 79;

(i) specify or enforce standards with respect to quality, continuity and reliability of service by licensees;

(j) fix the trading margin in the intra-state trading of electricity, if considered, necessary;

(k) discharge such other functions as may be assigned to it under this Act.

1.5 The Commission has to also advise the State Government as per sub section 2 of Section 86 of the Act, on all or any of the following matters, namely :-

(a) promotion of competition, efficiency and economy in activities of the electricity industry;

(b) promotion of investment in electricity industry;

(c) reorganisation and restructuring of electricity industry in the State;

(d) matters concerning generation, transmission, distribution and trading of electricity or any other matter referred to the State Commission by that Government.

1.6 The State Commission ensures transparency while exercising its powers and discharging its functions.

1.7 In discharge of its functions, the State Commission is also guided by the National Tariff Policy as brought out by GoI in compliance to Section 3 of the Act. The objectives of the National Tariff Policy are to:

(a) ensure availability of electricity to consumers at reasonable and competitive rates;

(b) ensure financial viability of the sector and attract investments;

(c) promote transparency, consistency and predictability in regulatory approaches across jurisdictions and minimize perceptions of regulatory risks;

(d) promote competition, efficiency in operations and improvement in quality of supply.

The Petitioner - Tata Power Company Limited

1.8 The Petitioner, Tata Power Company Limited (hereinafter referred to as 'TPCL' or the 'Petitioner'), is a company incorporated under the Indian Companies Act, VII of 1913 with its Registered Office at Bombay House, 24, Homi Mody Street, Fort, Mumbai – 400001 and is engaged in the generation, transmission and distribution of electricity in the country.

1.9 TPCL operates two units (Unit 2 and Unit 3) of Jojobera Power Plant, which are the subject matter of tariff determination in this Tariff Order. Both Units have a capacity of 120 MW each. Unit 2 commenced its operations on February 1, 2001 and Unit 3 on February 1, 2002.

1.10 Tata Steel Limited (TSL), which is engaged in the production of iron and steel and is also a distribution licensee in Jamshedpur (Jharkhand), obtained permission from the Government of Bihar to establish power plants in Jojobera in 1991 through its subsidiary company named Jamshedpur Power Company Ltd. (JAPCOL) which was subsequently transferred to Tata Power Company Limited. TPCL thereafter commissioned the two Units of 120 MW each at Jojobera for supply of power to TSL.

Scope of the Present Order

1.11 The Petitioner in the Annual Performance Review (APR) petition for FY 2015-16 dated February 29, 2016 has prayed before the Commission:

(a) To approve the Operational, Fuel and Financial Parameters, Additional Capitalization, Annual Revenue Requirement and Generation Tariff for Unit 2 and Unit 3 of Jojobera for Truing-up for FY 2013-14;

(b) To approve the Operational, Fuel and Financial Parameters, Additional Capitalization, Annual Revenue Requirement and Generation Tariff for Unit 2 and Unit 3 of Jojobera for Truing-up for FY 2014-15;

(c) To approve the Operational, Fuel and Financial Parameters, Additional Capitalization, Annual Revenue Requirement and Generation Tariff for Unit 2 and Unit 3 of Jojobera for Annual Performance Review for FY 2015-16;

1.12 The Petitioner filed for the truing up for FY 2013-14 and FY 2014-15 based on the actual information and audited accounts (including the requisite auditor certifications).

Basis of consideration

1.13 The Commission in this order has conducted the truing up for FY 2013-14 and FY 2014-15 after thorough scrutiny of the information submitted by the Petitioner.

1.14 While conducting the truing up for FY 2013-14 and FY 2014-15 the Commission has taken into consideration:

(a) Provisions of the Electricity Act, 2003,

(b) Provisions of the National Electricity Policy,

(c) Provisions of the Tariff Policy;

(d) Principles and provisions laid down in the JSERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2010 (hereinafter referred to as 'Generation Tariff Regulations, 2010').

A2: PROCEDURAL HISTORY

Background

2.1 TISCO, now TSL, was accorded sanction under section 28(1) of the Indian Electricity Act 1910 for distribution of electricity in the Jamshedpur township area in 1923. Subsequently by Government of Bihar notification dated February 5, 1993 permission was granted for the establishment of Jamshedpur Power Generating Co. Ltd (JAPCOL) as proposed by TISCO in order to set up Units 2 and Unit 3 at Jojobera, Jamshedpur.

2.2 The two parties, signed a PPA on September 12, 1997 under which both the parties agreed to set up, in a phased manner, a power plant with a total capacity of up to 500 MW at Jojobera. The PPA contained certain provisions which govern the determination of tariff for power generated at Jojobera power plant and purchased by TSL.

2.3 In April 2000, JAPCOL was amalgamated into TPCL (the Petitioner) as its subsidiary. Currently, the Petitioner operates five units at the Jojobera Power Plant, out of which two Units (Units 2 and Unit 3) have been subject to tariff determination by the Commission. Both Units have a capacity of 120 MW each.

TSL and TPCL's prayer for treatment of Unit 2 and Unit 3 as captive units and ruling of ATE

2.4 TSL and the Petitioner jointly filed a petition with the Commission for treatment of Unit 2 and Unit 3 at Jojobera power plant as captive units of TSL. The extract of the Appeal is as stated below

"The units 2 & 3 at Jojobera, Jamshedpur with a total installed capacity of 240 MW were conceived to meet the needs of steel works and are essentially captive power plants for steel works and related and associated activities of TSL i.e. steel works. The permission to establish the units 2 & 3 were granted to Jamshedpur Power Generating Co. Ltd. (JAPCOL for short) vide a notification issued by the Government of Bihar dated 05.02.93, subsequently amended on 22.03.96 under section 15-A, 43(A)(1)(C) and 44(1) of the Act of 1948. JAPCOL was later amalgamated into TPC in April 2000. The electricity generated from units 2 & 3 were from the very beginning primarily and essentially used for activities associated with manufacture of steel at TSL and for activities incidental and related thereto such as for supply to residential colonies of steel works. TSL became a sanction holder under section 28(1) of Act of 1910 and the area contiguous to the steel works forming part of the Jamshedpur city was taken over by TSL for electricity distribution. TSL is now distribution licensee in the area of Jamshedpur as an ancillary unit in principal business of production of steel. The electricity distribution and retail supply to consumers was done from the energy available after own consumption for TSL's principal business activity. TSL also purchases electricity from

TPCL's unit 1 at Jojobera for consumers of steel works. It also purchases electricity from the Damodar Valley Corporation (DVC for short) to supplement the electricity generated at TPCL's generating units. The supply of electricity to steel works from units 2 & 3 be not considered as supply of electricity by TSL as distribution licensee and therefore be not made part of annual revenue requirement and tariff proposal of TSL's activity as distribution licensee."

2.5 The Commission, in its order dated November 2, 2007, dismissed the appellants' contention that Units 2 and Unit 3 of the Jojobera plant be treated as captive power plants, on the basis of Section 9 of the Electricity Act 2003 and Rule 3 of the Electricity Rules 2005.

2.6 Dissatisfied with the Commission's order on the Joint petition filed by TSL and the Petitioner, the two appellants went in appeal before the Hon'ble ATE.

2.7 The Hon'ble ATE, too, ruled that the generating Units in question could not be treated as CPPs and upheld the Order of the Commission. The two appellants subsequently submitted a petition in the Hon'ble Supreme Court to get a stay on the Hon'ble ATE's Judgment, which was refused by the Hon'ble Court. The matter is still pending in the Hon'ble Supreme Court.

Filing of ARR and Tariff petition by TPCL and Tariff Order for FY 2009-10

2.8 In view of the Hon'ble ATE's Judgement and in accordance with the JSERC Generation Tariff Regulations, 2004 and its powers under the Section 62 (1) (a) of the Act, 2003, the Commission directed the Petitioner to file the ARR and Tariff petition with the Commission for determination of tariff of the two units (Unit 2 and Unit 3) at Jojobera.

2.9 TPCL filed the petition for determination of ARR for FY 2007-08, FY 2008-09 and FY 2009-10. The norms and guiding principles for tariff determination adopted by TPCL were not as per the JSERC Generation Tariff Regulations, 2004 but in accordance with the Power Purchase Agreement of 30 years signed with TISCO/TSL as sanction holder for distribution and generation of electricity at Jamshedpur.

2.10 During the tariff determination exercise for FY 2009-10 the Petitioner submitted that "as the PPA is legally binding on both parties, the Commission is requested to determine generation tariff for sale of power from both the Units, as per the provisions of the existing PPA."

2.11 The Commission accepted TPCL's request and determined the tariff for the FY 2009-10 as per the provisions of the PPA between TPCL and TSL. The Commission, however, directed the two parties to re-negotiate the PPA as under:

"10.1 The Petitioner had signed a Power Purchase Agreement (PPA) with TSL Limited (TSL) on 12th September, 1997 under which the Petitioner and TSL agreed to set up, in a phased manner, a power plant with a total capacity up to 500 MW at Jojobera. The PPA laid down certain provisions governing the determination of tariff for power generated by TPCL's Jojobera Power Plant and purchased by TSL.

10.2 Since the tariff period for FY 2007-08 and FY 2008-09 is effectively over and the tariff period remaining for FY 2009-10 is also not adequate to enforce any changes in the PPA, the Commission has decided to accept the provisions of the PPA for the tariff determination exercise for FY 2007-08, FY 2008-09 & FY 2009-10 for power generated from Unit 2 and Unit 3 of Jojobera Plant.

10.3 Furthermore, since the petition for FY 2010-11 is already due for submission by TPCL, the Commission has decided to continue with the provisions of the PPA for the tariff period FY 2010-11 as well.

10.4 Meanwhile, for future tariff periods, the Commission directs the Petitioner to renegotiate the terms and conditions for the determination of tariff specified in the PPA with TSL within 6 months of the issue of this order and submit the ARR filing for FY 2011-12 as per the new agreement (to be ratified by the Commission). The terms and conditions of the tariff determination in the new agreement between TPCL and TSL should be guided by 'Generation Tariff Regulations, 2004' as amended from time to time."

Tariff Order for FY 2010-11

2.12 During the tariff determination exercise for FY 2010-11 the Petitioner reiterated its request that the Commission determine the generation tariff for sale of power from both the Units (Unit 2 and Unit 3), as per the provisions of the existing PPA.

2.13 The Commission in its previous tariff order of FY 2009-10 had accepted the Petitioner's request and had decided to follow the provisions of PPA for determination of tariff up to the FY 2010-11 for power generated by Unit 2 and Unit 3. Thus the Commission decided to determine the tariff for FY 2010-11 as per the provisions of the PPA.

2.14 However, the Commission reiterated that from FY 2011-12 onwards, the tariff for Unit 2 and Unit 3 must be determined in accordance with the Generation Tariff Regulations 2010 of the Commission. It was clarified in the Tariff Order for FY 2010-11, thus;

"The Commission is in the process of revising the Generation Regulations and the same would be applicable to all the generation stations."

Tariff Order for FY 2011-12

2.15 The Commission in its previous Tariff Order for FY 2011-12 determined the ARR and generation tariff for Unit 2 and Unit 3 of TPCL for FY 2011-12 in accordance with the provisions and principles laid down in the Generation Tariff Regulations, 2010.

Business Plan and MYT Order for FY 2012-13 to FY 2015-16

2.16 The Petitioner filed the petition for Business Plan, Annual Revenue Requirement and Determination of Generation Tariff for the control period FY 2012-13 to 2015-16 on November 30, 2011.

2.17 The Commission in its order dated May 31, 2012 approved the petition filed by the Petitioner regarding Business Plan, Annual Revenue Requirement and Determination of Generation Tariff for the control period FY 2012-13 to 2015-16, including truing up for FY 2010-11 and provisional truing up for FY 2011-12.

Tariff Order on Annual Performance Review for FY 2012-13 including Truing up of FY 2011-12 and Revised Estimates for FY 2013-14 - FY 2015-16

2.18 The Commission in its previous Tariff Order, in accordance with the provisions and principles laid down in the Generation Tariff Regulations, 2010, carried out truing up of ARR parameters for FY 2011-12 and directed the Petitioner to file fresh petition regarding Truing up for FY 2012-13, APR for FY 2013-14 and Revised Estimates for FY 2014-15 to FY 2015-16.

Tariff Order on Annual Performance Review for FY 2013-14 including revised Truing up for FY 2011-12 and True up for FY 2012-13

2.19 The Commission in its previous Tariff Order, in accordance with the provisions and principles laid down in the Generation Tariff Regulations, 2010, carried out revised truing up of ARR parameters for FY 2011-12, true up of FY 2012-13 and APR for FY 2013-14.

Filing of the Petition by the Petitioner

2.20 The Petitioner filed the petition for Annual Performance Review for 2015-16 along with True Up for FY 2013-2014 and FY 2014-15 on 29th February, 2016.

2.21 The Petitioner in the present petition has requested to approve:

(a) Operational, Fuel and Financial Parameters, Additional Capitalization, Annual Revenue Requirement and Generation Tariff for Unit 2 and Unit 3 of Jojobera for Truing-up for FY 2013-14;

(b) Operational, Fuel and Financial Parameters, Additional Capitalization, Annual Revenue Requirement and Generation Tariff for Unit 2 and Unit 3 of Jojobera for Truing-up for FY 2014-15;

(c) Operational, Fuel and Financial Parameters, Additional Capitalization, Annual Revenue Requirement and Generation Tariff for Unit 2 and Unit 3 of Jojobera for Annual Performance Review for FY 2015-16;

Information Gaps in the APR Petition

2.22 In accordance with Section 64(3) of the Act, the State Electricity Regulatory Commission, within one hundred and twenty days of the filing of application for determination of tariff, is required to either accept it and issue a tariff order or reject the application for reasons to be recorded in writing. The Commission accepted the application submitted by the Petitioner for determination of tariff. As part of tariff determination exercise for the Control Period, several deficiencies/information gaps were observed in the tariff petition submitted by the Petitioner.

2.23 Those information were pointed out and communicated to the Petitioner vide letter nos.

(a) JSERC/Case (Tariff) No. 03 of 2016/27 dated 13th April 2016

(b) JSERC/Case (Tariff) No. 03 of 2016/110 dated 17th May 2016

(c) JSERC/Case (Tariff) No. 03 of 2016/471 dated 20th October 2016

(d) JSERC/Case (Tariff) No. 03 of 2016/ 535 dated 21st November 2016

2.24 The Petitioner submitted its response to the aforesaid letters and furnished additional data/information vide letter nos.

(a) JPP/REG/JSERC/63/16 dated 3rd May 2016

(b) JPP/REG/JSERC/84/16 dated 31st May 2016

(c) JPP/REG/JSERC/148/16 dated 27th October 2016

(d) JPP/REG/JSERC/162/16 dated 1st December 2016

2.25 The Commission scrutinized the said additional data/information and also considered the same while passing this Order on the petition filed by the Petitioner.

Inviting Public Comments/Suggestions

2.26 The Commission directed the Petitioner to make available copies of the petition to the members of general public on request, and also issue a public notice inviting comments/ suggestions on the petition for Truing Up of energy charges for FY 2013-14, Truing up of FY 2014-15 and APR for FY 2015-16.

2.27 The aforesaid public notice was issued by the Petitioner in various newspapers and a period of twenty one (21) days was given to the members of the general public for submitting their comments/suggestions.

Table 1: List of newspapers and dates on which the public notice by TPCL appeared

Sl. No.	Newspaper (Jamshedpur edition)	Date of Publication
1.	The Telegraph	28.07.2016 & 29.07.2016
2.	Hindustan Times	28.07.2016 & 29.07.2016
3.	Dainik Bhaskar	28.07.2016 & 29.07.2016
4.	Hindustan	28.07.2016 & 29.07.2016

2.28 Subsequently, the Commission also issued a notice on its website www.jserc.org and various newspapers for conducting the public hearing on the Petition. The details of the newspapers publishing the notice by the Commission are as under:

Table 2: List of newspapers and dates on which the public notice by JSERC appeared

Sl. No.	Newspaper (Jharkhand edition)	Date of Publication
1	Dainik Bhaskar	07.09.2016
2	Uditvani	07.09.2016
3	The Hindustan Times	07.09.2016
4	Sanmarg	07.09.2016
5	Hindustan	08.09.2016
6	Prabhat Khabar	08.09.2016
7	Dainik Jagran	08.09.2016
8	Times of India	08.09.2016

Submission of Comments/Suggestions and Conduct of Public Hearing

2.29 A public hearing was held on September 16th 2016 at Jamshedpur and many respondents voiced their views on the ARR and tariff petition filed by the Petitioner. The comments/suggestions voiced by the respondents and the Petitioner's response thereon along with the Commissions analysis on the response provided by the Petitioner are detailed in the **Section 4** of this Order.

A3: SUMMARY OF THE PETITION FOR ANNUAL PERFORMANCE REVIEW FOR FY 2015-16 INCLUDING TRUING UP FOR FY 2013-14 AND FY 2014-15

Overview of the Thermal Stations

3.1 The Petitioner currently operates five units at the Jojobera power plant. Of these, two units i.e. Unit 2 and Unit 3 are the subject of ARR and tariff determination in the petition filed by it. The following table summarizes the information pertaining to both the units.

Table 3: Overview of Unit 2 and Unit 3

S. No.	Unit	Installed Capacity(MW)	Status of Operation	Commercial Date of Operation
1	Unit 2	120	Operational	February 1, 2001
2	Unit 3	120	Operational	February 1, 2002

Truing up of FY 2013-14

3.2 In its petition the Petitioner has requested for the Truing up of FY 2013-14 based on the actual information for the period from April 2013 to March 2014. The energy charge and fixed charge submitted by the Petitioner for FY 2013-14 are shown in the table below:

Table 4: Operational performance, fixed cost, energy charges and ARR for FY 2013-14

Particulars	Units	Actuals for FY 2013-14 (Unit -2)	Actuals for FY 2013-14 (Unit -3)
Gross Generation	MUs	823.23	742.10
Plant Load Factor	%	78.31%	70.60%
Aux Power Consumption	%	9.18%	9.79%
Ex-Bus Generation	MUs	740.91	667.89
Availability	%	98.85%	92.07%
Gross Heat Rate	kcal/kWh	2573	2597
Normative Sp. LDO Consumption	ml/kWh	1.00	1.00
Depreciation	Rs Crores	4.84	6.47
Interest on Loan	Rs Crores	1.97	1.71
O&M Expenses	Rs Crores	30.53	26.26
Return on Equity (Pre-Tax)	Rs Crores	26.78	25.87
Interest on working Capital	Rs Crores	13.98	13.73
Cost of Secondary Fuel Oil	Rs Crores	5.46	5.51
Annual Fixed Charges	Rs Crores	**83.57**	**79.56**
Projected Incentive (Pre-tax)	Rs Crores	17.23	8.37
Annual Fixed Charges (including Incentive)	Rs Crores	**100.80**	**87.93**
Rate of Energy Charges	Rs/kWh	2.659	2.667

Particulars	Units	Actuals for FY 2013-14 (Unit -2)	Actuals for FY 2013-14 (Unit -3)
Energy charge	Rs Crores	**198.83**	**178.54**
Annual Revenue Requirement	Rs Crores	**299.63**	**266.47**
Add: Tax on the Gain on LDO Consumption retained by TPCL	Rs Crores	1.09	0.64
Add: Tax on the Gain on Auxiliary Power Consumption	Rs Crores	0.48	0.11
Annual Revenue Requirement (including Tax on Efficiency Gains)	**Rs Crores**	**301.19**	**267.21**

Truing up of FY 2014-15

3.3 In its petition the Petitioner has requested for the Truing up of FY 2014-15 based on the actual information for the period from April 2014 to March 2015. The energy charge and fixed charge submitted by the Petitioner for FY 2014-15 are shown in the table below:

Table 5 Operational performance, fixed cost, energy charges and ARR for FY 2014-15

Particulars	Units	Actuals for FY 2014-15 (Unit -2)	Actuals for FY 2014-15 (Unit -3)
Gross Generation	MUs	834.23	859.67
Plant Load Factor	%	79.36%	81.78%
Aux Power Consumption	%	9.31%	9.00%
Ex-Bus Generation	MUs	756.54	782.28
Availability	%	93.64%	99.59%
Gross Heat Rate	kcal/kWh	2562	2565
Normative Sp. LDO Consumption	ml/kWh	1.00	1.00
Depreciation	Rs Crores	5.45	7.03
Interest on Loan	Rs Crores	2.88	2.52
O&M Expenses	Rs Crores	34.04	27.44
Return on Equity (Pre-Tax)	Rs Crores	27.50	26.54
Interest on working Capital	Rs Crores	14.35	14.05
Cost of Secondary Fuel Oil	Rs Crores	5.27	5.54
Annual Fixed Charges	Rs Crores	**89.50**	**83.13**
Projected Incentive (Pre-tax)	Rs Crores	11.51	18.05
Annual Fixed Charges (including Incentive)	Rs Crores	**101.01**	**101.18**
Rate of Energy Charges	Rs/kWh	2.680	2.712
Energy charge	Rs Crores	**202.75**	**212.19**
Annual Revenue Requirement	Rs Crores	**303.76**	**313.37**

Particulars	Units	Actuals for FY 2014-15 (Unit -2)	Actuals for FY 2014-15 (Unit -3)
Add: Tax on the Gain on LDO Consumption retained by TPCL	Rs Crores	0.83	1.02
Add: Tax on the Gain on Auxiliary Power Consumption	Rs Crores	0.41	0.62
Add: Tax on the Gain on Station Heat Rate	Rs Crores	0.10	0.27
Annual Revenue Requirement (including Tax on Efficiency Gains)	**Rs Crores**	**305.10**	**315.28**

Annual Performance Review for FY 2015-16

3.4 In its petition, the Petitioner has requested for Annual Performance Review for FY 2015-16 based on the actual information from April 2015 to October 2015. The following table shows the energy charge and fixed charge for FY 2015-16 submitted by the Petitioner for performance review:

Table 6 Annual Performance Review for FY 2015-16 submitted by the Petitioner

Particulars	Units	Unit -2	Unit 3
Gross Generation	MUs	874.63	830.16
Plant Load Factor	%	82.98%	78.76%
Aux Power Consumption	%	9.62%	9.66%
Ex-Bus Generation	MUs	790.54	749.99
Availability	%	99.15%	99.07%
Gross Heat Rate	kcal/kWh	2550	2558
Normative Sp. LDO Consumption	ml/kWh	1.00	1.00
Depreciation	Rs Crores	5.75	7.54
Interest on Loan	Rs Crores	3.50	3.09
O&M Expenses	Rs Crores	45.17	37.80
Return on Equity (Pre-Tax)	Rs Crores	28.21	27.22
Interest on working Capital	Rs Crores	15.89	15.50
Cost of Secondary Fuel Oil	Rs Crores	4.89	4.81
Annual Fixed Charges	Rs Crores	**103.41**	**95.96**
Incentive (Pre-tax)	Rs Crores	21.89	20.19
Annual Fixed Charges (including Incentive)	Rs Crores	**125.30**	**116.15**
Rate of Energy Charges	Rs/kWh	2.859	2.884
Energy charges	Rs Crores	**226.03**	**216.31**
Add: Tax on the Gain on LDO Consumption retained by TPCL	Rs Crores	0.68	0.57

Add: Tax on the Gain on Auxiliary Power Consumption	Rs Crores	0.26	0.22
Add: Tax on the Gain on Station Heat Rate	Rs Crores	0.40	0.44
Annual Revenue Requirement (including Tax on Efficiency Gains)	Rs Crores	**352.67**	**333.70**

A4: PUBLIC CONSULTATION PROCESS

4.1 The public hearing on the tariff petition filed by the Petitioner was held on 16th September 2016 in Jamshedpur. The list of participants is enclosed as **Annexure-I**.

4.2 The comments and suggestion of the members of the public along with the response thereon of the Petitioner and the views of the Commission are detailed hereunder:

Comments regarding supply to other licensee

Public Comments/Suggestions

4.3 The objector commented that Tata Power supplies to JUSCO without approval of the Hon'ble Commission. However, Tata Power has not mentioned these facts in its ARR Petition. Hence, any benefits on such gain should be shown in the ARR Petition.

Petitioner's response

4.4 The Petitioner submitted that it is a generating company and supplies power from Jojobera Unit 2 and Unit 3 to Tata Steel distribution licensee and not to JUSCO. Hence the query is not relevant.

Commission's views

4.5 The Commission has taken note of the Objectors comments and the response of the Petitioner.

Loans of Tata power

Public Comments/Suggestions

4.6 The objector has commented that Tata Power has taken huge amount of loans from a nationalised bank and requested the Hon'ble Commission to conduct a prudence check whether the liability is pertaining to the loan and taxes payable on Tata Power Jojobera Plant alone ot for the entire Tata Power Company Limited.

Petitioner's response

4.7 The Petitioner submitted that the additional capitalization claimed in the Petition for FY 2015-16, including debt servicing pertains only to Jojobera Unit 2 and Unit 3. Similarly, the tax claimed is pertaining to Jojobera Unit 2 and Unit 3 which is in accordance to the JSERC Generation Tariff Regulations 2010.

Commission's views

4.8 The Commission has noted the submission of the Petitioner and would like to mention that the approval has been accorded only after carrying out review and prudence check of the submissions of the Petitioner.

Tariff

Public Comments/Suggestions

4.9 The objector commented that any increase in tariff should be in tandem with the increase in the rate of Petroleum Products and has requested the Commission to check before approving any increase in per unit price of electricity.

Petitioner's response

4.10 The Petitioner submitted that the objection raised is not relevant to the APR Petition for FY 2015-16. The Generation tariff of Jojobera Unit 2 and Unit 3 is determined by the Hon'ble Commission based on prudence check and in accordance with JSERC Generation Tariff Regulations 2010.

Commission's views

4.11 The primary fuel of the Petitioner's power station is coal and tariff is to be determined as per the provisions of applicable tariff regulations. However, the Commission would like to mention that any increase in tariff is carried out only after due prudence check and after consultation with all stakeholders.

Fly ash

Public Comments/Suggestions

4.12 The objector has commented that the Petitioner sells Fly Ash at the rate of Rs. 45 per ton at No Profit No Loss basis and has enquired whether the Petitioner has obtained any No Objection Certificate from the Hon'ble Commission or not. Also, the objector has requested the Hon'ble Commission to conduct a prudence check on the same.

Petitioner's response

4.13 The Petitioner submitted that as per the statutory notifications of JSPCB, MoEF and the Hon'ble Commission, Tata Power is mandated to dispose Fly Ash for utilization in other purposes and it is supplying at free of cost to Lafarge Cement Factory and other off-takers. The Petitioner has further submitted that the Hon'ble Commission in its previous orders had taken cognizance of the same and after conducting due prudence check only had passed the orders.

Commission's views

4.14 The Commission has noted the objector comments and submission of the Petitioner.

Expenditure on Safety

Public Comments/Suggestions

4.15 The objector has commented that the Petitioner has shown huge expenditure on Safety, whereas 99% of the work is done by vendors who are given 2-4% of their total cost of safety. The Hon'ble Commission may conduct a prudence check to ascertain whether the cost allocated to Safety in actual is equal to the cost depicted in the ARR.

Petitioner's response

4.16 The Petitioner submitted that Tata Power has given paramount importance to safety and has ensured maximum safety to all its employees, vendor's workforce and to other stakeholders. Any expenditure incurred by Tata Power is done with due care and prudence. The Petitioner further submitted that the concern of the objector is baseless and mischievous and is denied by the Petitioner.

Commission's views

4.17 The Commission has approved the Petition after undertaking due prudence check and as per the provisions of the JSERC Tariff Regulations 2010.

Issue of Gate passes

Public Comments/Suggestions

4.18 The objector highlighted that Tata Power issues gate passes to labours in the name of Tata Power and has requested the Hon'ble Commission to conduct a prudence check on the number of employees of Tata Power Jojobera Power Plant.

Petitioner's response

4.19 The Petitioner submitted that no gate pass is issued on the name of Tata Power to contractual labours. The passes are issued in the name of Contractor who provides labours for the designated job. Therefore the Petitioner has requested the Hon'ble Commission to ignore such baseless and irrelevant queries.

Commission's views

4.20 The Commission has undergone due prudence check of O&M expenses and approved the same as per the provisions of the JSERC Tariff Regulations 2010.

Supply of electricity to nearby areas

Public Comments/Suggestions

4.21 One stakeholder requested the Petitioner to extend the supply of electricity to nearby areas like Sarjamda, Gadra and JEMCO so that those areas can access reliable power.

Petitioner's response

4.22 The Petitioner submitted it is a generating station and the entire power generated by Jojobera Unit 2 and Unit 3 is supplied to Tata Steel Distribution Licensee. Tata Power doesn't have a Distribution License in Jamshedpur and therefore, it cannot supply power directly to any consumer including to the nearby areas.

Commission's views

4.23 The Commission welcomes the request of the stakeholder and would like to mention that Tata Power being a Generating company is not licensed to supply electricity to retail consumers. However, stakeholder should avail connection from the concerned distribution licenses in Jamshedpur and nearby area for availing the supply of power.

A5: TRUING UP FOR FY 2013-14

5.1 The Commission had approved the ARR and generation tariff for FY 2013-14 in its MYT Order dated May 31 2012 based on the projections for various cost parameters. The Petitioner has now sought approval from the Commission for truing up of variation in certain elements of the ARR for FY 2013-14.

5.2 The Commission has analysed the submission of the Petitioner with respect to the ARR for FY 2013-14, and has undertaken the true up exercise of ARR components. The component-wise description of the Petitioner's submission and the Commission's analysis thereof is provided hereunder.

Operational Performance

Plant Availability

Petitioner's submission

5.3 The Petitioner submitted the month wise actual plant availability of Unit 2 and Unit 3. The Petitioner has calculated the average annual availability of Unit 2 at 98.85% and that of Unit 3 at 92.07% during FY 2013-14

Commission's analysis

5.4 The Commission in the MYT Order dated May 31 2012 for FY 2013-14 had projected the availability for Unit 2 and Unit 3 as equal to the Normative Annual Plant Availability Factor (NAPAF) of 85% as specified in the Regulation 8.4 of JSERC Generation Tariff Regulation, 2010.

5.5 The Commission after scrutinising the certifications of SLDC to verify the actual availability approved the availability of Unit 2 as 98.95% and Unit 3 as 92.07%.

Auxiliary Consumption

Petitioner's submission

5.6 The actual auxiliary power consumption of Unit 2 and Unit 3 for FY 2013-14 was 9.18% and 9.79%. However, the Petitioner has considered the normative auxiliary consumption of 10.00% as approved by the Commission in the MYT order dated 31.05.2012.

Commission's analysis

5.7 The Commission approves the actual auxiliary consumption for both Unit 2 and Unit 3 at 9.18% and 9.79% for FY 2013-14. The Commission has considered the normative auxiliary consumption of 10.00% for both units for the year FY 2013-14 for computation of ECR.

5.8 However, for arriving at the net generation of Unit 2 and Unit 3 for the year FY 2013-14, the Commission has considered the actual auxiliary consumption.

Generation

Petitioner's submission

5.9 The Petitioner submitted that the actual generation of Unit 2 and Unit 3 of the Jojobera generating station was 823.23 MU and 742.10 MU respectively for FY 2013-14.

Commission's analysis

5.10 The Commission in the MYT Order dated May 31 2012 had approved Gross generation at 893.52 MU for Unit 2 and Unit 3 each after considering PLF at normative level of 85%.The Petitioner has now submitted that the actual PLF for FY 2013-14 as 78.31% and 70.60% for Unit 2 and Unit 3 respectively. Hence for the purpose of truing up for FY 2013-14, the Commission has considered actual PLF and accordingly, approved Gross Generation at 823.19MU and 742.15 MU for Unit 2 and Unit 3 respectively.

Heat Rate

Petitioner's submission

5.11 The Petitioner claimed the Heat rate for Unit 2 and Unit 3 at 2573 kCal/kWh and 2597 kCal/Kwh respectively. The Petitioner has claimed to achieve a reduction of 71 kCal/kWh and 24 kCal/kWh in Heat rate for Unit 2 and Unit 3 respectively within a span of four years owing to various short-term and medium-term measures during Annual Shutdowns of the Units as recommended by Central Power Research Institute (CPRI), Bangalore during Energy audit as well as improved O&M practices benchmarked with the various Thermal Power Units across the country. The Petitioner further submitted that such reduction in actual Heat Rate was achieved despite operating Unit 2 and Unit 3 at very low PLF at about 70-78%. The trend in reduction in actual Heat Rate over the years vis-à-vis actual PLF and availability of the Units are shown in the following table.

Table 7: Normative vs Actual Heat Rate of Units 2 and 3 from FY 2010-11 to FY 2013-14

Unit 2						
Particulars	UoM	FY 2010-11	Normative	FY 2011-12	FY 2012-13	FY 2013-14
Actual Heat Rate	kCal/kWh	2644	2567	2611	2591	2573
Improvement in Heat Rate	kCal/kWh	-NA-	-NA-	33	20	18
Cumulative improvement w.r.t FY 10-11	kCal/kWh	-NA-	-NA-	33	53	71
PLF	%	81.85%	85%	75.76%	82.47%	78.31%
Availability	%	-NA-	85%	91.87%	94.10%	98.88%

Particulars	Unit 3					
	UoM	**FY 2010-11**	**Normative**	**FY 2011-12**	**FY 2012-13**	**FY 2013-14**
Actual Heat Rate	kCal/kWh	2621	2577	2615	2601	2597
Improvement in Heat Rate	kCal/kWh	-NA-	-NA-	6	14	4
Cumulative improvement w.r.t FY 10-11	kCal/kWh	-NA-	-NA-	6	20	24
PLF	%	84.01%	85%	78.24%	84.33%	70.60%
Availability	%	-NA-	85%	94.96%	98.81%	92.07%

5.12 The Petitioner further submitted that the schemes approved by the Commission in the order dated May 31, 2012 also include certain schemes which fulfil the above requirement and the implementation of the measures can be performed only during the annual shutdown of the Units and therefore may take more than a year to put to effect.

5.13 The Petitioner has requested that a huge reduction of heat rate as envisaged is an uphill task and requires a certain time period to implement the identified measures. The Petitioner has claimed submitted that it has adopted internal initiatives and a detailed action plan based on CPRI Energy reports in pursuit of continual improvement to improve upon the heat rate of the above units.

5.14 Hence, the Petitioner requested the Commission to exercise its “Power to remove difficulties” and “Power of Relaxation” as specified in Regulations 17.3 and 17.4 respectively in the Generation Tariff Regulations, 2010 and approve actual heat rate at 2573 kCal/kWh for Unit 2 and 2597 kCal/kWh for Unit 3 for Truing-up of FY 2013-14.

5.15 The Petitioner has reiterated the concept of Sliding Heat rate introduced in the model Power Supply Agreement in the Standard Bid Documents for Case-1 projects. Since the proceedings in the matter are pending before the Hon’ble Commission, the Petitioner has requested the Commission to approve the actual heat rate of Unit 2 and Unit 3 considering the merit of the circumstances.

Commission’s analysis

5.16 As per the Generation Tariff regulations, 2010 the Station Heat Rate for the Petitioner is specified at 2567 kCal/kWh for Unit 2 and 2577 kCal/kWh for Unit 3.

5.17 The following are the extracts from the APR Order dated 28 April 2014, wherein the Commission has cited the grounds for not considering the actual Station Heat Rate :

"5.18 In the tariff petition submitted by the Petitioner for FY 2011-12, the Petitioner had requested for relaxation of station heat rate approved by the Commission in the Generation Tariff Regulation, 2010. The Commission after considering the submissions made by the Petitioner in detail had however declined to relax the norm for station heat Rate. The relevant portion of the order is quoted below:

> *"9.15 The Commission specified the norms of operation for the two Units of Jojobera Plant in the Clause 8.4 of the Generation Tariff Regulations, 2010. It is pertinent to mention that the norms of operation were fixed by the Commission after study of the past performance for each plant in the state and as per the data made available by the Generation companies including TPCL for the two units - Unit 2 and Unit 3 of Jojobera Plant. Before finalization of the norms, the Commission had also conducted a public hearing in which all the stakeholders, including TPCL, participated. The Commission after due deliberation finalized the Regulations.*
>
> *9.16 The Regulations have been notified accordingly and the norms of operation are applicable and binding on each of the generation plants covered under the Regulations. As per the said Regulations, the Station Heat Rate for the two units has been fixed at 2567kCal/kWh and 2577 kCal/kWh respectively.*
>
> *9.18 The Commission notes with concern that the CPRI Report clearly indicates that principal deviation (274.8 kCal/kWh) is a controllable loss and better SHR than the 2577 kCal/kWh currently allowed is achievable.*
>
> *9.19 In view of the above observations, the Commission does not find any merit in allowing deviation in the norms fixed for SHR, for Unit 2 at 2567 kCal/kWh and Unit 3 at 2577 kCal/kWh, as per the Generation Tariff Regulations, 2010."*

5.19 The Petitioner filed an appeal (Appeal no 189 of 2011) before the Hon'ble APTEL for relaxation of the norm for station heat rate. The Hon'ble APTEL however upheld the decision of the Commission not to relax the norm for station heat rate. The relevant portions of the judgement of the APTEL are quoted below:

> *"31. The principles laid down in these authorities cited by the Appellant are as follows:*
>
> *(a) If the Station Heat Rate allowed by the Commission is not achievable, then the same would not be in anybody's interest. The entity would suffer by not recovering its reasonable cost of supply of electricity and consumers would not get right signal about the pricing of the product, they would be using.*

(b) The Station Heat Rate is one of the most important factors for the purpose of determination of the cost of generation. If the targets given to the generating company are not achievable, no purpose would be served by setting such targets, because such approach would adversely impact the financial position of the generator.

(c) The reasonable time has to be given for completion of the medium term measures required for the improvement of the Station Heat Rate. In case any Regulation causes hardship to a party or works injustice to him, the Regulation can be relaxed.

(e) The tariff determination shall be consistent with Section 61 of the Act as well as the Government of India guidelines which shall strike a balance between the transparency, fairness, consumer interest and viability.

*32. **On-going through all the decisions, we are of the view that the principles which have been laid down by this Tribunal as well as Hon'ble Supreme Court as cited by the State Commission would squarely apply to the present case especially, when impugned order has given proper reasoning for not relaxing the norms**. On the other hand, the reliance placed by the Appellant on 2010 DELR (APTEL) 0189 cited by him has no application to the present case. In that case, the Station Heat Rate was found to be unachievable and in that context the State Commission was not in a position to take a considered view on the subject. **In the present case, the State Commission has fixed the norms of Station Heat Rate after studying in details the past performance for each plant in the State and after considering the data furnished by the Appellant for 2 units i.e. Unit No.2 and Unit No.3 of the Plant.***

*33. In the present case, the State Commission has considered the CPRI report in detail and studied that the major deviation between the design Heat Rate and the Test Heat Rate due to turbine deficiency. Similarly, in other cases also reported in 2011 ELR (APTEL) 1742, i.e. suo-moto action taken by this Tribunal and Essar Power Limited case reported in 2011 Energy Law Journal would not apply to this case since the issue in question has not been decided in those cases. **In the present case, Station Heat Rate norms have been framed under the Regulation after studying the past performance of the Plants. That apart, the State Commission has given a detailed reasoning in the impugned order for not relaxing the norms laid down in the Regulation. Hence, we do not find any infirmity in the finding of the State Commission on this issue**.*

5.20 The Petitioner again sought relaxation in the heat rate in its petition for truing up on the following grounds:

(a) *The Petitioner claimed to achieve a reduction of 33 kCal/kWh and 6 kCal/kWh in Heat rate for Unit 2 and Unit 3 respectively within a span of one year owing to short-term measures like mill fineness optimization, turbine fin replacement and blade roughness reduction during Annual Shutdowns of the Units as recommended by Central Power Research Institute (CPRI), Bangalore during Energy audit.*

(b) *The Petitioner has requested that such a huge reduction of Heat Rate to the tune of 50 kCal/kWh as envisaged in the above units is an uphill task and requires a certain time period to implement the identified measures.*

5.21 Further, in the interlocutory application filed by it, the Petitioner has re-iterated that the Commission approved the actual Heat Rate achieved by the Units 2 and 3 for FY 2011-12 & FY 2012-13 for truing-up and revised estimate of Heat Rate for FY 2013-14 to FY 2015-16 at the actual Heat Rate achieved in FY 2012-13 subject to Truing-up at actual.

5.22 As mention earlier, the Commission has fixed the norms of operation for Unit 2 and Unit 3 after study of the past performance for each plant in the state and as per the data made available by the Generation companies including TPCL for the two units - Unit 2 and Unit 3 of Jojobera Plant. Before finalization of the norms, the Commission had also conducted a public hearing in which all the stakeholders, including TPCL, participated. The Commission after due deliberation finalized the Regulations.

5.23 It is to be noted that the Commission in its tariff orders prior to FY 2011-12 allowed the Petitioner a higher heat rate for the years FY 2007-08, FY 2008-09, FY 2009-10 and FY 2010-11.

Table 8: Heat rate allowed by the Commission for FY 2007-08, FY 2008-09, FY 2009-10 and FY 2010-11

Financial Year	*Heat Rate allowed (kCal/kWh)*	
	Unit 2	*Unit 3*
FY 2007-08	*2645*	*2676*
FY 2008-09	*2569*	*2592*
FY 2009-10	*2632*	*2648*
FY 2010-11	*2644*	*2621*

5.24 Simultaneously, however, the Commission also directed the Petitioner in its orders to improve its operational performance. In the 'Tariff Order on ARR for FY 2007-08, 2008-09 & 2009-10 & Determination of Distribution Tariff for FY 2009-10 for TPCL', the Commission observed that "performance of the two Units of Jojobera plant with respect to some of the operational parameters is worse than other similarly placed plants in the country considering the age profile of the TPCL Units. In particular, the SHR, PLF, normative annual plant availability factor (as per CERC Tariff Regulations, 2009) and the auxiliary consumption can be improved further to the extent of CERC approved operational norms for thermal stations of such nature".

5.25 Further again in the 'Tariff Order on Annual Revenue Requirement and Determination of Generation Tariff for Financial Year 2010-11 for Tata Power Company Limited (TPCL)' the Commission directed "that the performance with respect to some of the operational parameters is lower than those of the other similarly placed plants in the country. In particular, the SHR, the PLF, normative annual plant availability factor (as per CERC Tariff Regulations, 2009) and the auxiliary consumption can be improved further to the extent of CERC approved operational norms for thermal stations of such nature."

5.26 Further, as pointed out by the Petitioner itself in its APR petition dated March 28, 2013, the capital expenditure schemes approved by the Commission in the order dated May 31, 2012 also included certain schemes for implementation of the measures for improvement of station heat rate. The financing cost and capital expenditure on account of this capital expenditure has already been allowed to the Petitioner in the tariff approved by the Commission.

5.27 In view of the Judgement of APTEL in Appeal No. 189 of 2011, the previous orders of the Commission in this regard and the reasons noted above, the Commission does not deem it appropriate to allow the actual SHR for Unit 2 and Unit 3 as requested by the Petitioner. The Commission therefore approves the station heat rate specified in the Generation Tariff Regulations, 2010 i.e. at 2567 kCal/kWh for Unit 2 and 2577 kCal/kWh for Unit 3."

5.18 Since all the points were considered in the previous Order and the same was also upheld by the Hon'ble Tribunal, the Commission does not consider it fit to change the same and for the purpose of truing up considers Station Heat Rate as laid out in Generation Tariff Regulations, 2010 i.e. at 2567 kCal/kWh for Unit 2 and 2577 kCal/kWh for Unit 3.

Operational Parameters Summary

The following table indicates the operational parameters for Unit 2 and Unit 3 as approved in MYT Order dated 31.05.2012, as submitted by the Petitioner now and as approved by the Commission in true up of FY 2013-14.

Table 9: Approved Operational Parameters for Unit 2 for FY 2013-14

Particulars	Approved in MYT order	Submitted by TPCL	Approved in True up
Gross Generation(MU)	893.52	823.23	823.19
PLF	85.00%	78.31%	78.31%
Aux. Power Consumption	10.00%	10.00%	10.00%
Net Generation(MU)	804.18	747.66	747.63
Heat Rate(kcal/kwh)	2567	2573	2567

Table 10: Approved Operational Parameters for Unit 3 for FY 2013-14

Particulars	Approved in MYT order	Submitted by TPCL	Approved in True up
Gross Generation(MU)	893.52	742.10	742.15
PLF	85.00%	70.60%	70.60%
Aux. Power Consumption	10.00%	10.00%	10.00%
Net Generation(MU)	810.55	669.44	669.49
Heat Rate(kcal/kwh)	2577	2597	2577

Fuel Cost Parameters

Coal Mix and Gross Calorific Value (GCV) of Primary Fuel

Petitioner's submission

5.19 The Petitioner submitted that during FY 2013-14 coal was procured from West Bokaro Colliery of Tata Steel (i.e. Middling Coal) and Mahanadi Coalfields, Orissa (i.e. MCL Coal). However, during FY 2013-14, due to shortfall in production of Middling Coal, West Bokaro had supplied two other categories of Washed Coal, i.e. 2-Product Coal and Tailing Coal which have been fired simultaneously into the Boilers of Unit 2 and Unit 3. The proportion of the various types of coal used during FY 2013-14 has been computed as Middling Coal – 61.83%, MCL Coal – 30.69% and 2-Product and Tailing Coal – 7.49% for Unit 2 and Middling Coal – 58.65%, MCL Coal – 33.63% and 2-Product and Tailing coal – 7.72% for Unit 3.

5.20 The Petitioner further submitted the actual weighted average Gross Calorific Value (GCV) for various types of coal consumed in both Units 2 and 3. The Petitioner submitted that the GCV of coal used in Unit 2 during FY 2013-14 was 4164 Kcal/kg in respect of Middling Coal, 2614 Kcal/kg in respect of MCL Coal and 2646 Kcal/kg for 2-Product, Tailing and Reject coal. Whereas for Unit 3, the same was 4159 Kcal/kg in respect of Middling Coal, 2617 Kcal/kg in respect of MCL Coal and 2665 kcal/kg in respect of 2-Product, Tailing and Reject coal.

Commission's analysis

5.21 The Commission computed the GCV for each type of coal by considering the actual weighted average GCV for FY 2013-14 after scrutinizing the actual monthly GCV submitted by the Petitioner. The following tables summarize the weighted average GCV of coal as submitted by the Petitioner and approved by the Commission and the Coal Mix submitted and approved by the Commission for Unit 2 and Unit 3 of Jojobera Generation station.

Table 11: Approved Coal Mix and GCV for Unit 2 for FY 2013-14

Particulars	Coal Mix (%)			GCV(kCal/kg)		
	Approved in MYT order	Submitted by TPCL	Approved in True up	Approved in MYT order	Submitted by TPCL	Approved in True up
MCL Coal	38.31%	30.69%	30.69%	2935	2614	2614
Middling Coal	61.69%	61.83%	61.83%	4156	4164	4164
2-Product + Tailing + Reject coal	-	7.49%	7.49%	-	2646	2646

Table 12: Approved Coal Mix and GCV for Unit 3 for FY 2013-14

Particulars	Coal Mix (%)			GCV(kCal/kg)		
	Approved in MYT order	Submitted by TPCL	Approved in True up	Approved in MYT order	Submitted by TPCL	Approved in True up
MCL Coal	36.88%	33.63%	33.63%	2940	2617	2617
Middling Coal	63.12%	58.65%	58.65%	4163	4159	4159
2-Product + Tailing + Reject coal	-	7.72%	7.72%	-	2665	2665

Transit Loss

Petitioner's submission

5.22 The Petitioner submitted that coal is procured primarily from two sources – West Bokaro Collieries of Tata Steel and Mahanadi Coalfields Limited. The coal procured from West Bokaro Collieries is known as the Middling Coal and therefore falls under the category of 'Washed Coal'. Based on the directive of the Hon'ble Tribunal in the judgement dated 14.11.2013 in Appeal No. 147 of 2012, the Commission has in the APR order for FY 2013-14 dated 31.05.2015 allowed Normative transit loss of 1% in Middling Coal which was the Washed Coal being used by Tata power in FY 2011-12 and FY 2012-13. Due to shortfall in generation of Middling coal, West Bokaro had supplied two other categories of Washed coal namely 2-Product coal and Tailing coal. The Petitioner submitted that the two other types of Coal were simultaneously fired in the Boilers of Unit 2 and Unit 3 alongside Middling and MCL coal. The actual Transit Loss in the categories of coal are 0.70% for Middling coal, 1.52% for MCL coal and 2.69% for 2-Product and Tailing coal. The Petitioner has submitted the month wise details of actual transit loss in all categories of coal for review of the Commission.

5.23 The Petitioner has prayed to the Hon'ble Commission to exercise its "Power for Relaxation" as specified in Regulation 17.4 respectively in the JSERC Generation Tariff Regulations, 2010 and approve the actual transit loss at 2.69% for 2-Product Coal and Tailing Coal for truing up.

Commission's analysis

5.24 The Commission in the MYT order dated May 31, 2012 approved Transit Loss at 0.8% for both Unit 2 and Unit 3 for FY 2012-13 in accordance with the norms specified in the JSERC Generation Tariff Regulation, 2010.

5.25 The Commission while disposing off the APR Petition FY 2012-13 through its Order dated 28th April 2014 had taken note of the earlier prayer of the Petitioner with regards to the Transit Loss in Middling Coal. In the current petition, the Commission has taken note of the Petitioner's prayer and has approved the normative Transit Loss at 0.8% for Middling and MCL coal for Unit 2 and Unit 3 for FY 2013-14 as per norms specified in the Generation Tariff Regulation, 2010.

5.26 The Petitioner has submitted that due to shortfall in supply of Middling coal, West Bokaro collieries had supplied two other categories of Washed coal namely 2-Product coal and Tailing coal which were simultaneously fired along with other types of coal. The Petitioner has requested for a relaxation in Transit loss up to 2.69% for 2-Product coal and Tailing coal.

5.27 The Commission has considered the submissions made by the Petitioner with respect to the transit loss incurred on 2-product and tailing coal. As per the submissions of the Petitioner in Annexure 3e of its Petition, the Petitioner has achieved transit loss of 0.70% on Middling Coal which is a washed coal used by Tata Power. The Petitioner has also submitted that 2-Product and Tailing coal are washed coal and are procured from the same source i.e. West Bokaro collieries. On scrutiny of the monthly transit loss data submitted by the Petitioner, the Commission observed that there was significant variation in transit loss of 2-product and tailing coal during FY 2013-14 and that significantly lower transit loss than 2.69% has been actually achieved by the Petitioner in some months of FY 2013-14.

5.28 The JSERC Generation Tariff Regulations, 2010 provide a normative transit loss of 0.8% for non-pit head generating stations. Further in light of the Judgement of the Hon'ble Tribunal in Appeal No. 147 of 2012, the Commission in its tariff order dated 31.05.2015 had provisionally allowed transit loss subject to a maximum of 1% in washed coal (Middling coal) of Unit 2 and Unit 3 of the Jojobera Generating station for FY 2011-12, subject to final view which may be taken on completion of fuel audit study.

5.29 In the Tariff Order dated 31.05.2015, the Commission had considered similar precedence wherein Punjab State Electricity Regulatory Commission (PSERC) in its Tariff Order for FY 2015-16 for Punjab State Power Corporation Ltd. (PSPCL) had capped transit loss for PSPCL thermal stations. PSPCL for FY 2015-16 also faced similar issue in case of transit loss for its GNDTP thermal station. PSPCL had claimed that the actual transit losses for the GNDTP stations is 1.50% and that loss in transportation of coal is beyond its control and had prayed to the Commission to adopt the same norm. However, the PSERC after considering the whole issue of transit loss, decided to cap the maximum transit loss of coal at 1.0% to be trued up at actual.

5.30 The PSERC had also approved Transit loss of coal at 1% for all the three thermal generating stations of PSPCL in the tariff order for FY 2013-14 as against 1.5%, 1.5% and 2.0% projected by PSPCL for GNDTP, GGSSTP and GSTP respectively. Subsequently PSPCL challenged the issue of transit loss in APTEL filing appeal no. 106 of 2013. However, the Hon'ble Tribunal in its order dated 16.12.2015 decided the issue against PSPCL.

5.31 Taking into consideration the above facts and also the instance of PSERC, the Commission provisionally allows transit loss subject to a maximum of 1% in 2-Product Coal and Tailing Coal of Unit-2 and Unit-3 of Jojobera generating station for FY 2013-14 subject to the final view which may be taken on completion of the fuel audit study and subject to suitable benchmarking.

Table 13: Approved Transit loss for the year 2013-14

Particulars	Approved transit loss
MCL Coal	0.8%
Middling coal	0.8%
2-Product and Tailing coal	1.0%

Landed Cost of Coal

Petitioner's submission

5.32 The Petitioner has submitted the normative landed cost of MCL coal at Rs/Ton 1814, Middling coal at Rs/Ton 4065 and 2-Product and Tailing Coal at Rs/Ton 3509 for Unit 2 and MCL Coal at Rs/Ton 1814, Middling Coal at Rs/Ton 4064 and 2-Product and Tailing Coal at Rs/Ton 3517 for Unit 3.

5.33 The Petitioner has submitted the weighted average landed cost of coal at Rs/Ton 3337 by considering actual transit loss of 2.69% for 2-Product and Tailing coal.

Commission's analysis

5.34 The Commission has arrived at the weighted average of the landed cost of coal from April 2013 to March 2014, using the following methodology :

(a) The base price of coal, other charges and tax, transportation and handling charges as submitted by the Petitioner from April 2013 to March 2014.

(b) Actual consumption of various types of coal during April 2013 to March 2014.

(c) Transit loss as approved by the Commission.

5.35 The Commission has verified the Auditor's certificate on month wise landed price of coal submitted by the Petitioner. The Commission now approves the landed cost of coal which is given in the following table.

Table 14: Approved Weighted Average Landed Price of Coal for Unit 2

Particulars	Weighted Average Landed Price of the coal (Rs/ton)		
	Approved in MYT order	Submitted by TPCL	Approved in True up
MCL Coal	1671	1814	1814
Middling Coal	2921	4065	4065
2 Product + Tailing coal	-	3509	3516
Weighted average landed cost	2442	3337	3333

Table 15: Approved Weighted Average Landed Price of Coal for Unit 3

Particulars	Weighted Average Landed Price of the coal (Rs/ton)		
	Approved in MYT order	Submitted by TPCL	Approved in True up
MCL Coal	1663	1814	1813
Middling Coal	2921	4064	4064
2 Product + Tailing coal	-	3517	3524
Weighted average landed cost	2457	3270	3265

Energy Charge Rate (ECR)

Petitioner's submission

5.36 The Petitioner has submitted the energy charge rate for FY 2013-14 at Rs. 2.659 per Kwh and Rs. 2.667 per kWh for Unit 2 and Unit 3 respectively.

Commission's analysis

5.37 As per the Generation Tariff Regulation, 2010, the energy (variable) charge shall cover primary fuel costs and shall be payable by every Beneficiary for the total energy scheduled to be supplied to such Beneficiary during the calendar month on ex-power plant basis, at the specified energy charge rate of the month (with fuel price adjustment).

5.38 The formula for calculation of energy charge and energy charge rate (ECR) payable to a Generating Company is specified in Regulation 8.17 and 8.18 of the Generation Tariff Regulation, 2010 as quoted below:

"8.17 Total Energy charge payable to the Generating Company for a month shall be: = (Energy charge rate in Rs. /kWh) x {Scheduled energy (ex-bus) for the month in kWh.}

8.18 Energy charge rate (ECR) in Rupees per kWh on ex-power plant basis shall be determined to three decimal places in accordance with the following formula:

(a) For coal based stations

ECR = (GHR – SFC x CVSF) x LPPF x 100/ {CVPF x (100 – AUX)}

Where, AUX - Normative auxiliary energy consumption in percentage

CVPF - Gross calorific value of primary fuel as fired, in KCal per kg, per litre or per standard cubic metre, as applicable.

CVSF - Calorific value of secondary fuel, in KCal per ml

ECR - Energy charge rate, in Rupees per kWh sent out.

GHR - Gross station heat rate, in KCal per kWh.

LPPF - Weighted average landed price of primary fuel, in Rupees per kg, per litre or per standard cubic metre, as applicable, during the month.

SFC - Specific fuel oil consumption, in ml per kWh".

5.39 Accordingly, the Commission has calculated the ECR to be charged by the Petitioner as per the formula specified in the JSERC Generation Tariff Regulations, 2010. The Table below details the ECR and Fuel Cost for Units 2 and 3 for truing up of FY 2013-14 as submitted by the Petitioner and as approved by the Commission.

Table 16: Approved Energy Charge Rate and Fuel Cost for Unit 2

Parameters	UoM	Approved in MYT order	Submitted by TPCL	Approved in True up
Gross Generation	MU	893.52	823.23	823.19
Heat Rate	KCal/kWh	2567	2573	2567
Specific Oil Consumption	ml/kWh	1.00	1.00	1.00
Calorific Value of Oil	KCal/l	9100	9100	9100
Landed price	Rs/Ton	2442	3337	3333
Energy Charge Rate	Rs/kWh	**1.882**	**2.659**	**2.651**
Fuel Cost	**Rs Cr**	**151.34**	**198.83**	**198.20**

Table 17: Approved Energy Charge Rate and Fuel Cost for Unit 3

Parameters	UoM	Approved in MYT order	Submitted by TPCL	Approved in True up
Gross Generation	MU	893.52	742.10	742.15
Heat Rate	KCal/kWh	2577	2597	2577
Specific Oil Consumption	ml/kWh	1.00	1.00	1.00
Calorific Value of Oil	KCal/l	9100	9100	9100
Landed price	Rs/Ton	2457	3270	3265
Energy Charge Rate	Rs/kWh	**1.888**	**2.667**	**2.644**
Fuel Cost	**Rs Cr**	**152.18**	**178.54**	**177.01**

Summary of Fuel Cost

5.40 The following table provides the summary of Fuel Cost submitted by the Petitioner and approved by the Commission for True up of FY 2013-14

Table 18: Approved Parameters for fuel cost for Unit 2 for FY 2013-14

Particulars	UoM	Approved in MYT order	Submitted by TPCL	Approved in True up
LDO Consumption	Ml/kWh	1	1	1
GCV – LDO	Kcal/Kg	9100	9100	9100
Weighted Average GCV – Middling Coal	Kcal/kWh	4156	4164	4164
Weighted Average GCV –MCL Coal	Kcal/kWh	2935	2614	2614
Weighted Average GCV –2-Product+Tailing+Reject Coal	Kcal/kWh	-	2646	2646
LDO cost	Rs Cr	5.33	5.46	5.46
Landed Price– Middling Coal	Rs/MT	2921	4065	4065
Transit loss considered	%	0.8%	0.8%	0.8%
Landed Price–MCL Coal	Rs/MT	1671	1814	1814
Transit loss considered	%	0.8%	0.8%	0.8%
Landed Price – 2 Product + Tailing + Reject Coal	Rs/MT	-	3509	3516
Transit loss considered	%	-	2.69%	1%
Fuel Cost	Rs Cr	**151.34**	**198.83**	**198.20**

Table 19: Approved Parameters for fuel cost for Unit 3 for FY 2013-14

Particulars	UoM	Approved in MYT order	Submitted by TPCL	Approved in True up
LDO Consumption	Ml/kWh	1	1	1
GCV – LDO	Kcal/Kg	9100	9100	9100
Weighted Average GCV – Middling Coal	Kcal/kWh	4163	4159	4159
Weighted Average GCV –MCL Coal	Kcal/kWh	2940	2617	2617
Weighted Average GCV –2-Product+Tailing+Reject Coal	Kcal/kWh	-	2665	2665
LDO cost	Rs Cr	5.66	5.51	5.51
Landed Price– Middling Coal	Rs/MT	2921	4064	4064

Particulars	UoM	Approved in MYT order	Submitted by TPCL	Approved in True up
Transit loss considered	%	0.8%	0.8%	0.8%
Landed Price–MCL Coal	Rs/MT	1663	1814	1813
Transit loss considered	%	0.8%	0.8%	0.8%
Landed Price – 2 Product + Tailing + Reject Coal	Rs/MT	-	3517	3524
Transit loss considered	%	-	2.69%	1%
Fuel Cost (Rs Cr)	Rs Cr	**152.18**	**178.54**	**177.01**

Determination of Fixed Cost

Additional Capitalization

Petitioner's submission

5.41 The Petitioner has submitted that from FY 2011-12 onwards, it has categorized the Additional Capitalisation under two broad categories after due approval by the Hon'ble Commission:

i. Capitalization – Standalone: This category includes the Capitalized Costs incurred for Assets/Schemes exclusively for Unit 2 & 3.

ii. Capitalization – Common Facilities: Unlike the above-mentioned Capitalized Costs incurred for Assets/Schemes exclusively for Unit 2 & 3, this category includes the Capitalized Costs which have been incurred or proposed to be incurred for the whole Station. These Assets/Schemes provide facilities to the whole power station and therefore the Capitalized Cost of such Assets/ Schemes must be apportioned to the GFA of Unit 2 & 3 appropriately.

The same methodology has been adopted by the Petitioner for determining the additional capitalisation during the FY 2013-14.

5.42 The Petitioner in their original petition has submitted an apportionment ratio of 56.14% for Unit 2 and Unit 3 together based on the installed capacity of these two units with respect to the total installed capacity of 427.5 MW considering Units 1-4.

5.43 The Commission vide letter no. JSERC/Case (Tariff) no. 03 of 2016/535 dated 21.11.2016 had directed the Petitioner to confirm as to whether the Assets/ Schemes undertaken for common facilities of Jojobera Power plant are also being used for Unit 5, which has been commissioned on 27.03.2011 and is within the same premises of Jojobera Power plant

5.44 As a reply to above mentioned query of the Hon'ble Commission, the Petitioner has submitted that it has carried out a detailed re-assessment of the asset utilization of the common facilities of the Jojobera Power Plant and has observed that some of the common facilities are also being utilized by Unit 5 since it is also present under the same premises of Jojobera Power Plant. Since Unit 5 is a part of separate legal entity viz. Industrial Energy Limited, the standalone additional capitalization schemes mentioned by the Petitioner are not inclusive of any schemes pertaining to that of Unit 5. However, the common schemes of the plant are being capitalized as part of Tata Power generating units 1, 2, 3 and 4. Hence the Petitioner has submitted a revised apportionment ratio of 43.84% considering the installed capacity of 240MW for Unit 2 and Unit 3 with respect to the total installed capacity of 547.5 MW considering Units 1-5 in place of the earlier considered total capacity of 427.5 MW.

Table 20: Apportionment ratio for additional Capitalisation of Common Facilities submitted by Petitioner

Facilities to Unit 2 & 3		
Installed Capacity of Unit 1	MW	67.5
Installed Capacity of Unit 2	MW	120
Installed Capacity of Unit 3	MW	120
Installed Capacity of Unit 4	MW	120
Installed Capacity of Unit 5	MW	120
Installed Capacity of Jojobera Power Plant	MW	547.5
Contribution of Unit 2 in Total Installed Capacity	%	21.92%
Contribution of Unit 3 in Total Installed Capacity	%	21.92%
Combined Contribution of Unit 2 & 3 in Total Installed Capacity	%	43.84%

5.45 The total capitalisation details submitted by the Petitioner in their original submission is shown in the following table.

Table 21: Total Capitalisation submitted by the Petitioner (Rs. Cr)

Asset Class Description	Standalone Capitalisation		Apportioned for Common Facilities		Total Additional Capitalisation	
	Unit 2	Unit 3	Unit 2	Unit 3	Unit 2	Unit 3
Land	0.00	0.00	0.00	0.00	0.00	0.00
Building & Civil Engineering Works	0.05	0.05	4.68	4.68	4.73	4.73
Transformers & other Fixed Apparatus	0.00	0.00	0.00	0.00	0.00	0.00
Batteries	0.00	0.00	0.00	0.00	0.00	0.00
Plant and Machinery in Generating Stations	2.48	11.03	0.17	0.17	2.66	11.20
Switchgear, including Cable Connections	0.00	0.00	0.00	0.00	0.00	0.00
Air Conditioning Plants(Static)	0.00	0.00	0.00	0.00	0.00	0.00
Other Assets-Unclassified	2.47	1.22	0.66	0.66	3.13	1.88
Office Furniture, Furnishings &Office Equipment	0.00	0.00	0.01	0.01	0.01	0.01

Asset Class Description	Standalone Capitalisation		Apportioned for Common Facilities		Total Additional Capitalisation	
	Unit 2	Unit 3	Unit 2	Unit 3	Unit 2	Unit 3
Communication Equipment-Telephone Lines and Telephones	0.00	0.00	000	000	0.00	0.00
Self-Propelled Vehicles	0.00	0.00	0.00	0.00	0.00	0.00
IT Equipment's	0.05	0.05	0.00	0.00	0.05	0.05
Total	**5.06**	**12.36**	**5.52**	**5.52**	**10.58**	**17.88**

Commission's analysis

The Commission has outlined the provisions for approval of any additional capitalization, for a generating station in Regulation 7.5 of the Generation Tariff Regulation, 2010. The clause is outlined below

Additional Capitalisation
(a) *'7.5 The capital expenditure incurred or projected to be incurred, on the following counts within the original scope of work, after the date of commercial operation and up to the cut-off date may be admitted by the Commission, subject to prudence check:*

(i) Undischarged liabilities;

(ii) Works deferred for execution;

(iii) Procurement of initial capital spares within the original scope of work, subject to the provisions under clause 7.3,7.4 of these Regulations;

(iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and

(v) Change in law.

Provided that the details of works included in the original scope of work along with estimates of expenditure, undischarged liabilities and the works deferred for execution shall be submitted along with the application for determination of tariff.

(b) *'7.6 The capital expenditure incurred on the following counts after the cut-off date may, in its discretion, be admitted by the Commission, subject to prudence check:*

(i) Liabilities to meet award of arbitration or for compliance of the order or decree of a court;

(ii) Change in law;

(iii) *Deferred works relating to ash pond or ash handling system in the original scope of work;*

(iv) *Any additional works/services which have become necessary for efficient and successful operation of the generating station, but not included in the original project cost;"*

5.46 The Commission had scrutinized the information provided by the Petitioner and after due prudence check approved the additional capitalisation as shown in the following table:

Table 22: Approved Additional Capitalisation for Unit 2 (Rs Cr)

Particulars	Additional Capitalisation during FY 13-14		
Asset Class Description	Approved in MYT order	Submitted by TPCL	Approved in True up
Building & Civil Engineering Works	-	4.73	3.70
Transformers & other Fixed Apparatus		0.00	0.00
Batteries		0.00	0.00
Plant and Machinery in Generating Stations		2.66	2.62
Switchgear, including Cable Connections		0.00	0.00
Air Conditioning Plants (Static)		0.00	0.00
Other Assets - Unclassified		3.13	2.99
Office Furniture, Furnishings & Office Equipment		0.01	0.01
Communication Equipment - Telephone Lines and Telephones		0.00	0.00
Self-Propelled Vehicles		0.00	0.00
IT equipment		0.05	0.05
Total Additional Capitalisation	**24.31**	**10.58**	**9.36**

Table 23: Approved Additional Capitalisation for Unit 3 (Rs Cr)

Particulars	Additional Capitalisation during FY 13-14		
Asset Class Description	Approved in MYT order	Submitted by TPCL	Approved in True up
Building & Civil Engineering Works	-	4.73	3.70
Transformers & other Fixed Apparatus		0.00	0.00
Batteries		0.00	0.00
Plant and Machinery in Generating Stations		11.20	11.17
Switchgear, including Cable Connections		0.00	0.00
Air Conditioning Plants (Static)		0.00	0.00
Other Assets - Unclassified		1.88	1.74
Office Furniture, Furnishings & Office Equipment		0.01	0.01
Communication Equipment – Telephone Lines and Telephones		0.00	0.00

Particulars	Additional Capitalisation during FY 13-14		
Asset Class Description	Approved in MYT order	Submitted by TPCL	Approved in True up
Self-Propelled Vehicles		0.00	0.00
IT equipment		0.05	0.05
Total Additional Capitalisation	**18.76**	**17.88**	**16.66**

Depreciation

Petitioner's submission

5.47 The Petitioner submitted that the depreciation on additional capitalization calculation was determined as per the depreciation rates of various classes of assets as prescribed in Appendix–I of Generation Tariff Regulations, 2010. The submission made by the Petitioner for total depreciation for Units 2 and Unit 3 has been provided in the following Table:

Table 24: Submitted Depreciation on Additional Capitalisation for Unit 2 for FY 2013-14 (Rs Cr)

Asset Class Description	Depreciation in FY 14 on Additional Capitalisation of FY 14
Depreciation on Original Capital Cost	3.59
Depreciation on Additional Capitalization	1.25
Total Depreciation	**4.84**

Table 25: Submitted Depreciation on Additional Capitalisation for Unit 2 for FY 2013-14 (Rs Cr)

Asset Class Description	Depreciation in FY 14 on Additional Capitalisation of FY 14
Depreciation on Original Capital Cost	5.34
Depreciation on Additional Capitalization	1.12
Total Depreciation	**6.47**

Commission's analysis

5.48 The Generation Tariff Regulation, 2010 have specified the following methodology for the calculation of depreciation expense for existing generating stations:

(a) Depreciation shall be allowed up to a maximum of 90% of the capital cost of the asset and the salvage value of the asset shall be considered as 10%.

(b) Depreciation shall be calculated annually as per the straight line method and at the rates specified in the Appendix-I of the said Regulations.

(c) In case of existing generating stations, during the transition period, the balance depreciable value as on April 1, 2011 shall be worked out by deducting the cumulative depreciation including AAD as admitted by the Commission up to March 31, 2011 from the gross depreciable value of the assets.

(d) The rate of depreciation shall be continued to be charged at the rate specified in Annexure-I till the cumulative depreciation reaches 70%. Thereafter, the remaining depreciable value shall be spread over the remaining life of the asset such that the maximum depreciation does not exceed 90%.

5.49 The Commission in the MYT order dated May 31, 2012 approved depreciation on original cost of power plant at Rs 5.38 Cr for Unit 2 and Rs 6.72 Cr for Unit 3. The Commission after conducting prudence check approves depreciation as shown in the following table:

Table 26: Approved Depreciation for FY 2013-14 of Unit 2 (Rs Cr)

Particulars	Approved in MYT order	Submitted by TPCL	Approved in True up
Depreciation on Original Cost of Capital	3.59	3.59	3.59
Depreciation on Additional Capitalisation	1.79	1.25	1.23
Total Depreciation	**5.38**	**4.84**	**4.82**

Table 27: Approved Depreciation for FY 2013-14 of Unit 3 (Rs Cr)

Particulars	Approved in MYT order	Submitted by TPCL	Approved in True up
Depreciation on Original Cost of Capital	5.34	5.34	5.34
Depreciation on Additional Capitalisation	1.38	1.12	1.10
Total Depreciation	**6.72**	**6.47**	**6.44**

Operation & Maintenance Expenses

Petitioner's submission

5.50 The Petitioner has submitted O&M Expenses for FY 2013-14 at Rs 30.53 Cr for Unit 2 and at Rs 26.26 Cr for Unit 3.

5.51 The basis of allocation as submitted by the Petitioner is shown below:

(a) Ash Disposal Expenses: The petitioner submitted that Ash Disposal Expenses form a major part of the O&M expenses and around 67% of the ash was utilized through off-take by adjacent cement plants and balance ash is dumped in the ash pond. Wet ash is then transported from ash pond to distant low lying areas and the same has increased in FY 2013-14 w.r.t FY 2012-13 on account of the following factors:

i. Tata Power could not evacuate the entire Ash generated during the year and had to dump the excess Ash in the JEMCO pond. However, the Hon'ble Jharkhand State Pollution Control Board (JSPCB) had on 11.02.2013 and 28.02.2013 sent show cause notices highlighting

"ii) That, the fly ash disposal is not being made properly. It is found that ash pond is generally full of ash."

In compliance of the directive, the Petitioner was prohibited from disposing ash in the nearby areas and had to transport the ash to low lying areas over distances of 25-30 km using bulk transport vehicles, which resulted in increase in ash disposal charges.

ii. Compliance with other statutory directives – The MOE&F, Government of India vide its notification dated 03.11.2009 had mandated that low lying areas used to fill ash must be covered with top soil after disposing ash in the area. Thus to comply with the above directive, the Petitioner had to procure top soil at the rate of Rs. 200 per tonne for covering the ash-filled low lying areas which also resulted in increased expenditure in ash disposal expenses.

(b) Head office expenses – The expenses incurred due to outsourcing by the operational division such as Jojobera Unit 2 and Unit 3 to the corporate functions of Tata Power based in Mumbai and Noida. The basis of allocation of HO expenses to any Unit of Tata Power is as per the given methodology

*i. Allocation of Head Office and management expenses = Head office and management expenses allocable to cost of generation*Generation expenses of Unit/Total generation expenses (excluding cost of power purchase, depreciation, borrowing costs, exchange loss/gain, non-recurring onetime expenses, fuel (including related exchange loss/gain) etc.).*

ii. *Head office and Management expenses allocable to cost of generation = Head office and management expenses* Total generation expenses (excluding cost of power purchase, depreciation, borrowing costs, exchange loss/gain, non-recurring onetime expenses, fuel (including related exchange loss/gain),etc.)/{Total generation expenses(excluding cost of power purchase, depreciation, borrowing costs, exchange loss/gain, non-recurring onetime expenses, fuel(including related exchange loss/gain),etc.) + Total distribution, transmission expenses and expenses related to other business (excluding wheeling/transmission charges, depreciation, exchange loss/gain and borrowing costs, components consumed, non-recurring one-time expenses, etc.)}*

(c) Raw water expenses – The Raw water expenses have been computed in line with the order of the Hon'ble Commission dated 21st November 2012 on Review petition filed by Tata Power (Case No. 12 of 2012) wherein the Hon'ble Commission had provisionally approved the Raw water charges for Units 2 and 3 considering the apportionment methodology based on the actual generation of each units of Jojobera power plant subject to truing up at actual at the end of each financial year.

(d) Application fees and Publication expenses – The Petitioner submitted that no expenses have been incurred towards the ARR application fees and publication expenses during FY 2013-14 and has therefore not considered the same for truing up of FY 2013-14 for Unit 2 and Unit 3.

5.52 Using the above methodology the Petitioner has submitted the details as shown on the table below.

Table 28: Summary of O&M Expenses submitted by the Petitioner (Rs Cr)

Particulars	Unit 2	Unit 3
O&M Expenses		
Employee Cost	5.89	5.89
Employee Expenses without Terminal Liabilities	5.05	5.05
Terminal Liabilities	0.84	0.84
R&M Expenses	11.17	6.95
A& G Expenses	13.47	13.42
Ash Disposal Expenses	5.04	4.64
Raw Water Expenses	1.47	1.34
Other A&G Expenses (including HO Expenses)	6.97	7.44
Application Fees & Publication Expenses	0.00	0.00
Total O&M Expenses	**30.53**	**26.26**

Commission's analysis

5.53 Regulation 7.41 of the Generation Tariff Regulation, 2010 lays out the provision for determination of O&M expenses, the same is quoted below

"7.41 Existing Thermal Generating Stations:
(a) The O&M expenses for the Transition Period shall be approved by the Commission as per the JSERC (Terms and condition of Determination of Generation Tariff) Regulations, 2004.

(b) The Applicant shall submit details on O&M expenses as required by the Commission. The O&M expenses excluding terminal liabilities for the Base Year shall be determined based on latest accounting statements, estimates of the Generating Company for relevant years and other factors considered relevant.

(c) The O&M expenses excluding terminal liabilities permissible towards determination of tariff for each year of the Control Period shall be determined after a prudence check by the Commission based on submissions of the Generating Company, previous years' actual expenses and any other factor considered relevant.

(d) Terminal Liabilities will be approved as per actual submitted by the Generating Company or be established through actuarial studies.

(e) Increase in O&M charges on account of war, insurgency or changes in laws, or like eventualities where the Commission is of the opinion that an increase in O&M charges is justified, may be considered by the Commission for a specified period."

5.54 As per Regulation 6.14 of the Generation Tariff Regulation, 2010, for the Existing Thermal Generating Stations, any surplus or deficit on account of O&M expenses shall be to the account of the generating company. The regulations are quoted below:

"6.14 The true up across various controllable parameters shall be conducted as per principles stated below: -
(a) Any surplus and deficit on account of O&M expenses shall be to the account of the generating company and shall not be trued up in ARR;"

5.55 Based on the above norms as specified in the Generation Tariff Regulation, 2010, the Commission had approved the O&M expenses as per the MYT order for the year FY 2012-13. Aggrieved by the above order, the Petitioner had approached the Hon'ble Tribunal challenging the earlier order of the Commission passed on 31.05.2015. Pertaining to O&M, the Petitioner had challenged the disallowance of actual ash disposal expenses in the earlier order of the Commission.

5.56 The Hon'ble Tribunal in their judgement on appeal no. 195 of 2015 passed on 10.08.2016 had mentioned the following on the issue of ash disposal expenses:

"(iii) The State Commission while approving true up of FY 2012-13 allowed Rs. 2.49 Cr as Ash disposal expenses against the claim of Rs. 4.09 Cr submitted by the Appellant for the Unit No. 2 and Rs. 2.58 Cr against the claim of Rs. 4.44 submitted by the appellant for Unit 3 resulting into disallowing of the Ash Disposal Expenses to the tune of Rs. 3.46 Cr stated to have been incurred by the Appellant during the year FY 2012-13.

(iv) In our considered opinion, the Ash disposal activity undertaken by the generator is in compliance with the statutory requirements prescribed by the State Pollution Control Board as well as by the Ministry of Environment and Forest, Government of India. In this present case, we have noted that the Jharkhand State Pollution Control Board ("JSPCB") issued Consent to Operate dated 13.08.2012 for the project prohibiting the generators in the State from disposing Ash in the nearby areas of the project and as a result the Appellant was required to transport Ash to farther places.

(v) In compliance to this condition imposed by the State Control Pollution board, the Appellant has claimed transportation charges etc. to dispose off the fly ash in the areas located around 20-25 kms from the project.

(vi) Ministry of Environment and Forest, Government of India by its Notification dated 03.11.2009 mandated that low lying areas used to fill ash must be covered with top soil after disposing Ash in the Area. The Appellant in compliance to this directive of Ministry of Environment and Forest, Government of India had to procure top soil for covering Ash filled in the low lying areas and for the same, the Appellant made claim in the Ash disposal expenses.

(vii) As per clause 2.1 (13) of the State Commission's Generation Tariff Regulations, 2010, change in law means occurrence of any of the following events;

……..change by any competent authority, in any consent, approval or license or obtained for the project……..

As per Clause 7.41 of State Commission's Generation Tariff Regulation, 2010 states as under:-

e) Increase in O&M on account of war, insurgency or changes in laws, or like eventualities where the Commission is of the opinion that an increase in O&M charges is justified, may be considered by the Commission for a specified period."

(viii) In light of the Regulations 7.41(e) read with 2.1 (13) of the State Commission's Generation Tariff Regulation's, 2010, we do not have any doubt in our minds that the Appellant was required to comply with the both the Notifications i.e Notification issued by the State Pollution Control Board as well Notification issued by Ministry of Environment and Forest, Government of India since they are statutory in nature and mandated by the statutory authorities and compliance of the same is must for the Appellant which resulted in additional expenditure towards disposal of Ash generated by its plant and the same should have been allowed by the State Commission while approving true up of the Appellant for the FY 2012-13 subject to its prudent check for the expenses incurred as claimed by the Appellant.

In light of the above, we decide this issue in favour of the Appellant and remand the matter to the State Commission for the Consideration of the same."

5.57 In light of the judgement and directive by Hon'ble Tribunal, the Commission has considered the actual ash disposal expenses for FY 2013-14. The Petitioner had submitted auditor's certificate against the actual ash disposal expenses. The Commission after due prudence check approves the actual ash disposal expenses The O&M expenses approved for True up of FY 2013-14 and that submitted by the Petitioner are shown in the table below:

Table 29: O&M expenses of Unit 2 approved for True Up for FY 2013-14 (Rs Cr)

Particulars	Unit 2		
	As per MYT Order	Submitted by TPCL	Approved by JSERC
Employee Cost	5.89	5.89	5.89
Employee Expenses without Terminal Liabilities	5.05	5.05	5.05
Terminal Liabilities	0.84	0.84	0.84
R&M Expenses	11.17	11.17	11.17
A&G Expenses	10.10	13.47	12.12
Ash Disposal Expenses	2.70	5.04	5.04
Raw Water Expenses	1.60	1.47	1.47
Other A&G Expenses (including HO Expenses)	5.62	6.97	5.62
Application Fees & Publication Expenses	0.18	0.00	0.00
Total O&M Expenses	**27.16**	**30.53**	**29.18**

Table 30: O&M expenses of Unit 3 approved for True Up for FY 2013-14 (Rs Cr)

Particulars	Unit 3		
	As per MYT Order	Submitted by TPCL	Approved by JSERC
Employee Cost	5.89	5.89	5.89
Employee Expenses without Terminal Liabilities	5.05	5.05	5.05
Terminal Liabilities	0.84	0.84	0.84

Particulars	Unit 3		
	As per MYT Order	Submitted by TPCL	Approved by JSERC
R&M Expenses	6.95	6.95	6.95
A& G Expenses	9.57	13.42	10.96
Ash Disposal Expenses	2.80	4.64	4.64
Raw Water Expenses	1.61	1.34	1.34
Other A&G Expenses (including HO Expenses)	4.98	7.44	4.98
Application Fees & Publication Expenses	0.18	0.00	0.00
Total O&M Expenses	**22.41**	**26.26**	**23.80**

Return on Equity (RoE)

Petitioner's submission

5.58 The details of equity considered by the Petitioner are shown in the table below.

Table 31: Return on Equity submitted by the Petitioner (Rs Cr)

Particulars	Unit 2	Unit 3
Computation of Regulatory Equity		
Opening GFA (Original Project Cost)	449.95	430.86
Opening Equity	134.98	129.26
Additional Capitalization during FY14	10.58	17.88
Additions (Additional Equity of FY14)	3.17	5.36
Closing Equity	138.16	134.62
Computation of Return on Equity		
Rate of Return on Equity Component of Original Capital Cost (%)	15.50%	15.50%
Rate of Return on Equity Component of Additional Capitalization (%) after 1st April 2012	15.50%	15.50%
Return on Equity Component of Original Capital Cost (Post-Tax)	20.92	20.03
Return on Equity Component of Additional Capitalization (Post-Tax)	0.25	0.42
Total Return on Equity (Post-Tax)	21.17	20.45
Applicable Tax MAT	MAT	MAT
Applicable Tax Rate	20.96%	20.96%
Total Return on Equity (Pre-Tax) for FY 2012-13	**26.78**	**25.87**

Commission's analysis

5.59 The Commission has worked out the gross normative equity for FY 2013-14 as per Regulation 7.13 and 7.14 of the JSERC Generation Tariff Regulation, 2010. The Commission has considered the return on equity at 15.50% which after grossing up with the MAT rate applicable for the year comes out to 20.96% for FY 2013-14.

5.60 Accordingly the Commission approves the return of equity for FY 2013-14 as per detailed calculation shown in the following table.

Table 32: Approved Return on Equity for Unit 2 (Rs Cr)

Particulars	Approved in MYT order	Submitted by TPCL	Approved by JSERC
Opening Equity for the year	135.64	134.98	134.99
Additional capitalization during FY 2013-14	24.31	10.58	9.36
Additional equity during FY 2013-14	7.29	3.17	2.81
Closing Equity	142.99	138.16	137.80
Rate of Return on Equity Component on Opening GFA	15.50%	15.50%	15.50%
Rate of Return on Equity Component of Additional Capitalization	15.50%	15.50%	15.50%
Tax Rate	20.01%	20.96%	20.96%
Rate of Return on Equity Component of Original Cost	21.02	20.92	20.92
Rate of Return on Equity Component of Additional Capitalization	0.57	0.25	0.22
Return on Equity (Post Tax)	21.59	21.17	21.14
Applicable Tax Rate	20.01%	20.96%	20.96%
Return on Equity (Pre Tax)	**27.00**	**26.78**	**26.75**

Table 33: Approved Return on Equity for Unit 3 (Rs Cr)

Particulars	Approved in MYT order	Submitted by TPCL	Approved by JSERC
Opening Equity for the year	130.28	129.26	129.26
Additional capitalization during FY 2013-14	18.76	17.88	16.66
Additional equity during FY 2013-14	5.63	5.36	5.00
Closing Equity	135.91	134.62	134.25
Rate of Return on Equity Component on Opening GFA	15.50%	15.50%	15.50%
Rate of Return on Equity Component of Additional Capitalization	15.50%	15.50%	15.50%
Tax Rate	20.01%	20.96%	20.96%
Rate of Return on Equity Component of Original Cost	20.19	20.03	20.03

Particulars	Approved in MYT order	Submitted by TPCL	Approved by JSERC
Rate of Return on Equity Component of Additional Capitalization	0.44	0.42	0.39
Return on Equity (Post Tax)	20.63	20.45	20.42
MAT Rate	20.01%	20.96%	20.96%
Return on Equity (Pre Tax)	**25.79**	**25.87**	**25.84**

Interest on Loan

Petitioner's submission

5.61 The Petitioner has considered rate of interest of loan at 13.02% for Unit 2 and 12.33% for Unit 3 which is equal to the rate of interest approved by the Commission in the order dated May 31, 2012 for FY 2013-14 as shown in the table below

Table 34: Interest on Loan of Unit 2 and Unit 3 submitted by the Petitioner for FY 2013-14 (Rs Cr)

Particulars	Unit 2	Unit 3
Loan Balance Movement		
Opening GFA (Original Project Cost)	449.95	430.86
Opening Loan Balance on above (=70%ofGFA)	12.09	8.18
Additional Capitalization during FY14	10.58	17.88
Loan Balance (on Additional Capitalization for FY14)	7.41	12.51
Deemed Repayment (=Depreciation)	1.25	1.12
Closing Loan Balance	18.24	19.57
Average Loan Balance during the year	15.17	13.88
Computation of Interest on Loan		
Rate Of Interest (%)	13.02%	12.33%
Interest on Loan for FY 2013-14	**1.97**	**1.71**

Commission's analysis

5.62 The Commission has worked out gross normative loan for FY 2013-14 as per Regulation 7.13 and 7.14 of the Generation Tariff Regulation, 2010 as quoted below

> *"7.13 In case of the generating station declared under commercial operation prior to 1.4.2011, debt-equity ratio allowed by the Commission for determination of Tariff for the period ending 31.3.2011 shall be considered for determination of tariff for the Transition period.*
>
> *7.14 For the project declared under commercial operation on or after 1.04.2011, if the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:*

Explanation: - Any expenditure incurred or projected to be incurred on or after 1.04.2011 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernization expenditure for life extension shall be serviced in the manner specified in clause 7.14 of this Regulation."

5.63 The rate of interest on the approved normative debt has been worked out for Unit 2 and Unit 3 as 13.02% and 12.33% respectively. Accordingly the Commission approves the interest on loan amount at Rs 1.92 Cr for Unit 2 and Rs 1.66 Cr for Unit 3 respectively.

Cost of Secondary Fuel

Petitioner's submission

5.64 The Petitioner submitted that cost of secondary fuel at Rs 5.46 Cr and Rs 5.51 Cr for Unit 2 and Unit 3 respectively.

Commission's analysis

5.65 The Commission has approved the cost of secondary fuel oil (LDO in case of the Petitioner) in accordance with Regulation 7.49 of the JSERC Generation Tariff Regulations, 2010:

"7.49 Expenses on secondary fuel oil in Rupees shall be computed corresponding to normative secondary fuel oil consumption (SFC) specified in clause 8.4, 8.6 of these Regulations, in accordance with the following formula:

$$= SFC \times LPSFi \times NAPAF \times 24 \times NDY \times IC \times 10$$

Where,
SFC – Normative Specific Fuel Oil consumption in ml/kWh
LPSFi – Weighted Average Landed Price of Secondary Fuel in Rs./ml considered initially
NAPAF – Normative Annual Plant Availability Factor in percentage
NDY – Number of days in a year
IC - Installed Capacity in MW

7.50 Initially, the landed cost incurred by the Generating Company on secondary fuel oil shall be taken based on actuals of the weighted average price of the three preceding months and in the absence of landed costs for the three preceding months, latest procurement price for the generating station, before the start of the year."

5.66 As per the Generation Tariff Regulations 2010, the consumption of LDO has been calculated considering the gross generation corresponding to the NAPAF (i.e. 85%) and Specific Normative Fuel Oil Consumption (i.e. 1 ml/kWh) and the landed price of LDO has been computed considering the weighted average cost of LDO from April 2013 to March 2014. Accordingly the Commission approves the LDO cost at Rs 5.46 Cr and Rs 5.51 Cr for Unit 2 and Unit 3 respectively.

Interest on Working Capital

Petitioner's submission

5.67 The Petitioner for computing the working capital and interest thereon as per the Generation Tariff Regulations, 2010 has considered the working capital as the sum of the following:

(a) Cost of Coal for two months for generation corresponding to the Normative Annual Plant Availability Factor;

(b) Cost of secondary fuel oil for two months for generation corresponding to the Normative Annual Plant Availability Factor;

(c) Maintenance spares @ 20% of operation and maintenance expenses;

(d) Operation and Maintenance expenses for 1 month; and

(e) Receivables equivalent to two months of capacity charges and energy charges for sale of electricity calculated on the Normative Annual Plant Availability Factor.

5.68 The rate of interest for calculating the interest on working capital is taken at the prevalent SBI PLR rate @ 14.75%The details are shown in the table below:

Table 35: Interest on Working Capital for FY 2013-14 of Unit 2 and Unit 3

Submitted by the Petitioner (Rs Cr)

Particulars	Unit 2	Unit 3
Computation of Cost Elements at Normative Availability		
Ex-Bus Generation at Normative Availability & Aux Power (i) (MUs)	804.17	804.17
Approved Rate of Energy Charges for FY 2013-14 (ii) (Rs/Kwh)	2.659	2.667
Coal Cost at Normative Availability [=(i)x(ii)]	213.86	214.47
LDO Cost at Normative Availability	5.46	5.51
Annual Fixed Charges (excluding Incentive) at Normative Availability	83.57	79.56
O&M Expenses	30.53	26.26
Maintenance Spares	6.11	5.25

Particulars	Unit 2	Unit 3
Elements of Working Capital		
Working Capital as Coal Cost for 2 months	35.64	35.74
Working Capital as LDO Cost for 2 months	0.91	0.92
Working Capital as Receivables for 2 months	49.57	49.00
Working Capital as O&M Expenses for 1 month	2.54	2.19
Working Capital as Maintenance Spares (at 20% of O&M Expenses)	6.11	5.25
Total Working Capital	94.77	93.11
Computation of Interest on Working Capital		
SBI PLR as on 1st April 2012 (%)	14.75%	14.75%
Interest on working Capital	**13.98**	**13.73**

Commission's analysis

5.69 The Commission has computed the interest on working capital for FY 2013-14 for both Units 2 and 3 by considering values of related components. The working capital requirement for the Petitioner has been determined by considering the following components as per Regulation 7.34 of the Generation Tariff Regulation, 2010:

(a) Cost of Coal for two months for generation corresponding to the Normative Annual Plant Availability Factor;

(b) Cost of secondary fuel oil for two months for generation corresponding to the Normative Annual Plant Availability Factor;

(c) Maintenance spares @ 20% of operation and maintenance expenses;

(d) Operation and Maintenance expenses for 1 month; and

(e) Receivables equivalent to two months of capacity charges and energy charges for sale of electricity calculated on the Normative Annual Plant Availability Factor.

5.70 Further Regulation 7.37 states that for calculation of working capital no fuel price escalation shall be provided during the tariff period.

> *"7.37 The cost of fuel in cases covered under clause 7.34 and 7.35 of these Regulations shall be based on the landed cost incurred (taking into account normative transit and handling losses) by the Generating Company and gross calorific value of the fuel as per actual for the three months preceding the first month for which tariff is to be determined and no fuel price escalation shall be provided during the tariff period."*

5.71 The rate of interest on working capital has been taken as 14.75% i.e. the short-term Prime Lending Rate of State Bank of India as on April 1, 2012.

5.72 Accordingly, the Commission has trued up the interest on working capital for Unit 2 and Unit 3 for FY 2013-14 as shown in the tables below.

Table 36: Interest on Working Capital approved by the Commission for FY 2013-14 (Rs Cr)

Particulars	Approved in MYT order		Submitted by TPCL		Approved in True up	
	Unit 2	Unit 3	Unit 2	Unit 3	Unit 2	Unit 3
Coal Cost for 2 months	25.22	25.30	35.64	35.74	33.03	29.50
LDO Cost for 2 months	0.89	0.94	0.91	0.92	0.91	0.92
Receivables for 2 months	38.27	37.52	49.57	49.00	46.57	41.99
O&M Expenses for 1 month	2.26	1.87	2.54	2.19	2.43	1.98
Maintenance Spares (@ 20% of O&M Expenses)	5.43	4.48	6.11	5.25	5.84	4.76
Total Working Capital	72.07	70.11	94.77	93.11	88.78	79.15
Rate of Interest	14.75%	14.75%	14.75%	14.75%	14.75%	14.75%
Interest on Working Capital	10.63	10.34	13.98	13.73	13.10	11.68

Summary of Fixed Cost Determinants and Generation Tariff

5.73 Regulation 8.2 of the Generation Tariff Regulations, 2010 states that the annual fixed cost of a thermal generating station shall consist of the following

(a) Return on Equity;

(b) Interest and Financing Charges on Loan Capital;

(c) Depreciation;

(d) Operation and Maintenance Expenses;

(e) Interest Charges on Working Capital; and

(f) Cost of Secondary Fuel Oil.

5.74 The following tables show the fixed cost components and energy cost for FY 2013-14, in terms of the Petitioner's submission and the Commission's trued up costs for Unit 2 and Unit 3.

Table 37: Summary of Annual Fixed Cost and Generation Tariff for Unit 2 for FY 2013-14

Parameters	Units	Unit 2		
		Approved in MYT order	Submitted by TPCL	Approved in True up
O&M charges	Rs Cr	25.56	30.53	29.18
Depreciation	Rs Cr	5.38	4.84	4.82
Interest on Loan	Rs Cr	2.77	1.97	1.92
Return on Equity	Rs Cr	27.00	26.78	26.75
Cost of Secondary Fuel	Rs Cr	5.33	5.46	5.46
Interest on Working Capital	Rs Cr	10.52	13.98	13.10
Annual Fixed Charges	Rs Cr	**76.56**	**83.57**	**81.23**
Energy Charge Rate (ECR)	Rs/kWh	1.882	2.659	2.651
Fuel Cost	Rs Cr	**151.34**	**198.83**	**198.20**
Total Cost	Rs Cr	**227.90**	**282.40**	**279.42**

Table 38: Summary of Annual Fixed Cost and Generation Tariff for Unit 3 for FY 2013-14

Parameters	Units	Unit 3		
		Approved in MYT order	Submitted by TPCL	Approved in True up
O&M charges	Rs Cr	20.81	26.26	23.80
Depreciation	Rs Cr	6.72	6.47	6.44
Interest on Loan	Rs Cr	2.02	1.71	1.66
Return on Equity	Rs Cr	25.79	25.87	25.84
Cost of Secondary Fuel	Rs Cr	5.66	5.51	5.51
Interest on Working Capital	Rs Cr	10.33	13.73	11.68
Annual Fixed Charges	Rs Cr	**71.22**	**79.56**	**74.93**
Energy Charge Rate (ECR)	Rs/kWh	1.888	2.667	2.644
Fuel Cost	Rs Cr	**152.18**	**178.54**	**177.01**
Total Cost	Rs Cr	**223.40**	**258.10**	**251.94**

Incentive

Petitioner's submission

5.75 The Petitioner based on the provisions of Generation Tariff Regulations, 2010 computed Incentive for Truing-up of FY 2013-14 which works out to Rs 17.23 Cr for Unit 2 and Rs 8.37 Cr for Unit 3. The detailed computation of pre-tax Incentive is shown in the following Tables:

Table 39: Incentive submitted by the Petitioner for FY 2013-14 for Unit 2 and Unit 3

Particulars	UoM	FY 2013-14	
		Unit 2	Unit 3
Actual Plant Availability	%	98.85	92.07
Normative Plant Availability	%	85.00	85.00
Annual Fixed Charges without Incentive	Rs Cr	83.57	79.56
Annual Fixed Charges with Incentive	Rs Cr	97.19	86.18
Computation of Incentive			
Incentive(Post-Tax)	Rs Cr	13.62	6.61
MAT Rate	%	20.96%	20.96%
Incentive(Pre-Tax) for FY 2013-14	Rs Cr	17.23	8.37

Commission's analysis

5.76 As per Regulation 8.12 of Generation Tariff Regulations, 2010,

"8.12 The capacity charge (inclusive of incentive) payable to a thermal generating station for a calendar month shall be calculated in accordance with the following formulae :

(a) Generating stations in commercial operation for less than ten (10) years on 1st April of the financial year:

= (AFC x (NDM / NDY) x (0.5 + 0.5 x PAFM / NAPAF) (in Rupees) ;

Provided that in case the plant availability factor achieved during a financial year (PAFY) is less than 70%, the total capacity charge for the year shall be restricted to: =AFC x (0.5 + 35 / NAPAF) x (PAFY / 70) (in Rupees)

(b) For generating stations in commercial operation for ten (10) years or more on 1st April of the year:

= (AFC x NDM / NDY) x (PAFM / NAPAF) (in Rupees)

Where, AFC - Annual fixed cost specified for the year, in Rupees;

NAPAF - Normative annual plant availability factor in percentage;

NDM - Number of days in the month;

NDY - Number of days in the year;

PAFM - Plant availability factor achieved during the month, in percent;

PAFY - Plant availability factor achieved during the year, in percent"

5.77 Accordingly the Commission has calculated the incentives after due verification of SLDC certified availability. The Commission hereby approves the pre-tax incentives at Rs 16.74 Cr for Unit 2 and 7.88 Cr for Unit 3.

Tax Liability on gain on secondary fuel oil consumption

Petitioner's submission

5.78 The Petitioner submitted that the tax liability to be borne by the Petitioner on such gains on account of lower LDO Consumption is recoverable from the beneficiaries at Rs 1.09 Cr for Unit 2 and 0.64 Cr for Unit 3 respectively.

Commission's View

5.79 As per Regulation 7.48 of the Generation Tariff Regulations, 2010:

> *"7.48 Tax on the income streams of the Generating Company shall not be recovered from the Beneficiaries.*
>
> *Provided that the deferred tax liability, excluding Fringe Benefit Tax, for the period up to 31st March, 2011 whenever it materializes, shall be recoverable directly from the beneficiaries and the long-term customers;*
>
> *Provided further that any tax liability on incentives and savings due to improved performance on any parameter, if any, shall be considered for passing onto the Beneficiaries in the ratio of the sharing of the gains as prescribed under these Regulations."*

5.80 The following table shows the tax liability submitted by the Petitioner and approved by the Commission.

Table 40: Computation of Tax liability on gains on LDO consumption of Unit 2 for FY 2013-14 (Rs Cr)

Particulars	Unit 2	
	Submitted by the Petitioner	Approved by the Commission
Normative Gross generation	893.52	893.52
Actual gross generation	823.23	823.19
Normative sp. LDO Consumption	1	1
LDO Consumption at Normative Plant Availability	893.52	893.52
Actual LDO Consumption for the year	206.00	206.00
Equivalent actual LDO Consumption at normative generation	223.59	223.60
Difference in LDO Consumption	669.93	669.92
LDO Landed Price	61107	61107
Gain/Loss on LDO Consumption(post Tax)	4.09	4.09

Particulars	Unit 2	
	Submitted by the Petitioner	Approved by the Commission
MAT rate	20.96%	20.96%
Retained by TPCL	5.18	5.18
Passed on to Consumers	-	-
Tax liability to be recovered from Consumers	1.09	1.09

Table 41: Computation of Sharing of gains on LDO consumption of Unit 3 for FY 2013-14 (Rs Cr)

Particulars	Unit 3	
	Submitted by the Petitioner	Approved by the Commission
Normative Gross generation	893.52	893.52
Actual gross generation	742.10	742.15
Normative sp. LDO Consumption	1	1
LDO Consumption at Normative Plant Availability	893.52	893.52
Actual LDO Consumption for the year	419.00	419.00
Equivalent actual LDO Consumption at normative generation	504.50	504.50
Difference in LDO Consumption	389.02	389.06
LDO Landed Price	61704	61704
Gain/Loss on LDO Consumption(post Tax)	2.40	2.40
MAT rate	20.96%	20.96%
Retained by TPCL	3.04	3.04
Passed on to Consumers	-	-
Tax liability to be recovered from Consumers	0.64	0.64

Tax Liability on gain in Auxiliary Consumption

Petitioner's submission

5.81 The Petitioner submitted that the tax liability to be borne on the gain on account of lower auxiliary power consumption is recoverable from the beneficiaries as per Regulation 7.48 of the Generation Tariff Regulations, 2010. The Petitioner calculated the tax liability on gain on auxiliary consumption at Rs 0.48 Cr for Unit 2 and Rs 0.11 Cr for Unit 3 for FY 2012-13.

5.82 The detailed computation on Tax liability on Gain on Auxiliary Power Consumption as submitted by the Petitioner is shown in the following Table:

Table 42: Tax Liability on Gain in Auxiliary Power Consumption submitted by the Petitioner for FY 2013-14

Particulars	UoM	Unit 2	Unit 3
Energy Charges	Rs Cr	198.83	178.54
Net Gain due to lower Auxiliary Power Consumption	Rs Cr	1.80	0.41
MAT Rate	%	20.96%	20.96%
Tax Liability due to Gain in Auxiliary Consumption	**Rs Cr**	**0.48**	**0.11**

Commission's analysis

5.83 As per Regulation 7.48 of the Generation Tariff Regulations, 2010:

> *"7.48 Tax on the income streams of the Generating Company shall not be recovered from the Beneficiaries.*
>
> *Provided that the deferred tax liability, excluding Fringe Benefit Tax, for the period up to 31st March, 2011 whenever it materializes, shall be recoverable directly from the beneficiaries and the long-term customers;*
>
> *Provided further that any tax liability on incentives and savings due to improved performance on any parameter, if any, shall be considered for passing onto the Beneficiaries in the ratio of the sharing of the gains as prescribed under these Regulations."*

5.84 The Commission calculated the tax on the gain in auxiliary consumption of the Petitioner and accordingly approves the tax on auxiliary consumption for Unit-2 at Rs 0.48 Cr and Unit-3 at Rs 0.11 Cr.

Total cost

5.85 The tables below show the total cost recoverable by the Petitioner for Unit 2 and Unit 3 inclusive of incentive and sharing of gains on operational parameters.

Table 43: Cost recoverable by Petitioner for Unit 2 for FY 2013-14

Parameters	Units	Unit 2		
		Approved in MYT order	Submitted by TPCL	Approved in True up
Annual Fixed Charges	Rs Cr	78.27	83.57	81.23
Fuel Cost	Rs Cr	151.35	198.83	198.20
Total Cost	Rs Cr	229.62	282.40	279.42
Incentive	Rs Cr	-	17.23	16.74
Less: Sharing of Gains on LDO		-	-	-
Add: Tax on the Gain on LDO Consumption retained by TPCL	Rs Cr	-	1.09	1.09

Parameters	Units	Unit 2		
		Approved in MYT order	Submitted by TPCL	Approved in True up
Add: tax on Gain on aux. power consumption	Rs Cr	-	0.48	0.48
Total Cost including incentive & sharing of gains on LDO consumption	**Rs Cr**	**229.62**	**301.19**	**297.73**

Table 44: Cost recoverable by Petitioner for Unit 3 for FY 2013-14

Parameters	Units	Unit 3		
		Approved in MYT order	Submitted by TPCL	Approved in True up
Annual Fixed Charges	Rs Cr	72.94	79.56	74.93
Fuel Cost	Rs Cr	152.18	178.54	177.01
Total Cost	Rs Cr	225.12	258.10	251.94
Incentive	Rs Cr	-	8.37	7.88
Less: Sharing of Gains on LDO		-	-	-
Add: Tax on the Gain on LDO Consumption retained by TPCL	Rs Cr	-	0.64	0.64
Add: Tax on Gain on aux. power consumption	Rs Cr	-	0.11	0.11
Total Cost including incentive & sharing of gains on LDO consumption	**Rs Cr**	**225.12**	**267.21**	**260.57**

Gap/Surplus for FY 2013-14

5.86 The Commission has calculated the gap taking into account the carrying cost for the period from mid of FY 2013-14 up to the end of FY 2015-16 and accordingly approved revenue gap/surplus for FY 2013-14 in table below. **In accordance with Regulation 6.18 of 'Generation Tariff Regulations, 2010' the Petitioner may recover the gap in 6 equal monthly instalments from the beneficiary starting within three months from the date of this tariff order issued by the Commission.**

Table 45: Gap/Surplus for FY 2013-14 of Unit-2

Particulars	Approved in MYT order	Submitted by TPCL	Approved in True up
Total Cost including incentive & sharing of gains on LDO consumption for FY 2013-14	229.62	301.19	297.73
Revenue Recovered during the year FY 2013-14	-	292.42	292.42
Gap/(Surplus) for the year FY 2013-14	229.62	8.77	5.31

Particulars	Approved in MYT order	Submitted by TPCL	Approved in True up
Carrying Cost on current year gap/(Surplus)	-	3.17	1.94
Total gap for FY 2013-14 C/f		11.94	7.25
Net Gap to be recovered/adjusted	**-**	**11.94**	**7.25**

Table 46: Gap/Surplus for FY 2013-14 of Unit-3

Particulars	Approved in MYT order	Submitted by TPCL	Approved in True up
Total Cost including incentive & sharing of gains on LDO consumption for FY 2013-14	225.12	267.21	260.57
Revenue Recovered during the year FY 2013-14		257.09	257.09
Gap/(Surplus) for the year FY 2013-14	225.12	10.12	3.48
Carrying Cost on current year gap/(Surplus)		3.66	1.27
Total gap for FY 2013-14 C/f		13.78	4.75
Net Gap to be recovered/adjusted	**-**	**13.78**	**4.75**

A6: TRUING UP FOR FY 2014-15

6.1 The Commission had approved the ARR and generation tariff for FY 2014-15 in its MYT Order dated May 31, 2012 based on the projections for various cost parameters. The Petitioner has now sought approval from the Commission for truing up of the ARR for FY 2014-15.

6.2 The Commission has analysed the submission of the Petitioner with respect to the ARR for FY 2014-15, and has undertaken the true up exercise of various components. The component-wise description of the Petitioner's submission and the Commission's analysis thereof is provided hereunder.

Operational Performance

Plant Availability

Petitioner's submission

6.3 The Petitioner submitted month wise actual plant availability of Unit 2 and Unit 3 and has calculated the average annual availability of Unit 2 at 93.64% and that of Unit 3 at 99.59% during FY 2014-15

Commission's analysis

6.4 The Commission in the MYT Order dated May 31 2012 for FY 2014-15 had projected the availability for Unit 2 and Unit 3 as equal to the Normative Annual Plant Availability Factor (NAPAF) of 85% as specified in the Generation Tariff Regulation, 2010. Since the actual Availability of Unit 2 and Unit 3 as submitted by the Petitioner was 93.64% and 99.59% respectively which is greater than NAPAF of 85%, the Commission after scrutinising the certifications of SLDC regarding availability approves the actual availability for the purpose of truing up for FY 2014-15.

Auxiliary Consumption

Petitioner's submission

6.5 The Petitioner submitted the auxiliary consumption of Unit 2 and Unit 3 of the Jojobera generating station at normative 10% for FY 2014-15.

Commission's analysis

6.6 The Commission has observed that the actual auxiliary consumption for Unit 2 and Unit 3 are 9.31% and 9.00% for FY 2014-15. The Petitioner for computing the energy charge rate (ECR) for the year has considered the normative auxiliary consumption of 10.00 %. The Commission has also considered the normative auxiliary consumption of 10.00 % for both units for the year FY 2014-15 for computation of ECR.

6.7 However, for arriving at the net generation of Unit 2 and Unit 3 for the year FY 2014-15, the Commission has considered the actual auxiliary consumption.

Generation

Petitioner's submission

6.8 The Petitioner submitted that the actual generation of Unit 2 and Unit 3 of the Jojobera generating station was 834.23 MU and 859.67 MU respectively for FY 2014-15.

Commission's analysis

6.9 The Commission in the MYT Order dated May 31 2012 had approved Gross generation at 893.52 MU for Unit 2 and Unit 3 after considering PLF at normative level of 85%.The Petitioner has now submitted that the actual PLF for FY 2014-15 as 79.36% and 81.78% for Unit 2 and Unit 3 respectively. Hence for the purpose of truing up for FY 2014-15, the Commission after a prudence check has considered actual PLF and accordingly, approved Gross Generation at 834.23 MU and 859.67 MU for Unit 2 and Unit 3 respectively.

Heat Rate

Petitioner's submission

6.10 The Petitioner has submitted that the actual Heat rate for Unit 2 and Unit 3 are 2562 kCal/kWh and 2565 kCal/Kwh respectively as against the normative heat rate of 2567 kCal/kWh and 2577 kCal/kWh. The Petitioner has claimed to achieve the reduction on account of its continual effort and O&M practices from 2644 kCal/kWh for Unit 2 and 2621 kCal/kWh for Unit 3 respectively in FY 2010-11 to 2562 kCal/kWh for Unit 2 and 2565 kCal/kWh in FY 2014-15. The Petitioner claims, the reduction in the Heat rate for both the units is largely on the account of the proper implementation of various short-term, medium-term and long-term measures in a phased manner.

6.11 The Petitioner has for true-up of FY 2014-15 considered the normative heat rate at 2567 kCal/kWh for Unit 2 and 2577 kCal/kWh for Unit 3 and has requested the Hon'ble Commission to approve the same.

Commission's analysis

6.12 The Commission appreciates the effort undertaken by the Petitioner to improve SHR of its power station. The Petitioner has in their submission claimed the normative Station Heat Rate as 2567 kCal/kWh and 2577 kCal/kWh for Unit 2 and Unit 3 respectively as per Generation Tariff Regulations, 2010. The Commission has for the purpose of truing up also considered the Station Heat Rate as laid out in Generation Tariff Regulations, 2010 i.e. at 2567 kCal/kWh for Unit 2 and 2577 kCal/kWh for Unit 3.

Operational Parameters Summary

6.13 The tables below show the operational parameters summary for FY 2014-15, in terms of the Petitioner's submission and the Commission's trued up costs for Unit 2 and Unit 3.

Table 47: Approved Operational Parameters for Unit 2 for FY 2014-15

Particulars	Approved in MYT order	Submitted by TPCL	Approved in True up
Gross Generation(MU)	893.52	834.23	834.23
PLF	85.00%	79.36%	79.36%
Aux. Power Consumption	10.00%	10.00%	10.00%
Net Generation(MU)	804.17	756.54	756.57
Heat Rate(kcal/kwh)	2567	2567	2567

Table 48: Approved Operational Parameters for Unit 3 for FY 2014-15

Particulars	Approved in MYT order	Submitted by TPCL	Approved in True up
Gross Generation(MU)	893.52	859.67	859.67
PLF	85.00%	81.78%	81.78%
Aux. Power Consumption	10.00%	10.00%	10.00%
Net Generation(MU)	804.17	782.28	782.30
Heat Rate(kcal/kwh)	2577	2577	2577

Fuel Cost Parameters

Coal Mix and Gross Calorific Value (GCV) of Primary Fuel

Petitioner's submission

6.14 The Petitioner submitted that during FY 2014-15 coal was sourced from West Bokaro Colliery of Tata Steel (i.e. Middling Coal) and Mahanadi Coalfields, Orissa (i.e. MCL Coal). However, during FY 2014-15, due to shortfall in production of Middling Coal, the Petitioner had to procure additionally two different by-products of coal from West Bokaro Collieries i.e. 2-Product Coal and Tailing Coal. Such types of Coal have been fired along with MCL coal in the 1st Quarter for FY 2014-15 and along with Middling coal for the balance period of FY 2014-15. The proportion of the various types of coal used during FY 2014-15 has been computed as Middling Coal – 42.64%, MCL Coal – 34.44% and 2-Product and Tailing Coal – 22.91% for Unit 2 and Middling Coal – 40.60%, MCL Coal – 33.71% and 2-Product and Tailing coal – 25.69% for Unit 3.

6.15 The Petitioner further submitted the actual weighted average Gross Calorific Value (GCV) for various types of coal consumed in both Units 2 and 3. The Petitioner has mentioned that the GCV of coal used in Unit 2 during FY 2014-15 was 4140 Kcal/kg in respect of Middling Coal, 2771 Kcal/kg in respect of MCL Coal and 3555 Kcal/kg for 2-Product and Tailing coal. Whereas for Unit 3, the same was 4112 Kcal/kg in respect of Middling Coal, 2776 Kcal/kg in respect of MCL Coal and 3538s kcal/kg in respect of 2-Product and tailing coal.

Commission's analysis

6.16 The Commission computed the GCV for each type of coal by considering the actual weighted average GCV for FY 2014-15 after scrutinizing the actual details of monthly GCV submitted by the Petitioner. The following tables summarize the weighted average GCV of coal as submitted by the Petitioner and approved by the Commission for both the Units and the Coal Mix submitted and approved by the Commission for both the units.

Table 49: Approved Coal Mix and GCV for Unit 2 for FY 2014-15

Particulars	Coal Mix (%)			GCV(kCal/kg)		
	Approved in MYT order	Submitted by TPCL	Approved in True up	Approved in MYT order	Submitted by TPCL	Approved in True up
MCL Coal	38.31%	34.44%	34.44%	2935	2771	2771
Middling Coal	61.69%	42.64%	42.64%	4156	4140	4140
2-Product + Tailing + Reject coal	-	22.91%	22.91%	-	3555	3555

Table 50: Approved Coal Mix and GCV for Unit 3 for FY 2014-15

Particulars	Coal Mix (%)			GCV(kCal/kg)		
	Approved in MYT order	Submitted by TPCL	Approved in True up	Approved in MYT order	Submitted by TPCL	Approved in True up
MCL Coal	36.88%	33.71%	33.71%	2940	2776	2776
Middling Coal	63.12%	40.60%	40.60.%	4163	4112	4112
2-Product + Tailing + Reject coal	-	25.69%	25.69%	-	3538	3538

Transit Loss

Petitioner's submission

6.17 The Petitioner submitted that coal is procured primarily from two sources – West Bokaro Collieries of Tata Steel and Mahanadi Coalfields Limited. The coal procured from West Bokaro Collieries is known as the Middling Coal and therefore falls under the category of 'Washed Coal'. Based on the directive of the Hon'ble Tribunal in the judgement dated 14.11.2013 in Appeal No. 147 of 2012, Hon'ble Commission has in the APR order for FY 2013-14 dated 31.05.2015 allowed Normative transit loss of 1% in Middling Coal which was the Washed Coal being used by Tata power in FY 2011-12 and FY 2012-13. Due to shortfall in generation of Middling coal, West Bokaro had supplied two other categories of Washed coal namely 2-Product coal and Tailing coal (through Rake and Road Transport). The Petitioner submitted that the two other types of Coal were simultaneously fired in the Boilers of Unit 2 and unit 3 alongside Middling and MCL coal. The actual Transit Loss in the categories of coal are 0.08% for Middling coal, 1.08% for MCL coal and 3.44% for 2-Product and Tailing coal. The Petitioner has submitted the month wise details of actual transit loss in all categories of coal for review of the Hon'ble Commission.

6.18 The Petitioner has prayed to the Hon'ble Commission to exercise its "Power for Relaxation" as specified in Regulation 17.4 respectively in the Generation Tariff Regulations, 2010 and approve the actual transit loss at 3.44% only for 2-Product Coal and Tailing Coal for truing up.

Commission's analysis

6.19 For the current year also, the Commission has approved the transit loss for the year FY 2014-15 as per details provided in Section 5.25 of the current order. The transit loss approved by the Commission for the year FY 2014-15 is given in the following table

Table 51: Approved transit loss for the year FY 2014-15

Particulars	Approved in MYT order
MCL Coal	0.8%
Middling coal	0.8%
2-Product and Tailing coal	1.0%

Landed Cost of Coal

Petitioner's submission

6.20 The Petitioner submitted the normative landed cost of coal for MCL coal at Rs/Ton 1892, Middling coal at Rs/Ton 4373 and 2-Product and Tailing Coal at Rs/Ton 3469 for Unit 2 and MCL Coal at Rs/Ton 1898, Middling Coal at Rs/Ton 4399 and 2-Product and Tailing Coal at Rs/Ton 3467 for Unit 3.

6.21 The Petitioner has submitted the weighted average landed cost of coal at Rs/Ton 3333 by considering actual transit loss of 3.44% for 2-Product and Tailing coal.

Commission's analysis

6.22 The Commission arrived at the weighted average of the landed cost of coal from April 2014 to March 2015, using the following methodology :

(a) The base price of coal, other charges and tax, transportation and handling charges as submitted by the Petitioner from April 2014 to March 2015.

(b) Actual consumption of various types of coal during April 2014 to March 2015.

(c) Transit loss as approved by the Commission

6.23 The Commission after due verification of the Certificate of the Auditor of the Petitioner regarding the Landed price of Coal , approves the Landed Cost of Coal as shown in the following table.

Table 52: Approved Weighted Average Landed Price of Coal for Unit 2

Particulars	Weighted Average Landed Price of the coal(Rs /ton)		
	Approved in MYT order	Submitted by TPCL	Approved in True up
MCL Coal	1671	1892	1892
Middling Coal	2921	4373	4373
2 Product + Tailing coal	-	3469	3476
Weighted average landed cost	2442	3333	3313

Table 53: Approved Weighted Average Landed Price of Coal for Unit 3

Particulars	Weighted Average Landed Price of the coal (Rs/ton)		
	Approved in MYT order	Submitted by TPCL	Approved in True up
MCL Coal	1663	1898	1898
Middling Coal	2921	4399	4400
2 Product + Tailing coal	-	3467	3474
Weighted average landed cost	2457	3341	3318

Energy Charge Rate (ECR)

Petitioner's submission

6.24 The Petitioner has submitted the energy charge rate for FY 2014-15 at Rs. 2.680 per Kwh and Rs. 2.712 per kWh for Unit 2 and Unit 3 respectively.

Commission's analysis

6.25 As per the Generation Tariff Regulation, 2010, the energy (variable) charge shall cover primary fuel costs and shall be payable by every Beneficiary for the total energy scheduled to be supplied to such Beneficiary during the calendar month on ex-power plant basis, at the specified energy charge rate of the month (with fuel price adjustment).

6.26 The formula for calculation of energy charge and energy charge rate (ECR) payable to a Generating Company is specified in Regulation 8.17 and 8.18 of the Generation Tariff Regulation, 2010 as quoted below:

"8.17 Total Energy charge payable to the Generating Company for a month shall be: = (Energy charge rate in Rs. /kWh) x {Scheduled energy (ex-bus) for the month in kWh.}

8.18 Energy charge rate (ECR) in Rupees per kWh on ex-power plant basis shall be determined to three decimal places in accordance with the following formula:

(a) For coal based stations

ECR = (GHR – SFC x CVSF) x LPPF x 100/ {CVPF x (100 – AUX)}

Where, AUX - Normative auxiliary energy consumption in percentage

CVPF - Gross calorific value of primary fuel as fired, in KCal per kg, per litre or per standard cubic metre, as applicable.

CVSF - Calorific value of secondary fuel, in KCal per ml

ECR - Energy charge rate, in Rupees per kWh sent out.

GHR - Gross station heat rate, in KCal per kWh.

LPPF - Weighted average landed price of primary fuel, in Rupees per kg, per litre or per standard cubic metre, as applicable, during the month.

SFC - Specific fuel oil consumption, in ml per kWh".

6.27 Accordingly, the Commission has calculated the ECR to be charged by the Petitioner as per the formula stated above and considering the Heat Rate as per the Generation Tariff Regulations, 2010. The Table below details the ECR and Fuel Cost for Units 2 and 3 for truing up of FY 2014-15 as submitted by the Petitioner and as approved by the Commission.

Table 54: Approved Energy Charge Rate and Fuel Cost for Unit 2

Parameters	UoM	Approved in MYT order	Submitted by TPCL	Approved in True up
Gross Generation	MU	893.52	834.23	834.23
Heat Rate	KCal/kWh	2567	2567	2567
Specific Oil Consumption	ml/kWh	1.00	1.00	1.00
Calorific Value of Oil	KCal/l	9100	9100	9100
Landed price	Rs./Ton	2442	3333	3313
Energy Charge Rate	Rs/kWh	**1.882**	**2.680**	**2.665**

Table 55: Approved Energy Charge Rate and Fuel Cost for Unit 3

Parameters	UoM	Approved in MYT order	Submitted by TPCL	Approved in True up
Gross Generation	MU	893.52	859.67	859.67
Heat Rate	Kcal/kWh	2577	2597	2577
Specific Oil Consumption	ml/kWh	1.00	1.00	1.00
Calorific Value of Oil	Kcal/l	9100	9100	9100
Landed price	Rs./Ton	2457	3341	3318
Energy Charge Rate	Rs/kWh	**1.888**	**2.712**	**2.695**

Summary of Fuel Cost

6.28 The following table provides the summary of Fuel Cost submitted by the Petitioner and approved by the Commission for True up of FY 2014-15

Table 56: Approved Parameters for fuel cost for Unit 2 for FY 2014-15

Particulars	UoM	Approved in MYT order	Submitted by TPCL	Approved in True up
LDO Consumption	Ml/kWh	1	1	1
GCV – LDO	Kcal/Kg	9100	9100	9100
Weighted Average GCV – Middling Coal	Kcal/kWh	4156	4140	4140
Weighted Average GCV –MCL Coal	Kcal/kWh	2935	2771	2771
Weighted Average GCV –2-Product+Tailing+Reject Coal	Kcal/kWh	-	3555	3555
LDO cost	Rs Cr	5.33	5.27	5.27
Landed Price– Middling Coal	Rs/MT	2921	4373	4373
Transit loss	%	0.8%	0.8%	0.8%
Landed Price–MCL Coal	Rs/MT	1671	1892	1892
Transit loss	%	0.8%	0.8%	0.8%
Landed Price – 2 Product + Tailing + Reject Coal	Rs/MT	-	3469	3476
Transit loss	%	-	3.44%	1%
Fuel Cost	Rs Cr	**151.35**	**202.75**	**201.62**

Table 57: Approved Parameters for fuel cost for Unit 3 for FY 2014-15

Particulars	UoM	Approved in MYT order	Submitted by TPCL	Approved in True up
LDO Consumption	Ml/kWh	1	1	1
GCV – LDO	Kcal/Kg	9100	9100	9100
Weighted Average GCV – Middling Coal	Kcal/kWh	4163	4112	4112
Weighted Average GCV –MCL Coal	Kcal/kWh	2940	2776	2776
Weighted Average GCV – 2-Product+Tailing+Reject Coal	Kcal/kWh	-	3538	3538
LDO cost	Rs Cr	5.66	5.54	5.54
Landed Price– Middling Coal	Rs/MT	2921	4399	4399
Transit loss	%	0.8%	0.8%	0.8%

Particulars	UoM	Approved in MYT order	Submitted by TPCL	Approved in True up
Landed Price–MCL Coal	Rs/MT	1663	1898	1898
Transit loss	%	0.8%	0.8%	0.8%
Landed Price – 2 Product + Tailing + Reject Coal	Rs/MT	-	3467	3474
Transit loss	%	-	3.44%	1%
Fuel Cost (Rs Cr)	Rs Cr	**152.18**	**212.19**	**210.83**

Determination of Fixed Cost

Additional Capitalization

Petitioner's submission

6.29 The Petitioner in their original petition has arrived at the actual Additional Capitalization of Common Facilities using the earlier approved apportionment ratio of 56.14% for Unit 2 and Unit 3 which amounts to 1.44 Cr for each unit for FY 2014-15. The total capitalisation details submitted by the Petitioner including the additional capitalisation are shown in the following table.

Table 58: Total Capitalisation submitted by the Petitioner (Rs Cr)

Asset Class Description	Standalone Capitalisation		Apportioned for Common Facilities		Total Additional Capitalisation	
	Unit 2	Unit 3	Unit 2	Unit 3	Unit 2	Unit 3
Land	0.00	0.00	0.00	0.00	0.00	0.00
Building & Civil Engineering Works	0.08	0.08	0.96	0.96	1.04	1.04
Transformers & other Fixed Apparatus	0.20	0.10	0.00	0.00	0.20	0.10
Batteries	0.25	0.00	0.00	0.00	0.25	0.00
Plant and Machinery in Generating Stations	9.36	2.98	0.18	0.18	9.54	3.16
Switchgear, including Cable Connections	0.00	0.00	0.00	0.00	0.00	0.00
Air Conditioning Plants(Static)	0.00	0.00	0.00	0.00	0.00	0.00
Other Assets-Unclassified	2.22	0.06	0.14	0.14	2.36	0.20
Office Furniture, Furnishings &Office Equipment	0.00	0.00	0.02	0.02	0.02	0.02
Communication Equipment-Telephone Lines and Telephones	0.00	0.00	0.00	0.00	0.00	0.00
Self-Propelled Vehicles	0.00	0.00	0.14	0.14	0.14	0.14
IT Equipment's	0.28	0.28	0.00	0.00	0.28	0.28
Total	**12.39**	**3.49**	**1.44**	**1.44**	**13.83**	**4.93**

6.30 As detailed in section 5.44, the Petitioner has submitted a revised apportionment ratio of 43.84% for apportionment of additional capitalization of common facilities to Unit 2 and Unit 3.

Commission's analysis

6.31 The Commission has outlined the provisions for approval of any additional capitalization, for a generating station in Regulation 7.5 of the Generation Tariff Regulation, 2010.

Additional Capitalization

(a) *'7.5 The capital expenditure incurred or projected to be incurred, on the following counts within the original scope of work, after the date of commercial operation and up to the cut-off date may be admitted by the Commission, subject to prudence check:*

(vi) Undischarged liabilities;

(vii) Works deferred for execution;

(viii) Procurement of initial capital spares within the original scope of work, subject to the provisions under clause 7.3,7.4 of these Regulations;

(ix) Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and

(x) Change in law.

Provided that the details of works included in the original scope of work along with estimates of expenditure, undischarged liabilities and the works deferred for execution shall be submitted along with the application for determination of tariff.

(b) *'7.6 The capital expenditure incurred on the following counts after the cut-off date may, in its discretion, be admitted by the Commission, subject to prudence check:*

(v) Liabilities to meet award of arbitration or for compliance of the order or decree of a court;

(vi) Change in law;

(vii) Deferred works relating to ash pond or ash handling system in the original scope of work;

(viii) Any additional works/services which have become necessary for efficient and successful operation of the generating station, but not included in the original project cost;"

6.32 In the MYT order dated May 31, 2012 the Commission had scrutinized the information provided by the Petitioner and after due prudence check approved the capital expenditure schemes and related capital expenditure plan.

6.33 The Commission approves the additional capitalisation as shown in the following table:

Table 59: Approved Additional Capitalisation for Unit 2 (Rs Cr)

Particulars	Additional Capitalisation during FY 14-15		
Asset Class Description	Approved in MYT order	Submitted by TPCL	Approved in True up
Building & Civil Engineering Works	-	1.04	0.83
Transformers & other Fixed Apparatus		0.20	0.20
Batteries		0.25	0.25
Plant and Machinery in Generating Stations		9.54	9.50
Switchgear, including Cable Connections		0.00	0.00
Air Conditioning Plants (Static)		0.00	0.00
Other Assets - Unclassified		2.36	2.33
Office Furniture, Furnishings & Office Equipment		0.02	0.01
Communication Equipment - Telephone Lines and Telephones		0.00	0.00
Self-Propelled Vehicles		0.14	0.11
IT equipment		0.28	0.28
Total Additional Capitalisation	**3.12**	**13.83**	**13.51**

Table 60: Approved Additional Capitalisation for Unit 3 (Rs Cr)

Particulars	Additional Capitalisation during FY 14-15		
Asset Class Description	Approved in MYT order	Submitted by TPCL	Approved in True up
Building & Civil Engineering Works	-	1.04	0.83
Transformers & other Fixed Apparatus		0.10	0.10
Batteries		0.00	0.00
Plant and Machinery in Generating Stations		3.16	3.12
Switchgear, including Cable Connections		0.00	0.00
Air Conditioning Plants (Static)		0.00	0.00
Other Assets - Unclassified		0.20	0.17
Office Furniture, Furnishings & Office Equipment		0.02	0.01
Communication Equipment – Telephone Lines and Telephones		0.00	0.00
Self-Propelled Vehicles		0.14	0.11
IT equipment		0.28	0.28
Total Additional Capitalisation	**0.87**	**4.93**	**4.62**

Depreciation

Petitioner's submission

6.34 The Petitioner submitted that the depreciation on additional capitalization calculation was determined as per the depreciation rates of various classes of assets as prescribed in Appendix–I of Generation Tariff Regulations, 2010. The submission made by the Petitioner for total depreciation for Units 2 and Unit 3 has been provided in the following Table:

Table 61: Submitted Depreciation on Additional Capitalisation for Unit 2 for FY 2014-15 (Rs Cr)

Asset Class Description	Depreciation in FY 15 on Additional Capitalisation of FY 15
Depreciation on Original Capital Cost	3.59
Depreciation on Additional Capitalization	1.86
Total Depreciation	**5.45**

Table 62: Submitted Depreciation on Additional Capitalisation for Unit 2 for FY 2014-15 (Rs Cr)

Asset Class Description	Depreciation in FY 15 on Additional Capitalisation of FY 15
Depreciation on Original Capital Cost	5.34
Depreciation on Additional Capitalization	1.69
Total Depreciation	**7.03**

Commission's analysis

6.35 The Generation Tariff Regulation, 2010 have specified the following methodology for the calculation of depreciation expense for existing generating stations:

(a) Depreciation shall be allowed up to a maximum of 90% of the capital cost of the asset and the salvage value of the asset shall be considered as 10%.

(b) Depreciation shall be calculated annually as per the straight line method and at the rates specified in the Appendix-I of the said Regulations.

(c) In case of existing generating stations, during the transition period, the balance depreciable value as on April 1, 2011 shall be worked out by deducting the cumulative depreciation including AAD as admitted by the Commission up to March 31, 2011 from the gross depreciable value of the assets.

(d) The rate of depreciation shall be continued to be charged at the rate specified in Annexure-I till the cumulative depreciation reaches 70%. Thereafter, the remaining depreciable value shall be spread over the remaining life of the asset such that the maximum depreciation does not exceed 90%.

6.36 The Commission in the MYT order dated May 31, 2012 approved depreciation on original cost of power plant at Rs 6.10 Cr for Unit 2 and Rs 7.23 Cr for Unit 3. The Commission after conducting prudence check approves depreciation as shown in the following table:

Table 63: Approved Depreciation for FY 2014-15 of Unit 2 (Rs Cr)

Particulars	Approved in MYT order	Submitted by TPCL	Approved in True up
Depreciation on Original Cost of Capital	3.59	3.59	3.59
Depreciation on Additional Capitalisation	2.51	1.86	1.81
Total Depreciation	**6.10**	**5.45**	**5.40**

Table 64: Approved Depreciation for FY 2014-15 of Unit 3 (Rs Cr)

Particulars	Approved in MYT order	Submitted by TPCL	Approved in True up
Depreciation on Original Cost of Capital	5.34	5.34	5.34
Depreciation on Additional Capitalisation	1.89	1.69	1.64
Total Depreciation	**7.23**	**7.03**	**6.98**

Operation & Maintenance Expenses

Petitioner's submission

6.37 The Petitioner has submitted O&M Expenses for FY 2014-15 at Rs 34.04 Cr for Unit 2 and at Rs 27.44 Cr for Unit 3.

6.38 The basis of allocation as submitted by the Petitioner is shown below:

(a) Ash Disposal Expenses: The petitioner submitted that Ash Disposal Expenses form a major part of the O&M expenses and the same has increased in FY 2014-15 on account of the following factors:

i. Increase in ash generation due to increase in PLF – The increased generation has led to increased cost of removal, transportation and disposal.

ii. Compliance with statutory directives – Compliance with directives of JSPCB and MoEF has also led to increase costs of ash disposal.

The Petitioner has also submitted that Tata Power has put efforts to reduce the expenses by employing achievable means. Tata Power has switched from distance based to rate base contracts, which has helped to contain Ash Disposal cost to a considerable extent. The Petitioner has also mentioned that they had taken efforts to reduce the differential Railway Freight Charges with better deliberation and negotiation which further helped in containing the costs further.

The Petitioner has requested the Hon'ble Commission to approve the actual ash disposal expenses of FY 2014-15.

(b) Head office expenses – The expenses incurred due to outsourcing by the operational division such as Jojobera Unit 2 and Unit 3 to the corporate functions of Tata Power based in Mumbai and Noida. The basis of allocation of HO expenses to any Unit of Tata Power is as per the given methodology

*iii. Allocation of Head Office and management expenses = Head office and management expenses allocable to cost of generation*Generation expenses of Unit/Total generation expenses (excluding cost of power purchase, depreciation, borrowing costs, exchange loss/gain, non-recurring onetime expenses, fuel (including related exchange loss/gain),etc.).*

iv. Head office and Management expenses allocable to cost of generation = Head office and management expenses Total generation expenses (excluding cost of power purchase, depreciation, borrowing costs, exchange loss/gain, non-recurring onetime expenses, fuel (including related exchange loss/gain), etc.)/{Total generation expenses(excluding cost of power purchase, depreciation, borrowing costs, exchange loss/gain, non-recurring onetime expenses, fuel(including related exchange loss/gain),etc.) + Total distribution, transmission expenses and expenses related to other business (excluding wheeling/transmission charges, depreciation, exchange loss/gain and borrowing costs, components consumed, non-recurring one-time expenses, etc.)}*

(c) Raw water expenses – The Raw water expenses have been computed in line with the order of the Hon'ble Commission dated 21st November 2012 on Review petition filed by Tata Power (Case No. 12 of 2012) wherein the Hon'ble Commission had provisionally approved the Raw water charges for Units 2 and 3 considering the apportionment methodology based on the actual generation of each units of Jojobera power plant to truing up at actual at the end of each financial year.

(d) Application fees and Publication expenses – The Petitioner has submitted the actual expenses incurred towards the ARR application fees and publication expenses during FY 2014-15 and has therefore considered the same for truing up for FY 2014-15 for Unit 2 and Unit 3.

6.39 Using the above methodology the Petitioner has submitted the details as shown on the table below.

Table 65: Summary of O&M Expenses submitted by the Petitioner (Rs Cr)

Particulars	Unit 2	Unit 3
O&M Expenses		
Employee Cost	**6.32**	**6.32**
Employee Expenses without Terminal Liabilities	5.48	5.48
Terminal Liabilities	0.84	0.84
R&M Expenses	**12.10**	**7.54**
A& G Expenses	**15.62**	**13.58**
Ash Disposal Expenses	4.74	4.92
Raw Water Expenses	1.43	1.45
Other A&G Expenses (including HO Expenses)	9.21	6.96
Application Fees & Publication Expenses	0.24	0.24
Total O&M Expenses	**34.04**	**27.44**

Commission's analysis

6.40 The Commission while approving the O&M expenses for FY 2014-15 has followed the procedure specified in the JSERC Generation Tariff Regulations, 2010 and has approved the O&M expenses as per the details provided in True up of FY 2013-14 and as submitted by the Petitioner

Table 66: O&M expenses of Unit 2 approved for True Up for FY 2014-15 (Rs Cr)

Particulars	Unit 2		
	As per MYT Order	Submitted by TPCL	Approved by JSERC
Employee Cost	**6.32**	**6.32**	**6.32**
Employee Expenses without Terminal Liabilities	5.48	5.48	5.48
Terminal Liabilities	0.84	0.84	0.84
R&M Expenses	**12.10**	**12.10**	**12.10**
A&G Expenses	**10.81**	**15.62**	**12.50**
Ash Disposal Expenses	2.93	4.74	4.74
Raw Water Expenses	1.60	1.43	1.43
Other A&G Expenses (including HO Expenses)	6.09	9.21	6.09

Particulars	Unit 2		
	As per MYT Order	Submitted by TPCL	Approved by JSERC
Application Fees & Publication Expenses	0.19	0.24	0.24
Total O&M Expenses	**29.23**	**34.04**	**30.92**

Table 67: O&M expenses of Unit 3 approved for True Up for FY 2014-15 (Rs Cr)

Particulars	Unit 3		
	As per MYT Order	Submitted by TPCL	Approved by JSERC
Employee Cost	**6.32**	**6.32**	**6.32**
Employee Expenses without Terminal Liabilities	5.48	5.48	5.48
Terminal Liabilities	0.84	0.84	0.84
R&M Expenses	**7.54**	**7.54**	**7.54**
A& G Expenses	**10.23**	**13.57**	**12.01**
Ash Disposal Expenses	3.03	4.92	4.92
Raw Water Expenses	1.61	1.45	1.45
Other A&G Expenses (including HO Expenses)	5.40	6.96	5.40
Application Fees & Publication Expenses	0.19	0.24	0.24
Total O&M Expenses	**24.09**	**27.44**	**25.87**

Return on Equity (RoE)

Petitioner's submission

6.41 The Petitioner has submitted the RoE at 15.50% which is same as that approved by the Commission in the MYT order dated May 31, 2012. The details are shown in the table below.

Table 68: Approved Return on Equity submitted by the Petitioner (Rs Cr)

Particulars	Unit 2	Unit 3
Computation of Regulatory Equity		
Opening GFA (Original Project Cost)	460.53	448.74
Opening Equity	138.16	134.62
Additional Capitalization during FY14	13.83	4.94
Additions (Additional Equity of FY14)	4.15	1.48
Closing Equity	142.31	136.10
Computation of Return on Equity		
Rate of Return on Equity Component of Original Capital Cost (%)	15.50%	15.50%

Particulars	Unit 2	Unit 3
Rate of Return on Equity Component of Additional Capitalization (%) after 1st April 2012	15.50%	15.50%
Return on Equity Component of Original Capital Cost (Post-Tax)	21.41	20.87
Return on Equity Component of Additional Capitalization (Post-Tax)	0.32	0.11
Total Return on Equity (Post-Tax)	21.74	20.98
Applicable Tax MAT	MAT	MAT
Applicable Tax Rate	20.96%	20.96%
Total Return on Equity (Pre-Tax) for FY 2012-13	**27.50**	**26.54**

Commission's analysis

6.42 The Commission has worked out the gross normative equity for FY 2014-15 as per Regulation 7.13 and 7.14 of the Generation Tariff Regulation, 2010. The Commission has considered the return on equity at 15.50% which after grossing up with the MAT rate applicable for the year comes out to 20.96% for FY 2013-14.

6.43 Accordingly the Commission approves the return of equity for FY 2014-15 and the calculation of the same is shown in the table below.

Table 69: Return on Equity approved for Unit 2 (Rs Cr)

Particulars	Approved in MYT order	Submitted by TPCL	Approved by JSERC
Opening Equity for the year	142.99	138.16	138.16
Additions during FY 2013-14	0.94	4.15	4.05
Closing Equity	143.93	142.31	142.21
Rate of Return on Equity Component on Opening GFA	15.50%	15.50%	15.50%
Rate of Return on Equity Component of Additional Capitalization	15.50%	15.50%	15.50%
Tax Rate	20.01%	20.96%	20.96%
Rate of Return on Equity Component of Original Cost	22.16	21.41	21.41
Rate of Return on Equity Component of Additional Capitalization	0.07	0.32	0.31
Return on Equity (Post Tax)	22.24	21.74	21.73
MAT Rate	20.01%	20.96%	20.96%
Return on Equity (Pre Tax)	**27.80**	**27.50**	**27.49**

Table 70 Approved Return on Equity for Unit 3 (Rs Cr)

Particulars	Approved in MYT order	Submitted by TPCL	Approved by JSERC
Opening Equity for the year	135.91	134.62	134.62
Additions during FY 2013-14	0.26	1.48	1.39
Closing Equity	136.17	136.10	136.00
Rate of Return on Equity Component on Opening GFA	15.50%	15.50%	15.50%
Rate of Return on Equity Component of Additional Capitalization	15.50%	15.50%	15.50%
Tax Rate	20.01%	20.96%	20.96%
Rate of Return on Equity Component of Original Cost	21.07	20.87	20.87
Rate of Return on Equity Component of Additional Capitalization	0.04	0.11	0.11
Return on Equity (Post Tax)	21.11	20.98	20.97
MAT Rate	20.01%	20.96%	20.96%
Return on Equity (Pre Tax)	**26.36**	**26.54**	**26.53**

Interest on Loan

Petitioner's submission

6.44 The Petitioner has considered rate of interest of loan at 13.02% for Unit 2 and 12.33% for Unit 3 which is equal to the rate of interest approved by the Commission in the order dated May 31, 2012 as shown in the table below

Table 71: Interest on Loan of Unit 2 and Unit 3 submitted by the Petitioner for FY 2014-15 (Rs Cr)

Particulars	Unit 2	Unit 3
Loan Balance Movement		
Opening GFA (Original Project Cost)	460.53	448.73
Opening Loan Balance on above (=70%ofGFA)	18.24	19.57
Additional Capitalization during FY14	13.83	4.93
Loan Balance (on Additional Capitalization for FY14)	9.68	3.45
Deemed Repayment (=Depreciation)	1.86	1.69
Closing Loan Balance	26.06	21.33
Average Loan Balance during the year	22.15	20.45
Computation of Interest on Loan		
Rate Of Interest (%)	13.02%	12.33%
Interest on Loan for FY 2014-15	**2.88**	**2.52**

Commission's analysis

6.45 The Commission has worked out gross normative loan for FY 2014-15 as per Regulation 7.13 and 7.14 of the Generation Tariff Regulation, 2010

> *"7.13 In case of the generating station declared under commercial operation prior to 1.4.2011, debt-equity ratio allowed by the Commission for determination of Tariff for the period ending 31.3.2011 shall be considered for determination of tariff for the Transition period.*
>
> *7.14 For the project declared under commercial operation on or after 1.04.2011, if the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:*
>
> *Explanation: - Any expenditure incurred or projected to be incurred on or after 1.04.2011 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernization expenditure for life extension shall be serviced in the manner specified in clause 7.14 of this Regulation."*

6.46 The rate of interest on the approved normative debt has been worked out for Unit 2 and Unit 3 as 13.02% and 12.33% respectively and accordingly the Commission approves the interest on loan amount at Rs 2.87 Cr for Unit 2 and Rs 2.51 Cr for Unit 3 respectively.

Cost of Secondary Fuel

Petitioner's submission

6.47 The Petitioner submitted that cost of secondary fuel at Rs 5.27 Cr and Rs 5.54 Cr for Unit 2 and Unit 3 respectively.

Commission's analysis

6.48 The Commission has approved the cost of secondary fuel oil (LDO in case of the Petitioner) in accordance with Regulation 7.49 of the Generation Tariff Regulations, 2010 as quoted below:

> *"7.49 Expenses on secondary fuel oil in Rupees shall be computed corresponding to normative secondary fuel oil consumption (SFC) specified in clause 8.4, 8.6 of these Regulations, in accordance with the following formula:*
>
> $$= SFC \times LPSFi \times NAPAF \times 24 \times NDY \times IC \times 10$$
>
> *Where,*
>
> *SFC – Normative Specific Fuel Oil consumption in ml/kWh*

LPSFi – Weighted Average Landed Price of Secondary Fuel in Rs./ml considered initially
NAPAF – Normative Annual Plant Availability Factor in percentage
NDY – Number of days in a year
IC - Installed Capacity in MW

7.50 Initially, the landed cost incurred by the Generating Company on secondary fuel oil shall be taken based on actuals of the weighted average price of the three preceding months and in the absence of landed costs for the three preceding months, latest procurement price for the generating station, before the start of the year."

6.49 As per the Generation Tariff Regulations 2010, the consumption of LDO has been calculated considering the gross generation corresponding to the NAPAF (i.e. 85%) and Specific Normative Fuel Oil Consumption (i.e. 1 ml/kWh). The landed price of LDO has been computed considering the weighted average cost of LDO from April 2013 to March 2014. Accordingly the Commission approves the LDO cost at Rs 5.27 Cr and Rs 5.54 Cr for Unit 2 and Unit 3 respectively.

Interest on Working Capital

Petitioner's submission

6.50 The Petitioner for computing the working capital and interest thereon as per the Generation Tariff Regulations, 2010 has considered the working capital as the sum of the following:

(a) Cost of Coal for two months for generation corresponding to the Normative Annual Plant Availability Factor;

(b) Cost of secondary fuel oil for two months for generation corresponding to the Normative Annual Plant Availability Factor;

(c) Maintenance spares @ 20% of operation and maintenance expenses;

(d) Operation and Maintenance expenses for 1 month; and

(e) Receivables equivalent to two months of capacity charges and energy charges for sale of electricity calculated on the Normative Annual Plant Availability Factor.

6.51 The rate of interest for calculating the interest on working capital is taken at the prevalent SBI PLR rate of 2012 i.e. @ 14.75%The details are shown in the table below:

Table 72: Interest on Working Capital for FY 2014-15 of Unit 2 and Unit 3 submitted by the Petitioner (Rs Cr)

Particulars	Unit 2	Unit 3
Computation of Cost Elements at Normative Availability		
Ex-Bus Generation at Normative Availability & Aux Power (i) (MUs)	804.17	804.17
Approved Rate of Energy Charges for FY 2014-15 (ii) (Rs/Kwh)	2.680	2.712
Coal Cost at Normative Availability [=(i)x(ii)]	215.52	218.12
LDO Cost at Normative Availability	5.46	5.59
Annual Fixed Charges (excluding Incentive) at Normative Availability	89.50	83.13
O&M Expenses	34.04	27.44
Maintenance Spares	6.81	5.49
Elements of Working Capital		
Working Capital as Coal Cost for 2 months	35.92	36.35
Working Capital as LDO Cost for 2 months	0.91	0.93
Working Capital as Receivables for 2 months	50.84	50.12
Working Capital as O&M Expenses for 1 month	2.84	2.29
Working Capital as Maintenance Spares (at 20% of O&M Expenses)	6.81	5.49
Total Working Capital	97.31	95.27
Computation of Interest on Working Capital		
SBI PLR as on 1st April 2012 (%)	14.75%	14.75%
Interest on working Capital	**14.35**	**14.05**

Commission's analysis

6.52 The working capital requirement for the Petitioner has been determined by considering the following components as per Regulation 7.34 of the Generation Tariff Regulation, 2010:

(a) Cost of Coal for two months for generation corresponding to the Normative Annual Plant Availability Factor;

(b) Cost of secondary fuel oil for two months for generation corresponding to the Normative Annual Plant Availability Factor;

(c) Maintenance spares @ 20% of operation and maintenance expenses;

(d) Operation and Maintenance expenses for 1 month; and

(e) Receivables equivalent to two months of capacity charges and energy charges for sale of electricity calculated on the Normative Annual Plant Availability Factor.

6.53 Further Regulation 7.37 states that for calculation of working capital no fuel price escalation shall be provided during the tariff period.

"7.37 The cost of fuel in cases covered under clause 7.34 and 7.35 of these Regulations shall be based on the landed cost incurred (taking into account normative transit and handling losses) by the Generating Company and gross calorific value of the fuel as per actual for the three months preceding the first month for which tariff is to be determined and no fuel price escalation shall be provided during the tariff period."

6.54 The rate of interest on working capital has been taken as per the prevailing short-term Prime Lending Rate of State Bank of India i.e 14.75%.

6.55 Accordingly, the Commission has trued up the interest on working capital for Unit 2 and Unit 3 for FY 2014-15 as shown in the tables below.

Table 73: Interest on Working Capital approved by the Commission for FY 2014-15 (Rs Cr)

Particulars	Approved in MYT order		Submitted by TPCL		Approved in True up	
	Unit 2	Unit 3	Unit 2	Unit 3	Unit 2	Unit 3
Coal Cost for 2 months	25.22	25.30	35.92	36.35	33.60	35.14
LDO Cost for 2 months	0.89	0.94	0.91	0.93	0.88	0.92
Receivables for 2 months	39.06	38.12	50.84	50.21	47.83	48.64
O&M Expenses for 1 month	2.44	2.01	2.84	2.29	2.58	2.16
Maintenance Spares (@ 20% of O&M Expenses)	5.85	4.82	6.81	5.49	6.18	5.17
Total Working Capital	73.46	71.18	97.31	95.27	91.08	92.03
Rate of Interest	14.75%	14.75%	14.75%	14.75%	14.75%	14.75%
Interest on Working Capital	10.83	10.50	14.35	14.05	13.43	13.57

Summary of Fixed Cost Determinants and Generation Tariff

6.56 Regulation 8.2 of the Generation Tariff Regulations, 2010 states that the annual fixed cost of a thermal generating station shall consist of the following

(a) Return on Equity;

(b) Interest and Financing Charges on Loan Capital;

(c) Depreciation;

(d) Operation and Maintenance Expenses;

(e) Interest Charges on Working Capital; and

(f) Cost of Secondary Fuel Oil.

6.57 The following tables show the fixed cost components and energy cost for FY 2014-15, in terms of the Petitioner's submission and the Commission's trued up costs for Unit 2 and Unit 3.

Table 74: Summary of Annual Fixed Cost and Generation Tariff for Unit 2 for FY 2014-15

Parameters	Units	Unit 2		
		Approved in MYT order	Submitted by TPCL	Approved in True up
O&M charges	Rs Cr	29.23	34.04	30.92
Depreciation	Rs Cr	6.10	5.45	5.40
Interest on Loan	Rs Cr	3.74	2.88	2.87
Return on Equity	Rs Cr	27.80	27.50	27.49
Cost of Secondary Fuel	Rs Cr	5.33	5.27	5.27
Interest on Working Capital	Rs Cr	10.83	14.35	13.43
Annual Fixed Charges	Rs Cr	**83.04**	**89.50**	**85.38**
Energy Charge Rate (ECR)	Rs/kWh	1.882	2.680	2.665
Fuel Cost	Rs Cr	**151.34**	**202.75**	**201.62**
Total Cost	Rs Cr	**234.38**	**292.25**	**287.01**

Table 75: Summary of Annual Fixed Cost and Generation Tariff for Unit 3 for FY 2014-15

Parameters	Units	Unit 3		
		Approved in MYT order	Submitted by TPCL	Approved in True up
O&M charges	Rs Cr	24.09	27.44	25.87
Depreciation	Rs Cr	7.23	7.03	6.98
Interest on Loan	Rs Cr	2.66	2.52	2.51
Return on Equity	Rs Cr	26.36	26.54	26.53
Cost of Secondary Fuel	Rs Cr	5.66	5.54	5.54
Interest on Working Capital	Rs Cr	10.50	14.05	13.57
Annual Fixed Charges	Rs Cr	**76.53**	**83.13**	**81.01**
Energy Charge Rate (ECR)	Rs/kWh	1.888	2.712	2.695
Fuel Cost	Rs Cr	**151.83**	**212.19**	**210.83**
Total Cost	Rs Cr	**228.32**	**295.32**	**291.84**

Incentive

Petitioner's submission

6.58 The Petitioner based on the provisions of Generation Tariff Regulations, 2010 computed Incentive for Truing-up of FY 2014-15 which works out to Rs 11.51 Cr for Unit 2 and Rs 18.05 Cr for Unit 3. The detailed computation of pre-tax Incentive is shown in the following Tables:

Table 76: Incentive submitted by the Petitioner for FY 2014-15 for Unit 2 and Unit 3

Particulars	UoM	FY 2014-15	
		Unit 2	Unit 3
Actual Plant Availability	%	93.64	99.59
Normative Plant Availability	%	85.00	85.00
Annual Fixed Charges without Incentive	Rs Cr	89.50	8313
Annual Fixed Charges with Incentive	Rs Cr	98.60	97.40
Computation of Incentive			
Incentive(Post-Tax)	Rs Cr	9.10	14.27
MAT Rate	%	20.96%	20.96%
Incentive(Pre-Tax) for FY 2014-15	Rs Cr	11.51	18.05

Commission's analysis

6.59 As per Regulation 8.12 of Generation Tariff Regulations, 2010,

> *"8.12 The capacity charge (inclusive of incentive) payable to a thermal generating station for a calendar month shall be calculated in accordance with the following formulae :*
>
> *(a) Generating stations in commercial operation for less than ten (10) years on 1st April of the financial year:*
>
> *= (AFC x (NDM / NDY) x (0.5 + 0.5 x PAFM / NAPAF) (in Rupees) ;*
>
> *Provided that in case the plant availability factor achieved during a financial year (PAFY) is less than 70%, the total capacity charge for the year shall be restricted to: =AFC x (0.5 + 35 / NAPAF) x (PAFY / 70) (in Rupees)*
>
> *(b) For generating stations in commercial operation for ten (10) years or more on 1st April of the year:*
>
> *= (AFC x NDM / NDY) x (PAFM / NAPAF) (in Rupees)*
>
> *Where, AFC - Annual fixed cost specified for the year, in Rupees;*

NAPAF - Normative annual plant availability factor in percentage;

NDM - Number of days in the month;

NDY - Number of days in the year;

PAFM - Plant availability factor achieved during the month, in percent;

PAFY - Plant availability factor achieved during the year, in percent"

6.60 Accordingly the Commission has calculated the incentives after due verification of SLDC certified availability. The Commission hereby approves the incentives at Rs. 10.98 Cr for Unit 2 and Rs. 17.59 Cr for Unit 3.

Tax Liability on gain on secondary fuel oil consumption

Petitioner's submission

6.61 The Petitioner submitted that the tax liability to be borne by the Petitioner on such gains on account of lower LDO Consumption is recoverable from the beneficiaries at Rs 0.83 Cr for Unit 2 and 1.02 Cr for Unit 3 respectively.

Commission's Analysis

6.62 Regulation 7.48 of the Generation Tariff Regulations, 2010 specifies:

"7.48 Tax on the income streams of the Generating Company shall not be recovered from the Beneficiaries.

Provided that the deferred tax liability, excluding Fringe Benefit Tax, for the period up to 31st March, 2011 whenever it materializes, shall be recoverable directly from the beneficiaries and the long-term customers;

Provided further that any tax liability on incentives and savings due to improved performance on any parameter, if any, shall be considered for passing onto the Beneficiaries in the ratio of the sharing of the gains as prescribed under these Regulations."

6.63 The Commission approves the tax liabilities on gains on LDO consumption as per the aforementioned Regulations. The following table shows the tax liability submitted by the Petitioner and as approved by the Commission.

Table 77: Computation of Tax liability on gains on LDO consumption of Unit 2 for FY 2014-15 (Rs Cr)

Particulars	Unit 2	
	Submitted by the Petitioner	Approved by the Commission
Normative Gross generation	893.52	893.52
Actual gross generation	834.23	834.23
Normative sp. LDO Consumption	1.00	1.00
LDO Consumption at Normative Plant Availability	893.52	893.52
Actual LDO Consumption for the year	336.00	336.00
Equivalent actual LDO Consumption at normative generation	359.88	359.88
Difference in LDO Consumption	533.64	533.64
LDO Landed Price	58956	58956
Gain/Loss on LDO Consumption(post Tax)	3.15	3.15
MAT rate	20.96%	20.96%
Retained by TPCL	3.98	3.98
Passed on to Consumers	-	-
Tax liability to be recovered from Consumers	0.83	0.83

Table 78: Computation of Sharing of gains on LDO consumption of Unit 3 for FY 2014-15 (Rs Cr)

Particulars	Unit 3	
	Submitted by the Petitioner	Approved by the Commission
Normative Gross generation	893.52	893.52
Actual gross generation	859.67	859.67
Normative sp. LDO Consumption	1.00	1.00
LDO Consumption at Normative Plant Availability	893.52	893.52
Actual LDO Consumption for the year	263.50	263.50
Equivalent actual LDO Consumption at normative generation	273.88	273.88
Difference in LDO Consumption	619.64	619.64
LDO Landed Price	62054	62054
Gain/Loss on LDO Consumption(post Tax)	3.85	3.85
MAT rate	20.96%	20.96%
Retained by TPCL	4.86	4.86
Passed on to Consumers	-	-
Tax liability to be recovered from Consumers	1.02	1.02

Tax Liability on gain in Auxiliary Consumption

Petitioner's submission

6.64 The Petitioner submitted that the tax liability to be borne on the gain on account of lower auxiliary power consumption is recoverable from the beneficiaries as per Regulation 7.48 of the Generation Tariff Regulations, 2010. The Petitioner calculated the tax liability on gain on auxiliary consumption at Rs 0.41 Cr for Unit 2 and Rs 0.62 Cr for Unit 3 for FY 2014-15.

6.65 The detailed computation on Tax liability on Gain on Auxiliary Power Consumption as submitted by the Petitioner is shown in the following Table:

Table 79: Tax Liability on Gain in Auxiliary Power Consumption submitted by the Petitioner for FY 2014-15

Particulars	UoM	Unit 2	Unit 3
Energy Charges	Rs Cr	202.75	212.19
Net Gain due to lower Auxiliary Power Consumption	Rs Cr	1.54	2.33
MAT Rate	%	20.96%	20.96%
Tax Liability due to Gain in Auxiliary Consumption	**Rs Cr**	**0.41**	**0.62**

Commission's analysis

6.66 As per Regulation 7.48 of the Generation Tariff Regulations, 2010:

> *"7.48 Tax on the income streams of the Generating Company shall not be recovered from the Beneficiaries.*
>
> *Provided that the deferred tax liability, excluding Fringe Benefit Tax, for the period up to 31st March, 2011 whenever it materializes, shall be recoverable directly from the beneficiaries and the long-term customers;*
>
> *Provided further that any tax liability on incentives and savings due to improved performance on any parameter, if any, shall be considered for passing onto the Beneficiaries in the ratio of the sharing of the gains as prescribed under these Regulations."*

6.67 The Commission calculated the tax on the gain in auxiliary consumption of the Petitioner and accordingly approves the tax on auxiliary consumption for Unit-2 at Rs 0.40 Cr and Unit-3 at Rs 0.62 Cr.

Tax Liability on gain in Heat Rate

Petitioner's submission

6.68 The Petitioner submitted that the tax liability to be borne on the gain on account of lower heat rate is recoverable from the beneficiaries as per Regulation 7.48 of the Generation Tariff Regulations, 2010. The Petitioner calculated the tax liability on gain on het rate at Rs 0.10 Cr for Unit 2 and Rs 0.27 Cr for Unit 3 for FY 2014-15.

6.69 The detailed computation on Tax liability on Gain on Heat Rate as submitted by the Petitioner is shown in the following Table:

Table 80: Tax Liability on Gain in Heat Rate submitted by the Petitioner for FY 2014-15

Particulars	UoM	Unit 2	Unit 3
Normative Station Heat Rate	kCal/kWh	2567.00	2577.00
Actual Station Heat Rate	kCal/kWh	2562.00	2565.00
Difference in to actual consumption	kCal/kWh	5.00	12.00
Gross Generation	MUs	834.23	859.67
Heat Energy saved	kCal	3867.70	10656.16
GCV of Coal (kCal/Kg)	kCal/kg	3533	3513
Amount of coal saved (Ton)	Ton	1094.24	3032.30
Landed Price of coal	Rs/Ton	3333	3341
Gain on account of Normative Heat rate	Rs Cr	0.36	1.01
Tax Rate		20.96%	20.96%
Pre-Tax Gain	Rs Cr	0.46	1.28
Tax liability due to Gain on Heat Rate	Rs Cr	0.10	0.27

Commission's analysis

6.70 As per Regulation 7.48 of the Generation Tariff Regulations, 2010:

> *"7.48 Tax on the income streams of the Generating Company shall not be recovered from the Beneficiaries.*
>
> *Provided that the deferred tax liability, excluding Fringe Benefit Tax, for the period up to 31st March, 2011 whenever it materializes, shall be recoverable directly from the beneficiaries and the long-term customers;*
>
> *Provided further that any tax liability on incentives and savings due to improved performance on any parameter, if any, shall be considered for passing onto the Beneficiaries in the ratio of the sharing of the gains as prescribed under these Regulations."*

6.71 The Commission calculated the tax on the gain in heat rate of the Petitioner and accordingly approves the tax on auxiliary consumption for Unit-2 at Rs 0.10 Cr and Unit-3 at Rs 0.26 Cr.

Total cost

6.72 The tables below show the total cost recoverable by the Petitioner for Unit 2 and Unit 3 inclusive of incentive and sharing of gains on operational parameters.

Table 81: Cost recoverable by Petitioner for Unit 2 for FY 2014-15

Parameters	Units	Unit 2		
		Approved in MYT order	Submitted by TPCL	Approved in True up
Annual Fixed Charges	Rs Cr	83.04	89.50	85.38
Fuel Cost	Rs Cr	151.34	202.75	201.62
Total Cost	Rs Cr	234.38	292.25	287.01
Incentive	Rs Cr	-	11.51	10.98
Less: Sharing of Gains on LDO		-	-	-
Add: Tax on the Gain on LDO Consumption retained by Tata Power	Rs Cr	-	0.83	0.83
Add: tax on Gain on aux. power consumption	Rs Cr	-	0.41	0.40
Add: tax on Gain on Heat Rate	Rs Cr	-	0.10	0.10
Total Cost including incentive & sharing of gains on LDO consumption	**Rs Cr**	**234.38**	**305.10**	**299.33**

Table 82: Cost recoverable by Petitioner for Unit 3 for FY 2014-15

Parameters	Units	Unit 3		
		Approved in MYT order	Submitted by TPCL	Approved in True up
Annual Fixed Charges	Rs Cr	76.49	83.13	81.01
Fuel Cost	Rs Cr	151.83	212.19	210.83
Total Cost	Rs Cr	228.32	295.28	291.84
Incentive	Rs Cr	-	18.06	17.59
Less: Sharing of Gains on LDO		-	-	-
Add: Tax on the Gain on LDO Consumption retained by Tata Power	Rs Cr	-	1.02	1.02
Add: Tax on Gain on aux. power consumption	Rs Cr	-	0.62	0.62

Parameters	Units	Unit 3		
		Approved in MYT order	Submitted by TPCL	Approved in True up
Add: Tax on Gain on Heat Rate	Rs Cr	-	0.27	0.26
Total Cost including incentive & sharing of gains on LDO consumption	**Rs Cr**	**228.32**	**315.28**	**311.34**

Gap/Surplus for FY 2014-15

6.73 The Commission has calculated the gap taking into account the carrying cost for the period from mid FY 2014-15 upto end of FY 2015-16 and accordingly approved revenue gap/surplus for FY 2014-15 in table below. **In accordance with Regulations 6.18 of 'Generation Tariff Regulations, 2010' the Petitioner shall recover the gap in six equal monthly instalments from the beneficiary starting within three months from the date of this tariff order issued by the Commission.**

Table 83: Gap/Surplus for FY 2014-15 of Unit-2

Particulars	Approved in MYT order	Submitted by TPCL	Approved in True up
Total Cost including incentive & sharing of gains on LDO consumption for FY 2014-15	234.38	305.10	299.33
Revenue Recovered during the year FY 2014-15	-	295.27	295.27
Gap/(Surplus) for the year FY 2014-15	234.38	9.83	4.06
Carrying Cost on current year gap/(Surplus)	-	2.18	0.90
Total gap for FY 2014-15 C/f		12.01	4.96
Net Gap to be recovered/adjusted	**-**	**12.01**	**4.96**

Table 84: Gap/Surplus for FY 2014-15 of Unit-3

Particulars	Approved in MYT order	Submitted by TPCL	Approved in True up
Total Cost including incentive & sharing of gains on LDO consumption for FY 2014-15	228.32	315.28	311.34
Revenue Recovered during the year FY 2014-15	-	303.52	303.52
Gap/(Surplus) for the year FY 2014-15	228.32	11.76	7.82
Carrying Cost on current year gap/(Surplus)	-	2.60	1.73
Total gap for FY 2014-15 C/f	-	14.36	9.55
Net Gap to be recovered/adjusted	**-**	**14.36**	**9.55**

A7: ANNUAL PERFORMANCE REVIEW FOR FY 2015-16

Petitioner's submission

7.1 In its petition the Petitioner has requested for the Review of Operational Performance of FY 2015-16 based on the actual performance from April 2015 to October 2015 and estimated performance for the period from November 2015 to March 2016.

Commission's analysis

7.2 As per Regulation 15 of the Generation Tariff Regulations, 2010 (as quoted below) the Commission is required to carry out periodic reviews of performance of a generation company during the control period.

"Review during Control period
15.1 To ensure smooth implementation of the Multi Year Tariff (MYT) framework, the Commission may undertake periodic reviews of Generating Company's performance during the Control Period, to address any practical issues, concerns or unexpected outcomes that may arise.

15.2 The Generating Company shall submit information as part of annual performance review on actual performance to assess the performance vis-à-vis the targets approved by the Commission at the beginning of the Control Period. This shall include annual statements of its performance and accounts including latest available accounting statements, norms achieved and the tariff worked out in accordance with these Regulations.

15.3 The Commission may also direct any modifications to the forecast of the Generating Company for the remainder of the Control Period, with detailed reasons for the same."

7.3 The Petitioner submitted the actual operational data for the period April 2015 to October 2015 and has estimated the performance for the period from November 2015 to March 2016; however, audited statements for FY 2015-16 for Tata Power and other requisite certifications of the Statutory Auditors, etc. are not available with the Commission for truing up for FY 2015-16.

7.4 Since FY 2015-16 is already over, the Commission does not find it prudent to revise the tariff for the year at this stage. Hence, the Commission directs the Petitioner to submit a petition for truing up of FY 2015-16.

A8: STATUS OF EARLIER DIRECTIVES

Directives as per APR Order dated May 31, 2015	Status	Views of the Commission
Auditor's certificate for additional capitalization With regards to the Additional Capitalization for FY 2013-14, the Petitioner is directed to get the Certificate of Completion and the listing of the Fixed Assets Register, certified by the Statutory Auditors of the Company and submit the same to the Commission with the next tariff petition	As directed by the Hon'ble Commission, the Certificates of completion of the assets pertaining to Additional Capitalization and the listing of the Fixed Asset Register for FY 2013-14 certified by the Statutory Auditors of the Company have been provided as Annexure 6 through the instant petition.	The Commission notes compliance of this directive
Competitive Procurement The Commission directs the Petitioner to submit the details of procurement process followed for each year of the Control Period.	As per the directive of the Hon'ble Commission, the detail of the competitive bidding of the approved schemes in the MYT order, for which the competitive bidding have been completed, have been provided as Annexure 32 of the instant petition.	The Commission notes compliance of this directive
Landed Cost of Coal The Commission directs the Petitioner to get the month-wise landed cost of coal separately showing Base cost of coal; Royalty; Taxes and duties; Transport cost by rail / ocean / road / pipeline or any other means; and Clean energy cess as per Ministry of Coal, Govt. of India Notification with respect to Unit 2 and Unit 3 certified by the Statutory Auditor of the Company and submit the same along with the petition for truing up of ARR for FY 2013-14.	Tata power has provided the Landed Price of Coal for FY 2013-14 duly certified by the Statutory Auditors of the Company as Annexure 4 of the instant petition.	The submission in Annexure 4 only provides the landed cost. The breakup of landed cost of coal was not submitted along with the petition and was submitted later as part of the response to the discrepancy note raised by the Commission. The Commission directs the Petitioner to submit the requisite certificates of breakup of landed cost for true up of subsequent years along with the instant petition.

Directives as per APR Order dated May 31, 2015	Status	Views of the Commission
Data adequacy in next Tariff petition and timelines The Commission directs the Petitioner to remove data deficiencies highlighted throughout the tariff order and submit the same at the time of next Petition along with the unit-wise audited accounts for FY 2013-14 and latest actual figures of FY 2014-15. True up petitions should be accompanied by unit wise audited accounts along with all schedules and allocation statements.	In compliance with the Directive of this Hon'ble Commission, Tata Power humbly submits that the Truing up of FY 2013-14 and FY 2014-15 have been conducted in view of the Audited Accounts. Further, Tata Power has also submitted the unit-wise Audited Accounts as Annexure 10 and Annexure 21 of the instant petition for the kind perusal of the Hon'ble Commission.	The Commission notes compliance of this directive
Additional details for additional capitalization plans The Commission directs the Petitioner to furnish details related to cost benefit analysis, the details related to the savings in the operating norms due to improvement in availability, auxiliary consumption, heat rates, secondary fuel consumption, etc. which shall benefit the consumers, certificates from Board of Directors, justification for emergency works, for provisionally approved schemes in this order and also while submitting revised or new additional capitalisation plans.	Tata Power humbly submits that the Capital Expenditure Schemes approved by this Hon'ble Commission through the APR order FY 2013-14 are mostly related to Safety and Security of the Plant, technological Up-gradation & Obsolescence. Such schemes have been envisaged for successful and reliable operation of the Units and would therefore reflect intangible benefits for the Beneficiaries and may not be accurately quantifiable. The Hon'ble Commission may therefore consider the Auditor's Certificate during the truing-up of the respective years during which such Schemes would be capitalized.	The Commission views that the Petitioner has not taken directive seriously and directs the Petitioner to comply and submit the status report along with the next petition. The Commission is of the view that every work that is carried out should be backed by detailed analysis and supported with sufficient justifications as this has implications on the cost that is to be borne by the final consumer.

A9: DIRECTIVES

Filling of True up Petition for FY 2015-16 and APR for 2016-17

9.1 The Commission directs the Petitioner to submit a petition for final truing up of FY 2015-16 and annual performance review for FY 2016-17 within 2 months of this Order.

Data adequacy in next Tariff petition

9.2 The Commission directs the Petitioner to note the data deficiencies highlighted throughout the present petition and submit the required details and certificates along with the next petition while submitting for true up of FY 2015-16.

Ash disposal expenses

9.3 The Commission is concerned regarding the year on year increasing trend of ash disposal expenses due to various reasons as mentioned in the petition. The Commission appreciates the steps taken by the Petitioner to contain the ash disposal expenses and further directs the Petitioner to devise ways to control the expenses.

This Order is signed and issued by the Jharkhand State Electricity Regulatory Commission on this the 30th of December, 2016.

Date: 30th of December, 2016
Place: Ranchi

Sd/-	Sd/-
(R. N. Singh)	**(N.N Tiwari, J)**
MEMBER (T)	**CHAIRPERSON**

A10: ANNEXURES

Annexure 1: List of participating members of public in the public hearing

Sl. No.	Name	Address / Organization if any
1	Sunil Kumar	Tata Power Co. Ltd.
2	G. P. Shastry	Tata Power Co. Ltd.
3	S. K. Panigrahi	Tata Power Co. Ltd.
4	Shekhar Mukharjee	Tata Power Co. Ltd.
5	Vimant Singh	Tata Power Co. Ltd.
6	Jagdish Ladiwalla	Tata Power Co. Ltd.
7	Kush Kumar	Tata Steel
8	Prabhakar Kumar	Tata Power Co. Ltd.
9	U. N. Jha	Tata Power Co. Ltd.
10	A. N. Choudhary	JUSCO
11	Shubhayu Sanyal	Tata Power Co. Ltd.
12	Supratik Mukherji	Tata Power Co. Ltd.
13	Aubrata Kundu	Tata Power Co. Ltd.
14	Barun Kumar	Tata Power Co. Ltd.
15	S.D. Bhanerjee	Tata Power Co. Ltd.
16	N.K. Mandal	Tata Power Co. Ltd.
17	Vijay Prakash Singh	JUSCO
18	Ajay Kumar Singh	Tata Steel
19	Satendra Kumar	Supodeya, Jamshedpur
20	Sudhir Burla	Supodeya, Jamshedpur
21	Rsmimaya Lenka	Tata Steel
22	Chandan Kumar	Tata Power Co. Ltd.
23	Rajesh Sinha	Tata Power Co. Ltd.
24	Sunil Kunwar	Tata Power Co. Ltd.
25	Surodh Day	Tata Power Co. Ltd.
26	Sharda	Sakchi, Jamshedpur
27	Aveek Chaterjee	Tata Power Co. Ltd.
28	Puneel Munjal	Tata Power Co. Ltd.
29	Harshwardhan Sinha	Tata Power Co. Ltd.
30	Dilip Kumar	Tata Power Co. Ltd.
31	Raja Biswas	Tata Power Co. Ltd.
32	V.B. Srivastava	Tata Power Co. Ltd.
33	Ajay Kumar	Tata Steel
34	Paresh Nath Jana	Tata Power Co. Ltd.
35	Datari Swain	Tata Power Co. Ltd.
36	Anshul Agarawal	JUSCO

Sl. No.	Name	Address / Organization if any
37	S. K. Shrivatava	Tata Power Co. Ltd.
38	Anshu de	Tata Power Co. Ltd.
39	Rajesh Kumar	Sonari, Jamshedpur
40	R. N. Mastana	Jemco
41	Dharmendra Mahto	Parsudih, Jamshedpur
42	J.J. Mallick	Jamshedpur
43	Ashok Lodh	Tata Power Co. Ltd.
44	Sharad Kumar	Tata Steel