Jharkhand State Electricity Regulatory Commission

Order on
Petition for Annual Performance Review
For
FY 2014-15
(Including truing-up
For FY 2012-13 &
FY 2013-14)
For
Tenughat Vidyut Nigam Limited
(TVNL)

Ranchi

30th September 2016

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BEFORE

Jharkhand State Electricity Regulatory Commission, Ranchi

Case (Tariff) No.: 06 of 2015

In the matter of:

Petition for True up of Aggregate Revenue Requirement for FY 2012-13 & FY 2013-14;

And

Annual Performance Review for FY 2014-15

In the matter:

Tenughat Vidyut Nigam Limited (TVNL),
Hinoo, Doranda, Ranchi ……………….. ……………… Petitioner

PRESENT

Hon'ble Mr Justice Narendra Nath Tiwari - Chairperson

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

Order dated 30th September 2016

In this Petition, Tenughat Vidyut Nigam Limited (hereinafter referred to as TVNL) has prayed for True-up of Aggregate Revenue Requirement (ARR) for FY 2012-13 and FY 2013-14 and Annual Performance Review for FY 2014-15.

List of Abbreviations

Abbreviation	Description
A&G	Administrative and General
AAD	Advance Against Depreciation
ARR	Aggregate Revenue Requirement
CISF	Central Industrial Security Forces
COD	Commercial Operation Date
CWIP	Capital Work in Progress
DM	De-mineralised
FY	Financial Year
GCV	Gross Calorific Value
GFA	Gross Fixed Assets
GoI	Government of India
JSEB	Jharkhand State Electricity Board
JSERC	Jharkhand State Electricity Regulatory Commission
Kcal	Kilocalorie
Kg	Kilogram
kWh	Kilowatt-hour
MGR	Merry-Go-Round
Ml	Millilitre
MT	Million Tonnes
MUs	Million Units
MW	Megawatt
O&M	Operations and Maintenance
PLF	Plant Load Factor
PPA	Power Purchase Agreement
R&M	Repair and Maintenance
RoE	Return on Equity
SERC	State Electricity Regulatory Commission
SLM	Straight Line Method

A1: INTRODUCTION

Jharkhand State Electricity Regulatory Commission (JSERC)

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.

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:-

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

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

- 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;

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

1.3 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 as 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 The JSERC discharges the functions to be discharged by the State Commission as specified under Section 86 of the Act, which are to: -

- 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;

- 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;

- facilitate intra-state transmission and wheeling of electricity;

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

- 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;

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

- levy fee for the purposes of this Act;

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

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

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

- 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 :-

- promotion of competition, efficiency and economy in activities of the electricity industry;
- promotion of investment in electricity industry;
- reorganisation and restructuring of electricity industry in the State;
- 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:

- ensure availability of electricity to consumers at reasonable and competitive rates;
- ensure financial viability of the sector and attract investments;
- promote transparency, consistency and predictability in regulatory approaches across jurisdictions and minimize perceptions of regulatory risks;
- promote competition, efficiency in operations and improvement in quality of supply.

Tenughat Vidyut Nigam Limited (TVNL)

1.8 The Tenughat Vidyut Nigam Limited (TVNL) (hereinafter referred to as 'the Petitioner') is a wholly owned Generating Company of Government of Jharkhand and was constituted in 1987 under the Indian Company's Act, 1956.

1.9 The Petitioner operates two Units (Units I and II) of Tenughat Thermal Power Station that are the subject of tariff determination in the petition filed by it. Each unit has an installed power generation capacity of 210 MW. Unit I commenced its operations in September, 1996 and Unit II in September, 1997. With the creation of State of Jharkhand on November 15, 2000, the Petitioner is an undertaking of Government of Jharkhand.

1.10 The total cost of the project at the time of CoD, including interest during construction (IDC), was approved as Rs. 1247.04 Cr by the Commission in its previous Tariff Orders.

The Petitioner's Prayers

1.11 This Petitioner in its Petition for True-up of Aggregate Revenue Requirement (ARR) for FY 2012-13 and FY 2013-14 and Annual Performance Review for FY 2014-15 has prayed before the Commission:

- To admit the Petition for True Up for FY 2012-13 & FY 2013-14 and Annual Performance Review of FY 2014-15 and revised estimates for FY 2014-15 to FY 2015-16.
- To approve the operational and financial parameters as proposed by TVNL considering the constraints of the old machines, and consider the same for recovery of full fixed cost.
- To approve the Station's operating parameters viz. PAF, Auxiliary Consumption, Station Heat Rate, Transit Loss, Specific Oil Consumption and actual fuel rate for recovery of variable cost considering the constraints of the old machines as well as site specific constraints.
- To grant any other relief as the Commission may consider appropriate.

Scope of the present order

1.12 The Commission in this Order has reviewed the performance of the Petitioner for the FY 2012-13 and FY 2013-14 and approved the True-up of ARR for FY 2012-13, FY 2013-14 and APR for FY 2014-15.

1.13 While conducting the True-up of ARR for FY 2012-13, FY 2013-14 and APR for FY 2014-15 the Commission has taken into consideration:

- Material placed on record
- Provisions of the Electricity Act, 2003;
- Provisions of the National Electricity Policy;
- Provisions of the Tariff Policy;
- 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');

1.14 Accordingly, the Commission has scrutinized the Petition in detail and hereby issues the Tariff Order on True-up of ARR for FY 2012-13, FY 2013-14 and APR for FY 2014-15.

A2: PROCEDURAL HISTORY

Background

2.1 The Commission had approved the Business Plan and Aggregate Revenue Requirement (ARR) for the first Multi Year Tariff control period FY 2012-13 to FY 2015-16 in its Order dated May 2012.

2.2 Subsequently the Commission had issued its last Tariff Order for TVNL in July 2014 for approval of True-up of FY 2011-12 and APR of FY 2012-13.

2.3 The Petitioner has now submitted the Petition for approval of true up of ARR for FY 2012-13 & FY 2013-14 and Annual Performance Review for FY 2014-15 on August 12, 2015.

Information Gaps in the Petition

2.4 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 after initial scrutiny of the Petition for True-up of Aggregate Revenue Requirement (ARR) for FY 2012-13 and FY 2013-14 and Annual Performance Review for FY 2014-15 for by the TVNL, accepted the application submitted by the Petitioner on August 18th, 2015.

2.5 The information gaps observed in the petition were communicated to the Petitioner through written communication vide–

- Letter No. JSERC/Case(T) No. 06 of 2015/402 dated September 09, 2015;
- Letter No. JSERC/Case(T) No. 06 of 2015/800 dated December 30, 2015;
- Letter No. JSERC/Case(T) No. 06 of 2015/383 dated September 06, 2016;

2.6 The Petitioner subsequently submitted its response and provided the requisite data vide –

- Letter No. 1404/2015-16 dated October 19, 2015;
- Letter No. 1912/2015-16 dated January 11, 2016;
- Letter No. 855/2016-17 dated September 14, 2016;
- Letter No. 947/2016-17 dated September 30, 2016;

2.7 The Commission scrutinized the additional data/information submitted and considered the same while passing this Order on the Petition filed by the Petitioner. The Commission has examined the replies and supporting documents as supplied by the Petitioner on the discrepancies pointed out to it only on material already on record in the Petition filed by the Petitioner.

2.8 In order to provide adequate opportunities to all stakeholders and general public, as mandated under Section 64(3) of the Electricity Act 2003 and in relevant provisions of Regulation(s) framed by the Commission and in order to ensure transparency in the process of tariff determination, the Commission decided to hold public hearing at divisional headquarters.

Inviting Comments/Suggestions from the Public

2.9 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 True-up for FY 2012-13, Truing up of FY 2013-14 and APR for FY 2014-15

2.10 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 TVNL appeared

Newspaper	Date
Hindustan	19.02.2016 & 23.02.2016
Prabhat Khabar	19.02.2016 & 23.02.2016
Dainik Jagran	19.02.2016 & 23.02.2016
Hindustan Times	19.02.2016 & 23.02.2016
The Times of India	19.02.2016 & 23.02.2016

2.11 Subsequently, the Commission also issued a notice on its website www.jserc.org and in various newspapers for conducting the public hearing on the True-up and APR Petition filed by TVNL. The details of the newspapers wherein the notice was issued by the Commission are as under:

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

Newspaper	Date
Times of India (English)	15.07.2016
Hindustan	15.07.2016
Dainik Bhaskar	15.07.2016
Morning India (English)	16.07.2016
Dainik Jagran	16.07.2016
Prabhat Khabar	16.07.2016

Conduct of Public Hearing

2.12 A public hearing was held on August 04, 2016 at the Commission's office in Ranchi wherein the Petitioner presented a summary of the Petition filed by it to the Commission. The list of participants is attached as **Annexure-I.**

A3: SUMMARY OF THE PETITION

Overview of the Thermal Stations

3.1 The Petitioner operates two Units (Units I and II) of Tenughat Thermal Power Station (TTPS) that are the subject of tariff determination in the petition filed by it. Each unit has an installed power generation capacity of 210 MW. Unit I commenced its operations in September, 1996 and Unit II in September, 1997. With the creation of State of Jharkhand on November 15, 2000, the Petitioner became an undertaking of Government of Jharkhand.

True up for FY 2012-13

3.2 The Petitioner has requested for true up of FY 2012-13 and has submitted the actual performance of the Units I & II for FY 2012-13 on various operational and financial related parameters.

3.3 The energy charges and fixed cost as proposed by the Petitioner for FY 2012-13, are summarised in the following table:

Table 3: Submitted Plant parameters and Fuel cost determinants for FY 2012-13

Parameters	Actual as per Finalized Accounts for FY 2012-13
Capacity in MW	420
PLF (Overall in %) Unit-I & Unit-II	79.42%
Gross Generation (MUs) - Unit-I & Unit-II	2,922
Auxiliary Consumption (%)	10.78%
Net Generation (MUs) - Overall	2,617.17
Station Heat Rate (kCal/kW h)	2,940
Gross Calorific Value of Coal (Kcal/Kg)	4,037
Specific Oil Consumption (ml/kWh)	1.61
Gross Calorific Value of Oil (Kcal/KL)	9,359
Total Heat Required (Kcal)	8,590,680
Oil Consumption (KL)	4,703
Heat From Oil (Kcal)	44,028.67
Heat from Coal (Kcal)	8,546,651.33
Transit Loss (%)	0.20%
Total Coal Consumption including transit losses (MT)	2,116,764
Cost of Oil (Rs/Kl)	61,831
Cost of Coal (Rs/MT)	1,960
Total Cost of Oil (Rs Cr)	29.08

Parameters	Actual as per Finalized Accounts for FY 2012-13
Total Cost of Coal (Rs Cr)	414.93
Total Fuel Cost (Rs Cr)	444.02
Per Unit Fuel Cost (Rs/Kwh)	1.59

Table 4: Submitted Fixed Charges for FY 2012-13 (Rs. Cr)

Parameters	Actual as per Finalized Accounts for FY 2012-13
O&M Expenses	174.31
Depreciation	74.47
Interest on Loan	86.71
Return on Equity	25.87
Interest on Working Capital	36.34
Income Tax	0.00
Cost of Secondary Fuel Oil	29.08
Fixed Cost	426.78
Inefficient fixed cost disallowed	0.00
Total Fixed Cost	426.78

True up for FY 2013-14

3.4 The Petitioner has requested for true up of FY 2013-14 and has submitted the actual performance of the Units I & II for FY 2013-14 on various operational and financial related parameters.

3.5 The energy charges and fixed cost as proposed by the Petitioner for FY 2013-14, are summarised in the following table:

Table 5 : Submitted Plant Parameters & Fuel Cost Determinants for FY 2013-14

Parameters	Actual as per Finalized Accounts for FY 2013-14
Capacity in MW	420
PLF (Overall in %) Unit-I & Unit-II	61.32%
Gross Generation (MUs) - Unit-I & Unit-II	2,256.14
Auxiliary Consumption (%)	11.74%
Net Generation (MUs) – Overall	1,991.21
Station Heat Rate (kCal/kW h)	2,778
Gross Calorific Value of Coal (Kcal/Kg)	4,037

Parameters	Actual as per Finalized Accounts for FY 2013-14
Specific Oil Consumption (ml/kWh)	1.88
Gross Calorific Value of Oil (Kcal/KL)	9,359
Total Heat Required (Kcal)	62,67,557
Oil Consumption (KL)	4,245
Heat From Oil (Kcal)	39,696.60
Heat from Coal (Kcal)	62,27,860.32
Transit Loss (%)	0.20%
Total Coal Consumption including transit losses (MT)	16,02,412
Cost of Oil (Rs/Kl)	65,082
Cost of Coal (Rs/MT)	1,767
Total Cost of Oil (Rs Cr)	27.60
Total Cost of Coal (Rs Cr)	283.13
Total Fuel Cost (Rs Cr)	310.73
Per Unit Fuel Cost (Rs/Kwh)	1.42

Table 6 : Submitted Fixed Charges for FY 2013-14

Parameters	Actual as per Finalized Accounts for FY 2013-14
O&M Expenses	90.45
Depreciation	70.83
Interest on Loan	324.87
Return on Equity	26.30
Interest on Working Capital	30.67
Income Tax	0.00
Cost of Secondary Fuel Oil	27.63
Fixed Cost	570.75
Inefficient fixed cost disallowed	0.00
Total Fixed Cost	570.75

Review of Operational Performance of FY 2014-15

3.6 In its petition, the Petitioner has requested for the review of operational performance of FY 2014-15 based on actual performance from April 2014 to March 2015.

3.7 The plant parameters and Fuel Cost Determinants as submitted by the Petitioner for FY 2014-15 are shown in the table below –

Table 7 : Submitted Plant Parameters & Fuel Cost Determinants for FY 2014-15 (Apr 14 – Mar 15)

Particulars	Units	Unit I & II
Availability	%	80%
PLF	%	64.70%
Gross Generation	MU	2380
Auxiliary Consumption	%	11.77%
Net Generation	MU	2100
Station Heat Rate	kCal/kWh	2843
Gross Calorific Value of Coal	kCal/kg	3602
Specific Oil Consumption	ml/kWh	1.49
Transit Loss	%	0.20%
Total Coal Consumption	MT	1869968
Cost of Coal	Rs/MT	2072
Total Cost of Coal	Rs. Cr	387.54
Energy Charges	Rs/Kwh	1.63

Table 8 : Submitted Cost of Secondary Fuel Oil for FY 2014 -15 (Apr 14 – Mar 15)

Particulars	Units	Unit I & II
Normative Gross Generation	MU	2380
Secondary Fuel Oil Consumption	ml/kWh	1.49
Gross Calorific Value of Oil	kCal/L	9359
Cost of Oil	Rs/kL	61134
Oil Consumption	kL	3546
Total Cost of Oil	Rs Cr	21.68

A4: PUBLIC CONSULTATION PROCESS

4.1 A public hearing was held on August 04, 2016 at the Commission's office in Ranchi wherein the Petitioner presented a summary of the Petition filed by it to the Commission. The list of participants is attached as Annexure-I.

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

Auxiliary Consumption

Public Comments/Suggestions

4.3 The objector has highlighted that the auxiliary consumption taken by TVNL for FY 2012-13 is 10.78% and for the year FY 2013-14 is 11.74%. However, as per Regulation 8.4 of the JSERC (Generation) Tariff Regulations 2010, the maximum auxiliary consumption can't be more than 9.5 %.

Petitioner's response

4.4 The Petitioner has submitted that it is trying its best to reduce the Auxiliary Consumption of the plant, however due to constraints like ageing, partial loading, quality of coal etc., it is not able to achieve the desired value as per regulations. The Petitioner also submitted that in FY 2013-14, due to grid backing down, there has been loss of generation of 392.41 MUs which has affected the performance and it is a technical reason that, when the plant is suffering with loss of generation due to uncontrollable factors like grid backing down, a minimum amount of electricity is still necessary for maintaining the plant in running condition, which resulted in auxiliary consumption more than permitted by the Hon'ble Commission in its regulations.

Commission's view

4.5 The Commission, in the past, had directed the Petitioner to take steps to reduce the auxiliary consumption and had issued a directive to submit progress report of measures taken within one month of this tariff order.

4.6 Under the provisions of the Generation Tariff Regulations, 2010, the Commission approves the Auxiliary consumption on a normative basis and not on actual basis. Therefore, the cost on account of higher auxiliary consumption of the Petitioner are not being passed on to the consumers.

Station Heat Rate

Public Comments/Suggestions

4.7 The objector has highlighted that the actual station heat rate taken by TVNL for FY 2012-13 is 2940 kCal/kWh and for the year FY 2013-14 is 2778kCal/kWh against the approved station heat rate of 2908 kCal/kWh and 2773 kCal/kWh respectively.

Petitioner's response

4.8 In response to the submission, the Petitioner has submitted that the increase in Station Heat rate is because of the age of the plant and tripping in the years FY 2012-13 and FY 2013-14. TVNL suffered with 99 instances of tripping accounting to the total duration of 2124.39 minutes in FY 2012-13 and 83 instances of tripping accounting to the total duration of 5056.81 minutes in FY 2013-14. However in FY 2013-14, the station heat rate is just 5 kCal/kWh more than approved SHR as per the regulations and Petitioner feels that it is well within the permissible limits.

Commission's view

4.9 The Commission approves the station heat rate on a normative basis as per the JSERC (Generation) Tariff Regulations, 2010, and not on actual basis for true up of the year FY 2012-13 and FY 2013-14.

Secondary Fuel oil consumption

Public Comments/Suggestions

4.10 The objector has highlighted that the actual specific fuel oil consumption for FY 2012-13 is 1.61 (ml/kWh) and for the year FY 2013-14 is 1.88 (ml/kWh), while as per the regulations of JSERC 2010, specific oil consumption should not be more than 1 ml/kWh.

Petitioner's response

4.11 In response to the submission, the Petitioner has submitted that the consumption of secondary fuel oil depends on the load variation of the power plant and number of restarts to be made after tripping. The Petitioner has already submitted the total number of tripping records in FY 2012-13 and FY 2013-14. Also, the Petitioner has been able to achieve the specific oil consumption level at 1.61 ml/kWh which is much below than its past trend of 2.5-3.5 ml/kWh and is striving hard to bring the specific oil consumption levels to the optimum as per the regulations.

Commission's view

4.12 The Commission appreciates the efforts of the Petitioner. However SFC is still higher than normative levels. The Petitioner is directed to bring down Secondary Fuel Oil consumption to the normative range.

4.13 Under the provisions of the JSERC (Generation) Tariff Regulations, 2010, the Commission approves the specific consumption of secondary fuel oil on a normative basis and not on actual basis for true up of the year FY 2012-13 and FY 2013-14. Therefore, the higher Secondary Fuel Oil expenses of the Petitioner are not being passed on to the consumers.

Depreciation

Public Comments/Suggestions

4.14 The objector has highlighted that the depreciation may be taken as per provisional order for FY 2012-13. Any increase in the depreciation due to inefficiencies will affect the power purchase cost and will affect the tariff to the consumers.

Petitioner's response

4.15 In response to the submission, the Petitioner has submitted that the depreciation of the assets depends on the actual gross fixed assets addition in the previous year and it is accounted as per the Companies Act and increase in depreciation cannot be treated in the inefficiency of the utility.

Commission's view

4.16 Under the provisions of the JSERC (Generation) Tariff Regulations, 2010, the Commission has approved the depreciation as per MYT Tariff Order dated May' 2012.

Interest and Finance charges

Public Comments/Suggestions

4.17 The objector has highlighted that the increase in interest and finance charges will increase the power purchase rate which in turn will increase the power purchase cost and finally affect the consumers.

Petitioner's response

4.18 The Petitioner has submitted that the interest and finance charges depends on the credit worthiness of the borrower and the Petitioner has been paying excess interest on the loan because of poor debts servicing which is mainly because of the poor receivables from the beneficiaries like JBVNL. The Petitioner has requested the Commission to take appropriate action against the defaulters of payments and issue necessary orders in this regard.

Commission's view

4.19 The Commission has noted the objection and the Petitioner's response on the issue of high interest and finance charges. The Commission hereby directs JBVNL to ensure that timely payments are made to the Petitioner so that credit worthiness of the Petitioner is maintained and the beneficiary avoids surcharges for delayed payment.

4.20 Regulation 6.14 of the JSERC (Generation) Tariff Regulations 2010 specifies that financing cost, which includes cost of debt including working capital (interest), cost of equity (return) shall be trued up on the basis of actual/audited information and prudence check by the Commission at the end of the control period. Hence for the current true-up, the Commission has approved the charges as per MYT Tariff Order dated May' 2012.

Plant Availability Factor

Public Comments/Suggestions

4.21 The objector has highlighted that the actual PAF submitted by the Petitioner is 79.47% against the target of 85% as per the JSERC (Generation) Tariff Regulations 2010.

Petitioner's response

4.22 The Petitioner has submitted that the low PAF was achieved because of backing down of 400 KV S/C TTPS Biharsharif Transmission line for 183 days. In this duration, only one of the two units was generating while the other unit had to be shut down. The backing down of the evacuation facility is beyond the control of the Petitioner and is an uncontrollable factor.

Commission's view

4.23 The Commission has dealt with this matter while truing up the Aggregate Revenue Requirement (ARR) for FY 2013-14. Although the reduction in PLF can be attributed to the reasons submitted by the Petitioner in its response, this is not an appropriate justification for achieving a lower than normative PAF. The Commission has considered actual PAF achieved while approving the recovery of capacity charges. Further Commission has given suitable directions to the Petitioner to study the feasibility of options to avoid such a scenario in the future.

Operation and Maintenance expenses

Public Comments/Suggestions

4.24 The objector has highlighted that the few employees of TVNL are working with other establishments like JREDA/ Energy department on deputation and are drawing salaries and allowances from TVNL. The objector has requested the Commission to direct the Petitioner to recover the money paid by TVNL for the employee who is on deputation to other departments.

Petitioner's response

4.25 The Petitioner has submitted that the as per earlier directives of Hon'ble Commission, the Petitioner has requested the Energy Department for reimbursement of employee expenses deputed to Energy Department/ JREDA. Since the Energy department, Govt. of Jharkhand is the controlling department of TVNL, on the order of Energy Department, the concerned employee is allowed to work in JREDA in addition to his assigned duty in TVNL. Since the employee is discharging his assigned duty of TVNL, hence there is no bearing on Tariff determination for the Petitioner. Both TVNL and JREDA are under Energy Department, Govt. of Jharkhand and TVNL provides technical assistance to the other Government departments and also takes technical assistance from the other Government departments as per requirement.

Commission's view

4.26 The Commission is of the opinion that reimbursement of such employee expenses from the Energy department is in the interest of the Petitioner. The Petitioner is directed to follow up with the Energy department for this and report compliance.

A5: TRUE UP FOR FY 2012-13

5.1 The Commission in its MYT Tariff Order dated 30th May, 2012 approved the ARR for FY 2012-13. The Petitioner has now sought approval from the Commission for true up of variation in certain items of the ARR for FY 2012-13 on the basis of the audited accounts.

5.2 The Commission has analysed the submission of the Petitioner with respect to the ARR for FY 2012-13 and has undertaken the true up exercise of various components in accordance with the applicable regulations and methodology adopted by the Commission in previous Tariff orders, as the case may be. The component-wise description of the Petitioner's submission and the Commission's analysis thereof is provided hereunder.

Operational Performance

Plant Availability Factor (PAF) and Plant Load Factor (PLF)

Petitioner's submission

5.3 The Petitioner in its Tariff Petition submitted that the PLF for FY 2012-13 as per actual data now available for FY 2012-13 was 79.42% against the PLF of 85% approved by the Commission in its MYT Order.

5.4 The Petitioner also submitted that the actual PAF for the mentioned period has been 87.88% as against 85% approved by the Commission.

5.5 The Petitioner requested the Commission to allow the deemed PLF/PAF keeping in mind their continuous effort to improve efficiency, which saw the plant attain their best PLF in last five years.

Commission's analysis

5.6 As per Regulation 8.4 of the Generation Tariff Regulations, 2010, the normative availability allowable for the Power Plant for FY 2012-13 is 85%, as also approved by the Commission in the previous Tariff Order.

5.7 The Commission has verified the actual availability during FY 2012-13 from SLDC certificates and accordingly approves a final availability of 88.55% for TVNL.

5.8 The Commission approves the PLF of 79.42% for FY 2012-13 based on scrutiny of the information submitted by the Petitioner.

Gross Generation

Petitioner's submission

5.9 The Petitioner in its ARR & Tariff Petition submitted that the actual gross generation for both units was 2922 MUs based on the PLF of 79.42% for FY 2012-13.

Commission's analysis

5.10 The Commission approves gross generation of 2922 MUs for FY 2012-13 based on the approved PLF of 79.42%.

Auxiliary Consumption

Petitioner's submission

5.11 The Petitioner submitted the actual auxiliary consumption for both units for FY 2012-13 was 10.78%.

5.12 The Petitioner also submitted that it is trying its best to reduce the auxiliary consumption, however due to constraints like ageing, partial loading, quality of coal etc. it is not being able to achieve the same to the desired value.

Commission's analysis

5.13 Auxiliary consumption refers to the quantum of energy consumed by the auxiliary equipment of the generating station. Higher auxiliary consumption reduces the net generation of a generating station and leads to higher cost per unit of generation.

5.14 Regulation 8.4 of the Generation Tariff Regulations, 2010 specifies norm for the auxiliary consumption for the Petitioner for FY 2012-13 as 9.50%. Further, as per the said regulations the auxiliary consumption is a "controllable parameter". Therefore, the Commission has considered the auxiliary consumption at 9.50% for calculation of energy charge rate for the year.

5.15 However, for computation of net generation for the year, the Commission has considered the Auxiliary Consumption for FY 2012-13 as per the actual auxiliary consumption observed during the year i.e. 10.78% as submitted by the Petitioner.

Net Generation

Petitioner's submission

5.16 The Petitioner submitted the net generation of 2617.17 MU on the basis of gross generation of 2922 MU and 10.78% auxiliary consumption.

Commission's analysis

5.17 The Commission approves net generation of 2607 MUs for FY 2012-13 based on the approved gross generation of 2922 MU and approved auxiliary consumption of 10.78% for FY 2012-13.

Station Heat Rate (SHR)

Petitioner's submission

5.18 The Petitioner submitted that the actual SHR for TVNL was 2940 kcal/kWh as against the Commission approved SHR of 2908 kCal/kWh for FY 2012-13.

5.19 The Petitioner requested the Commission to approve SHR of 2940 kcal/kWh for FY 2012-13

Commission's analysis

5.20 The Commission specified the norms of operation for the two Units of TVNL in the Regulation 8.4 of the 'Generation Tariff Regulations, 2010'. As already noted by the Commission in its MYT Order dated May 30,2012 , 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 the Petitioner for the two units. Before finalization of the norms, the Commission had also conducted a public hearing in which all the stakeholders, including the Petitioner, participated. The Commission after due deliberation finalized the Regulations.

5.21 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. Accordingly, the Commission does not find any merit in allowing relaxation of the norms fixed for SHR in the Generation Tariff Regulations, 2010. Hence, SHR is allowed as 2908 kCal/kWh.

Secondary Fuel Oil Consumption

Petitioner's submission

5.22 The Petitioner has submitted actual secondary fuel oil consumption of 1.61 ml/kWh for both the Units as against the normative consumption of 1 ml/kWh for FY 2012-13.

5.23 The Petitioner submitted that historically the actual specific oil consumption for TVNL has been in the range of 2.5-3.5 Ml/kWh

5.24 The Petitioner submitted that consumption of auxiliary fuel is higher because of frequent tripping and grid breakdown by JSEB. The Petitioner further submitted that these factors are not in the hands of the Petitioner and requested the Commission to allow relaxation of norms with respect to secondary fuel oil consumption.

Commission's analysis

5.25 Regulation 6.12 and Regulation 6.13 of the Generation Tariff Regulations, 2010 specify:

> *"6.12 The Commission shall set targets for each year of the Control Period for the items or parameters that are deemed to be "controllable" and which includes:*
>
> *(a) Gross Station Heat Rate;*
>
> *(b) Normative Annual Plant Availability Factor;*
>
> *(c) Auxiliary Energy Consumption;*
>
> *(d) Secondary Fuel Oil Consumption;*
>
> *(e) Operation and Maintenance Expenses;*
>
> *(f) Financing Cost which includes cost of debt (interest), cost of equity (return);*
>
> *and*
>
> *(g) Depreciation.*
>
> *6.13 Any financial loss on account of underperformance on targets for parameters specified in clause 6.12 (a) to (e) of these Regulations is not recoverable through tariffs. Similarly, any financial gain on account of over-performance with respect to these parameters is to the Generating Company's benefit and shall not be adjusted in tariffs".*

5.26 The actual specific oil consumption of 1.61 ml/kWh is higher than the norm of 1 ml/kWh specified in Regulation 8.4 of the Generation Tariff Regulations, 2010 and MYT Order for the financial year.

5.27 Regulation 6.12 read with Regulation 6.13 Generation Tariff Regulations, 2010 clearly specifies that any financial loss on account of underperformance on targets of Secondary Fuel Oil consumption is not recoverable through tariffs. Accordingly, the Commission approves the normative specific oil consumption of 1 ml/kWh for FY 2012-13 as per applicable regulations.

Gross Calorific Value (GCV) Of Primary and Secondary Fuel

Petitioner's submission

5.28 The gross calorific value of coal and oil were submitted as 4037 kcal/kg and 9359 kcal/kl respectively for FY 2012-13.

Commission's analysis

5.29 Calorific value of a fuel refers to the amount of heat released on burning one unit of the fuel. Thus, a higher GCV indicates better quality of fuel and also lowers fuel cost, since it lowers the consumption of fuel needed for producing the required amount of energy.

5.30 The Commission directed the Petitioner to submit information on consumption and GCV of coal and secondary fuel oil for complete year of FY 2012-13 as part of additional data requirements during the process of initial scrutiny of the Petition.

5.31 The Commission has analysed the additional information submitted by the Petitioner and accordingly approves the GCV of coal as 4037 kCal/kg and GCV of oil as 9359 kCal/kL respectively for FY 2012-13.

Price of Primary Fuel

Petitioner's submission

5.32 The Petitioner submitted the landed coal price as Rs 1960/MT for FY 2012-13 on the basis of audited accounts for FY 2012-13.

Commission's analysis

5.33 Based on the actual data provided in the audited accounts, the Commission approves the landed price of coal as Rs 1943.88 /MT for FY 2012-13.

Summary of Plant Parameters & Fuel Cost Determinants

5.34 The summary of plant parameters and fuel cost determinants for the two Units of Tenughat Thermal Power Station as approved by the Commission in the MYT Order for FY 2012-13, as submitted by the Petitioner in its present Tariff Petition and now approved by the Commission for FY 2012-13 is given in the below table.

Table 9: Approved Plant parameters & Fuel Cost Determinants for FY 2012-13

Parameters	Formula	Unit	Unit 1 and 2		
			Approved by the Commission in the TO of FY 2012-13	Submitted by TVNL in the Petition	Now Approved by the Commission
Capacity	A	MW	420	420	420
Availability	B	%	85%	87.88%	88.55%
PLF	C	%	85%	79.42%	79.42%
Gross Generation	D=Ax1000 x8760 x C/10^6	MU	3127.32	2922.02	2922.02
Heat Rate	E	kcal/kWh	2908	2940	2908
Specific oil consumption	F	ml/kWh	1.00	1.61	1.00
Calorific value of oil	G	kcal/kl	9359	9359	9359
Normative Auxiliary Consumption	H	%	9.50%		9.50%
Actual Auxiliary Consumption	H1	%	-	10.78%	-
Net Generation	I=D x (1-H)	MU	2830.22	2617.17	2607.03
Calorific value of coal	J	kcal/kg	4368.44	4037	4037.17
Transit Loss	K	%	0.20%	0.20%	0.20%
Cost of coal per MT without transit loss	L	Rs/MT	1660	1960	1943.88
Per unit fuel cost	**M=(E-F*G/1000)*(L/(J*(100-(H*100))))**	Rs/Kwh	**1.22**	**1.59**	**1.54**

Determination of Fixed Cost

Operation & Maintenance (O&M) Expenses

Petitioner's submission

5.35 The Petitioner submitted O&M Expenses for FY 2012-13 at Rs 174.31 Cr.

5.36 The Petitioner submitted that it has done the actuarial valuation of pension and gratuity which was pending since long time in FY 2012-13 for the current year as well as the past years amounting to Rs. 91.83 Cr which can also be verified from the audited accounts of FY 2012-13. The Petitioner submitted that such expenses were mandatory as per Accounting Standards. The Petitioner has also stated that Regulation 7.41 of the Generation

Tariff Regulations 2010 allow terminal liabilities to be considered on the basis of actual or actuarial studies.

5.37 The Petitioner further submitted the details of O&M Expenses with break up into A&G Expenses, R&M Expenses and Employee Expenses. During the year, the Petitioner also undertook CSR expenses amounting to Rs 1.43 Cr.

Table 10 : Submitted O&M Expenses for FY 2012-13

O&M Expenses	Approved in MYT Tariff Order	Actuals Submitted Now
A&G Expenses	18.97	12.56
R&M Expenses	91.82	39.19
Employee Expenses	31.57	121.13
Total	142.36	172.88
CSR		1.43
Total O&M Expenses	142.36	174.31

Commission's analysis

5.38 Regulation 7.41 of the Generation Tariff Regulations 2010 specifies :

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 prudency 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.”

5.39 Regulation 6.14 of Generation Tariff Regulations 2010 specifies -

“The true up across various controllable parameters shall be conducted as per principles stated below: -

*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;***”**

5.40 The Petitioner has claimed O&M expenses as per its actual audited accounts for the year. The R&M expenses depend on the maintenance activities carried out during the year and differ from year to year. The Commission has considered the actual R&M expenses as per audited accounts as the Petitioner has not incurred the R&M expenses on its generation units in line with approval granted in the MYT Order. The Commission approves O&M expenses as per the audited accounts after giving due consideration to the submissions of the Petitioner, interest of all stakeholders and assessing the actual costs incurred by the Petitioner during the year.

5.41 For the purpose of approval of true-up of employee expenses of the Petitioner for FY 2012-13 the Commission has considered the actual employee expenses of Rs 29.30 Cr (Rs 121.13Cr – Rs 91.83 Cr) excluding terminal liabilities.

5.42 After verification of the information submitted by the Petitioner including the audited accounts for FY 2012-13 and FY 2013-14, the Commission observed that there is an extra provision of Rs 13.82 Cr considered in FY 2013-14 for terminal liabilities. Hence The Commission has approved an amount of Rs 78.01 Cr (Rs 91.83 Cr – Rs 13.82 Cr) for FY 2012-13 in line with 7.41 (d) of the Generation Tariff Regulations 2010.

5.43 The Commission approves the R&M Expenses of Rs 39.39 Cr and A&G expenses of Rs 12.56 Cr for FY 2012-13 as per the actuals submitted by the Petitioner for the year FY 2012-13 after due prudence check.

5.44 Accordingly the Commission approves the total O&M expenses of Rs 159.26 Cr for FY 2012-13.

Table 11 : Approved O&M Expenses for FY 2012-13

O&M Expenses	Approved in MYT Tariff Order	Actuals Submitted Now	Approved now True-up FY 2012-13
A&G Expenses		12.56	12.56
R&M Expenses		39.19	39.19
Employee Expenses		121.13	29.30
Terminal Liabilities			78.01
Total	142.36	172.88	159.06
CSR		1.43	
Total O&M Expenses	142.36	174.31	159.06

Depreciation

Petitioner's submission

5.45 The Petitioner submitted depreciation expenses for FY 2012-13 at Rs. 74.47 Cr. The break-up of the total expenditure submitted is detailed in the following table:

Table 12 : Submitted Depreciation Expenses for FY 2012-13

Depreciation	Submitted by TVNL in MYT Tariff Petition	Approved in MYT Tariff Order	Actuals Submitted Now
Depreciation for Plant	73.69	68.74	74.15
Depreciation for Head Office	0.11	0.12	0.13
Depreciation for Ranchi office	0.01		0.01
Depreciation for additional Assets during the year	0.95	0.82	0.18
Total Depreciation	74.76	69.68	74.47

Commission's analysis

5.46 Regulation 6.8 and Regulation 6.9 of Generation Tariff Regulations 2010 specifies that:

> *"6.8 The Commission shall review the actual capital investment at the end of each year of the Control Period as a part of the Annual Performance Review of the Generating Company. The Generating Company shall submit the actual capital*

expenditure incurred along with the Annual Performance Review Filing

6.9 The Commission shall not revisit the approved Capital Investment Plan during the Control Period and any adjustment to depreciation, interest on working capital and return on equity for the actual capital investment undertaken vis-à-vis approved capital investment shall be done at the end of the Control Period."

5.47 Regulation 6.14 of Generation Tariff Regulations 2010 specifies that -

"(b) at the end of the control period –

i. the Commission shall review actual capital investment vis-à-vis approved capital investment.

ii. depreciation and financing cost, which includes cost of debt including working capital (interest), cost of equity (return) shall be trued up on the basis of actual/audited information and prudence check by the Commission."

5.48 Accordingly the Commission approves Rs. 69.68 Cr. as depreciation expenses for FY 2012-13 as per the MYT Tariff Order dated May' 2012.

Interest on Debt

Petitioner's submission

5.49 The Petitioner has submitted the interest & finance charges at Rs. 86.71 Cr for FY 2012-13. The break-up of the same is as given below -

Table 13 : Submitted Interest on Loan Expenses for FY 2012-13

Particular	Interest & Finance Charges (Rs Cr.)
Interest on State Government Loan (Jharkhand)	7.55
Interest on State Government Loan (Bihar)	79.16
Bank Charges	0
Total	86.71

Commission's analysis

5.50 Regulation 6.14 of Generation Tariff Regulations 2010 specifies that financing cost, which includes cost of debt including working capital (interest), cost of equity (return) shall be trued up on the basis of actual/audited information and prudence check by the Commission at the end of the control period. Accordingly the Commission approves Rs. 65.72 Cr. under Interest on debt as per the MYT Tariff Order dated May' 2012.

Return on Equity

Petitioner's submission

5.51 The Petitioner has submitted RoE charges at Rs. 25.87 Cr. for FY 2012-13:

Table 14 : Submitted Return on Equity for FY 2012-13

Return on Equity	Unit	Submitted bt TVNL in MYT Tariff Petition	Approved in MYT Tariff Order	Actuals for the Year
Equity (Opening Balance)	Rs Cr	202.48	169.18	165.06
Net additions during the Year	Rs Cr	10.81	4.54	3.72
Equity (Closing Balance)	Rs Cr	213.29	173.72	168.78
Average Equity	Rs Cr	207.88	171.45	166.92
Rate of Return on Equity	%	15.50%	15.50%	15.50%
Applicable tax rate (t%)	%			
Return on Equity	Rs Cr	32.22	26.57	25.87

Commission's analysis

5.52 Regulation 6.14 of Generation Tariff Regulations 2010 specifies that financing cost, which includes cost of debt including working capital (interest), cost of equity (return) shall be trued up on the basis of actual/audited information and prudence check by the Commission at the end of the control period. Accordingly the Commission approves Rs. 26.57 Cr. under Return on Equity as per the MYT Tariff Order dated May' 2012.

Interest on Working Capital

Petitioner's submission

5.53 The Petitioner while 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 1.5 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.

5.54 The rate of interest for calculating the interest on working capital is taken at the prevalent SBI PLR rate, i.e. 14.75%.

5.55 Interest on Working Capital, as submitted by the Petitioner for FY 2012-13 is Rs. 36.34 Cr.

Commission's analysis

5.56 Regulation 6.14 of Generation Tariff Regulations 2010 specifies that financing cost, which includes cost of debt including working capital (interest), cost of equity (return) shall be trued up on the basis of actual/audited information and prudence check by the Commission at the end of the control period. Accordingly the Commission approves Rs. 29.90 Cr. under Interest on Working Capital as per the MYT Tariff Order dated May' 2012.

Cost of Secondary Fuel Oil

Petitioner's submission

5.57 The Petitioner made the following submissions with respect to the cost of secondary fuel oil for FY 2012 -13:

Table 15 : Submitted Cost of Secondary Fuel Oil for FY 13

		FY 2012-13	
Particulars	Unit	MYT Approved	As proposed by TVNL
Normative Gross Generation	MU		2922
Secondary Fuel Oil Consumption	ml/kWH		1.61
Gross Calorific Value of Oil	Kcal/L		9359
Cost of Oil	Rs/KL		61831
Oil Consumption	KL		4703
Expenses on secondary fuel	**Rs Crs**	**18.71**	**29.08**

Commission's analysis

5.58 The Petitioner has not used the methodology specified in the Regulation 7.49 of the Generation Tariff Regulations, 2010 for calculating the cost of secondary fuel.

5.59 The Commission has approved the cost of secondary fuel oil in accordance with Regulation 7.49, Regulation 7.50 and Regulation 7.51 of the 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 x LPSFi x NAPAF x 24 x NDY x IC x 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."

7.51 The secondary fuel oil expenses shall be subject to fuel price adjustment at the end of the each year of Control period as per following formula:
= SFC x NAPAF x 24 x NDY x IC x 10 x (LPSFy – LPSFi)
Where,
LPSFy - Weighted average landed price of secondary fuel oil for the year in Rs. /ml

5.60 The consumption of Secondary Fuel Oil 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 Secondary Fuel Oil has been computed considering the weighted average cost of Secondary Fuel Oil for the respective year. Accordingly, the Commission approves Cost of Secondary Fuel Oil as Rs. 19.34 Cr. for FY 2012 -13.

Table 16 : Cost of Secondary Fuel as approved by the Commission for FY 2012-13

Particulars	Unit	FY 2012-13		
		MYT Approved	As proposed by TVNL	Approved now by JSERC
Specific oil consumption	ml/kWH	1	1.61	1
Weighted average landed price of secondary fuel	Rs/ml	0.06	0.062	0.062
NAPAF	%	85.00	85.00	85.00
Number of days in a year		365	365	365
Installed capacity	MW	420	420	420
Expenses on secondary fuel	**Rs/Crs**	**18.71**	**29.08**	**19.34**

Non-Tariff Income

Petitioner's submission

5.61 The Petitioner has submitted that non-tariff income for FY 2012-13 as Rs 28.25 Cr. and requested the Commission to approve the same as per actuals.

Commission's analysis

5.62 The Commission has scrutinised the non-tariff income of the Petitioner from the submitted audited annual accounts. It is accrued through various income sources: Sale of BOQ/Tender Paper, house rent from employee, interest on fixed deposits, fee for RTI, sale receipts, other receipts etc. The major contribution is from interest on fixed deposits.

5.63 The Commission approves the Non-Tariff Income of Rs 28.25 Cr as per audited accounts for FY 2012-13.

Summary of Fixed Cost Determinants

5.64 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.

5.65 The following table details the fixed cost determinants for FY 2012-13, in terms of the Petitioner's submission and the approval granted by the Commission:

Table 17 : Summary of Fixed Cost components as approved for FY 13

Particulars	FY 2012-13		
	MYT - approved	As proposed by TVNL	Approved now by JSERC
	Rs. Crore	Rs. Crore	Rs. Crore
O&M Expenses	142.36	174.31	159.06
Depreciation	69.68	74.47	69.68
Interest on Loan	65.72	86.71	65.72
Return on Equity	26.57	25.87	26.57
Interest on Working Capital	29.90	36.34	29.90
Cost of Secondary Fuel Oil	18.71	29.08	19.34
Total Fixed Cost	**352.94**	**426.78**	**370.27**
PAF based Incentive/ Disincentive			15.46
Annual Fixed Charges with Incentive			**385.73**
Income Tax on Incentive			3.87
Fixed Cost with Incentive			**389.60**
Less : NTI	16.91	28.25	28.25
Total Fixed Cost	**336.03**	**398.53**	**361.36**
Gap/(Surplus) for the Year			**25.33**

Gap/Surplus for FY 2012-13

5.66 The total Annual Fixed Cost approved in the MYT Order dated May 2012 was Rs. 336.03 Cr., which now stands as Rs. 361.36 Cr. after true-up for the year. The Commission approves a total revenue gap of Rs. 25.33 Cr. for TVNL for FY 2012-13.

5.67 Regulation 6.16, Regulation 6.16 and Regulation 6.18 of the Generation Tariff Regulations 2010 specify:

"Refund of Excess Amount

6.16 If the Tariff already recovered is more than the Tariff determined after true up, the Generating Company shall refund to the Beneficiaries the excess amount so recovered along with simple interest at the rate equal to short term prime lending rate of State.

6.17 Similarly, in case the Tariff already recovered is less than the Tariff *determined after true up, the Generating Company shall recover from the Beneficiaries, the less recovered amount along with simple interest at the rate equal to short term prime lending rate of State Bank of India as on 1st April of the respective Year/Years subject to adhering to the timelines specified by the Commission for filling of True-up application. In case, it is found that the filling of True-up is delayed due to the reasons attributable to the Generating Company, the under recovery shall not bear any interest expenses.*

6.18 The amount under-recovered or over-recovered, along with simple interest, shall be recovered or refunded by the Generating Company, in six equal monthly instalments starting within three months from the date of the tariff order issued by the Commission after the truing up exercise."

5.68 The Commission has approved a revenue gap of Rs 25.33 Cr for FY 2012-13. In accordance with the aforesaid Regulation 6.16 the Petitioner shall recover the excess amount of Rs 38.33 Cr (Rs. 25.33 + Rs. 13.00) from its beneficiaries.

Table 18 : Calculation of carrying cost of revenue surplus for FY 2012-13

Particulars	2012-13	2013-14	2014-15	2015-16
Rate as on 1st Apr	14.75%	14.45%	14.75%	14.75%
No. of months to be calculated	6	12	12	12
Interest amount	1.87	3.66	3.74	3.74
Total carrying cost				13.00

A6: TRUE UP FOR FY 2013-14

6.1 The Commission in its MYT Order dated 30th May, 2012 approved ARR for FY 2013-14. The Petitioner has now sought approval from the Commission for true up of variation in certain items of the ARR for FY 2013-14 on the basis of the audited accounts.

6.2 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 various components in accordance with the applicable regulations and methodology adopted by the Commission in previous Tariff orders, as the case may be. The component-wise description of the Petitioner's submission and the Commission's analysis thereof is provided hereunder.

Operational Performance

Plant Availability Factor (PAF) & Plant Load Factor (PLF)

Petitioner's submission

6.3 The Petitioner in its Tariff Petition submitted that the PLF for FY 2013-14 as per actual data now available for FY 2013-14 was 61.32% against the PLF of 85% approved by the Commission in its MYT Order.

6.4 The Petitioner has mentioned that it could have achieved higher operating performance however due to backing down of 400 KV S/C TTPS Biharsharif transmission line for 183 days, only one of the two units of TVNL was generating while the other Unit had to be shut down during this period. The Petitioner also submitted that availability of both units has been considered during that period to recover the fixed cost. The Petitioner submitted that considering the above factor the Normative Plant Availability Factor considered is 79.47% for FY 2013-14.

6.5 The Petitioner requested the Commission to allow the deemed PLF/PAF keeping in mind their continuous effort to improve efficiency, which saw the plant attain their best PLF in last five years. Commission's analysis

Commission's analysis

6.6 As per Regulation 8.4 of the Generation Tariff Regulations, 2010, the normative availability allowable for the Power Plant for FY 2013-14 is 85%, as also approved by the Commission in the previous Tariff Orders.

6.7 The Commission has verified the actual availability during FY 2013-14 from SLDC certificates and accordingly approves a final availability of 80.13% for TVNL. The Commission also sought clarification from the Petitioner on whether any compensation was receivable from the transmission company due to non-availability of the transmission lines during the period. The Petitioner clarified that no such compensation was receivable from the transmission company.

6.8 The Commission approves actual PLF of 61.32% for TVNL for FY 2013-14.

Gross Generation

Petitioner's submission

6.9 The Petitioner in its ARR & Tariff Petition submitted that the actual gross generation for both units was 2256.14 MUs based on the PLF of 61.32% for FY 2013-14.

Commission's analysis

6.10 The Commission approves gross generation of 2256.09 MUs for FY 2013-14 based on the approved PLF of 61.32%.

Auxiliary Consumption

Petitioner's submission

6.11 The Petitioner submitted the actual auxiliary consumption for both units for FY 2013-14 was 11.74%. The Petitioner cited reasons such as grid backing down, ageing, partial loading, quality of coal etc. due to which it is not being able to achieve the desired value of Auxiliary consumption as specified by regulations.

Commission's analysis

6.12 As per the Generation Tariff Regulations, 2010, the auxiliary consumption specified for the Petitioner for FY 2013-14 is 9.50%. Further, as per the said regulations the auxiliary consumption is a "controllable parameter". Therefore, the Commission has considered the auxiliary consumption at 9.50% for calculation of energy charge rate for the year.

6.13 However, for computation of net generation for the year, the Commission has considered the Auxiliary Consumption for FY 2013-14 as per the actual auxiliary consumption observed during the year i.e. 11.74% as submitted by the Petitioner.

Net Generation

Petitioner's submission

6.14 The Petitioner submitted the net generation of 1991.21 MU on the basis of gross generation of 2256 MU and 11.74% auxiliary consumption.

Commission's analysis

6.15 The Commission approves net generation of 1991.22 MUs for FY 2013-14 based on the approved gross generation of 2256.09 MU and the auxiliary consumption of 11.74% for the said year.

Station Heat Rate (SHR)

Petitioner's submission

6.16 The Petitioner has submitted the actual SHR of 2778 kcal/kWh for FY 2013-14.

Commission's analysis

6.17 The Commission specified the norms of operation for the two Units of TVNL in the Regulation 8.4 of the 'Generation Tariff Regulations, 2010'. As already noted by the Commission in its MYT Order dated May 30, 2012 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 the Petitioner for the two units. Before finalization of the norms, the Commission had also conducted a public hearing in which all the stakeholders, including the Petitioner, participated. The Commission after due deliberation finalized the Regulations.

6.18 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. Accordingly, the Commission does not find any merit in allowing relaxation of the norms fixed for SHR in the Generation Tariff Regulations, 2010. Hence, SHR is allowed as 2773 kCal/kWh.

Secondary Fuel Oil Consumption

Petitioner's submission

6.19 The Petitioner has submitted estimated specific oil consumption of 1.88 ml/kWh for both the Units for FY 2013-14. The Petitioner further submitted that historically the actual specific oil consumption of TVNL has been in the range of 2-3.5 ml/kWh and that consumption of auxiliary fuel is higher due to grid breakdown.

6.20 The Petitioner submitted that it has been carrying out repair and maintenance works and thus it has managed to achieve specific oil consumption at levels much below its past trend of 2.5 -3.5 ml/kWh and that the Commission may consider the facts and allow relaxation in secondary fuel oil consumption norms for the Petitioner.

Commission's analysis

6.21 The Commission appreciates the efforts made by the Petitioner to reduce the actual secondary fuel oil consumption of its Units and demonstrate improved performance as compared to historical performance with respect to secondary fuel oil consumption.

6.22 Regulation 6.12 and Regulation 6.13 of the Generation Tariff Regulations, 2010 specify:

> *"6.12 The Commission shall set targets for each year of the Control Period for the items or parameters that are deemed to be "controllable" and which includes:*
>
> *(a) Gross Station Heat Rate;*
>
> *(b) Normative Annual Plant Availability Factor;*
>
> *(c) Auxiliary Energy Consumption;*
>
> *(d) Secondary Fuel Oil Consumption;*
>
> *(e) Operation and Maintenance Expenses;*
>
> *(f) Financing Cost which includes cost of debt (interest), cost of equity (return); and*
>
> *(g) Depreciation.*
>
> *6.13 Any financial loss on account of underperformance on targets for parameters specified in clause 6.12 (a) to (e) of these Regulations is not recoverable through tariffs. Similarly, any financial gain on account of over-performance with respect to these parameters is to the Generating Company's benefit and shall not be adjusted in tariffs".*

6.23 The actual specific oil consumption of 1.88 ml/kWh is higher than the norm of 1 ml/kWh specified in Regulation 8.4 of the Generation Tariff Regulations, 2010 and MYT Order for the financial year.

6.24 Regulation 6.12 read with Regulation 6.13 Generation Tariff Regulations, 2010 clearly specifies that any financial loss on account of underperformance on targets of Secondary Fuel Oil consumption is not recoverable through tariffs. Accordingly, the Commission approves the normative specific oil consumption of 1 ml/kWh for FY 2013-14 as per applicable regulations.

Gross Calorific Value (GCV) Of Primary and Secondary Fuel

Petitioner's submission

6.25 The gross calorific value of coal and oil were submitted as 3887 kcal/kg and 9359 kcal/kl respectively for FY 2013-14.

Commission's analysis

6.26 Calorific value of a fuel refers to the amount of heat released on burning one unit of the fuel. Thus, a higher GCV indicates better quality of fuel and also lowers fuel cost, since it lowers the consumption of fuel needed for producing the required amount of energy.

6.27 The Commission directed the Petitioner to submit information on consumption and GCV of coal and secondary fuel oil for complete year of FY 2012-13 as part of additional data requirements during the process of initial scrutiny of the Petition.

6.28 The Commission has analysed the additional information submitted by the Petitioner and accordingly approves the GCV of coal as 3887 kCal/kg and GCV of oil as 9359 kCal/kL respectively for FY 2013-14.

Price of Primary Fuel

Petitioner's submission

6.29 The Petitioner submitted the estimated landed coal price as Rs 1767/MT for FY 2013-14 on the basis of actual finalized accounts for FY 2013-14.

Commission's analysis

6.30 Based on the actual data provided in the audited accounts, the Commission approves the landed price of coal as Rs 1765.52/MT for FY 2013-14.

Summary of Plant Parameters & Fuel Cost Determinants

6.31 The summary of plant parameters and fuel cost determinants for the two Units of Tenughat Thermal Power Station as approved by the Commission in the MYT Order for FY 2013-14, as submitted by the Petitioner in its present Tariff Petition and now approved by the Commission for FY 2013-14 is given in the following table:

Table 19: Approved Plant parameters & Fuel Cost Determinants for FY 2013-14

Parameters	Formula	Unit	Unit 1 and 2		
			Approved by the Commission in the TO of FY 2013-14	Submitted by TVNL in the Petition	Approved Now by the Commission
Capacity	A	MW	420	420	420
Availability	B	%	85%	79.47%	80.13%
PLF	C	%	85%	61.32%	61.32%
Gross Generation	D=Ax1000 x8760 x C/10^6	MU	3127.32	2256.14	2256.09
Heat Rate	E	kcal/kWh	2773	2778	2773
Specific oil consumption	F	ml/kWh	1.00	1.88	1.00
Calorific value of oil	G	kcal/kl	9359	9359	9359
Normative Auxiliary Consumption	H	%	9.50%		9.50%
Actual Auxiliary Consumption	H1	%	-	11.74%	-
Net Generation	I=D x (1-H)	MU	2830.22	1991.27	1991.22
Calorific value of coal	J	kcal/kg	4368.44	3887	4368.44
Transit Loss	K	%	0.20%	0.20%	0.20%
Cost of coal per MT without transit loss	L	Rs/MT	1660	1767	1765.52
Per unit fuel cost	**M=(E-F*G/1000)*(L/(J*(100-(H*100))))**	Rs/Kwh	**1.16**	**1.42**	**1.39**

Determination of Fixed Cost

Operation & Maintenance (O&M) Expenses

Petitioner's submission

6.32 The Petitioner submitted O&M Expenses for FY 2013-14 at Rs 90.45 Cr.

6.33 The Petitioner further submitted the details of O&M Expenses with break up into A&G Expenses, R&M Expenses and Employee Expenses. During the year, the Petitioner also undertook CSR expenses amounting to Rs 1.87 Cr.

6.34 The Petitioner submitted the provision for Pension and Gratuity of Rs. 91.83 Cr in the accounts of FY 2012-13 was further evaluated by a firm appointed by the Petitioner. The Petitioner submitted that from this firm's report it was identified that the provision of Rs 13.82 Cr was made extra in the accounts of FY 2012-13 which was then subtracted from the employee expenses of FY 2013-14 as evident from the accounts of FY 2013-14.

Table 20 : Submitted O&M Expenses for FY 2013-14

O&M Expenses	Submitted by TVNL in MYT Tariff Petition	Approved in MYT Tariff Order	Actuals for the Year
A&G Expenses	21.17	20.56	13.37
R&M Expenses	90.01	99.54	57.21
Employee Expenses	40.17	33.84	18.00
Total	151.35	153.94	88.58
CSR	-	-	1.87
Total O&M Expenses	151.35	153.94	90.45

Commission's analysis

6.35 Regulation 7.41 of the Generation Tariff Regulations 2010 specifies :

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 prudency 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."

6.36 Regulation 6.14 of Generation Tariff Regulations 2010 specifies -

"The true up across various controllable parameters shall be conducted as per principles stated below: -

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;"

6.37 The Petitioner has claimed O&M expenses as per its actual audited accounts for the year. The R&M expenses depend on the maintenance activities carried out during the year and differ from year to year. The Commission has considered the actual R&M expenses as per audited accounts as the Petitioner has not incurred the R&M expenses on its generation units in line with approval granted in the MYT Order. The Commission approves O&M expenses as per the audited accounts after giving due consideration to the submissions of the Petitioner, interest of all stakeholders and assessing the actual costs incurred by the Petitioner during the year.

6.38 Since the Commission has already deducted the extra provision of Rs 13.82 Cr in the True up of the previous year FY 2012-13, for the current year of FY 2013-14 the Commission has not considered any amount for terminal liabilities.

6.39 The Commission approves the R&M Expenses of Rs 57.21 Cr and A&G expenses of Rs 13.37 Cr as per the actuals submitted by the Petitioner for the year FY 2013-14 after due prudence check.

6.40 Accordingly the Commission approves the total O&M expenses of Rs 88.58 Cr for FY 2013-14.

Table 21 : Approved O&M Expenses for FY 2013-14

O&M Expenses	Approved in MYT Tariff Order	Actuals Submitted Now	Approved now True-up FY 2013-14
A&G Expenses		13.37	13.37

O&M Expenses	Approved in MYT Tariff Order	Actuals Submitted Now	Approved now True-up FY 2013-14
R&M Expenses		57.21	57.21
Employee Expenses		18.00	18.00
Terminal Liabilities			
Total	153.94	88.58	88.58
CSR		1.87	
Total O&M Expenses	153.94	90.45	88.58

Depreciation

Petitioner's submission

6.41 The Petitioner submitted depreciation expenses for FY 2013-14 at Rs 70.83 Cr. The break-up of the total expenditure has been detailed in the following table:

Table 22 : Submitted Depreciation Expenses for FY 2013-14

Depreciation	Submitted by TVNL in MYT Tariff Petition	Approved in MYT Tariff Order	Actuals for the Year
Depreciation for Plant	71.72	68.74	70.64
Depreciation for Head Office	0.11	0.12	0.12
Depreciation for Ranchi office	0.01		0.01
Depreciation for additional Assets during the year	1.45	1.58	0.05
Total Depreciation	73.29	70.44	70.83

Commission's analysis

6.42 Regulation 6.8 and Regulation 6.9 of Generation Tariff Regulations 2010 specifies that:

> *"6.8 The Commission shall review the actual capital investment at the end of each year of the Control Period as a part of the Annual Performance Review of the Generating Company. The Generating Company shall submit the actual capital expenditure incurred along with the Annual Performance Review Filing*
>
> *6.9 The Commission shall not revisit the approved Capital Investment Plan during the Control Period and any adjustment to depreciation, interest on working capital and return on equity for the actual capital investment undertaken vis-à-vis*

approved capital investment shall be done at the end of the Control Period."

6.43 Regulation 6.14 of Generation Tariff Regulations 2010 specifies that -

"(b) at the end of the control period –

i. the Commission shall review actual capital investment vis-à-vis approved capital investment.

ii. depreciation and financing cost, which includes cost of debt including working capital (interest), cost of equity (return) shall be trued up on the basis of actual/audited information and prudence check by the Commission."

6.44 Accordingly the Commission approves Rs.70.44 Cr. as depreciation expenses for FY 2013-14 as per the MYT Tariff Order dated May' 2012.

Interest on Debt

Petitioner's submission

6.45 The Petitioner has submitted the interest & finance charges at Rs. 324.87 Cr. for FY 2013-14. Break-up of the same is as given below -

Table 23 : Submitted Interest of Debt Expenses for FY 2013-14

Description	Interest & Finance Charges (Rs Cr.)
Interest on State Government Loan (Jharkhand)	13.76
Interest on State Government Loan (Bihar)	311.10
Bank Charges	0.01
Total	324.87

Commission's analysis

6.46 Regulation 6.14 of Generation Tariff Regulations 2010 specifies that financing cost, which includes cost of debt including working capital (interest), cost of equity (return) shall be trued up on the basis of actual/audited information and prudence check by the Commission at the end of the control period. Accordingly the Commission approves Rs. 57.93 Cr. under Interest on debt as per the MYT Tariff Order dated May' 2012.

Return on Equity

Petitioner's submission

6.47 The Petitioner has submitted RoE at Rs. 26.30 Cr. for FY 2013-14. Details of the same are shown in the table below –

Table 24 : Submitted Return of Equity for FY 2013-14

Return on Equity	Unit	Submitted by TVNL in MYT Tariff Petition	Approved in MYT Tariff Order	Actuals for the Year
Equity (Opening Balance)	Rs Cr	202.48	173.72	168.78
Net additions during the Year	Rs Cr	10.81	4.12	1.84
Equity (Closing Balance)	Rs Cr	213.29	177.84	170.62
Average Equity	Rs Cr	207.88	175.78	169.70
Rate of Return on Equity	%	15.50%	15.50%	15.50%
Applicable tax rate (t%)	%			
Return on Equity	Rs Cr	32.22	27.25	26.30

Commission's analysis

6.48 Regulation 6.14 of Generation Tariff Regulations 2010 specifies that financing cost, which includes cost of debt including working capital (interest), cost of equity (return) shall be trued up on the basis of actual/audited information and prudence check by the Commission at the end of the control period. Accordingly the Commission approves Rs. 27.25 Cr. under Return on Equity as per the MYT Tariff Order dated May' 2012.

Interest on Working Capital

Petitioner's submission

6.49 The Petitioner while 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 1.5 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.

6.50 The rate of interest for calculating the interest on working capital is taken at the prevalent SBI PLR rate, i.e. 14.75%

6.51 Interest on Working Capital, as submitted by the Petitioner for FY 2012-13 is Rs. 30.67 Cr.

Commission's analysis

6.52 Regulation 6.14 of Generation Tariff Regulations 2010 specifies that financing cost, which includes cost of debt including working capital (interest), cost of equity (return) shall be trued up on the basis of actual/audited information and prudence check by the Commission at the end of the control period. Accordingly the Commission approves Rs. 29.82 Cr. under Interest on working capital as per the MYT Tariff Order dated May' 2012.

Cost of Secondary Fuel Oil

Petitioner's submission

6.53 The Petitioner submitted that the Cost of Secondary Fuel Oil at Rs. 27.63 Cr. for FY 2013-14.

Table 25 : Submitted Cost of Secondary Fuel Oil

		FY 2013--14	
Particulars	**Unit**	**MYT Approved**	**As proposed by TVNL**
Normative Gross Generation	MU		2256
Secondary Fuel Oil Consumption	ml/kWH		1.88
Gross Calorific Value of Oil	Kcal/L		9359
Cost of Oil	Rs/KL		65082
Oil Consumption	KL		4245
Expenses on secondary fuel	**Rs Crs**	**17.27**	**27.63**

Commission's analysis

6.54 The Petitioner has not used the methodology specified in the Regulation 7.49 of the Generation Tariff Regulations, 2010 for calculating the cost of secondary fuel.

6.55 The Commission has approved the cost of secondary fuel oil in accordance with Regulation 7.49, Regulation 7.50 and Regulation 7.51 of the 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 x LPSFi x NAPAF x 24 x NDY x IC x 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."

7.51 The secondary fuel oil expenses shall be subject to fuel price adjustment at the end of the each year of Control period as per following formula:
= SFC x NAPAF x 24 x NDY x IC x 10 x (LPSFy – LPSFi)
Where,
LPSFy - Weighted average landed price of secondary fuel oil for the year in Rs. /ml

6.56 The consumption of Secondary Fuel Oil 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 Secondary Fuel Oil has been computed considering the weighted average cost of Secondary Fuel Oil for the respective year. Accordingly, the Commission approves Cost of Secondary Fuel Oil as Rs. 20.35 Cr. for FY 2013 -14.

Table 26 : Cost of Secondary Fuel as approved by the Commission for FY 2013-14

Particulars	Unit	FY 2013-14		
		MYT Approved	As proposed by TVNL	Approved now by JSERC
Specific oil consumption	ml/kWH		1.88	1
Weighted average landed price of secondary fuel	Rs/ml		0.065	0.065
NAPAF	%		85.00	85.00
Number of days in a year			365	365
Installed capacity	MW		420	420
Expenses on secondary fuel	**Rs/Crs**	**18.71**	**27.63**	**20.35**

Non-Tariff Income

Petitioner's submission

6.57 The Petitioner has submitted that non-tariff income for FY 2013-14 as Rs 32.38 Cr. and requested the Commission to approve the same on actuals.

Commission's analysis

6.58 The Commission has scrutinised the non-tariff income of the Petitioner from the submitted audited annual accounts. It is accrued through various income sources: Sale of BOQ/Tender Paper, house rent from employee, interest on fixed deposits, fee for RTI, sale receipts, other receipts etc. The major contribution is from interest on fixed deposits.

6.59 The Commission approves the Non-Tariff Income of Rs 32.38 Cr as per actuals for FY 2013-14.

Summary of Fixed Cost determinants

6.60 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.

6.61 The tables below show the fixed cost determinants for FY 2013-14, in terms of the Petitioner's submission and the approval granted by the Commission:

Table 27 : Summary of Fixed Cost Components as approved for FY 13-14

Particulars	FY 2013-14		
	MYT - approved	As proposed by TVNL	As approved by JSERC
	Rs. Crore	Rs. Crore	Rs. Crore
O&M Expenses	153.94	90.45	88.58
Depreciation	70.44	70.83	70.44
Interest on Loan	57.93	324.87	57.93
Return on Equity	27.25	26.3	27.25
Interest on Working Capital	29.82	30.67	29.82
Cost of Secondary Fuel Oil	18.71	27.63	20.35
Total Fixed Cost	**358.09**	**570.75**	**294.37**
PAF based Incentive/ Disincentive			**(16.86)**
Annual Fixed Charges with Incentive			**277.51**
Income Tax on Incentive			-
Fixed Cost with Incentive			**277.51**
Less : NTI	16.91	32.38	32.38
Total Fixed Cost	**341.18**	**538.37**	**245.13**
Gap/(Surplus) for the Year			(96.05)

Gap/Surplus for FY 2013-14

6.62 The total fixed cost approved in the MYT Order was Rs. 341.18 Cr., which now stands as Rs. 245.13 Cr. after true-up for the year. TVNL has a total revenue surplus of Rs. 96.05 Cr. for the year.

6.63 Regulation 6.16, Regulation 6.16 and Regulation 6.18 of the Generation Tariff Regulations 2010 specify:

"Refund of Excess Amount

6.16 If the Tariff already recovered is more than the Tariff determined after true up, the Generating Company shall refund to the Beneficiaries the excess amount so recovered along with simple interest at the rate equal to short term prime lending rate of State.

6.17 Similarly, in case the Tariff already recovered is less than the Tariff determined after true up, the Generating Company shall recover from the Beneficiaries, the less recovered amount along with simple interest at the rate equal to short term prime lending rate of State Bank of India as on 1st April of the respective Year/Years subject to adhering to the timelines specified by the Commission for filling of True-up application. In case, it is found that the filling of True-up is delayed due to the reasons attributable to the Generating Company, the under recovery shall not bear any interest expenses.

6.18 The amount under-recovered or over-recovered, along with simple interest, shall be recovered or refunded by the Generating Company, in six equal monthly instalments starting within three months from the date of the tariff order issued by the Commission after the truing up exercise."

6.64 The Commission has approved a revenue surplus of Rs 96.05 Cr for FY 2013-14. In accordance with the aforesaid Regulation 6.16 the Petitioner shall refund the excess amount of Rs 131.32 Cr (Rs. 96.05 + Rs. 35.27) to its beneficiaries.

Table 28 : Calculation of carrying cost of revenue surplus for FY 2013-14

Particulars	2013-14	2014-15	2015-16
Rate as on 1st Apr	14.45%	14.75%	14.75%
No. of months to be calculated	6	12	12
Interest amount	(6.94)	(14.17)	(14.17)
Total carrying cost			(35.27)

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A7: REVIEW OF OPERATIONAL PERFORMANCE OF FY 2014-15

Petitioner's submission

7.1 In its petition the Petitioner has requested for the Review of Operational Performance of FY 2014-15 based on the actual performance from April 2014 to March 2015.

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 FY 2014-15; however, audited statements for FY 2014-15 for TVNL and other requisite certifications of the Statutory Auditors, etc. are not available with the Commission for truing up for FY 2014-15.

7.4 Since FY 2014-15 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 2014-15 and annual performance review for FY 2015-16 within 2 months of notification of this Order.

A8: STATUS OF EARLIER DIRECTIVES

Table 29 : Status of Directives

Directive	Compliance to the Directive	Views of the Commission
Auditor's certificate for additional capitalization and Fixed Asset Register	The Petitioner submitted that it is trying hard to comply with the Commission's directive. The Petitioner further submitted that the management has invited tenders from appropriate firms for the work, and will award the same to competent firms in short time. The Petitioner requested the Commission to exempt it in this regard as this exercise would take some time Further, the Petitioner submitted that it has commissioned the MGR system and the trial run of the MGR system has been completed on 25.06.2014.	The Commission directs the Petitioner to report the status of the compliance of this directive within one month of date of issue of this Tariff Order.
Prior Approval of Capital schemes with value greater than or equal to 1 Cr	The Petitioner submitted that it will approach Hon'ble Commission for prior approval as per directives and guidelines at appropriate time when such schemes/ investments are planned to be undertaken.	-
SLDC Certificate for PAF	The Petitioner mentioned that it had submitted the same along with the Petition.	The same 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 SLDC certificates along with the next Tariff Petition
Auxiliary Consumption – Action Plan to reduce	The Petitioner submitted that it had completed the process of re-calibration of meters for measuring auxiliary consumption. Further it was added that the Petitioner will install fresh energy meters at various locations to calculate area wise power consumption. The Petitioner also submitted that it has been making all possible efforts for reduction of Auxiliary Consumption, however due to constraints like ageing, partial loading, quality of coal etc. it was not being able to achieve the same to the desired value	The Commission directs the Petitioner to submit detailed progress report on the same within one month of the date of issue of this Tariff Order.
Secondary Fuel Oil Consumption	The Petitioner submitted that it has been making all possible efforts for reducing the secondary oil consumption and bring down the same to the specified normative range. The Petitioner further submitted that considering the operational performance of FY 2014-15, the same has been successfully come down to 1.49 (ml/kWh) as compared to 1.88(ml/kWh) in FY 2013-14. The Petitioner further hoped to successfully reduce and	The Commission appreciates the efforts of the Petitioner. However it is a matter of concern that the SFC is still higher than normative levels. The Petitioner is directed to bring down Secondary Fuel Oil consumption to the normative range.

Directive	Compliance to the Directive	Views of the Commission
	bring down the same within specified normative range in near future.	
Ash Utilization and Management	The Petitioner submitted that it has approached to cement manufacturers like Ultratech cement Co. & Burnpur Cement Co. for setting cement plant nearby Tenughat TPS. Both cement manufacturers had visited site for setting up Cement Plants in the nearby areas of Tenughat TPS. But nothing has materialized till date.	The Commission views that the Petitioner has not taken the directive of the Commission seriously and directs the Petitioner to comply with the directive and submit the status report of the same within two months of the issue of this Tariff Order.
Details of Loan Repayment Details of Outstanding dues with JSEB	The Petitioner has submitted that due to non-recovery of energy dues from JSEB, repayment of loan has not been undertaken. The amount allowed by way of depreciation is piled up with JSEB as energy dues and the repayment of loan is done only after recovery of dues from JSEB. The Petitioner submitted that it had already provided in the earlier paragraphs of the Petition that as on date 1st Dec 2014 JSEB owes around Rs. 3076 Cr as outstanding dues.	The Commission views that the Petitioner should not link the Repayment of Loan with the recovery of dues from JSEB successor companies and work out a mechanism to liquidate the Govt. Loan either through repayment or conversion of equity.
Adjustment of Bills & payments / receipt as per revised cost of power sold to JSEB	As regards the recovery of approved Revenue gap of Rs. 49.12 Cr for FY 2011-12 in 6 equal monthly installments, the Petitioner submitted that accordingly it had issued 6 monthly letters to JSEB for recovery of approved gap, The letters issued to JSEB has also been marked to JSERC.	The Commission notes compliance of this directive.
Filing of True-up Petition for FY 2012-13 & FY 2013-14, Annual Performance of review of FY 2014-15 and revised estimates for FY 2014-15 to FY 2015-16	As discussed in the earlier paragraphs of the Petition, the Petitioner has filed the present Petition for approval of True-up of FY 2012-13 & FY 2013-14, Annual Performance of FY 2013-14	The Commission notes compliance of this directive.

A9: DIRECTIVES

Minimization of Outages and Strengthening of evacuation arrangement for TTPS

9.1 The Petitioner has reported that although its plant was available in FY 2013-14, the PLF was lower than optimal due to non-availability of 400kV S/C TTPS Biharsharif Transmission Line for 183 days. The Commission is concerned that currently there are no safeguards in place to mitigate this risk in the future. Therefore the Commission directs the Petitioner to take this issue up at the highest levels to ensure that there are minimal outages of the transmission line in the future. Further the Petitioner should also ensure/pursue that appropriate upgradation work is completed so as to operate the transmission line at 400 kV as against the existing operating voltage of 220 kV

9.2 The Commission directs the Petitioner to pursue the early completion of the construction of 220 kV TVNL- Jainamore (Bokaro)- Govindpur transmission line being constructed by JUSNL so as to minimize the instances of non-evacuation of power on account of outage of transmission lines.

9.3 The Petitioner is directed to report status of compliance of these directives on a quarterly basis.

Adjustment of Bills & payments/receipt as per Revised Cost of Power Sold to JBVNL

9.4 The Commission directs the Petitioner to reconcile the payment due/receipts with JBVNL, in lieu of the revised Generation Tariff for power sold to JBVNL for FY 2012-13 & FY 2013-14, as determined by the Commission in this order. The Petitioner is required to generate a supplementary bill for the reconciled billed amount and submit the same to JBVNL.

9.5 The Commission directs the Petitioner to recover/ refund the combined approved gap/surplus for FY 2012-13 and FY 2013-14 in 6 equal monthly instalments from the beneficiary from October 2016 to March 2017 and report the compliance.

Filing of True Up Petition for FY 2014-15 and APR for FY 2015-16

9.6 The Commission directs the Petitioner to submit a petition for final truing up of FY 2014-15 and annual performance review for FY 2015-16 within 2 months of this Order.

Data adequacy in next Tariff petition and timelines

9.7 The Commission directs the Petitioner to come up with the next tariff petition for FY 2014-15 removing the various data deficiencies highlighted throughout the tariff order along with the unit-wise audited accounts for the financial year.

Date: 30th September, 2016

Place: Ranchi

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

A10: ANNEXURE-I

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

Sl. No.	Name S/Shri	Address / Organisation if any
1	Ramawatar Sahu	MD, TVNL
2	M.K. Prasad	Finance Controller, TVNL
3	S.R. Singh	TVNL
4	Dipak Kumar Singh	CS, TVNL
5	Shruti	TVNL
6	J. Tuti	TVNL
7	Siddhartha	Feedback (Consultant)
8	Prasull Ranjan	Feedback (Consultant)
9	Rajesh Ranjan	TVNL
10	Krishna Kumar Singh	TVNL
11	K.K. Verma	JBVNL, CE (C&R)
12	Anita Prasad	JBVNL
13	Sanjay Besra	JBVNL
14	Ankit Jain	Feedback (Consultant)
15	Rishi Nandan	ESE, JBVNL
16	Kedar Nath Das	Jharkhand Technology Pvt. Ltd., BIT Mesra, Ranchi
17	S. S. Kujur	Ranchi
18	Vijay Kumar	Ranchi