RAJASTHAN ELECTRICITY REGULATORY COMMISSION

Petition No. RERC/459/14

In the matter of Annual Performance Review (APR) for FY 2011-12 for KTPS (Unit 1 to 7), STPS (Unit 1 to 6), RGTPS, DCCPP, CTPP (Unit 1 and 2) and Mahi Hydel Project and determination of ARR and Tariff for FY 2014-15 for KTPS (Unit 1 to 7), STPS (Unit 1 to 6), RGTPS, DCCPP, CTPP (Unit 1 to 3), GLTPP Unit 2 and Mahi Hydel Project of RVUN.

Coram:	Shri Vishvanath Hiremath, Chairman Shri Vinod Pandya, Member
Petitioner:	M/s Rajasthan Rajya Vidyut Utpadan Nigam Ltd. (RVUN)
Respondent:	
	 Jaipur Vidyut Vitran Nigam Ltd (JVVNL) Ajmer Vidyut Vitran Nigam Ltd (AVVNL) Jodhpur Vidyut Vitran Nigam Ltd (JdVVNL)
Date of hearing	02.09.2014 & 16.09.2014
Present:	
	 Sh. P.S. Arya, CE (PPMC & IT), RVUN Sh. Hemant Singhal, CE GLPL Sh. M. K. Khandelwal, CAO, RVUN Sh. Ankit Sharma, Consultant, RVUN Sh. Rajesh Mathur, SE (RA), JVVNL Sh. G.L. Sharma Sh. D.S. Agarwal, Rudraksh Energy Sh. B.M. Sanadhya, Samta Power

Date of Order:

09.10.2014

ORDER

1.1 Rajasthan Rajya Vidyut Utpadan Nigam Ltd. (in short 'RVUN') is a Generating Company under the provisions of the Electricity Act 2003 filed a petition for Annual Performance Review (True up) for FY 2011-12 and approval of Annual Revenue Requirement (ARR) and Tariff for sale of electricity from its existing power stations to distribution companies for the FY 2014-15.



- 1.2 In exercise of the powers conferred under Sections 62, 64 and other provisions of the Electricity Act, 2003, read with RERC (Terms and Conditions for Determination of Tariff) Regulations, 2009, RERC (Terms and Conditions for Determination of Tariff) Regulations, 2014 and other enabling Regulations, the Commission has carefully considered the submissions of the Petitioner and the suggestions/objections submitted by the various stakeholders. The Commission has passed the following Order.
- 1.3 This Order has been structured in 5 sections, as given under:
 - (1) Section 1: General
 - (2) Section 2: Summary of filing of Annual Performance Review and Tariff determination process.
 - (3) Section 3: Summary of objections/ comments/ suggestions received from stakeholders and RVUN's response on the True up of ARR for FY 2011-12 and ARR & Tariff Petition for FY 2014-15.
 - (4) Section 4: Analysis of Annual Performance Review (True Up) of RVUN Stations for FY 2011-12
 - (5) Section 5: Determination of ARR and Tariff for RVUN generating Stations for FY 2014-15



SECTION 2

Summary of Filing

2.1 In accordance with Regulation 8 of RERC (Terms & Conditions for Determination of Tariff) Regulations, 2009 hereinafter referred to as RERC Tariff Regulations, 2009, Rajasthan Rajya Vidyut Utpadan Nigam Ltd. (RVUN) filed a petition on 06.06.2014 for Annual Performance Review for FY 2011-12 in respect of the following power stations:

S. No.	Generating Station	Capacity (MW)
1	Kota Thermal Power Station (KTPS) (Unit 1 to 7)	1240
2	Suratgarh Thermal Power Station (STPS) (Unit 1 to 6)	1 500
3	Ramgarh Gas Thermal Power Station (RGTPS)	110.50
4	Dholpur Combined Cycle Gas Based Thermal Power Plant (DCCPP)	330
5	Chhabra Thermal Power Station (CTPP) (Unit 1 & 2)	500
6	Mahi Hydel Power Project	140
	Total	3820.50

2.2 Further, in accordance with Regulation 11 of RERC (Terms & Conditions for determination of tariff) Regulations, 2014 hereinafter referred to as RERC Tariff Regulations, 2014 Rajasthan Rajya Vidyut Utpadan Nigam Ltd. (RVUN) also prayed for determination of ARR and tariff for supply of electricity from its existing power stations to distribution companies for FY 2014-15 for the following power stations:

Table 2: RVUN Generating Stations under ARR and Tariff for FY 2014-15

S. No.	Generating Station	Capacity (MW)	
1	Kota Thermal Power Station (KTPS) (Unit 1 to 7)	1240	
2	Suratgarh Thermal Power Station (STPS) (Unit 1 to 6)	1 500	
3	Ramgarh Gas Thermal Power Station (RGTPS)	110.50	
4	Dholpur Combined Cycle Gas Based Thermal Power Plant (DCCPP)	330	
5	Chhabra Thermal Power Station (CTPP) (Unit 1 to 3)	750	
6	Giral Lignite Thermal Power Project (Unit 2)	125	
7	Mahi Hydel Power Project	140	
	Total	4195.50	

- 2.3 The petition was admitted on 18.06.2014 by the Commission for further consideration.
- 2.4 As required under Section 64(2) of the Electricity Act, 2003 public notice with salient features of the petition inviting objections/ comments/ suggestions from



any desirous person was published in the following newspapers on the dates mentioned against each:

Sr. No.	Name of News Paper	Date of publishing
(i)	Rajasthan Patrika	01.07.2014
(ii)	Dainik Bhaskar	01.07.2014
(iii)	Times of India	02.07.2014
(i∨)	Danik NavJyoti	01.07.2014

- 2.5 The Commission, vide letter dated 07.07.2014, communicated some data gaps and deficiencies in the ARR and Tariff petition for FY 2014-15 and True-up petition for FY 2011-12. The petitioner furnished the requisite information vide its letter dated 22.08.2014.
- 2.6 The petition was also placed on RERC Website. The objections/comments/ suggestions were received from following stakeholders:
 - Jaipur Vidyut Vitaran Nigam Limited
 - Shri G. L. Sharma
 - Shri B. M. Sanadhya
 - Rudraksh Energy
 - Committee for Protection of Public Properties
- 2.7 The Commission forwarded the objections/ comments/ suggestions of objectors to RVUN for its replies. The petitioner replied to the objections/ comments /suggestions made by the objectors vide its letter dated 27.08.2014. RVUN vide its letter dated 12.09.2014 filed additional submissions claiming Return on Equity in the ARR and Tariff for FY 2014-15.
- 2.8 The Public hearing in the matter was finally held on 16.09.2014
- 2.9 The Commission had approved the Tariff for FY 2011-12 in respect of KTPS (Unit 1 to 7), STPS (Unit 1 to 6), RGTPS, DCCPP and Mahi Hydel Power Project in its Tariff Order dated 30.11.2011 and for CTPP (Unit 1 and 2) in its Order dated 06.06.2013. The Commission in this Order is undertaking the Truing up of these Stations for FY 2011-12.
- 2.10 To facilitate reference, the abbreviations used in this Order and an index of the issues and points dealt with are placed at Annexure-1 and Annexure-2, respectively. The status of compliance as submitted by RVUN to the directions issued by the Commission in its previous Orders and fresh directions are discussed in Annexure-3 of the Order.



SECTION 3

<u>Summary of Objections/Comments/Suggestions and Petitioner's Response on</u> <u>Petition filed by RVUN for True up of ARR for FY 2011-12.</u>

General Issues

Stakeholder's Suggestions/Comments

- 3.1 Stakeholder submitted that the copy of Annual Accounts for FY 2011-12 as submitted by RVUN is not a complete copy of the Annual Accounts as it does not contain the Notes on Accounts, Management Replies in respect of CA's Report including Annexure I and II and also does not contain the comments of CAG. He also submitted that the Annual Accounts copy as submitted by RVUN does not fulfil the requirement of the RERC Tariff Regulations, 2009 and therefore RVUN may be asked to submit complete copy of the Audited Accounts for the FY 2011-12.
- 3.2 Stakeholder submitted that the True-up Petition for FY 2011-12 does not contain all the issues separately for KTPS (Unit 1 to 6) and KTPS Unit 7, STPS (Unit 1 to 5) and STPS Unit 6. He submitted that the True-up Petition for these stations has been filed by clubbing these Units together. He further submitted that RVUN may submit the position of True-up as per the Tariff Order dated 30.11.2011 for KTPS and STPS segregating the True-up for KTPS (Unit 1 to 6) and KTPS Unit 7, STPS (Unit 1 to 5) and STPS Unit 6.
- 3.3 Stakeholders submitted that Note 7.1 of the Audited Accounts for FY 2011-12 states as follows:

"Gas Authority of India Ltd. has claimed an amount of Rs. 773.02 Lakh towards Minimum Gas Offtake claim which is disputed and the Company do not admit the claim. However, the Company has provided the liability but the payment will be made only after appropriate decision regarding this matter."

Stakeholder submitted that RVUN may submit as to what is the current position with respect to the said dispute and whether any payment has been made in this regard.

RVUN's Response

3.4 As regards the Audited Accounts for FY 2011-12, RVUN has submitted the Copy of Audited Accounts along with the management reply, notes to accounts and other details to the Commission along with reply to the data gap.



- 3.5 As regards the Unit wise break-up of fixed charges and Variable charges, RVUN has submitted the separate break up cost of KTPS Unit 1-6 and KTPS Unit 7, STPS Unit 1-5 and STPS Unit 6 and CTPP Unit 1, CTPP Unit 2 along with the replies to the data gap.
- 3.6 As regards the issue of payment on account of minimum gas take off, RVUN submitted that the amount of Rs. 773.02 lakh belongs to the previous year as also reflected in the accounts of previous year. RVUN further submitted that the liability as mentioned has been considered as income in the FY 2012-13 and therefore it shall be considered as income in the true up of FY 2012-13.

PLF and Availability

Stakeholder's Suggestions/Comments

3.7 It has been pointed out that PLF and Availability for RGTPS, DCCPP and CTPP for FY 2011-12 have been shown as provided in table below:

Station	Particular	Normative	Actual	
RGTPS	PLF	70%	55.30%	
KGIPS	Availability	70%	86.23%	
DCCPP	PLF	80%	77.76%	
	Availability	80%	94.89%	
CTPP	PLF	80%	70.49%	
CIPP	Availability	80%	81.58%	

 Table 3: PLF and Availability for FY 2011-12

Stakeholders have submitted that RVUN may be asked to clarify as to how such higher Availability has been computed along with the SLDC Certificate. Stakeholders have requested the Commission to proportionately reduce the fixed charges on account of lower PLF for the above mentioned stations due to non-achievement of normative PLF.

3.8 Stakeholder submitted that Availability for Mahi Hydel Power Project has been shown as 91% which is on higher side and may be substantiated by providing the SLDC Certificate. He further submitted that PLF of 14.68% for Mahi Hydel Power Station may be justified by providing the quantum of water released from the Dam.

RVUN's Response

3.9 As regards the higher Availability for RGTPS, DCCPP, CTPP and Mahi Hydel Power Project, RVUN submitted that it has requested the SLDC to provide the



Certificate for Availability of its generating stations. RVUN submitted that for RGTPS the gap in availability and PLF is mainly due to less availability of Gas and backing down instructions from the SLDC.

3.10 As regards the lower PLF of Mahi Hydel Power Project, RVUN submitted that though Mahi Hydel power station is a Peak Load Station due to its quick start and operational characteristics however, it runs as per irrigation demand and not electricity demand. RVUN submitted that the generation of Mahi hydel power station is totally dependent upon the monsoon and availability of water in the Mahi dam. RVUN submitted that besides monsoon and availability of water, generation in the Mahi Hydel Power Project is planned as per irrigation requirement, quantum of water to be released in the canals and schedule of running canals. RVUN submitted that due to all these issues the generation of Mahi Hydel Power Project varies and results in the form of lower PLF than its availability.

Auxiliary Consumption

Stakeholder's Suggestions/Comments

3.11 It has been pointed out that Auxiliary Consumption for RGTPS, DCCPP, CTPP and Mahi Hydel Power Project have been shown as provided in Table below:

Station	Approved Auxiliary Consumption	Actual Auxiliary Consumption
RGTPS	4.93%	1.79%
DCCPP	3.00%	2.73%
Mahi	1.84%	1.33%
CTPP	9.00%	11.60%
KTPS	9.27%	9.59%

Table 4: Auxiliary Consumption for FY 2011-12

He submitted that as the actual Auxiliary Consumption for the above mentioned Stations (except for CTPP and KTPS) is less than the approved figures, the Commission may pass on the necessary relief to the Discoms as per the RERC Tariff Regulations, 2009. As regards CTPP, stakeholder pointed out that higher Auxiliary Consumption reflects the deteriorating performance of the Units and that RVUN may be asked to provide appropriate reasons for such poor performance of CTPP Station. Stakeholders requested the Commission to approve the Auxiliary Consumption for the KTPS and CTPP on normative basis only.



RVUN's Response

3.12 RVUN submitted that the Commission may pass on the benefit as per the norms specified in the RERC Tariff Regulations, 2009. As regards the higher auxiliary Consumption for CTPP, RVUN submitted that increase in Auxiliary Consumption is due to the instructions from SLDC for shutdown/back down of its units. RVUN submitted that in case of backing down of generation, though the load (generation) is reduced but all the auxiliary equipments should have to be run as before the reduction of load and thus electricity consumption does not reduces in that ratio, which results in higher auxiliary consumption on the percentage during the reduced load period.

Capital Cost

Stakeholder's Suggestions/Comments

3.13 Stakeholder submitted that from Para 2.11 to para 2.13 of the True-up Petition for FY 2011-12, it is noted that RVUN has increased the Capital cost of KTPS Unit 7, STPS Unit 6 and CTPP (Unit 1 and 2) on a new issue of Work Contract Tax. He submitted that this issue was not brought out earlier while seeking True-up for FY 2010-11. He further submitted that RVUN may be asked to provide a short note about the case on Work Contract Tax pending before the Hon'ble APTEL.

RVUN's Response

3.14 RVUN submitted that the issue of WCT could not be brought out during the true up of ARR and Tariff for FY 2010-11 as the true up Order for FY 2009-10 came out after the filing of true up petition for FY 2010-11.

Interest on Working Capital

- 3.15 Stakeholder pointed out that RVUN is capitalizing the O&M Spares. He further submitted that there is a component of maintenance of Spares (@ 20% of O&M expenses) in Working Capital which may not be considered while computing the Working Capital Loan. He further submitted that allowing such component will result into double accounting.
- 3.16 Stakeholder submitted that for KTPS the actual Interest on Transitional Ioan and Interest on Working Capital have witnessed a hike of 122% and 79% respectively over and above the approved figures for FY 2011-12. It is further



pointed out that for STPS the actual Interest on Working Capital has witnessed a hike of 44% over and above the approved figures for FY 2011-12. Stakeholder requested the Commission not to allow such hike.

RVUN's Response

- 3.17 As regards the capitalization of O&M spares, RVUN requested the Commission to allow the actual expenditure in the true up.
- 3.18 As regards the interest on transitional loan and interest on working capital, RVUN submitted that in totality the interest claim for term and transitional loan are less than approved by Rs. 17.94 crore.

Operation and Maintenance Expenses

- 3.19 Stakeholder submitted that the O&M expenses as claimed in the True-up Petition for FY 2011-12 for all the generating stations cannot be said as correct as RVUN does not have account of Station-wise actual expenses and has maintained only one account of total expenses for all the stations. He submitted that the O&M expenses have been computed on pro-rata basis as shown at page 59 of the True-up Petition for FY 2011-12. He further submitted that maintaining one account for whole organization and dividing the same on ratio basis does not give correct position and rather it compensates the expenses of one station to other station and in such circumstances the position of loss or gain cannot be found out. He requested the Commission to pass on any savings under O&M expenses to the Discoms as per Regulations.
- 3.20 Stakeholder submitted that in Annual Account Books also, no segregation of the actual expenses is appearing and as regards the same, RVUN may provide the detailed computations (Excel sheet, if prepared). He further submitted that RVUN may be asked to provide appropriate justification for not maintaining the Station-wise expenses and also not showing the same in the Annual Accounts.
- 3.21 Stakeholder submitted that RVUN may clarify whether DCCPP is with warranty spares or without warranty spares along with a copy of the Order placed for the Units for substantiating its claim. He submitted that in absence of such information, the correctness of the claim as well as the correctness of the loss and gain cannot be found out.



- 3.22 Stakeholder submitted that from Annexure-A of the True-Up Petition it is observed that in O&M expenses of RGTPS, DCCPP and CTPP (Unit 1 and 2), an amount of Rs. 0.81 Crore, Rs. 2.41 Crore and Rs. 3.68 Crore has been added on account of "Corporate Allocation" respectively. He submitted that as per Order dated 30.04.2011 of Hon'ble APTEL in case of NTPC vs. CERC, Corporate Expenses are covered in the O&M expenses and therefore, no additional expenses may be added into the O&M expenses. He requested the Commission to disallow any such additional amount.
- 3.23 Stakeholder pointed out that for CTPP (Unit 1 and 2), a Gain of Rs. 15.52 Crore has been shown under O&M expenses in the True-up Petition for FY 2011-12 and therefore, necessary relief as per the Regulations may be passed on to the Discoms.
- 3.24 Stakeholder submitted that RVUN has not provided any document for the actual payment made towards insurance for KTPS (Unit 1 to 7), STPS (Unit 1 to 6), RGTPS, DCCPP and CTPP (Unit 1 and 2) and same may be provided now.
- 3.25 Stakeholder submitted that as per Audited Accounts no expenditure has been shown under Additional Liability towards Pension and Gratuity and as such nothing may be allowed under this head.

RVUN's Response

- 3.26 As regards the accounts for station wise actual expenses, RVUN submitted that the plant wise break up cost has been provided to the Commission in replies to the data gap.
- 3.27 As regards the O&M expenses for RGTPS, RVUN submitted that the excess expenses under O&M in the RGTPS is due to repair work of GT 1 and SGT 1 of GT 2 which has been carried out in the FY 2010-11 but the Store Identification Number (SIN) for the same store item were received in the FY 2011-12 for Rs. 17.56 Crore.
- 3.28 As regards O&M expenses for DCCPP, RVUN submitted that O&M expenses in DCCPP have been claimed without warranty spares and that the expenses claimed in the petition are actual and duly certified by statutory Auditor.
- 3.29 RVUN submitted that the O&M expenses which are not attributed to any specific plant and are incurred at Corporate Office (H.O.) level are common



expenditure and are allocated to the plants. RVUN submitted that the Corporate Office expenses have been booked under the O&M expenses and allocated to different plant based on the capacity of the plants.

- 3.30 As regards the passing on of gain in CTPP Station, RVUN requested the Commission to pass on the benefits in accordance with RERC Tariff Regulations, 2009.
- 3.31 As regards the supporting documents for insurance charges for FY 2011-12, RVUN submitted that the document of actual insurance paid has been provided to the commission along with the replies to the data gap.

Depreciation

Stakeholder's Suggestions/Comments

- 3.32 Stakeholder submitted that certain changes in GFA have been shown for RGTPS and DCCPP Stations stating that it is due to change in the inter allocation of assets head. He submitted that RVUN may clarify this position in detail and may also state as to what was the position prior to this change and what is the position thereafter. He further submitted that RVUN in its True-up Petition for FY 2010-11 had also made such changes in GFA but the Commission in its Order dated 23.07.2014 has not allowed such changes and therefore, on similar lines these changes in GFA for RGTPS and DCCPP may be disallowed for FY 2011-12.
- 3.33 Stakeholder submitted that RVUN has not given segregation of the assets which have completed life of 12 years and which have not. He submitted that in absence of such segregation, the calculations/ computations cannot be said as correct.

RVUN's Response

3.34 As regards the contentions raised by Stakeholders towards computations of depreciation, RVUN submitted that Depreciation has been claimed on actual based on audited accounts.

Interest and Finance Charges

Stakeholder's Suggestions/Comments

3.35 Stakeholder submitted that from page 52 and 57 of the Petition, it may be observed that there are no proper details for the term loans, transitional loans



and interest on working capital and these are being claimed on apportioned basis which cannot be said as correct. He further submitted that RVUN may provide correct actual position and also provide Station wise details of the Ioan obtained, utilised, repaid and the present balance for each of the Ioans. He requested the Commission to adopt the same approach as adopted in Commission's Order dated 23.07.2014 while approving interest and finance charges.

RVUN's Response

3.36 RVUN submitted that the details of loans have been provided along with the petition and that the break up as requested has been provided to the Commission in the replies to the data gap.

Prior Period Expenses

Stakeholder's Suggestions/Comments

3.37 Stakeholder submitted that the claim of additional amount on account of "Corporate Office Allocations" may be disallowed and rest may be allowed on the same approach as has been adopted in the Commission's Order dated 23.07.2014.

RVUN's Response

3.38 RVUN submitted that the prior period expenses of corporate office have been claimed on the actual basis as per audited account for FY 2011-12.

Fuel Cost and Variable Charges

- 3.39 Stakeholder pointed out that RVUN in its True up petition for FY 2011-12 has submitted actual variable cost of Rs. 6799.23 Crore which is 39% higher than that approved by the Commission (i.e., Rs. 4887.65 Crore) in its Tariff Orders dated 30.11.2011 and 06.06.2013 (for CTPP) respectively. Stakeholder has requested the Commission to disallow the higher cost as submitted by RVUN against the normative cost approved by the Commission as it will impact the revenue requirement of the distribution utilities of Rajasthan and subsequently the consumers of the state.
- 3.40 Stakeholder submitted that actual SHR as has been submitted for RGTPS, DCCPP and CTPP (Unit 1 and 2) for FY 2011-12 is on higher side as compared to that approved in the RERC Tariff Regulations, 2009. He further submitted that



RVUN may be asked to indicate whether RGTPS and DCCPP were run on Open Cycle basis or Combined Cycle basis and also give necessary calculations for the SHR claimed for RGTPS, DCCPP and CTPP (Unit 1 and 2) in the True-up Petition for FY 2011-12.

- 3.41 Stakeholder submitted that the GCV of gas for DCCPP Station has been shown as 9106.82 kCal which is on the improved side. He requested the Commission to provide necessary relief to the Discoms on this account. As regards the price of gas, he submitted that RVUN may provide appropriate supporting documents for substantiating the claimed price of gas.
- 3.42 Stakeholder submitted that RVUN may be asked to clarify as to what type of coal has been used in the CTPP Station and in what quantity. He further submitted that RVUN may also submit the Transit loss and GCV for each category of coal and basis thereof.
- 3.43 During the hearing, one of the stakeholders pointed out that at Table 12 of the RVUN True up Petition for FY 2011-12, the GCV for the Indian Coal for CTPP Station is shown as 'zero' which does not seem to be correct.

RVUN's Response

- 3.44 As regards the higher variable charges, RVUN submitted that the main reason for increase in actual variable charges than the approved charges is on account of higher generation than the approved and also increase in the fuel cost. RVUN submitted that the Generation business in power sector is facing lots of hurdles and risk on account of backing down instruction from SLDC, nonavailability of transmission line, non-availability of fuel and sudden turbulence of machinery/plants. RVUN requested the Commission to take considerate view towards RVUN and pass on the additional cost incurred by RVUN.
- 3.45 As regards the SHR for RGTPS and DCCPP, RVUN has submitted that both of these stations have run on combined cycle mode as well open cycle mode of operation. RVUN has also provided the details about mode of operation as shown below:

Particulo	ır	Open cycle on gas	Combined cycle on gas	Total
Gross	Generation			
(MU)		214.7975	321.997	536.794
Net gen	eration (MU)	527.21	4357	527.214357

Table 5: Details of Open and Combined Cycle Mode of Operation for RGTPS



Particular	Open cycle on	Combined cycle	Total
	gas	on gas	
Capacity in MW	220	330	330
PLF%	35.91	84.07	77.98
No of Days	37	328	365
Gross Generation (MU)	70.165	2183.978	2254.143
Net generation (MU)	69.4634	2123.1536	2192.617

Table 6: Details of Open and Combined Cycle Mode of Operation for DCCPP

- 3.46 As regards relief on account of improved GCV of fuel for DCCPP, RVUN requested the Commission to provide necessary relief in accordance with RERC Tariff Regulations, 2009. RVUN has enclosed the copies of the bills for substantiating the price of gas for DCCPP.
- 3.47 As regards the increase in SHR for CTPP RVUN submitted that the normative heat rate prescribed in the RERC Tariff Regulations, 2009 can be achieved only when the unit is running at their optimum operational parameters and since there is frequent back down of the generation by the load dispatch centre for maintaining the grid discipline, it has been observed that frequent back down of generation on the units affects the other operational parameters which further causes increase in SHR. RVUN submitted that the location of the CTPP plant is situated in the zone, where the rainfall is comparatively higher, therefore causing improper burning due to wet-coal. RVUN submitted that under such condition Machine do not operate at full load, causing increase in the SHR for the generating station.
- 3.48 As regards the details of coal used, transit loss and GCV of coal for CTPP station, RVUN submitted that the details of fuel have been provided in true up petition for FY 2011-12 at Table No. 36. RVUN submitted that the actual transit losses have been claimed as per audited accounts for FY 2011-12.

<u>Summary of Objections/Comments/Suggestions and Petitioner's Response on</u> <u>Petition filed by RVUN for determination of ARR and Tariff for FY 2014-15.</u>

General Issues

- 3.49 Stakeholders submitted that Regulation 11(4) of the RERC Tariff Regulations, 2014 specifies that the information for the previous year should be based on the Audited Accounts and in case Audited Accounts for previous year are not available, Audited Accounts of the immediately preceding previous year should be filed along with Un-audited Accounts for the previous year. They further submitted that in accordance with the Regulations, such accounts should have been submitted for consideration of the ARR and Tariff Petition for FY 2014-15 but the same are not available. Stakeholders submitted that RVUN may provide the Audited Accounts for FY 2012-13 and Un-audited Accounts for FY 2013-14 for maintainability of the Petition.
- 3.50 Stakeholder submitted that in the ARR and Tariff Petition for FY 2014-15 for CTPP Station, CTPP Unit 3 has also been included whose COD has been stated as 19.12.2013. He submitted that till the Capital cost of CTPP Unit 3 is not determined/ approved by the Commission and tariff for FY 2013-14 is determined, the inclusion of CTPP Unit 3 in the ARR and Tariff Petition for FY 2014-15 is not correct. He pointed out that RVUN should have submitted separate petition for CTPP Unit 3 as per Regulation 42(2) of RERC Tariff Regulations, 2014.
- 3.51 Stakeholder submitted that RVUN may clarify whether the colony of Mahi Hydel Power Project is with metered electricity supply and regular charges are being recovered from the occupants of the colony. He further submitted that RVUN may provide the electricity supplied to the colony of Mahi Hydel Power Project during FY 2011-12, FY 2012-13 and FY 2013-14 and revenue received for such supply of electricity.
- 3.52 Stakeholder submitted that as per Regulation 42(1) of the RERC Tariff Regulations, 2014, a generating company is required to file a Petition of tariff in accordance with the provisions of Part II of the Regulations. He further submitted that Regulation 5 (3) in Part II of the RERC Tariff Regulations 2014 stipulates that the applicant shall submit the forecast of the ARR, expected revenue from the existing tariff and proposed tariff but the statement of ARR and expected revenue on the basis of existing tariff is not available with the



Petitions for KTPS, STPS, RGTPS, DCCPP, CTPP, GLTPP and Mahi hydel power project. He further submitted that RVUN may provide this information.

- 3.53 Stakeholder submitted that RVUN may provide following information with respect to the damages in the fire incident reported earlier for CTPP Unit 1
 - (i) Date on which the reported incident of fire occurred.
 - (ii) Reasons for such an incidence and whether any enquiry has been set up and if so what were the results of that enquiry.
 - (iii) Cost incurred in bringing the Unit in use after due repairs.
 - (iv) Whether the damage has taken place due to mal-operation of the Unit or due to manufacturing defect.
 - (v) Duration of outage of Unit on account of this defect.
- 3.54 Stakeholder pointed out that STPS Unit 6 had achieved COD on 30.12.2009 at 12:00 hours. However, RVUN subsequently revoked the COD vide its letter dated 06.01.2010 citing a defect reported in the LP Turbine Rotor Blade. He further submitted that the Commission in its Order date 06.06.2013 did not consider this revocation of COD and has considered the COD as 30.12.2009. He submitted that RVUN may provide following information in this regard:
 - (i) Details of the actual defect in STPS Unit 6 due to which LP Turbine rotor blade was damaged.
 - (ii) Details of the cost that has been incurred in replacing the damaged turbine rotor blades and who has borne this cost.
 - (iii) Whether the damage has taken place due to mal-operation of the Unit or due to manufacture defect.
 - (iv) Details of enquiry made in this respect and results of such enquiry.
 - (v) Duration of outage of STPS Unit 6 on account of this defect.
- 3.55 Stakeholder submitted that there is no specific proposition for provisional tariff in the petition and in case RVUN wants to seek provisional tariff similar to what has been proposed for final tariff, the basic purpose for determining the tariff will be lost.
- 3.56 Stakeholder submitted that RVUN may provide the various measures taken by it towards improvement of the station-wise generation and also provide the detailed year-wise comparison sheet for the improvements in various consumables, fuel, breakdown etc. which will help in clarifying the reduction in the cost of generation over the past years.

- 3.57 Stakeholder submitted that RVUN may be asked to specify the steps taken by it in accordance with various provisions of the National Tariff Policy and Electricity Policy under the Electricity Act 2003 and specifically provide the Station-wise measures taken in accordance with provisions of Renovation and Modernization (R&M) at Para 5.2.21, 5.2.22 and 5.2.23 of National Tariff Policy.
- 3.58 Stakeholder submitted that RVUN may provide its current actual position of Profit and Loss as compared to the FY 2000-01 and if RVUN is suffering losses, it may also provide the measures to be taken for improvement of the same.
- 3.59 Stakeholder submitted that RVUN has not included the Kalisindh Thermal Power Station in the ARR and Tariff Petition for FY 2014-15 but from the petition filed by RVUN for Kalisindh Thermal Power Plant, it was noticed that RVUN has considered generation for Kalisindh TPS Unit I (600MW) for 11 months and Unit II (600 MW) for 3 months. Stakeholder pointed out that the factual position may be clarified by RVUN along with the expected generation & tariff for FY 2014-15, for Kalisindh Thermal Power Plant.
- 3.60 Stakeholder pointed out that in Table 12 of the ARR and Tariff Petition for FY 2014-15 for CTPP, the Auxiliary Energy Consumption is given as 89.76% and the Auxiliary Energy Consumption of 'zero' units is shown which should have been 10.24% and 294.29 MU respectively.
- 3.61 Stakeholder pointed out that in a meeting taken by Union Power Minister with Regulators (perhaps on 27.6.14), it was discussed as to how the development of Renewable Energy can be boosted and it was suggested that on the line of RPO, RGO (Renewable Generation Obligation) may also be prescribed. Stakeholder further submitted that by the time, it is made mandatory; RVUN may take steps for generation from Renewable Sources like Solar and Wind and that sufficient land must be available for Solar Generation at Ramgarh & Suratgarh. He further submitted that around 200 MW of Solar Power which is 5% of the total Generation Capacity, for RVUN's Coal based stations of about 4000 MW, may be installed. He submitted that Solar Generation at these sites will not be costly, since the land and evacuation system are already available.

RVUN's Response

- 3.62 As regards the Audited Accounts for FY 2012-13 and Un-Audited Accounts for FY 2013-14, RVUN submitted that it has provided the actual information, however at the time of filing the petition for ARR and Tariff for FY 2014-15, the audited accounts for FY 2012-13 were not finalized by the AG and therefore it has considered the unaudited figures for FY 2012-13.
- 3.63 As regards the inclusion of CTPP Unit 3, RVUN submitted that a separate petition for approval of capital cost and ARR and Tariff for CTPP Unit 3 for FY 2013-14 has been filed before the Commission.
- 3.64 As regards the electricity supply to the colony of Mahi Hydel Power Project, RVUN submitted that electricity supply to the colony of Mahi Hydel Power Project is metered supply and regular charges are being paid to Discoms.
- 3.65 As regards the statement of ARR and expected revenue on basis of existing tariff, RVUN submitted that both the ARR and expected revenue has been provided in the Format no 1.2 and Format no. 3.1 along with the ARR and Tariff Petition for FY 2014-15.
- 3.66 As regards the details for damages of CTPP Unit 1 and defects in STPS Unit 6, RVUN submitted that the query is not relevant to the ARR and tariff petition of FY 2014-15 and that the Commission has already approved the capital cost of these Stations through a separate Order. RVUN submitted that the detail in this regards may be provided separately to the stakeholder, if sought.
- 3.67 As regards the provisional tariff, RVUN submitted that in the ARR and Tariff Petition of FY 2014-15, RVUN has requested the Commission to allow the provisional Tariff with effect from 01.04.14 for FY 2014-15 till the final tariff order is issued as proposed in the petition.
- 3.68 As regards the measures taken to improve performance, RVUN submitted that it appreciates the concern of stakeholder and that it has already provided the information of income and expenditure with the ARR and Tariff petition for FY 2014-15. RVUN submitted that it is striving hard for better performance of generating stations and is consistently focusing on the monitoring of the generating stations for the better performance.
- 3.69 As regards the inclusion of the Kalisindh Thermal Power Station in the ARR and Tariff Petition for FY 2014-15, RVUN submitted that Kalisindh TPS Unit 1 (600 MW) has achieved the COD on 07.05.2014 and that a separate ARR and Tariff



Petition has been filed before the Commission for FY 2014-15 for this Station. RVUN submitted that the ex-bus generation considered in the Petition is 3725.77 MU and proposed tariff is Rs. 4.22 per unit.

- 3.70 As regards the Auxiliary Consumption of CTPP Station, RVUN submitted that it has provided the Auxiliary Consumption separately for CTPP Unit 1 and 2 and that there is some typographical error. RVUN submitted that the average Auxiliary consumption may be considered as 10.24% and 294.29 MU for FY 2013-14 for CTPP Unit 1 and 2.
- 3.71 As regards the steps to be taken for promoting generation from Renewable Sources, RVUN submitted that it appreciates the suggestion of the stakeholder as being the consumers and as well as society.

Availability and PLF

Stakeholder's Suggestions/Comments

- 3.72 Stakeholder submitted that RVUN has taken both Availability and PLF for KTPS (Unit 1 to 7) as 82% which is as per the norms prescribed in the Regulations. He submitted that in past the PLF for KTPS has been ranging from 89% to 92%. He further submitted that RVUN should have mentioned higher PLF, though with a mention that their tariff may be decided on normative PLF basis as this would have helped improve availability of power to Discoms which would have curbed the purchase of short term power by Discoms at higher rates.
- 3.73 Stakeholder submitted that RVUN has taken PLF and Availability for STPS, RGTPS, DCCPP and CTPP as shown in table below:

Station	Particular	As per Petition for FY 2014-15			
STPS (Unit 1 to 6)	PLF	82%			
	Availability	88%			
	PLF	70%			
RGTPS	Availability	70%			
	PLF	80%			
DCCPP	Availability	80%			
	PLF	80%			
CTPP (Unit 1 to 3)	Availability	80%			

Table 7: PLF and Availability for FY 2014-15

Stakeholder pointed out that in the past, STPS (Unit 1 to 6), RGTPS, DCCPP and CTPP (Unit 1 to 3) have not been able to achieve even the normative PLF of



82%, 70%, 80% and 80% respectively and therefore RVUN may be asked to clarify as to how it is proposing such higher Availability for these Stations in the present petition.

- 3.74 Stakeholder submitted that for Mahi Hydel Power Project RVUN has taken Availability as 90% and PLF as 10.60%. He submitted that RVUN may clarify as to why it has proposed such high availability with such a lower PLF.
- 3.75 Stakeholders have submitted that for GLTPP Unit 2, RVUN has shown a PLF of 20.25% and 77.36% for FY 2013-14 and FY 2014-15 respectively and therefore the fixed charges for GLTPP Unit 2 for FY 2014-15 may be proportionally reduced due to non-achievement of normative PLF.
- 3.76 Stakeholder pointed out that PLF for STPS Unit 1 to 6 has been shown as 80.44%, 71.76% and 82% for FY 2012-13, FY 2013-14 and FY 2014-15 respectively. Stakeholder submitted that RVUN may indicate the reason for lower PLF for STPS Station during FY 2013-14 and also clarify as to how it is expecting to achieve 82% PLF during FY 2014-15.
- 3.77 Stakeholder pointed out that as the PLF for STPS Unit 1 to 6 has been lesser than the normative PLF, the fixed charges should have been reduced on pro-rata basis during FY 2013-14. He submitted that RVUN may clarify the same.
- 3.78 During the hearing one of the stakeholders pointed out that for the purpose of tariff determination, the normative PLF can be considered but for indicating the energy availability, realistic PLF should be considered so that the energy availability from all sources is assessed correctly by the Discoms.
- 3.79 During the hearing one of the stakeholders submitted that RVUN may provide the Actual Availability for Giral Generating Station Unit I & II as against the Normative Availability.

RVUN's Response

3.80 As regards the PLF and Availability for KTPS, RVUN submitted that RERC Tariff Regulations require the utility to file the petition based on the norms prescribed. RVUN submitted that the actual PLF and Availability shall be considered in true up petition.

- 3.81 As regards the PLF and Availability for STPS Unit 1 to 6, RGTPS, DCCPP, CTPP Unit 1 to 3 and Mahi Hydel Power Project, RVUN submitted that for FY 2014-15, the RVUN is trying its best to achieve the target for PLF and Availability as specified in the RERC Tariff Regulations. As regards Mahi Hydel Power Project, RVUN submitted that availability of water is not under the control of RVUN.
- 3.82 As regards the reduction in fixed charges of GLTPP Unit 2 on account of lower PLF, RVUN submitted that the PLF for FY 2014-15 is as per Norms specified in the RERC Tariff Regulations.
- 3.83 As regards the reason for lower PLF of STPS Station, RVUN submitted that the generation data for FY 2013-14 were provisional at the time of filing the petition and that the RERC norms require the utility to file the petition based on norms prescribed. RVUN submitted that any difference in the approved and actual figures shall be considered in the true up petition.
- 3.84 As regards the reduction in fixed charges for FY 2013-14 due to lesser PLF, RVUN submitted that the petition has been submitted in accordance with the RERC Tariff Regulations and that the Regulations do not specify the reduction of fixed charges on the basis of PLF.

Fuel Price and Gross Calorific Value

- 3.85 Stakeholders submitted that following information may be provided by RVUN in respect of coal being received from the coal mines allotted to RVUN in Jharkhand:
 - (i) Whether the cost of coal has been determined including washed coal and if so what is the cost so determined and by whom this cost is determined.
 - (ii) As per Regulations, Transfer Price for the coal mined from these mines is required to be determined by the Commission and as such RVUN may clarify whether it has filed any petition for determination of Transfer Price in the Commission and if so on what date and what is its present stage.
 - (iii) Whether the GCV of this coal has been analysed by some approved laboratory and if so what has been the result.
 - (iv) The quantity of each kind of coal to be used may be stated.
 - (v) Total quantity of each kind of coal to be used during the year may also be stated



- (vi) GCV of indigenous coal, washed coal and imported coal may also be stated.
- 3.86 During the hearing one of the stakeholders pointed out that the prices of imported coal have been declining in recent months as shown in Table below:

Months	Price of Coal with GCV of 6500 kCal (\$ per MT)	Price of Coal with GCV of 4200 kCal (\$ per MT)
January, 2014	83.22	38.75
June, 2014	76.29	37.49

 Table 8: Imported Coal Prices as submitted by Stakeholder

He further submitted that from January to June 2014, Coal prices have decreased by more than 8% for Coal with GCV 6500 kCal. The stakeholder pointed out that coal having higher GCV is more than two times costly with almost 1.5 times higher GCV. Therefore, techno economic suitability of imported coal of lower GCV of 4200 kcal may be checked and if found suitable, the same may be used. He submitted that the GCV of imported coal is near to that of indigenous coal.

RVUN's Response

3.87 As regards the fuel price and GCV, RVUN submitted the details of actual fuel price and calorific value along with the copies of the bills for the recent quarter i.e., April, 2014 to June, 2014. As regards fuel supply to Chhabra Thermal Power Station, RVUN submitted that coal to CTPP unit-1 & 2 is being supplied from Coal India Ltd and not from coal mines allotted to RVUN.

Capacity Index for Mahi Hydel Power Project

Stakeholder's Suggestions/Comments

3.88 Stakeholder submitted that RVUN may provide the Capacity index for Mahi Hydel Power Project, keeping in view the availability of the water and its release schedule declared by the Irrigation Department. It was further submitted that such latest schedule as available may be furnished and if the same is not yet obtained, it may be obtained now.

<u>RVUN's Response</u>



3.89 RVUN submitted that release of water for the Mahi Hydel Power Project is under the control of irrigation department as Mahi project is essentially as irrigation project

Auxiliary Consumption

Stakeholder's Suggestions/Comments

- 3.90 Stakeholder submitted that Auxiliary Consumption for KTPS is on the increasing side which shows the inefficiency of the Station. It was also pointed out that Auxiliary Consumption for STPS in the past has been on the higher side and RVUN must be cautious while claiming and it is within the normative parameters.
- 3.91 Stakeholders submitted that for GLTPP Unit 2, RVUN has proposed auxiliary consumption of 20.10% and 11.50% for FY 2013-14 and FY 2014-15 respectively which is higher than the normative auxiliary consumption approved by the Commission. Stakeholders have requested the Commission to approve the auxiliary consumption on normative basis for GLTPP Unit 2 while computing the ARR requirement for RVUN stations for FY 2014-15.

RVUN's Response

- 3.92 As regards the Auxiliary Consumption for KTPS and STPS, RVUN submitted that the old Units had undergone major overhauling and thus the Auxiliary Consumption had increased and the same has also increased due to instruction from SLDC for shutdown/back down of its Units. RVUN submitted that in case of backing down of generation, though the load (generation) is reduced but all the auxiliary equipments have to be run as before the reduction of load and thus electricity consumption does not reduce in that ratio in the station which results in higher auxiliary consumption on the percentage during the reduced load period. RVUN also submitted that it is trying its best to achieve the target for Auxiliary Consumption as specified in the RERC Tariff Regulations, 2014. However some time target could not be achieved due to some external factors as stated above.
- 3.93 As regards the Auxiliary Consumption of GLTPP Unit 2, RVUN submitted that the Auxiliary Consumption for FY 2014-15 is considered as per the Norms specified in RERC Tariff Regulations, 2014.



Capital Cost

Stakeholder's Suggestions/Comments

- 3.94 Stakeholder submitted that RVUN has once again increased the Capital cost of KTPS Unit 7, STPS Unit 6 and CTPP (Unit 1 and 2) by not considering the reduction on account of 'Work Contract Tax' as was done in the Commission's Order dated 06.06.2013 by stating that the matter is pending before the Hon'ble APTEL. It was also pointed out that merely because the matter is pending before the Hon'ble APTEL and there being no Stay Order RVUN has to go by the Commission's order. Therefore, stakeholder requested the Commission to consider the cost for KTPS Unit 7, STPS Unit 6 and CTPP (Unit 1 and 2) as per the Commission's Order dated 23.07.2014.
- 3.95 Stakeholder submitted that RVUN may clarify whether the Capital cost for DCCPP has been approved by the Commission and if so, RVUN may provide the reference of the Commission's Order.
- 3.96 Stakeholder pointed out that the Capital Cost of CTPP Unit 3 has been shown in the Petition as Rs. 1761.60 Crore i.e., about Rs. 7.05 Crore/MW which is quite high. Stakeholder submitted that RVUN may provide the Cost indicated in the DPR and the Cost approved by the State Government and also furnish the details as directed by RERC vide its order dated 04.07.14.

RVUN's Response

- 3.97 As regards the increase in the Capital Cost for KTPS, STPS and CTPP on account of WCT, RVUN has requested the Commission to consider the addition of WCT in the Capital cost as RVUN is very much hopeful to get the relief from the Hon'ble APTEL. RVUN also submitted that the issue of WCT could not be brought out in the true up petition for FY 2010-11 as the Order on true up of ARR for FY 2009-10 came out after the filing of true up petition for FY 2010-11.
- 3.98 As regards the Capital Cost of DCCPP, RVUN submitted that the Capital cost for DCCPP has been approved by the Commission.
- 3.99 As regards the Capital Cost of CTPP Unit 3 RVUN submitted that RVUN shall provide the detailed cost break-up separately in its replies to the data gap with respect to petition for Capital cost and ARR for CTPP Unit 3 for FY 2013-14.



Operation and Maintenance Expenses

Stakeholder's Suggestions/Comments

- 3.100Stakeholder submitted that the O&M expenses for KTPS (Unit 1 to 7), STPS (Unit 1 to 6), RGTPS, CTPP (Unit 1 and 2) and Mahi Hydel Power Project may be allowed as per the norms specified in RERC Tariff Regulations 2014. Stakeholder also pointed out that CTPP Unit 3 may be excluded from the present petition as its Capital cost is not yet finalised and so it may be dealt separately and as such no O&M expenses may be allowed for CTPP Unit 3.
- 3.101 Stakeholder submitted that RVUN may clarify whether DCCPP is with warranty spares for 10 years or is without warranty spares. He further submitted that to substantiate the position, RVUN may provide the copies of the Orders placed for the Units.
- 3.102Stakeholders submitted that for STPS station; RVUN has proposed O&M expenses of Rs. 241.34 Crore for FY 2014-15 which is 18% higher than Rs. 205.18 Crore estimated for FY 2013-14. Stakeholders have requested the Commission to approve normative escalation on O&M expenses for STPS Units for FY 2014-15 and disallow such huge escalation sought by RVUN for STPS Station.

RVUN's Response

- 3.103As regards the O&M expenses for all the generating stations, RVUN submitted that O&M expenses have been computed on the normative basis. As regards the inclusion of CTPP Unit 3, RVUN submitted that it is very much hopeful that the Capital cost and tariff of CTPP Unit 3 as filed through a separate petition will be finalized soon by the Commission.
- 3.104As regards the O&M expenses for DCCPP, RVUN submitted that DCCPP station is without warranty spares. Further, RVUN also submitted that it has already provided the supporting documents to the Commission.
- 3.105As regards the O&M expenses for STPS station, RVUN submitted that the O&M expenses for STPS for FY 2014-15 have been computed as per RERC Tariff Regulations, 2014.

Depreciation

- 3.106Stakeholder submitted that depreciation for KTPS, STPS, RGTPS, DCCPP, CTPP (Unit 1 and 2) and Mahi Hydel Power Project may be allowed on the basis of the Capital cost already approved and no additional Capital cost be allowed. Stakeholder also pointed out that CTPP Unit 3 may be excluded from the present petition as its Capital cost in not yet finalised and so it may be dealt separately and as such no depreciation may be allowed for CTPP Unit 3.
- 3.107Stakeholder submitted that correctness of the depreciation claimed for all the generating stations cannot be found out as RVUN has not submitted the details of the assets which have completed 12 years of life and which have not, which means that the proper Fixed Asset Register is not maintained. He further submitted that for how long such position is allowed to be continued and this is a matter of concern.
- 3.108Stakeholder pointed out that Unit 1 of Mahi Hydel Power Project was commissioned on 22.01.1986, Unit 2 on 06.02.1986, Unit 3 on 15.02.1989 and Unit 4 on 17.09.1989 and hence Unit 1 and 2 have completed around 28 years and Unit 3 and 4 have completed around 25 years. He pointed out that the computation of depreciation has to be in accordance with Regulation 22(4) of RERC Tariff Regulations, 2014. He submitted that RVUN may provide the rate of depreciation arrived at on this basis.

RVUN's Response

- 3.109 As regards the depreciation for KTPS Unit 7, STPS Unit 6 and CTPP Unit 1 and 2, RVUN requested the Hon'ble Commission to consider the addition of WCT in the Capital cost, as RVUN is very much hopeful to get the relief from the Hon'ble APTEL and also consider the additional capitalization as submitted in the petition with detailed justification.
- 3.110As regards the submission of Fixed Asset Register, RVUN submitted that as directed by the Commission, RVUN is in process of preparing the fixed assets register for all the generating stations and for this RVUN had appointed an consultant for preparing the fixed assets registers of STPS and the said consultant has submitted its report and the same is being examined by the auditor. RVUN therefore, submitted that once the fixed assets registers of STPS is approved by the auditor, the fixed assets registers for all the generating stations will be maintained on similar lines and till the time fixed assets registers are not prepared, RVUN has to calculate and claim depreciation based on the rates of depreciation provided in appendix of the Regulation 23. RVUN submitted



that the rate of depreciation in appendix 1 of the Regulation has been prepared based on the useful life of the asset. RVUN submitted that considering that the net loan repayment is allowed to the tune of allowed depreciation only and that the current depreciation level (maximum allowed depreciation percentage is 5.28% only) do not cover for the requirement of loan repayment (80% of the capital cost to be paid in 15 years which equals 5.33% per year). Therefore, any reduction in current depreciation will increase the interest burden of the utility. RVUN submitted that apart from this there is no other method to determine the useful life of the each and every asset separately. Considering all these, RVUN requested the Commission to consider the rate of depreciation as in appendix -1 of the Regulation 23 and compute and allow the depreciation based on the useful life of the assets till the time fixed asset registers are prepared.

3.111 As regards the depreciation for Mahi Hydel Power Project, RVUN submitted that the depreciation for Mahi Hydel Power Project has been claimed only as per norms

Return on Equity

- 3.112During the hearing, one of the stakeholder submitted that Return on Equity needs to be provided but for the first time, ROE may be allowed at rate of 5% as was done in case of RVPN or at maximum 8% so as to restrict increase in Average Tariff of about 25 P/unit.
- 3.113During the hearing, one of the stakeholder pointed out that the equity for various generating stations as claimed by RVUN is higher than that approved by the Commission in its earlier Tariff Orders. He requested the Commission to approve the return on equity based on the equity approved by the Commission in its earlier Tariff Orders. He further submitted that the BoD approved the RVUN's request for ROE on 19.05.2014 whereas RVUN filed the Petition for ARR and Tariff for FY 2014-15 in the month of June, 2014. RVUN may clarify as to why ROE was not included in the ARR and Tariff Petition for FY 2014-15 when the approval from the Board of Director was already available with it even before filing of the Petition and why this issue has been raised through supplementary Petition after the comments on the Petition have been invited.



Interest on Loan

Stakeholder's Suggestions/Comments

- 3.114Stakeholder pointed out that Form G-6.2 of the ARR and Tariff Petition for FY 2014-15 for KTPS, STPS, RGTPS, CTPP and Mahi Hydel Power Project does not provide the details about transitional loan, term loan and other loans. He further submitted that RVUN may provide details separating all kinds of loans and may also provide information for each loan as to how much was originally obtained, how much has been repaid and what is the current balance.
- 3.115Stakeholder pointed out that RVUN has included transitional loan in the Interest and Loan Liability Statement in Form G-6.2 of the ARR and Tariff Petition for CTPP for FY 2014-15, whereas no transitional loan has yet been approved by the Commission for CTPP. He submitted that RVUN may provide the clarification regarding inclusion of transitional loan.
- 3.116Stakeholder pointed out that the interest on loan for Mahi Hydel Generating Station has been shown as zero in the ARR and Tariff Petition for FY 2014-15.

RVUN's Response

3.117As regards the details of Ioan, RVUN submitted that the details of Ioan have been provided with the ARR and tariff petition for FY 2014-15. RVUN submitted that the break up has been provided to the Commission in the replies to the data gap.

Working Capital Loan Requirement

- 3.118Stakeholder submitted that the Working Capital for FY 2014-15 may be allowed for KTPS (Unit 1 to 7), STPS (Unit 1 to 6), RGTPS, DCCPP, CTPP (Unit 1 and 2) and Mahi Hydel Power Project as per the norms specified in the RERC Tariff Regulations, 2014. He also pointed out that as RVUN is capitalizing the spares of operation and maintenance and therefore, the component of maintenance spares may be removed from the Working Capital so as to avoid double accounting.
- 3.119Stakeholders have submitted that for KTPS station, RVUN has shown an amount of Rs. 95.10 Crore towards interest on working capital requirement for FY 2013-14 which is 16% higher than that for FY 2012-13 and further Rs. 88.16 Crore have



been shown as interest on working capital requirement for FY 2014-15 which is lower by around 7% than that for FY 2013-14. Stakeholders have requested the Commission to scrutinize the variation in the submission made by RVUN and approve interest on working capital as per the normative computations.

RVUN's Response

3.120As regards the various contentions raised by the stakeholders with respect to computations of the Interest on Working Capital for the generating stations, RVUN submitted that the Interest on working capital has been computed as per norms specified in the RERC Tariff Regulations, 2014.

Insurance Charges

Stakeholder's Suggestions/Comments

- 3.121 Stakeholder pointed out that RVUN has computed insurance charges for KTPS (Unit 1 to 7), STPS (Unit 1 to 6), RGTPS, DCCPP and CTPP (Unit 1 and 2) by increasing the insurance charges paid for previous years by 10% and taking FY 2012-13 as the base year. He submitted that this method does not appear to be correct and although the Annual Accounts for FY 2013-14 are getting finalized, RVUN may provide the actual payment made on this account in FY 2013-14 with a copy of supporting document.
- 3.122Stakeholder submitted that the RERC Tariff Regulations, 2014 specifies that the actual insurance expenses incurred shall be allowed separately, subject to a ceiling of 0.2% of average Net Fixed Asset for the year and therefore, RVUN may indicate the NFA as well as confirm that the ceiling specified by the Commission is being followed for all the Stations.

<u>RVUN's Response</u>

- 3.123As regards the insurance charges for FY 2014-15, RVUN submitted that it has provided the best possible information in the ARR and tariff petition for FY 2014-15 and that the copy of payment of insurance charges will be provided during the True up of ARR for FY 2014-15.
- 3.124As regards the submission of NFA, RVUN submitted that the Net Fixed Assets (NFA) have been provided in the Format 6.1 as well as Format 6.12. RVUN also submitted that the insurance charges are within the limit specified by the Commission.



Corporate Social Responsibility

Stakeholder's Suggestions/Comments

3.125Stakeholders have pointed out that the Commission in its Order dated 06.06.2013 has already taken a decision that no separate amount is to be allowed under CSR as it is to be met out by RVUN's internal resources. Stakeholders submitted that in line with the above mentioned Order, RVUN's claim for CSR for KTPS (Unit 1 to 7), STPS (Unit 1 to 6), RGTPS, DCCPP, CTPP and Mahi Hydel Power Project for FY 2014-15 is not admissible as these are to be met from the profit of RVUN.

<u>RVUN's Response</u>

3.126As regards the inclusion of CSR, RVUN requested the Commission to approve the CSR expenses as it is incurring the CSR expenditure as per policy approved by the Energy Department, Government of Rajasthan.

Variable Charges

- 3.127Stakeholder submitted that RVUN may clarify as to what type of coal and in what quantity has been used in the KTPS (Unit 1 to 7), STPS (Unit 1 to 6) and CTPP (Unit 1 to 3) i.e., indigenous coal, washed coal, imported coal etc. He also submitted that RVUN may provide GCV and transit loss for each kind of coal being used in the station along with the copy of latest Order placed for purchase of coal as supporting document.
- 3.128Stakeholder submitted that RVUN may provide computations for the SHR of 2256 kCal/kWh as claimed in ARR and Tariff Petition for RGTPS for FY 2014-15. He also submitted that the copy of latest Order placed for purchase of gas for RGTPS and DCCPP may be provided by RVUN for substantiating the price and GCV of gas.
- 3.129Stakeholder submitted that for STPS Station the impact of blending of imported coal has been taken as 10% for FY 2012-13, FY 2013-14 and FY 2014-15. Stakeholder submitted that the actual data about percentage of imported coal and variable charges with imported coal for FY 2012-13 and FY 2013-14 may be given and it may also be clarified whether 10% of imported coal has been blended with Indigenous coal and how the impact of the same on tariff has been considered. It is further pointed out that as per the Form G-1.1,



impact of imported coal has been shown as Rs. 0.606 per unit in FY 2012-13, Rs. 0.615 per unit during FY 2013-14 and Rs. 0.608 for FY 2014-15 which appears to be quite high i.e., about 22% increase on blending of 10% of Imported coal and therefore, RVUN may clarify the same.

- 3.130Stakeholder pointed out that as per the details given in Table 12 of the ARR and Tariff Petition for CTPP Station, the quantity of imported coal used works out to 11.38% approx. Stakeholder further submitted that in Table G 1.1, summary of Tariff Proposed is given, wherein the impact of Imported Coal on the rate of variable charges has been shown as Rs. 0.589 per unit which appears to be very high. Stakeholder requested RVUN to indicate as to how the same has been worked out.
- 3.131 Stakeholder pointed out that the SHR as claimed by RVUN for KTPS and STPS is on the higher side than the normative SHR as per RERC Tariff Regulations, 2014.
- 3.132Stakeholders pointed out that RVUN in its ARR and Tariff Petition for FY 2014-15 has considered the SHR for RGTPS as 2256 kCal/kWh. It was pointed out that if the plant is assumed to achieve normative PLF then it implies that adequate gas is available for running the generating station in the combined cycle mode of operation. Stakeholders submitted that RVUN may provide the basis of SHR proposed in the Petition with details of computations and supporting documents.

RVUN's Response

- 3.133 As regards the details of coal used, RVUN submitted that the detail of fuel used in the generating stations has been provided in format 5.3 of the ARR and Tariff petition for FY 2014-15. As regards the supporting documents for computations of GCV and landed fuel price, RVUN submitted that the information in this respect is provided to the Commission as reply to the data gap.
- 3.134As regards the computation of SHR for RGTPS, RVUN submitted that the RERC Tariff Regulations, 2014 allows SHR of 1950 kCal/kWh for combined cycle mode of operation and SHR 2850 kcal/kWh for open cycle mode of operation for RGTPS. RVUN submitted that it has computed the SHR of 2256 kCal/kWh considering 34% weight for open cycle mode of operation and 66 % for combined cycle mode of operation.

- 3.135As regards the blending of coal, RVUN submitted that the quantity of imported coal is approximately 10% of the total coal consumption and as the price of imported coal is more than twice the price of domestic coal the percentage of imported coal cost in total cost is approximately 22%.
- 3.136As regards the blending of coal for CTPP, RVUN submitted that the quantity of imported coal is approximately 10% of the total coal consumption and as the price of imported coal is more than twice the price of domestic coal the percentage of imported coal cost in total cost is approximately 27%.

Incentive

Stakeholder's Suggestions/Comments

3.137Stakeholder submitted that RVUN in its Petition for determination of ARR and Tariff for FY 2014-15 for KTPS (unit 1 to 7), STPS (Unit 1 to 6), RGTPS, DCCPP, CTPP (Unit 1 to 3) and Mahi Hydel Power Project has proposed to recover incentive as per RERC Tariff Regulations, 2014. It is further submitted that for such proposals no orders are required as has already been stated by the Commission in its previous Orders. He also submitted that RVUN may clarify as to how it is claiming incentive if it is proposing Availability at normative basis.

RVUN's Response

3.138As regards the incentive computations, RVUN submitted that incentive has been claimed in accordance with the norms specified in the RERC tariff Regulations, 2014.

Capital Spares for KTPS

Stakeholder's Suggestions/Comments

3.139Stakeholder pointed out that in the statement of gross assets under the True-up Petition filed by RVUN for FY 2011-12, capital spares have been shown as Rs. 72.10 Crore in respect of KTPS Unit 1-6 and total gross assets as at the beginning and end of the year have been shown as Rs. 1110.61 Crore and Rs. 1115.71 Crore respectively. He further submitted that considering the amount of Rs. 1115.71 Crore, the capital spares for FY 2014-15 work out as Rs. 27.89 Crore only and so the value of Rs. 77.40 Crore as claimed in the ARR and Tariff Petition for FY 2014-15 for KTPS (Unit 1 to 7) is on much higher side and RVUN may be asked to provide appropriate justification in this regards.



RVUN's Response

3.140As regards the capital spares, RVUN submitted that as per Regulation 18 (7) of RERC Tariff Regulations, Scrutiny of the cost estimates by the Commission shall be limited to the reasonableness of the capital cost, financing plan, interest during construction, use of efficient technology, and such other matters for determination of tariff. RVUN submitted that the Commission has approved the capital cost of RVUN considering the above mentioned provisions and accordingly the cost approved by the Commission has been considered by RVUN for tariff determination.

Tariff for Mahi Hydel Generating Station

Stakeholder's Suggestions/Comments

3.141 During the hearing, one of the stakeholders pointed out that the tariff of Mahi HEP for FY 2013-14 was Rs. 0.79/kWh, which has increased to Rs. 4.08/kWh, which appears to be wrong. He submitted that the reason for this increase may be that the expected generation during FY 2014-15 has been considered at 128.70 MU against actual of 225 MU during FY 2013-14, which is not correct. He submitted that during FY 2014-15, the generation from Mahi HEP will be more as the reservoir is full. He pointed out that normally generation should be considered equivalent to design PLF of 24%, which may be about 290 MU for 140 MW capacity.

Commission's Views on Issues Raised by Stakeholders

3.142The Commission has taken note of all the comments / suggestions / observations of the stakeholders raised in writing as well as during the course of hearing and RVUN's responses to them. The Commission has attempted to capture all the comments / suggestions / observations. However, in case any comment / suggestion / observation is not specifically elaborated, it does not mean that the same has not been considered. The Commission has considered all the issues raised by the stakeholders related to the ARR and Tariff Petition for FY 2014-15 and True up of ARR for FY 2011-12 and RVUN's response on these issues while carrying out the detailed analysis of the ARR and Tariff for FY 2014-15 and prudence check of the truing up of ARR for FY 2011-12 in accordance with RERC Tariff Regulations, 2014 and RERC Tariff Regulations, 2009 respectively as detailed in the next Section of the Order.



SECTION 4

Analysis of Annual Performance Review for FY 2011-12 (True Up) and Allowed Fixed and Variable Charges

Norms of Operation

<u>Availability</u>

4.1 The actual Availability/Capacity Index submitted by RVUN for its Stations for FY 2011-12 is as shown in Table below:

Particulars	KTPS (Unit 1- 6)	KTPS (Unit 7)	STPS (Unit 1-5)	STPS Unit 6	RGTPS	DCCPP	Mahi	CTPP Unit 1	CTPP Unit 2
Target Availability for full recovery of fixed charges	82.00%	82.00%	82.00%	82.00%	70.00%	80.00%	85.00%	80.00%	80.00%
Approved in Tariff Order	82.00%	82.00%	82.00%	82.00%	70.00%	80.00%	85.00%	80.00%	80.00%
Actual as claimed in Petition & subsequent submissions	93.07%	91.16%	88.32%	50.33%	86.23%	94.89%	91.00%	86.95%	69.91%

Table 9: Availability/Capacity Index as submitted by RVUN

4.2 RVUN however did not submit any reasons for lower availability achieved in case of STPS Unit 6 and CTPP Unit 2.

Commission's Analysis

4.3 The Commission in its Order dated 23.07.2014 had directed RVUN to submit the SLDC Certificates towards actual Availability and reasons for loss in generation, if any, along with the true-up Petitions from FY 2011-12 onwards. However, RVUN has not submitted the SLDC Certificates for the actual Availability along with the true-up Petition for FY 2011-12. The Commission therefore, again asked RVUN to submit the SLDC Certificate for actual Availability of its Units/Plants. RVUN in its replies has stated that it has requested SLDC for details of actual Availability but has not furnished the SLDC certificate.



- 4.4 As regards Mahi HPP, the Commission has approved availability of the station as 85% for recovery of full fixed charges. As RVUN has not submitted the SLDC certificate therefore the Commission is restricting the availability approved to 85%.
- 4.5 In view of the above the Commission has considered the actual Availability equal to the PLF as approved by the Commission. The Availability/Capacity Index approved by the Commission is as shown in Table below:

Particulars	KTPS (Unit 1-6)	KTPS (Unit 7)	STPS (Unit 1-5)	STPS Unit 6	RGTPS	DCCPP	CTPP Unit 1	CTPP Unit 2
Availability claimed	93.07%	91.16%	88.32%	50.33%	86.23%	94.89%	86.95%	69.91%
Approved on true-up	91.53%	96.15%	87.54%	49.44%	55.53%	77.93%	74.51%	55.41%

Table 10: Availability Approved by the Commission for FY 2011-12

Plant Load Factor (PLF)

4.6 The actual PLF as submitted by RVUN for its Stations for FY 2011-12 is as shown in Table below:

Particulars	KTPS (Unit 1-6)	KTPS (Unit 7)	STPS (Unit 1-5)	STPS Unit 6	RGTPS	DCCPP	CTPP Unit 1	CTPP Unit 2
Target PLF for incentive	82.00%	82.00%	82.00%	82.00%	70.00%	80.00%	80.00%	80.00%
Approved in Tariff Order	82.00%	82.00%	82.00%	82.00%	70.00%	80.00%	80.00%	80.00%
Actual	91.73%	97.17%	87.36%	49.29%	55.30%	77.76%	76.30%	57.90%

Table 11: PLF as submitted by RVUN

4.7 RVUN submitted that for STPS Unit 6, the PLF for FY 2011-12 had been lower than the normative PLF due to prolonged outage of Unit 6. RVUN submitted that PLF for RGTPS and DCCPP had been lower than the normative PLF due to nonavailability of PMT gas and non approval from RDPPC for consuming SPOT R-LNG Gas. RVUN further submitted details of gas allocation, PLF and letter of RDPPC in this regard. For achieving lower PLF in case of CTPP, RVUN submitted that CTPP is a new Station and therefore lower PLF is attributable to stabilization of the plant.

Commission's Analysis

- 4.8 The Commission is of the view that under the cost plus regime, RVUN is being allowed all the prudent expenses based on the Availability of its Stations, however, at the same time, RVUN must also strive to achieve higher PLF so that more energy is made available to the Discoms within the State at lower price. The Commission directs RVUN to implement the best practices in its generating Stations so as to achieve maximum possible generation. The Commission directs RVUN to submit a detailed write-up on the further course of action initiated to increase the PLF of its Stations, within one month from the date of this Order.
- 4.9 The Commission observed that the Petitioner has worked out the actual PLF by dividing the actual gross generation by the maximum gross generation considering the maximum capacity of the station. It may be noted that the RERC Tariff Regulations, 2009 specifically define the PLF as specified below:

"(43) "Plant Load Factor", for a given period, means the total sent-out energy corresponding to scheduled generation during such period, expressed as a percentage of sent out energy corresponding to installed capacity in that period and shall be computed in accordance with the following formula:

N Plant Load Factor (%) = 10000 x I ΣAGi / {N x IC x (100 – AUXn)} % i=1

where - N = number of time blocks in the given period

AGi = Actual Generation in MW for the ith time block in such period

IC = Installed Capacity of the generating station in MW

AUXn = Normative Auxiliary Consumption in MW, expressed as a percentage of gross generation"

4.10 The Commission based on the submitted actual net generation and the normative net generation has recomputed the actual PLF as per the above specified formula. The PLF as submitted by the Petitioner and as considered by the Commission for FY 2011-12 is as shown in the Table below:
Particulars	KTPS (Unit 1-6)	KTPS (Unit 7)	STPS (Unit 1-5)	STPS Unit 6	RGTPS	DCCP P	CTPP Unit 1	CTPP Unit 2
Actual as Submitted by the Petitioner	91.73%	97.17%	87.36%	49.29%	55.30%	77.76%	76.30%	57.90%
Actual reworked by the Commission	91.53%	96.15%	87.54%	49.44%	55.53%	77.93%	74.51%	55.41%
Considered for True-up	91.53%	96.15%	87.54%	49.44%	55.53%	77.93%	74.51%	55.41%

Table 12: PLF as Approved by the Commission for FY 2011-12

Auxiliary Consumption

4.11 The actual auxiliary consumption submitted by RVUN for its Stations for FY 2011-12 is as shown in the Table below:

	KTPS	KTPS	STPS	STPS	RGTP	S			CTPP	СТРР
Particulars	(Unit 1- 6)	(Unit 7)	(Unit 1- 5)	Unit 6	Combined Cycle	Open Cycle	DCCPP	Mahi	Unit 1	Unit 2
Normative	9.32%	9.00%	9.00%	9.00%	3.00%	1.00%	3.00%	*	9.00%	9.00%
Approved in Tariff Order	9.32%	9.00%	9.00%	9.00%	4.93%		3.02%	1.04%	9.00%	9.00%
Actual Claimed in Petition	9.52%	9.95%	8.81%	8.73%	1.79%		2.73%	0.74%	11.14%	12.91%

 Table 13: Auxiliary Consumption as submitted by RVUN

*Mahi Ph 2 – 3.0 lakh units per annum + 0.75% of the energy generated Mahi Ph 1 - 4.0 lakh units per annum + 0.65% of the energy generated

4.12 RVUN submitted that increase in auxiliary consumption for KTPS and CTPP is due to instruction from SLDC for shutdown/backing down of RVUN Stations. RVUN submitted that in case of backing down of generation, though the load is reduced but all the auxiliary equipments of the Station have to be run just like before backing down and therefore, higher Auxiliary Consumption on the percentage during the reduced load period is observed. Further, with regards to DCCPP, RVUN submitted that the auxiliary consumption increased due to lower gross generation which was restricted due to lower availability of gas leading to partial/low load operation of the power plant. The Petitioner further submitted that this has led to lower gross generation but since most of the auxiliaries are in operation even at low load, therefore auxiliary consumption



has not reduced proportionately and therefore in percentage terms the auxiliary consumption appears to be higher.

Commission's Analysis

- 4.13 The Commission observed that RVUN has stated the reason for higher auxiliary consumption than normative values is on account instructions from SLDC for shutdown/backing down of RVUN Stations. The Petitioner submitted the detailed computation sheets of loss of generation submitted by it to SLDC. However, the Petitioner has not submitted any certificate from SLDC in this regard. Further, it is observed that the contention of the Petitioner is unsound as the PLF for KTPS station is considerably higher than the normative PLF and therefore the reason behind increased auxiliary consumption on account of partial loading cannot be accepted.
- 4.14 With regard to auxiliary consumption of CTPP the Commission observes that the PLF of CTPP Unit 1 and Unit 2 is 76.30% and 57.90% respectively. RVUN in this regard has submitted that the lower PLF was on account of stabilisation of the new plant. The Commission is of the view that stabilisation issues cannot be held as a reason for increased auxiliary consumption as the same is not provided in the Regulations. The Commission is therefore not convinced with the reasons submitted by RVUN. Further, the Commission is of the view that the norm specified in Regulations for KTPS is based on the past years' actual operational performance and therefore it takes care of the contention of the petitioner as mentioned above. With regards to CTPP, the Tariff Regulations, 2009 do not recognise relaxed norms on account of stabilisation period and therefore the Commission finds no basis for any relaxation of the norms. The Commission, therefore, has not allowed relaxation in Auxiliary Consumption for FY 2011-12. Further, as auxiliary consumption is a controllable performance parameter, the Commission has computed the sharing of gains/losses in accordance with Regulation 10 of RERC Tariff Regulations, 2009.
- 4.15 It has been observed that RGTPS and DCCPP have been operated under open cycle mode and combined cycle mode. The Commission asked the Petitioner to submit the period for which the plant had operated in open and closed cycle mode along with gross and net generation during the period. RVUN in its replies has submitted the gross generation under the Open cycle and combined cycle mode of operation for both the stations separately as shown in Table below:

Particulars	RGTPS	DCCPP
Open Cycle Mode	214.80	70.17
Combined Cycle Mode	321.96	2183.88
Total	536.76	2254.04

Table 14: Gross Generation under Open Cycle and Combined Cycle Mode ofOperation as submitted by RVUN

- 4.16 The Commission has worked out the approved auxiliary consumption for the above stations considering the generation in open cycle mode and combined cycle mode. Further, as auxiliary consumption is a controllable performance parameter, the Commission has computed the sharing of gains/losses in accordance with Regulation 10 of the RERC Tariff Regulations, 2009.
- 4.17 The auxiliary consumption approved by the Commission for FY 2011-12 is as shown in the Table below:

Particular s	KTPS (Unit 1-6)	KTPS (Unit 7)	STPS (Unit 1-5)	STPS Unit 6	RGTP S	DCCP P	Mahi	CTPP Unit 1	CTPP Unit 2
Actual	9.52%	9.95%	8.81%	8.73%	1.79%	2.73%	0.74%	11.14%	12.91%
Approved on true- up	9.32%	9.00%	9.00%	9.00%	2.20%	2.94%	0.74%	9.00%	9.00%

Station Heat Rate

4.18 The actual Station Heat Rate submitted by RVUN for its Stations for FY 2011-12 is as shown in the Table below:

Table 16: Actual Station heat Rate as submitted by RVUN (kCal/kWh)

Particulars	KTPS (Unit 1-6)	KTPS (Unit 7)	STPS (Unit 1-5)	STPS Unit 6	RGTPS	DCCPP	CTPP Unit 1	CTPP Unit 2
Normative	2605.00	2450.00	2500.00	2450.00	CC:1950 OC:2895	1950.00	2356.57	2356.57
Approved in Tariff Order	2605.00	2450.00	2500.00	2450.00	CC:1950 OC:2895	1950.00	2356.57	2356.57
Actual	2538.19	2291.94	2504.00	2482.00	2587.11	2152.47	2878.34	2724.01



4.19 RVUN submitted that for STPS Unit 1-5, CTPP Unit 1 and CTPP Unit 2, the SHR has been on higher side due to various factors like poor quality of fuel, backing down of generating station due to lower power demand, transmission outage, additional equipment installation due to environmental law and decrease in PLF due to any external reasons not in control of the generating station such as scheduling, fuel availability etc.

Commission's Analysis

- 4.20 The Commission observed that the actual SHR for STPS Unit 1-5, CTPP Unit 1 and CTPP Unit 2 is higher than the normative heat rate, while the actual heat rate for other Units are lower than the normative values. The Commission observed that RVUN has stated the reasons for higher SHR than normative values as various factor like poor quality of fuel, backing down of generating station due to lower power demand, transmission outage, additional equipment installation due to environmental law and decrease in PLF due to any external reasons not in the control of the generating station such as scheduling, fuel availability etc. The Commission is of the view that such limitations are not station specific and almost all other stations face similar issues and therefore such reasons cannot be held responsible for increased station heat rate. Further, the norms specified in Regulations are based on past years operational performance and takes care of all the reasons cited by the petitioner as mentioned above.
- 4.21 As discussed above, the station heat rate for some of the stations is higher than the normative heat rate while for some of the stations/units, the same is lower. In case the actual station heat rate is considered for stations/units for which station heat rate is higher except if the same is due to uncontrollable factor, then the entire objective of specifying targets for performance parameters with sharing of gains and losses will be lost. The Commission, therefore, has not allowed any relaxation in Station Heat Rate for FY 2011-12.
- 4.22 As discussed earlier, RGTPS and DCCPP have been operated under open cycle mode and combined cycle mode. RVUN in its replies has also submitted the gross generation under the Open cycle and combined cycle mode of operation for both the stations separately as shown in Table below:

Particulars	RGTPS	DCCPP		
Open Cycle Mode	214.80	70.17		
Combined Cycle				
Mode	321.96	2183.88		
Total	536.76	2254.04		

Table 17: Gross Generation under Open Cycle and Combined Cycle Mode of
Operation as submitted by RVUN (MU)

- 4.23 The Commission has worked out the approved Station Heat Rate for the above stations considering the generation in open cycle mode and combined cycle mode.
- 4.24 As Station Heat Rate is a controllable performance parameter, the Commission has computed the sharing of gains/losses in accordance with Regulation 10 of the RERC Tariff Regulations, 2009.
- 4.25 The Station Heat Rate approved by the Commission for FY 2011-12 is as shown in the Table below:

Particulars	KTPS (Unit 1- 6)	KTPS (Unit 7)	STPS (Unit 1- 5)	STPS Unit 6	RGTPS	DCCPP	CTPP Unit 1	CTPP Unit 2
Actual	2538.19	2291.94	2504.00	2482.00	2587.11	2152.47	2878.34	2724.01
Approved on True- up	2605.00	2450.00	2500.00	2450.00	2328.16	1977.39	2356.57	2356.57

Table 18: Station Heat Rate Approved for FY 2011-12 (kCal/kWh)

Secondary Fuel Oil Consumption

- 4.26 The actual SFOC submitted by RVUN for its Stations for FY 2011-12 is as shown in the Table below:
 - Table 19: Actual Secondary Fuel Oil Consumption as submitted by RVUN (ml/kWh)

Particulars	KTPS (Unit 1-6)	KTPS (Unit 7)	STPS (Unit 1-5)	STPS Unit 6	CTPP Unit 1	CTPP Unit 2
Normative	1.00	1.00	1.00	1.00	1.00	1.00
Approved in Tariff Order	1.00	1.00	1.00	1.00	1.00	1.00
Actual	0.48	0.42	0.71	2.15	1.95	6.57

4.27 RVUN has not submitted any justification for the increase in SFOC for STPS Unit 6, and CTPP Unit 1 and 2.

Commission's Analysis

4.28 The Commission has allowed SFOC for all the generating stations for FY 2011-12 in accordance with the norms stipulated in the RERC Tariff Regulations, 2009. Further, as SFOC is a controllable performance parameter, the Commission has computed the sharing of gains/losses in accordance with Regulation 10 of the RERC Tariff Regulations, 2009. The SFOC approved by the Commission is as shown in table below:

Particulars	KTPS (Unit 1-6)	KTPS (Unit 7)	STPS (Unit 1-5)	STPS Unit 6	CTPP Unit 1	CTPP Unit 2
Actual	0.48	0.42	0.71	2.15	1.95	6.57
Approved on True- up	1.00	1.00	1.00	1.00	1.00	1.00

Table 20: Secondary Fuel Oil Consumption as Approved for FY 2011-12 (ml/kWh)

Coal Transit Loss

Commission's Analysis

4.29 RVUN has not submitted the Coal Transit Loss separately in percentage terms as specified by RERC Tariff Regulations, 2009. The Commission has computed the Transit Loss in percentage terms from the actual coal cost data submitted by RVUN. The Commission, for the purpose of truing up, therefore, has considered the normative transit loss of 1.10% for domestic coal for FY 2011-12 as specified in RERC Tariff Regulations, 2009. Further, as Transit Loss is a controllable performance parameter, the Commission has computed the sharing of gains/losses in accordance with Regulation 10 of the RERC Tariff Regulations, 2009. The Transit Loss approved by the Commission for FY 2011-12 is as shown in the Table below:

 Table 21: Transit Loss Approved by the Commission for FY 2011-12

Particulars	KTPS	KTPS	STPS	STPS	CTPP	CTPP
rancolars	Unit 1-6	Unit 7	Unit 1-5	Unit 6	Unit 1	Unit 2
Actual	2.55%	2.55%	1.58%	1.58%	0.76%	0.76%
Approved	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%
on True-up						



Fuel Price and Calorific Value

Commission's Analysis

4.30 The Commission has considered the actual GCV as submitted by RVUN. Further, the Commission has recomputed the landed fuel price of domestic coal considering the approved transit loss. The fuel price and calorific value considered by the Commission is as shown in the Table below:

Station	Fuel	(kcal/kg /	lorific Value kcal/L / kcal CM)	Landed fuel price (Rs./MT / Rs./ kL / Rs./ 1000 SCM)		
		RVUN	Approved	RVUN	Approved	
	Domestic Coal	3574.64	3574.64	3285.16	3236.94	
KTPS (Unit 1-7)	Imported Coal	6500.00	6500.00	7782.84	7782.84	
KII 3 (UIIII 1-7)	FO	10504.00	10504.00	32470.54	32470.54	
	HSD	11150.00	11150.00	39519.12	39519.12	
	Domestic Coal	3614.25	3614.25	3772.40	3754.25	
STPS (Unit 1-6)	Imported Coal	6600.00	6600.00	8839.00	8839.00	
511 5 (01111 1-0)	FO	9500.00	9500.00	38398.00	38398.00	
	LDO	9200.00	9200.00	51697.00	51697.00	
RGTPS	Gas	4672.81	4672.81	5648.48	5648.48	
KGIFS	Oil	9300.00	9300.00	32366.35	32366.35	
DCCPP	Gas	9106.82	9106.82	15140.00	15140.00	
	Domestic Coal	4108.65	4108.65	2237.15	2244.87	
CTPP (Unit 1-2) (Average for Unit 1 and 2)	Imported Coal	6600.00	6600.00	8764.73	8764.73	
	FO	9978.80	9978.80	41413.09	41413.09	
	HSD	9520.00	9520.00	59610.93	59610.93	

Table 22: Landed Price and GCV of Fuel as A	pproved by the Commission
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4.31 The Commission is of the view that although the actual calorific value and price of fuel used in the thermal power plants of RVUN alongwith transit losses of coal gets verified and compared with the data filed in the ARR of RVUN at the time of processing of the ARR and Tariff Petition. However, there are many factors related to Fuel price and GCV which remain unchecked while determining the ARR and Tariff of the utility. Therefore, in order to check more precisely the methodology regarding computation of cost of fuel being passed on to the consumers as an uncontrollable element, the Commission considers it appropriate and fair that the Fuel Audit of all the thermal power plants of RVUN should be carried out as per standard practices. The Commission directs RVUN to carry out the Fuel Audit of Primary Fuel for all its thermal plants through an



independent agency which should include audit of quantity and calorific value of coal at loading point, quantity and calorific value of coal as received at the generating station and calorific value as fired. The Commission also directs RVUN to submit the independent agency report alongwith the True Up Petitions from FY 2014-15 onwards.

Annual Fixed Charges

- 4.32 The Annual Fixed Charges comprise of the following elements:
 - i. Operation and Maintenance (O&M) Expenses
 - ii. Depreciation
 - iii. Interest and Finance Charges on Term Loans
 - iv. Interest on Transitional Loans
 - v. Interest on Working Capital
 - vi. Lease Rental
 - vii. Inter-unit account balance written off
 - viii. Addl. Contribution towards Pension and Gratuity
 - ix. Prior Period Expenses/income
 - x. Return on Equity
 - xi. Insurance Charges
 - xii. Less: Non-tariff Income
- 4.33 Each of these elements has been dealt with in the following paragraphs.

Operation and Maintenance Expenses

RVUN's Submission:

4.34 For some of the stations, RVUN has submitted that the actual O&M expenses have been lower than that approved by the Commission. However, for KTPS Unit 1-6, KTPS Unit 7, RGTPS, Mahi Hydel and CTPP Unit 2, the actual O&M expenses have been higher than that approved by the Commission in its Tariff Order for FY 2011-12. RVUN submitted that the O&M expenses for KTPS Unit 1-6 has increased on account of increased cost of supply of Reheater Coil assemblies HRH for KTPS Unit 3 and Unit 4, Operator Training Simulator, Travelling Water Screen for Unit 5 and Plate Heat Exchanger for Unit 3 and Unit 4. RVUN has also submitted the cost breakup of these equipment as shown below:



S. No.	Particular	Amount
		(Rs. Crore)
1	Supply of Reheater Coil assemblies HRH for Unit 3&4	7.52
2	Operator Training Simulator	3.51
3	Travelling Water Screen for Unit 5	2.50
4	Plat Heat Exchanger for Unit 3&4	1.00
	Total	14.52

Table 23: Equipment wise Cost Break-up for increase in O&M Expenses of KTPS as submitted by RVUN

- 4.35 As regards the increase in O&M expenses for RGTPS Station, RVUN submitted that a store item costing Rs 17.56 Crore was issued in FY 2010-11 whereas Store Identification Number (SIN) for the same was submitted in FY 2011-12 and therefore the O&M cost increased. RVUN submitted that the actual O&M expenses as per audited accounts for Mahi Hydel Power Project is Rs 1.89 Crore higher than that approved by the Commission. The Petitioner however did not submit any specific reasons for the increase in the O&M expenses for Mahi Hydel. With regard to CTPP Unit 1 and 2, RVUN submitted that the O&M expenses for both the units was higher than that approved by the Commission by Rs 15.52 Crore, however no specific reasons were submitted for such increase in the expenses.
- **4.36** The details of O&M expenses as recovered by RVUN from Discoms as per Tariff Order for FY 2011-12 and petitioned for truing up based on actual/audited accounts are as shown in the table below:

Particular	KTPS (Unit 1-6)	KTPS (Unit 7)	STPS (Unit 1-5)	STPS Unit 6	RGT PS	DC CPP	Mahi	CTPP Unit 1	CTPP Unit 2	Total
Recovered from Discoms as per tariff order	142.14	26.53	170.02	34.01	13.67	33.64	11.74	34.01	15.70	481.46
As petitioned based on Audited Accounts	165.33	30.85	129.82	25.96	33.42	16.65	13.63	23.41	10.78	449.85

Table 24:	O&M	Expenses	(Rs.	Crore)
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Commission's Analysis

4.37 Regulation 8(7) of the RERC Tariff Regulations, 2009 specifies that:

"(8) Annual Review of Performance



•••••

(7) Some illustrative variations or expected variations in the performance of the applicant which may be attributed by the Commission to controllable factors include, but are not limited to, the following:

•••••

(g) Variation in operation & maintenance expenses;

....."

Hence, O&M expenses are controllable in accordance with RERC Tariff Regulations, 2009.

4.38 Further, Regulation 10 of the RERC Tariff Regulations, 2009 specifies that:

"10. Sharing of Gains and Losses on account of Controllable factors

- (1) The approved aggregate gain to the Applicant on account of controllable factors shall be dealt with in the following manner:
 - (a)50% of such gain shall be passed on as a rebate in tariffs over such period as may be specified in the Order of the Commission;
 - (b)The balance amount of gain may be utilized at the discretion of the Applicant.
- (2) The approved aggregate loss to the Applicant on account of controllable factors shall be dealt with in the following manner:
 - (a)50% of the amount of such loss may be passed on as an additional charge in tariffs over such period as may be specified in the Order of the Commission under; and
 - (b)The balance amount of loss shall be absorbed by the Applicant."
- 4.39 As O&M expenses are controllable in accordance with RERC Tariff Regulations, 2009, the Commission has computed the sharing of gains/losses in accordance with Regulation 10 of the RERC Tariff Regulations, 2009.
- 4.40 The Commission observed that in case of KTPS, the reason for increase in O&M expenses has been shown as increased cost of supply of Reheater Coil assemblies HRH for KTPS Unit 3 and Unit 4, Operator Training Simulator, Travelling Water Screen for Unit 5 and Plat Heat Exchanger for Unit 3 and Unit 4. With regard to RGTPS, RVUN has submitted that the increase is on account of expense of Rs 17.56 Crore incurred in the previous year i.e., FY 2010-11 which has been booked in FY 2011-12. Further, with regard to Mahi hydel and CTPP Unit 1 and 2, RVUN has not submitted any specific reasons for increase in the O&M expenses.



- 4.41 The Commission is of the view that when the O&M expenses are approved on normative basis, it could happen that the actual O&M expenses for some of the Stations may be higher than normative and lower than the normative O&M expenses for some of the Stations. Accordingly, any variation in actual O&M expenses has to be trued up in accordance with Regulation 10 of the RERC Tariff Regulations, 2009. The variation in O&M expenses is controllable to the extent it does not arise due to factors such as increase in statutory levies, taxes, charges, etc. The Commission is of the view that the increase in the cost of supply of the above mentioned equipments is part of normal O&M expenses. Further, due to such instances, the O&M expenses in some years may be higher than the normative O&M expenses and in some years, the same may be lower. If such kind of expense is to be allowed on actual basis, then there will be no sanctity of performance trajectory for controllable factors and sharing of gains and losses. Accordingly, the Commission has considered normative O&M expenses as per the RERC Tariff Regulations, 2009 while carrying out the truing up of O&M expenses, along with sharing of gains and losses as per provisions of RERC Tariff Regulations, 2009.
- 4.42 The Commission asked RVUN to reconcile the O&M expenses submitted in the Petition with audited accounts for FY 2011-12. RVUN submitted that the variation in the Audited Accounts and expenses claimed in Petition is mainly on account of non-consideration of Giral, MMH, allocation of H&GP expenses and HO expenses. RVUN has submitted the reconciliation of the O&M expenses as shown in the Table below:

Particular	As per Balance Sheet	After Giral and MMH	As per Petition	Variation
Repairs and Maintenance	172	166		
Employees Costs	163	153		
Administration and Other Expenses	74	68	450	135
Less: Expenses Capitalised	81	72		
Total	328	315		

Table 25: Reconciliation of O&M Expenses with Audited Accounts as submitted by RVUN (Rs Crore)

4.43 RVUN submitted that the increase in claimed O&M expenses is on account of Rs. 70 Crore claimed towards Items like fuel related item, cost of water, lubrication, station supplies and other cost. RVUN further submitted that the



capitalization includes the capitalization of infirm power of Rs. 65 Crore and depreciation of Rs. 0.47 Crore.

- 4.44 The Commission has gone through the reconciliation of O&M expenses with the audited accounts for FY 2011-12 as submitted by RVUN. The Commission observed that RVUN has claimed the fuel related charges like cost of water, lubricants, etc., under the O&M expenses. The Commission is of the view that such other fuel related expenses could be claimed as a part of O&M expenses or other variable charges. As RVUN has claimed the same in O&M expenses and not claimed as part of variable charges in accordance with the practice adopted in previous years, the Commission has considered the same as part of O&M expenses.
- 4.45 Regulation 25(4) of RERC Tariff Regulations, 2009 specifies as under:

"Normative O&M expenses allowed at the commencement of the Control Period (i.e. FY 2009-10) under these Regulations shall be escalated at the rate of 5.72% per annum. Further, the same shall be subject to revision on account of annual escalation linked to WPI in the subsequent years for the purpose of true-up."

- 4.46 In accordance to the above mentioned Regulations, the Commission approved the O&M expenses for FY 2011-12 considering the normative O&M expenses for FY 2009-10 as specified in RERC Tariff Regulations, 2009 and escalating the same with an escalation rate of 19.35% based on the increase in WPI for FY 2011-12 over FY 2009-10.
- 4.47 The O&M expenses approved by the Commission for true up is as shown in the Table below:

Station	Actual	Normative	(Gain) / Loss	50% Sharing	Net entitlement
KTPS (Unit 1-6)	165.33	151.79	13.54	6.77	158.56
KTPS (Unit 7)	30.85	28.32	2.53	1.26	29.59
STPS (Unit 1-5)	129.82	181.57	-51.75	-25.87	155.69
STPS (Unit 6)	25.96	36.31	-10.35	-5.17	31.14
RGTPS	33.42	14.60	18.82	9.41	24.01
DCPP	16.65	35.92	-19.27	-9.64	26.28
Mahi	13.63	12.53	1.10	0.55	13.08
CTPP Unit 1	23.41	36.31	-12.90	-6.45	29.86
CTPP Unit 2	10.78	16.77	-5.99	-3.00	13.77
Total	449.85	514.12	-64.28	-32.14	481.99

Table 26: Approved O&M Expenses (Rs. Crore)



Increase in Capital Expenditure

RVUN's Submission

4.48 RVUN has submitted that it has considered the Capital cost of KTPS Unit 7, STPS Unit 6, CTPP Unit 1 and CTPP Unit 2 as approved by the Commission in Order dated 06.06.2013, however, RVUN submitted that it has not considered the reduction on account of Work Contract Tax (WCT) while computing the Capital cost for these Stations as the matter is pending before the Hon'ble Appellate Tribunal for Electricity (APTEL). RVUN submitted that it has also considered the additional capitalization of Rs. 17.90 Crore and Rs. 48.71 Crore for KTPS Unit 7 and STPS Unit 6 respectively. Accordingly, the Capital Cost for these Stations as submitted by RVUN is as shown in the table below:

Table 27: Capital Cost for KTPS Unit 7, STPS Unit 6 and CTPP Unit 1-2 as claimed
by RVUN (Rs. Crore)

Particulars	KTPS	STPS	CTPP
	Unit 7	Unit 6	Unit 1-2
Approved by the Commission in Order dated	824.247	978.09	2415.95
06.06.2013			
Add: WCT (Work Contract Tax) as matter is	9.89	14.26	22.46
pending before the Hon'ble APTEL			
Total as on 31.03.2010	834.137	992.35	2415.95
Add: Addition as per Rejoinder and Audited	17.90	48.71	-
Accounts for FY 2010-11			
Total as on 31.03.2011	852.04	1041.06	2438.02

Commission's Analysis

4.49 The Commission in its Order dated 06.06.2013 has approved the Capital cost for KTPS Unit 7, STPS Unit 6, CTPP Unit 1 and CTPP Unit 2 after reducing an amount of Rs. 9.89 Crore, Rs. 14.26 Crore and Rs. 22.46 Crore respectively from the BTG package of the Capital cost on account of refund made by RVUN to BHEL towards WCT. RVUN has now submitted that the reduction on WCT is a matter pending before the Hon'ble APTEL. The Commission is of the view that as the matter is pending before the Hon'ble APTEL and as the Hon'ble APTEL has not issued any stay Order in the said matter, the Commission has considered the Capital Cost for these projects as already approved by the Commission under previous Orders.



- 4.50 The Commission has already approved the additional Capital Cost of Rs. 17.90 Crore and Rs. 48.71 Crore for KTPS Unit 7 and STPS Unit 6 while truing up for FY 2010-11 in its Order dated 23.07.2014. The Commission in the said Order approved the total Capital Cost for KTPS Unit 7 as Rs. 842.22 Crore and total Capital Cost for STPS Unit 6 as Rs. 1026.79 Crore. Further, the Commission has already approved the Capital cost for CTPP Unit 1 and Unit 2 as Rs. 1177 Crore and Rs. 1239 Crore respectively.
- 4.51 In view of the above discussion, the Commission has considered the Capital Cost for KTPS Unit 7 and STPS Unit 6 as already approved in the Order dated 23.07.2014. For CTPP Unit 1 and Unit 2, the Commission has considered the Capital Cost as already approved by the Commission in Order dated 06.06.2013.

Depreciation

RVUN's Submission

- 4.52 RVUN has submitted that there is variation in depreciation for STPS unit 6 and CTPP Unit 1 and 2 due to change in the Capital cost and inter allocation of the assets head. RVUN has submitted that variation in depreciation for KTPS is due to claim of lump-sum depreciation with respect to assets buy-back in true-up petition of FY 2009-10. RVUN submitted that there is variation in depreciation for RGTPS, DCCPP and Mahi Hydel Power Project is due to inter allocation of assets head.
- 4.53 The details of depreciation as recovered by RVUN from Discoms as per Tariff Order for FY 2011-12 and as per Petition based on actual/audited accounts are as shown in the table below:

Particular	KTPS	KTPS	STPS	STPS	RGTPS	DCCPP	Mahi	CTPP	CTPP	Total
	(Unit 1-6)	(Unit 7)	(Unit 1-	Unit 6				Unit 1	Unit 2	
			5)							
Recovered from										
Discoms as per	55.61	44.77	205.36	57.91	13.56	57.52	4.82	58.94	28.51	527.00
tariff order										
As petitioned										
based on Audited	33.54	42.58	227.58	50.75	14.99	56.91	4.20	59.71	28.96	519.22
Accounts										

Table 28: Depreciation (Rs. Crore)

Commission's Analysis:

- 4.54 As regards depreciation, the Commission is of the view that the depreciation for KTPS Unit 1-6, STPS Unit 1-5, CTPP, RGTPS, DCCPP and Mahi Hydel Power Project needs to be allowed as already allowed in the Tariff Order for FY 2011-12 as the opening Gross Fixed Asset for these stations has not changed. While computing depreciation for KTPS Unit 7 and STPS Unit 6, the Commission has considered the revised Capital Cost for these stations as approved in the Commission's Order dated 23.07.2014. Further, while computing depreciation for CTPP Unit 1 and CTPP Unit 2 the Commission has considered the Capital Cost for these Units as approved in the Commission's Order dated 06.06.2013.
- 4.55 Accordingly, the depreciation already allowed in the Tariff Order for FY 2011-12 is retained for KTPS Unit 1-6, STPS Unit 1-5, CTPP, RGTPS, DCCPP and Mahi Hydel Power Project, and depreciation for KTPS Unit-7, STPS Unit-6, CTPP Unit 1 and CTPP Unit 2 is allowed as under:

Particular	KTPS (Unit 1-6)	KTPS (Unit 7)	STPS (Unit 1-5)	STPS Unit 6	RGTPS	DCCPP	Mahi	CTPP Unit	CTPP Unit 2	Total
Recovered from Discoms as per Tariff Order	55.61	44.77	205.36	57.91	13.56	57.52	4.82	58.94		527.00
Approved for True Up	55.61	42.02	205.36	50.06	13.56	57.52	4.82	58.94	28.51	516.40

Table 29: Approved Depreciation (Rs. Crore)

Interest and Finance Charges on Term Loans

RVUN's Submission

4.56 RVUN submitted that the variation in interest and finance charge is due to the variation in actual amount of loan, repayment and interest on loan. The details of Interest and Finance Charges as approved in the Tariff Order of FY 2011-12 and as per Petition based on actual/audited accounts are as shown in the table below:

Particular	KTPS	KTPS	STPS	STPS	RGTPS	DCCPP	Mahi	CTPP	CTPP	Total
	(Unit	(Unit	(Unit	Unit 6				Unit 1	Unit 2	
	1-6)	7)	1-5)							
Recovered										
from Discoms	11.23	72.15	61.55	91.60	2.66	63.06	0.00	101.32	53.69	457.26
as per tariff										
order										
As petitioned										
based on	13.35	60.72	88.00	59.06	2.91	62.92	0.00	91.69	42.20	420.86
Audited										
Accounts										

Table 30: Interest and Finance Charges on Term Loans (Rs. Crore)

Commission's Analysis

- 4.57 The actual interest and finance charges on Term Loans are lesser than that allowed in the Tariff Order for FY 2011-12 for KTPS Unit 7, STPS Unit6, DCCPP, CTPP Unit 1, CTPP unit 2 and higher in case of KTPS Unit 1-6, STPS Unit 1-5, and RGTPS. It may be noted that the interest expenses for the KTPS Unit 7, STPS Unit 6, CTPP Unit 2 and RGTPS would change from the approved figures only due to change in loan due to interest rate variation. The Commission has computed the interest on term loans based on loan balance approved by the Commission for FY 2009-10 in its MYT Order and by considering the repayment equivalent to depreciation allowed for FY 2009-10, FY 2010-11 and FY 2011-12 as trued up in respective Orders. The Commission has considered the actual average interest rate as submitted by RVUN. In case of KTPS Unit 7 and STPS Unit 6 the Commission has approved the interest and finance charges as per the Capital Cost approved by the Commission in its Order dated 23.07.2014 and for CTPP Unit 1 and Unit 2, the Commission has approved the interest and finance charges as per the Capital Cost approved by the Commission in its Order dated 06.06.2013.
- 4.58 As regards the finance charges, RVUN submitted that the actual finance charges on account of commitment charges, other bank charges, guarantee charges, other finance charges and deferred revenue charges as appearing in the Audited Accounts for FY 2011-12 have been claimed for FY 2011-12. The Commission on going through the RVUN submission observed that a certain amount has been booked under "deferred revenue charges" which has been claimed as a part of finance charges. The Commission asked RVUN for



justification towards claiming deferred revenue charges under the finance charges. RVUN submitted that the deferred revenue charges are incurred on account of refinancing of term loans and hence have been included in the finance charges. The Commission while carrying out the truing up has considered the actual finance charges for each station as submitted by RVUN excluding guarantee fee on working capital loan which has been discussed along with the interest on working capital. Accordingly, the interest and finance charges are allowed as under:

Table 31: Approved Interest and Finance Charges on term Loans (Rs. Crore)

Particular	KTPS (Unit 1-6)	KTPS (Unit 7)	STPS (Unit 1-5)	STPS Unit 6	RGTPS	DCCPP	Mahi	CTPP Unit 1	CTPP Unit 2	Total
Recovered from Discoms as per Tariff Order	11.23	72.15	61.55	91.60	2.66	63.06	0.00	101.3 2	53.69	457.26
Approved for True Up	13.72	62.11	61.19	81.31	3.58	65.20	0.00	82.36	37.15	406.62

Interest on Transitional Loan

RVUN's Submission:

4.59 The details of interest on Transitional Loans as recovered by RVUN from Discoms as per the Tariff Order for FY 2011-12 and as per Petition based on actual/audited accounts are provided in the table below:

Particular	KTPS (Unit 1-6)	KTPS (Unit 7)	STPS (Unit 1-5)	STPS Unit 6	RGTPS	DCCP P	Mahi	CTPP Unit 1	CTPP Unit 2	Total
Recovered from Discoms as per tariff order	9.20	0.00	69.68	0.00	1.96	2.37	0.00	0.00	0.00	83.21
As petitioned based on Audited Accounts	13.02	7.41	71.33	0.00	3.23	6.68	0.00	0.00	0.00	101.67

 Table 32: Interest on Transitional Loan (Rs. Crore)

Commission's Analysis

4.60 The Commission has already settled the issue of Transitional Loan vide its Order dated 21.1.2010. However, based on the various submissions of RVUN, it is observed that as a part of ARR and Tariff Petition for FY 2011-12, RVUN submitted the loan balance for transitional loan has reduced as compared to



that approved by the Commission in the MYT Order and hence claimed the lower interest on transitional loan, which was allowed by the Commission. RVUN in its Petition for True up for FY 2011-12 has claimed the higher interest on transitional loan. The Commission is of the view that this issue needs to be examined in detail for the entire Control Period of FY 2009-10 to FY 2013-14. The Commission directs RVUN to submit the detailed year-wise statement of loan balances on transitional loans and interest on transitional loans for the period FY 2009-10 to FY 2013-14 alongwith with the truing up Petition for FY 2013-14.

4.61 At this stage, the Commission has allowed the interest on Transitional Loans for FY 2011-12 as considered in Order dated 21.01.2010 as under:

Particular	KTPS (Unit 1-6)	KTPS (Unit 7)	STPS (Unit 1-5)	STPS Unit 6	RGTPS	DCCPP	Mahi	CTPP Unit 1	CTPP Unit 2	Total
Recovered from Discoms as per Tariff Order	9.20	0.00	69.68	0.00	1.96	2.37	0.00	0.00	0.00	83.21
Approved for True Up	13.02	0.00	70.20	0.00	1.74	2.41	0.00	0.00	0.00	87.37

Table 33: Approved Interest on Transitional Loan (Rs. Crore)

Interest on Working Capital:

<u>RVUN's Submission:</u>

4.62 RVUN submitted that it has computed the Interest on Working Capital (IWC) as per the norms stipulated in the RERC Tariff Regulations, 2009 with actual costs incurred. The details of interest on working capital as recovered by RVUN from Discoms as per the Tariff Order for FY 2011-12 and as per Petition based on actual/audited accounts are as shown in the table below:

Particular	KTPS (Unit 1-6)	KTPS (Unit 7)	STPS (Unit 1-5)	STPS Unit 6	RGTPS	DCCPP	Mahi	CTPP Unit 1	CTPP Unit 2	Total
Recovered from Discoms as per tariff order	43.14	9.00	64.13	13.69	4.14	17.38	0.48	13.03	5.88	170.87
As petitioned based on Audited Accounts	78.55	14.66	93.45	18.69	6.31	20.76	0.70	13.21	6.08	252.40

Table 34: Interest on Working Capital (Rs. Crore)



4.63 The actual interest on short-term loans is Rs. 347.80 Crore as per the Audited Accounts for FY 2011-12. RVUN at Annexure E of its truing up Petition submitted that this amount comprises of IWC of Rs. 249.60 Crore and interest on transitional loan of Rs. 98.20 Crore and accordingly has claimed these separately. The Commission observed that as per the true-up Petition for FY 2011-12 the interest on transitional loan works out to be Rs. 101.67 Crore and interest on working capital works out as Rs. 252.40 Crore for all the generating Stations. The Commission also observed that while computing the net Interest on Working Capital, RVUN has also included an amount of Rs. 7.39 Crore on account of "Working Capital Guarantee Commission". Accordingly, the Commission in its datagaps has asked RVUN to reconcile the figures of Interest on Working Capital as claimed in the Petition with the Audited Accounts and also provide the appropriate justification for considering amount of Rs. 7.39 Crore on account of "Working Capital Guarantee Commission". RVUN in its reply has submitted that as per audited accounts accounting code 78.884-Guarantee Commission charges has been shown as Rs. 11.70 crore, which are further allocated among the Working Capital, Transitional Loan and Term Loan. RVUN has also submitted the reconciliation for the figures as claimed in the Petition with the Audited Accounts as shown in Tables below:

Particular	Amount (Rs. Crore)
Interest on Working capital Loan (WCL)	249.60
Add: Guarantee Commission on WCL	7.39
Total	257.00
Less: Giral unit 2 & MMH (interest on WCL)	4.60
Net Interest on Working capital	252.40

Table 36: Reconciliation of Interest on	Transitional Loan as Submitted by RVUN
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Particular	Amount (Rs. Crore)
Interest on transitional loan	98.20
Add: Guarantee Commission on Transitional Loan	3.93
Total	102.13
Less: MMH (interest on Transitional Loan)	0.46
Net Transitional Loan	101.67

Particular	Amount (Rs. Crore)
Interest on WCL	249.60
Interest on transitional loan	98.20
Interest on WCL including transitional loan (Item 78.7xx)	347.80

Table 37: Reconciliation as Submitted by RVUN

- 4.64 Accordingly, for arriving at the actual IWC for FY 2011-12, the Commission has deducted the approved interest on transitional loan i.e., 87.37 Crore from the actual Interest on Working Capital Loan of Rs 343.20 Croe and added the amount of Rs. 7.39 Crore and Rs. 3.93 Crore on account of Guarantee Commission considering the reconciliation provided by RVUN. Accordingly, the actual IWC considered by the Commission for FY 2011-12 is Rs. 267.15 Crore as against Rs. 252.40 Crore claimed by RVUN.
- 4.65 The Commission observed that RVUN has computed the normative Working Capital corresponding to actual Availability for each Station while the RERC Tariff Regulations, 2009 specify the Working Capital corresponding to Target Availability. The Commission has computed the normative interest on working capital in accordance with RERC Tariff Regulations, 2009.
- 4.66 RVUN in its Petition has computed the normative interest on Working Capital on the basis of interest rate of 12.87%. The Commission while computing the interest on working capital has considered the rate of interest on working capital of 13.00% p.a. which is the short term prime lending rate of SBI as on 01.04.2011in accordance with RERC Tariff Regulations, 2009. Further, as interest on working capital requirement is a controllable factor, the Commission has computed the sharing of gains/losses in accordance with Regulation 10 of the RERC Tariff Regulations, 2009.
- 4.67 The interest on working capital approved by the Commission for FY 2011-12 is as shown in the Table below:

Station	Actual	Normative	(Gain) / Loss	50% Sharing	Net entitlement
KTPS (Unit 1-6)	83.14	71.52	11.62	5.81	77.33
KTPS (Unit 7)	15.51	14.11	1.41	0.70	14.81
STPS (Unit 1-5)	98.92	96.30	2.62	1.31	97.61
STPS (Unit 6)	19.78	19.90	-0.12	-0.06	19.84
RGTPS	6.68	5.58	1.10	0.55	6.13

Table 38: Approved Interest on Working Capital (Rs. Crore)

Station	Actual	Normative	(Gain) / Loss	50% Sharing	Net entitlement
DCPP	21.97	21.21	0.76	0.38	21.59
Mahi	0.74	0.66	0.08	0.04	0.70
CTPP (Unit 1)	13.98	12.64	1.33	0.67	13.31
CTPP (Unit 2)	6.43	6.29	0.15	0.07	6.36
Total	267.15	248.20	18.95	9.47	257.68

Lease Rental:

RVUN's Submission:

4.68 RVUN has claimed an expense on account of lease rental amounting to Rs.0.23 crore for STPS as lease rentals accrued and paid by corporate office completely allocated to STPS.

Commission's Analysis:

4.69 The Commission has approved the lease rental charges of Rs. 0.23 Crore for STPS as claimed by RVUN in its Petition for true up of ARR for FY 2011-12 as the same has been actually incurred by RVUN and is also reflected in the Annual Accounts for FY 2011-12.

Inter-unit account balance written off:

RVUN's Submission:

- 4.70 RVUN submitted that as per the Commission's Order dated 06.06.2013 the adjustments of the inter unit account balances has been spread over the five equal instalments from FY 2008-09 to FY 2012-13.
- 4.71 The details of plant wise inter-unit account balances as recovered by RVUN from Discoms as per Tariff Order for the FY 2011-12 and as per Petition based on actual/audited accounts are as shown in the table below:

Particular	KTPS (Unit 1-6)	KTPS (Unit 7)	STPS (Unit 1-5)	STPS Unit 6	RGTPS	DCCPP	Mahi	CTPP Unit 1	CTPP Unit 2	Total
Recovered from Discoms as per tariff order	10.01	0.00	4.96	0.00	0.38	0.00	0.32	0.00	0.00	15.67
As petitioned based on Audited Accounts	8.44	1.57	3.99	0.80	0.33	0.00	0.11	0.00	0.00	15.24

Table 39: Inter Unit Account Balance Written Off (Rs. Crore)



Commission's Analysis:

- 4.72 The Commission, to avoid very high tariff adjustments, in its order dated 28.06.2008 has decided to have the inter unit account balances spread over in 5 equal instalments starting from FY 2008-09 to FY 2012-13.
- 4.73 Accordingly, The details of inter-unit balances approved by the Commission considering the RVUN's submissions for true up are as shown in Table below:

Particular	KTPS (Unit 1-6)	KTPS (Unit 7)	STPS (Unit 1-5)	STPS Unit 6	RGTPS	DCCPP	Mahi	CTPP Unit 1	CTPP Unit 2	Total
Recovered from Discoms as per Tariff Order	10.01	0.00	4.96	0.00	0.38	0.00	0.32	0.00	0.00	15.67
Approved for True Up	10.01	0.00	4.79	0.00	0.33	0.00	0.11	0.00	0.00	15.24

Table 40: Approved Inter Unit Account Balance Written Off (Rs. Crore)

Additional liability towards pension and gratuity

RVUN's Submission:

4.74 RVUN has claimed no additional liability towards pension and gratuity as the Commission in Order dated 06.06.2013 has already specified that as the amount with respect to additional liability towards pension and gratuity has been remitted in FY 2012-13, no amount can be allowed under true up and appropriate treatment for the amount will be given in true up exercise for FY 2012-13.

Commission's Analysis

4.75 The Commission dated November 30, 2011 in its Tariff Order for FY 2011-12 allowed the additional liability towards pension and gratuity as approved in the MYT Order. However, as the amount has not been remitted by RVUN to the fund, the Commission while carrying out the truing up for FY 2011-12, has not allowed any amount for additional liability towards pension and gratuity.

Prior Period Expenses/Income

RVUN submission:

4.76 RVUN has claimed an amount of Rs. 12.74 crore as prior period income on the ground that this income is related to past period and unforeseen and has been



claimed on actual basis. The prior period expenses/income as claimed by RVUN for true-up are as shown below:

Particular	KTPS (Unit 1-6)	KTPS (Unit 7)	STPS (Unit 1-5)	STPS Unit 6	RGTPS	DCCP	Mahi	CTPP Unit 1	CTPP Unit 2	Total
Recovered from Discoms as per tariff order	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As petitioned based on Audited Accounts - Expenses /(Income)	(6.33)	(1.18)	(7.58)	(1.52)	4.38	(0.69)	(0.69)	0.60	0.27	(12.74)

Table 41: Prior Period Expenses/Income (Rs. Crore)

Commission's Analysis

- 4.77 The Commission observed that the details of Prior Period expenses have been provided in the Note No. 29 of the Audited Accounts for FY 2011-12. While doing the detailed analysis of the Audited Accounts of RVUN for FY 2011-12, the Commission observed that some prior period gains have been shown under the heads 'Fuel Related Gains'.
- 4.78 The Commission is of the view that any prior period gains under the head 'Fuel Related Gains' as shown in the Audited Accounts need to be considered while carrying out the truing up as the Commission has been allowing prudent fuel expenses recovered by RVUN in accordance with the RERC Tariff Regulations, 2009. Accordingly, the Commission has added the amount of Rs. 0.65 crore booked under "Fuel Related Gains" to the prior period income of Rs. 12.74 crore claimed by RVUN in its Petition, to arrive at the net prior period expenses which are allowed under the True up of ARR for FY 2011-12.

Particular	KTPS (Unit 1-6)	KTPS (Unit 7)	STPS (Unit 1-5)	STPS Unit 6	RGTPS	DCCP P	Mahi	CTPP Unit 1	CTPP Unit 2	Total
Recovered from Discoms as per Tariff Order	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Approved for True Up- Expenses /(Income)	(6.65)	(1.24)	(7.97)	(1.59)	4.61	(0.73)	(0.73)	0.63	0.29	(13.39)

 Table 42: Approved Prior Period Expenses/Income (Rs. Crore)



<u>Recovery of ARR and Tariff Petition fees</u> <u>RVUN submission:</u>

4.79 The details of the plant-wise ARR and Tariff Petition fee recovered by RVUN from Discoms as per Tariff Order for FY 2011-12 and as per Petition based on actual/audited accounts are as shown in the table below:

Particular	KTPS (Unit 1-6)	KTPS (Unit 7)	STPS (Unit 1-5)	STPS Unit 6	RGTPS	DCCPP	Mahi	CTPP Unit 1	CTPP Unit 2	Total
Recovered from Discoms as per tariff order	0.52	0.10	0.63	0.12	0.06	0.17	0.01	0.13	0.13	1.86
As petitioned based on Audited Accounts	0.61	0.11	0.73	0.15	0.06	0.19	0.08	0.15	0.15	2.23

Table 43: Recovery of ARR and Tariff Petition Fees (Rs. Crore)

Commission's Analysis:

4.80 The Commission is of the view that the ARR and Tariff Petition Fees shall be allowed at the rate as specified in the RERC (Fees for Petitions) Regulations, 2005. Accordingly, the Commission has computed the ARR and Tariff Petition Fees at the rate of Rs. 5000/MW for all the generating stations. The details of Recovery of ARR and Tariff Petition fees approved by the Commission for True up are provided below:

 Table 44: Approved Recovery of ARR and Tariff Petition Fees (Rs. Crore)

Particular			STPS (Unit 1-5)	STPS Unit 6	RGTPS	DCCPP	Mahi	CTPP Unit 1	CTPP Unit 2	Total
Recovered from Discoms as per Tariff Order	0.52	0.10	0.63	0.12	0.06	0.17	0.01	0.13	0.13	1.86
Approved for True Up	0.52	0.10	0.63	0.13	0.06	0.17	0.07	0.13	0.13	1.91

Insurance on fixed assets <u>RVUN's Submission:</u>

4.81 RVUN submitted that the insurance charges on fixed assets were not claimed in the ARR and Tariff Petition for FY 2011-12 except CTPP Unit 1 and 2 and the same have now been claimed in the true up Petition on actual basis for all the stations as per Regulation 27 of the RERC Tariff Regulations, 2009. The details of insurance charges as claimed by RVUN are as under:

Particular	KTPS (Unit 1- 6)	KTPS (Unit 7)	STPS (Unit 1-5)	STPS Unit 6	RGTP	DCCP	Mahi	CTPP Unit 1	CTPP Unit 2	Total
Recovered from Discoms as per tariff order	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.33	0.53	1.86
As petitioned based on Audited Accounts	1.59	1.22	1.77	0.44	0.38	1.50	0.00	0.83	0.88	8.60

Table 45: Insurance on Fixed Assets (Rs. Crore)

Commission's Analysis:

- 4.82 Based on the detailed analysis of the audited accounts of RVUN for FY 2011-12, the Commission observed that an amount of Rs. 9,39,34,009 has been shown as deduction during 2011-12 under the head "Other Reserve Funds". The Commission asked RVUN for the reconciliation of the amount of Rs. 8.60 crore claimed in the Petition with the audited accounts. RVUN submitted that from the amount of Rs. 9.39 Crore as shown in the audited accounts, the amount of Rs. 8.60 Crore is for the existing RVUN stations whereas the remaining amount is related to Giral Lignite Power Project, which is not considered under the present Petition for true up of ARR for FY 2011-12.
- 4.83 The Commission vide its data gaps asked RVUN to submit the supporting documents for substantiating the insurance claimed for various generating stations. RVUN in its replies to the data gaps submitted the supporting documents for insurance charges as claimed in the true up petition. The Commission on going through the supporting documents as submitted by RVUN observed that the amount as claimed by RVUN under insurance charges is higher than the amount as per the supporting documents.
- 4.84 In view of the above discussions, the Commission has allowed the insurance charges on fixed assets as per the supporting documents submitted by RVUN as shown in Table below:

Particular		KTPS (Unit 7)	STPS (Unit 1-5)	STPS Unit 6	RGTPS	DCCPF	Mahi	CTPP Unit 1	CTPP Unit 2	Total
Recovered from Discoms as per tariff order	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.33	0.53	1.86
Approved for True up	1.63	1.05	1.31	0.30	0.38	1.12	0.00	0.86	0.86	7.50

 Table 46: Approved Insurance Charges on Fixed Assets (Rs. Crore)



Return on Equity

4.85 The Commission, in view of RVUN not claiming any "Return of Equity" for FY 2011-12, has not provided for the same while true up for FY 2011-12.

Non-tariff Income

4.86 The details of plant-wise non-tariff income as per the Tariff Order for FY 2011-12 and as per Petition based on actual/audited accounts are as shown in the table below:

Particular	KTPS (Unit 1- 6)	KTPS (Unit 7)	STPS (Unit 1-5)	STPS Unit 6	RGTP	DCCP	Mahi	CTPP Unit 1	CTPP Unit 2	Total
Recovered from Discoms as per tariff order	5.50	0.10	7.55	0.10	0.50	0.50	0.30	0.10	0.05	14.70
As petitioned based on Audited Accounts	36.82	6.87	8.02	1.60	0.23	1.60	0.26	4.43	2.04	61.88

Table 47: Non-Tariff Income (Rs. Crore)

4.87 The Commission has considered the non-tariff income as per Petition based on actual/audited accounts in true-up exercise for FY 2011-12. The details are as under:

Particular	KTPS (Unit 1-6)	KTPS (Unit 7)	STPS (Unit 1-5)	STPS Unit 6	RGTPS	DCCPP		CTPP Unit 1	CTPP Unit 2	Total
Recovered from Discoms as per Tariff Order	5.50	0.10	7.55	0.10	0.50	0.50	0.30	0.10	0.05	14.70
Approved for True Up	36.82	6.87	8.02	1.60	0.23	1.60	0.26	4.43	2.04	61.88

Table 48: Approved Non-Tariff Income (Rs. Crore)

Annual Fixed Charges

4.88 The actual availability of some of the stations of RVUN has been lower than the normative availability approved by the Commission in this Order. For such stations, the Commission has reduced the recovery of Annual Fixed Charge on pro-rata basis. The approved Annual Fixed Charges and Annual Fixed Charges reduced by the Commission are as shown in Tables below:

S. No	Particulars	KTPS Unit 1-6	KTPS Unit 7	STPS Unit 1-5	STPS Unit 6	RGTPS	DCCPP	Mahi	CTPP Unit 1	CTPP Unit 2	RVUN (Total)
1	O&M Expenses	151.79	28.32	181.57	36.31	14.60	35.92	12.53	36.31	16.77	514.12
2	Depreciation	55.61	42.02	205.36	50.06	13.56	57.52	4.82	58.94	28.51	516.40
3	Interest & Finance Charges	13.72	62.11	61.19	81.31	3.58	65.20	0.00	82.36	37.15	406.62
4	Interest on transitional loan	13.02	0.00	70.20	0.00	1.74	2.41	0.00	0.00	0.00	87.37
5	Interest on working capital	71.52	14.11	96.30	19.90	5.58	21.21	0.66	12.64	6.29	248.20
6	Lease Rental	0.00	0.00	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.23
7	Insurance on fixed assets	1.63	1.05	1.31	0.30	0.38	1.12	0.00	0.86	0.86	7.50
8	Inter Unit Account Balance Written Off	10.01	0.00	4.79	0.00	0.33	0.00	0.11	0.00	0.00	15.24
9	Recovery of ARR & Tariff Petition Fees	0.52	0.10	0.63	0.13	0.06	0.17	0.07	0.13	0.13	1.91
12	Prior Period Charges	-6.65	-1.24	-7.97	-1.59	4.61	-0.73	-0.73	0.63	0.29	-13.39
13	Total fixed charges	311.17	146.46	613.59	186.42	44.43	182.82	17.46	191.87	89.98	1784.21
14	Less: Non Tariff Income	36.82	6.87	8.02	1.60	0.23	1.60	0.26	4.43	2.04	61.88
15	Net fixed charges	274.35	139.59	605.56	184.81	44.20	181.22	17.20	187.44	87.94	1722.32

Table 49: Approved AFC for FY 2011-12 (Rs. Crore)

Table 50: Approved AFC and AFC Reduced for not achieving Target Availability

Station	AFC after true-up	Actual Availability Considered by the Commission	Normative Availability	AFC Allowed linked to Availability	AFC reduced
KTPS(Unit 1-6)	274.35	91.53%	82.00%	274.35	0.00
KTPS Unit-7	139.59	96.15%	82.00%	139.59	0.00
STPS (Unit 1-5)	605.56	87.54%	82.00%	605.56	0.00
STPS Unit-6	184.81	49.44%	82.00%	111.42	73.39
RGTPS	44.20	55.53%	70.00%	35.07	9.13
DCCPP	181.22	77.93%	80.00%	176.52	4.70
Mahi	17.20	14.64%	14.64%	17.20	0.00
CTPP Unit 1	187.44	74.51%	80.00%	174.56	12.87
CTPP Unit 2	87.94	55.41%	80.00%	60.91	27.03
Total	1722.32			1595.20	127.13



Revenue Gain / (Loss) due to lower / higher auxiliary consumption

4.89 The Commission, as elaborated in the preceding paragraphs has approved the normative auxiliary consumption in the true up of FY 2011-12. Further, as auxiliary consumption is a controllable performance parameter, the Commission has carried out the sharing of revenue gain/loss due to lower / higher auxiliary consumption in comparison to the normative auxiliary consumption for each Station as shown in the Table below:

Particulars	KTPS (Unit 1- 6)	KTPS (Unit 7)	STPS (Unit 1- 5)	STPS Unit 6	RGTPS	DCCPP	CTPP Unit 1	CTPP Unit 2	Total
Gross Generation (MU)	8420.15	1664.34	9592.13	1082.41	536.76	254.04	1675.55	587.11	25812.49
Actual Auxiliary Consumption	9.52%	9.95%	8.81%	8.73%	1.79%	2.73%	11.14%	12.91%	
Normative Auxiliary Consumption	9.32%	9.00%	9.00%	9.00%	4.93%	3.02%	9.00%	9.00%	
(Lesser) /Additional Sales due to higher/better Auxiliary Consumption (MU)	-16.73	-15.85	18.23	2.92	16.90	6.44	-35.86	-22.96	
Approved Energy Charge (Rs./kWh)	1.91	1.79	2.31	2.65	2.43	3.01	1.69	1.67	
Revenue Loss/(gain) due to higher /better Auxiliary Consumption (Rs. Crore)	-3.19	-2.83	4.21	0.77	4.10	1.94	-6.06	-3.82	-4.88

Table 51: Sharing of Revenue Gain/ (Loss) due to lower/higher auxiliary consumption

Variable Charges

Commission's Analysis

4.90 The Commission has computed the variable charges for FY 2011-12 considering the approved fuel parameters and performance parameters. The variable charges computed by the Commission for FY 2011-12 are as shown in the Table below:

S.		KTPS	Unit 1-6	KTPS	S Unit 7	STPS	Unit 1-5
No.	Particulars	RVUN	Approved	RVUN	Approved	RVUN	Approved
1	Capacity in (MW)	1045.00	1045.00	195.00	195.00	1250.00	1250
2	PLF	91.73%	91.53%	97.17%	96.15%	87.36%	87.54%
3	Unit Generated (MU)	8420.15	8420.15	1664.34	1664.34	9592.13	9592.13
4	Auxiliary Consumption	9.52%	9.32%	9.95%	9.00%	8.81%	9.00%
5	Units Sent out (MU)	7618.67	7635.40	1498.70	1514.55	8747.06	8728.84
6	SHR kcal/Kwh	2538.19	2605.00	2291.94	2450.00	2504.00	2500.00
7	Specific Indian Coal consumption(kg /kwh)	0.59	0.60	0.53	0.56	0.60	0.60
8	Specific imported Coal consumption(kg /kwh)	0.07	0.07	0.06	0.07	0.05	0.05
9	Specific Oil Consumption	0.48	1.00	0.42	1.00	0.71	1.00
10	Specific Gas Consumption	0.00	0.00	0.00	0.00	0.00	0.00
11	GCV of Indian Coal(kcal/kg)	3574.64	3574.64	3574.64	3574.64	3614.25	3614.25
12	GCV of Imported Coal(kCal/kg)	6500.00	6500.00	6500.00	6500.00	6600.00	6600.00
13	GCV of Oil (HFO) (kcal/litre)	10504.00	10504.00	10504.00	10504.00	9500.00	9500.00
14	GCV of Oil (LDO) (kCal/litre)	0.00	0.00	0.00	0.00	9200.00	9200.00
15	GCV of Oil (HSD) (kCal/litre)	11150.00	11150.00	11150.00	11150.00	0.00	0.00
16	GCV of gas (kCal/scm)	0.00	0.00	0.00	0.00	0.00	0.00
17	Price of Indian coal Rs./kg	3285.16	3236.94	3285.16	3236.94	3772.40	3754.25
18	Price of Imported coal Rs./kg	7782.84	7782.84	7782.84	7782.84	8839.00	8839.00
19	Price of Oil (HFO) (Rs/ KL)	32470.54	32470.54	32470.54	32470.54	38398.00	38398.00

Table 52: Approved Variable Charges for FY 2011-12 (Rs. Crore)



S.		KTPS Unit 1-6		KTPS	5 Unit 7	STPS Unit 1-5	
No.	Particulars	RVUN	Approved	RVUN	Approved	RVUN	Approved
20	Price of Oil (LDO) (Rs/ KL)	0.00	0.00	0.00	0.00	51697.00	51697.00
21	Price of Oil (HSD) (Rs/ KL)	39519.12	39519.12	39519.12	39519.12	0.00	0.00
22	Price of gas (Rs/scm)	0.00	0.00	0.00	0.00	0.00	0.00
23	Variable Cost of generation (Rs. in Cr.)	2076.97	2116.85	370.67	393.77	2622.09	2615.85

Variable Charges Approved by the Commission

S.		STPS	S Unit 6	R	GTPS	DCCPP		
No.	Particulars	RVUN	Approved	RVUN	Approved	RVUN	Approved	
1	Capacity in (MW)	250.00	250	110.50	110.5	330.00	330	
2	PLF	49.29%	49.44%	55.30%	55.53%	77.76%	77.93%	
3	Unit Generated (MU)	1082.41	1082.41	536.76	536.76	2254.04	2254.04	
4	Auxiliary Consumption	8.73%	9.00%	1.79%	2.20%	2.73%	2.94%	
5	Units Sent out (MU)	987.91	984.99	527.18	524.95	2192.51	2187.83	
6	SHR kcal/Kwh	2482.00	2450.00	2587.11	2328.16	2152.47	1977.39	
7	Specific Indian Coal consumption(kg/ kwh)	0.60	0.60	0.00	0.00	0.00	0.00	
8	Specific imported Coal consumption(kg/ kwh)	0.04	0.04	0.00	0.00	0.00	0.00	
9	Specific Oil Consumption	2.15	1.00	0.04	0.04	0.00	0.00	
10	Specific Gas Consumption	0.00	0.00	0.55	0.50	0.24		
11	GCV of Indian Coal(kcal/kg)	3614.25	3614.25	0.00	0.00	0.00	0.00	
12	GCV of Imported Coal(kCal/kg)	6600.00	6600.00	0.00	0.00	0.00	0.00	
13	GCV of Oil (HFO) (kcal/litre)	9500.00	9500.00	0.00	0.00	0.00	0.00	
14	GCV of Oil (LDO) (kCal/litre)	9200.00	9200.00	0.00	0.00	0.00	0.00	
15	GCV of Oil (HSD) (kCal/litre)	0.00	0.00	0.00	0.00	0.00	0.00	



S.		STPS	5 Unit 6	R	GTPS	DCCPP	
No.	Particulars	RVUN	Approved	RVUN	Approved	RVUN	Approved
16	GCV of gas (kCal/scm)	0.00	0.00	4672.81	4672.81	9106.82	9106.82
17	Price of Indian coal Rs./kg	3772.40	3754.25	0.00	0.00	0.00	0.00
18	Price of Imported coal Rs./kg	8839.00	8839.00	0.00	0.00	0.00	0.00
19	Price of Oil (HFO) (Rs/ KL)	38398.00	38398.00	0.00	0.00	0.00	0.00
20	Price of Oil (LDO) (Rs/ KL)	51697.00	51697.00	0.00	0.00	0.00	0.00
21	Price of Oil (HSD) (Rs/ KL)	0.00	0.00	0.00	0.00	0.00	0.00
22	Price of gas (Rs/scm)	0.00	0.00	5.65	5.65	15.14	15.14
23	Variable Cost of generation (Rs.in Cr.)	296.41	287.93	167.91	151.11	806.74	740.99

Variable Charges Approved by the Commission

S.		CTPP	Unit 1	CTPP Unit 2		
No.	Particulars	RVUN	Approved	RVUN	Approved	
1	Capacity in (MW)	250.00	250.00	250.00	250.00	
2	PLF	76.30%	74.51%	57.90%	55.41%	
3	Unit Generated (MU)	1675.55	1675.55	587.11	587.11	
4	Auxiliary Consumption	11.14%	9.00%	12.91%	9.00%	
5	Units Sent out (MU)	1488.89	1524.75	511.31	534.27	
6	SHR kcal/Kwh	2878.34	2356.57	2724.01	2356.57	
7	Specific Indian Coal consumption(kg/kwh)	0.62	0.51	0.63	0.55	
8	Specific imported Coal consumption(kg/kwh)	0.03	0.03	0.04	0.04	
9	Specific Oil Consumption	1.95	1.00	6.57	1.00	
10	Specific Gas Consumption	0.00	0.00	0.00	0.00	
11	GCV of Indian Coal(kcal/kg)	4214.00	4214.00	3808.00	3808.00	
12	GCV of Imported Coal(kCal/kg)	6600.00	6600.00	6600.00	6600.00	
13	GCV of Oil (HFO) (kcal/litre)	9978.80	9978.80	9978.80	9978.80	
14	GCV of Oil (LDO) (kCal/litre)	0.00	0.00	0.00	0.00	
15	GCV of Oil (HSD) (kCal/litre)	9520.00	9520.00	9520.00	9520.00	
16	GCV of gas (kCal/scm)	0.00	0.00	0.00	0.00	
17	Price of Indian coal Rs./kg	2237.15	2244.87	2237.15	2244.87	
18	Price of Imported coal Rs./kg	8764.73	8764.73	8764.73	8764.73	
19	Price of Oil (HFO) (Rs/ KL)	41413.09	41413.09	41413.09	41413.09	
20	Price of Oil (LDO) (Rs/ KL)	0.00	0.00	0.00	0.00	



S.		CTPP	Unit 1	CTPP Unit 2		
No.	Particulars	RVUN	Approved	RVUN	Approved	
21	Price of Oil (HSD) (Rs/ KL)	59610.93	59610.93	59610.93	59610.93	
22	Price of gas (Rs/scm)	0.00	0.00	0.00	0.00	
23	Variable Cost of generation (Rs. in Cr.)	299.15	241.90	120.08	94.29	

4.91 Further, the Commission has carried out the sharing of gains / losses on account of variation in controllable performance parameters (SHR, SFOC & Transit Losses) as shown in the Table below:

Station	Actual	Normative	(Gain) / Loss	50% Sharing	Net entitlement
KTPS (Unit 1-6)	2076.97	2116.85	-39.89	-19.94	2096.91
KTPS (Unit 7)	370.67	393.77	-23.09	-11.55	382.22
STPS (Unit 1-5)	2622.09	2615.85	6.25	3.12	2618.97
STPS (Unit 6)	296.41	287.93	8.48	4.24	292.17
RGTPS	167.91	151.11	16.80	8.40	159.51
DCPP	806.74	740.99	65.75	32.88	773.87
CTPP (Unit 1)	299.15	241.90	57.26	28.63	270.53
CTPP (Unit 2)	120.08	94.29	25.79	12.89	107.19
Total	6760.03	6642.68	117.34	58.67	6701.36

Table 53: Approved Variable Charges after Sharing of Gain/Loss for FY 2011-12 (Rs. Crore)

Incentive for generation beyond Target PLF / Capacity Index

4.92 Regulation 55 of RERC Tariff Regulations, 2009 specifies that incentive shall be payable by the beneficiary at a flat rate of 25.0 paise/kWh for ex-bus scheduled energy corresponding to scheduled generation in excess of ex-bus energy corresponding to target Plant Load Factor. Regulation 73 of RERC Tariff Regulations, 2009 specifies that incentive shall be payable when the capacity Index (CI) exceeds 85% for run-of-river hydel plants. The Commission has computed the incentive for thermal generation for Stations, which have achieved PLF more than the target PLF. For Mahi, the Commission has not allowed any incentive as the actual Capacity Index is lower than the target Capacity Index. The incentive for generation beyond the target PLF/Capacity Index approved by the Commission is as shown in the Table below:



Table 54: Incentive for generation beyond Target PLF/Capacity Index approved by
the Commission

Particulars	KTPS Unit 1-6	KTPS Unit 7	STPS Unit 1-5	STPS Unit 6	RGTPS	DCCPP	Mahi	CTPP Unit 1	CTPP Unit 2	Total
Claimed by Peti	tioner									
Incentive (Rs. Crore)	19.84	5.51	13.85	0.00	0.00	0.00	0.00	0.00	0.00	39.20
Approved										
Additional Net Generation Eligible for incentive (MU)	793.18	220.54	553.79	0	0	0	0	0	0	
Rate of Incentive (Rs./kWh)	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	
Incentive Approved for FY 2011-12 (Rs. Crore)	19.84	5.51	13.85	0	0	0	0	0	0	39.20

<u>Revenue Side True-up</u>

Commission's Analysis

4.93 The Commission observed that the actual revenue from sale of power for FY 2011-12 as per the Audited Accounts is Rs. 8256.72 Crore whereas, RVUN in its petition has claimed for the revenue of Rs. 8338.18 Crore. Accordingly, the Commission in its datagaps has asked RVUN to submit the reconciliation of Revenue as claimed in the Petition with the Audited Accounts. The reconciliation of revenue from sale of power with the audited accounts as submitted by RVUN is as shown in the Table below:

Table 55: Reconciliation of Revenue as submitted by RVUN

S. No.	Particulars	Amount
A	Revenue as per Balance Sheet	8256.21
В	Less: Revenue from sale of power from MMH Stations	6.21
С	Revenue from sale of power from Giral Unit	58.04
D	Net Revenue (A-B-C)	8191.96



S. No.	Particulars	Amount
E	Add: Refund of variable charges	146.66
F	Total (D+E)	8338.62

4.94 The Commission has considered the revenue earned from fixed charges and variable charges for the Stations. The revenue considered by the Commission for truing up purposes is as shown in the Table below:

Station	Fixed Charges	Variable Charges	FPA	Generation Incentive
KTPS (Unit 1-6)	280.89	1451.56	667.19	19.84
KTPS (Unit 7)	152.45	267.80	93.44	5.51
STPS Unit (1-5)	586.17	2020.89	641.90	13.85
STPS (Unit 6)	121.10	223.73	73.96	0.00
DCCPP	178.23	659.32	72.57	0.00
CTPP (Unit 1)	208.66	251.77	-18.86	0.00
CTPP (Unit 2)	91.22	84.89	3.33	0.00
RGTPS	37.47	128.07	9.43	0.00
Mahi	7.31	4.48	0.00	0.00
Total for true-up	1663.50	5092.51	1542.97	39.20
Revenue from sale of power for true-up		8298.98		
Revenue from Generation Incentive		39.	20	
Total Revenue	8338.18			

Table 56: Revenue Considered by the Commission (Rs Crore)

Summary of True-up

4.95 The summary of true up for FY 2011-12 is as shown below:

Particulars	Tariff Order	Actual	Trued-up	Deviatio n	Sharing of Efficiency (Gain)/Loss	Net entitlement
O&M charges	481.46	449.85	514.12	-64.28	-32.14	481.99
Depreciation charges	527.00	519.22	516.40	2.81		516.40
Interest & Financial Charges	457.26	420.86	406.62	14.24		406.62
Interest on transitional Ioans	83.21	101.67	87.37	14.30		87.37
Interest on WC	170.87	267.15	248.20	18.95	9.47	257.68
Lease Rental	0.00	0.23	0.23	0.00		0.23
Insurance on fixed assets	1.86	8.60	7.50	1.11		7.50
Inter unit account balance written off	15.67	15.24	15.24	0.00		15.24
Recovery of ARR & Tariff Petition fees	1.86	2.23	1.91	0.32		1.91
Additional liability towards pension and gratuity	40.01	0.00	0.00	0.00		0.00
Prior period charges	0.00	-12.74	-13.39	0.65		-13.39
Annual Fixed Charges	1779.20	1772.29	1784.21	-11.91		1761.54
Fuel Expenses	4887.54	6760.03	6642.68	117.34	58.67	6701.36
Generation Incentive	0.00	39.20	39.20			39.20
MVArh charges	0.00	0.00	0.00			0.00
ARR (A)	6666.73	8571.52	8466.09			8502.10
Revenue from sale of power		8298.98	8298.98			8298.98
Revenue from Generation Incentive		39.20	39.20			39.20
Non Tariff Income	14.70	61.88	61.88			61.88
Revenue loss due to higher auxiliary consumption			4.88		2.44	2.44
Total Revenue (B)		8400.07	8404.95			8402.51
Gap/(Surplus) (A-B)						99.59
Less : Reduction in AFC						127.13
Net Gap/(Surplus)						(27.54)

Table 57: Summary of True up for FY 2011-12 (Rs. Crore)

4.96 The Commission has approved the treatment of this surplus amount in the next Section of the Order i.e., Determination of ARR and Tariff for FY 2014-15.



SECTION 5

Determination of ARR and Tariff for FY 2014-15

- 5.1 The Annual Fixed Charges comprise of the following elements:
 - i. Operation and Maintenance (O&M) Expenses
 - ii. Depreciation
 - iii. Interest on Term Loans
 - iv. Interest on Transitional Loans
 - v. Finance Charges
 - vi. Return on Equity
 - vii. Interest on Working Capital
 - viii. Insurance Charges
 - ix. Less: Non-tariff Income
- 5.2 Each of these elements has been dealt with in the following paragraphs.

Operation and Maintenance Expenses

Petitioner's Submission

- 5.3 RVUN submitted that the Operation & Maintenance Expenses for FY 2014-15 have been computed on the basis of norms prescribed under Regulation 47 of RERC Tariff Regulations, 2014.
- 5.4 The details of the O&M expenses as claimed in petition for FY 2014-15 has been provided in the table below:

Particular	KTPS (Unit 1-7)	STPS (Unit 1-6)	CTPP (Unit 1-2)	DCCPP	RGTPS	Mahi	RVUN Total
As per Petition	199.52	241.35	80.45	39.80	16.18	13.89	591.18

Table 58: O&M Expenses as per Petition for FY 2014-15 (Rs. Crore)

Commission's Analysis

- 5.5 The Commission has verified RVUN's computations of O&M expenses and found it to be in order and accordingly, same has been approved.
- 5.6 The O&M expenses as approved by the Commission for FY 2014-15 have been provided in the table below:
| Particular | KTPS
(Unit 1-7) | STPS
(Unit 1-6) | CTPP
(Unit 1-2) | DCCPP | RGTPS | Mahi | RVUN
Total |
|--------------------|--------------------|--------------------|--------------------|-------|-------|-------|---------------|
| As per
Petition | 199.52 | 241.35 | 80.45 | 39.80 | 16.18 | 13.89 | 591.18 |
| Approved | 199.52 | 241.35 | 80.45 | 39.80 | 16.18 | 13.89 | 591.18 |

Table 59: O&M Expenses Approved for FY 2014-15 (Rs. Crore)

Depreciation

Petitioner's Submission

- 5.7 RVUN submitted that the depreciation for FY 2014-15 has been computed on the basis of norms prescribed under Regulation 22 of RERC Tariff Regulations, 2014.
- 5.8 RVUN submitted that depreciation for KTPS Unit 7, STPS Unit 6 and CTPP Unit 1-2 has been computed on the basis of the Capital Cost as approved by the Commission in its Order dated 06.06.2013. The Commission in the said Order approved the Capital Cost of KTPS Unit 7, STPS Unit 6 and CTPP Unit 1-2 by reducing amount of Rs. 9.89 Crore, Rs. 14.26 Crore and Rs. 22.46 Crore from the total Capital Cost of these Stations respectively on account of Work Contract Tax (WCT). However, RVUN has not considered this reduction on account of WCT by stating that the matter for reduction of WCT from Capital Cost of these Stations is pending in appeal before the Hon'ble APTEL and accordingly, RVUN in its Petition has considered Capital Cost for KTPS Unit 7, STPS Unit 6 and CTPP Unit 1-2 by adding the amount reduced on account of WCT into the total Capital Cost as approved by the Commission in its Order dated 06.06.2013. Further, RVUN has also considered an Additional capitalization of Rs. 17.90 Crore and Rs. 48.71 Crore for KTPS Unit 7 and STPS Unit 6 respectively as submitted in supplementary petition for FY 2013-14 as well.
- 5.9 The details of the depreciation as claimed in petition for FY 2014-15 has been provided in the table below:

Particular	KTPS (Unit 1-7)	STPS (Unit 1-6)	CTPP (Unit 1-2)	DCCPP	RGTPS	Mahi	RVUN Total
As per Petition	99.79	269.10	123.38	56.63	15.40	4.18	568.47

Table 60: Depreciation as per Petition for FY 2014-15 (Rs. Crore)



Commission's Analysis

- 5.10 The Commission has approved the Depreciation for FY 2014-15 in accordance with the RERC Tariff Regulations, 2014.
- 5.11 The Commission observed that RVUN has computed the depreciation on SLM basis for the entire assets and has not computed the depreciation separately for the assets older than 12 years. As regard the same, the Commission vide its datagaps asked RVUN to submit the revised computation of the depreciation in accordance with Regulation 22 (4) of RERC Tariff Regulations, 2009. RVUN in its reply to the datagaps has submitted that RVUN is in process of preparing the fixed assets register for all the generating stations. RVUN submitted that it has appointed an external consultant for preparing the fixed assets register of STPS and that the said consultant has submitted its report and the same is being examined by the auditor. RVUN submitted that once the assets register of STPS is approved by the auditor, the fixed assets register for all the plants will be prepared on similar lines. Till the time RVUN is not able to prepare its fixed assets register, RVUN is calculating depreciation based on rates of depreciation in Appendix-1 of the RERC Tariff Regulations, 2014. RVUN further submitted that it believes that the rate of depreciation in Appendix-1 of the Regulations has been prepared based on the useful life of the asset. Also considering the net loan repayment is allowed to the tune of allowed depreciation only and the current depreciation level (maximum allowed depreciation percentage is 5.28% only) does not cover for the requirement of loan repayment (80% of the capital cost to be paid in 15 years which equals 5.33% per year), any reduction in current depreciation will increase the interest burden of the utility. RVUN submitted that apart from this there is no method to determine the useful life of the each and every asset separately. Considering all these RVUN has requested the Commission to consider the rate of depreciation in Appendix-1 of the Regulations till the time fixed asset register is prepared.
- 5.12 The Commission with regards to expenses incurred towards work contract tax is of the view that as the matter of reduction of Rs. 9.89 Crore, Rs. 14.26 Crore and Rs. 22.46 Crore from the Capital Cost of KTPS Unit 7, STPS Unit 6 and CTPP Unit 1-2 respectively on account of WCT is still pending in appeal before the Hon'ble APTEL, the Commission has considered the Capital Cost of KTPS Unit 7, STPS Unit 6 and CTPP Unit 1&2 as already approved by the Commission.
- 5.13 As regards the issue of additional capitalization of Rs. 17.90 Crore and Rs. 48.71 Crore for KTPS Unit 7 and STPS Unit 6 respectively, the Commission has already



scrutinized this issue in detail in its Order dated 24.02.2014. Accordingly, the Commission has considered the Capital Cost for KTPS Unit 7 and STPS Unit 6 as approved in the Order dated 24.02.2014.

- 5.14 For KTPS (Unit 1 to 6), STPS (Unit 1 to 5), RGTPS and DCCPP depreciation has been computed as per the approach adopted in MYT Order for FY 2009-10 to FY 2013-14. The Commission has computed the depreciation for the Control Period in the following manner:
 - Considered Accumulated Depreciation till FY 2013-14 by adding year-wise depreciation allowed in Tariff Orders/True up orders from FY 2009-10 to FY 2013-14 to the accumulated depreciation till FY 2009-10.
 - Depreciation @5.28% if the Station/Stage/Unit has not completed 12 years life from the date of commissioning
 - If the Station/Stage/Unit has completed 12 years life, depreciation computed by spreading remaining depreciation to be charged over the balance useful life of the asset.
- 5.15 During the public hearing held on 16.09.2014, one of the stakeholder pointed out that the depreciation for the generating stations shall be computed taking into consideration the depreciation for individual Units for the generating station. The Commission has taken note of the contentions raised by the Stakeholder and is of the view that the depreciation shall be computed in accordance with Regulations 22(8) of the RERC Tariff Regulations, 2014. The relevant extract of the Regulations is reproduced below:

"22. Depreciation

(8) In case a single tariff needs to be determined for all the Units of generating station, the depreciation shall be computed from the effective date of commercial operation taking into consideration the depreciation of individual Units thereof."

- 5.16 As already discussed above, the Commission has computed the depreciation for KTPS (Unit 1 to 6), STPS (Unit 1 to 5), RGTPS and DCCPP from the effective date of commercial operation taking into consideration the depreciation of individual Units.
- 5.17 As regards the issue of non-maintenance of Fixed Asset Register, the Commission observes that even after issuance of repeated directives from the Commission, RVUN has failed to submit the Fixed Asset Register for all the

generating stations. Accordingly, as a first step towards reprimanding RVUN over the issue of non-maintenance of fixed asset registers, the Commission has decided to withhold 5% of the allowable depreciation for FY 2014-15 for all the generating stations. The same would be considered for release for recovery through tariff, upon submission of fixed asset registers up to the current year i.e., FY 2014-15 within three months from the date of publishing of this Order.

5.18 Accordingly, the depreciation approved by the Commission for FY 2014-15 is as shown in the Table below:

Particular	KTPS (Unit 1-7)	STPS (Unit 1-6)	CTPP (Unit 1-2)	DCCPP	RGTP S	Mah i	RVUN Total
As per Petition	99.79	269.10	123.38	56.63	15.40	4.18	568.47
Depreciation Computed by the Commission	88.90	186.30	120.25	58.19	1.99	6.18	461.82
Depreciation Approved by the Commission after 5% Deduction	84.46	176.99	114.23	55.28	1.90	5.87	438.73

 Table 61: Depreciation Approved for FY 2014-15 (Rs. Crore)

Interest on Term Loan

Petitioner's Submission

- 5.19 RVUN in its petitions for ARR and Tariff for FY 2014-15 has submitted that for computation of interest expenses, the loan repayment amount for the term loans and transitional loans combined has been kept equal to the depreciation figure envisaged for 2012-13, FY 2013-14 arrived at the opening balance of term loans for FY 2014-15.
- 5.20 RVUN in its ARR and Tariff petition for FY 2014-15 has not provided the interest charges on long term loans and the interest charges on transitional loans separately. The details of interest charges on long term loans and transitional loan as submitted by RVUN in its petition for FY 2014-15 has been provided in the table below:



Table 62: Interest on Term Loan and Transitional Loan as submitted in Petition for FY
2014-15 (Rs. Crore)

Particular	KTPS (Unit 1-7)	STPS (Unit 1-6)	CTPP (Unit 1-2)	DCCPP	RGTPS	Mahi	RVUN Total
As per Petition	75.05	130.28	176.64	48.51	0.54	0.00	431.01

Commission's Analysis:

- 5.21 RVUN in its petition has submitted the computation of interest on loan for FY 2014-15 considering the average rate of interest. As per Regulation 21 (5) of RERC Tariff Regulations, 2014, the rate of interest to be considered is weighted average rate of interest calculated on the basis of the actual loan portfolio at the beginning of each year. In accordance with this Regulation, the Commission in its datagaps had asked RVUN to submit the details of the actual loans for considering the average interest rate along with the supporting computations.
- 5.22 RVUN in its replies to the datagaps has submitted the average rate of interest calculated on the basis of the actual loan portfolio at the beginning of FY 2014-15 for all stations as shown in the table below:

Station/Unit	Interest Rate
KTPS Unit 1 to 6	12.50%
KTPS Unit 7	12.50%
STPS Unit 1 to 5	12.50%
STPS Unit 6	12.50%
CTPP	12.50%
RGTPS	12.50%
DCCPP	12.50%
Mahi Hydel	12.50%

Table 63: Average Rate of Interest as submitted by RVUN

5.23 The Commission observed that RVUN has not submitted the details of actual interest loan and computations of weighted average rate of interest for FY 2014-15. Accordingly, the Commission has considered the weighted average rate of interest as allowed for FY 2013-14 in Order dated 24.02.2014 as shown in the table below:



Station/Unit	Interest Rate
KTPS Unit 1 to 6	10.11%
KTPS Unit 7	11.27%
STPS Unit 1 to 5	11.85%
STPS Unit 6	11.52%
CTPP	12.14%
rgtps	12.12%
DCCPP	12.59%
Mahi Hydel	11.52%

Table 64: Weighted Average Interest Rate as considered by the Commission for FY2014-15

- 5.24 The Commission has computed the interest charges for FY 2014-15 by considering weighted average interest rate as allowed for FY 2013-14 in Order dated 24.02.2014 and by keeping repayment equivalent to depreciation.
- 5.25 The Commission has arrived at the opening balance of term loans for FY 2014-15 by considering the opening balance for FY 2009-10 as already approved in the MYT Order for FY 2009-10 to FY 2013-14 and by taking the repayment equivalent to depreciation less the repayment amount for Transitional Loan for FY 2009-10 to FY 2013-14 as approved by the Commission in True up Orders for FY 2009-10, FY 2010-11 and FY 2011-12 and Tariff Orders for FY 2012-13 and FY 2013-14. The computations of the opening loan balance for FY 2014-15 for KTPS Unit 1 to 6, STPS Unit 1 to 5, RGTPS and DCCPP are as shown in Table below:

											FY 2014-
	FY 20	09-10	FY 2010-11		FY 2011-12		FY 2012-13		FY 2013-14		15
Stations	Opening Loan	Rep. Equal to Depr.	Opening Loan								
KTPS (Unit 1-6)	249.62	62.58	187.04	54.08	132.96	45.32	87.64	40.49	47.15	40.51	6.64
STPS (Unit 1-5)	912.30	195.36	716.94	169.29	547.65	158.27	389.38	176.22	213.16	65.24	147.92
DCCPP	684.85	65.25	619.60	65.25	554.35	57.52	496.83	57.20	439.63	58.19	381.44
RGTPS	50.68	13.30	37.38	11.50	25.88	11.14	14.74	11.50	3.24	2.88	0.36

Table 65: Opening Balance of Term Loans as Computed by the Commission for FY2014-15 (Rs. Crore)

- 5.26 In case of CTPP and new units of KTPS and STPS, the interest charges have been allowed on the basis of capital cost and additional capitalisation as approved by the Commission in its Order dated 06.06.2013 and 23.07.2014 respectively. Further, the debt component of the Capital cost has been taken in the same ratio as submitted by RVUN.
- 5.27 The interest charges on term allowed by the Commission for FY 2014-15 have been provided in the table below.

Table 66: Interest on Term Loan as approved by the Commission for FY 2014-15 (Rs. Crore)

Particular	KTPS (Unit 1-7)	STPS (Unit 1-6)	CTPP (Unit 1-2)	DCCPP	RGTPS	Mahi	RVUN Total
Approved Interest on Term Loan	52.76	76.04	181.69	44.54	0.02	0.00	355.06

Interest Charges on Transitional Loan

Petitioner's Submission

5.28 As discussed earlier in this Order, RVUN in its ARR and Tariff petition for FY 2014-15 has not provided separately the interest charges on long term loans and the interest charges on transitional loans.

Commission's Analysis:

5.29 As already discussed earlier in this Order, the interest on transitional loan needs to be examined in detail during the truing up exercise for FY 2013-14. Accordingly, for now the Commission has adopted the same approach as adopted in the Commission's Order on review of MYT Order for FY 2009-10 to FY 2013-14 dated 21.10.2010. The Commission has computed the interest on transitional loan for KTPS Unit (1 to 6), STPS (Unit 1 to 5), RGTPS and DCCPP by considering the closing balance for FY 2013-14 as already approved in the Commission's Order on review of MYT Order for FY 2013-14 dated 21.10.2010. The detailed computations of Interest on transitional loan are as shown in Table below:

S. No.	Particulars	KTPS	STPS	RGTPS	DCCPP
1	Opening balance of transitional loan as worked out by the Commission.	88.74	649.02	13.96	24.37
2	Depreciation allowed by the commission in MYT order	46.88	176.99	1.90	55.28
3	Term Loan repayment	6.64	42.02	0.36	55.28
4	Repayment of Transitional Loan	40.24	134.96	1.54	0.00
5	Closing balance of transitional loan (1-4)	48.50	514.06	1.54	24.37
6	Interest@ 9.895% the weighted average rate of interest on transitional loans.	6.79	57.54	0.77	2.41

Table 67: Interest on Transitional Loan as Computed by the Commission

5.30 Accordingly, the interest charges on transitional loans allowed by the Commission for FY 2014-15 have been provided in the table below.

Table 68: Interest on Transitional Loan as approved by the Commission for FY 2014-15(Rs. Crore)

Particular	KTPS (Unit 1-7)	STPS (Unit 1-6)	DCCPP	RGTPS	RVUN Total
Approved Interest on Transitional Loan	6.79	57.54	2.41	0.77	67.51

Finance Charges

Petitioner's Submission

5.31 The details of finance charges as submitted by RVUN in its petition for FY 2014-15 has been provided in the table below:

Table 69: Finance Charges as submitted in Petition for FY 2014-15 (Rs. Crore)

Particular	KTPS (Unit 1-7)	STPS (Unit 1-6)	CTPP (Unit 1-2)	DCCPP	RGTPS	Mahi	RVUN Total
As per Petition	2.50	2.00	1.00	1.00	0.00	0.00	6.50



Commission's Analysis

- 5.32 As regards the finance charges, the Commission in its datagaps had asked RVUN to submit the basis for estimating the Finance Charges for each station for FY 2013-14. RVUN in its replies submitted that the finance charges have been claimed towards the commitment charges, bank charges and other finance charges. However, RVUN has not submitted any details for arriving at the finance charges as claimed in its petition.
- 5.33 The Commission at this stage allows the finance charges as claimed by RVUN in its ARR and Tariff Petition for FY 2014-15. However, the same shall be subject to truing up at the time of final true up exercise for FY 2014-15.

Interest on Working Capital Petitioner's Submission

- 5.34 RVUN submitted that the requirement for working capital loan has been computed on the basis of Regulation 27 of RERC Tariff Regulations, 2014 and the rate of interest on Working Capital Loan has been taken equal to 250 basis points higher than the average Base Rate of State Bank of India prevalent during first six months of the previous year.
- 5.35 The details of interest on working capital as claimed in Petition for FY 2014-15 has been provided in the table below:

Particular	KTPS (Unit 1-7)	STPS (Unit 1-6)	CTPP (Unit 1-2)	DCCPP	RGTPS	Mahi	RVUN Total
As per Petition	89.68	123.91	32.78	20.54	6.06	1.28	274.25

Table 70: Interest on Working Capital as per Petition for FY 2014-15 (Rs. Crore)

Commission's Analysis

5.36 Regulation 27(2) of the RERC Tariff Regulations, 2014 specify that the rate of interest on working capital to be computed shall be on normative basis and shall be 250 basis points higher from SBI base rate prevalent during first six months of the year previous to the relevant year. Accordingly, for working out interest on working capital, weighted rate of interest has been considered as per admissible rates during the previous year. The same works out to 12.21% p.a. which has been used for calculating interest on working capital. The computation of the bank rate is as shown in the Table below:



Time Period (Month)	SBI Base Rate	250 Basis Point	Approved Interest Rate
Apr-13	9.70%		
May-13	9.70%		
Jun-13	9.70%		
Jul-13	9.70%		10.0197
Aug-13	9.70%	2.50%	12.21%
18-Sep-13	9.70%		
30-Sep-13	9.80%		
Interest Rate	9.71%		

Table 71: Computations of Bank Rate as Considered by the Commission for FY 14-15

5.37 Further, the Commission has worked out the working capital requirement in accordance with Regulation 27 of the RERC Tariff Regulations, 2014. The interest on working capital as approved by the Commission for FY 2014-15 has been provided in the table below.

Table 72: Approved Interest on Working Capital (Rs. Crore)

Particular	KTPS (Unit 1-7)	STPS (Unit 1-6)	CTPP (Unit 1-2)	DCCPP	RGTPS	Mahi	RVUN Total
As per Petition	89.68	123.91	32.78	20.54	6.06	1.28	274.25
Approved	94.35	125.80	30.24	18.09	4.51	0.71	273.70

Additional Liability towards Pension and Gratuity

Petitioner's Submission

5.38 RVUN has not claimed any additional liability towards Pension and Gratuity for FY 2014-15.

Commission's Analysis

5.39 The Commission in view of RVUN not claiming any additional liability towards Pension and Gratuity for FY 2014-15, has not provided for the same while approving the annual fixed charges for FY 2014-15.

<u>Return on Equity</u>

Petitioner's Submission



- 5.40 RVUN vide its additional submission dated September 12, 2014 submitted that RVUN has decided to request the Commission for allowing the ROE (%).
- 5.41 RVUN submitted that for FY 2014-15 it has computed the ROE at the base rate of 15.5% along with the MAT as per Regulation 20 of RERC Tariff Regulations, 2014. The ROE as claimed by RVUN in its ARR and Tariff Petition for FY 2014-15 is as shown in the Table below:

Particular	KTPS (Unit 1-7)	STPS (Unit 1-6)	CTPP (Unit 1-2)	DCCPP	RGTPS	Mahi	RVUN Total
As per Petition	77.43	186.15	87.42	53.79	18.61	26.42	449.81

Table 73: Return on Equity as per Petition for FY 2014-15 (Rs. Crore)

Commission's Analysis

- 5.42 RVUN in its Petition filed on June 6, 2014 had not included the Return on Equity (RoE) component while proposing the tariff for FY 2014-15. The summary of Tariff Petition filed by RVUN for determination of ARR for FY 2014-15 was published in newspapers on July 1, 2014 for inviting comments from the stakeholder. The comments received from the Stakeholders were sent to the Petitioner and the Petitioner submitted its responses on the comments of stakeholders on August 27, 2014. Subsequently, RVUN vide its submission dated August 27, 2014 informed the Commission that its Board of Directors on 19.05.14 has approved to request the State Govt. for allowing Return on Equity.
- 5.43 RVUN vide its additional submissions dated September 12, 2014 submitted that RVUN has now decided to claim Return on Equity and revised the ARR &tariff for FY15.
- 5.44 From the submissions made by RVUN it is observed that the Board of Directors of RVUN in its 236th meeting held on 19.05.2014 has considered and approved to request the State Government for allowing the ROE (%). However while filing the Petition for ARR and Tariff for FY 2014-15 in the month of June, 2014 RVUN did not claim RoE. Further it was observed that even while filing its additional submissions claiming RoE, specific approval of BoD was not obtained.
- 5.45 Further, it is also observed that while making additional submissions on September 12, 2014 claiming ROE, comments from the stakeholders had already been invited and the hearing of the matter was scheduled and hence

the stakeholders were not aware of RoE claimed by RVUN. Since the RVUN is claiming RoE for the first time it should have been included in the petition that was published inviting comments. Therefore Commission is of the view that under such circumstances, if RoE is to be allowed to RVUN for FY 2014-15 it could be done only after re-publication of the petition inviting comments. This would delay the entire process of tariff determination for FY 2014-15 which is already overdue as half of the year is over.

- 5.46 Further it is observed that while claiming the RoE, RVUN has also not provided the approved details of equity component with the supporting documents.
- 5.47 In view of the above, the Commission has decided not to allow any Return on Equity for FY 2014-15. However Commission will consider allowing RoE to RVUN from FY 2015-16 onwards if claimed as per regulations.

Tax on Return on Equity

Petitioner's Submission

5.48 RVUN submitted that it has computed the tax on ROE in accordance with Regulation 20 of the RERC Tariff Regulations, 2014. The tax on return on equity as proposed by RVUN for FY 2014-15 is provided in the table below:

Table 74: Tax on Return on Equity as per Petition for FY 2014-15

Particular	KTPS (Unit 1-7)	STPS (Unit 1-6)	CTPP (Unit 1-2)	DCCPP	RGTPS	Mahi	RVUN Total
As per Petition	20.53	49.36	23.18	14.26	4.94	7.00	119.28

Commission's Analysis

5.49 Since the Commission has decided not to allow any Return on Equity for FY 2014-15, no tax on Return on Equity is being allowed.

Recovery of ARR and Tariff Petition fees

Petitioner's submission

5.50 RVUN submitted that it has proposed for the recovery of ARR and Tariff petition fees as the Commission in its order dated 10.03.2008 has allowed to pass through the fees levied for filling up of ARR and Tariff petition, as expenses in the ARR. The recovery of ARR and tariff petition fees as proposed by RVUN for FY 2014-15 is provided in the table below:

Particular	KTPS (Unit 1-7)	STPS (Unit 1-6)	CTPP (Unit 1-2)	DCCPP	RGTPS	Mahi	RVUN Total
As per Petition	0.62	0.75	0.25	0.17	0.06	0.07	1.91

Table 75: ARR and Tariff Petition Fees as per Petition for FY 2014-15 (Rs. Crore)

Commission's Analysis

5.51 The Commission has approved the recovery of ARR and Tariff Petition fees as claimed by RVUN for FY 2014-15 as shown in Table below:

Table 76: Recovery of ARR and Tariff Petition Fees Approved for FY 2014-15 (Rs. Crore)

Particular	KTPS (Unit 1-7)	STPS (Unit 1-6)	CTPP (Unit 1-2)	DCCPP	RGTPS	Mahi	RVUN Total
As per Petition	0.62	0.75	0.25	0.17	0.06	0.07	1.91
Approved	0.62	0.75	0.25	0.17	0.06	0.07	1.91

Insurance Charges

Petitioner's submission

5.52 RVUN in its petition has claimed the insurance charges for FY 2014-15 based on the actual insurance charges paid in the preceding year with an increment of 10% Year on Year. The insurance charges as proposed by RVUN for FY 2014-15 is provided in the table below:

Table 77: Insurance Charges as per Petition for FY 2014-15 (Rs. Crore)

Particular	KTPS (Unit 1-7)	STPS (Unit 1-6)	CTPP (Unit 1-2)	DCCPP	RGTPS	Mahi	RVUN Total
As per Petition	3.74	2.66	2.17	1.99	0.51	0.00	11.07

Commission's Analysis

5.53 As regard the Insurance charges the Commission in its data gaps had asked RVUN to submit the Station wise statement of actual insurance premium paid, based on which the insurance charges for FY 2014-15 have been claimed. The Commission also asked RVUN to submit the justification for projecting 10% higher insurance charges (YOY) than FY 2013-14.



- 5.54 RVUN in its reply submitted segregation of insurance charges for all the generating Stations for FY 2012-13 and computations for insurance charges claimed for FY 2014-15 by escalating insurance charges of FY 2012-13 by 10% per annum. RVUN has requested the Commission to consider the projected figures for FY 2013-14 and FY 2014-15. RVUN in its reply also submitted that looking to the past trends year on year increase of 10% has been considered for projecting the insurance charges for FY 2013-14 and FY 2013-14 and FY 2013-14.
- 5.55 The Commission vide its datagaps asked RVUN to submit the actual insurance charges paid for FY 2013-14. RVUN in its replies to datagaps submitted the actual insurance charges for FY 2013-14. For the purpose of ARR and Tariff determination for FY 2014-15, the Commission has considered the actual Insurance charges for FY 2013-14 as submitted by RVUN. Any variation in the actual insurance premium paid for FY 2014-15 and as approved by the Commission in this order shall be adjusted during the truing up exercise for FY 2014-15. The insurance charges as approved by the Commission for ARR and Tariff of FY 2014-15 are as shown in Table below:

Table 78: Insurance Charges Approved for FY 2014-15 (Rs. Crore)

Particular	KTPS (Unit 1-7)	STPS (Unit 1-6)	CTPP (Unit 1-2)	DCCPP	RGTPS	Mahi	RVUN Total
As per Petition	3.74	2.66	2.17	1.99	0.51	0.00	11.07
Approved	2.54	2.63	3.25	1.23	0.37	0.67	10.69

Non-Tariff Income

Petitioner's submission

5.56 RVUN submitted that the main heads of accounts of Non-tariff income are sale of scrap, interest on FD/Staff loans and miscellaneous receipts etc. The Nontariff income as proposed by RVUN is provided in the table below:

Table 79: Non-Tariff Income as per Petition for FY 2014-15 (Rs. Crore)

Particular	KTPS (Unit 1-7)	STPS (Unit 1-6)	CTPP (Unit 1-2)	DCCPP	RGTPS	Mahi	RVUN Total
As per Petition	6.30	8.14	3.36	2.13	0.10	0.32	20.34



Commission's Analysis

5.57 The Commission vide its datagaps had asked RVUN to submit the detailed break-up of the non-tariff income for each of the generating stations as claimed in the ARR and Tariff petition for FY 2014-15. The Commission has examined RVUN's submission and found the same in order and has approved the same for computing the Annual Fixed Charges for FY 2014-15 as shown in the table below:

Particular	KTPS (Unit 1-7)	STPS (Unit 1-6)	CTPP (Unit 1-2)	DCCPP	RGTPS	Mahi	RVUN Total
As per Petition	6.30	8.14	3.36	2.13	0.10	0.32	20.34
Approved	6.30	8.14	3.36	2.13	0.10	0.32	20.34

Table 80: Non-Tariff Income Approved for FY 2014-15 (Rs. Crore)

Corporate Social Responsibility

Petitioner's Submission

5.58 RVUN in its petition has claimed the charges on account of Corporate Social Responsibility as part of AFC for FY 2014-15. RVUN submitted that the Corporate Social Responsibility Policy of RVUN has been approved by the Government of Rajasthan vide letter No. F.16 (4) Energy/2009 dated 20.5.2011 of Energy Department. The expense on account of Corporate Social Responsibility as proposed by RVUN for FY 2014-15 is provided in the table below:

Table 81: CSR Expenses as per Petition for FY 2014-15 (Rs. Crore)

Particular	KTPS (Unit 1-7)	STPS (Unit 1-6)	CTPP (Unit 1-2)	DCCPP	RGTPS	Mahi	RVUN Total
As per Petition	0.50	0.60	0.20	0.10	0.04	0.03	1.48

Commission's Analysis

5.59 The Commission is of the view that the CSR activities are an initiative of RVUN and have to be carried out from their internal funds and cannot be allowed to be passed in tariff. In this regard, the Commission vide its Order dated 06.06.2013 for determination of ARR and Tariff for RVUN for FY 2012-13 had observed as under:

"Commission's Analysis:

8.29 CSR activities are an initiative of RVUN and have to be carried out from their internal funds and cannot be allowed to be passed through ARR."

5.60 The Commission observes that the Hon'ble APTEL in its Judgment dated 28.11.2013 in the matter of APPEAL No. 104, 105 and 106 of 2012 in the case of the Tata Power Company Limited (Generation, Transmission and Distribution) and Maharashtra Electricity Regulatory State Commission has also observed that Corporate Social Responsibility is the responsibility of the company. The relevant extract of the Judgment is reproduced below:

"63. In reply to above submissions, the learned Counsel for the State Commission submits the following:

(a) The expenses towards community welfare/Corporate Social Responsibility (CSR) cannot be passed on to the consumers, since it is the social obligation of the corporate entity and the same cannot be passed on to the consumers. The Appellant is free to undertake such activities by funding the same from its returns, based on how it desires to utilize its profits/returns from the business.

(c) The State Commission has never discussed CSR expenses as part of A&G expenses in its previous Orders and has never knowingly allowed this expense to be recovered as a part of the ARR. Merely because the State Commission has not raised a query in this regards, does not mean that the State Commission can never raise queries in this regard and take a considered view on the matter in future orders.

64. We have carefully considered the said submissions on the issue.

65. At the outset, it shall be mentioned that the Community Social Responsibility is the responsibility of the Company. The contention of the Appellant that the State Commission had approved these expenses in the ARR petition and that therefore, it cannot change during true up exercise is not tenable.

66. In fact, the State Commission is duty bound to apply prudency check while truing up otherwise no purpose would be served in truing up.

67. On going through the impugned order on this point as well as the submissions made by the learned Counsel for the State Commission, it is clear that the conclusion on this point arrived at by the State Commission is valid and the reasons for such conclusions are justified."

5.61 In view of the above discussions, the Commission has decided not to allow any expenses on account of Corporate Social Responsibility for FY 2014-15.



Annual Fixed Charges for FY 2014-15

5.62 Based on the above analysis, the approved Station-wise Fixed Charges of the Generating Stations for FY 2014-15 allowed are as under:

	KTPS (Unit 1-7)	STPS (U	nit 1-6)	CTPP (Unit 1-2)	
Particulars	As per Petition	Allowed	As per Petition	Allowed	As per Petition	Allowed
O & M Expenses	199.52	199.52	241.35	241.35	80.45	80.45
Depreciation	99.79	84.46	269.10	176.99	123.38	114.23
Interest on Term Loans + Transitional Loans	75.05	59.21	130.28	124.82	176.64	181.69
Finance Charges	2.50	2.50	2.00	2.00	1.00	1.00
Interest on WC	89.68	94.35	123.91	125.80	32.78	30.24
Return on Equity	77.43	0.00	186.15	0.00	87.42	0.00
Tax on ROE	20.53	0.00	49.36	0.00	23.18	0.00
Corporate Social Responsibility	0.50	0.00	0.60	0.00	0.20	0.00
Recovery of ARR & Tariff Petition fees	0.62	0.62	0.75	0.75	0.25	0.25
Insurance Charges	3.74	2.54	2.66	2.63	2.17	3.25
Gross Fixed Charges	569.35	443.20	1006.17	674.34	527.48	411.12
Less: Non-Tariff Income	6.30	6.30	8.14	8.14	3.36	3.36
Net Fixed Cost (i.e. Capacity Charges)	563.05	436.90	998.03	666.20	524.12	407.76
Per Unit Fixed Cost (Rs./kWh) (only for indicative purpose)	0.697	0.541	1.018	0.679	1.644	1.279

Table 82: Annual Fixed Charges for FY 2014-15 (Rs. Crore)

Approved Annual Fixed Charges for FY 2014-15 (Rs. Crore)

	DCCPP		RG	TPS	Mahi	
Particulars	As per Petition	Allowed	As per Petition	Allowed	As per Petition	Allowed
O & M Expenses	39.80	39.80	16.18	16.18	13.89	13.89
Depreciation	56.63	55.28	15.40	1.90	4.18	5.87
Interest on Term Loans+ Transitional Loans	48.51	46.96	0.54	0.77	0.00	0.00
Finance Charges	1.00	1.00	0.00	0.00	0.00	0.00

	DCC	CPP	RG	RGTPS		ahi
Particulars	As per Petition	Allowed	As per Petition	Allowed	As per Petition	Allowed
Interest on WC	20.54	18.09	6.06	4.51	1.28	0.71
Return on Equity	53.79	0.00	18.61	0.00	26.42	0.00
Tax on ROE	14.26	0.00	4.94	0.00	7.00	0.00
Corporate Social Responsibility	0.10	0.00	0.04	0.00	0.03	0.00
Recovery of ARR & Tariff Petition fees	0.17	0.17	0.06	0.06	0.07	0.07
Insurance Charges	1.99	1.23	0.51	0.37	0.00	0.67
Gross Fixed Charges	236.78	162.52	62.33	23.77	52.87	21.21
Non-Tariff Income	2.13	2.13	0.10	0.10	0.32	0.32
Net Fixed Cost (i.e. Capacity Charges)	234.65	160.39	62.23	23.67	52.56	20.90
Per Unit Fixed Cost (Rs./kWh) (only for indicative purpose)	1.046	0.715	0.947	0.358	4.08	1.63

Determination of Variable Charges for FY 2014-15

- 5.63 The Commission has approved Variable Charges for the FY 2013-14 on the basis of following approach.
 - (a) While allowing the variable cost of the generating stations, the Commission has considered normative SHR, PLF and Auxiliary consumption. Further, as detailed earlier in this order, the station heat rate and auxiliary consumption for RGTPS has been computed after considering its operation in open cycle mode and combined cycle mode for various days of the year in accordance with the RERC Tariff Regulations, 2014.

The Commission is of the view that under the cost plus regime, RVUN is being allowed all the prudent expenses based on the Availability of its Stations, however, at the same time, RVUN must also strive to achieve higher PLF so that more energy is made available to the Discoms within the State at lower price. The Commission directs RVUN to implement the best practices in its generating Stations so as to achieve maximum possible generation. The Commission directs RVUN to submit a detailed write-up on the further course of action initiated to increase the PLF of its Stations, within one month from the date of this Order.



(b) The Commission observed that RVUN has computed the SHR for STPS Unit 6 by considering the tolerance limit of 2.5% on Design Heat Rate. The Commission is of the view that the RERC Tariff Regulations, 2014 covers all the aspects required for computations of SHR for a generating Stations and therefore tolerance limit as considered by RVUN on Design Heat Rate for STPS Unit 6 cannot be considered separately. Accordingly, the Commission has computed SHR for STPS Unit 6 based on the Turbine Cycle Heat Rate (TCHR) of 1980 kCal/kWh and Boiler Efficiency of 87.76% as submitted by RVUN. Accordingly, the SHR for STPS Unit 6 works out to be 2357.68 and for STPS Unit 1 to 6 works out to be 2476.28 kCal/kWh as against 2483.92 kcal/kWh submitted by RVUN in ARR and Tariff Petition for FY 2014-15. Similarly, the Commission has approved the SHR for CTPP Unit 1 and 2 based on TCHR of 1941.90 kCal/kWh and Boiler Efficiency of 87.60% which works out as 2316.54 kCal/kWh as against 2316.54 kCal/kWh claimed by RVUN.

Table 83: SHR as worked out by Commission for New Generating Station for FY 2014-
15 (kCal/kWh)

Generating Station	TCHR (1)	Boiler Efficiency (2)	Design Heat Rate (3 = 1/2)	Station Heat Rate 4 = (3*1.045)
KTPS Unit 7	-	-	2228.00	2328.26
STPS Unit 6	1980.0	87.76%	2256.15	2357.68
CTPP Unit 1	1941.9	87.60%	2216.78	2316.54
CTPP Unit 2	1941.9	87.60%	2216.78	2316.54

- (c) The GCV and price of fuel for all the Stations has been considered as per actual submissions for April, 2014 to June, 2014. The Commission has considered the normative transit loss while working the fuel price for computing the variable charges.
- (d) The specific primary fuel consumption has been calculated on the basis of station heat rate and GCV allowed by the Commission.
- (e) The Commission has considered the ratio of primary fuel mix as proposed by RVUN.
- (f) The secondary fuel oil consumption has been allowed as per Regulations.
- 5.64 The plant wise variable charges determined by the Commission for FY 2014-15 are as under:

		KTPS (Unit 1-7)		STPS (U	nit 1-6)	CTPP (Unit 1-2)		
Particulars	Unit	As per Petition	Allowed	As per Petition	Allowed	As per Petition	Allowed	
Installed		1240.00	1240.00	1500.00	1500.00	500.00	500.00	
Capacity	MW		1240.00	1300.00	1300.00	500.00	500.00	
Availability	%	82.00%	82.00%	82.00%	82.00%	80.00%	80.00%	
Plant Load		82.00%	82.00%	82.00%	82.00%	80.00%	80.00%	
Factor	%	02.00%	02.00%	02.00%	02.00%	00.00%	00.00%	
Gross		8907.17	8907.17	10774.80	10774.80	3504.00	3504.00	
Generation	MU	0/0/.1/	0/0/.1/	10774.00	10/74.00	0004.00	5504.00	
Auxiliary		9.27%	9.27%	9.00%	9.00%	9.00%	9.00%	
Consumption	%	7.2770	7.2770	7.0078	7.0078	7.0078	7.0076	
Auxiliary		825.69	825.35	969.73	969.73	315.36	315.36	
Consumption	MU	025.07	025.55	/0/./5		515.50	515.50	
Net Generation	MU	8081.47	8081.82	9805.07	9805.07	3188.64	3188.64	
Station Heat Rate	kCal/kWh	2561.70	2561.70	2483.92	2476.28	2316.54	2316.54	
GCV								
Indigenous		2020.00	2407.00	2724.00	2//4 00	2/01/00	2001.00	
Coal	kcal/kg	3920.00	3496.00	3724.00	3664.00	3681.00	3801.20	
Imported Coal	kcal/kg	6600.00	6600.00	6600.00	6350.00	6600.00	6600.00	
HFO	kcal/litre	10504.00	10504.00	9500.00	9500.00	9978.80	9928.57	
HSD	kcal/litre	0.00	0.00	0.00	0.00	0.00	0.00	
LDO	kcal/litre	11200.00	11150.00	9200.00	9200.00	9520.00	9927.70	
Natural Gas	kCal/SCM	0.00	0.00	0.00	0.00	0.00	0.00	
Lignite	kCal/kg	0.00	0.00	0.00	0.00	0.00	0.00	
Lime	kCal/kg	0.00	0.00	0.00	0.00	0.00	0.00	
Landed Price of Fuel								
Indigenous		3900.00	3975.00	4442.00	4743.00	2850.89	2956.08	
Coal	Rs./MT							
Imported Coal	Rs./MT	9175.92	8117.00	8946.00	8752.00	9213.20	8119.91	
HFO	Rs./KL	48122.68	47115.00	49961.00	49211.00	50674.40	47238.87	
HSD	Rs./KL	0.00	0.00	0.00	0.00	0.00	0.00	
LDO	Rs./KL	53993.91	56927.00	63706.00	62109.00	69571.03	67265.11	
Natural Gas	Rs./SCM	0.00	0.00	0.00	0.00	0.00	0.00	
Lignite	Rs./MT	0.00	0.00	0.00	0.00	0.00	0.00	
Lime	Rs./MT	0.00	0.00	0.00	0.00	0.00	0.00	
Total Cost	Rs. Crore	2429.00	2643.77	3285.44	3511.12	720.14	695.10	
Variable Cost Generated	Rs./kWh	2.73	2.97	3.05	3.26	2.06	1.98	
Variable Cost Sent Out	Rs./kWh	3.01	3.27	3.35	3.58	2.26	2.18	

Table 84: Approved Variable Charges for FY 2014-15

		DC	CPP	RG	TPS
Particulars	Unit	As per		As per	
		Petition	Allowed	Petition	Allowed
Installed Capacity	MW	330.00	330.00	110.50	110.50
Availability	%	80.00%	80.00%	70.00%	70.00%
Plant Load Factor	%	80.00%	80.00%	70.00%	70.00%
Gross Generation	MU	2312.64	2312.64	677.59	677.59
Auxiliary Consumption	%	3.00%	3.00%	3.00%	2.32%
Auxiliary Consumption	MU	69.38	69.38	20.33	15.72
Net Generation	MU	2243.26	2243.26	657.26	661.87
Station Heat Rate	kCal/kWh	1950.00	1950.00	2256.00	2256.00
GCV					
Indigenous Coal	kcal/kg	0.00	0.00	0.00	0.00
Imported Coal	kcal/kg	0.00	0.00	0.00	0.00
HFO	kcal/litre	0.00	0.00	0.00	0.00
HSD	kcal/litre	0.00	0.00	9300.00	9300.00
LDO	kcal/litre	0.00	0.00	0.00	0.00
Natural Gas	kCal/SCM	9117.47	9197.15	5622.71	6113.84
Lignite	kCal/kg	0.00	0.00	0.00	0.00
Lime	kCal/kg	0.00	0.00	0.00	0.00
Landed Price of Fuel					
Indigenous Coal	Rs./MT	0.00	0.00	0.00	0.00
Imported Coal	Rs./MT	0.00	0.00	0.00	0.00
HFO	Rs./KL	0.00	0.00	0.00	0.00
HSD	Rs./KL	0.00	0.00	32366.35	32223.39
LDO	Rs./KL	0.00	0.00	0.00	0.00
Natural Gas	Rs./SCM	15.50	13.81	8.19	6.65
Lignite	Rs./MT	0.00	0.00	0.00	0.00
Lime	Rs./MT	0.00	0.00	0.00	0.00
Total Cost	Rs. Crore	766.52	677.19	223.19	166.77
Variable Cost Generated	Rs./kWh	3.31	2.93	3.29	2.46
Variable Cost Sent Out	Rs./kWh	3.42	3.02	3.40	2.52

Approved Variable Charges for FY 2014-15 (Rs. Crore)

Tariff for Mahi Hydel Generating Station:

- 5.65 In accordance with the RERC Tariff Regulations, 2014, the Commission approves the two-part tariff for sale of electricity from Mahi Hydel generating station comprising annual capacity charges and primary energy charge.
- 5.66 In accordance with Regulation 51(7) of the RERC Tariff Regulations, 2014, the primary energy rate approved by the Commission is 30 Paise/kWh.
- 5.67 The capacity charge approved by the Commission for FY 2014-15 is Rs. 20.90 Crore as given in the following Table;



Annual Fixed Charges (Rs. Crore) (1)	Net Energy (MU) (2)	Energy Rate (Paise/kWh) (3)	Energy Charges (Rs. Crore) (4) = (2) x (3) /1000	Capacity Charges (Rs. Crore) (5)=(1)–(4)
20.90	128.37	30.00	3.85	17.05

Table 85: Approved Capacity Charges for Mahi Hydel Power Project

- 5.68 Incentive for Thermal Generating Stations and Mahi Hydel Station shall be claimed by RVUN as per Regulation 52(1) and 52(2) respectively of RERC Tariff Regulations, 2014.
- 5.69 Recovery of Capacity Charges shall be in accordance with Regulation 50 of RERC Tariff Regulations, 2014.
- 5.70 The summary of tariff approved by the Commission for FY 2014-15 is given in Table below:

c		KTPS (Unit 1-7)		STPS (L	Jnit 1-6)	CTPP (Unit 1-2)	
S. No.	Particulars	Petition	Approved	Petition	Approved	Petition	Approved
1	Fixed Charges (Rs. Crore)	563.05	436.90	998.03	666.20	524.12	407.76
2	Variable Charges (Rs./kWh)	3.01	3.27	3.35	3.58	2.26	2.18

Table 86: Summary of Tariff for FY 2014-15

c		DCCPP		RG	STPS	Mahi	
S. No.	Particulars	Petition	Approved	Petition	Approved	Petition	Approved
1	Fixed Charges (Rs. Crore)	234.65	160.39	62.23	23.67	52.56	20.90
2	Variable Charges (Rs./kWh)	3.42	3.02	3.40	2.52	-	-

Tariff for CTPP Unit 3 and GLTPP Unit 2

- 5.71 Stakeholders have pointed out that the Capital cost approval for CTPP Unit 3 is still pending before the Commission and that the CTPP Unit 3 may not be considered under the present Order. The Commission is of the view that as RVUN has separately filed a Petition for capital cost approval for CTPP Unit 3 and determination of Tariff for FY 2014-15, the ARR and Tariff Determination for CTPP Unit 3 for FY 2014-15 cannot be taken up in the present Order and the same shall be dealt with separately. Similar Issue is with GLTPP Unit 2 wherein the Capital Cost is yet to be approved by the Commission and therefore, tariff for GLTPP Unit 2 shall be approved separately.
- 5.72 The Tariff approved by the Commission for RVUN Stations for FY 2014-15 shall be effective from April 1, 2014. The Commission directs RVUN to bill the difference in tariff approved by the Commission in this Order and tariff charged by RVUN as provisionally approved by the Commission for the period April 1, 2014 to September 30, 2014 in next 5 months bills.
- 5.73 The Commission directs RVUN to adjust the surplus amount of Rs. 27.54 Crore as approved by the Commission while carrying out the truing up for FY 2011-12 in its monthly bills to the Discoms in the next 3 months in the ratio of energy purchased by them.
- 5.74 The copy of this Order may be sent to the Petitioner, Respondents, objectors, CEA and Government of Rajasthan.

(Vinod Pandya) Member (Vishvanath Hiremath) Chairman



Annexure-1

ABBREVIATIONS

AAD	Advance against Depreciation
ABT	Availability Based Tariff
Act	Electricity Act, 2003
APR	Annual Performance Review
APTEL	Appellate Tribunal for Electricity
ARR	Aggregate Revenue Requirement
AVVNL	Ajmer Vidyut Vitran Nigam Limited
BHEL	Bharat Heavy Electricals Ltd.
BoD	Board of Directors
BoP	Balance of Plant
BTG	Boiler, Turbine & Generator
CAG	Comptroller & Auditor General
CEA	Central Electricity Authority
CHP	Coal Handling Plant
CoD	Commercial Operation Date
CSR	Corporate Social Responsibility
CTPP	Chhabra Thermal Power Station
DCCPP	Dholpur Combined Circle Power Station
Discoms	Distribution Companies
ETC	Erection Testing & Commissioning
FPA	Fuel Price Adjustment
FY	Financial Year
GCV	Gross Calorific Value
GFA	Gross Fixed Assets
GoR	Government of Rajasthan
GT	Generator Transformer
HFO	High Furnace Oil
HSD	High Speed Diesel
IDC	Interest during Construction
JdVVNL	Jodhpur Vidyut Vitran Nigam Limited
JVVNL	Jaipur Vidyut Vitran Nigam Limited
kcal	kilo calorie
kL	kilo Litre
KTPS	Kota Thermal Power Station
kW	kilo Watt
kWh	kilo Watt hour
LD	Liquidated Damages
LDO	Light Diesel Oil
	Maharashtra Electricity Regulatory
MERC	Commission
ммн	Mini Minro I Ivale I Statione
/ * \ / * \	Mini Micro Hydel Stations



MT	Metric Ton
MU	Million Units
MW	Mega Watt
MYT	Multi Year Tariff
O&M	Operation & Maintenance
PA	Public Address
PAT	Perform Achieve and Trade
PLF	Plant Load Factor
PPA	Power Purchase Agreement
PV	Price Variation
RERC	Rajasthan Electricity Regulatory Commission
RGTPS	Ramgarh Gas Thermal Power Station
ROE	Return on Equity
RVPN	Rajasthan Vidyut Prasaran Nigam Limited
RVUN	Rajasthan Vidyut Utpadan Nigam Limited
RVVS	Rajasthan Vidyut Vikas Sansthan
SBI	State Bank of India
SCM	Standard cubic meter
SHR	Station Heat Rate
SLDC	State Load Despatch Centre
STPS	Suratgarh Thermal Power Station
TPS	Thermal Power Station
VAT	Value Added Tax
WCL	Working Capital Loan
WCT	Works Contract Tax



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Annexure 3: Status of compliance to the directives issued by the Commission and Fresh Directions issued by the Commission

Sr. No.	Reference	Commission's Directive	RVUN's Reply	Commission's Observations/ Directions
1.	RERC Order dt. 06.06.2013 (True up for 2009-10 and tariff for 2012-13) – Para 2.72 & 7.28,	Order dated 06.06.2013 Para 2.72 & 7.28- "Regarding non-maintenance of proper fixed assets registers; the Commission observed that it is long standing observation/ comment of all the stakeholders, respondents. The Statutory Auditors have been taking repeated observations since inception of the Company regarding non- maintenance of fixed assets registers. The Commission observes that it is very serious lapse on the part of the petitioner and cannot be allowed to continue such	The Company is in process of preparing the fixed assets register for all plants. For this RVUN has appointed an external consultant for preparing the Fixed Assets Register of STPS Unit 1 & 2.	The Commission has noted the submission of RVUN. The Commission has withheld 5% of the allowable depreciation for FY 2014-15 for all the generating stations. The same would be released for recovery through tariff, upon submission of fixed asset registers up to the current year i.e., FY 2014- 15 within three months from the date of publishing of this Order.



Sr. No.	Reference	Commission's Directive		RVUN's Reply		Commission's Observations/ Directions
		situation for indefinite period. The petitioner is directed to give a time bound programme for compliance of the long standing observations within two months of issue of this order."				
2.	RERC Order dt. 06.06.2013 (True up for 2009-10 and tariff for 2012-13) – Para 7.39, Para 2.41	Order dt. 06.06.2013 Para 7.39- "Further, the Commission has agreed to allow an amount of Rs.200 cr. in installments towards contribution to pension and gratuity fund subject to the condition mentioned at (i) to (iii) above. Against the amount		eady remitted ension &. Grate Amount deposited in Pension & Gratuity Fund in Rs. Cr	C	The Commission has noted the deposits carried out in the pension and gratuity fund by RVUN and directs RVUN to deposit the Balance amount along with due interest at the earliest.
	and RERC Order dt.	to Rs.200 cr., the Commission has already allowed around Rs.160 cr. towards contribution to pension and gratuity fund,	27.09.2012 06.11.2012	37.97 75.24	2009-10 2010-11 &	
	24.02.2014	besides amount of Rs. 49.4818			2011-12	



Sr. No.	Reference	Commission's Directive		RVUN's Rep	ly	Commission's Observations/ Directions
	(Tariff for 2013-14)- Para 2.83	cr. considered as payable into the Trusts after true-up up to FY 2008-09 vide order dated 20.5.2012. The remaining amount of Rs.40 cr. is being allowed in FY 2012-13. RVUN is directed to remit this amount of Rs.40 cr. along with Rs.49.4818 cr. into the Pension & Gratuity Trusts immediately and report compliance to the Commission."	up 2008-09 is	still to be de lingly Rs. 5 C the month c as been rem	nitted or	
3.	RERC Order dt. 06.06.2013 (True up for 2009-10 and tariff for 2012-	Order dated 06.06.2013 Para 3.25 regarding Liquidated damages for KTPS Unit 7 Para 3.52 regarding LD for STPS unit 6 Para 5.28 regarding LD for CTPP	The LD to be been finalized finally determ recovered or damages fro contractors.	d. RVUN is in hine the am h account c	n process to ount to be of liquidated	The Commission directs RVUN to submit the compliance of the same within 3 months from the date of issue of this order.

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Sr. No.	Reference	Commission's Directive	RVUN's Reply	Commission's Observations/ Directions
	13)– Para 3.25 & 3.52	Phase 1 Order dated 24.02.2014, Para 154 regarding LD for GLTPS Unit 2		
4.	RERC Order dt. 24.02.2014 (ARR and Tariff for RVUN for FY 2013-14) Para 2.136	Order dated 24.02.2014, Para 2.136 "2.136 As per Regulation 61 of RERC Tariff Regulations, the generating company is entitled for reactive energy charges on the directions issued by the SLDC. Accordingly, RVUN should take up the matter directly with SLDC."	RVUN has taken this issue with the Stale Power Committee (SPC) in its meeting held on 11.09.2013. During the meeting it was decided that consultation shall be solicited from Sh. Shanti Prasad, Ex- Chairman as an independent authority in the matter of applicability of MVArh claims raised by RVUN from Discoms. Two officers from RVUN, two officers of Discoms and one from SLDC shall coordinate/put up their viewpoint with Sh. Shanti Prasad in framing out guidelines in accordance with RERC Tariff Regulations. In view of above decision, a Committee under the Chairmanship of Sh. Shanti Prasad Ji has been formed. Matter is under	The Commission has noted the submissions of RVUN.



Sr. No.	Reference	Commission's Directive	RVUN's Reply	Commission's Observations/ Directions
			consideration of the Committee.	
5.	RERC Order dt. 24.02.2014 (ARR and Tariff for FY 2010-11, 2011-12 and 2012- 13 for GLTPS Unit - 2) Para 198	Order dated 24.02.2014 Para 198 "198. As regard the further course of action and to expedite the process of tariff determination based on the completed cost the Commission directs GLPL to file a separate petition for determination of final capital cost and tariff for FY 2010-11 along with the information indicated in this order based on actual capital expenditure incurred up to the date of commercial operation duly certified by Statutory Auditors based on annual audited accounts in accordance with the provisions of Regulation 44(5) of RERC (Terms and Conditions of Tariff) Regulations, 2009 within three months of this order."	RVUN and GLPL are in process to file the petition as per the direction given by the Hon'ble Commission.	The Commission has noted the submissions of RVUN.



Sr. No.	Reference	Commission's Directive	RVUN's Reply	Commission's Observations/ Directions
6.	RERC Order dt. 24.02.2014 (ARR and Tariff for FY 2010-11, 2011-12 and 2012- 13 for GLTPS Unit - 2) Para 84	Order dated 24.02.2014 Para 84 "84. The Commission observed that Fuel Supply agreement dt. 19.05.2009 has been executed between RVUN & RSMML for unit-1 & no FSA has been executed, so far, for unit-2. Since, the unit-1 has now been transferred to GLPL, the FSA for unit-1 should be transferred in favor of GLPL and a fresh FSA should be entered into by RVUN for Unit-2."	Fuel Supply agreement dt. 19.05.2009 executed between RVUN & RSMML for unit-1 already has following provision: "FSA executed for and all rights hereunder arc intended for the sole benefit of the parties and their respective successors and permitted assigns hereto and, except to the extent expressly provided for the benefit of the lenders and contractors, officers, employees and agents of the Parties, do not imply or create any right on the part of, or obligation, standard of care or liability to any other entity or individual not party to this Agreement." However, in view of Commission's observations, RVUN has requested RSMM to execute tripartite agreement between RVUN, GLPL & RSMM. The same is under process.	The Commission has noted the submissions of RVUN. The Commission directs RVUN to expedite the process of signing of FSA with RSMML and submit the compliance of the same.



Sr. No.	Reference	Commission's Directive	RVUN's Reply	Commission's Observations/ Directions
7.	RERC	Order dated 24.02.2014 Para 76	RVUN has taken up this matter with the	The Commission has noted
	Order dt. 24.02.2014	"76. The Commission has noted that the petitioner has not clarified whether the petitioner	Slate Government vide letter no. RVUN/CMD/Fuel/D. 167 dated	the submissions of RVUN.
	(ARR and Tariff for FY 2010-11, 2011-12 and 2012- 13 for GLTPS Unit - 2)Para 76	has approached the State Govt. for waival of Royalty and sales tax in compliance of the Commission's direction vide order dt. 17.07.2006. The petitioner is directed to submit a detailed compliance report along with tariff petition for final determination of tariff for the year 2010-11 & 2011-12."	26.06.2014.	

Fresh Directions issued in this Order

Sr. No.	Reference	Commission's Directive
1	Para 4.8 & Para 5.62(a) (Plant Load Factor)	"The Commission directs RVUN to implement the best practices in its generating Stations so as to achieve maximum possible generation. The Commission directs RVUN to submit a detailed write-up on the further course of action initiated to increase the PLF of its Stations, within one month from the date of this Order."

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Sr. No.	Reference	Commission's Directive
2	Para 4.31 (Fuel Price and Calorific Value)	"The Commission directs RVUN to carry out the Fuel Audit of Primary Fuel for all its thermal plants through an independent agency which should include audit of quantity and calorific value of coal at loading point, quantity and calorific value of coal as received at the generating station and calorific value as fired. The Commission also directs RVUN to submit the independent agency report along with the True Up Petitions from FY 2014-15 onwards."
3	Para 4.60 (Interest on Transitional Loan)	"The Commission directs RVUN to submit the detailed year-wise statement of loan balances on transitional loans and interest on transitional loans for the period FY 2009-10 to FY 2013-14 along with the truing up Petition for FY 2013-14."