



for Annual Performance Review (True-Up) for FY 2016-17 and approval of Aggregate Revenue Requirement (ARR) and determination of Tariff for sale of electricity from its existing power stations to distribution companies for FY 2018-19.

1.2 In exercise of the powers conferred under Sections 62, 64 and other provisions of Electricity Act 2003, read with RERC (Terms and Conditions for Determination of Tariff) Regulations, 2014, and other enabling Regulations, the Commission, after carefully considering each of the submissions of the Petitioner and suggestions/objections submitted by the Stakeholder, has passed the following Order.

1.3 This order has been structured in following sections as given under:

- (1) Section 1: General
- (2) Section 2: Summary of True up and Tariff determination process.
- (3) Section 3: Summary of objections/ comments/ suggestions received from Stakeholders and RVUN's response thereon.
- (4) Section 4: Analysis of True up of RVUN Stations for FY 2016-17.
- (7) Section 5: Determination of ARR and Tariff for RVUN generating Stations for FY 2018-19.
- (8) Section 6: Provisional Tariff for new stations for FY 2018-19.

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## **SECTION 2**

### **Summary of filing of True-up and Tariff determination process.**

2.1 In accordance with Regulation 8 of RERC (Terms and Conditions for Determination of Tariff) Regulations, 2014, hereinafter referred to as RERC Tariff Regulations, 2014, RVUN filed a petition on 23.01.2018 for APR of FY 2016-17 in respect of the following power stations:

**Table 1: RVUN's Generating Stations under True up for FY 2016-17**

<b>S. No.</b>	<b>Particulars</b>	<b>Capacity (MW)</b>
1	Kota Thermal Power Station(KTPS)(Units 1-7)	1240
2	Suratgarh Thermal Power Station(STPS)(Units 1-6)	1500
3	Ramgarh Gas Thermal Power Station(RGTPS) (110.5 MW)	110.5
4	Dholpur Combined Cycle Gas based Thermal Power Plant(DCCPP)	330
5	Mahi Hydel Power Project(MAHI)	140
6	Chhabra Thermal Power Station (CTPP)(Units 1 & 2)	500
<b>Total</b>		<b>3820.5</b>

2.2 Further, in accordance with Regulation 11 of RERC (Terms and Conditions for Determination of Tariff) Regulations, 2014 (hereinafter referred to as RERC Tariff Regulations, 2014), RVUN also prayed for approval of ARR and determination of tariff for supply of electricity to distribution companies for FY 2018-19 in respect of the following power stations:

**Table 2: RVUN Generating Stations under ARR and Tariff for FY 2018-19**

<b>S. No.</b>	<b>Particulars</b>	<b>Capacity(MW)</b>
1	Kota Thermal Power Station(KTPS)(Units 1-7)	1240
2	Suratgarh Thermal Power Station(STPS)(Units 1-6)	1500
3	Ramgarh Gas Thermal Power Station (RGTPS)(110.5 MW)	110.5
4	Ramgarh Gas Thermal Power Plant (RGTPS) Stage III	160
5	Dholpur Combined Cycle Gas based Thermal Power	330

<b>S. No.</b>	<b>Particulars</b>	<b>Capacity(MW)</b>
	Plant (DCCPP)	
6	Chhabra Thermal Power Station (CTPP) (Units 1-4)	1000
7	Kalisindh Thermal Power Station (KaTPP) (Units 1&2)	1200
8	Mahi Hydel Power Project (MAHI)	140
<b>Total</b>		<b>5680.5</b>

2.3 Subsequently, RVUN filed the petitions for determination of final capital cost and tariff for CTPP Units 3 & 4 (Petition No. 1334/18) and RGTPP Stage III (Petition No. 1340/18) from COD of the respective Units till FY 2018-19. Along with the aforesaid petitions, RVUN has also filed the Applications for withdrawal of tariff determination for CTPP Units 3 & 4 and RGTPP Stage III for FY 2018-19 from the instant petition. The Commission allows the prayer of RVUN for withdrawal of the tariff determination of CTPP Units 3 & 4 and RGTPP Stage III for FY 2018-19 from the instant petition. The tariff determination for these stations for FY 2018-19 shall be carried out in the Commission's orders on the respective petitions.

2.4 The Petitioner vide its application dated 15.03.2018 requested to allow interim tariff for FY 2018-19 till final order is issued.

2.5 As required under Section 64(2) of the Electricity Act, 2003, public notices with salient features of the petition inviting objections/comments/suggestions were published in the following newspapers on the dates mentioned against each:

**Table 3: Details of Newspapers**

Sr. No.	Name of News Paper	Date of publishing
(i)	Danik Bhaskar	28.02.2018
(ii)	Rastradoot	28.02.2018
(iii)	DNA	28.02.2018

2.6 The petition was also placed on the websites of the Commission and the Petitioner. The objections/comments/suggestions were received from Shri G. L. Sharma and Jaipur Vidyut Vitran Nigam Ltd. (JVVNL).

2.7 The Commission forwarded the objections/ comments/ suggestions of the stakeholder to RVUN for filing its reply.

2.8 The Commission vide letter dated 20.03.2018, communicated some data gaps and deficiencies in the petition. The Petitioner furnished information vide its letters dated 20.04.2018 and 23.04.2018. The Petitioner also replied to the objections/ comments/ suggestions made by the stakeholders vide its letter dated 20.04.2018.

2.9 The public hearing in the matter was held on 24.04.2018.

2.10 The Commission had approved the Tariff for FY 2016-17 in respect of KTPS (Units 1-7), STPS (Units 1-6), RGTPS (110.5 MW & 160 MW), DCCPP, CTPP (Units 1-4) and Mahi Hydel Power Project vide its Tariff Order dated 17.10.2016. Subsequently, RVUN filed a Review petition on 15.11.2016 seeking review on the Commission's ruling on some of the issues in the Tariff Order for FY 2016-17. The Commission dismissed the Review petition vide its Order dated 09.12.2016 as devoid of merits. In this Order, the Commission has undertaken the truing up for FY 2016-17 and determination of tariff for FY 2018-19 for RVUN generating stations, as petitioned.

2.11 To facilitate reference, an index of the issues and points dealt with are placed at Annexure-1.

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## **SECTION 3**

### **Summary of objections/comments/suggestions received form stakeholders and RVUN's response thereon**

#### **A. APR for FY 2016-17**

##### **General**

##### **Stakeholder's Comments/suggestions:**

3.1 Stakeholder sought the status of Petitions filed, if any, for determination of final capital cost of RGTPP Stage III, CTPP Units 3 & 4 and KaTPP Units 1 & 2.

##### **RVUN's Response:**

3.2 The petitions for determination of final capital cost of CTPP Units 3 & 4 and RGTPP Stage III were filed on 03.04.2018 and 10.04.2018 respectively. The petition for determination of final capital cost of KaTPP Units 1 & 2 shall be filed shortly.

##### **Actual Generation**

##### **Stakeholder's Comments/suggestions:**

3.3 From the submissions of the Petitioner, it can be apprehended that the actual generation claimed is inclusive of the actual generation and deemed generation. The claimed actual generation should be segregated into three parts i.e., (1) actual generation (2) deemed generation on account of back-down and (3) deemed generation on account of box-up for each station/unit.

##### **RVUN's Response:**

3.4 The details of actual gross generation, auxiliary consumption, net sent out energy, deemed generation, deemed sent out energy and deemed PLF have been submitted in table 7 of the petition. The segregation of actual generation as sought by the stakeholder is provided in the SLDC certificate submitted in the petition.

## **Generation loss**

### **Stakeholder's Comments/suggestions:**

- 3.5 The SLDC certificate only indicates the loss of generation due to back-down and/or box-up but does not indicate that such back-down and/or box-up was on account of their directions/instructions. The Petitioner may obtain a certificate in clear terms showing that the back-down and/or box-up was on account of instructions of SLDC. Further, it may also be obtained from SLDC the details of generating units that remained box-up and the corresponding period as per SLDC instructions.
- 3.6 The power generation in DCCPP was adversely affected due to non-availability of gas. In the absence of gas for power generation, the claim of generation loss due to back-down/box-up is not admissible.

### **RVUN's Response:**

- 3.7 SLDC certifies the generation loss on account of back-down and box-up after due verification of the messages issued by LD control room.
- 3.8 The generation loss due to back-down/box-up for DCCPP was certified by SLDC duly taking into consideration the gas available for power generation.

## **Plant Load Factor (PLF)**

### **Stakeholder's Comments/suggestions:**

- 3.9 As per the annual accounts, the loss due to backing down/forced outage (including backing down) is nil.
- 3.10 Considering the gross generation, auxiliary consumption and net generation as depicted in the annual accounts, the PLF of KTPS works out to 67.26%. In view of the lower PLF, proportionate reduction in fixed charges is to be carried out in the truing up.
- 3.11 For STPS, the Petitioner has worked out the deemed PLF of 85.77% by

adding the deemed generation to the actual net sent out energy. Deemed generation is the deemed gross generation, not the deemed sent out energy and hence, the deemed PLF worked out by the Petitioner is incorrect. Therefore, by subtracting the auxiliary consumption from the deemed generation and adding the resultant energy to the actual net sent out energy, the deemed PLF for STPS works out to 80.137% as against the normative of 82%. In view of the lower PLF, proportionate reduction in fixed charges is to be carried out in the truing up.

3.12 The Petitioner submitted that the actual PLF of DCCPP is lower than the normative PLF due to lower gas availability and back-down and/or box-up instructions from SLDC. The Petitioner has not clarified that during which period there was generation loss on account of instructions of SLDC and due to lower availability of gas. The Petitioner has worked out the deemed PLF of 26.47% by adding the deemed generation to the actual net sent out energy. Deemed generation is the deemed gross generation, not the deemed sent out energy and hence, the deemed PLF worked out by the Petitioner is incorrect. Therefore, by subtracting the auxiliary consumption from the deemed generation and adding the resultant energy to the actual net sent out energy, the deemed PLF for DCCPP works out to 20.92% as against the claim of 26.47%. In view of the lower PLF, proportionate reduction in fixed charges is to be carried out in the truing up.

3.13 The actual PLF of RGTPS is 45.79% as against the normative of 70%. In view of the lower PLF, proportionate reduction in fixed charges is to be carried out in the truing up.

**RVUN's Response:**

3.14 The cost records as indicated by the stakeholder have been left blank and not shown as nil. The table 7 of the petition indicates the net sent out energy, deemed generation and deemed sent out energy (generation including deemed generation). SLDC certifies only the ex-bus deemed generation.



3.15 The normative PLF for STPS is 82% whereas the station is capable of generating more than the normative. STPS has achieved gross generation of 33.65% with auxiliary consumption of 10.09% as against the normative of 9%. The deemed PLF of 85.77% is within the capability of the power station. The deemed PLF of 85.77% has been computed in accordance with the norms of Tariff Regulations.

3.16 DCCPP has achieved PLF of 3.38% against normative PLF of 80% due to lower gas availability and SLDC instructions. Lower availability of gas prevailed during entire financial year and the month wise statement of deemed generation certified by SLDC has been submitted. The deemed PLF of 26.47% has been computed in accordance with the norms of Tariff Regulations, 2014.

3.17 For RGTPS, as the actual PLF is lower on account of non-availability of gas, full recovery of fixed charges is requested to be allowed.

### **Auxiliary Consumption**

#### **Stakeholder's Comments/suggestions:**

3.18 The actual auxiliary consumption for KTPS, STPS, DCCPP, RGTPS, and CTPP (Units 1&2) for FY 2016-17 is higher than the normative auxiliary consumption. The Petitioner may submit the justification for the same. Normative auxiliary consumption should be considered in truing up.

#### **RVUN's Response:**

3.19 For KTPS, STPS and CTPP, the main cause of increase in auxiliary consumption is due to back-down and box-up instructions from SLDC. The increase in auxiliary consumption due to back-down and box-up instructions has been acknowledged by the Central Electricity Regulatory Commission. The norms notified by the Central Electricity Regulatory Commission vide the Notification dated 04.04.2016 clearly indicate that the auxiliary consumption is ought to increase with back-down and box-up instructions from RLDC. The reasons for increase in auxiliary consumption are beyond the control of RVUN and therefore, the Petitioner requested the

Commission to allow auxiliary consumption as submitted.

3.20 For DCCPP, the increase in auxiliary consumption was due to box-up instructions from SLDC and shortage of gas. The reasons are beyond the control of RVUN and therefore, the Petitioner requested the Commission to allow auxiliary consumption as submitted.

3.21 For RGTPS, the increase in auxiliary consumption was due to shortage of gas. The reasons are beyond the control of RVUN and therefore, the Petitioner requested the Commission to allow auxiliary consumption as submitted.

### **Additional Capitalization**

#### **Stakeholder's Comments/suggestions:**

3.22 The additional capitalisation of Rs. 0.16 Crore claimed for KTPS is beyond the cut-off dates and is not included in the original capital cost. Further these items are of O&M nature and hence may be met out from O&M expenses.

3.23 For STPS and DCCPP the additional capitalization of Rs. 0.002 Crore and Rs. 0.02 Crore respectively claimed towards office equipment is not admissible as such expenses are to be met out from O&M expenses as decided earlier by the Commission.

3.24 Stakeholder sought the copies of purchase orders in legible format to substantiate the additional capitalisation claimed for STPS towards plant and machinery amounting to Rs. 4.30 Crore. From the copies of purchase orders submitted by the Petitioner, it is noted that the work has not been completed within the stipulated time period and hence penal charges are to be recovered. Such penal charges required to be recovered in each case and the amount recovered may be furnished by the Petitioner.

3.25 As regards the submissions of the Petitioner regarding the asset deduction of Rs. 4.73 Crore in the audited accounts for FY 2016-17 it is submitted that the Petitioner has already taken the benefit of such additional

capitalisation, in FY 2014-15 and FY 2015-16 and therefore, those benefits are required to be deducted.

**RVUN's Response:**

3.26 Regulation 17(2) of the RERC Tariff Regulations, 2014 provide for additional capitalisation after cut-off date and not covered under original scope of work. The additional capitalisation claimed is towards the works which are essential for smooth operation of the power station.

3.27 As regards the deduction of Rs. 4.73 Crore for STPS as appearing in the audited accounts of FY 2016-17, this amount pertains to equipment of super critical units 7&8 which were wrongly booked in the audited accounts for FY 2014-15 as additional capitalisation and this fact was represented in the true up petition for FY 2014-15. The Commission had not considered this additional capitalisation of Rs. 4.73 Crore in the true up of FY 2014-15. Therefore, the Petitioner requested the Commission not to consider the deduction of the same from the assets of STPS Units 1-6 in FY 2016-17.

**Depreciation**

**Stakeholder's Comments/suggestions:**

3.28 Units 1 to 4 of KTPS have completed their useful life of 25 years and hence, depreciation is not chargeable for the same.

3.29 In accordance with Regulation 22(8) of the RERC Tariff Regulations, 2014, the depreciation of each Unit has to be determined from the effective date of commercial operation. In accordance with Regulation 22(4) of the RERC Tariff Regulations, 2014, the depreciation for each Unit has to be computed considering the assets in operation for more than 12 years and less than 12 years. The Petitioner has not complied to the provisions of the Regulations while claiming the depreciation for FY 2016-17. In the absence of required information, the Commission may disallow 20% of the depreciation claimed after making deduction of additional capitalisation claimed as well.

3.30 For DCCPP, no increase in depreciation is admissible as the additional capitalisation claimed is not admissible.

3.31 It is incorrect on the part of the Petitioner to state that the Commission had not approved any depreciation for RGTPS in the tariff order for FY 2016-17. The Commission vide its order dated 17.12.2016 had approved the depreciation of Rs. 1.88 Crore and the same may be approved in truing up.

3.32 The Petitioner may submit the duly filled Form 6.1 for CTPP (Units 1 & 2).

3.33 For CTPP (Units 1&2), the GFA addition has been submitted as Rs. 0.26 Crore in Form 6.1, whereas the GFA addition has been submitted as Rs. 0.17 Crore in para 8.2. Petitioner has also indicated the minus entry of Rs. 0.01 Crore in KTPS Form 6.1 as this amount has been transferred to CTPP (Units 1&2).

#### **RVUN's Response:**

3.34 Depreciation has been claimed in accordance with RERC Tariff Regulations, 2014 duly considering the specified rates of depreciation. The depreciation has not been claimed beyond 90% of the capital cost and also after 12 years, depreciation has been computed duly spreading the remaining depreciable value of assets over the useful life of assets. Details of depreciation have been submitted in the relevant formats submitted with the petition.

#### **O&M Expenses**

##### **Stakeholder's Comments/suggestions:**

3.35 The actual O&M expenses of Rs. 237.36 Crore claimed for KTPS is inclusive of other operating expenses for which no details have been provided and the same is not admissible. From the perusal of the annual accounts, the actual O&M expenses for KTPS works out to Rs. 165.32 Crore as against the approved O&M expenses of Rs. 223.54 Crore. Thus, there is a gain of Rs. 58.22 Crore. In light of the decision as is being taken in the case of RVPN, the surplus amount may be directed to be deposited in pension fund.

- 3.36 The actual O&M expenses of Rs. 224.43 Crore claimed for STPS is inclusive of other operating expenses for which no details have been provided and the same is not admissible. From the perusal of the annual accounts, the actual O&M expenses for STPS works out to Rs. 153.57 Crore as against the approved O&M expenses of Rs. 270.41 Crore. Thus, there is a gain of Rs. 116.84 Crore. In light of the decision as is being taken in the case of RVPN, the surplus amount may be directed to be deposited in pension fund.
- 3.37 The actual O&M expenses of Rs. 20.21 Crore claimed for DCCPP is inclusive of other operating expenses for which no details have been provided and the same is not admissible. From the perusal of the annual accounts, the actual O&M expenses for DCCPP works out to Rs. 16.10 Crore as against the approved O&M expenses of Rs. 44.59 Crore. Thus, there is a gain of Rs. 28.49 Crore. In light of the decision as is being taken in the case of RVPN, the surplus amount may be directed to be deposited in pension fund.
- 3.38 The actual O&M expenses of Rs. 11.33 Crore claimed for RGTPP is inclusive of other operating expenses. In the annual accounts, there is no segregation of actual O&M expenses in respect of Stages I & II (110.5 MW) and Stage III (160 MW). From the perusal of the annual accounts, the actual O&M expenses for RGTPP (Stages I, II & III) works out to Rs. 17.37 Crore. After apportioning the total O&M expenses of Rs. 17.37 Crore based on the installed capacity, the actual O&M expenses for Stages I & II works out to Rs. 7.02 Crore. The Commission may allow the O&M expenses of Rs. 7.02 Crore as against Rs. 11.33 Crore claimed and Rs. 18.13 Crore approved in the tariff order. Thus, there is a gain of Rs. 11.11 Crore. In light of the decision as is being taken in the case of RVPN, the surplus amount may be directed to be deposited in pension fund.
- 3.39 The actual O&M expenses of Rs. 73.84 Crore claimed for CTPP (Units 1 & 2) is inclusive of other operating expenses for which no details have been provided and the same is not admissible. Further, the Petitioner has not submitted the segregation of O&M expenses for Units 1&2 and Units 3&4. From the perusal of the annual accounts, the actual O&M expenses for

CTPP works out to Rs. 103.98 Crore. After apportioning the total O&M expenses of Rs. 103.98 Crore based on the installed capacity, the actual O&M expenses for Units 1&2 works out to Rs. 51.99 Crore as against Rs. 90.14 Crore claimed. Thus, there is a gain of Rs. 38.15 Crore. In light of the decision as is being taken in the case of RVPN, the surplus amount may be directed to be deposited in pension fund.

**RVUN's Response:**

3.40 The O&M expenses have been claimed as per the Regulations and the audited accounts. Other operating expenses have not been claimed. The details of O&M expenses have been submitted in the specified formats.

3.41 The generating units at KTPS and Mahi are old and completed useful life and still maintained to operate efficiently. The Regulations of CERC and other SERCs provide for special compensation allowance in addition to normative O&M expenses based on the age of the generating station. Therefore, the Petitioner requested the Commission to allow the actual O&M expenses for KTPS and Mahi.

3.42 For RGTPS, the total O&M expenses of Rs. 22.69 Crore have been claimed for Stages I, II & III out of which Rs. 9.27 Crore pertains to Stages I & II.

**Interest & finance charges**

**Stakeholder's Comments/suggestions:**

3.43 The interest and finance charges on term loans may be allowed only on normative term loan admitted. The increase in Interest due to additional capitalisation which is not admissible, may not be considered. In respect of additional capitalisation admitted, interest may be allowed only on the debt component.

**RVUN's Response:**

3.44 The interest on loan has been claimed as per the Tariff Regulations, 2014.

3.45 The Petitioner requested the Commission to consider the debt equity ratio

of 80:20 for additional capitalisation.

### **Interest on transitional loan**

#### **Stakeholder's Comments/suggestions:**

3.46 The interest on transitional loan may be considered only as per the Commission's order dated 21.01.2010. Further, the Petitioner may provide the details of the balance of transitional loans for each station.

#### **RVUN's Response:**

3.47 The interest on transitional loan has been claimed as per the Tariff Regulations, 2014.

### **Interest on working capital**

#### **Stakeholder's Comments/suggestions:**

3.48 The working capital may be allowed on normative basis as worked out after carrying out due corrections in the relevant components of working capital.

3.49 The Petitioner has claimed additional increase in working capital for KTPS, STPS and CTPP (Units 1&2) giving reasons about delay in payments by DISCOMs, which is not acceptable. The Petitioner should/could have recovered late payment surcharge from respective DISCOMs.

#### **RVUN's Response:**

3.50 The interest on working capital has been claimed as per the Tariff Regulations, 2014.

### **Additional liability towards pension and gratuity**

#### **Stakeholder's Comments/suggestions:**

3.51 Stakeholder sought the basis for the additional liability towards pension and gratuity claimed by the Petitioner for FY 2016-17. The Stakeholder also sought the details, if the Petitioner had made any interest payments on

account of late deposit, as per the Commission's orders.

3.52 The additional liability towards pension and gratuity is not admissible for CTPP (Units 1 & 2). The Petitioner shall contribute such amount from the O&M expenses.

**RVUN's Response:**

3.53 The claim of additional liability towards pension and gratuity is Rs. 44.65 Crore and the same has been deposited in FY 2016-17.

**Insurance on fixed assets**

**Stakeholder's Comments/suggestions:**

3.54 The insurance on fixed assets may be allowed on actual basis based on the documentary evidence provided.

**RVUN's Response:**

3.55 The insurance on fixed assets has been claimed as per actual.

**Return on Equity (RoE)**

**Stakeholder's Comments/suggestions:**

3.56 The Units 1 to 4 of KTPS have completed their useful life of 25 years and hence, the Commission may consider whether in such circumstance, any RoE is admissible in respect of those Units.

3.57 RoE may be allowed on the equity admitted and infused during the year. RoE should not be allowed on the additional capitalisation not admissible.

3.58 The Petitioner has not submitted the justification for the increase in RoE for CTPP (Units 1 & 2).

**RVUN's Response:**

3.59 RoE has been claimed as per the Tariff Regulations, 2014.



## **Variable Charges**

### **Stakeholder's Comments/suggestions:**

3.60 The variable charges are to be computed considering the normative performance parameters and not the actual performance parameters which are higher than the normative.

3.61 Stakeholder sought the copy of the analysis report of GCV of coal for FY 2016-17 and purchase orders regarding prices of fuels for FY 2016-17.

### **RVUN's Response:**

3.62 The improvement in some of the performance parameters is duly reflected in the fuel cost and the impact of the same is requested to be adjusted against the actual performance parameters which are higher than normative due to the reasons beyond the control of RVUN.

3.63 The Commission vide its Order dated 04.04.2018 ruled as under:

*"Commission has noted the suggestions of the Petitioner regarding amendment in REGC. As and when Commission initiates the process for amendment in the matter, it would treat the proposal of Petitioner as a suggestion/input. However, Petitioner is at liberty to give more inputs when Commission invites comments/suggestions on the draft amendment in REGC."*

3.64 Therefore, the Petitioner requested the Commission to allow SHR and auxiliary consumption in consideration of back-down on instructions of SLDC.

3.65 Coal is being supplied as per the existing fuel supply agreements, which have already been submitted in the truing up of previous years.

## **Revenue from sale of power**

### **Stakeholder's Comments/suggestions:**

3.66 In the annual accounts for FY 2016-17, station wise/ unit wise, revenue received is not available. Total revenue of all stations/units has been shown

under the head "Head Office". The Petitioner may submit segregation of total revenue shown under "Head Office", station wise/unit wise.

3.67 From the perusal of the annual accounts, the actual revenue realized for KTPS, STPS and DCCPP was Rs. 2701.96 Crore, Rs. 2534.81 Crore and Rs. 110.98 Crore as against the Petitioner's claim of Rs. 2483.89 Crore, Rs. 2248.41 Crore and Rs. 102.74 Crore respectively. The Petitioner may submit the reasons for these variations in revenue.

**RVUN's Response:**

3.68 The detailed break-up of station wise revenue has been submitted in the petition. The reason for variation in the revenue claimed for true up and the revenue as per the cost accounts is that the revenue as per the cost accounts is inclusive of the late payment surcharge.

**B. ARR and Tariff for FY 2018-19**

**Adhoc tariff w.e.f. 01.04.2018**

**Stakeholder's Comments/suggestions:**

3.69 Regarding the prayer of the Petitioner for adhoc tariff w.e.f. 01.04.2018, the Commission may allow the existing tariff to continue till the tariff for FY 2018-19 is determined by the Commission.

**RVUN's Response:**

3.70 The interim tariff has been prayed for billing the energy generated in FY 2018-19 till the final order is issued.

**Station Heat Rate (SHR)**

**Stakeholder's Comments/suggestions:**

3.71 The SHR considered by the Petitioner for KTPS and CTPP is higher than normative SHR. This has resulted in higher cost of fuel and such increase may not be allowed. The actual SHR of STPS in FY 2016-17 and FY 2017-18 was lower than normative SHR. Therefore, the claim for higher SHR in FY 2018-19 is not justified. SHR may be allowed only on normative basis/actual

basis whichever is lower for all the stations/units.

**RVUN's Response:**

3.72 The Petitioner requested the Commission to allow SHR as claimed and the fuel consumption and fuel cost on the basis of the SHR claimed.

**Additional Capitalisation**

**Stakeholder's Comments/suggestions:**

3.73 The final capital cost for CTPP Units 3&4, KaTPP Units 1&2 and RGTPP Stage III has not been approved by the Commission and hence, the claim of additional capitalisation for these units is not admissible.

**RVUN's Response:**

3.74 The petition for determination of final capital cost for CTPP Units 3&4 and RGTPP Stage III was filed on 03.04.2018 and 10.04.2018 respectively. The petition for determination of final capital cost of KaTPP Units 1&2 will be filed shortly.

**Depreciation**

**Stakeholder's Comments/suggestions:**

3.75 Petitioner has not submitted asset wise depreciation calculation in Form F 6.1. The Petitioner should resubmit Form F 6.1 with asset wise calculation of depreciation for STPS, KTPS, Mahi and RGTPS.

3.76 In accordance with Regulation 22(8) of the RERC Tariff Regulations, 2014, the depreciation of each Unit has to be determined from the effective date of commercial operation. In accordance with Regulation 22(4) of the RERC Tariff Regulations, 2014, the depreciation for each Unit has to be computed considering the assets in operation for more than 12 years and less than 12 years. The Petitioner has not complied with the provisions of the Regulations while claiming the depreciation for FY 2018-19. In the absence of required information, the Commission may disallow 20% of the depreciation approved for KTPS, STPS, RGTPS (110.5 MW) and Mahi for FY

2017-18. Regarding the units for which the final capital cost has not been approved, depreciation may be allowed as approved in the tariff order for FY 2017-18.

**RVUN's Response:**

3.77 Depreciation has been claimed in accordance with RERC Tariff Regulations, 2014 duly considering the specified rates of depreciation. The depreciation has not been claimed beyond 90% of the capital cost and also after 12 years of useful life, depreciation has been computed duly spreading the balance depreciable value of assets over the useful life of assets. Details of depreciation have been submitted in the relevant formats submitted with the petition.

**O&M Expenses**

**Stakeholder's Comments/suggestions:**

3.78 The O&M expenses may be allowed on normative basis for all the stations/units. From the past data, it is noted that the actual O&M expenses are on lower side than normative. It would have been justified that these expenses would have been sought on actual basis. This would have resulted the tariff to be on lower side which would have put RVUN on competitive position and would have mitigated the back-down/box-up situation.

**RVUN's Response:**

3.79 The Petitioner requested the Commission to allow the normative O&M expenses as per RERC Tariff Regulations, 2014.

**Interest on term loan**

**Stakeholder's Comments/suggestions:**

3.80 The interest on term loan may be allowed only in respect of the loan amount admitted while determining the capital cost and no increase beyond that is to be allowed. There is no outstanding loan for RGTPP (110.5

MW) and Mahi and hence, the claim of interest on loan is not admissible.

3.81 The Petitioner is claiming/paying very high interest rates as compared to the interest rates prevailing in the market. The Petitioner may be directed to refinance the loans for KTPS, STPS, CTPP, DCCPP, KaTPP and RGTPP bearing high interest rates, at reduced interest rates leading to savings to the consumers of the State. The Petitioner should also apprise the Commission regularly about the steps taken to refinancing of loans.

**RVUN's Response:**

3.82 The Petitioner requested the Commission to allow the normative interest on loan as per RERC Tariff Regulations, 2014.

3.83 The Petitioner submitted that it has made efforts to refinance its loan to get lower interest rates. The rate of interest for FY 2018-19 has been estimated based on the rate of interest for FY 2016-17. The Petitioner further submitted that the improvement in company credit rating shall further lower the rate of interest.

**Interest on transitional loan**

**Stakeholder's Comments/suggestions:**

3.84 There is no transitional loan for KTPS, CTPP (Units 1-4), KaTPP (Units 1&2), DCCPP and RGTPP Stage III and hence, claim of interest on transitional loan for these stations/units is not admissible. The interest on transitional loan for STPS (Units 1-5) may be dealt with in accordance with the Commission's Order dated 21.12.2010.

**RVUN's Response:**

3.85 The Petitioner requested the Commission to allow the normative interest on transitional loan as per RERC Tariff Regulations, 2014.

### **Interest on Working capital**

#### **Stakeholder's Comments/suggestions:**

3.86 Interest on working capital is to be allowed on normative basis for all stations/units.

3.87 SBI MCLR base rate as on December 2017 was 8.95% and accordingly the rate of interest on working capital works out to 11.45% as against 11.80% claimed. The interest rate of 11.45% may be considered for calculation of interest on working capital for FY 2018-19.

#### **RVUN's Response:**

3.88 The Petitioner requested the Commission to allow the normative interest on working capital as per RERC Tariff Regulations, 2014.

### **Insurance charges**

#### **Stakeholder's Comments/suggestions:**

3.89 Insurance charges may be allowed only at the level of actual for previous year. Any increase may be considered in trueing up.

#### **RVUN's Response:**

3.90 The insurance charges have been claimed on the basis of actual insurance expenses for FY 2017-18.

### **Return on Equity (RoE)**

#### **Stakeholder's Comments/suggestions:**

3.91 RoE may be allowed only on the equity admitted/actually infused.

3.92 The Discoms do not claim RoE to reduce the burden of tariff on the consumers of the State. RVPN, in its ARR petition for FY 2018-19 has claimed nominal RoE of 2% as against 15.50% specified in the RERC Tariff Regulations, 2014, to reduce the burden on Discoms and consumers. On similar lines, RoE claimed by RVUN should also be reduced from 15.50% to

nil as claimed by Discoms or nominal RoE of 2% as claimed by RVPN. This will positively impact the consumers of the State.

**RVUN's Response:**

3.93 The Petitioner requested the Commission to allow RoE as claimed as per RERC Tariff Regulations, 2014.

**Variable Charges**

**Stakeholder's Comments/suggestions:**

3.94 Variable charges may be allowed considering the SHR approved for FY 2018-19.

3.95 The Petitioner may submit the following information regarding fuel.

- a) Quantity of fuel –coal to be consumed on normative SHR basis and on the basis of SHR taken in the petition separately with cost thereof.
- b) Transit loss in each case.
- c) Copy of last purchase order for supply of coal in respect of each station/unit indicating the rate of fuel supplied.
- d) Reasons for GCV of coal/oil/gas considered to be on lower side than that of previous year.
- e) Analysis report in respect of fuel coal/oil/gas for GCV.
- f) For each station, the stock of fuel each of coal, oil, gas as on 01.04.2016, on 01.04.2017 and on 01.04.2018 and cost thereof.
- g) Fuel wise GCV of September-November 2017 duly certified by statutory auditors.
- h) Fuel wise breakup of landed cost showing base cost, taxes etc. as specified in Regulation 51 (5) of the RERC Tariff Regulations, 2014.

**RVUN's Response:**

3.96 Coal is being supplied as per the existing Fuel Supply Agreements, which have already been submitted in the truing up of previous years.

3.97 The GCV of coal is derived by taking weighted average GCV of coal from different seams and different mines. Therefore, GCV does vary at all rakes

received from coal mines for a long period. As the complete reports are voluminous, the sample Fuel Analysis Reports for the month of January 2017 have been provided.

3.98 The fuel wise GCV for November 2017 to January 2018 has been submitted.

3.99 The breakup of landed cost of fuel (sample bill) has been submitted. The basic price of coal is paid as per certified coal grade for CIL/SECL/NCL. The fuel cost is claimed as per the provisions of the Regulations.

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## SECTION 4

### Analysis of True up of ARR for FY 2016-17 and Allowed Fixed Charges and Variable Charges

#### Norms of Operation

##### Availability

##### **RVUN's Submissions**

4.1 The actual Availability/ Capacity Index submitted by RVUN for its stations for FY 2016-17 are as shown in the Table below:

**Table 4: Availability/ Capacity Index as submitted by RVUN**

Particulars	FY 2016-17					
	KTPS (Units 1-7)	STPS (Units 1-6)	CTPP (Units 1&2)	RGTPS (110.5 MW)	DCCPP	Mahi
Target Availability for full recovery of fixed charges	82.00%	82.00%	80.00%	70.00%	80.00%	90.00%
Actual as claimed	88.74%	85.77%	81.37%	45.72%	26.47%	91.23%

4.2 RVUN submitted that it had faced shortage of gas at DCCPP and RGTPS for power generation in FY 2016-17. RVUN also submitted that it has faced loss of generation due to back-down/box-up instructions of SLDC.

4.3 RVUN submitted that Mahi Power House – I is located on a saddle dam of Mahi Dam periphery. The Mahi Dam is the property of Water Resources Department and the use/distribution of water stored in the dam is completely in the control of Water Irrigation Committee headed by District collector Banswara. Whenever there is need of irrigation in the area, water releases in the LMC (Left Main Canal) & RMC (Right Main Canal) and then only the operation of machines at Mahi Power House-I could be possible. For this purpose, the water irrigation committee intimates the plant in-charge regarding the schedule of canals and quantity of water to be released in the LMC and RMC and accordingly the running hours of machines are decided. Therefore, the operation of Mahi PH-I totally depends on the irrigation requirements and the Mahi PH-I is not purely run of river power station with pondage and storage type because RVUN does

not have any control on water utilization. The irrigation schedule is intimated to the plant very shortly and as the machines remain in ready to start mode, they are in operation. It is not possible to provide a pre-decided schedule of declared capacity of the machines.

- 4.4 Mahi PH-II is a canal-based power plant and its balancing reservoir is located at the end of LMC, which means whenever water is released in LMC and after meeting the irrigation demand, the balance water stores in the balancing reservoir. For the operation of machines, a certain level of water reservoir is required. If the available water in the reservoir is optimum for generation then only the machines at Mahi PH-II can run. So, at Mahi PH-II, machines remain in ready to start mode/available for operation but operation of machines is totally dependent on the availability of water.
- 4.5 Considering the above uncontrollable factor and RERC Tariff Regulations, 2014, RVUN requested the Commission to not reduce the fixed charges for Mahi, on pro-rata basis.

### **Commission's Analysis**

- 4.6 The Commission observes that the reasons stated by RVUN for non-achievement of target Availability are non-availability of gas for gas-based stations and backing down by SLDC.
- 4.7 The Commission in its Order dated 23.07.2014 directed RVUN to submit the SLDC Certificate towards actual Availability and reasons for loss in generation, if any, along with true up petitions from FY 2011-12 onwards. RVUN in the instant petition has submitted the loss in generation due to back down instructions certified by SLDC in FY 2016-17 as follows.

**Table 5: Generation Loss due to back-down/box-up instructions**

Particulars	FY 2016-17	
	RVUN proposed generation loss (MU)	Certified by SLDC (MU)
KTPS(Units 1-7)	2117.07	2117.08
STPS(Units 1-6)	6232.09	6232.10
RGTPS(110.5 MW)	0.17	0.17
DCCPP	648.17	648.17
CTPP(Units 1&2)	183.96	183.96
<b>Total</b>	<b>9181.45</b>	<b>9181.47</b>

4.8 RVUN has submitted the computations of deemed PLF considering the loss of generation due to back-down/box-up instructions for FY 2016-17.

4.9 As regards the non-availability of gas, the Commission is of the view that the responsibility for arrangement of fuel lies with the generator. In this regard, the Commission vide its Order dated 27.04.2011 passed in the matter of true up of ARR for FY 2004-05 to FY 2008-09 for RVUN observed as under:

*“22. Fuel supply arrangement is the responsibility of RVUN. Therefore, non-availability of gas cannot be considered as a valid reason for non-availability of plant.”*

4.10 The Commission, in its Order dated 20.06.2017 on approval of true up for FY 2014-15 and FY 2015-16, had considered the actual Availability equal to deemed PLF computed considering the actual net generation and generation loss due to back-down/box-up as certified by SLDC. In line with the same, the Commission, after taking into consideration the certification of SLDC for loss of generation due to back-down/box-up instructions, has recomputed the deemed PLF by adding the same to the actual net generation in accordance with Regulation 41 of the RERC Tariff Regulations, 2014. The Commission for the purpose of computing the deemed PLF has considered the normative auxiliary consumption. The Commission has considered the PLF so computed as the actual Availability for FY 2016-17. The deemed PLF submitted by RVUN and as approved by

the Commission is as shown in the Table below:

**Table 6: Availability based on deemed generation for FY 2016-17**

Particulars	Units	KTPS (Units 1-7)		STPS (Units 1-6)		CTPP (Units 1&2)		RGTPS (110.5 MW)		DCCPP	
		Claimed	Approved	Claimed	Approved	Claimed	Approved	Claimed	Approved	Claimed	Approved
Installed Capacity	MW	1240.00	1240.00	1500.00	1500.00	500.00	500.00	110.50	110.50	330.00	330.00
Normative Auxiliary Consumption	%	9.27%	9.27%	9.00%	9.00%	9.00%	9.00%	2.40%	2.74%	2.90%	2.91%
Actual Net Generation	MU	6628.79	6628.79	4023.28	4023.28	3059.46	3059.46	431.77	431.77	94.86	94.86
<b>Actual PLF</b>	<b>%</b>	<b>67.26%</b>	<b>67.26%</b>	<b>33.65%</b>	<b>33.65%</b>	<b>76.76%</b>	<b>76.76%</b>	<b>45.70%</b>	<b>45.86%</b>	<b>3.38%</b>	<b>3.38%</b>
Generation loss due to back-down/box-up	MU	2117.07	2117.08	6232.09	6232.09	183.96	183.96	0.17	0.17	648.17	648.17
Net Generation+ Generation loss	MU	8745.86	8745.87	10255.37	10255.37	3243.42	3243.42	431.95	431.95	743.03	743.03
<b>Deemed PLF</b>	<b>%</b>	<b>88.74%</b>	<b>88.74%</b>	<b>85.77%</b>	<b>85.77%</b>	<b>81.37%</b>	<b>81.37%</b>	<b>45.72%</b>	<b>45.88%</b>	<b>26.47%</b>	<b>26.47%</b>

4.11 The Availability/Capacity Index approved by the Commission is as shown in the Table below:

**Table 7: Availability/Capacity Index approved by the Commission for FY 2016-17**

Particulars	FY 2016-17					
	KTPS (Units 1-7)	STPS (Units 1-6)	CTPP (Units 1&2)	RGTPS (110.5 MW)	DCCPP	Mahi
As claimed	88.74%	85.77%	81.37%	45.72%	26.47%	91.23%
Approved on True up	88.74%	85.77%	81.37%	45.88%	26.47%	91.23%

4.12 The Commission has gone through the submissions of RVUN for allowing the recovery of full fixed charges on account of shortage of gas. In the truing up of previous years, the Commission had not considered the gas shortage situation for allowing recovery of full fixed charges for gas based thermal generating stations. This consistent approach of the Commission has been challenged before Hon'ble APTEL and is pending adjudication. Hence, the Commission pending the decision of Hon'ble APTEL, maintains status-quo in the matter.

### **Plant Load Factor (PLF)**

#### **RVUN's Submission**

4.13 The actual PLF as submitted by RVUN for its stations for FY 2016-17 is as shown in the Table below:

**Table 8: PLF as submitted by RVUN for FY 2016-17**

Particulars	FY 2016-17				
	KTPS (Units 1-7)	STPS (Units 1-6)	CTPP (Units 1&2)	RGTPS (110.5 MW)	DCCPP
Target PLF for incentive	82.00%	82.00%	80.00%	70.00%	80.00%
Approved in Tariff Order	82.00%	82.00%	80.00%	70.00%	80.00%
Actual as claimed	67.26%	33.65%	76.76%	45.70%	3.38%

4.14 RVUN submitted that the actual PLF for KTPS, STPS, and CTPP for FY 2016-17 is lower than the target PLF on account of back-down instructions from SLDC. For RGTPS and DCCPP the actual PLF for FY 2016-17 is lower than the target PLF on account of shortage of gas and back-down instructions from SLDC.

### Commission's Analysis

4.15 The Commission is of the view that under the RERC Tariff Regulations, 2014, 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 a lower price.

4.16 RERC Tariff Regulations, 2014 specifically define the PLF as specified below:

*"(44) "Plant Load Factor", for a given period, means the total sent-out energy 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:*

$$\text{Plant Load Factor (\%)} = \frac{10000 \times \sum_{i=1}^N \text{AG}_i}{\{N \times \text{IC} \times (100 - \text{AUX}_n)\}} \%$$

*where - N = number of time blocks in the given period,  
AG<sub>i</sub> = Actual Generation in MW for the i<sup>th</sup> time block in such period  
IC = Installed Capacity of the generating station in MW,  
AUX<sub>n</sub> = Normative Auxiliary Consumption in MW, expressed as a percentage of gross generation"*

4.17 The Commission, based on the actual net generation submitted and the normative net generation considering the normative auxiliary consumption,

has recomputed the actual PLF as per the above specified formula. The PLF as submitted by the Petitioner and as approved by the Commission for FY 2016-17 is as shown in the Table below:

**Table 9: PLF approved by the Commission for FY 2016-17**

Particulars	FY 2016-17				
	KTPS (Units 1-7)	STPS (Units 1-6)	CTPP (Units 1&2)	RGTPS (110.5 MW)	DCCPP
Actual as claimed	67.26%	33.65%	76.76%	45.70%	3.38%
Approved on true up	67.26%	33.65%	76.76%	45.86%	3.38%

### **Auxiliary Consumption**

#### **RVUN's Submissions**

4.18 The actual auxiliary consumption submitted by RVUN for its stations for FY 2016-17 is as shown in the Table below:

**Table 10: Auxiliary consumption as submitted by RVUN**

Particulars	FY 2016-17							
	KTPS (Units 1-7)	STPS (Units 1-6)	CTPP (Units 1&2)	RGTPS (110.5 MW)		DCCPP		Mahi
				CC	OC	CC	OC	
Normative	9.27%	9.00%	9.00%	3.00%	1.00%	3.00%	1.00%	1.00%
Approved in Tariff Order	9.27%	9.00%	9.00%	2.40%		2.90%		-
Actual as claimed	11.46%	10.09%	10.13%	4.39%		24.03%		0.53%

4.19 RVUN submitted that increase in auxiliary consumption for KTPS, STPS, CTPP, RGTPS and DCCPP is due to back-down/box-up instructions from SLDC and also lower availability of gas for DCCPP and RGTPS. RVUN submitted that in case of backing down of generation, though the load is reduced, but all the auxiliary equipment of the Station has to run and therefore, the auxiliary consumption in percentage terms is higher during the low load operation.

4.20 RVUN further submitted that at KTPS, as the tube mills are used instead of bowl mills, the auxiliary consumption for FY 2016-17 is higher than the normative, because tube mills are of high rating (2100 kW × 3 i.e., in Units-5,6 & 7) than the bowl mills (340 kW × 4 i.e., in units 1,2,3 & 4) and these mills always run on full capacity as balls are always loaded in the mills.

4.21 RVUN submitted that based on the hours of operation in combined cycle and open cycle mode, the normative auxiliary consumption of DCCPP works out as 2.907% and 2.74% for RGTPS for FY 2016-17 against the actual auxiliary consumption of 24.03% and 4.39% for DCCPP and RGTPS respectively for FY 2016-17.

4.22 RVUN submitted that the excessive auxiliary consumption is the consequential effect of SLDC back down instructions and therefore, requested the Commission that any excessive auxiliary consumption due to SLDC back down instructions may also be allowed and considered as uncontrollable as the SLDC instructions are considered as uncontrollable.

### **Commission's Analysis**

4.23 The Commission observes that RVUN has stated that the reason for higher auxiliary consumption than normative values is on account of instructions from SLDC for back-down/box-up of its Stations.

4.24 Hon'ble APTEL vide its Judgment dated 18.09.2015 in Appeal Nos. 196 of 2014 and 326 of 2013 in Haryana Power Generation Corporation Ltd. Vs Haryana Electricity Regulatory Commission & Ors ruled as under:

*“iii) According to the appellant/petitioner it is the PTPS Unit 1-4 which has outlived their useful economic life and the performance for the past few years has been well below the norm prescribed by the Tariff Regulations. Further, PTPS Unit-5, as per the appellant, is also nearing the end of its useful economic life due to which the auxiliary consumption remains high. Further, the submission of the appellant is that the other Unit of DCR Thermal Power Station had frequent shutdowns resulting in higher auxiliary energy consumption. The appellant contended that the large steps have been taken to reduce the auxiliary energy consumption of the power plants during the controlled period. The State Commission, after considering all these contentions of the appellant, has correctly and justly, not found it a fit case where power to relax could be exercised by the State Commission and the Commission has legally decided the issue as per the norms prescribed in MYT Regulations 2012. Further power to relax has to be exercised in exceptional cases when the same is in the public interest. In the case in hand if the contention of the appellant is allowed and norms for auxiliary are diluted or relaxed that would cost additional burden on the end consumers of the Discoms which should*

*not be permitted considering the relevant provisions in this regard given in the Electricity Act, 2003. Consequently, this Issue No. (c) is also decided against the appellant."*

4.25 In light of the above Judgment of Hon'ble APTEL, the prayer of RVUN for relaxing the normative auxiliary consumption is not allowable as the same is not in public interest and it will result in further increase in tariff which will cause additional burden on the Respondents and ultimately the end consumers of the electricity.

4.26 It is also observed that RGTPS and DCCPP have been operated in open cycle and combined cycle mode. RVUN has submitted the number of hours of operation in both modes of operation. The Commission has worked out the auxiliary consumption for these stations considering the number of hours of operation in open and combined cycle mode. With regards to the normative auxiliary consumption of Mahi station for FY 2016-17 Regulation 46 of RERC Tariff Regulations 2014 stipulates as:

*"46. Norms of Operation for Hydro Power Generating Stations:*

*(2) Auxiliary energy consumption*

*(c) Auxiliary energy consumption for existing hydro power stations*

*i. Mahi PH 2- 3.0 Lakhs Units per annum + 0.75% of energy generated*

*ii. Mahi PH 1- 4.0 Lakhs units per annum + 0.65% of energy generated"*

4.27 Commission has considered the normative auxiliary consumption for Mahi considering the Phase wise gross generation of Mahi PH-1 and Mahi PH-2 in accordance with Regulation 46 of RERC Tariff Regulations, 2014.

4.28 The auxiliary consumption approved by Commission for FY 2016-17 is as shown in the table below:

**Table 11: Auxiliary consumption approved for FY 2016-17**

Particulars	FY 2016-17					
	KTPS (Units 1-7)	STPS (Units 1-6)	CTPP (Units 1&2)	RGTPS (110.5 MW)	DCCPP	Mahi
Actual as claimed	11.46%	10.09%	10.13%	4.39%	24.03%	0.53%
Approved on true up	9.27%	9.00%	9.00%	2.74%	2.91%	1.00%



## **Station Heat Rate (SHR)**

### **RVUN's Submission**

4.29 The actual Station Heat Rate submitted by RVUN for its Stations for FY 2016-17 is as shown in the Table below:

**Table 12: Actual Station Rate as submitted by RVUN (kcal/kWh)**

Particulars	FY 2016-17						
	KTPS (Units 1-7)	STPS (Units 1-6)	CTPP (Units 1&2)	RGTPS (110.5 MW)		DCCPP	
				CC	OC	CC	OC
Normative	2561.70	2476.28	2312.31	1950.00	2830.00	1950.00	2830.00
Approved in Tariff Order	2561.70	2476.28	2312.31	2214.00		1994.00	
Actual as claimed	2551.16	2452.08	2615.92	2596.60		2334.08	

4.30 RVUN submitted that for DCCPP and RGTPS, due to unavailability of gas, there has been increased SHR of the plant as the plant was running on partial loads on regular basis.

4.31 The efficiency of gas-based power plants depends on ambient temperature, ambient pressure and relative humidity. During summer season the temperature at Dholpur is very high which affects the performance of gas turbine and increases SHR. During winter temperature is very low and due to fog, relative humidity of air increases thereby increasing the density of air which becomes insufficient for complete burning of fuel and therefore consumption of fuel increases for the same output.

4.32 RVUN requested the Commission to allow actual SHR achieved in the true-up for FY 2016-17.

4.33 RVUN submitted that based on the hours of operation in open cycle and closed cycle mode, the normative SHR of DCCPP works out as 1990.78 kcal/kWh and 2063.68 kcal/kWh for RGTPS for FY 2016-17 against the actual SHR of 2334.08 kcal/kWh and 2596.60 kcal/kWh for DCCPP and RGTPS respectively for FY 2016-17.

## **Commission's Analysis**

4.34 The actual SHR of KTPS and STPS for FY 2016-17 were lower than the normative SHR for the respective stations. The Petitioner has not submitted the justification for the actual SHR of CTPP being higher than the normative SHR. Further, as regards the higher SHR for RGTPS and DCCPP, the reasons submitted by RVUN are similar to the reasons submitted in the true up petitions for previous years which the Commission has not considered as prudent for relaxing the norm of SHR.

4.35 In line with the approach adopted in the true up for FY 2015-16, the Commission has considered the normative SHR for all the stations in true up of FY 2016-17.

4.36 RGTPS and DCCPP have been operated in open cycle mode and combined cycle mode. RVUN has submitted the number of hours of operation in both modes of operation. The Commission has worked out the normative SHR for these stations considering the hours of operation in open cycle mode and combined cycle mode.

4.37 The Station Heat Rate approved by the Commission for FY 2016-17 is as shown in the Table below:

**Table 13: Station Heat Rate approved for FY 2016-17 (kcal/kWh)**

Particulars	FY 2016-17				
	KTPS (Units 1-7)	STPS (Units 1-6)	CTPP (Units 1&2)	RGTPS (110.5 MW)	DCCPP
Actual as claimed	2551.16	2452.08	2615.92	2596.60	2334.08
Approved on true up	2561.70	2476.28	2312.31	2063.69	1990.78

## **Secondary Fuel Oil Consumption (SFOC)**

### **RVUN's Submission**

4.38 The actual SFOC submitted by RVUN for its Stations for FY 2016-17 is as shown in Table below:

**Table 14: SFOC as submitted by RVUN (ml/kWh)**

Particulars	FY 2016-17		
	KTPS (Units 1-7)	STPS (Units 1-6)	CTPP (Units 1&2)
Normative	0.50	0.50	0.50
Actual as claimed	0.81	1.57	1.17

### Commission's Analysis

4.39 The Commission has allowed SFOC for all generating stations for FY 2016-17 in accordance with the norms specified in RERC Tariff Regulations, 2014. The SFOC approved by the Commission is as shown in the Table below:

**Table 15: SFOC approved for FY 2016-17 (ml/kWh)**

Particulars	FY 2016-17		
	KTPS (Units 1-7)	STPS (Units 1-6)	CTPP (Units 1&2)
Actual as claimed	0.81	1.57	1.17
Approved on true up	0.50	0.50	0.50

### Coal Transit Loss

#### Commission's Analysis

4.40 RVUN has not submitted the Coal Transit Loss separately in percentage terms as specified by RERC Tariff Regulations, 2014. The Commission has computed the Transit Loss in percentage terms from the actual coal cost data submitted by RVUN.

4.41 The Commission therefore, for the purpose of truing up, has considered the normative transit loss of 0.8% for domestic coal for FY 2016-17 as specified in RERC Tariff Regulations, 2014. The Transit Loss approved by the Commission for FY 2016-17 is as shown in the Table below:

**Table 16: Transit loss approved for FY 2016-17**

Particulars	FY 2016-17		
	KTPS (Units 1-7)	STPS (Units 1-6)	CTPP (Units 1&2)
Actual as claimed	1.05%	0.42%	0.23%
Approved on true up	0.80%	0.80%	0.80%

## **Fuel Price and Calorific Value**

### **RVUN's Submission**

4.42 The actual fuel prices and GCV as submitted by RVUN for FY 2016-17 are shown in the Table below:

**Table 17: Actual fuel prices and GCV for FY 2016-17 as submitted by RVUN**

Station	Primary Fuel (Coal/Gas)		Fuel Oil	
	GCV	Price	GCV	Price
	kcal/kg / kcal/SCM	Rs./MT / Rs./SCM	kcal/lt	Rs./kL
KTPS	3846.40	4088.21	9546.87	27752.28
STPS	4023.00	5140.96	9835.56	26741.81
CTPP	4059.87	3658.89	10397.75	23636.66
RGTPS	4615.49	4.38	9300.00	42978.89
DCCPP	9197.63	15.38	-	-

4.43 RVUN also submitted the month-wise details of the fuel prices and GCV for its stations during FY 2016-17.

### **Commission's Analysis**

4.44 The Commission observes that RVUN has not burnt/consumed any imported coal for power generation in FY 2016-17. The Commission observed some discrepancies in the actual fuel prices and GCV for FY 2016-17 as submitted in the computations of energy charges and in the month-wise details for KTPS and STPS. In reply to a query in this regard, RVUN submitted that the fuel prices and GCV as submitted in the computations of the energy charges should be considered for true up as the same are in accordance with the annual accounts for FY 2016-17. Accordingly, the Commission has considered the actual fuel prices and GCV as submitted by RVUN in the computations of energy charges for FY 2016-17. Further, the Commission has recomputed the landed price of coal for KTPS, STPS and CTPP considering the normative transit loss for FY 2016-17. The fuel prices and GCV considered by the Commission in the true up for FY 2016-17 are as shown in the Table below:

**Table 18: Fuel prices and GCV considered by the Commission for FY 2016-17**

Station	Primary Fuel (Coal/Gas)		Fuel Oil	
	GCV	Price	GCV	Price
	kcal/kg / kcal/SCM	Rs./MT / Rs./SCM	kcal/lt	Rs./kL
KTPS	3846.40	4077.81	9546.87	27752.28
STPS	4023.00	5160.50	9835.56	26741.81
CTPP	4059.87	3679.86	10397.75	23636.66
RGTPS	4615.49	4.38	9300.00	42978.89
DCCPP	9197.63	15.38	-	-

**Other Charges****RVUN's Submission**

4.45 In addition to fuel cost, RVUN has claimed other charges under the heads of fuel related cost. The other charges claimed by the Petitioner for FY 2016-17 are as shown in the Table below:

**Table 19: Other charges claimed by RVUN (Rs. Crore)**

Station	Other charges
KTPS	9.12
STPS	2.88
CTPP	7.78
RGTPS	0.00
DCCPP	0.00
<b>Total</b>	<b>19.78</b>

**Commission's Analysis**

4.46 The amount claimed by RVUN under other charges are towards the expenses related to fuel handling charges within the power station like coal handling contract charges, demurrage on coal wagons, payment to railway staff etc. Further, RVUN submitted that it has claimed Rs. 7.78 Crore under this head for CTPP(Units 1&2) while the total expenses incurred for CTPP(Units 1-4) was Rs. 10.21 Crore.

4.47 The Commission is of the view that the cost related to arrangement of fuel can only be considered as part of fuel cost to work out the variable

charges. The Commission observes that the other charges claimed by RVUN are related to fuel and hence the Commission has considered the fuel related costs as claimed by RVUN while approving the variable charges.

4.48 The other charges approved by the Commission for FY 2016-17 are as shown in the Table below:

**Table 20: Other charges approved for FY 2016-17 (Rs. Crore)**

Station	FY 2016-17	
	Claimed	Approved
KTPS	9.12	9.12
STPS	2.88	2.88
CTPP	7.78	7.78
RGTPS	0.00	0.00
DCCPP	0.00	0.00
<b>Total</b>	<b>19.78</b>	<b>19.78</b>

### **Annual Fixed Charges**

4.49 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) Inter-Unit Account balance written off
- (vii) Addl. Contribution towards Pension and Gratuity
- (viii) Prior Period Expenses/Income
- (ix) Return on Equity
- (x) Insurance Charges
- (xi) Less: Non-Tariff Income

4.50 Each of these elements has been dealt with in the following paragraphs.

## **Operation and Maintenance (O&M) Expenses**

### **RVUN's Submission**

4.51 For most of the stations, the actual O&M expenses claimed by RVUN for FY 2016-17 are lower than that approved by the Commission. But for Mahi and KTPS, the actual O&M expenses are on the higher side than that approved by the Commission for FY 2016-17. RVUN submitted that the actual O&M expenses for Mahi and KTPS are higher due to old units, and therefore require more expenditure towards R&M works for smooth operation.

4.52 The details of O&M expenses approved in the Tariff Order for FY 2016-17, and petitioned for truing up based on audited accounts are as shown in the Table below:

**Table 21: O&M expenses claimed by RVUN for FY 2016-17 (Rs. Crore)**

Station	FY 2016-17	
	Approved in the Tariff Order	Claimed for true up
KTPS(Units 1-7)	223.54	237.36
STPS(Units 1-6)	270.41	224.43
CTPP(Units 1&2)	90.14	73.84
RGTPS(110.5 MW)	18.13	11.33
DCCPP	44.59	20.21
Mahi	15.56	23.54
<b>Total</b>	<b>662.37</b>	<b>590.71</b>

4.53 RVUN has proposed the sharing of gains and losses in O&M expenses for FY 2016-17.

### **Commission's Analysis**

4.54 The Commission in the Tariff Order for FY 2016-17 had approved the O&M expenses considering the normative O&M expenses specified in the RERC Tariff Regulations, 2014.

4.55 As against the approved O&M expenses of Rs. 662.37 Crore, RVUN has claimed the actual O&M expenses of Rs. 590.71 Crore. Thus, the actual O&M expenses claimed by RVUN are lower than the approved O&M expenses by Rs. 71.66 Crore.

4.56 The Commission in the following paragraphs ruled that the cost of assets pertaining to procurement of vehicles, furniture etc. in FY 2016-17 are to be treated as revenue expenses and not capital expenses due to the nature of such small works. Hence, the Commission has considered the cost of the same as part of actual O&M expenses for FY 2016-17.

4.57 Further, the Commission observes that RVUN has claimed Rs. 44.65 Crore towards the additional contribution towards pension and gratuity, in FY 2016-17. These expenses are typically of the nature of O&M expenses. However, the Commission had allowed the additional contribution towards pension and gratuity as a separate item in Annual Fixed Charges in the tariff determination for the previous years, considering the weak financial position of RVUN. The Commission finds it prudent to discontinue this approach henceforth as RVUN has achieved significant financial gains in O&M expenses for FY 2016-17. Therefore, the Commission has considered the additional contribution towards pension and gratuity claimed by RVUN for FY 2016-17 as a part of the actual O&M expenses. The Commission has not separately allowed any amount on account of additional contribution towards pension and gratuity in true up of FY 2016-17.

4.58 Therefore, the actual O&M expenses considered by the Commission for FY 2016-17 are as under:

**Table 22: Actual O&M expenses for FY 2016-17 considered by the Commission (Rs. Crore)**

Station	Actual as claimed by RVUN	Cost of minor assets	Additional contribution to pension and gratuity	Total actual O&M expenses considered by the Commission
KTPS(Units 1-7)	237.36	0.16	19.83	<b>257.34</b>
STPS(Units 1-6)	224.43	0.00	12.81	<b>237.25</b>
CTPP(Units 1&2)	73.84	0.08	5.83	<b>79.75</b>
RGTPS(110.5 MW)	11.33	0.00	2.02	<b>13.35</b>
DCCPP	20.21	0.02	1.69	<b>21.92</b>
Mahi	23.54	0.00	2.47	<b>26.01</b>
<b>Total</b>	<b>590.71</b>	<b>0.26</b>	<b>44.65</b>	<b>635.62</b>



4.59 Regulation 8(8) of the RERC Tariff Regulations, 2014 stipulates as follows:

**“(8) Truing Up**

.....

*(8) 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:*

.....

*(d) Variation in operation & maintenance expenses;*

.....”

4.60 Hence, O&M expenses are controllable in accordance with RERC Tariff Regulations, 2014.

4.61 Further, Regulation 9 of the RERC Tariff Regulations, 2014 specifies that:

**“9. Gains and Losses on account of Uncontrollable and Controllable factors**

*(1) The approved aggregate gain or loss to the Generating Company or Licensee on account of Uncontrollable factors shall be allowed as an adjustment in the tariff of the Generating Company or Licensee over such period as may be stipulated in the order of the Commission passed under these Regulations.*

*(2) Gain or loss to the Generating Company or Licensee on account of controllable factors shall be retained or borne by the Generating Company or Licensee, as the Case may be, except in case of the following:*

*(a) Rate of interest on working capital requirement, which shall be as per regulation 27;*

*(b) Station Heat Rate, Auxiliary Consumption and Secondary fuel oil consumption which shall be as per regulation 57 and*

*(c) Distribution loss, which shall be as per regulation 76.*

.....”

4.62 Therefore, from the above, it can be observed that the RERC Tariff Regulations, 2014 do not provide for any sharing of gain/loss on account of variation in actual vis-à-vis normative O&M expenses. Accordingly, the Commission has not considered the sharing of gain/loss on account of variation in O&M expenses.

4.63 Accordingly, the Commission has approved the O&M expenses as approved in the Tariff Order for FY 2016-17, in the true up of FY 2016-17 as shown in the Table below:

**Table 23: O&M expenses approved for FY 2016-17 (Rs. Crore)**

Station	FY 2016-17		
	Approved in the Tariff Order	Claimed for true up	Approved on true up
KTPS(Units 1-7)	223.54	237.36	223.54
STPS(Units 1-6)	270.41	224.43	270.41
CTPP(Units 1&2)	90.14	73.84	90.14
RGTPS(110.5 MW)	18.13	11.33	18.13
DCCPP	44.59	20.21	44.59
Mahi	15.56	23.54	15.56
<b>Total</b>	<b>662.37</b>	<b>590.71</b>	<b>662.37</b>

**Additional Capitalization****RVUN's Submission**

4.64 RVUN has claimed the additional capitalization of Rs. 4.85 Crore for true up for FY 2016-17 as shown in the Table below:

**Table 24: Additional capitalisation claimed by RVUN for FY 2016-17 (Rs. Crore)**

Station	FY 2016-17	
	Approved in the Tariff Order	Claimed for true up
KTPS(Units 1-7)	0.00	0.16
STPS(Units 1-6)	0.00	4.30
CTPP(Units 1&2)	0.00	0.25
RGTPS(110.5 MW)	0.00	0.00
DCCPP	0.00	0.14
Mahi	0.00	0.00
<b>Total</b>	<b>0.00</b>	<b>4.85</b>

4.65 RVUN claimed the additional capitalization of Rs. 0.16 Crore for KTPS Units 1-6 for FY 2016-17 citing Regulation 17(2) of RERC, Tariff Regulations, 2014. The details of the additional capitalization are as follows:

- a) Rs. 0.13 Crore towards purchase of ambulance.
- b) Rs. 0.03 Crore towards purchase of office equipment.

4.66 RVUN submitted that for STPS Units 1-5, it has incurred the additional capitalization of Rs. 4.30 Crore for plant & machinery and office equipment. The details of additional capitalization are as given below:

**Table 25: Additional capitalization claimed by RVUN  
for STPS for FY 2016-17 (Rs. Crore)**

S. No.	Particulars	Amount (Rs. Crore)	PO. NO & Date	Date of Completion	RERC Order dated
1	Plant & Machinery	3.68	D-130 dated 29.07.13	06.09.2016	31.10.12
2	Plant & Machinery	0.62	D-575 dated 01.08.13	06.09.2016	31.10.12
3	Office Equipment	0.002	D-629 dated 01.08.16	04.08.2016	Not Approved

4.67 RVUN submitted that the additional capitalization of Rs. 0.002 Crore for STPS for FY 2016-17 has been claimed as per Regulation 17(2)(iv) of RERC Tariff Regulation 2014, as it is inevitable for smooth functioning of plant and was not covered under original scope of work, so RVUN requested the Commission to approve the above additional capitalization.

4.68 RVUN submitted that it has incurred the additional capitalization of Rs. 0.142 Crore in FY 2016-17 for DCCPP on account of furniture & fixtures, Office equipment and capital spares. RVUN requested the Commission to approve the same. The details of additional capitalization claimed for DCCPP for FY 2016-17 are as shown below:

**Table 26: Additional capitalization claimed by RVUN  
for DCCPP for FY 2016-17 (Rs. Crore)**

S. No.	Particulars	Amount	Justification/Remark
1	Furniture & Fixtures	0.1825	Claimed as per Regulation 17(2) (iv) of RERC Tariff Regulations, 2014.
2	Capital (initial) Spares	0.1243	It is also the part of original scope of work (Initial spare) done by BHEL against order no. (1132/17.03.2008 & 4072/05.11.08) incurred towards deferred payment of earlier years.
	Total	0.142	

4.69 RVUN submitted that the additional capitalization of Rs. 0.25 Crore for CTPP for FY 2016-17 has been claimed as per regulation 17(2)(iv) of RERC Tariff Regulations, 2014. RVUN requested the Commission to approve the above additional capitalization. The details of additional capitalization claimed for

CTPP for FY 2016-17 are as shown below:

**Table 27: Additional capitalization claimed by RVUN for CTPP for FY 2016-17 (Rs. Crore)**

S. No.	Particulars	Amount
1	Main Plant BTG Package	0.16
2	Main Plant C&I Package	0.01
3	Furniture & Fixtures & office equipment	0.08
	<b>Total</b>	<b>0.25</b>

### Commission's Analysis

4.70 Regarding the additional capitalisation of existing stations, Regulation 17 of RERC Tariff Regulations, 2014 specifies as follows:

**“17. Additional capitalization**

*(1) The following capital expenditure, actually incurred after the date of commercial operation and upto the cut-off date and duly audited, may be considered by the Commission against the original scope of work, subject to prudent check*

*(a) Due to undischarged liabilities;*

*(b) On works deferred for execution;*

*(c) To meet award of arbitration or satisfaction of order or decree of a court;*

*(d) On account of change in law;*

*(e) On procurement of initial spares included in the original project costs subject to the ceiling norm laid down in regulation 16.*

*Provided that the details of the work included in the original scope of work along with estimates of expenditure shall be submitted along with the application for provisional tariff:*

*Provided further that a list of the undischarged liabilities and works deferred for execution shall be submitted along with the application for final tariff after the date of commercial operation of the generating station.*

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

- (i) Liabilities to meet award of arbitration or for compliance of the order or decree of a court;
  - (ii) Change in law;
  - (iii) Deferred works relating to ash pond or ash handling system in the original scope of work;
  - (iv) Any additional works/ services, which have become necessary for efficient and successful operation of a generating station or transmission system but not included in the original capital cost.
- .....”

4.71 Any additional capitalisation has to be claimed in accordance with Regulation 17 of the RERC Tariff Regulations, 2014 giving a detailed justification for the same.

4.72 It is pertinent to mention that it may not be appropriate to consider the above Regulation in isolation. For the stations in service before the regulatory regime in the State, the Commission had not determined the capital cost of such stations. It is for this reason that the Commission had emphasized on the prior approval for capital expenditure in the true up of previous years. The Commission had disallowed the capital expenditure for which the prior approval was not obtained in the true up for previous years. RVUN had not contested this decision of the Commission in the past.

4.73 RVUN has also sought the capitalisation of cost of assets pertaining to procurement of vehicles, office equipment and furniture and fixtures in FY 2016-17 which are minor in nature, as shown in the Table below:

**Table 28: Cost of minor assets claimed by RVUN for FY 2016-17 (Rs. Crore)**

Station	Particulars	FY 2016-17
KTPS (Units 1-6)	Vehicles	0.13
	Furniture	0.02
<b>Total KTPS</b>		<b>0.16</b>
STPS (Units 1-5)	Office equipment	0.002
DCCPP	Furniture	0.02
CTPP (Units 1&2)	Office equipment	0.08

4.74 The Commission finds that such equipment procured cannot be considered as part of capital expenses due to the nature of such assets. Regarding the cost of minor assets claimed by the Petitioner for FY 2016-17, the Commission has adopted the same approach as was adopted during the true-up of FY 2015-16. Accordingly, the Commission has not approved the cost incurred towards the minor assets, in the true up of FY 2016-17.

4.75 RVUN has claimed the additional capitalisation of Rs. 4.30 Crore for STPS against the Commission approved schemes the details of which are shown in the Table below:

**Table 29: Additional capitalisation for STPS claimed by RVUN**

Particulars	Approved cost (including IDC)	Awarded cost (excluding IDC)	Scheduled commencement date	Scheduled completion date	Actual completion date	Claimed completion cost
	Rs. Crore	Rs. Crore	Date	Date	Date	Rs. Crore
Supply and ETC of passenger cum goods elevator at Boiler Unit 2	0.61	0.62	Apr-14	Sep-14	Jul-16	0.62
Upgradation of MMI system of Unit 2	2.50	2.55	Jan-14	Feb-14	Sep-16	2.55
IDC for the above two works	-	-	-	-	-	1.13
<b>Total</b>	<b>3.11</b>	<b>3.17</b>	-	-	-	<b>4.30</b>

4.76 From the above, table, it can be observed that as against the approved cost of Rs. 3.11 Crore, RVUN has claimed the actual cost of Rs. 4.30 Crore. It is pertinent to mention that the Commission's approval for undertaking the above stated works was accorded vide the Order dated 31.10.2012. Pursuant to the Commission's approval for undertaking the works, the work orders were placed during the year 2013. RVUN submitted the copies of work orders. The increase in the actual completion cost claimed and the ordering cost is only on account of IDC.

4.77 From the above, it can also be observed that there was significant time gap between the scheduled completion date and the actual completion

date. It has been observed from the work orders that penalties are leviable upto a maximum of 10% of the award price. RVUN has not submitted any reasons for delay in completion of the works and the details of penalties levied if any although these issues were raised by the stakeholder. In light of the above, the Commission finds it prudent to approve the cost of the above stated works as approved in the Order dated 31.10.2012.

4.78 Regarding additional capitalisation claimed towards CTPP(Units 1&2) and DCCPP, the Commission is of the view that in accordance with Regulation 2(17) of the RERC Tariff Regulations, 2014, the cut-off date of these stations have already been over. Further, Regulation 17(2) of the RERC Tariff Regulations, 2014 does not provide for allowing the deferred works as claimed by RVUN. Hence, the Commission has not approved the additional capitalisation claimed by RVUN for CTPP(Units 1&2) and DCCPP.

4.79 In light of the above, the additional capitalisation approved by the Commission for FY 2016-17 is as shown in the table below:

**Table 30: Additional capitalisation approved for FY 2016-17 (Rs. Crore)**

Station	FY 2016-17		
	Approved in the Tariff Order	Claimed for true up	Approved on true up
KTPS(Units 1-7)	0.00	0.16	0.00
STPS(Units 1-6)	0.00	4.30	3.11
CTPP(Units 1&2)	0.00	0.25	0.00
RGTPS(110.5 MW)	0.00	0.00	0.00
DCCPP	0.00	0.14	0.00
Mahi	0.00	0.00	0.00
<b>Total</b>	<b>0.00</b>	<b>4.85</b>	<b>3.11</b>

4.80 RVUN has considered the means of finance of the proposed additional capitalisation for FY 2016-17 in the debt equity ratio of 70:30. Subsequently, in its replies to stakeholder's comments, RVUN requested the Commission to consider the debt equity ratio of additional capitalisation as 80:20. The Commission has considered the means of finance of the approved additional capitalisation in the debt equity ratio of 80:20.

## Depreciation

### RVUN's Submission

4.81 The details of depreciation approved in the Tariff Order for FY 2016-17 and petitioned for true up based on actual/audited accounts are as shown in the Table below:

**Table 31: Depreciation claimed by RVUN for FY 2016-17 (Rs. Crore)**

Station	FY 2016-17	
	Approved in the Tariff Order	Claimed for true up
KTPS(Units 1-7)	72.80	76.13
STPS(Units 1-6)	163.74	164.12
CTPP(Units 1&2)	124.05	122.62
RGTPS(110.5 MW)	1.88	1.88
DCCPP	57.92	57.94
Mahi	4.20	6.41
<b>Total</b>	<b>424.59</b>	<b>429.12</b>

4.82 RVUN submitted that the variation in depreciation for KTPS in FY 2016-17 is on account of adjustment of excess depreciation by the Commission in the Tariff Order for FY 2016-17 and approved additional capitalization during FY 2014-15 and FY 2015-16.

4.83 RVUN submitted that the variation in depreciation for STPS in FY 2016-17 is due to additional capitalization claimed FY 2014-15, 2015-16 and 2016-17.

4.84 RVUN submitted that the variation in depreciation for DCCPP in FY 2016-17 is due to additional capitalization claimed during the year.

4.85 RVUN submitted that variation in depreciation for RGTPS in FY 2016-17 is due to adjustment of excess depreciation by the Commission in approved depreciation in the Tariff Order for FY 2016-17.

### Commission's Analysis

4.86 The Commission in this order has approved the depreciation of KTPS (Unit 1-6), STPS (Unit 15), RGTPS, DCCPP and Mahi Hydel Power for FY 2016-17 by



adopting the same approach as was adopted by the Commission in the MYT order for the Control period FY 2009-14. The Commission has computed the depreciation for the control period in the following manner:

- i. Considered Accumulated Depreciation till FY 2015-16 by adding year-wise depreciation allowed in Tariff orders/True up orders from FY 2009-10 to FY 2015-16 to the accumulated depreciation till FY 2009-10.
- ii. Depreciation @5.28% if the Station/Stage/Unit has not completed 12 years life from the date of commissioning.
- iii. 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.

4.87 For KTPS Unit 7, STPS Unit 6, and CTPP (Units 1&2) the Commission has approved the depreciation for FY 2016-17 considering the closing GFA approved in true up for FY 2015-16 as the opening GFA for FY 2016-17.

4.88 The additional capitalisation approved for FY 2016-17 has also been considered by the Commission while approving the depreciation for FY 2016-17.

**Table 32: Depreciation approved for FY 2016-17 (Rs. Crore)**

Station	FY 2016-17		
	Approved in the Tariff Order	Claimed for true up	Approved on true up
KTPS(Units 1-7)	72.80	76.13	75.97
STPS(Units 1-6)	163.74	164.12	164.09
CTPP(Units 1&2)	124.05	122.62	122.62
RGTPS(110.5 MW)	1.88	1.88	1.88
DCCPP	57.92	57.94	57.92
Mahi	4.20	6.41	6.41
<b>Total</b>	<b>424.59</b>	<b>429.12</b>	<b>428.90</b>

### **Interest and Finance Charges on Term Loans**

#### **RVUN's Submission**

4.89 The details of interest and finance charges as approved in the Tariff Order

of FY 2016-17 and petitioned for true up based on actual/audited accounts are as shown in the table below:

**Table 33: Interest and finance charges claimed by RVUN for FY 2016-17 (Rs. Crore)**

Station	FY 2016-17	
	Approved in the Tariff Order	Claimed for true up
KTPS(Units 1-7)	47.72	53.69
STPS(Units 1-6)	62.72	66.36
CTPP(Units 1&2)	169.22	167.45
RGTPS(110.5 MW)	0.00	0.00
DCCPP	31.44	28.93
Mahi	0.00	0.00
<b>Total</b>	<b>311.10</b>	<b>316.44</b>

4.90 RVUN submitted that the variation in interest and finance charge for KTPS is due to variation in rate of interest rate and additional capitalization during FY 2014-15 and FY 2015-16 and additional capitalization claimed in FY 2016-17.

4.91 RVUN submitted that the variation in interest and finance charge for STPS is due to approved capitalization during FY 2014-15 and FY 2015-16 and additional capitalization claimed in FY 2016-17.

4.92 RVUN submitted that the variation in interest and finance charge for DCCPP is due to variation in interest rate.

### **Commission's Analysis**

4.93 It may be noted that the interest expenses would change from the approved figures only due to change in loan balances and due to interest rate variation. The Commission has computed the interest on term loans considering the closing loan balance for the respective stations approved in the true up for FY 2015-16 as the opening balance for FY 2016-17 and rate of interest in accordance with the RERC Tariff Regulations, 2014. The Commission has considered the debt component of the approved additional capitalisation as loan addition during the year. The Commission has considered the normative repayment as equivalent to the approved depreciation.

4.94 The Commission has considered the finance charge for each station as submitted by the Petitioner.

**Table 34: Interest and finance charges on term loans approved for FY 2016-17**

Particulars	KTPS (Units 1-6)	KTPS Unit 7	Total KTPS	STPS (Units 1-5)	STPS Unit 6	Total STPS	CTPP (Units 1&2)	DCCPP
Op. balance	53.59	405.93	459.52	5.13	508.75	513.88	1341.08	261.44
Addition	0.00	0.00	0.00	2.49	0.00	2.49	0.00	0.00
Repayment	33.57	42.41	75.97	7.62	50.06	57.68	122.62	57.92
Closing balance	20.02	363.53	383.54	0.00	458.69	458.69	1218.47	203.51
Interest rate	12.50%	12.04%		12.36%	12.36%		12.11%	11.74%
<b>Interest</b>	4.60	46.32	50.92	0.32	59.79	60.10	155.00	27.29
Finance charges			2.95			6.26	11.29	1.63
<b>Interest and finance charges</b>	<b>4.60</b>	<b>46.32</b>	<b>53.87</b>	<b>0.32</b>	<b>59.79</b>	<b>66.37</b>	<b>166.29</b>	<b>28.92</b>

4.95 RVUN in its petition claimed the weighted average rate of interest on term loans considering the outstanding loan balances at the beginning of the year. Subsequently, RVUN in its replies to data gaps requested the Commission to consider the rate of interest on term loans considering the average loan balance for the year. The Commission does not find this prayer of the Petitioner acceptable as the RERC Tariff Regulations, 2014 specify that the rate of interest should be computed considering the outstanding loan balances at the beginning of the year.

4.96 The interest and finance charges approved by the Commission are as shown in the Table below:

**Table 35: Interest and finance charges on term loans approved for FY 2016-17 (Rs. Crore)**

Station	FY 2016-17		
	Approved in the Tariff Order	Claimed for true up	Approved on true up
KTPS(Units 1-7)	47.72	53.69	53.87
STPS(Units 1-6)	62.72	66.36	66.37
CTPP(Units 1 & 2)	169.22	167.45	166.29
RGTPS(110.5 MW)	0.00	0.00	0.00
DCCPP	31.44	28.93	28.92
Mahi	0.00	0.00	0.00
<b>Total</b>	<b>311.10</b>	<b>316.44</b>	<b>315.45</b>

## **Interest on Transitional Loans**

### **RVUN's Submission**

4.97 The details of interest on transitional loans approved in the Tariff Order for FY 2016-17 and petitioned for true up based on actual/audited accounts are provided in the Table below:

**Table 36: Interest on transitional loans claimed by RVUN for FY 2016-17 (Rs. Crore)**

Station	FY 2016-17	
	Approved in the Tariff Order	Claimed for true up
KTPS(Units 1-7)	0.59	0.79
STPS(Units 1-6)	36.92	36.63
CTPP(Units 1&2)	0.00	0.00
RGTPS(110.5 MW)	0.00	0.16
DCCPP	2.41	2.39
Mahi	0.00	0.00
<b>Total</b>	<b>39.92</b>	<b>39.97</b>

### **Commission's Analysis**

4.98 The Commission has already settled the issue of transitional loans earlier vide its order dated 21.01.2010.

4.99 In line with the approach adopted by the Commission in the true up for FY 2015-16, the Commission has approved the interest on transitional loans for FY 2016-17 as considered in order dated 21.01.2010. The details of opening and closing balances of transitional loan for FY 2016-17 are as shown in the Table below:

**Table 37: Transitional loan approved for FY 2016-17 (Rs. Crore)**

Particulars	KTPS (Units 1-6)	STPS (Units 1-5)	RGTPS (110.5 MW)	DCCPP
Opening balance	8.01	423.13	2.60	21.20
Depreciation	33.57	114.03	1.88	57.92
Term Loan repayment	33.57	7.62	0.00	57.92
Available balance to make repayment of transitional loan	0.00	106.41	1.88	0.00
Closing balance	8.01	316.72	0.72	21.20
Rate of Interest	9.90%	9.90%	9.90%	9.90%
Interest	0.79	36.60	0.16	2.10

4.100 The interest on Transitional Loans approved by the Commission is as shown in the Table below:

**Table 38: Interest on transitional loan approved for FY 2016-17 (Rs. Crore)**

Station	FY 2016-17		
	Approved in the Tariff Order	Claimed for true up	Approved on true up
KTPS(Units 1-7)	0.59	0.79	0.79
STPS(Units 1-6)	36.92	36.63	36.60
CTPP(Units 1&2)	0.00	0.00	0.00
RGTPS(110.5 MW)	0.00	0.16	0.16
DCCPP	2.41	2.39	2.10
Mahi	0.00	0.00	0.00
<b>Total</b>	<b>39.92</b>	<b>39.97</b>	<b>39.66</b>

### **Interest on Working Capital (IoWC)**

#### **RVUN's Submission**

4.101 The details of IoWC approved in the Tariff order for FY 2016-17 and petitioned for true up based on actual/audited accounts are as shown in the Table below:

**Table 39: Interest on working capital claimed by RVUN for FY 2016-17 (Rs. Crore)**

Station	FY 2016-17	
	Approved in the Tariff Order	Claimed for true up
KTPS(Units 1-7)	78.16	78.66
STPS(Units 1-6)	122.06	64.26
CTPP(Units 1&2)	30.03	35.30
RGTPS(110.5 MW)	5.44	3.71
DCCPP	21.75	5.72
Mahi	1.17	1.52
<b>Total</b>	<b>258.61</b>	<b>189.16</b>

4.102 RVUN submitted that the variation in interest on working capital is due to delay in payment by Discoms and it has incurred additional cost towards working capital loan. RVUN also submitted that the variation in interest on working capital for DCCPP is due to lower generation which resulted in lower requirement of working capital on cost of generation.

## Commission's Analysis

4.103 The Commission has computed the normative interest on working capital in accordance with Regulation 27 (2) of the RERC Tariff Regulations, 2014, which specifies that:

*“(2) Rate of interest on working capital to be computed shall be on normative basis and shall be 250 basis points higher than the average Base Rate of State Bank of India prevalent during first six month of the year previous to the relevant year. The interest on working capital shall be computed on normative basis notwithstanding that the generating company or licensee has not taken working capital loan from any outside agency. The variation in the interest amount on account of actual vis-à-vis normative interest rate on normative working capital shall be shared in the ratio of 50:50 between the generating company/licensee and the beneficiary.”*

4.104 Accordingly, for the purpose of calculating interest on working capital, Commission has considered SBI base rate of 9.76% prevalent during first six months of FY 2015-16 plus 250 basis points as per the RERC Tariff Regulations, 2014. The rate of interest on working capital thus works out to 12.26%.

4.105 Further, as loWC is a controllable factor, the Commission has computed the sharing of gains/losses in accordance with Regulation 27(2) of RERC Tariff Regulations, 2014.

4.106 As per Regulation 27(2) of the RERC Tariff Regulations, 2014 sharing of gains and losses has to be carried out with regards to variation in normative rate of interest and actual rate of interest. The normative rate of interest applicable is 12.26%.

4.107 However, it is observed that RVUN has not carried out the sharing as per the above Regulations and has shared the loWC amount as per the audited accounts. RVUN has further not submitted the actual weighted average rate of interest on working capital loans.

4.108 The Commission has computed the rate of interest on working capital

loans as per the audited accounts which works out to 12.12%.

4.109 The loWC approved by the Commission for FY 2016-17 is as shown in the Table below:

**Table 40: Approved loWC for FY 2016-17 (Rs. Crore)**

Station	loWC at normative rate of loWC	loWC at actual rate of loWC	(Gain)/Loss	Sharing of (Gain)/Loss
	A	B	C=B-A	D=50%*C
KTPS(Units 1-7)	90.16	89.09	-1.06	-0.53
STPS(Units 1-6)	127.59	126.09	-1.51	-0.75
CTPP(Units 1&2)	33.18	32.79	-0.39	-0.20
RGTPS(110.5 MW)	4.23	4.18	-0.05	-0.02
DCCPP	21.04	20.79	-0.25	-0.12
Mahi	1.20	1.19	-0.01	-0.01
<b>Total</b>	<b>277.40</b>	<b>274.13</b>	<b>-3.28</b>	<b>-1.64</b>

### **Additional contribution towards Pension and Gratuity**

#### **RVUN's Submission**

4.110 The details of additional contribution towards pension and gratuity approved in the Tariff Order for FY 2016-17 and petitioned for true up based on actual/audited accounts are as shown in the Table below:

**Table 41: Additional contribution towards pension and gratuity claimed by RVUN for FY 2016-17 (Rs. Crore)**

Station	FY 2016-17	
	Approved in the Tariff Order	Claimed for true up
KTPS(Units 1-7)	0.00	19.83
STPS(Units 1-6)	0.00	12.81
CTPP(Units 1&2)	0.00	5.83
RGTPS(110.5 MW)	0.00	2.02
DCCPP	0.00	1.69
Mahi	0.00	2.47
<b>Total</b>	<b>0.00</b>	<b>44.65</b>

4.111 RVUN submitted that it had remitted the claimed amounts on account of additional liability towards pension and gratuity, to the designated fund in FY 2016-17. RVUN further submitted that the Commission in its order dated 07.09.2015 had allowed Rs. 44.68 Crore for pension and gratuity fund for FY

2015-16. This amount was recovered through billing in FY 2015-16 and deposited in FY 2016-17. The Commission had not allowed any amount under the head of additional contribution towards pension and gratuity as RVUN had not deposited the same into the designated fund.

### Commission's Analysis

4.112 In accordance with the Commission's ruling in Para 4.59, the Commission has not approved any amount separately on account of additional contribution towards pension and gratuity in true up for FY 2016-17 and has considered the same as part of O&M expenses.

**Table 42: Additional contribution towards pension and gratuity approved for FY 2016-17 (Rs. Crore)**

Station	FY 2016-17		
	Approved in the Tariff Order	Claimed for true up	Approved on true up
KTPS(Units 1-7)	0.00	19.83	0.00
STPS(Units 1-6)	0.00	12.81	0.00
CTPP(Units 1&2)	0.00	5.83	0.00
RGTPS(110.5 MW)	0.00	2.02	0.00
DCCPP	0.00	1.69	0.00
Mahi	0.00	2.47	0.00
<b>Total</b>	<b>0.00</b>	<b>44.65</b>	<b>0.00</b>

### Prior Period Expenses/Income

#### RVUN's Submission

4.113 RVUN, in its petition, has not claimed any amount towards prior period expenses/income. Subsequently, RVUN requested the Commission to consider the prior period income of Rs. 1.63 Crore for FY 2016-17 as shown in the Table below:

**Table 43: Prior period expenses/(income) claimed by RVUN for FY 2016-17**

Station	FY 2016-17		
	Approved in the Tariff Order	As claimed in petition	Revised claim
KTPS(Units 1-7)	0.00	0.00	-0.11
STPS(Units 1-6)	0.00	0.00	-0.46
CTPP(Units 1&2)	0.00	0.00	-1.06
RGTPS(110.5 MW)	0.00	0.00	0.00



Station	FY 2016-17		
	Approved in the Tariff Order	As claimed in petition	Revised claim
DCCPP	0.00	0.00	0.00
Mahi	0.00	0.00	0.00
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>-1.63</b>

### Commission's Analysis

4.114 RVUN submitted the reconciliation of the station wise prior period expenses/income claimed in true up for FY 2016-17 reconciling the same with the audited accounts.

4.115 The Commission observes that the details of prior period items have been provided in Schedule No. 28 of the audited accounts. It is to be noted that the Commission while doing true up of the previous years in accordance with the Tariff Regulations, had allowed the expenses on normative basis and also shared the same with actual expenses given at that time. As per Tariff Regulations, only fuel related expenses are to be allowed on actual basis. The Commission, therefore, only considers the fuel related expenses or gain of prior period. The prior period income claimed by RVUN is towards such prior fuel related gains as per the audited accounts. The Commission has considered the prior period income as claimed by RVUN shown in the Table below:

**Table 44: Prior period expenses/(income) approved for FY 2016-17 (Rs. Crore)**

Station	FY 2016-17		
	Approved in the Tariff Order	Revised claim for true up	Approved on true up
KTPS(Units 1-7)	0.00	-0.11	-0.11
STPS(Units 1-6)	0.00	-0.46	-0.46
CTPP(Units 1&2)	0.00	-1.06	-1.06
RGTPS(110.5 MW)	0.00	0.00	0.00
DCCPP	0.00	0.00	0.00
Mahi	0.00	0.00	0.00
<b>Total</b>	<b>0.00</b>	<b>-1.63</b>	<b>-1.63</b>

## **Recovery of ARR and Tariff Petition Fees**

### **RVUN's Submission**

4.116 RVUN has submitted ARR and Tariff petition fees for FY 2016-17 in accordance with the audited figures. The allocation plant wise has been done based on the ratio of their capacities. The detail as filed by RVUN is as under:

**Table 45: ARR and tariff petition fees claimed by RVUN for FY 2016-17 (Rs. Crore)**

Station	FY 2016-17	
	Approved in the Tariff Order	Claimed for true up
KTPS(Units 1-7)	0.62	0.62
STPS(Units 1-6)	0.75	0.75
CTPP(Units 1&2)	0.25	0.25
RGTPS(110.5 MW)	0.06	0.06
DCCPP	0.17	0.17
Mahi	0.07	0.07
<b>Total</b>	<b>1.92</b>	<b>1.92</b>

### **Commission's View**

4.117 The ARR and Tariff petition fees shall be allowed at the rate as specified in 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 of FY 2016-17 are provided below:

**Table 46: ARR and tariff petition fees approved for FY 2016-17 (Rs. Crore)**

Station	FY 2016-17		
	Approved in the Tariff Order	Claimed for true up	Approved on true up
KTPS(Units 1-7)	0.62	0.62	0.62
STPS(Units 1-6)	0.75	0.75	0.75
CTPP(Units 1&2)	0.25	0.25	0.25
RGTPS(110.5 MW)	0.06	0.06	0.06
DCCPP	0.17	0.17	0.17
Mahi	0.07	0.07	0.07
<b>Total</b>	<b>1.92</b>	<b>1.92</b>	<b>1.92</b>

## **Insurance on Fixed Assets**

### **RVUN's Submission**

4.118 RVUN submitted the actual insurance on fixed assets along with supporting documents as against that approved in Tariff Order for FY 2016-17 as follows:

**Table 47: Insurance on fixed assets claimed by RVUN for FY 2016-17 (Rs. Crore)**

Station	FY 2016-17	
	Approved in the Tariff Order	Claimed for true up
KTPS(Units 1-7)	3.00	2.92
STPS(Units 1-6)	2.86	2.66
CTPP(Units 1&2)	2.49	3.55
RGTPS(110.5 MW)	0.15	0.26
DCCPP	0.92	0.96
Mahi	0.02	0.00
<b>Total</b>	<b>9.44</b>	<b>10.35</b>

4.119 RVUN submitted that variation in Insurance on fixed assets is due to actual expense claimed as per Regulation 25 of RERC Tariff Regulations, 2014.

### **Commission's Analysis**

4.120 The Commission has approved the actual insurance on fixed assets as claimed by the Petitioner for FY 2016-17.

**Table 48: Approved insurance on fixed assets for FY 2016-17 (Rs. Crore)**

Station	FY 2016-17		
	Approved in the Tariff Order	Claimed for true up	Approved on true up
KTPS(Units 1-7)	3.00	2.92	2.92
STPS(Units 1-6)	2.86	2.66	2.66
CTPP(Units 1&2)	2.49	3.55	3.55
RGTPS(110.5 MW)	0.15	0.26	0.26
DCCPP	0.92	0.96	0.96
Mahi	0.02	0.00	0.00
<b>Total</b>	<b>9.44</b>	<b>10.35</b>	<b>10.35</b>

## **Return on Equity (RoE)**

### **RVUN's Submission**

4.121 The details of RoE approved in the Tariff order for FY 2016-17 and petitioned for true up based on actual/audited accounts are as shown in the Table below:

**Table 49: RoE claimed by RVUN for FY 2016-17 (Rs. Crore)**

Station	FY 2016-17	
	Approved in the Tariff Order	Claimed for true up
KTPS(Units 1-7)	75.99	78.13
STPS(Units 1-6)	181.99	182.29
CTPP(Units 1&2)	76.97	76.98
RGTPS(110.5 MW)	18.62	18.62
DCCPP	53.79	53.79
Mahi	26.41	26.41
<b>Total</b>	<b>433.77</b>	<b>436.22</b>

4.122 RVUN submitted that the variation in RoE is due to additional capitalization claimed during FY 2016-17 and approved additional capitalization during FY 2014-15 and FY 2015-16.

### **Commission's Analysis**

4.123 The GoR in its letter dated 18.03.2015 has allowed rate of RoE as 5% in FY 2015-16, 10% in FY 2016-17 and 15.5% in FY 2017-18 onwards. However, in the revised letter of Government of Rajasthan (GOR) dated 21.03.2016, the rate of RoE for FY 2016-17 is revised to 15.5 %. Therefore, the Commission has approved the RoE for FY 2016-17 as per the latest order of GoR and in accordance with the Regulation 20 of the RERC Tariff Regulations, 2014.

4.124 The Commission has considered the equity base approved for FY 2015-16 on truing up. Further, the Commission has also considered the equity addition in FY 2016-17 on account of the approved additional capitalisation in this Order.

**Table 50: Equity base approved for FY 2016-17 (Rs. Crore)**

Particulars	KTPS (Units 1-7)	STPS (Units 1-6)	CTPP (Units 1&2)	RGTPS (110.5 MW)	DCCPP	Mahi
Opening Equity	504.07	1175.40	496.61	120.13	347.00	170.38
Addition	0.00	0.62	0.00	0.00	0.00	0.00
Closing Equity	504.07	1176.02	496.61	120.13	347.00	170.38

4.125 Hence, in view of the above, the Commission approves RoE at the rate of 15.5% for FY 2016-17, as shown in the Table below:

**Table 51: RoE approved for FY 2016-17 (Rs. Crore)**

Station	FY 2016-17		
	Approved in the Tariff Order	Claimed for true up	Approved on true up
KTPS(Units 1-7)	75.99	78.13	78.13
STPS(Units 1-6)	181.99	182.29	182.24
CTPP(Units 1&2)	76.97	76.98	76.97
RGTPS(110.5 MW)	18.62	18.62	18.62
DCCPP	53.79	53.79	53.79
Mahi	26.41	26.41	26.41
<b>Total</b>	<b>433.77</b>	<b>436.22</b>	<b>436.15</b>

## **Non-Tariff Income**

### **RVUN's Submission**

4.126 The details of plant-wise non-tariff income approved in the Tariff Order for FY 2016-17 and petitioned for true up based on actual/audited accounts are as shown in the Table below:

**Table 52: Non-tariff income claimed by RVUN for FY 2016-17 (Rs. Crore)**

Station	FY 2016-17	
	Approved in the Tariff Order	Claimed for true up
KTPS(Units 1-7)	4.38	18.08
STPS(Units 1-6)	1.85	7.38
CTPP(Units 1&2)	1.30	14.36
RGTPS(110.5 MW)	0.02	0.11
DCCPP	0.17	0.26
Mahi	0.04	0.13
<b>Total</b>	<b>7.76</b>	<b>40.32</b>

## Commission's Analysis

4.127 The Commission has considered the non-tariff income as per petition based on actual/audited accounts in true up for FY 2016-17 as under:

**Table 53: Non-tariff income approved for FY 2016-17 (Rs. Crore)**

Station	FY 2016-17		
	Approved in the Tariff Order	Claimed for true up	Approved on true up
KTPS(Units 1-7)	4.38	18.08	18.08
STPS(Units 1-6)	1.85	7.38	7.38
CTPP(Units 1&2)	1.30	14.36	14.36
RGTPS(110.5 MW)	0.02	0.11	0.11
DCCPP	0.17	0.26	0.26
Mahi	0.04	0.13	0.13
<b>Total</b>	<b>7.76</b>	<b>40.32</b>	<b>40.32</b>

## Adjustment of excess depreciation

### Commission's Analysis

4.128 The Commission in the Tariff order for FY 2016-17 ruled as under:

"7.49. The Commission finds that the outstanding balance of transitional loan is getting repaid completely for KTPS while the outstanding balance for RGTPS is already zero in FY 2016-17. However, the depreciation is allowable for those stations in accordance with the Tariff Regulations. The advance against depreciation allowed by the Commission was for the repayment of term loans and the transitional loans. The term loans & transitional loans for some of the old stations have already been repaid in full. Hence, the depreciation over and above the repayment of the term loans and the transitional loans is in excess with RVUN. As the depreciation admissible for the year is in excess of the repayment of term loans and the transitional loans, the excess amount of depreciation over and above of the term loan and transitional loans has been adjusted against the balance of AAD already allowed to RVUN. Accordingly, the Commission has adjusted such advance against depreciation from the AFC for the respective stations for FY 2016-17 as shown in the Table below:

.....

7.50. The Commission shall carry out this adjustment of advance against depreciation for each year from FY 2016-17 onwards till the

*cumulative adjustment reaches equal to the AAD allowed by the Commission for the respective stations."*

4.129 The Commission at the time of tariff determination for FY 2016-17 had only carried out the true-up upto FY 2013-14 only. Subsequently, the Commission had carried out the true up for FY 2014-15 and FY 2015-16 wherein the Commission had approved the additional capitalisation for the respective years. Therefore, the adjustment of excess depreciation as determined in the Tariff order for FY 2016-17 need to be reworked considering the revised loan balances for FY 2015-16. Accordingly, the adjustment of advance against depreciation reworked for FY 2016-17 is as shown in the Table below:

**Table 54: Adjustment of Advance Against Depreciation (Rs. Crore)**

Particulars	KTPS (Units 1-6)	STPS (Units 1-5)	RGTPS (110.5 MW)	DCCPP
AAD allowed till FY 2008-09 and after adjustment in FY 2009-10 & FY 2013-14	206.00	455.14	14.93	7.00
Outstanding transitional loan	8.01	423.13	2.60	21.20
Depreciation for the year	33.57	114.03	1.88	57.92
Repayment of LT loan	33.57	7.62	0.00	57.92
Balance Depreciation available for repayment of transitional loan	0.00	106.41	1.88	0.00
Repayment of transitional Loan	0.00	106.41	1.88	0.00
<b>Excess depreciation to be deducted from AAD of FY 2016-17</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
Balance AAD to be adjusted in subsequent years	206.00	455.14	14.93	7.00

### **Annual Fixed Charges**

4.130 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 Table below:

**Table 55: Approved AFC for FY 2016-17 (Rs. Crore)**

Station	KTPS(Units 1-7)			STPS(Units 1-6)			CTPP(Units 1&2)		
	Approved in Tariff Order	Claimed for true up	Approved on true up	Approved in Tariff Order	Claimed for true up	Approved on true up	Approved in Tariff Order	Claimed for true up	Approved on true up
O&M expenses	223.54	237.36	223.54	270.41	224.43	270.41	90.14	73.84	90.14
Depreciation	72.80	76.13	75.97	163.74	164.12	164.09	124.05	122.62	122.62
Interest on term loans & finance charges	47.72	53.69	53.87	62.72	66.36	66.37	169.22	167.45	166.29
Interest on transitional loan	0.59	0.79	0.79	36.92	36.63	36.60	0.00	0.00	0.00
Interest on working capital	78.16	78.66	90.16	122.06	64.26	127.59	30.03	35.30	33.18
Return on Equity	75.99	78.13	78.13	181.99	182.29	182.24	76.97	76.98	76.97
Additional contribution towards pension & gratuity	0.00	19.83	0.00	0.00	12.81	0.00	0.00	5.83	0.00
Insurance on fixed assets	3.00	2.92	2.92	2.86	2.66	2.66	2.49	3.55	3.55
Recovery of ARR & tariff petition fee	0.62	0.62	0.62	0.75	0.75	0.75	0.25	0.25	0.25
Prior period items	0.00	0.00	-0.11	0.00	0.00	-0.46	0.00	0.00	-1.06
Minus: Non-tariff income	4.38	18.08	18.08	1.85	7.38	7.38	1.30	14.36	14.36
Minus: Adjustment of excess depreciation	18.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Annual Fixed Charges</b>	<b>479.66</b>	<b>530.05</b>	<b>507.81</b>	<b>839.60</b>	<b>746.94</b>	<b>842.87</b>	<b>491.85</b>	<b>471.46</b>	<b>477.58</b>

Station	RGTPS(110.5 MW)			DCCPP			Mahi		
	Approved in Tariff Order	Claimed for true up	Approved on true up	Approved in Tariff Order	Claimed for true up	Approved on true up	Approved in Tariff Order	Claimed for true up	Approved on true up
O&M expenses	18.13	11.33	18.13	44.59	20.21	44.59	15.56	23.54	15.56
Depreciation	1.88	1.88	1.88	57.92	57.94	57.92	4.20	6.41	6.41
Interest on term loans & finance charges	0.00	0.00	0.00	31.44	28.93	28.92	0.00	0.00	0.00
Interest on transitional loan	0.00	0.16	0.16	2.41	2.39	2.10	0.00	0.00	0.00
Interest on working capital	5.44	3.71	4.23	21.75	5.72	21.04	1.17	1.52	1.20
Return on Equity	18.62	18.62	18.62	53.79	53.79	53.79	26.41	26.41	26.41
Additional contribution towards pension & gratuity	0.00	2.02	0.00	0.00	1.69	0.00	0.00	2.47	0.00
Insurance on fixed assets	0.15	0.26	0.26	0.92	0.96	0.96	0.02	0.00	0.00
Recovery of ARR & tariff petition fee	0.06	0.06	0.06	0.17	0.17	0.17	0.07	0.07	0.07
Prior period items	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Minus: Non-tariff income	0.02	0.11	0.11	0.17	0.26	0.26	0.04	0.13	0.13
Minus: Adjustment of excess depreciation	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Annual Fixed Charges</b>	<b>42.38</b>	<b>37.93</b>	<b>43.23</b>	<b>212.82</b>	<b>171.54</b>	<b>209.23</b>	<b>47.39</b>	<b>60.29</b>	<b>49.53</b>



Station	Total RVUN		
	Approved in the Tariff Order	Claimed for true up	Approved on true up
O&M expenses	662.37	590.71	662.37
Depreciation	424.59	429.12	428.90
Interest on term loans & finance charges	311.10	316.44	315.45
Interest on transitional loan	39.92	39.97	39.66
Interest on working capital	258.61	189.16	277.40
Return on Equity	433.77	436.22	436.15
Additional contribution towards pension & gratuity	0.00	44.65	0.00
Insurance on fixed assets	9.44	10.35	10.35
Recovery of ARR & tariff petition fee	1.92	1.92	1.92
Prior period items	0.00	0.00	-1.63
Minus: Non-tariff income	7.76	40.32	40.32
Minus: Adjustment of excess depreciation	20.26	0.00	0.00
<b>Annual Fixed Charges</b>	<b>2113.70</b>	<b>2018.21</b>	<b>2130.25</b>

4.131 The full recovery of fixed charges is allowed if the actual availability is equal to or more than the target availability. If the actual availability is lower than the target availability, the approved normative AFC is reduced proportionately in truing up of FY 2016-17.

**Table 56: AFC reduced for non-achievement of target Availability**

Station	AFC after true up	Actual Availability considered by the Commission	Target Availability for full recovery of fixed charges	Reduced AFC	AFC reduced
KTPS(Units 1-7)	507.81	88.74%	82.00%	507.81	0.00
STPS(Units 1-6)	842.87	85.77%	82.00%	842.87	0.00
CTPP(Units 1&2)	477.58	81.37%	80.00%	477.58	0.00
RGTPS(110.5 MW)	43.23	45.88%	70.00%	28.34	14.90
DCCPP	209.23	26.47%	80.00%	69.23	139.99
<b>Total</b>	<b>2080.72</b>			<b>1925.84</b>	<b>154.89</b>

## Energy Charges

### Commission's Analysis

4.132 The Commission has computed the energy charges for FY 2016-17

considering the approved performance parameters and actual fuel prices and calorific value. The energy charges computed by the Commission for FY 2016-17 are as shown in the Table below:

**Table 57: Energy Charges approved for FY 2016-17**

Particulars	Units	KTPS(Units 1-7)		STPS(Units 1-6)		CTPP(Units 1&2)	
		Claimed	Approved	Claimed	Approved	Claimed	Approved
Gross Generation	MU	7486.91	7486.91	4474.71	4474.71	3404.26	3404.26
Auxiliary Consumption	%	11.46%	9.27%	10.09%	9.00%	10.13%	9.00%
Net Generation	MU	6628.79	6792.87	4023.28	4071.99	3059.46	3097.88
Landed Price of Coal	Rs./kg	4.09	4.08	5.14	5.16	3.66	3.68
Gross Station Heat Rate	kcal/kWh	2551.16	2561.70	2452.08	2476.28	2615.92	2312.31
Price of Secondary fuel oil	Rs./ml	0.03	0.03	0.03	0.03	0.02	0.02
Secondary fuel oil Consumption	ml/kWh	0.81	0.50	1.57	0.50	1.17	0.50
Gross Calorific Value of Secondary fuel oil	kcal/ml	9.55	9.55	9.84	9.84	10.40	10.40
Heat Contribution from Secondary fuel oil	kcal/kWh	7.71	4.77	15.43	4.92	12.19	5.20
Heat Contribution from Coal	kcal/kWh	2543.45	2556.93	2436.65	2471.36	2603.74	2307.11
Gross Calorific Value of Coal	kcal/kg	3846.40	3846.40	4023.00	4023.00	4059.87	4059.87
Specific coal consumption	kg/kWh	0.66	0.66	0.61	0.61	0.64	0.57
Rate of Energy Charge	Rs./kWh	3.08	3.00	3.51	3.50	2.64	2.31
Other Charges	Rs. Crore	9.12	9.12	2.88	2.88	7.78	7.78
<b>Total Energy Charges</b>	<b>Rs. Crore</b>	<b>2049.88</b>	<b>2049.03</b>	<b>1414.97</b>	<b>1427.40</b>	<b>816.04</b>	<b>723.69</b>
	<b>Rs./kWh</b>	<b>3.092</b>	<b>3.016</b>	<b>3.517</b>	<b>3.505</b>	<b>2.667</b>	<b>2.336</b>

Particulars	Units	RGTPS(110.5 MW)		DCCPP	
		Claimed	Approved	Claimed	Approved
Gross Generation	MU	451.62	451.62	124.85	124.85
Auxiliary Consumption	%	4.39%	2.74%	24.03%	2.91%
Net Generation	MU	431.77	439.24	94.86	121.22
Landed Price of Gas	Rs./SCM	4.38	4.38	15.38	15.38
Gross Station Heat Rate	kcal/kWh	2596.60	2063.69	2334.08	1990.78
Price of fuel oil	Rs./ml	0.04	0.04	0.00	0.00
Fuel oil Consumption	ml/kWh	0.01	0.01	0.00	0.00
Gross Calorific Value of fuel oil	kcal/ml	9.30	9.30	0.00	0.00
Heat Contribution from fuel oil	kcal/kWh	0.09	0.07	0.00	0.00
Heat Contribution from Gas	kcal/kWh	2596.51	2063.61	2334.08	1990.78
Gross Calorific Value of Gas	kcal/SCM	4615.49	4615.49	9197.63	9197.63
Specific Gas consumption	SCM/kWh	0.56	0.45	0.25	0.22

Particulars	Units	RGTPS(110.5 MW)		DCCPP	
		Claimed	Approved	Claimed	Approved
Rate of Energy Charge	Rs./kWh	2.58	2.01	5.14	3.43
Other Charges	Rs. Crore	0.00	0.00	0.00	0.00
<b>Total Energy Charges</b>	<b>Rs. Crore</b>	<b>111.23</b>	<b>88.41</b>	<b>48.73</b>	<b>41.56</b>
	<b>Rs./kWh</b>	<b>2.576</b>	<b>2.013</b>	<b>5.137</b>	<b>3.428</b>

4.133 Further, Regulation 57(2) of RERC Tariff Regulations, 2014 states as follows:

*“57. Sharing of gains and losses on account of controllable factors*

*(1) ...*

*(2) The Financial losses by a generating company on account of Station Heat Rate, Auxiliary Consumption and Secondary Fuel Oil Consumption shall be borne by the Generating Company”*

4.134 Therefore, from the Regulation 57(2) of RERC Tariff Regulations 2014, it is clear that any loss on account of controllable factor has to be borne by the generator and no sharing of the same will be done. Therefore, the Commission in this order has not done the sharing of energy charges in accordance with Regulation 57(2) of RERC Tariff Regulations 2014.

4.135 Regulation 52 of the RERC Tariff Regulations, 2014 specifies that incentive shall be payable when the Capacity Index (CI) exceeds 90% for run-of-river Hydel plants. For Mahi although, RVUN has submitted that the actual capacity Index for FY 2015-16 is 91.23% but it has not booked any revenue on this account. Hence the Commission has not allowed any incentive for Mahi for FY 2016-17.

### **Revenue Side True Up**

#### **RVUN's Submission**

4.136 RVUN has claimed the revenue for true up of FY 2016-17 as Rs. 7137.67 Crore including the revenue from late payment surcharge of Rs. 936.20 Crore.

#### **Commission's Analysis**

4.137 The reconciliation of actual revenue as per the audited accounts for FY

2016-17 is as shown below:

Station	Fixed Charges	Energy Charges	FPA	LPS	Others	Total
KTPS(Units 1-7)	479.66	1685.04	319.19	217.82	-	<b>2701.71</b>
STPS(Units 1-6)	839.60	1334.52	74.29	197.17	-	<b>2445.58</b>
CTPP(Units 1&2)	491.85	605.16	101.57	105.11	-	<b>1303.69</b>
RGTPS(110.5 MW)	27.67	125.69	-32.90	10.56	-	<b>131.03</b>
DCCPP	70.41	33.87	-1.55	9.01	-	<b>111.75</b>
Mahi	47.39	-	-	4.16	-	<b>51.55</b>
CTPP Unit 3	292.05	319.74	38.12	56.99	-	<b>706.90</b>
CTPP Unit 4	259.61	328.94	39.09	55.04	-	<b>682.68</b>
KaTPP Unit 1	888.42	832.35	36.32	154.09	-	<b>1911.18</b>
KaTPP Unit 2	470.06	515.64	23.43	88.50	-	<b>1097.63</b>
RGTPP Stage III	143.28	289.08	-5.14	37.47	-	<b>464.69</b>
Mahi MMH	0.37	-	-	0.03	-	<b>0.40</b>
Mangrol	2.23	-	-	0.20	-	<b>2.42</b>
STPS-MMH	0.63	-	-	0.05	-	<b>0.68</b>
Income pertaining to FY 2015-16	0.00	0.00	21.43	-	-	<b>21.43</b>
KaTPP Unit 1 (FY 2014-15)	-5.67	-6.26	-0.03	-	-	<b>-11.96</b>
True up of FY 2013-14	110.54	-	-	-	-	<b>110.54</b>
Giral II (FY 2014-15)	8.13	4.45	-2.84	-	-	<b>9.74</b>
AAD	-	-	-	-	18.38	<b>18.38</b>
<b>Total</b>	<b>4126.23</b>	<b>6068.23</b>	<b>610.99</b>	<b>936.20</b>	<b>18.38</b>	<b>11760.03</b>

4.138 The Commission has considered the revenue earned from fixed charges, energy charges and FPA for carrying out the truing up for FY 2016-17.

4.139 Based on the revenue details submitted by the Petitioner, the Commission observes that it has considered the Late Payment Surcharge as part of revenue while carrying out the truing up. Further, the Petitioner has considered the Late Payment Surcharge on the expenses side while carrying out the truing up. The Commission is of the view that Late Payment Surcharge is towards the delay in receipt of bills by the Petitioner beyond the due date. As the Commission approves the tariff on normative basis, the Commission has not considered the Late Payment Surcharge neither as part of revenue nor as part of expenses while carrying out the truing up.

4.140 Accordingly, the revenue considered by the Commission for truing up

purposes is as shown in the Table below:

**Table 58: Revenue from sale of power considered by the Commission for FY 2016-17 (Rs. Crore)**

Station	Fixed Charges	Energy Charges	FPA	Total
KTPS(Units 1-7)	479.66	1685.04	319.19	<b>2483.89</b>
STPS(Units 1-6)	839.60	1334.52	74.29	<b>2248.41</b>
CTPP(Units 1&2)	491.85	605.16	101.57	<b>1198.59</b>
RGTPS(110.5 MW)	27.67	125.69	-32.90	<b>120.46</b>
DCCPP	70.41	33.87	-1.55	<b>102.74</b>
Mahi	47.39	-	-	<b>47.39</b>
<b>Total</b>	<b>1956.59</b>	<b>3784.29</b>	<b>460.60</b>	<b>6201.47</b>

## **Summary of True Up**

### **RVUN's submission**

4.141 The summary of true up claimed by RVUN is as shown below:

**Table 59: Summary of true up for FY 2016-17 claimed by RVUN (Rs. Crore)**

Particulars	As per Tariff Order	Claimed for true up
<b><u>Cost side True Up</u></b>		
Total Fixed Cost	2113.68	2018.21
Variable cost	6926.43	4440.86
PLF incentive	0.00	0.00
Late Payment Surcharge		936.20
Total Expenses	9040.11	7395.27
<b>Extra Cost incurred By RVUNL (A)</b>		<b>-1644.85</b>
<b><u>Revenue Side True up</u></b>		
Revenue From electricity (fixed And Energy charges)	9040.11	6201.47
PLF incentive	0.00	0.00
Late Payment Surcharge		936.20
Total Revenue	<b>9040.11</b>	<b>7137.67</b>
Extra Amount billed to Discom by RVUNL		<b>-1902.44</b>
Total True up Calculation		
Total Amount Sought from Discom C=(A-B)		<b>257.60</b>
D: Additional gain of O&M expenses		<b>71.66</b>
E: Advance Against Depreciation		<b>18.38</b>
Total Amount Sought from Discom F=C+D-E		<b>310.88</b>

4.142 RVUN has claimed the net gap of Rs. 310.88 Crore on true-up for FY 2016-17.

## Commission's Analysis

4.143 Based on component wise cost and revenue approved as discussed above, the summary of True Up for FY 2016-17 as approved by the Commission is as shown below:

**Table 60: Summary of true up approved by the Commission for FY 2016-17 (Rs. Crore)**

Particulars	Approved
<b><u>Cost side True Up</u></b>	
Fixed Cost less Non-Tariff Income	2170.57
Variable cost	4330.09
Sharing of (gain)/loss in rate of IoWC	-1.64
Less: Reduction in AFC due to non-achievement of Target Availability	154.89
<b>TOTAL (A)</b>	<b>6344.14</b>
<b><u>Revenue Side True up</u></b>	
Revenue From sale of electricity	6201.47
Non-tariff income	40.32
<b>TOTAL (B)</b>	<b>6241.80</b>
<b>Revenue Gap (C=A-B)</b>	<b>102.34</b>

4.144 Accordingly, the Commission has approved the revenue gap of Rs. 102.34 Crore as against the revenue gap of Rs. 310.88 Crore claimed by RVUN for FY 2016-17. The Commission allows RVUN to recover the approved revenue gap of Rs. 102.34 Crore from the Discoms in 6 monthly installments from June 2018 onwards in the ratio of total energy purchased by them in FY 2016-17.

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## **SECTION 5**

### **Determination of ARR and Tariff for FY 2018-19**

5.1 RVUN filed the petition for approval of ARR and Tariff for FY 2018-19 following generating stations:

- i. Kota Thermal Power Station (KTPS)(Units 1-7)
- ii. Suratgarh Thermal Power Station (STPS)(Units 1-6)
- iii. Ramgarh Gas Thermal Power Station (RGTPS)(110.5 MW)
- iv. Ramgarh Gas Thermal Power Plant (RGTPS)(160 MW)
- v. Dholpur Combined Cycle Gas based Thermal Power Plant (DCCPP)
- vi. Chhabra Thermal Power Station (CTPP)(Units 1-4)
- vii. Kalisindh Thermal Power Station (KaTPP)(Units 1&2)
- viii. Mahi Hydel Power Project (Mahi)

5.2 The Commission in this section has determined the Tariff for the stations KTPS(Units 1-7), STPS(Units 1-6), CTPP (Units 1&2), RGTPS(110.5 MW), DCCPP and Mahi. For the new Stations for which the final capital cost is yet to be approved by the Commission, the provisional Tariff has been determined in the next section.

5.3 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) Return on Equity
- (vi) Interest on Working Capital
- (vii) Insurance Charges

(viii) Less: Non-tariff Income

5.4 Each of the annual fixed charges elements has been dealt with in the following paragraphs.

### **Operation and Maintenance Expenses**

#### **RVUN's Submission**

5.5 RVUN submitted that the Operation & Maintenance Expenses for FY 2018-19 have been computed on the basis of norms prescribed under Regulation 47 of RERC Tariff Regulations, 2014.

5.6 The details of the O&M expenses as claimed in petition for FY 2018-19 are as shown in the Table below:

**Table 61: O&M expenses claimed by RVUN for FY 2018-19 (Rs. Crore)**

Station	FY 2018-19
	Claimed
KTPS(Units 1-7)	250.46
STPS(Units 1-6)	302.98
CTPP(Units 1&2)	100.99
RGTPS(110.5 MW)	20.31
DCCPP	49.96
Mahi	17.43
<b>Total</b>	<b>742.13</b>

#### **Commission's Analysis**

5.7 The Commission has verified RVUN's computations of normative O&M expenses and found it to be in order as per provisions of Regulations and accordingly, the same has been approved.

5.8 The O&M expenses as approved by the Commission for FY 2018-19 are as shown in the Table below:

**Table 62: O&M expenses approved for FY 2018-19 (Rs. Crore)**

Station	FY 2018-19	
	Claimed	Approved
KTPS(Units 1-7)	250.46	250.46
STPS(Units 1-6)	302.98	302.97



Station	FY 2018-19	
	Claimed	Approved
CTPP(Units 1&2)	100.99	100.99
RGTPS(110.5 MW)	20.31	20.31
DCCPP	49.96	49.96
Mahi	17.43	17.43
<b>Total</b>	<b>742.13</b>	<b>742.13</b>

## **Depreciation**

### **RVUN's Submission**

5.9 RVUN submitted that for computation of depreciation it has considered the capital cost of KTPS Units 1-6 and Unit 7 as Rs. 1257.63 Crore for FY 2016-17 as per RERC order dated 20.06.2017. Similarly, as per aforesaid true up order of FY 2015-16, the approved cost of capital for KTPS Unit 7 as on 01.04.2016 is considered as Rs. 851.85 Core. Further, in FY 2016-17 RVUN has booked an additional capitalisation of Rs. 0.16 Crore towards purchase of ambulance and office equipment's for KTPS Units 1-6 in accordance with Regulation 17(2)(iv) of RERC Tariff Regulations, 2014. While computing the depreciation, these additional capitalizations had also been considered.

5.10 RVUN submitted that for computation of depreciation it has considered the capital cost of STPS Units 1-5 as Rs. 4230.70 Crore for FY 2016-17. Similarly, as per aforesaid true up order of FY 2015-16, the approved capital cost of STPS Unit 6 as on 01.04.2016 is considered as Rs. 1026.78 Crore. Further, in FY 2016-17, RVUN has booked the additional capitalisation of Rs. 4.30 Crore towards plant machinery and office equipment's for STPS Units 1-5 in accordance with Regulation 17(2)(iv) of RERC Tariff Regulations, 2014. Therefore, while computing the depreciation these additional capitalizations had also been considered.

5.11 RVUN submitted that it has considered GFA for CTPP Unit 1 and Unit 2 for FY 2016-17 as per True-up order for FY 2015-16 i.e. Rs. 2460.69 Crore. Further, RVUN claimed that the payment of deferred liability to BHEL during FY 2016-17 of Rs. 0.16 Crore, as this work is covered under original scope of work and booked Rs. 0.01 Crore against recovery of ED & CST which was wrongly

booked in other head of IL kota. RVUN further submitted that it has booked additional capitalization of Rs. 0.08 Crore towards furniture and office equipment's. Therefore, while computing the depreciation, these additional capitalizations has also been considered.

5.12 RVUN submitted that it has considered the opening balance of Capital cost of DCCPP as Rs. 1115 Crore as per Commission's order dated 20.06.2017. Further, it has included the additional capitalization of Rs. 0.14 Crore for FY 2016-17 towards furniture & fixtures and capital spares and the same has also been considered while computing depreciation.

5.13 RVUN submitted that it has considered the Capital cost of RGTPS Stages I & II (110.5 MW) as Rs. 311.08 Crore as per Commission's order dated 20.06.2017 and the depreciation is calculated considering the aforesaid capital cost.

5.14 RVUN submitted that it has considered the opening balance of capital cost of Mahi as Rs. 259.02 Crore as per Commission's order dated 17.10.2016.

5.15 The details of depreciation as claimed in the petition for FY 2018-19 are as follows:

**Table 63: Depreciation claimed by RVUN for FY 2018-19 (Rs. Crore)**

Station	FY 2018-19
	Claimed
KTPS(Units 1-7)	71.33
STPS(Units 1-6)	164.24
CTPP(Units 1&2)	122.63
RGTPS(110.5 MW)	1.24
DCCPP	57.95
Mahi	4.42
<b>Total</b>	<b>421.81</b>

### Commission's Analysis

5.16 The Commission has approved the depreciation for FY 2018-19 in accordance with Regulation 22 of RERC Tariff Regulations, 2014.

5.17 The Commission has considered the closing GFA approved for FY 2016-17

as the opening GFA for FY 2017-18. RVUN has not claimed any additional capitalisation for FY 2017-18. Accordingly, the Commission has not considered any additional capitalisation for FY 2017-18. The closing GFA for FY 2017-18 has been considered as the opening GFA for FY 2018-19. RVUN has not claimed any additional capitalisation for FY 2018-19. Accordingly, the Commission has not considered any additional capitalisation for FY 2018-19.

5.18 The details of GFA base considered by the Commission for KTPS Unit 7, STPS Unit 6, CTPP(Units 1&2) and DCCPP for computing the depreciation for FY 2018-19 are as under:

**Table 64: GFA base for KTPS Unit 7, STPS Unit 6, CTPP(Units 1&2) and DCCPP**

<b>Particulars</b>	<b>KTPS Unit 7</b>	<b>STPS Unit 6</b>	<b>CTPP(Units 1&amp;2)</b>	<b>DCCPP</b>
Land & Land Rights	0.00	0.00	12.73	2.86
Building & Civil Works of Power Plants	126.19	209.48	257.85	39.11
Hydraulic Works	10.98	15.73	21.47	14.96
Other Civil Works	4.70	7.10	88.55	2.86
Plant & Machinery	705.38	768.70	2005.79	1011.09
Lines & Cable Net work	0.00	0.45	28.97	2.45
Vehicles	0.00	0.00	0.12	0.12
Furniture & Fixtures	0.04	0.10	0.72	0.80
Office Equipment	-3.19	4.63	6.84	0.12
Capital Spares	7.76	20.60	37.66	40.61
<b>Total</b>	<b>851.86</b>	<b>1026.79</b>	<b>2460.69</b>	<b>1115.00</b>

5.19 For KTPS (Units 1-6), STPS (Units 1-5), RGTPS, and Mahi, 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 2017-18 by adding year-wise depreciation allowed in Tariff Orders/True up orders from FY 2009-10 to FY 2017-18 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.

**Table 65: Details of accumulated depreciation of old stations (Rs. Crore)**

Particulars	KTPS (Units 1-6)	STPS (Units 1-5)	RGTPS (110.5 MW)	Mahi
Capital Cost	1185.17	4223.32	311.08	259.02
Depreciable value=90% of capital cost	1066.65	3800.99	279.97	233.11
Cumulative depreciation approved upto FY 2016-17	805.65	2885.21	274.36	204.62
Depreciation for FY 2017-18	25.41	113.63	1.88	6.41
Depreciation approved for FY 2018-19	25.41	113.63	1.24	4.42
Cumulative depreciation approved upto FY 2018-19	856.47	3112.47	277.48	215.45
Balance depreciation allowable	210.18	688.52	2.49	17.67

5.20 Accordingly, the depreciation approved by the Commission for FY 2018-19, is as shown in the Table below:

**Table 66: Depreciation approved for FY 2018-19 (Rs. Crore)**

Station	FY 2018-19	
	Claimed	Approved
KTPS(Units 1-7)	71.33	71.17
STPS(Units 1-6)	164.24	164.17
CTPP(Units 1&2)	122.63	122.62
RGTPS(110.5 MW)	1.24	1.24
DCCPP	57.95	57.92
Mahi	4.42	4.42
<b>Total</b>	<b>421.81</b>	<b>421.54</b>

## **Interest and finance charges on Term Loan**

### **RVUN's Submission**

5.21 RVUN submitted that interest on term loan has been claimed in accordance with Regulation 21 of RERC Tariff Regulations, 2014.

5.22 The details of interest charges on long term loans as submitted by RVUN in its petition for FY 2018-19 has been provided in the table below:

**Table 67: Interest on term loan claimed by RVUN for FY 2018-19 (Rs. Crore)**

Station	FY 2018-19
	Claimed
KTPS(Units 1-7)	36.06
STPS(Units 1-6)	47.36
CTPP(Units 1&2)	126.47
RGTPS(110.5 MW)	0.00
DCCPP	16.53
Mahi	0.00
<b>Total</b>	<b>226.41</b>

### Commission's Analysis

5.23 The Commission has considered the closing term loan balance approved in true up for FY 2016-17 as the opening loan balance for FY 2017-18. Thereafter, the Commission has worked out the opening loan balances for FY 2018-19 considering the normative repayment for FY 2017-18 as the allowable depreciation for the year. The Commission has considered the closing loan balance for FY 2017-18 as the opening loan balance for FY 2018-19. The allowable depreciation for the year has been considered as the normative repayment for the year.

5.24 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. The Commission has computed the applicable rate of interest on long term loans considering the information on outstanding loan balances for FY 2017-18 and applicable interest rates as submitted by RVUN in replies to datagaps. RVUN has not claimed any finance charges for FY 2018-19. Accordingly, the Commission has not considered any finance charges for FY 2018-19.

**Table 68: Loan balances approved for FY 2018-19 (Rs. Crore)**

Particulars	KTPS Unit 7	STPS Unit 6	CTPP(Units 1&2)	DCCPP
Op. balance	321.12	408.62	1095.85	145.59
Addition	-	-	-	-
Repayment	42.41	50.06	122.62	57.92
Closing balance	278.71	358.56	973.23	87.67
Interest rate	10.81%	11.54%	10.82%	10.88%

Particulars	KTPS Unit 7	STPS Unit 6	CTPP(Units 1&2)	DCCPP
<b>Interest</b>	<b>32.41</b>	<b>44.26</b>	<b>111.94</b>	<b>12.69</b>
Finance charges			0.00	0.00
<b>Interest and finance charges</b>	<b>32.41</b>	<b>44.26</b>	<b>111.94</b>	<b>12.69</b>

**Table 69: Interest and finance charges on term loans approved for FY 2018-19 (Rs. Crore)**

Station	FY 2018-19	
	Claimed	Approved
KTPS(Units 1-7)	36.06	32.41
STPS(Units 1-6)	47.36	44.26
CTPP(Units 1&2)	126.47	111.94
RGTPS(110.5 MW)	0.00	0.00
DCCPP	16.53	12.69
Mahi	0.00	0.00
<b>Total</b>	<b>226.41</b>	<b>201.30</b>

5.25 The main reason for the variation in interest and finance charges approved by the Commission and that claimed by RVUN is because the Commission has considered the revised interest rates on term loans as submitted by RVUN in its replies to data gaps.

### **Interest on Transitional Loans**

#### **RVUN's Submission**

5.26 The interest on transitional loans claimed by RVUN for FY 2018-19 is as given below:

**Table 70: Interest on transitional loan claimed by RVUN for FY 2018-19 (Rs. Crore)**

Station	FY 2018-19
	Claimed
KTPS(Units 1-7)	0.00
STPS(Units 1-6)	14.48
CTPP(Units 1&2)	0.00
RGTPS(110.5 MW)	0.00
DCCPP	0.00
Mahi	0.00
<b>Total</b>	<b>14.48</b>

#### **Commission's Analysis**

5.27 The Commission has computed the outstanding balance of transitional

loan for FY 2018-19 considering the closing loan balances approved for FY 2016-17 and the depreciation for FY 2017-18. Accordingly, the Commission has computed the interest on transitional loan for FY 2018-19 as under:

**Table 71: Outstanding balances of transitional loan (Rs. Crore)**

Particulars	STPS(Units 1-5)	DCCPP
Opening balance	202.61	13.34
Depreciation	114.11	57.92
Term Loan repayment	0.00	57.92
Available balance to make repayment of transitional loan	114.11	0.00
Closing balance	88.50	13.34
Rate of Interest	9.895%	9.895%
Interest	14.40	1.32

5.28 The interest on transitional loan approved by the Commission for FY 2018-19 is as shown in Table below:

**Table 72: Interest on transitional loan approved for FY 2018-19 (Rs. Crore)**

Station	FY 2018-19	
	Claimed	Approved
KTPS(Units 1-7)	0.00	0.00
STPS(Units 1-6)	14.48	14.40
CTPP(Units 1&2)	0.00	0.00
RGTPS(110.5 MW)	0.00	0.00
DCCPP	*	1.32
Mahi	0.00	0.00
<b>Total</b>	<b>14.48</b>	<b>15.72</b>

*\*Not indicated separately*

### **Interest on Working Capital (IoWC)**

#### **RVUN's Submission**

5.29 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.

5.30 The details of interest on working capital as claimed in petition for FY 2018-

19 have been provided in the table below:

**Table 73: loWC claimed by RVUN for FY 2018-19 (Rs. Crore)**

Station	FY 2018-19
	Claimed
KTPS(Units 1-7)	82.55
STPS(Units 1-6)	121.90
CTPP(Units 1&2)	32.55
RGTPS(110.5 MW)	4.49
DCCPP	24.77
Mahi	1.21
<b>Total</b>	<b>267.47</b>

### Commission's Analysis

5.31 Regulation 27(2) of the RERC Tariff Regulations, 2014 specifies 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 11.55% 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:

**Table 74: Computations of Bank rate as considered by the Commission for FY 2018-19**

Month	No. of Days	SBI Base Rate	250 Basis Point	Approved Interest Rate
Apr-17	30	9.10%	2.50%	<b>11.55%</b>
May-17	31	9.10%		
Jun-17	30	9.10%		
Jul-17	31	9.00%		
Aug-17	31	9.00%		
Sep-17	30	9.00%		

5.32 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 2018-19 has been provided in the table below:

**Table 75: IoWC approved for FY 2018-19 (Rs. Crore)**

Station	FY 2018-19	
	Claimed	Approved
KTPS(Units 1-7)	82.55	80.06
STPS(Units 1-6)	121.90	119.23
CTPP(Units 1&2)	32.55	30.83
RGTPS(110.5 MW)	4.49	4.37
DCCPP	24.77	24.43
Mahi	1.21	1.18
<b>Total</b>	<b>267.47</b>	<b>260.10</b>

## **Return on Equity (RoE)**

### **RVUN's Submission**

5.33 RVUN has claimed Return on Equity has been computed in accordance with Regulation 20 of RERC Tariff Regulations, 2014.

5.34 The details of Return on equity as claimed in petition for FY 2018-19 has been provided in the table below:

**Table 76: RoE claimed by RVUN for FY 2018-19 (Rs. Crore)**

Station	FY 2018-19
	Claimed
KTPS(Units 1-7)	78.14
STPS(Units 1-6)	182.39
CTPP(Units 1&2)	76.98
RGTPS(110.5 MW)	18.62
DCCPP	53.79
Mahi	26.41
<b>Total</b>	<b>436.32</b>

### **Commission's Analysis**

5.35 The GoR in its letter dated 18.03.2015 has allowed rate of RoE as 5% in FY 2015-16, 10% in FY 2016-17 and 15.5% in FY 2017-18 onwards. Therefore, the Commission has approved the RoE for FY 2018-19 as per the latest order of

GoR and in accordance with the Regulation 20 of the RERC Tariff Regulations, 2014.

5.36 The Commission has considered the closing equity balance approved in true up for FY 2016-17 as the opening balance for FY 2017-18. RVUN has not claimed any additional capitalisation for FY 2017-18 and accordingly no equity addition has been claimed in FY 2017-18. The Commission has not approved any additional capitalisation for FY 2017-18 in this Order and accordingly has not considered any equity addition in FY 2017-18. The closing equity balance for FY 2017-18 has been considered as the opening balance for FY 2018-19. RVUN has not claimed any additional capitalisation for FY 2018-19 and accordingly no equity addition has been claimed in FY 2018-19. Accordingly, Commission has not considered any equity addition in FY 2018-19. The equity base considered by the Commission for computing RoE for FY 2018-19 is as shown in the Table below:

**Table 77: Equity base considered by the Commission for FY 2018-19 (Rs. Crore)**

Station	FY 2018-19
KTPS(Units 1-7)	504.07
STPS(Units 1-6)	1176.02
CTPP(Units 1&2)	496.61
RGTPS(110.5 MW)	120.13
DCCPP	347.00
Mahi	170.38
<b>Total</b>	<b>2814.20</b>

5.37 Hence, in view of the above, the Commission approves RoE at the rate of 15.5% for FY 2018-19, as shown in the Table below:

**Table 78: RoE approved for FY 2018-19 (Rs. Crore)**

Station	FY 2018-19	
	Claimed	Approved
KTPS(Units 1-7)	78.14	78.13
STPS(Units 1-6)	182.39	182.28
CTPP(Units 1&2)	76.98	76.97
RGTPS(110.5 MW)	18.62	18.62
DCCPP	53.79	53.79
Mahi	26.41	26.41
<b>Total</b>	<b>436.32</b>	<b>436.20</b>

## **Recovery of ARR and Tariff Petition Fees**

### **RVUN's Submission**

5.38 The recovery of ARR and tariff petition fees as proposed by RVUN for FY 2018-19 is provided in the table below:

**Table 79: ARR and tariff petition fee claimed by RVUN for FY 2018-19 (Rs. Crore)**

Station	FY 2018-19
	Claimed
KTPS(Units 1-7)	0.62
STPS(Units 1-6)	0.75
CTPP(Units 1&2)	0.25
RGTPS(110.5 MW)	0.06
DCCPP	0.17
Mahi	0.07
<b>Total</b>	<b>1.92</b>

### **Commission's Analysis**

5.39 The Commission has computed the ARR and Tariff petition fees at the rate of Rs. 5000/MW for all the generating stations as shown in the Table below:

**Table 80: ARR and tariff petition fee approved for FY 2018-19 (Rs. Crore)**

Station	FY 2018-19	
	Claimed	Approved
KTPS(Units 1-7)	0.62	0.62
STPS(Units 1-6)	0.75	0.75
CTPP(Units 1&2)	0.25	0.25
RGTPS(110.5 MW)	0.06	0.06
DCCPP	0.17	0.17
Mahi	0.07	0.07
<b>Total</b>	<b>1.92</b>	<b>1.92</b>

## **Insurance on fixed assets**

### **RVUN's Submission**

5.40 RVUN in its petition has claimed insurance charges for FY 2018-19 based on the estimates of actual insurance charges paid in the preceding year with an increment of 5% YoY (Year on Year). Subsequently, RVUN has revised the claim of insurance charges based on the actual for FY 2017-18. The details

are as shown below:

**Table 81: Insurance on fixed assets claimed by RVUN for FY 2018-19 (Rs. Crore)**

Station	FY 2018-19	
	Claimed in petition	Revised claim
KTPS(Units 1-7)	3.22	2.67
STPS(Units 1-6)	2.93	4.02
CTPP(Units 1&2)	3.91	3.02
RGTPS(110.5 MW)	0.28	0.19
DCCPP	1.06	1.62
Mahi	0.00	0.00
<b>Total</b>	<b>11.40</b>	<b>11.52</b>

### Commission's Analysis

5.41 The Commission has approved the insurance charges in this order as claimed by RVUN. Any variation shall be adjusted during the truing up exercise for FY 2018-19. The insurance charges as approved by the Commission are as follows:

**Table 82: Insurance on fixed assets approved for FY 2018-19 (Rs. Crore)**

Station	FY 2018-19		
	Claimed in petition	Revised claim	Approved
KTPS(Units 1-7)	3.22	2.67	2.67
STPS(Units 1-6)	2.93	4.02	4.02
CTPP(Units 1&2)	3.91	3.02	3.02
RGTPS(110.5 MW)	0.28	0.19	0.19
DCCPP	1.06	1.62	1.62
Mahi	0.00	0.00	0.00
<b>Total</b>	<b>11.40</b>	<b>11.52</b>	<b>11.52</b>

### Non-Tariff Income

#### RVUN's Submission

5.42 RVUN in its petition submitted that the main heads of Non-Tariff income are Sale of Scrap, interest on FD/Staff loans, miscellaneous receipts (rebates), etc. The Non-tariff income as proposed by RVUN for FY 2018-19 is provided in the table below:

**Table 83: Non-tariff income claimed by RVUN for FY 2018-19 (Rs. Crore)**

Station	FY 2018-19
	Claimed
KTPS(Units 1-7)	19.94
STPS(Units 1-6)	8.13
CTPP(Units 1&2)	15.83
RGTPS(110.5 MW)	0.12
DCCPP	0.29
Mahi	0.14
<b>Total</b>	<b>44.45</b>

**Commission's Analysis**

5.43 The Commission has approved the Non-Tariff Income for FY 2018-19 as claimed by the Petitioner as shown in the Table below:

**Table 84: Non-tariff income approved for FY 2018-19 (Rs. Crore)**

Station	FY 2018-19	
	Claimed	Approved
KTPS(Units 1-7)	19.94	19.94
STPS(Units 1-6)	8.13	8.13
CTPP(Units 1&2)	15.83	15.83
RGTPS(110.5 MW)	0.12	0.12
DCCPP	0.29	0.29
Mahi	0.14	0.14
<b>Total</b>	<b>44.45</b>	<b>44.45</b>

**Adjustment of Excess Depreciation****Commission's Analysis**

5.44 In line with the approach adopted by the Commission in the Tariff Orders for FY 2016-17 and FY 2017-18, Commission has carried out the adjustment of excess depreciation, in FY 2018-19 as shown in the Table below:

**Table 85: Adjustment of Advance Against Depreciation (Rs. Crore)**

Particulars	KTPS (Units 1-6)	STPS (Units 1-5)	RGTPS (110.5 MW)	DCCPP
AAD allowed till FY 2008-09 and after adjustment in FY 2009-10, FY 2013-14, FY 2016-17 & FY 2017-18	205.26	455.14	13.76	7.00
Outstanding transitional loan	0.00	202.61	0.00	13.34

Particulars	KTPS (Units 1-6)	STPS (Units 1-5)	RGTPS (110.5 MW)	DCCPP
Depreciation for the year	28.76	114.11	1.24	57.92
Repayment of LT loan	0.00	0.00	0.00	57.92
Balance Depreciation available for repayment of transitional loan	28.76	114.11	1.24	0.00
Repayment of transitional Loan	0.00	114.11	0.00	0.00
<b>Excess depreciation to be deducted from AFC</b>	<b>28.76</b>	<b>0.00</b>	<b>1.24</b>	<b>0.00</b>
Balance AAD to be adjusted in subsequent years	176.50	455.14	12.52	7.00

### Annual Fixed Charges for FY 2018-19

5.45 Based on the above analysis, the approved Station wise AFC for FY 2018-19 is as shown in the Table below:

**Table 86: AFC for FY 2018-19 (Rs. Crore)**

Station	KTPS(Units 1-7)		STPS(Units 1-6)		CTPP(Units 1&2)	
	Claimed	Approved	Claimed	Approved	Claimed	Approved
O&M expenses	250.46	250.46	302.98	302.97	100.99	100.99
Depreciation	71.33	71.17	164.24	164.17	122.63	122.62
Interest on term loans & finance charges	36.06	32.41	47.36	44.26	126.47	111.94
Interest on transitional loan	0.00	0.00	14.48	14.40	0.00	0.00
Interest on working capital	82.55	80.06	121.90	119.23	32.55	30.83
Return on Equity	78.14	78.13	182.39	182.28	76.98	76.97
Insurance on fixed assets	2.67	2.67	4.02	4.02	3.02	3.02
Recovery of ARR & tariff petition fee	0.62	0.62	0.75	0.75	0.25	0.25
Minus: Non-tariff income	19.94	19.94	8.13	8.13	15.83	15.83
Minus: Adjustment of excess depreciation	0.00	28.76	0.00	0.00	0.00	0.00
<b>Annual Fixed Charges</b>	<b>501.89</b>	<b>466.82</b>	<b>829.99</b>	<b>823.96</b>	<b>447.07</b>	<b>430.79</b>
Net Generation (MU)	8081.47	8081.47	9805.07	9805.07	3188.64	3188.64
<b>Per unit fixed cost (Rs./kWh) (indicative only)</b>	<b>0.621</b>	<b>0.578</b>	<b>0.846</b>	<b>0.840</b>	<b>1.402</b>	<b>1.351</b>

Station	RGTPS(110.5 MW)		DCCPP		Mahi	
	Claimed	Approved	Claimed	Approved	Claimed	Approved
O&M expenses	20.31	20.31	49.96	49.96	17.43	17.43
Depreciation	1.24	1.24	57.95	57.92	4.42	4.42
Interest on term loans & finance charges	0.00	0.00	16.53	12.69	0.00	0.00
Interest on transitional loan	0.00	0.00	-	1.32	0.00	0.00
Interest on working capital	4.49	4.37	24.77	24.43	1.21	1.18

Station	RGTPS(110.5 MW)		DCCPP		Mahi	
	Claimed	Approved	Claimed	Approved	Claimed	Approved
Return on Equity	18.62	18.62	53.79	53.79	26.41	26.41
Insurance on fixed assets	0.19	0.19	1.62	1.62	0.00	0.00
Recovery of ARR & tariff petition fee	0.06	0.06	0.17	0.17	0.07	0.07
Minus: Non-tariff income	0.12	0.12	0.29	0.29	0.14	0.14
Minus: Adjustment of excess depreciation	0.00	1.24	0.00	0.00	0.00	0.00
<b>Annual Fixed Charges</b>	<b>44.79</b>	<b>43.44</b>	<b>204.50</b>	<b>201.61</b>	<b>49.40</b>	<b>49.37</b>
Net Generation (MU)	661.32	661.32	2245.57	2245.57	148.50	148.50
<b>Per unit fixed cost (Rs./kWh) (indicative only)</b>	<b>0.677</b>	<b>0.657</b>	<b>0.911</b>	<b>0.898</b>	<b>3.326</b>	<b>3.325</b>

## Determination of Energy Charges for FY 2018-19

### **RVUN's Submissions**

5.46 RVUN has submitted that it has considered SHR for KTPS (Unit 1-7) as 2570.98 kcal/kWh as against 2561.70 kcal/kWh approved by the Commission. Further, RVUN claimed that the matter with regard to SHR for KTPS Unit 7 is pending before APTEL.

5.47 RVUN has submitted that Gross Calorific Value and the average rate of coal and oil supply for KTPS, STPS, CTPP (Units 1&2) have been calculated on the basis of receipts of previous three months during Sept to Nov of 2017 as per Commission's formats for FY 2018-19.

5.48 RVUN has submitted that Gross Calorific Value and the average rate of gas have been calculated on the basis of receipts of previous three months during September to November, 2017 for DCCPP and receipts of three months during July to September, 2017 for RGTPS(110.5 MW) as per Commission's formats for FY 2018-19.

### **Commission's Analysis**

5.49 As regards the SHR for KTPS Unit 7, as the matter is sub-judice and there are no restraining directions from APTEL on the Commission's ruling in the matter, therefore, Commission deems it appropriate to consider the normative SHR as approved in the Tariff Order for FY 2017-18.

5.50 The Commission has approved the Energy Charges for the FY 2018-19 on the basis of following:

- (a) While allowing the variable cost of the generating stations, the Commission has considered normative SHR, PLF and Auxiliary consumption.
- (b) RVUN requested the Commission to consider the SHR for CTPP (Units 1&2) as 2400 kcal/kWh as against the normative SHR of 2312.31 kcal/kWh, citing the Commission's Order dated 24.04.2017 in petition no. 1089/17. The referred Commission's Order is for FY 2017-18 and hence, the Commission does not accept the prayer of RVUN to approve the SHR of 2400 kcal/kWh for CTPP (Units 1&2).
- (c) For DCCPP and RGTPS (110.5 MW), the Commission has considered the proportion of operation in closed cycle and open cycle for FY 2017-18 as proposed by RVUN and has accordingly considered the Station Heat Rate and Auxiliary Consumption same as that proposed by RVUN.
- (d) As regards GCV and price of fuels, the Commission has considered the actual prices and GCV of primary fuel as submitted by RVUN in its replies to data gaps, for the months of Nov-17 to Jan-18. The Commission has considered the prices and GCV of fuel oil as submitted by RVUN in its petition.
- (e) Secondary fuel oil consumption has been allowed as per Regulation 45(4) of RERC Tariff Regulations, 2014.

5.51 Plant wise energy charges determined by Commission for FY 2018-19 are as under:

**Table 87: Energy Charges approved for FY 2018-19**

Particulars	Units	KTPS (Units 1-7)		STPS (Units 1-6)		CTPP (Units 1&2)	
		Claimed	Approved	Claimed	Approved	Claimed	Approved
Gross Generation	MU	8907.17	8907.17	10774.80	10774.80	3504.00	3504.00
Auxiliary Consumption	%	9.27%	9.27%	9.00%	9.00%	9.00%	9.00%
Net Generation	MU	8081.47	8081.47	9805.07	9805.07	3188.64	3188.64
Landed Price of Coal	Rs./kg	3.87	3.87	4.97	4.97	3.85	3.85



Particulars	Units	KTPS (Units 1-7)		STPS (Units 1-6)		CTPP (Units 1&2)	
		Claimed	Approved	Claimed	Approved	Claimed	Approved
Gross Station Heat Rate	kcal/kWh	2570.98	2561.70	2476.28	2476.28	2400.00	2312.31
Price of Secondary fuel oil	Rs./ml	0.03	0.03	0.03	0.03	0.03	0.03
Secondary fuel oil Consumption	ml/kWh	0.50	0.50	0.50	0.50	0.50	0.50
Gross Calorific Value of Secondary fuel oil	kcal/ml	9.45	9.45	9.70	9.70	9.89	9.89
Heat Contribution from Secondary fuel oil	kcal/kWh	4.72	4.72	4.85	4.85	4.94	4.94
Heat Contribution from Coal	kcal/kWh	2566.26	2556.98	2471.43	2471.43	2395.06	2307.37
Gross Calorific Value of Coal	kcal/kg	3935.91	3935.91	3947.50	3947.50	4251.00	4251.00
Specific coal consumption	kg/kWh	0.65	0.65	0.63	0.63	0.56	0.54
Rate of Energy Charge	Rs./kWh	2.80	2.79	3.44	3.44	2.40	2.31
Other Charges	Rs. Crore	-	-	-	-	-	-
<b>Total Energy Charges</b>	<b>Rs. Crore</b>	<b>2261.21</b>	<b>2253.09</b>	<b>3371.05</b>	<b>3371.05</b>	<b>764.65</b>	<b>736.85</b>
	<b>Rs./kWh</b>	<b>2.798</b>	<b>2.788</b>	<b>3.438</b>	<b>3.438</b>	<b>2.398</b>	<b>2.311</b>

Particulars	Units	RGTPS (110.5 MW)		DCCPP	
		Claimed	Approved	Claimed	Approved
Gross Generation	MU	677.59	677.59	2312.64	2312.64
Auxiliary Consumption	%	2.40%	2.40%	2.90%	2.90%
Net Generation	MU	661.32	661.32	2245.57	2245.57
Landed Price of Gas	Rs./SCM	4.50	4.50	22.19	22.19
Gross Station Heat Rate	kcal/kWh	2214.00	2214.00	1994.00	1994.00
Price of fuel oil	Rs./ml	0.04	0.04	0.00	0.00
Fuel oil Consumption	ml/kWh	0.50	0.50	0.00	0.00
Gross Calorific Value of fuel oil	kcal/ml	9.30	9.30	0.00	0.00
Heat Contribution from fuel oil	kcal/kWh	4.65	4.65	0.00	0.00
Heat Contribution from Gas	kcal/kWh	2209.35	2209.35	1994.00	1994.00
Gross Calorific Value of Gas	kcal/SCM	4596.11	4596.11	9158.29	9158.29
Specific Gas consumption	SCM/kWh	0.48	0.48	0.22	0.22
Rate of Energy Charge	Rs./kWh	2.24	2.24	4.97	4.97
Other Charges	Rs. Crore	-	-	-	-
<b>Total Energy Charges</b>	<b>Rs. Crore</b>	<b>147.91</b>	<b>147.91</b>	<b>1117.14</b>	<b>1117.14</b>
	<b>Rs./kWh</b>	<b>2.237</b>	<b>2.237</b>	<b>4.975</b>	<b>4.975</b>

### Tariff for Mahi Hydel Generating Station

5.52 In accordance with 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.

5.53 Regulation 51(7) of RERC Tariff Regulations, 2014 states that rate of Primary Energy for hydro power stations shall be 50% of cost of generation or incentive rate applicable for thermal power stations, whichever is less. Accordingly, the primary energy rate approved by the Commission is 30 Paise/kWh.

5.54 The tariff for Mahi approved by the Commission for FY 2018-19 is as given in the Table below:

**Table 88: Approved tariff for Mahi Hydel Power Project**

Annual Fixed Charges (Rs. in Crore)	Net Energy (MU)	Energy Rate (Paise/kWh)	Energy Charges (Rs. in Crore)	Capacity Charges (Rs. in Crore)
49.37	148.50	0.30	4.46	44.92

5.55 Incentive for Thermal and Mahi Hydel Station shall be claimed by RVUN as per Regulation 52(1) and 52(2) respectively of RERC Tariff Regulations, 2014.

5.56 Recovery of Capacity Charges shall be in accordance with Regulation 50 of RERC Tariff Regulations, 2014.

5.57 The Summary of tariff as approved by the Commission for FY 2018-19 is given in the Table below:

**Table 89: Approved tariff for FY 2018-19**

Station	Units	KTPS(Units 1-7)		STPS(Units 1-6)		CTPP(Units 1&2)	
		Claimed	Approved	Claimed	Approved	Claimed	Approved
Fixed charges	Rs. Crore	501.89	466.82	829.99	823.96	447.07	430.79
Rate of fixed charges	Rs./kWh	0.621	0.578	0.846	0.840	1.402	1.351
Energy charges	Rs. Crore	2261.21	2253.09	3371.05	3371.05	764.65	736.85
Rate of energy charges	Rs./kWh	2.798	2.788	3.438	3.438	2.398	2.311
<b>Total tariff</b>	<b>Rs./kWh</b>	<b>3.419</b>	<b>3.366</b>	<b>4.285</b>	<b>4.278</b>	<b>3.800</b>	<b>3.662</b>

Station	Units	RGTPS(110.5 MW)		DCCPP		Mahi	
		Claimed	Approved	Claimed	Approved	Claimed	Approved
Fixed charges	Rs. Crore	44.79	43.44	204.50	201.61	49.40	44.92
Rate of fixed charges	Rs./kWh	0.677	0.657	0.911	0.898	3.326	3.025
Energy charges	Rs. Crore	147.91	147.91	1117.14	1117.14	-	4.46
Rate of energy	Rs./kWh	2.237	2.237	4.975	4.975	-	0.300

Station	Units	RGTPS(110.5 MW)		DCCPP		Mahi	
		Claimed	Approved	Claimed	Approved	Claimed	Approved
charges							
<b>Total tariff</b>	<b>Rs./kWh</b>	<b>2.914</b>	<b>2.893</b>	<b>5.886</b>	<b>5.873</b>	<b>3.326</b>	<b>3.325</b>

5.58 The tariff approved by the Commission for RVUN Stations for FY 2018-19 shall be effective from 01.04.2018 and shall remain in force till next order of the Commission.

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## **SECTION 6**

### **Determination of provisional tariff for new Units for FY 2018-19**

- 6.1 The Commission is yet to determine the final capital cost of the new Units namely CTPP Units 3&4, RGTPS Stage III and KaTPP Units 1&2. Pending the final determination of capital cost for these Units, the Commission has been determining the provisional tariff considering the provisionally approved capital cost. The petition filed by RVUN included the claim for approval of tariff for CTPP Units 3&4, RGTPS Stage III and KaTPP Units 1&2. Subsequently, RVUN filed the separate petitions for determination of final capital cost and tariff for CTPP Units 3 & 4 (Petition No. 1334/18) and RGTPP Stage III (Petition No. 1340/18) from COD of the respective Units till FY 2018-19. Along with the aforesaid petitions, RVUN has also filed the Applications for withdrawal of tariff determination for CTPP Units 3 & 4 and RGTPP Stage III for FY 2018-19 from the instant petition. The Commission allows the prayer of RVUN for withdrawal of the tariff determination of CTPP Units 3 & 4 and RGTPP Stage III for FY 2018-19 from the instant petition. The tariff determination for these stations for FY 2018-19 shall be carried out in the Commission's Orders on the respective petitions. Accordingly, Commission has determined the provisional tariff for KaTPP Units 1&2 for FY 2018-19.
- 6.2 For KaTPP Unit 1, the Commission has issued the Order approving the provisional capital cost on 14.05.2015. The Commission in this Order has provisionally approved the tariff for FY 2018-19 for KaTPP Unit 1 considering the provisional capital cost as approved by the Commission as RVUN is yet to file the petition for determination of final capital cost.
- 6.3 The Commission vide its order dated 21.01.2016 had approved the provisional tariff of KaTPP Unit 2 for FY 2015-16. In the aforesaid order, the Commission has approved the provisional fixed charges for KaTPP Unit 2 for FY 2015-16 by applying the ratio of provisional fixed charges approved to the provisional charges claimed for KaTPP Unit 1 in the approval of provisional tariff for FY 2014-15. In line with the same approach, the Commission has approved the provisional fixed charges for KaTPP Unit 2 for

FY 2018-19. In the absence of approved capital cost, the Commission has not approved the individual components of Annual Fixed Charges for KaTPP Unit 2 for FY 2018-19. The Commission has approved the variable charges for KaTPP Unit 2 for FY 2018-19 considering the latest available fuel parameters and in accordance with RERC Tariff Regulations, 2014.

6.4 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) Return on Equity
- (v) Interest on Working Capital
- (vi) Insurance Charges
- (vii) Less: Non-tariff Income

6.5 Each of the annual fixed charges elements has been dealt with in the following paragraphs.

### **Operation and Maintenance Expenses**

#### **RVUN's Submission**

6.6 RVUN submitted that the Operation & Maintenance Expenses for FY 2018-19 have been computed on the basis of norms prescribed under Regulation 47 of RERC Tariff Regulations, 2014. Accordingly, RVUN has claimed the O&M expenses of Rs. 109.06 Crore for KaTPP Unit 1 for FY 2018-19.

#### **Commission's Analysis**

6.7 The Commission has verified RVUN's computations of normative O&M expenses and found it in order. Accordingly, Commission has approved the O&M expenses of Rs. 109.06 Crore for KaTPP Unit 1 for FY 2018-19.

## **Depreciation**

### **RVUN's Submission**

- 6.8 KaTPP Unit 1 achieved COD on 07.05.2014. The Commission vide its order dated 14.05.2015 had approved the provisional capital cost of Rs. 4502.07 Crore as against Rs. 5082.89 Crore claimed by RVUN. RVUN submitted that it had incurred additional capitalisation of Rs. 80.80 Crore in FY 2014-15, Rs. 87.68 Crore in FY 2015-16 and Rs. 30.60 Crore in FY 2016-17 and is further proposed to incur additional capitalization Rs. 58.34 Crore in the FY 2017-18 against the original scope of work.
- 6.9 RVUN submitted that the depreciation for FY 2018-19 has been computed on the basis of above capital cost and additional capitalization claimed. Accordingly, RVUN has claimed the depreciation of Rs. 226.92 Crore for KaTPP Unit 1 for FY 2018-19.

### **Commission's Analysis**

- 6.10 The Commission has approved the depreciation for FY 2018-19 in accordance with the provisions of RERC Tariff Regulations, 2014.
- 6.11 For KaTPP Unit 1 RVUN is yet to file the petition for approval of final capital cost and hence, the Commission does not find it appropriate to consider the capital cost claimed by RVUN for determination of ARR and tariff for FY 2018-19. Commission, for KaTPP Unit 1, has considered the closing GFA for FY 2017-18 approved in the tariff order for FY 2017-18 as the opening GFA for FY 2018-19.
- 6.12 The GFA base considered by the Commission for KaTPP Unit 1 for FY 2018-19 and the depreciation thereon is as shown in the Table below:

**Table 90: Depreciation approved for KaTPP Unit 1 for FY 2018-19 (Rs. Crore)**

<b>Particulars</b>	<b>Rate of depreciation</b>	<b>GFA base</b>	<b>Depreciation</b>
Land & Land Rights	0.00%	9.20	0.00
Building & Civil Works of Power Plants	3.34%	1177.37	39.32
Hydraulic Works	5.28%	73.74	3.89

<b>Particulars</b>	<b>Rate of depreciation</b>	<b>GFA base</b>	<b>Depreciation</b>
Plant & Machinery	5.28%	3227.98	170.44
Communication equipment	0.00%	3.83	0.00
Vehicles	6.33%	0.09	0.01
Furniture & Fixtures	6.33%	0.60	0.04
Office Equipments	6.33%	0.10	0.01
Capital Spares	5.28%	9.15	0.48
<b>Total</b>		<b>4502.07</b>	<b>214.19</b>

### **Interest and finance charges on Term Loan**

#### **RVUN's Submission**

6.13 RVUN submitted that the interest on term loans has been worked out in accordance with Regulation 21 of RERC Tariff Regulations, 2014. The loan repayment for term loans has been taken equal to depreciation for the year. RVUN has not claimed any finance charges for FY 2018-19. Accordingly, RVUN has claimed the interest and finance charges of Rs. 341.61 Crore for KaTPP Unit 1 for FY 2018-19.

#### **Commission's Analysis**

6.14 For KaTPP Unit 1, the Commission has considered the closing term loan balance approved for FY 2017-18 in the tariff order for FY 2017-18 as the opening loan balance for FY 2018-19. The allowable depreciation for the year has been considered as the normative repayment for the year.

6.15 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. The Commission has computed the rate of interest in accordance with the above stated Regulation based on the outstanding loan balances for FY 2017-18 and the applicable interest rate as submitted by RVUN in its replies to data gaps. The interest on loan approved by the Commission for KaTPP Unit 1 for FY 2018-19 is as shown in the Table below:

**Table 91: Interest and finance charges on term loan approved for KaTPP Unit 1 for FY 2018-19 (Rs. Crore)**

<b>Particulars</b>	<b>Approved</b>
Opening balance	2766.02
Addition	0.00
Repayment	214.19
Closing balance	2551.83
Interest rate	10.61%
<b>Interest</b>	<b>282.14</b>
Finance charges	0.00
<b>Interest and finance charges</b>	<b>282.14</b>

### **Interest on Working Capital**

#### **RVUN's Submission**

6.16 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. Accordingly, RVUN has claimed the interest on working capital of Rs. 48.67 Crore for KaTPP Unit 1 for FY 2018-19.

#### **Commission's Analysis**

6.17 Regulation 27(2) of the RERC Tariff Regulations, 2014 specifies 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 11.55% 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:



**Table 92: Computations of Bank Rate as considered by the Commission for FY 2018-19**

Month	No. of Days	SBI Base Rate	250 Basis Point	Approved Interest Rate
Apr-17	30	9.10%	2.50%	<b>11.55</b>
May-17	31	9.10%		
Jun-17	30	9.10%		
Jul-17	31	9.00%		
Aug-17	31	9.00%		
Sep-17	30	9.00%		

6.18 Further, the Commission has worked out the working capital requirement in accordance with Regulation 27 of the RERC Tariff Regulations, 2014. Accordingly, the Commission has approved the interest on working capital of Rs. 47.44 Crore for KaTPP Unit 1 for FY 2018-19.

### **Return on Equity**

#### **RVUN's Submission**

6.19 RVUN submitted that the RoE has been claimed in accordance with Regulation 20 of RERC Tariff Regulations, 2014. Accordingly, RVUN has claimed RoE of Rs. 147.54 Crore for KaTPP Unit 1 for FY 2018-19.

### **Commission's Analysis**

6.20 The GoR in its letter dated 18.03.2015 has allowed rate of RoE as 5% in FY 2015-16, 10% in FY 2016-17 and 15.5% in FY 2017-18 onwards. Therefore, the Commission has approved the RoE for FY 2018-19 as per the latest order of GoR and in accordance with the Regulation 20 of the RERC Tariff Regulations, 2014.

6.21 The Commission has considered the equity base of Rs. 900.41 Crore approved for KaTPP Unit 1 for FY 2017-18 in the tariff order for FY 2017-18 as the equity base for FY 2018-19. Considering the same, the Commission has approved the RoE of Rs. 139.56 Crore for KaTPP Unit 1 for FY 2018-19.

## **Recovery of ARR and Tariff Petition Fees**

### **RVUN's Submission**

6.22 RVUN has claimed the ARR and tariff petition fees of Rs. 0.30 Crore for KaTPP Unit 1 for FY 2018-19.

### **Commission's Analysis**

6.23 The Commission has computed the ARR and Tariff petition Fees at the rate of Rs. 5000/MW. Accordingly, the Commission has approved the ARR and tariff petition fees of Rs. 0.30 Crore for KaTPP Unit 1 for FY 2018-19.

## **Insurance on fixed assets**

### **RVUN's Submission**

6.24 RVUN in its petition has claimed insurance charges for FY 2018-19 based on the estimates of actual insurance charges paid in the preceding year with an increment of 5% YoY (Year on Year). RVUN, in its replies to data gaps has revised the claim of insurance on fixed assets based on the actual expenses for FY 2017-18. Accordingly, RVUN has claimed the amount of Rs. 4.38 Crore towards insurance on fixed assets for KaTPP Unit 1 for FY 2018-19.

### **Commission's Analysis**

6.25 The Commission has provisionally approved the insurance charges in this order as claimed by RVUN. Accordingly, the Commission has approved the amount of Rs. 4.38 Crore towards insurance on fixed assets for KaTPP Unit 1 for FY 2018-19.

## **Non-Tariff Income**

### **RVUN's Submission**

6.26 RVUN in its petition submitted that the main heads of Non-Tariff Income are Sale of Scrap, interest on FD/Staff loans, miscellaneous receipts (rebates), etc. accordingly, RVUN has claimed the non-tariff income of Rs. 0.65 Crore for KaTPP Unit 1 for FY 2018-19.

## Commission's Analysis

6.27 The Commission has approved the Non-Tariff Income for FY 2018-19 as claimed by the Petitioner. Accordingly, the Commission has approved the non-tariff income of Rs. 0.65 Crore for KaTPP Unit 1 for FY 2018-19.

### Annual Fixed Charges for FY 2018-19

6.28 Based on the above analysis, the approved Station Wise Fixed Charges for FY 2018-19 are as shown in the Table below:

**Table 93: AFC approved for KaTPP Unit 1 for FY 2018-19 (Rs. Crore)**

Particulars	KaTPP Unit 1	
	Claimed	Approved
O&M expenses	109.06	109.06
Depreciation	226.92	214.19
Interest on term loans & finance charges	341.61	282.14
Interest on working capital	48.67	47.44
Return on Equity	147.54	139.56
Insurance on fixed assets	4.38	4.38
Recovery of ARR & tariff petition fee	0.30	0.30
Minus: Non-tariff income	0.65	0.65
<b>Annual Fixed Charges</b>	<b>877.84</b>	<b>796.43</b>
Net Generation (MU)	4133.45	4133.45
<b>Per unit fixed cost (Rs./kWh) (indicative only)</b>	<b>2.124</b>	<b>1.927</b>

6.29 The Commission in this order has approved the tariff of KaTPP Unit 1 for FY 2018-19. For KaTPP Unit 1, the Commission has allowed the fixed charges of Rs. 1.927/kWh as against Rs. 2.124/kWh claimed by RVUN. RVUN has claimed the fixed charges of Rs. 1.989/kWh for KaTPP Unit 2 for FY 2018-19. Applying the same ratio of approved fixed charges of KaTPP Unit 1 to claimed fixed charges of KaTPP Unit 1, the Commission hereby allows fixed charge as Rs. 1.805/kWh as against Rs. 1.989/kWh claimed by RVUN. Further, the Commission has approved the variable charges for KaTPP Unit 2 for FY 2017-18 in accordance with RERC Tariff Regulations, 2014 considering the latest available fuel parameters.

## Determination of Energy Charges for FY 2018-19

### Commission's Analysis

6.30 The Commission has approved Energy Charges for the FY 2018-19 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.
- (b) As regards GCV and price of coal the Commission has considered the revised prices and GCV submitted by the Petitioner in its replies to data gaps.
- (c) Secondary fuel oil consumption has been allowed as per Regulation 45(4) of RERC Tariff Regulations, 2014.

6.31 Unit wise energy charges determined by Commission for FY 2018-19 are as under:

**Table 94: Energy charges approved for FY 2018-19**

Particulars	Units	KaTPP Unit 1		KaTPP Unit 2	
		Claimed	Approved	Claimed	Approved
Gross Generation	MU	4362.48	4362.48	4362.48	4362.48
Auxiliary Consumption	%	5.25%	5.25%	5.25%	5.25%
Net Generation	MU	4133.45	4133.45	4133.45	4133.45
Landed Price of Coal	Rs./kg	4.56	4.56	4.56	4.56
Gross Station Heat Rate	kcal/kWh	2320.63	2320.63	2320.63	2320.63
Price of Secondary fuel oil	Rs./ml	0.03	0.03	0.03	0.03
Secondary fuel oil Consumption	ml/kWh	0.50	0.50	0.50	0.50
Gross Calorific Value of Secondary fuel oil	kcal/ml	9.89	9.89	9.89	9.89
Heat Contribution from Secondary fuel oil	kcal/kWh	4.95	4.95	4.95	4.95
Heat Contribution from Coal	kcal/kWh	2315.68	2315.68	2315.68	2315.68
Gross Calorific Value of Coal	kcal/kg	4141.16	4141.16	4141.16	4141.16
Specific coal consumption	kg/kWh	0.56	0.56	0.56	0.56
Rate of Energy Charge	Rs./kWh	2.71	2.71	2.71	2.71
Other Charges	Rs. Crore	-	-	-	-
<b>Total Energy Charges</b>	<b>Rs. Crore</b>	<b>1119.94</b>	<b>1119.94</b>	<b>1119.94</b>	<b>1119.94</b>
	<b>Rs./kWh</b>	<b>2.709</b>	<b>2.709</b>	<b>2.709</b>	<b>2.709</b>

6.32 Incentive for Thermal Station shall be claimed by RVUN as per Regulation 52(1) and 52(2) respectively of RERC Tariff Regulations, 2014.

6.33 Recovery of Capacity Charges shall be in accordance with Regulation 50 of RERC Tariff Regulations, 2014.

6.34 The Summary of provisional tariff as approved by the Commission for new units for FY 2018-19 is given in the Table below:

**Table 95: Summary of provisional tariff for FY 2018-19**

Station	Units	KaTPP Unit 1		KaTPP Unit 2	
		Claimed	Approved	Claimed	Approved
Fixed charges	Rs. Crore	877.84	796.43	822.24	-
Rate of fixed charges	Rs./kWh	2.124	1.927	1.989	1.805
Energy charges	Rs. Crore	1119.94	1119.94	1119.94	1119.94
Rate of energy charges	Rs./kWh	2.709	2.709	2.709	2.709
<b>Total tariff</b>	<b>Rs./kWh</b>	<b>4.833</b>	<b>4.636</b>	<b>4.699</b>	<b>4.514</b>

6.35 The provisional tariff approved by the Commission for new units for FY 2018-19 shall be effective from 01.04.2018 and shall remain in force till next order of the Commission.

6.36 Copy of this order may be sent to the Petitioner, Respondents, Objectors, CEA and Government of Rajasthan.

(S. C. Dinkar)  
Member

(R. P. Barwar)  
Member

(Vishvanath Hiremath)  
Chairman

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