

RAJASTHAN ELECTRICITY REGULATORY COMMISSION

Petition No. RERC/1105/17

In the matter of determination of provisional Capital Cost, Aggregate Revenue Requirement & provisional Tariff for Unit 5(1x660 MW) of Chhabra Thermal Power Project (2x660 MW) Stage-II for FY 2017-18 from anticipated COD of Unit 5 (1.4.2017) to 31.03.2018.

Coram:

Sh. Vishvanath Hiremath, Chairman
Sh. R. P. Barwar, Member
Sh. S. C. Dinkar, Member

Petitioner : M/s Rajasthan Rajya Vidyut Utpadan Nigam Ltd.

Respondents:

1. Jaipur Vidyut Vitran Nigam Ltd.(JVVNL)
2. Ajmer Vidyut Vitran Nigam Ltd.(AVVNL)
3. Jodhpur Vidyut Vitran Nigam Ltd.(JdVVNL)

Date of hearing : 06.12.2017

Present:

1. Sh. Ankit Sharma, Consultant, RVUN
2. Sh. Rajan Prajapati, Advocate, Discoms
3. Sh. G. L. Sharma, Stakeholder

Date of Order: 04.04.2018

ORDER

- 1.1 Rajasthan Rajya Vidyut Utpadan Nigam Ltd. (in short 'RVUN'), a Generating Company under the provisions of the Electricity Act 2003, filed a petition for determination of provisional Capital Cost, Aggregate Revenue Requirement (ARR) & provisional Tariff of CTPP Unit 5 (1x660 MW) for FY 2017-18.

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

1.3 This Order has been structured in 5 sections, as given under:

- (1) Section1: General
- (2) Section2: Summary of filing of provisional Capital Cost, Aggregate Revenue Requirement (ARR) & Provisional Tariff and Provisional Tariff determination process.
- (3) Section3: Summary of objections/ comments/ suggestions received from stakeholders on instant petition and the RVUN's response.
- (4) Section4: Determination of provisional Capital Cost of CTPP-Unit 5 (1x660 MW) Stage-II
- (5) Section5: Determination of provisional ARR and Tariff for CTPP Unit 5 (1x660 MW) for FY 2017-18.
- (6) Annexure-1

SECTION 2

Summary of Filing

- 2.1 In accordance with RERC (Terms & Conditions for Determination of Tariff) Regulations, 2014, hereinafter referred to as RERC Tariff Regulations, 2014, RVUN filed a petition on 14.03.2017 for approval of provisional Capital Cost, ARR and provisional Tariff in advance of the anticipated date of commercial operation of Chhabra Thermal Power Station Unit 5 (1x660MW) for FY 2017-18.
- 2.2 The Petitioner in its petition has submitted that Chhabra Thermal Power Station Unit 5 (1x660MW) is likely to achieve COD on 01.04.2017.
- 2.3 As per regulation 42(4) of Rajasthan Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff) Regulations, 2014 generating company may file a petition for determination of provisional tariff in advance of the anticipated date of commercial operation of the Unit or Stage or Generating Station as a whole, as the case may be, based on the capital expenditure actually incurred up to the date of making the petition or a date prior to making of the petition, duly certified by the Statutory Auditors and the provisional tariff shall be charged from the date of commercial operation of such Unit or Stage or Generating Station, as the case may be.
- 2.4 The petition was admitted on 24.04.2017 by the Commission for further consideration.
- 2.5 As required under Section 64(2) of the Electricity Act, 2003, public notice with salient features of the petition inviting objections/ comments/ suggestions from any desirous person was published in the following newspapers on the dates mentioned against each:

Sr. No.	Name of News	Date of
(i)	DNA	05.05.2017
(ii)	Rajasthan Patrika	05.05.2017
(iii)	Dainik Bhaskar	05.05.2017

- 2.6 The petition was also placed on RVUN and RERC Website. The objections/comments/ suggestions were received from Sh. G. L. Sharma and Discoms.
- 2.1. Commission forwarded the objections/comments/suggestions of objector to RVUN for its replies. Petitioner replied to the objections/ comments /suggestions made by the objector vide its letter dated 07.06.2017 and additional comments vide letter dt. 06.10.2017. The Petitioner replied to the objections/ comments /suggestions made by the objector vide its letter dated 27.07.2017 and 08.11.2017 respectively.
- 2.7 The Commission vide its letter dated 11.05.2017 and 02.11.2017, communicated the data gaps in the petition. Petitioner furnished the information vide its letters dated 23.06.2017 and 05.12.2017 respectively. Petitioner also submitted reply to Discoms' comments vide its letter dated 05.12.2017.
- 2.8 The public hearing in the matter was held on 06.12.2017.
- 2.9 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 and Petitioner's Response on the petition filed by RVUN for provisional Capital Cost, ARR and provisional Tariff for Chhabra Thermal Power Station- Unit 5 (1x660 MW) for FY 2017-18

Capital cost of the Unit

General Comments

Stakeholder's Comments/suggestions:

- 3.1. The stakeholder submitted that as per Detailed Project Report (DPR) para 2.2.0.3.(n) the total capital cost including interest during construction of Rs. 1517 Crore for the 2x660 MW project was Rs. 7920 Crore (Rs. 6.00 Crore/MW).
- 3.2. Energy Department, Government of Rajasthan vide their letter dated 02.03.2009 has also accorded administrative and financial approval for this project of 2x660 MW for Rs. 7920.00 Crore.
- 3.3. The Board of Director's of RVUN has also accorded the approval of this project for estimated cost of Rs. 7920 Crore.
- 3.4. The stakeholder further submitted that the Petitioner has got financial loans sanctioned from Power Finance Corporation (PFC) for Rs. 3794 Crore and from Rural Electrification Company (REC) for Rs. 2530 Crore amounting to Rs. 6324 Crore which is 80% of the above referred estimated cost of Rs. 7920 Crore. The balance of Rs. 1596 Crore has been funded through equity i.e. 20% of the cost.
- 3.5. The stakeholder submitted that the Petitioner has not mentioned the revised total cost of the project as of now in its petition. However, from Table 1 of the petition it is noted that the total revised cost of the project has been stated as Rs. 9167.27 Crore.

3.6. The stakeholder submitted that the Petitioner has not submitted any document in respect of approval of the revised cost of Rs. 9167.27 Crore by their Board of Director's and by the State Govt. as well. The stakeholder further submitted that before considering the Capital Cost of the unit, documents approving the revised capital cost of the project by the Board of Director's of RVUN have to be submitted by the Petitioner.

RVUN's Response:

3.7. Revised capital cost of CTPP Unit 5 & 6 is 9550.27 Crore and it is approved by the Board of Directors (BOD) of RVUN on 09.03.2017. The Petitioner further submitted the copies of approval accorded from BOD and GOR.

Work Contract Orders

Stakeholder's Comments/suggestions:

3.8. The stakeholder in respect of "River Water System (supply) submitted that at S.No. 3 in Table 1 of the petition, name of M/s Zuberi Engineering Company have been mentioned and it is also mentioned that "order to be placed". In this respect, stakeholder has sought the following:

- (i) Copies of each of the four orders placed with M/s Zuberi Engineering Company.
- (ii) While supplying copies of these orders in each case it may also be indicated as to what has been the date to comply with the terms of each order and what has been the actual date of completion of the works.
- (iii) Further, from the position of these items mention in the table it can be inferred that water system to feed the units is not complete. In such circumstance how will it be possible for the Petitioner to achieve the COD of the unit without completion of water supply system, the same needs to be clarified by the Petitioner?

RVUN's Response:

3.9. The Petitioner in response to the above comments has submitted the following details:

- (i) Copies of all four work orders of M/s Zuberi.
- (ii) The scheduled date of completion of work order no. 55, 56, 57 dated 08.05.2015 as per clause no. 9 of work order which is within 24 months from the date of LOI and provisional time extension has been granted upto 30.11.2017 with the approval of competent authority.
- (iii) The work order for assigning additional work placed on M/s Zuberi Engineering Company comprising of supply (order no. 338), civil (order no. 336) & ETC (order no. 337) orders dated 09.10.2015 for laying of D.I. pipeline of various sizes as an interim arrangement to provide Raw water for CTPP supercritical units has been completed and presently requirement of water for CTPP Unit 5 will be met through this water circuit.

Railway Siding works**Stakeholder's Comments/suggestions:**

3.10. The stakeholder submitted that at S.No 7 in Table -1 of the petition for Railway siding it has been mentioned that order is to be placed. In this regard, it may be clarified/indicated by the Petitioner that when railway siding is not complete then in what way fuel supply will be available for unit-5.

3.11. The stakeholder further submitted that from S.No 5, 13 and 14 in table 1 of the petition it is noted that for intake well, locomotives and Bulldozer orders are to be placed. The value of order has not been mentioned. The basis of such cost estimates has to be provided by the Petitioner.

RVUN's Response:

- 3.12. The Petitioner in response submitted that the Railway siding work of Stage-II has not started till date. DPR of Rs 282.00 Crore has been approved by WCR Railway, Jabalpur & ESP Plan/drawings are yet to be approved by WCR Railway after that LOI and detailed work order will be placed to WCR Railway by RVUNL. Fuel/Coal will be transported through road from Stage-I to Stage-II Unit - 5 till completion of Railway siding work.
- 3.13. In reference of Sr. No. 5 of table 1 of petition, detailed estimate for intake well at Parwati with proposed pump house & balancing reservoir at Bethali is enclosed. Cost of Locomotive has been assessed based on the previous order placed for similar item amounting to Rs. 16.49 Crore & Cost of Bulldozer was assessed based on the previous order placed. The Petitioner further submitted a copy of recent order placed amounting to Rs. 10.5 Crore.

EPC Contract (M/s Larsen and Toubro Ltd.)**Stakeholder's Comments/suggestions:**

- 3.14. The stakeholder submitted that the Petitioner should provide the copies of following documents with relevant information:
- (i) Copy of EPC contract placed with M/s Larson & toubro Ltd., copy of contract placed in respect of erection/ installation/ commissioning of the unit, contract placed for supply of BOP (Electrical) and copy of the contract placed in respect of supply of BOP (Mechanical).
 - (ii) The stakeholder has also sought the scheduled date of supply as per contract order placed and the actual date of receipt of the material and the actual date of completion in respect of each case i.e. Erection, installation and commissioning.

RVUN's Response:

3.15. Petitioner in response to the comments of the stakeholder submitted as under:

- (i) Copy of EPC contract placed to M/s L&T is enclosed at reply of additional information / data gap. The scope of EPC contractor includes design, Engineering, supply, Erection, testing & commissioning of complete 2 X 660 MW power plant including BTG & BOP packages. Zero date of EPC contract is 28.03.2013 and scheduled date of completion for complete EPC contract including supply and services is 27.09.2016 (42 months for Unit5) and 27.12.2016 (45 months for Unit 6).
- (ii) Unit-5 synchronization on coal has been achieved but commissioning including PG Test has yet not been completed as per contract requirement. A provisional time extension has been granted upto 30.06.17 for Unit 5 and upto 17.12.17 for Unit 6.
- (iii) Being complete engineering, procurement and construction contract, supply completion, services and erection completion dates have not been specified in the contract separately.
- (iv) Separate orders have not been placed for BOP electrical and BOP Mechanical works, as the same are included in EPC contractors scope of work.

Construction Power**Stakeholder's comments/suggestions:**

3.16. Stakeholder with regard to construction power supplied to M/s L&T sought following information.

- (i) Details of year wise energy units supplied.
- (ii) Terms of supply of construction power.
- (iii) Accounting adjustment of such supply of construction power.
- (iv) Treatment of construction power as per Regulations.

RVUN's Response

3.17. RVUN in response submitted as follows:

- (i) Details of month wise energy supplied during commissioning activities from 25.05.2016 to September 2017 have been provided. The total energy supplied in FY 2016-17 was 322.43 MU and in FY 2017-18 was 170.07 MU.
- (ii) Construction power supplied is given free of cost under clause no. 3.12.2 of GCC of technical specifications and power supply for office use of M/s L&T is being charged under LDS category as applicable for such consumer. RVUN further submitted copies of GCC and details of energy consumed by offices of M/s L&T.
- (iii) 33 kV construction power supply has been extended from 33/11kV substation of CTPP (O&M) which is energized by CTPP (O&M) Unit # 1,2,3 & 4.
- (iv) The expenditure of construction power up to March 2017 has been booked under the head 14.000 construction power (WIP) amounting to Rs. 8.34 Crore. The cost recovered for energy supply to M/s L&T for residential quarters has been booked under the accounting head 28.811(Amount received from Contractors) amounting to Rs. 0.90 Crore is recovered upto March 2017 and Rs. 2.83 Crore has been recovered for use of electricity in offices of M/s L&T up to 31.03.2017 under the same head.
- (v) It has taken responsibility of providing uninterrupted construction power for U#5,6 and it will be provided free of cost only for construction purposes i.e., cost will be borne by RVUN, the same will be capitalized in the project cost under the guidelines of RERC regulations.

Land Acquisition

Stakeholder's Comments/suggestions:

3.18. The stakeholder submitted that the Petitioner may intimate as to whether Unit-5 and Unit -1 of Chhabra Generating station are being installed in the existing premises of the Generating station where its units 1 to 4 are installed or any additional land has been purchased and if so the area of land so

purchased and cost be intimated. Necessary copies of relevant documents in this regard may also be provided.

RVUN's Response:

3.19. CTPP Unit 5 & 6 is being installed in the additional acquired land which is adjacent to the existing Unit 1 to 4. Copies of relevant documents are placed in reply of additional information / data gap.

Increase in Cost of Certain Assets:

Stakeholder's Comments/suggestions:

3.20. The stakeholder submitted that at S.No. 9 in table -1 (Page 10 of the petition) a sum of Rs. 33 Crore has been shown in revised project cost of unit 5&6 towards CSR activities. The stakeholder submitted that the Petitioner should submit the basis and relevant rule under which such cost is to be considered towards project cost/ capital cost of this unit. The details regarding this may be intimated by the Petitioner.

3.21. The stakeholder further submitted that again at S.No 10 in table-1 (Page 10 of the petition) a sum of Rs. 52.50 Crore has been shown in revised project cost of unit 5 & 6 towards license fee for coal stock. The basis and relevant rule under which such cost is to be considered towards project cost/ capital cost of this unit may be intimated by the Petitioner. Petitioner may also intimate as to where the coal stock will be kept for which this license fee has been shown and provide copy of relevant rule under which such fee is chargeable.

3.22. There has been an increase of about 16% to 18% in capital cost of the project. Petitioner may indicate item-wise comparison of cost of the project as per DPR vis-à-vis the revised cost as shown in the petition with reasons of increase.

- 3.23. The stakeholder submitted that at S.No.12 in table-1 of the petition a sum of Rs 242.20 Crore has been shown under revised project cost of Unit 5&6 towards "others". The Petitioner may please supply details of the same
- 3.24. The stakeholder submitted that at S.No.15 in table-1 of the petition a sum of Rs 15 Crore has been shown under revised project cost of unit 5&6 towards items like truck, lift, oil, filtration machine etc., and against these items "order to be placed" is mentioned. The Petitioner should provide the basis of showing such amount without placing any order. How much time will be taken to place the orders may also be intimated. It may also be intimated as to how it will be possible for the Petitioner to run these units smoothly.
- 3.25. Similarly, at S.No 13 & 14 in respect of locomotives and Bulldozers also a sum of Rs.18 Crore and Rs. 12 Crore respectively has been shown under revised project cost of Unit 5 & 6 and against these items it has also been mentioned that "order to be placed". Petitioner may indicate the basis of such estimates. It may also be intimated by the Petitioner that in absence of these items how these units will start commissioning and will run smoothly on continued basis. It may also be intimated as to how much time would be taken to place the order and to receive these items.

RVUN's Response:

- 3.26. Petitioner has submitted that in reference to Sr. no. 9 of table 1 of petition, Reply has been provided at point no. 22 of reply of additional information / data gap of Commission.
- 3.27. Petitioner further submitted that in revised project cost of CTPP Unit 5&6 an amount of Rs. 52.50 Crore has been paid towards licenses fees for allotment of coal mines as per clause no. 3.1 (b) of the mining allotment agreement enclosed in the petition.
- 3.28. Further, from the reading of RERC Tariff Regulations 2014, it is not clear whether the payment made towards mining rights for allocation of coal

block could be the part of project cost or not. In the absence of provision/regulation for recovery of such upfront fee, in the Tariff Regulations, 2014, it would be appropriate to book the payment towards mining rights under the capital cost of the project.

3.29. The Petitioner, in support of the above submission referred the decision of the Hon'ble Supreme Court passed in the case of R. B. Seth Moolchand Suganchand vs. CIT, AIR 1973 SC 15 wherein the Court held as under:

"If we confine our attention to the mining leases, what appears to us to be an empirical test is that where minerals have to be won extracted and brought to surface by mining operations, the expenditure incurred for acquiring such a right would be of a capital nature. But where the mineral has already been gotten and is on the surface, then the expenditure incurred for obtaining the right to acquire the raw material-that is-the mineral, would be a revenue expenditure laid out for the acquisition of stock-in-trade.

The test for ascertaining whether the amount spent is of a capital nature is, whether it was spent for obtaining a right of an enduring character which in the case of mining leases is to acquire rights over land for winning the mineral. In other words, where the mineral is part of the land and some mining operations have to be performed to extract it from the earth, the amount paid to acquire a right over or in the land to win that mineral is of an enduring character and hence a capital expenditure."

3.30. Petitioner submitted that the item wise reasons for increase in project cost have been provided at point no. 3 (iii) of reply of additional information / data gap of Commission dated 23.06.2017.

3.31. Petitioner in response to Sr. no. 12 of table 1 of petition provided the details of Rs. 242.20 Crore towards 'other' as shown under Revised Project Cost of Unit 5&6.

3.32. In reference to Sr. no. 15 of table 1 of petition, Petitioner submitted that cost of truck, lift & oil filtration machine has been assessed based on the previous order placed for similar item and still no tender has been floated yet.

3.33. In reference of Sr. No 13, the Petitioner has submitted that cost of Locomotive has been assessed based on the previous order placed for

similar item amounting Rs. 16.49 Crore. In reference of Sr. No 14, cost of Bulldozer was assessed based on the previous order placed. Purchase order of Bulldozers have been placed to M/s BEML, Udaipur vide PO No. RVUN/DY. CE (TD-II)/Xen (TD-II B)/F.D. 110 dated 18.04.2017. Copy of recent order placed amounting Rs. 10.50 Crore is enclosed and subsequently two nos. bulldozers have already been received at site and are being utilized for coal transportation at stockyard and feeding to coal bunkers.

Work Orders to be placed for Certain Items

Stakeholder's Comments/suggestions:

3.34. The stakeholder submitted that at S. No 3,4,5,7,13,14 and 15 in table -1 of the petition, it has been mentioned that "Order to be placed" . In this respect following information has been sought by the stakeholder:

- (i) If since then necessary orders have been placed for these items and if so:
 - a) Copies of these order be supplied
 - b) What is the cost of these items as per orders placed
 - c) What is the scheduled date of receipt of these items in each case.
- (ii) In case no order has been placed for these items, following information may be supplied:
 - a) Whether necessary NITs have been issued for these items and so dates of issue of NITs to be intimated.
 - b) What is the period prescribed for obtaining the tenders/Bids even in case no NITs have been issued, the period to be prescribed for obtaining the tenders/Bid may be estimated.
 - c) In case necessary tenders/ bids have been received for these items, how much time/ period would be taken to finalize these tenders/ bids to place the orders. Even in case where necessary NITs have been issued so far and are to be issued now, how much time/ period would be required to obtain the bids and how much time would be taken to

finalize and to place the orders for the same and much time/ period would be there to receive these items, be also intimated.

d) In absence of these items and till such items are received in what way the unit would be able to perform its work of generation. Position in this respect may be clarified in detail.

RVUN's Response:

3.35. Petitioner in response to the comments of the stakeholder submitted that:

- a) In reference to Sr. No. 03, river water system, still no order has been placed and also NITs for the same has not been floated.
- b) In reference to Sr. No. 04, proposed work for construction of township has been dropped, in view of the proposed disinvestment of CTPP as per decision of BOD.
- c) In reference to Sr. No. 05, a new intake well & pipeline was proposed at Parwati river to CTPP reservoir to meet out the raw water requirement during monsoon period from Parwati river in addition to main river water system and to lift 128 mcft water stored/allotted to RVUN by raising 1.2 m height of anicuts at RD 7000m and 18000 m.
- d) In reference to Sr. No. 07, detailed order is not placed to WCR, Railway by RVUNL till date. After placing the detailed work order than cost of each item to be determined. E-tender/NIT are exempted for WCR Railway because it is deposit work to be carried out/ executed by WCR Railway.
- e) In reference to Sr. No. 13, Cost of Locomotive has been assessed based on the previous order placed for similar item amounting Rs. 16.49 Crore.
- f) In reference to Sr. No. 15, purchase of truck, lift & oil filtration machine is under process still no NITs has been floated.

Time Extension and Environmental Clearance

Stakeholder's Comments/suggestions:

- 3.36. Stakeholder with regards to time extension granted to M/s Zuberi Engineering Company (M/s ZEC) sought following information.
- (i) Copy of Request Letter of M/s ZEC dated 18.04.2017 for seeking time extension.
 - (ii) Copy of time extension letter of RVUN
 - (iii) Competent Authority who has approved the time extension.
- 3.37. The stakeholder with regards to time extension granted to M/s L&T Ltd. sought following information.
- (i) Copy of Request Letter of M/s L&T dated 17.08.2016, 14.03.2017, 26.06.2017 for seeking time extension.
 - (ii) Ground and justification considered by RVUN for granting time extension.
 - (iii) Competent Authority who has approved the time extension.
- 3.38. The stakeholder sought copy of Environmental clearance dated 2.2.2015 for Unit#6.

RVUN's Response

- 3.39. RVUN with regard to M/s ZEC provided following information:
- (i) Copy of request letter of M/s ZEC dated 18.04.2017.
 - (ii) Copy of letter granting time extension to M/s ZEC.
 - (iii) Competent authority who has approved the time extension for the EPC contract work is whole time director of RVUN authorized by Board of Directors of RVUN.
- 3.40. RVUN with regard to M/s L&T provided following information:
- (i) Copy of request letter of M/s L&T dated 17.08.2016, 14.03.2017, 26.06.2017 seeking time extension.
 - (ii) Justification considered by RVUN for granting extension is as follows:
 - a) To keep contract alive for completing of pending work and to maintain pace of work of Unit#5, a provisional time extension was granted with

deferment of levy of LD upto 30.06.2017 and subsequently upto 30.09.2017 reserving RVUN right to levy LD. RVUN reserves the right for levy of LD on merit after final time extension of Unit#5.

b) Work of Unit#6 was put on hold on account of delay in granting Environmental clearance from 7.3.2014 to 20.2.2015 (11 months and 13 days). Therefore, a provisional time extension of 11 months and 13 days on account of delay in grant of Environmental clearance and re-mobilisation time of 7 days (total 11 months 20 days) with deferment of LD from the scheduled completion date of 27.12.2016 has been considered. RVUN reserves the right to levy LD on merit after final time extension of Unit#6. However, final time extension shall be decided at the time of completion of the project.

(iii) Competent authority who has approved the time extension for the EPC contract work is whole time director of RVUN authorized by Board of Directors of RVUN.

3.41. RVUN submitted the copy of Environmental clearance for Unit # 6 dated 2.2.2015.

Date of Commercial Operation

Stakeholder's Comments/suggestions:

3.42. Stakeholder submitted the following comments.

- a) The date of synchronization of unit 5 may be intimated by the Petitioner.
- b) The date of issue of notice to the distribution license for performing successful trial run for 72 hours be intimated by the Petitioner copy of such notice may also be supplied.
- c) In case necessary date of commercial operation of units has since been declared by the Petitioner, necessary details of readings of each 15 minutes block of 72 hours of trail run be supplied. Besides above copy of

certificate given by the representative of Discoms be also supplied by the Petitioner.

- d) The date and time of commencements of trial run are the date and time upto which trial run has been may also be intimated by the Petitioner.

RVUN's Response:

3.43. The Petitioner in response submitted as under:

- a) The date of synchronization on oil of Unit 5 is 02.10.2016 and on coal is 25.02.2017.
- b) Trial run of machine is not started yet, so notice to Discoms has not been served and Commercial operation of Unit 5 is still awaited.

Variable Charges

Stakeholder's Comments/suggestions:

3.44. The stakeholder sought the following information

- (i) Copy of documents under which the supplier of BTG have guaranteed the turbine cycle heat rate and guaranteed the boiler efficiency.
- (ii) As per power purchase agreement dated 18.05.2010 (Table 4 of the petition) in both the cases, CTPP Unit-5 was to be commissioned in March 2013. Necessary reasons for delay in commissioning.
- (iii) Copy of Joint Venture agreement dated 8.12.2011 executed between RVUNL and Adani Enterprise Limited as referred in preamble H of coal mining and delivery agreement dated 3.10.2013.
- (iv) Documents available at page 64 to 118, at page 120 to 176 and at page 180 to 238 are incomplete as these documents do not indicate the date of allotment of agreement. The missing pages may be supplied by the Petitioner.
- (v) Copy of approved mining plan in respect of
- a) Parsa coal mine ,
- b) Parsa East and Kanta Basan,
- c) Kente extension coal block may be supplied

- (vi) Quantum of coal to be extracted from above three mines/ coal block as has been allowed as per approved mining plan for the FY 2014-15, FY 2015-16 and 2016-17.
- (vii) Quantum of coal received at Chhabra generating station from each above referral three mines/ Block during FY 2014-15, FY 2015-16 and 2016-17.
- (viii) Whether the coal used for Unit -5 is washed coal or otherwise.
- (ix) On going through the coal mining and Delivery Agreement dated 24.05.2016, it is noted that the same is in respect of development; Mining and delivery of coal from parsa coal mine only whereas for unit 5 & 6 of Chhabra generation station coal block allotted is Kente extension coal block. Petitioner may clarify as to whether coal requirement for unit 5 of Chhabra generating station will be mined by RVUN itself.
- (x) Rate of coal supply to Unit 5 and details of rates arrived at.
- (xi) Whether coal supply from Kente Extn. coal block has been commenced as per coal mining and delivery agreement dated 03.10.2013 and if so from which date and how much coal has been received at Chhabra generation station year-wise details may be supplied.

3.45. Stakeholder further submitted that there will be/has been a ceiling price of coal delivery of Kente Extn. coal block as per clause 5.3 of aforesaid delivery agreement date 03.10.2013. As per clause 5.3.3 of the said agreement the ceiling price shall be determined at the beginning of an operating year which means the financial year.

3.46. In this regard Petitioner should intimate the ceiling price to be placed by RVUN before the BoD. The Petitioner may please supply the copy of detailed specific calculation sheet for ceiling price placed before the board of RVUN. The date of BoDs meeting in which such sheet has been placed and

the observation of Board of RVUN in this regard may also be intimated by the Petitioner.

3.47. It may be intimated by the Petitioner whether the metering panel installed on the unit are having ABT (Availability Based Tariff) Energy meters with 0.2S accuracy class or not. Detailed position may be intimated.

RVUN's Response:

3.48. The Petitioner in response submitted that in reference to guaranteed turbine cycle heat rate & guaranteed boiler efficiency, reply has been provided at point no. 5 of reply of additional information / data gap of RERC.

3.49. The Petitioner in response submitted that in reference to delay in commissioning with respect to PPA, reply has been provided at reply of additional information / data gap of RERC.

3.50. Copy of Joint Venture Agreement dated 09.12.2011 executed between RVUNL and AEL is enclosed.

3.51. Documents available at page 64 to 118, 120 to 176 & 180 to 238 are complete in all respect. The initial pages contain title, index and enclosures.

3.52. Copy of approved Mining plan of 'Parsa East & Kanta Basan' and Parsa coal mines are enclosed. Mining plan of Kente Ext. coal mine is yet to be prepared.

3.53. Production from 'Parsa' and 'Kente Ext.' coal mines has not been commenced. Allowed quantity of production of coal from 'Parsa East & Kanta Basan' as per approved Mining Plan of 'Parsa East & Kanta Basan' coal mines is as under:

Year	ROM Coal production
2014-15	10.00 Million Tonne
2015-16	10.00 Million Tonne
2016-17	15.00 Million Tonne

3.54. Quantum of coal received at plant is as follows:

Year	Coal received
2014-15	Nil
2015-16	Nil
2016-17	86312 MT

3.55. The Petitioner submitted that Coal used for CTPP Unit 5 is washed coal.

3.56. The Petitioner submitted that Chhabra Unit 5&6 is lined with all three coal blocks namely 'Parsa East & Kanta Basan', 'Parsa' and 'kente Extn.' coal mine. Until commencement of coal supplies from 'Parsa' and 'kente Ext.' coal mine, Chhabra Unit 5& 6 shall be supplied coal from the 'Parsa East & Kanta Basan' coal mine only. After commencement of coal supplies from Parsa' and 'Kente Extn.' coal mine proportionate coal shall be supplied from these mine also. RVUN have appointed MDO (Mine Development cum Operator) to M/s PKCL & M/s RCL for mining of coal in these coal mines. Shortfall in coal shall be met from the Bridge Linkage allocated by Ministry of coal till development of 'Parsa' and 'Kente Extn.' coal mine.

3.57. The Petitioner has submitted the details of rate of coal supplied to Unit 5.

3.58. Supplies of coal from 'Kente Extn.' coal mine has not been commenced yet as the coal block is under development process.

3.59. As the supplies of coal from 'Kente Extn.' coal mine has not been commenced yet, therefore, there is no ceiling price for FY 2017-18 for 'Kente Extn. coal mine.

3.60. Installation of ABT meter by RVPN of accuracy class 0.2S is under process.

Raw water System

Stakeholder's Comments/suggestions:

3.61. Stakeholder sought approval of competent authority to start Stage-II work of River Water system. The Stakeholder further sought for scheduled completion time for Stage I and Stage II works of River Water System.

3.62. The stakeholder sought justification for additional works as per work orders no. 336, 337 and 338 dated 09.10.2015.

RVUN's Response

3.63. RVUN submitted the letter of Whole Time Director dated 5.4.2016 approving start of stage II work of River water system. It further submitted that the extended completion period for Stage I work is 30.11.2017 with deferment of LD, reserving right of RVUN to levy LD for entire river water system of Chhabra Supercritical project. Further, with regard to Stage-II works the scheduled completion period shall expire on 4.4.2018.

3.64. With regards to additional works orders dated 9.10.2015 RVUN submitted that laying of DI pipeline from Bethali pump house and Parwati pump house to CTPP 1 to 4 reservoir and CTPP Unit#5 reservoir, RVUN submitted that laying pipeline from reservoir 1 to 4 to Unit#5 could not fulfill the requirement of raw water due to non-availability of pumping system and insufficient capacity of pipeline from both pumping station i.e., Bethali and Parwati river, because existing pipelines were designed only to feed the water requirement of Unit 1 to 4. Hence separate pipelines are required to lay from existing pumping stations to maintain water supply.

Capital cost and IDC and Financing Charges

Stakeholder's Comments/suggestions:

3.65. The stakeholder submitted that based on RVUN's agreement dated 18.05.2010 and 15.12.2010 for power purchase where in expected date of COD of Unit 5 and unit 6 is March 2013 and September 2013 respectively. Accordingly, RVPNL has constructed and commissioned the related transmission system:

- a. 400 KV D/C (Quad Moose) Chhabra SCTPS – Anta (Bara Boot up Station Line) (Construction of 400KV D/C Quad Moose line from location No. 3 of 400 KV D/c Chhabra TPS-Anta Line to the Gantry of Super Critical Chhabra TPS (Approx - 2 Km) and Balance connection work of 400KV Twin Moose Chhabra TPS - Bhidwar line on Bay No 414 (Raised) Line (178.75 Km) Charged on 10.04.2015 from 765/400KV GSS Anta Side and on 22.4.2016 from chhabra side (2.9 Km) and (ii) 400/765 KV 2x1500 MVA GSS at Anta Basan) Pooling station along with 2 sets of 765KV 3X 80 MVAR (Single Phase) Line Reactors – commissioned on 5.01.2015 and 9.01.2015. Since the date of their commissioning, the above system of RVPN has remained idle. For the above two system an amount of Rs 432 Crore and 225 Crore = Rs 657 Crore approx has been incurred necessary incidence of O&M expenses, Depreciation, interest etc has been passed on to the Discom through transmission charges and in turn such expense have been passed on to Ultimate consumers for no fault of theirs.
- b. Commission in its order dated 25.10.2012 passed in petition no. RERC/300/12 wherein RVUNL has also been the Respondent has observed at Para 23 as under:-
- “Commission has also observed that in case the evacuation system being developed by RVPN remains idle, the liability for the same may have to be borne by RVUN which would be considered at the time of fixing tariff for respective generating station. Therefore, in case the evacuation system being constructed by RVPN remains idle the Commission while undertaking prudent check of such works in ARR would decide as to the extent of additional cost of idling to be passed on in ARR and the amount of this extra cost which would need to be borne by the generating company”*
- c. In view of above, the time has come to undertake prudent check by the Commission and to decide the additional cost of idling to be to be reduced from the capital cost determined for Unit-5 of Chhabra by honouring its own decision by the commission.

d. The stakeholder has submitted that interest of a period of 4 years may be disallowed from the capital cost of unit – 5 on the said account.

3.66. The stakeholder further submitted that the details of expenditures to be incurred after proposed COD have been given in the petition. Total amount of such expenditure is Rs 306.53 Crore which is the same as appearing in last column of Table 5 of the petition but these details are not matching with each other. For instance in form 6.30 (Page 39) in respect of cost of land and land rights the amount shown is Rs 8.27 Crore whereas in Table -3 of petition at S.no.11 it is Zero. For any other items the amount in the said form 6.10 the amount is Rs.0.88 Crore whereas in table -5 at S.No 12 it is Rs. 101.37 Crore again in the sub-station equipment the amount is Rs.798.21 Crore whereas in table -5 of petition for EPC contract the amount is Rs. 306.10 Crore only. Petitioner may clarify the position.

3.67. In order to have a correct position Petitioner may provide a statement showing the position of each item mentioned in table-5 vis-à-vis given in form 6.10. It is also mentioned that the position given in Table 6.10 also do not matches with the statement appended by the chartered accountant at page 62. Clarification in this regard may also be given.

3.68. Regulation 42(4) stipulates application for determination of provisional tariff in advance of the anticipated date of commercial operation of the unit based on actual capital expenditure incurred up to the date of filing the petition or a date prior to filing the petition. Regulation 42(3) says that generating company shall adopt a reasonable basis for allocation of capital cost relating to common facilities. The proviso to regulation 42(3) says that the Generating Company shall maintain an allocation statement providing the basis for allocation of such cost, which shall be duly audited and certified by the statutory auditors and submit such audited and certified statement to the Commission along with the application for determination of tariff. No such allocation statement duly audited and

certified by the statutory auditors has been submitted with this petition for determination in tariff. The same may be furnished by the Petitioner.

- 3.69. Petitioner may provide the statement showing date wise amount received from financial institutions and date-wise equity infused for the project.
- 3.70. Petitioner may provide justification for year wise amount of IDC and Finance charges claimed i.e. amount of Rs.891.5Crore (total IDC and finance charges claimed in the original petition) and of Rs 1517+33.10 = Rs.1550.10 Crore (total IDC and finance charges claimed by the petitioner in its revised submissions)
- 3.71. Petitioner may provide the details of various amount grouped from table 1 of the petition to the amount shown in form 6.5. How the amount of Rs. 31.35Crore towards land and land right has been arrived at from the details appearing in Tables, how the amount of Rs. 3026.27Crore has been arrived at Form G.6.1 towards plants and machinery including sub-station equipment from the details appearing in Table- 1 of the petition etc. and so on.

RVUN's Response:

- 3.72. The Petitioner in response submitted that environmental clearance from MOEF for setting of 660 MW U#5 was received on 23.05.2012. After retendering in June 2012, EPC contract for complete supply and ETC of 2X660 MW CTPP was awarded on 28.03.2013 to M/s L&T.
- 3.73. Zero date of the EPC contract was 28.03.2013. 400 kV switchyard was charged on 23.05.2016 and generator transformer Unit-5 charged on 31.06.2016. Initially Unit was synchronized with oil support on 02.10.2016.
- 3.74. The Petitioner has submitted the details of expenditures to be incurred as Annexure H. Petitioner further submitted that the detail of expenditure to be incurred after 31.03.17 up to COD has been prepared in two form i.e. in the

form of Assets to be created as per accounting norms and another in the form of works carried out according to approved DPR which has been certified by Chartered Accountant. The Petitioner further submitted that in both the statements, expenditure to be incurred are matched but could not be compared item wise.

- 3.75. Copy of Statuary Auditors Certificate for the basis of allocation ratio upto 31.03.2017 has been provided at Annexure A of reply of additional information / data gap of RERC.
- 3.76. Information regarding Equity support received for CTPP Unit 5& 6 (in proportionate of the Revised Plan of the Company) and Loans from PFC (Loan No. 07301026) and REC (Scheme Code 4447) received upto FY 2016-17 for setting-up of CTPP Unit 5& 6 is enclosed.
- 3.77. Details of year wise amount of IDC & Finance charges have been provided.
- 3.78. RVUN further submitted that it has filed the petition for provisional tariff in anticipation under Regulation 42(4) which allows to file the petition in advance of COD and based on the actual capital expenditure incurred upto the date of filing of the petition or a date prior to making the petition duly certified by statutory auditor and under the provision of the regulations CA certificate and statutory auditors certificates are provided upto 30.09.2016 and 31.03.2017 respectively and tariff petition have been filed based on the expenses actually incurred.

Tariff determination and ARR

Guaranteed Performance Parameter

Stakeholder's Comments/suggestions:

- 3.79. The Stakeholder sought copy of guaranteed performance parameters.

RVUN's Reply

- 3.80. RVUN submitted copy of guaranteed performance parameter.

Auxiliary Consumption:**Stakeholder's Comments/suggestions:**

- 3.81. The stakeholder submitted that Auxiliary consumption has been shown as 6.31% and at para 6.2 it has been mentioned that this has been considered as per actual auxiliary connected on the plant. Regulations do not provide the auxiliary consumption based on actual auxiliary connected. Petitioner may intimate whether the boiler feed pump of unit are steam driven or electrically driven. It may further be intimate what the boiler feed pumps are (i) with induced draft cooling tower or (ii) with natural draft cooling tower or without cooling towers.
- 3.82. Depreciation shall be admissible in respect of gross asset as may be decided by the Commission while determining the capital cost of the unit.

RVUN's Response:

- 3.83. At CTPP Unit 5 there are two type of Boiler feed pumps one is Motor driven boiler feed pump (MDBFP) & another is steam turbine driven boiler feed pump (TDBFP). Initially, MDBFP will be operated and when desired parameters of steam achieved then TDBFP will remain in service. Cooling tower is natural draft cooling tower.
- 3.84. Commission may allow depreciation as per norms.

Interest on term loan**Stakeholder's Comments/suggestions:**

- 3.85. Stakeholder submitted that the Petitioner has not mentioned the opening balance of loan in the petition.
- 3.86. Petitioner may provide date details about the amount of loan received from time to time from various financial institutions / sources and also intimate date-wise equity infused.

RVUN's Response:

- 3.87. The Petitioner has submitted that the format 6.2 requires the approval of interest on loan on capitalized assets, the figure of Rs. 2749.56 Crore is wrongly shown under anticipated receipt instead of opening balance.
- 3.88. Information regarding loans from PFC (Loan No. 07301026) and REC (Scheme Code 4447) received upto FY 2016-17 for setting up of CTPP Unit 5& 6 is enclosed.

Other components of Tariff**Stakeholder's Comments/suggestions:**

- 3.89. Working capital, interest there on and O&M expenses are admissible on normative basis.
- 3.90. Insurances charges are also to be decided based on fixed assets as may be arrived at after the determination of capital cost of the unit.
- 3.91. Return on Equity: Petitioner may provide the information about the actual amount of equity infused in the project by the Petitioner from time to time.

RVUN's Response:

- 3.92. Commission may allow Working capital, interest thereon and O&M expenses as per norms.
- 3.93. Commission may allow Insurance Charges as per norms.
- 3.94. Petitioner in response to return on equity submitted that the information regarding Equity support received (in proportionate of the Revised Plan of the Company) upto FY 2016-17 for setting up of CTPP Unit 5& 6 is enclosed.

Variable Charges**Stakeholder's Comments/suggestions:**

- 3.95. **Station Heat Rate (SHR)** : In Para 6.1 of the petition it has been mentioned that as the PG Test of CTPP Unit-5 has not been done so maximum design

unit heat rate as per regulations have been taken. It may be mentioned that for determination of SHR requirement of PG test is not there. The Petitioner may supply copy of certificate of OEM (Original Equipment Manufactory) of turbine and Boiler supplier/Manufactures in respect of the heat rate guaranteed and boiler efficiency guaranteed.

3.96. For auxiliary consumption, Petitioner may supply the information about the boiler feed pumps and may also quote the relevant Regulation under which auxiliary consumption is to be approved on the basis of auxiliary connected.

RVUN's Response:

3.97. The Petitioner has submitted that the information regarding SHR and auxiliary consumption has already been furnished.

Fuel Supply

Stakeholder's Comments/suggestions:

3.98. The stakeholder has submitted as under:

- a) Petitioner may intimate the percentage of transit loss of coal as well.
- b) Petitioner may supply copy of calculation sheet of sheet of fuel used.
- c) The rates of coal of CIL/SECL prevailing and considering in the calculation sheet of rate, may also be supplied by the Petitioner with copy of relevant documents in this respect.
- d) The rate of washing charges included in the calculation of rate of fuel, if any, may also be intimated by the Petitioner.

RVUN's Response:

3.99. The Petitioner in response submitted as under:

- a) Percentage of transit loss is upto 1.5 % as per Coal Mining and Delivery Agreement (CMDA).
- b) Detail of rate of fuel used is enclosed.
- c) At CTPP Unit 5 coal of CIL & SECL is not used.
- d) Separate washing charges are not defined in CMDA.

Approval of the Project

Stakeholder's Comments/suggestions:

3.100. The stakeholder in respect of the approval of the project has submitted the following information:-

- a) The DPR of the Project is for setting up two units 660MW at Chhabra was prepared in December, 2009.
- b) Proposal for installation of two units of 660 MW at Chhabra was such to the state Govt vide letter dated 6.05.2009.
- c) State Govt. conveyed in principle approval for the above within a period of a week i.e. on 13.01.2009.
- d) Matters for installation of above units were considered in the 153rd meeting of BOD of the company on 2.2.2009.
- e) State Govt was approached with letter dated 4.02.2009 for obtaining administrative and financial approval for setting up of the above projects.
- f) State govt conveyed its administrative letter dated 4.02.2009 for obtaining administrative and financial approval with letter dated 2.03.2009.

3.101. Stakeholder submitted that from the above, it may be observed that matter has been dealt with on priority basis without loss of time but from the petition it is noted that even the 5th unit of this project has not so far been put in services and started generation. The urgency as was shown for installation of these units to meet the growing requirement of power has proved futile. This has also resulted in increase in cost of the project. How the Petitioner justifies such delay and increase in cost of the project needs to be stated by the Petitioner.

3.102. A period of about eight years to complete the project is much far beyond the expectations and thus requires to be investigated to find the responsibility for such under delay in execution of the project, Petitioner may state the action taken by them in this respect.

3.103. Petitioner may supply information about delay in execution stepwise and particularly in respect of the following:

- (i) Date of NIT issued for obtaining the bid for purchase of the units to be intimated.
- (ii) Date prescribed in NIT for obtaining the bids to be intimated.
- (iii) Dates on which the bids were received. No of bids received may also be intimated.
- (iv) Time period taken in analyzing the bids.
- (v) Reference No. and date of letter of intent placed for purchase of the units
- (vi) Reference No. and date of final purchase order issued for purchase of BTGs.
- (vii) Actual date prescribed in purchase order for received of BTGs.
- (viii) Actual date on which the BTGs received as per purchase order.
- (ix) Reference No & date of the order placed for erection/ commission of the unit and period prescribed there in for completion of the work.
- (x) Date on which work of erection/ commissioning has been completed by the company.
- (xi) In case there has been delay in adhering to the above orders at any stage, Petitioner may intimate the period of delay and reasons for the delay. Also intimate who have been the responsible for the delays and what action has been taken against the defaults.
- (xii) Copies of all purchase orders placed for erection/ commissioning etc be also supplied by the Petitioner.

RVUN's Response:

3.104. The Petitioner in response to the comments of the stakeholder has submitted as follows:

- a) Matter dealt on priority basis without loss of time by RVUN but it may be observed that environmental clearance from MOEF for Unit 5 was received on 23.05.2012 and for Unit 6 on 02.02.2015 respectively. As per

statutory norms no major site work for the execution of the project can be initiated prior to receipt of environment clearance from MOEF, GOI.

- b) NIT was published in newspapers on 21.11.2009 which was opened on 30.04.2010. Only two tenders' offers were received against this NIT. This NIT was subsequently dropped on 25.04.12 in view of pending environmental clearance, to attract healthy and wider competition to get best competitive prices and to cater new technological requirements due to implementation of new Research Design and Standard Organization (RDSO) norms for coal handling package and making provisions for CEA advisory to use coal blending of 70:30 with indigenous and imported coal.
- c) Fresh NITs was issued on EPC basis on 07.06.2012 and order was placed on 28.03.2013 after techno commercial evaluation of bids.
 - (i) The due date of bid submission was initially kept as 31.08.2012, which was further extended 03.12.2012. Four bidders participated against tender enquiry.
 - (ii) After analyzing the tenders, LOI was issued on 28.03.2013 i.e. within a period of 4 months from the receipt of bids.
 - (iii) LOI was placed vide letter no. D.2909 dated 28.03.2013.
 - (iv) Detailed work order for supplying and ETC of complete 2X660 MW TPP including BTG, BOP (Electrical and Mechanical) packages were placed vide W.O. no. D. 423,424,425 dated 23.05.2015 for offshore supplies, onshore supplies and ETC, services and civil works respectively.
 - (v) Contract zero date was 28.03.2013. Scheduled completion date for Unit 5 was 27.09.2016 and schedule completion date for Unit 6 was 27.12.2016.

- (vi) Components of BTG were received from time to time and erected in due course. However, scheduled completion date for supply and ETC for Unit5 was 27.09.2016. Scheduled completion date for supply and ETC for Unit 6 was 27.12.2016.
- (vii) Separate order for erection and commissioning was not placed being complete EPC contract. However, detailed work order for EPC, services and civil works was placed vide order NO. 425 dated 23.05.2013.
- (viii) Initially Unit5 was synchronized on oil on dated 02.10.2016. Full load was achieved on 04.04.2017. Unit commissioning along with completion of PG test and COD has not been completed so far.
- (ix) The project is under process to achieve COD and rest will be assessed later.
- (x) Reply has already been provided by the Petitioner.

Acquisition of the Plant

Stakeholder's Comments/suggestions:

3.105. RVUN has executed a Memorandum of Understanding (MoU) on 04.01.2017 with NTPC limited for acquisition of power assets of Chhabra Stage- 1 (4x250MW) by NTPC and Chhabra Stage-II (2x660MW). The intent and purpose of MOU mentioned clause 1.2 of said MOU is as under :-

"1.2 NTPC shall carry out due diligence for takeover of Chhabra Stage I and Chhabra Stage II of RVUN and subsequent diligence, NTPC shall take over the power assets"

3.106. Stakeholder submitted that the Petitioner may intimate the date of transfer of aforesaid assets to NTPC of Chhabra Stage I and Chhabra Stage II further, when the above assets are being transfer or if have been transferred, the purpose for which the petition has been filed for determination of tariff may be stated by the Petitioner.

3.107. The stakeholder submitted that Commission may also consider the fact that in view of transfer of assets to NTPC question of determination of tariff by Commission does not arise. NTPC has to approach for tariff determination to CERC in view of section 79 of the Electricity Act 2003.

RVUN's Response:

3.108. The Petitioner in response submitted that it is a fact that MOU has been signed for transfer of asset of CTPP but still no binding agreement has yet been signed among the parties, so asset of CTPP Unit 5 & 6 has not been transferred to NTPC till date.

3.109. The Petitioner in response submitted that asset of CTPP Unit 5 & 6 has not been transferred to anyone & it is a plant asset of RVUN so RVUN has filed this petition.

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SECTION 4

Determination of Provisional Capital Cost of Unit 5 (1x660MW) Chhabra Thermal Power Project as on anticipated COD, i.e., 1.4.2017

Petitioner's Submission

- 4.1 RVUN vide its petition dated 14.03.2017 submitted that CTPP Unit 5 was initially synchronized on oil on 02.10.2016 and full load was achieved on 04.04.17. Unit commissioning along with completion of PG test and COD has not been completed so far. RVUN further submitted that the Unit 5 of CTPP was likely to achieve COD on 01.04.2017. Accordingly, in anticipation of COD RVUN filed this petition in advance for approval of provisional Capital Cost and determination of provisional tariff for FY 2017-18.
- 4.2 The proposal for setting up 2x660 MW Chhabra Unit 5 and Unit 6 was approved by the Board of Directors in its 152nd meeting held on 31.12.2008. RVUN submitted a letter dated 06.01.2009 to Principal Secretary (Energy) for in-principal approval for setting up of additional CTPP Unit 5 & 6. The State Government vide letter dated 13.01.2009 accorded in-principal approval for setting up of 2x660 MW CTPP Unit-5 and 6. The State Government accorded "Administrative & Financial" approval vide its letter dated 02.03.2009 at an estimated project cost of Rs. 7920 Crore for Unit 5 & 6, out of which the project cost approved for Unit 5 was Rs. 3960 Crore.
- 4.3 The said project cost of Rs. 3960 Crore for Phase II of CTPP Unit 5 comprises of equity support from Govt. of Rajasthan (GoR) of Rs. 792 Crore and balance was to be arranged as loan from financial institutions.
- 4.4 Initially, Power Finance Corporation (PFC) vide letter dated 13.01.2011 sanctioned a loan of Rs.3794 Crore to RVUN for setting up of Unit 5 & 6 at Chhabra, District Baran, Rajasthan. Another loan of Rs 2530 Crore for Unit 5 & 6 was sanctioned by Rural Electrification Corporation Limited (REC) vide letter dated 21.03.2011.

- 4.5 RVUN further submitted that the project cost was revised from Rs. 7920 Crore to Rs. 9167.27 Crore and then further to Rs.9550.27 Crore in the 268th BOD meeting held on 09.03.2017. RVUN further requested the State Government for approval of the revised enhanced cost from Rs. 7920 Crore to Rs. 9550.27 Crore vide letter dated 19.04.2017 and GoR has accorded approval of the same vide letter dated 07.06.2017.
- 4.6 Out of total project cost of Rs. 9550.27 Crore for Phase II of CTPP Unit 5 & 6, equity support from GoR was revised to Rs. 1920 Crore and balance was to be arranged as loan from financial institutions. RVUN further requested to PFC vide letter dated 23.05.2017 for additional financial assistance of Rs. 1304.22 Crore for CTPP Unit 5 and 6 on the basis of revised cost.
- 4.7 The order for Main Equipment has been placed on to L&T Limited. The detail break up of capital cost as submitted by RVUN in its petition for CTPP Unit 5, is shown in table below:

Table 2: Capital Cost of CTPP Unit 5 Phase II as submitted by the Petitioner (Rs. Crore)

Sl. No	Description of Equipment / Material / Works	Supplier/Contractor	Project Cost as per DPR Unit 5&6	Revised Project Cost of unit 5&6	capital expenditure incurred on unit 5&6	Order Value of unit 5	Actual Expenditure of CTPP unit 5	Expenditure Yet to be incurred for CTPP unit 5
1	EPC Contract	M/s L&T Ltd	5833.81	5997.13	4487.45	2998.56	2692.47	306.10
2	Consultancy Engineering services	M/s TCE Consulting Eng. Ltd	50	13.46	6.41	6.73	3.846	2.88
3	River Water System (Supply)	M/s Zuberi Engg. Co.	250	339.51	107.52	169.75	64.512	105.24
		M/s Zuberi Engg. Co.		37.38	36.1	18.69	18.69	0.00
		M/s Zuberi Engg. Co.		45.68	8.75	22.84	5.25	17.59
		M/s Zuberi Engg. Co.		44.08	8.32	22.04	4.992	17.05
		Order to be placed		31.77		15.88	0	15.89
4	Township	Millenium dream Build	10	6.61	5	3.305	3	0.31

Sl. No	Description of Equipment / Material / Works	Supplier/Contractor	Project Cost as per DPR Unit 5&6	Revised Project Cost of unit 5&6	capital expenditure incurred on unit 5&6	Order Value of unit 5	Actual Expenditure of CTPP unit 5	Expenditure Yet to be incurred for CTPP unit 5
		Order to be placed		200.4		100.2	0	100.20
5	Intake Well	Order to be placed		100		50	0	50.00
6	Lhasi Dam	Water Resource Department		58.93	47	29.465	28.2	1.27
7	Other Civil Work(railway siding)	Order to be placed only inspection charges paid	50	252	5.55	126	3.33	122.67
8	Raising of height of Anicut	Water Resource Department		61.02	3.63	30.51	2.178	28.33
9	CSR activities			33	2.25	16.5	1.35	15.15
10	Licence fee for coal stock			52.5	45.84	26.25	26.25	0.00
11	Land		8.8	56.11	52.36	28.055	28.055	0.00
12	Others	Furniture Fixture	167.52	0.28	0.28	0.14	0.14	0.00
		Office Equipment		0.11	0.11	0.055	0.055	0.00
		Others		242.2	32.89	121.1	19.734	101.37
13	Locomotives	Order to be placed		18		9	0	9.00
14	Bulldozers	Order to be placed		12		6	0	6.00
15	Truck, Lift, Oil, Filtration machine	Order to be placed		15		7.5	0	7.50
16	IDC		1517	1517				
17	Finance Charges		33.1	33.1	891.5	534.9	534.9	0.00
GRAND TOTAL			7920.23	9167.27	5740.96	4343.49	3436.95	906.53

4.8 Petitioner vide its reply to the additional information/data gaps dated 23.06.2017 of the Commission has revised its submission and has furnished the revised cost as on 31.3.2017 as approved by the BoD of the Petitioner along with the Auditor's Certificate dated 01.06.2017. As per the revised submission, the cost incurred on the project upto 31.3.2017 is Rs. 6845.22 Crore. However, amount of Rs. 2705.02 Crore is estimated to be incurred till the completion of the project. Out of Rs 2705.05 Crore, expenditure of Rs. 668.00 Crore is estimated to be incurred on Unit – 5 and Rs. 2037.05 Crore on Unit – 6.

4.9 The details of the revised capital expenditure incurred on Unit 5 and 6 and the capital cost of CTPP Unit – 5 as submitted by the Petitioner is shown in the

Table below:

**Table 1: Breakup of Capital Cost of Unit 5&6 as on anticipated COD of Unit 5
(Rs. Crore)**

Particulars	Supplier / Contractor	Project Cost as per DPR Unit 5&6	Revised project cost vide BoD dated 9.3.2017	Capital Expenditure incurred on unit 5 & 6 upto 31.3.2017	Actual Expenditure of CTPP Unit 5 upto 31.3.2017	Actual Expenditure of CTPP unit 6 upto 31.3.2017
EPC Contract	M/s Larsen and Toubro Limited	5833.81	5997.13	5185.68	3111.41	2074.27
Consultancy Engineering services	M/s TCE Consulting Engineering	50.00	13.46	9.57	5.74	3.83
Other Consultancy	M/s TCE Consulting Engineering		4.87		0.00	
River Water system supply	M/s Zuberi Engineering Company	250.00	339.51	137.04	82.22	54.82
	M/s Zuberi Engineering Company		37.38	33.93	20.36	13.57
	M/s Zuberi Engineering Company		45.68	14.85	8.91	5.94
	M/s Zuberi Engineering Company		44.08	15.30	9.18	6.12
	Order to be placed		31.77		0.00	
Township	Millenium dream build	10.00	5.68	5.62	3.37	2.25
Intake well	Orders to be placed		100.00		0.00	
Lhasi Dam	Water Resource Department		58.93	47.00	28.20	18.80
Other civil	Orders to be placed	50.00	252.00	5.56	3.34	2.22
Raising of height of Anicuts	Water Resource Department		61.02	11.27	6.76	4.51
Cost of Boundary wall			0.80		0.00	
Cost of Connecting Road			1.50		0.00	
Locomotives	Orders to be placed		18.00		0.00	
Bulldozers	order placed		12.00	4.82	2.89	1.93

Particulars	Supplier / Contractor	Project Cost as per DPR Unit 5&6	Revised project cost vide BoD dated 9.3.2017	Capital Expenditure incurred on unit 5 & 6 upto 31.3.2017	Actual Expenditure of CTPP Unit 5 upto 31.3.2017	Actual Expenditure of CTPP unit 6 upto 31.3.2017
Trucks, Lifts, oil	Orders to be placed		15.00		0.00	
Work required as per NGT	Work Required as per NGT		3.75		0.00	
Furniture for Admin	Furniture for Admin Building		2.00		0.00	
Other Capitalization	Office Equipments		0.14	0.14	0.08	0.06
	Furniture and Fixtures		1.61	1.23	0.74	0.49
	Others	167.52	166.10	39.21	23.53	15.68
Land		8.80	56.11	52.36	31.42	20.94
CSR Activities			33.00	2.40	1.44	0.96
License fees for coal			52.50	45.84	27.50	18.34
Cost of Fuel			100.00		0.00	
Cost of Construction Power			63.15	8.34	5.00	3.34
Hard Cost		6370.13	7517.17	5620.16	3372.09	2248.07
IDC and Financing charge		1517.00	2000.00	1225.06	735.04	490.02
Finance Charges (Loan)		33.10	33.10			
Total IDC and FC and Other charges		1550.10	2033.10	1225.06	735.04	490.02
Total Capital Cost		7920.23	9550.27	6845.22	4107.13	2738.09
Total Capital Cost as on CoD		7920.23	9550.27	6845.22	4107.13	2738.09

4.10 The Respondent RUVNL (Rajasthan Urja Vikas Nigam Limited) on behalf of the Discoms has submitted that the Petitioner has included certain capital expenditures which were not part of the Detailed Project Report (DPR) and has failed to enunciate the reasons as to why such expenditures were added on later stage. The Respondent further submitted that the Petitioner should furnish the reasons for adding such expenditure along with the details of the benefit arises after incurring such expenditure which was not even the part of

DPR.

- 4.11 The Respondent further submitted that RVUN in its petition has incurred a capital expenditure of Rs. 3436.95 Crore for Unit 5 till the date 30.09.2016 and a hypothecation has been made that the remaining cost of Rs. 906.53 Crore would be incurred during the financial year 2017-18. However, such hypothecation is not possible based on the facts and circumstances of the case. Further, the Respondent has submitted that certain expenditure has not even stated to be incurred and hence the Petitioner cannot legally claim the amount which has not even incurred. The Respondent also submitted that even the fixed charges and variable charges have been calculated and even the ARR has been determined on such hypothesis. Even the requirement under the RERC Tariff Regulations, 2014 has not been followed by the Petitioner.
- 4.12 The Respondent has submitted that Petitioner has made provision of Rs. 50 Crore for consultancy engineering services, however the actual expenditure incurred on the same is far behind the provisions. The Respondent further submitted that the Petitioner should justify the need for the consultancy engineering services. The Respondent also submitted that even the provision of CSR activities was not included in the DPR then also the Petitioner has claimed the same.
- 4.13 Petitioner with regards to actual expenses incurred and to be incurred submitted that actual expenses incurred have been considered for provisional tariff and amount shown as to be incurred is just the difference between order value and actual expenditure incurred up to 30.09.2016 which is just for reference and appraisal of the Commission. Further, with regard to fixed charges and variable charges, Petitioner submitted that the petition has been filed as per norms specified in RERC Tariff Regulations, 2014. Fixed charges have been claimed on the basis of actual expenses incurred upto 30.09.2016 and not on the basis of total cost. Since the COD of the Unit 5 has

not been declared yet so the variable cost has been claimed on basis of fuel data of Unit 3&4 and normative norms of operation as per RERC Tariff Regulations, 2014.

4.14 The Petitioner in response to appointment of consultant submitted that such services were required to optimize the plant layouts and thereby to reduce overall land requirement of thermal power plants to adopt the latest technology with cost effectiveness to get proper planning and designing according to site specification such as station capacity, coal source and quality, transportation mode and topography and geometry of the area etc. With regard to CSR expenses the Petitioner submitted that it has already submitted its response.

Commission’s Analysis

4.15 Regulation 42 of the RERC Tariff Regulations, 2014 specifies asunder:

“42. Petition for determination of generation tariff

.....

(4) A Generating Company may file a Petition for determination of provisional tariff in advance of the anticipated date of Commercial Operation of the Unit or Stage or Generating Station as a whole, as the case may be, based on the capital expenditure actually incurred up to the date of making the Petition or a date prior to making of the Petition, duly certified by the Statutory Auditors and the provisional tariff shall be charged from the date of commercial operation of such Unit or State or Generating Station, as the case maybe.

(5) A Generating Company shall file a fresh Petition in accordance with these Regulations, for determination of final tariff based on actual capital expenditure incurred up to the date of commercial operation of the Generating Station duly certified by the Statutory Auditors based on Audited Accounts, in accordance with the formats prescribed by the Commission from time to time.

.....”

4.16 Commission observes that the project comprises of two units of 660 MW each and as on date of filing of the petition the original as well as subsequent sanctioned estimated project cost is combined for both the units. The

booking of actual capital expenditure upto 31.3.2017 in the books of accounts of the Petitioner is also combined for both the units. The Petitioner has filed this petition for determination of the provisional capital cost of Unit # 5 based on allocation of actual capital expenditure on the basis of certain assumptions.

4.17 The Commission also observes that the orders have also been placed combined for both the units. Since the complete project has not achieved COD as on date of filing of the petition, the completed project cost for Stage -II of Chhabra TPS is not available and the Petitioner in its petition has only submitted revised estimates of the Capital Cost for the entire Project.

4.18 The Commission is, therefore, of the view that as the actual capital expenditure incurred for the entire Project is not available at this stage and the capital cost of Unit # 5 depends upon the capital cost of the entire project, the Commission at this stage can only provisionally approve the capital cost. Therefore, the Commission, in this order, has not gone into the merits of the cost and has provisionally approved the hard cost of the Unit # 5 by approving the minimum of the actual cost incurred as on 31.03.2017 under various heads and the corresponding amount approved in the DPR of the Project.

4.19 The Commission, at this stage has also not taken into cognizance of the expenses towards additional scope of work as submitted by the Petitioner. Commission shall undertake final determination of capital cost based on detailed prudence check after the project has achieved COD and the capital cost as on COD is audited and made available by RVUN.

Approval of Hard Cost

4.20 Commission observes that initially the project cost was estimated as Rs.7920.23 Crore which included IDC and financing charges of Rs. 1550.10 Crore. The project cost was revised to Rs.9550.27 Crore which included IDC and financing charges of Rs.2033.10 Crore. Accordingly, the hard cost of the

project was originally estimated as Rs 6370.13 Crore, which was revised to Rs. 7517.17 Crore.

4.21 As discussed earlier, the Commission has not gone into the merits of the expenses incurred and has considered the minimum of the actual cost incurred as on 31.03.2017 under various heads and the corresponding amount approved in the DPR of the Project.

4.22 Based on the above discussion, the Commission provisionally approves the hard cost of Unit # 5 as shown in the table below:-

Table 10: Hard Cost of CTPP Project Unit # 5 and 6 and cost as on anticipated COD of Unit # 5
(Rs Crore)

S. No.	Particulars	Supplier / Contractor	Total Cost as per DPR	Total Hard cost as submitted by RVUN	As per Auditor Certificate as on 31.03.2017	Total Hard Cost Provisionally approved by the Commission	Unit #5 Hard Cost (Allocated Cost)
1	EPC Contract	M/s Larson and Toubro Limited	5833.81	5997.13	5185.68	5185.68	3111.41
2	Consultancy Engineering services	M/s TCE Consulting Engineers	50.00	13.46	9.57	9.57	5.74
	Other Consultancy	M/s TCE Consulting Engineers		4.87	0.00	0.00	0.00
3	River Water system supply	M/s Zuberi	250.00	339.51	137.04	137.04	82.22
		M/s Zuberi		37.38	33.93	33.93	20.36
		M/s Zuberi		45.68	14.85	14.85	8.91
		M/s Zuberi		44.08	15.30	15.30	9.18
		Orders to be placed		31.77	0.00	0.00	0.00
4	Township	Millenium dream build	10.00	5.68	5.62	5.62	3.37
5	Intake well	Orders to be placed		100.00	0.00	0.00	0.00
6	Lhasi Dam	Water Resource Department		58.93	47.00	0.00	0.00
7	Other civil	Orders to be placed	50.00	252.00	5.56	5.56	3.34
8	Raising of height of water resource	WRD		61.02	11.27	0.00	0.00

S. No.	Particulars	Supplier / Contractor	Total Cost as per DPR	Total Hard cost as submitted by RVUN	As per Auditor Certificate as on 31.03.2017	Total Hard Cost Provisionally approved by the Commission	Unit #5 Hard Cost (Allocated Cost)
	department						
9	Cost of Boundary wall			0.80	0.00	0.00	0.00
10	Cost of Connecting Road			1.50	0.00	0.00	0.00
11	Locomotives	Orders to be placed		18.00	0.00	0.00	0.00
12	Bulldozers	order placed		12.00	4.82	0.00	0.00
13	Trucks, Lifts, oil	Orders to be placed		15.00	0.00	0.00	0.00
14	Work required as per NGT	Work Required as per NGT order		3.75	0.00	0.00	0.00
15	Furniture for Admin	Furniture for Admin Building		2.00	0.00	0.00	0.00
16	Other Capitalization	Office Equipments		0.14	0.14	0.00	0.08
		Furniture and Fixtures		1.61	1.23	0.00	0.00
		Others	167.52	166.10	39.21	39.21	23.53
17	Land		8.80	56.11	52.36	8.80	5.28
18	CSR Activities			33.00	2.40	0.00	0.00
19	License fees for coal			52.50	45.84	0.00	0.00
20	Cost of Fuel			100.00	0.00	0.00	0.00
21	Cost of Construction Power			63.15	8.34	0.00	0.00
	Total Hard Cost		6370.13	7517.17	5620.16	5455.56	3273.33

4.23 The Petitioner is further directed to submit the detailed individual package wise reasons for increase in the actual project cost as compared to the original project cost estimates in its petition for determination of the final capital cost of both the units. The reasons should elaborate the basis on which the original cost estimates were considered vis-à-vis the actual project cost. In case, some of the works / packages were not considered in the original project cost estimates and the same are now considered in revised

project cost, the reasons should elaborate the basis on which the same were not considered in the original project cost estimates and the basis on which the same are now being considered in the revised project cost. Where ever necessary, the supporting documents should also be submitted by RVUN.

Scheduled Completion Period:

- 4.24 The Petitioner has submitted that environmental clearance from MOEF for setting of 660 MW U#5 was received on 23.05.12. After retendering in June 2012, EPC contract for complete supply and ETC of 2X660 MW CTPP was awarded on date 28.03.2013 to M/s L&T. Petitioner has further submitted that zero date of EPC contract is 28.03.2013 and scheduled date of completion for complete EPC contract including supply and services is 27.09.2016 (42 months for Unit 5) and 27.12.2016 (45 months for Unit 6). Commission observes that as per the EPC contract, the Unit # 5 and 6 were to be commissioned within 42 months and 45 months respectively from the Letter of Award issued to the EPC Contractor. The Commission further observes that there is a delay in awarding EPC contract due to MOEF Clearance and various technical design changes after which retendering has been done by the Petitioner to attract healthy and wider competition.
- 4.25 Commission is of the view that since the debt infusion started on Quarter 1 of FY 2013-14 which is after the zero date therefore delay on account of delay in the zero date does not have much impact on the IDC, as the expenses incurred prior to this on the project was funded through equity. The Commission at this stage has not gone into the details of the time Over run with respect to the delay in zero date of the project and has provisionally considered the zero date for the project as 28.3.2013 as submitted by the Petitioner and accordingly as per the schedule, Unit # 5 was supposed to be commissioned by 27.09.2016 and Unit # 6 was supposed to be commissioned by 27.12.2016. However, Unit # 5 is anticipated to achieve COD on 1.4.2017.
- 4.26 The Commission further directs the Petitioner to quantify and submit the actual delay on account of environment clearance, delay due to coal block

allocation and delay due to various design changes in main equipment resulting in delay in zero date of the project separately along with all necessary supporting documents.

Date of Commercial Operation

4.27 RVUN submitted that CTPP Unit 5 was initially synchronized on oil on 02.10.2016 and Full load was achieved on 04.04.2017. Unit commissioning along with completion of PG test and COD has not been completed so far. The Petitioner has claimed the actual expenditure incurred upto 31.03.2017. The Commission has gone through the submission of the Petitioner, and has accordingly provisionally considered the expenditure incurred upto 31.03.2017 for the purpose of determining the provisional capital cost of CTPP Unit 5.

Delay in commissioning of the Unit:

4.28 Commission vide its data gap letter dated 11.05.2017 had directed the Petitioner to submit the detailed reasons for such delay in achieving anticipated COD of Unit # 5.

4.29 Petitioner in response submitted that it had floated NIT for CTPP in November, 2009 and price bids were received on 30.04.2010 but the same could not be processed despite several rounds of discussion in various board meetings, for reasons of non-availability of coal linkage/Coal Block(s). Only after assignment of coal blocks on 03.02.2012, that the tender process could gain momentum. As per decision of meeting of Board of Directors held on 20.04.2012, due to various technical design changes in main equipment and also considering that environmental clearance for the project was still awaited, the Board finally decided to cancel & drop the tender enquiry No. TNSCCH-02, release the Bank Guarantees towards Earnest Money Deposit (EMD) of the bidders and issue fresh NIT for setting up CTPP, so as to attract healthy and wider competition which would enable the Company (RVUN) to get the best competitive prices.

- 4.30 Further, RVUN received environmental clearance for CTPP U#5 vide letter dated 23.05.2012 of Ministry of Environment and Forests. Then, Fresh NIT No. TNSCCH-03 was floated on 07.06.2012. RVUN had issued LOI dated 28.03.2013 and according to this date of scheduled completion of Unit 5 was 27.09.2016. The Commission for computing delay has provisionally considered the SCOD for Unit 5 as 27.09.2016. The delay in COD Unit # 5 beyond the scheduled date of COD 27.09.2016 is due to major pending issues such as incomplete ash handling system, DM plant / PTP chemical system including various civil orders. However, the process of load trial operation of the Unit # 5 was earlier interrupted on account of miscellaneous steam leakages on dated 05.02.2017, Air Pre-heater jamming problem on 05.03.2017 and fly ash leakages / ESP associated problems due to which unit is under shutdown since 22.04.2017 for attending ESP / AHP and other pending issues.
- 4.31 Further, the Petitioner has submitted that for Unit 5, proof checking of design from SERC (Structural Engineering Research centre), Procurement of supply, and completion of boundary wall and fencing also delayed the commissioning of the project.
- 4.32 The Commission further asked the Petitioner to submit the delay on account of each reason along with the details. Petitioner did not submit the desired information and replied that the reasons for delay have already been submitted.
- 4.33 The Commission with regard to the reasons submitted by the Petitioner is of the view that except for Environment clearances all other reasons submitted are controllable in nature. Further, Petitioner has not quantified the delay on account of environment clearance.
- 4.34 After considering the replies/submission made by the Petitioner, the Commission is of the view that the Petitioner has not submitted proper justification with regards to any of the above reasons and therefore the Commission is of the view that the delay was totally on account of controllable factors except delay on account of Environmental Clearance by

MOEF.

4.35 Hon'ble APTEL in its judgment passed in Appeal No. 72 of 2011 while allowing the impact of increase in costs due to delay in achieving COD has categorically stated as follows:

"7.4. The delay in execution of a generating project could occur due to following reasons:

- (i) due to factors entirely attributable to the generating company, e.g., imprudence in selecting the contractors/suppliers and in executing contractual agreements including terms and conditions of the contracts, delay in award of contracts, delay in providing inputs like making land available to the contractors, delay in payments to contractors/suppliers as per the terms of contract, mismanagement of finances, slackness in project management like improper co-ordination between the various contractors, etc.*
- (ii) due to factors beyond the control of the generating company e.g. delay caused due to force majeure like natural calamity or any other reasons which clearly establish, beyond any doubt, that there has been no imprudence on the part of the generating company in executing the project.*
- (iii) situation not covered by (i) & (ii) above.*

In our opinion in the first case the entire cost due to time over run has to be borne by the generating company. However, the Liquidated Damages (LDs) and insurance proceeds on account of delay, if any, received by the generating company could be retained by the generating company. In the second case the generating company could be given benefit of the additional cost incurred due to time over-run. However, the consumers should get full benefit of the LDs recovered from the contractors/suppliers of the generating company and the insurance proceeds, if any, to reduce the capital cost. In the third case the additional cost due to time overrun including the LDs and insurance proceeds could be shared between the generating company and the consumer. It would also be prudent to consider the delay with respect to some benchmarks rather than depending on the provisions of the contract between the generating company and its contractors/suppliers. If the time schedule is taken as per the terms of the contract, this may result in imprudent time schedule not in accordance with good industry practices."

4.36 Hon'ble APTEL in its Judgment with regards to sharing of impact on account of time overrun due to mix of controllable and uncontrollable factors has ruled as follows:

"7.12. In view of above, we feel that this case falls under category (iii) described in para 7.4. Accordingly, following the principles of prudence check laid down by us, the cost of time over run has to be shared equally between the generating company and the consumers. Admittedly, there is no enhancement in cost of the contract price of the equipment as no price variation escalation was permissible to BHEL beyond the schedule date of completion of the Project according to the terms of the agreement. The impact of time over run beyond the contractual schedule is only on IDC and overhead costs. Accordingly, the same have to be shared between the generating company and the consumers. Excess IDC and overhead costs for time overrun from scheduled date of commissioning to actual date of commissioning has to be worked out on prorata basis with respect to total actual time taken in commissioning of the unit. 50% of the excess IDC and overhead costs will have to be disallowed. Deduction on account of 50% of the Liquidity Damages received by the Appellant from its suppliers/contractors has also to be allowed from the capital cost, to give due Credit for LDs to the consumers. This issue is answered accordingly."

4.37 Considering the facts and documents submitted by the Petitioner, it is observed that the delay is mainly on account of reasons attributable to RVUN. The Commission is of the view that the present case falls under the category (i) described in the APTEL ruling cited above.

4.38 Accordingly, the Commission at this stage has not allowed any excess costs due to delay in the Project for the purpose of approval of provisional capital cost of Unit # 5. The Commission will carry out the detailed prudence check of the reasons for delay in Project upto COD of Unit # 6 at the time of approval of final tariff based on actual Capital Cost till COD of Unit # 6. The Commission directs the Petitioner to submit the following information along with its petition for approval of final tariff based on actual audited capital cost till COD of Units.

- Activity wise Original L2 level Schedule agreed with EPC Contractor
- Activity wise Actual L2 level schedule
- Exact number of days of delay due to Environmental clearance
- Complete detailed reasons for package wise delay in completion clearly identifying the impact of delay in completion of the project on account of each reason.
- Bifurcation of the impact of each reason whether the same is attributable to the contractor or the Petitioner or due to uncontrollable factor. Whether each reason for delay was within or beyond control of the Petitioner with supporting documents.
- The Petitioner should also furnish the copies of the correspondence exchanged between the contractor / agency and the Petitioner in support of the reasons for delay.

IDC and Financing Charges

4.39 RVUN submitted that as per general accounting rules, the interest cost incurred on the loan taken for construction of power station is added to the capital cost of the project during the continuance of the construction activity. RVUN submitted total actual interest during construction of the units till 31.03.2017 is Rs 1225.06 Crore.

4.40 Petitioner in its petition has submitted that the original anticipated IDC and financing charges was Rs. 1550.10 Crore. However, the same was revised to Rs 2033.10 Crore by Board of Director in its meeting dated 9.03.2017. Petitioner has submitted the Auditor's Certificate certifying the IDC of Rs. 1225.06 Crore. RVUN submitted that due to cost overrun, and increase in the total project cost additional interest cost on the additional loan is estimated to be Rs. 483 Crore and therefore the total interest expense excluding financing charges is estimated to be Rs 2000 Crore (Actual interest expenses is Rs 1517 Crore and estimated interest Rs. 483 Crore on additional loan).

- 4.41 As per Hon'ble APTEL's judgment passed in Appeal No. 72 of 2010, excess IDC and overhead costs for time overrun from scheduled date of commissioning to actual date of commissioning have to be disallowed as discussed above.
- 4.42 The Respondents with regards to increase in IDC cost because of anticipated delay in Scheduled Completion Period for Unit 5&6 has submitted that in the DPR the provision of cost head for IDC was kept as Rs. 1517 Crore but due to delay in grant of Environment Clearance for Unit#6 from MOEF, work of Unit#6 was deferred, resulting in increase in schedule completion period. The work of Unit#5 is also delayed. The Respondent further requested Commission that the increase in such cost should not be borne by the Respondents. The Respondent further submitted that any satisfactory explanations for increase in the cost, has not been made by the Petitioner.
- 4.43 The Petitioner in response has submitted that the reasons of delay for CTPP Unit #5 and 6 are beyond its control and it shall claim the same as per the guidelines of the Commission.
- 4.44 To determine the excess IDC, the Commission asked the Petitioner to submit the quarter wise actual phasing of expenditure along with the funding of such expenditure. The Petitioner in response submitted the quarter wise actual drawal of loan and yearly equity infused in the project. The Petitioner however did not submit the actual quarter wise phasing of expenditure and equity infusion and quarterly interest rates.
- 4.45 Hon'ble APTEL has ruled the treatment of extra IDC on account of the delay under three scenarios. In such a case, the extra IDC needs to be computed considering the impact of the delay in the commissioning of the Project only (i.e., period of construction under Base Case and in the actual Case).
- 4.46 The Commission observes that the purpose of Base Case IDC is to determine the impact of time overrun on IDC, i.e., to determine the difference in IDC had the Project had been completed in the stipulated time, and the actual IDC incurred for the actual time taken for completion.

- 4.47 Hence, the Commission has re-computed the Base Case IDC considering the Hard Cost as approved in the DPR. As regards the Debt Equity ratio for computation of Base Case IDC, the Commission has considered 80:20 as it has been approved by GoR while according approval to the Project. The Commission has considered the quarterly loan amount drawn as submitted by the Petitioner. For purpose of calculating IDC the Commission has considered the interest rate for PFC as per the sanction letter with 3 year reset rate as 11.25% and same is the interest rate for REC. The loan drawals has been started from Q1 of 2013-14. The Petitioner has not submitted any quarterly interest rate and hence the Commission has considered the same rate as specified in the sanction letter. Since the Commission is not allowing the time over run and is considering the SCOD as 27.9.2016, the IDC has been calculated upto 27.9.2016 i.e. upto 89 days of second quarter of 2016.
- 4.48 As regards the delay in the Project due to which the actual IDC has increased, the Commission has already concluded that the delay was on account of reasons entirely attributable to RVUN and therefore the Commission is of the view that the present case falls under the category (i) described in the Hon'ble ATE ruling.
- 4.49 In light of the foregoing, the Commission is of the view that the cost of time overrun should be borne by the Petitioner. The Commission provisionally approves total IDC and financing charges of Rs 937.25 Crore for the project out of which 60% corresponds to unit 5 amounting to Rs 562.35 Crore as on anticipated COD of Unit 5 as per details given in Table below:.

Table 11: IDC and Financing Charges provisionally approved (Rs Crore)

Particulars		Amount
Actual/Estimated IDC	A	2000.00
Base Case IDC	B	937.25
Excess IDC	C=A-B	1062.75
Excess IDC to be allowed	D = 0% of C	0.00
Total IDC to be allowed		937.25
Total IDC and Financing Charges to be allowed provisionally		937.25
Total IDC allowed for Unit 5	60%	562.35

4.50 The Commission however directs that in order to assess the actual base case IDC, and impact of time overrun on IDC, the Petitioner should submit the following information along with the petition for final determination of capital cost.

- a) Actual quarter wise phasing of capital expenditure incurred till COD of the Complete Project. The Petitioner should submit the desired information separately for debt funding and equity infused.
- b) Detailed computations of actual IDC with phasing of expenditure.
- c) Justification for delay quantifying the delay in number of days on account of each reason submitted by the Petitioner.

4.51 The Commission accordingly provisionally approves the following capital cost as on anticipated COD of Unit # 5.

Table 12: Provisionally Approved Capital Cost for the Project and as on COD of Unit # 5(Rs Crore)

Particulars	Total Project Cost as per DPR	Total Project Cost as submitted by RVUN	Total project cost as per Auditor's Certificate	Total Project Cost Provisionally approved by the Commission	Unit # 5 (Allocated Cost)	Provisionally Approved Cost as on COD of Unit #5
Hard Cost	6370.13	7517.17	5620.16	5455.56	3273.33	3273.33
IDC and Financing Charges	1550.10	2033.10	1225.06	937.25	562.35	562.35
Total Cost	7920.23	9550.27	6845.22	6392.81	3835.68	3835.68

4.52 Commission has further allocated the provisionally approved capital cost of Unit #5 to class wise assets in the proportion of asset class wise cost as percentage of total cost submitted by the Petitioner. Accordingly, the asset class wise Capital Cost provisionally approved by the Commission is given in Table below:

Table 13: Asset wise Break up Capital Cost of CTPP Unit # 5 as on anticipated COD

Particulars	Provisionally Approved (Rs Crore)
Land & land Rights	36.42
Building & Civil works of Power Plants	757.84
Hydraulic Works	221.48
Other civil works	3.87
Plant & machinery	2790.84
Lines & cable Network'	24.27
Vehicles	0.00
Furniture & Fixtures	0.86
Office Equipments	0.09
Intangible Assets (Upfront fee for coal mine allotment)	0.00
Capital spares	0.00
Total	3835.68

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SECTION 5
Determination of ARR and Tariff for FY 2017-18

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

Additional Capitalisation

- 5.3 RVUN in its reply to the additional information/data gaps has submitted that it shall incur additional capitalisation of Rs. 667.99 Crore from anticipated COD of Unit # 5 to 31.03.2018. Commission has not considered any additional capitalisation beyond COD in FY 2017-18 at this stage as the Petitioner has not submitted the complete details of the same in accordance with the provisions of RERC Tariff Regulations, 2014. The Commission shall consider the same at the time of determining the final capital cost of the project.
- 5.4 The Commission directs the Petitioner to submit the details of additional capitalisation in accordance with Regulation 17 of RERC Tariff Regulations, 2014 along with the petition for final determination of capital cost.

Depreciation

Petitioner's Submission

- 5.5 RVUN submitted that the depreciation for FY 2017-18 has been computed on the basis of norms prescribed under Clause 22 of RERC Tariff Regulations, 2014.
- 5.6 RVUN has computed depreciation of Rs. 175.31 Crore on the basis of the capital cost as on anticipated COD, i.e. 01.04.2017 and on the basis of initial project cost estimates.

Commission's Analysis

5.7 The Petitioner has claimed depreciation based on the estimated capital cost of Rs. 3436.95 Crore as submitted in the petition. Thereafter, the Petitioner has revised its Capital Cost as Rs. 4107.13 Crore. Petitioner however did not submit the revised tariff forms along with its submissions. Commission vide its letter dated 11.05.2017 directed the Petitioner to submit the Tariff forms as per revised capital cost. Petitioner vide its reply dated 23.06.2017 submitted the same. The Commission has computed depreciation on the basis of approved capital cost as on anticipated COD of Unit # 5.

5.8 The total depreciation for FY 2013-14 is as shown in the table below.

Table 14: Provisionally approved Depreciation for FY 2017-18 (Rs. Crore)

Particular	As claimed in petition	Provisionally approved by the Commission
Depreciation	175.31	185.83

5.9 The provisionally approved depreciation is higher than the claim of the Petitioner as the Petitioner has claimed depreciation on the basis of an estimated capital cost of Rs 3436.95 Crore which was later on revised to Rs. 4107.13 Crore and the Commission has allowed the depreciation on the provisionally approved capital cost of Rs. 3835.68 Crore.

Interest on Term Loan

Petitioner's Submission

5.10 RVUN in its petition for provisional ARR and Tariff for FY 2017-18 has estimated interest on term loan and finance charges of Rs. 328.92 Crore based on the estimated Capital cost of Rs 3436.95 Crore as on anticipated COD.

5.11 RVUN further in its reply to the additional information/data gaps submitted the calculations for the weighted average rate of interest.

Table 15: Calculation of weighted average rate of Interest

Financial Year	Particulars	PFC	REC	Total Loan
2015-16	Additions	1686.49	631.09	2317.58
	Repayment	0.00	0.00	0.00
	Closing Balances	3227.66	1069.17	4296.83
	Interest (Gross)	298.69	76.29	374.98
2016-17	Additions	443.06	1267.46	1710.52
	Repayment	0.00	0.00	0.00
	Closing Balances	3670.72	2336.63	6007.35
	Interest (Gross)	408.13	219.38	627.51
	Weighted average rate of Interest	11.83%	12.88%	12.18%

5.12 Respondent with regards to interest charges on term loans and finance charges has submitted that the interest charges have also enumerated regarding working capital loans which stands at Rs. 45.78 Crore for financial year 2018. Respondent in this regards has submitted that the proposed COD was on 01.04.2017 which did not take place till now.

5.13 With regards to interest charges claimed, Petitioner submitted that the same have been claimed as per Regulation 27 of the RERC Tariff Regulations, 2014.

Commission's Analysis:

5.14 Commission while approving the interest charges has considered the provisionally approved capital cost as on anticipated COD of Unit # 5.

5.15 Petitioner has submitted that the interest rate applicable for the project was 12.18%. Commission in accordance with RERC Tariff Regulations, 2014 has considered the weighted average interest rate for the project which is 12.18%.

5.16 The interest charges on term loan allowed by the Commission for FY 2017-18 have been provided in the table below.

Table 16: Interest on Term Loans and Finance Charges as provisionally approved by the Commission for FY 2017-18 (Rs. Crore)

Particular	As claimed in petition	Provisionally approved by the Commission
Interest on Term Loans and Finance Charges	328.92	362.43

5.17 The provisionally approved interest on loan is higher than the claim of the Petitioner as the Petitioner has claimed Interest on loan on the basis of an estimated capital cost of Rs 3436.95 Crore which was later on revised to Rs. 4107.13 Crore and the Commission has allowed the interest on loan on the provisionally approved capital cost of Rs. 3835.68 Crore.

Operation and Maintenance Expenses

Petitioner's Submission

5.18 RVUN submitted that the Operation & Maintenance Expenses for FY 2017-18 have been computed on the basis of norms prescribed under RERC Tariff Regulations, 2014.

5.19 Accordingly, RVUN has claimed the O&M Expenses of Rs. 113.34 Crore for FY 2017-18.

5.20 Respondent vide its letter dated 24.11.2017 has submitted that RVUN has computed the operation and maintenance charge of Rs.113.34 Crore for FY 2017-18. The Respondent further submitted that the Petitioner has not provided any details regarding computation of the O&M charges. Further, the Respondent has submitted that how the Petitioner has added the operation charges when the plant was itself not under operation as it has not achieved its COD. It is further submitted that the power supplied to the grid is infirm power and for this only fuel cost can be recovered. Respondent further stated that the supply of infirm power to the grid cannot be equated with the supply of commercial power and hence requested the Commission that RVUN should accordingly modify the expenditure on O&M.

5.21 The Petitioner in response submitted that O&M charges have been claimed under Regulation 47 of RERC Tariff Regulations, 2014.

Commission's Analysis

5.22 The Commission has verified RVUN's computations of O&M expenses and found it to be in order as per the provisions of Regulations and

accordingly, same has been approved.

5.23 The O&M expenses as provisionally approved by the Commission for FY 2017-18 have been provided in the table below:

Table17: O&M Expenses Approved for FY 2017-18 (Rs. Crore)

Particular	As claimed in petition	Provisionally approved by the Commission
Operation & Maintenance Expenses	113.34	113.34

Recovery of ARR & Tariff Petition Fees

Petitioner's Submission

5.24 Commission vide Order dated 10.03.2008 had allowed to pass through the fees levied for filing of ARR & Tariff petition, as expenses in the ARR. Accordingly, RVUN has claimed the fee of Rs. 0.33 Crore for FY 2017-18.

Commission's Analysis:

5.25 Commission has approved the recovery of ARR and Tariff petition fees as claimed by RVUN for FY 2017-18 as shown in Table below:

Table18: Recovery of ARR & Tariff Petition Fees provisionally approved for FY 2017-18 (Rs. Crore)

Particular	As claimed in petition	Provisionally approved by the Commission
Recovery of ARR & Tariff petition Fees	0.33	0.33

Insurance Charges

Petitioner's Submission

5.26 RVUN has claimed insurance charges as per norms defined under Regulation 25 of RERC Tariff regulation 2014 which allows actual insurance charges incurred by the generating station subject to a ceiling of 0.20% of average of Net Fixed Assets for the year. Accordingly, RVUN has claimed the insurance charges of Rs. 6.52 Crore for FY 2017-18 for CTPP Unit # 5.

5.27 Respondent with regards to insurance charges has submitted that RVUN has claimed insurance charges in its petition for the FY 2017-18 to the tune of Rs. 6.52 Crore. Respondent further submitted that such expenditure can

be minimized as the station has not achieved its COD. The insurance charges can be calculated only after the determination of Capital cost. Further, RVUN has also not provided the details of the insurance charges.

5.28 The Petitioner in response has submitted that insurance charges have been claimed as per Regulation 25 of RERC Tariff Regulations, 2014.

Commission’s Analysis

5.29 The Commission in view of Regulation 25 of RERC Tariff Regulations, 2014 has provisionally approved insurance charges of Rs 7.30 Crore based on the provisionally approved capital cost of the plant.

5.30 The insurance expenses as provisionally approved by the Commission for FY 2017-18 have been provided in the table below:

Table 192: Insurance Expenses approved for FY 2013-14 (Rs. Crore)

Particular	As claimed in petition	Provisionally approved by the Commission
Insurance Expenses	6.52	7.30

5.31 The provisionally approved insurance charges is higher than the claim of the Petitioner as the Petitioner has claimed insurance charges on the basis of an estimated capital cost of Rs 3436.95 Crore which was later on revised to Rs. 4107.13 Crore and the Commission has allowed insurance charges on the basis of provisionally approved capital cost of Rs. 3835.68 Crore.

Interest on Working Capital

Petitioner’s Submission

5.32 RVUN submitted that the requirement for working capital loan has been computed as per norms specified under Regulation 27 of RERC Tariff Regulations, 2014 and the rate of interest on Working Capital Loan has been taken as 250 basis points higher than the average Base Rate of State Bank of India prevalent during first six months of the year previous to the relevant year. Accordingly, the Petitioner has claimed Rs. 45.78 Crore

towards Interest on Working Capital for FY 2017-18.

Commission's Analysis

5.33 Regulation 27 of the RERC Tariff Regulations, 2014 states that the interest rate for computing interest on working capital shall be considered at a rate of 250 basis points higher than the average base rate of SBI prevalent during the first six months of the previous year. The Commission has accordingly considered interest rate of 11.80% for computing interest on working capital.

5.34 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 provisionally approved by the Commission for FY 2017-18 has been provided in the table below:-

Table 20: Interest on Working Capital approved for FY 2017-18 (Rs. Crore)

Particular	RVUN	Allowable
Cost of Coal	128.14	120.09
Cost of secondary fuel oil	1.43	0.98
O&M expenses	9.45	9.45
Maintenance spares	22.67	22.67
Receivables	226.30	224.92
WC	387.99	378.11
Rate of IWC	11.80%	11.80%
IWC	45.78	44.62

Table 21: Interest on Working Capital provisionally approved for FY 2017-18 (Rs. Crore)

Particular	As claimed in petition	Provisionally approved by the Commission
Interest on Working Capital	45.78	44.62

Return on Equity and Tax on Return on Equity.

Petitioner's submission

5.35 RVUN has submitted that return on equity has been computed as per the norms prescribed under Regulation 20 of RERC Tariff Regulations, 2014 and accordingly has claimed return on equity as Rs.106.55 Crore.

Commission's Analysis

5.36 The Commission in view of Regulation 20 of RERC Tariff Regulation 2014 has computed the return on equity as under:

Table 22: Calculation for Return on Equity

Particulars	FY 2017-18	
	CTPP petition	Provisionally Approved
Opening Equity	687.39	767.14
Addition	0.00	0.00
Closing Equity	687.39	767.14
Rate of RoE	15.50%	15.50%
RoE	106.55	118.91

5.37 The provisionally approved RoE is higher than the claim of the Petitioner as the Petitioner has claimed RoE on the basis of an estimated capital cost of Rs 3436.95 Crore which was later on revised to Rs. 4107.13 Crore and the Commission has allowed RoE on the basis of provisionally approved capital cost of Rs. 3835.68 Crore.

Non-Tariff Income

Petitioner's submission

5.38 RVUN submitted that the main heads of accounts of Non-tariff income are sale of scrap, interest on FD/Staff loans and miscellaneous receipts (rebates), etc. Accordingly, RVUN has estimated the non-tariff income of Rs. 0.01 Crore for the Period FY 2017-18.

5.39 The Respondent with regards to non-tariff income has submitted that RVUN has computed non tariff income for FY 2017-18 however details for the same has not been provided. The Petitioner in response has submitted that since COD of Unit#5 is yet to be achieved hence the same has been claimed on anticipated basis only.

Commission's Analysis

5.40 The Commission has examined RVUN's submission and has provisionally considered non tariff income of Rs. 0.01 Crore as submitted by the

Petitioner:

Table 23: Non-Tariff Income approved for FY 2017-18 (Rs. Crore)

Particular	As claimed in petition	Provisionally approved by the Commission
Non-Tariff Income	0.01	0.01

Annual Fixed Charges for FY 2017-18

5.41 Based on the above analysis, the provisionally approved Fixed Charges of the Chhabra Thermal Power Station Unit # 5 (660 MW) allowed for FY 2017-18 are as under:

Table 24: Provisional Annual Fixed Charges for FY 2017-18 (Rs. Crore)

Particulars	CTPP Unit # 5 (660 MW)	
	As per petition (as per project cost of 7920 cr)	Provisionally approved by the Commission
Depreciation	175.31	185.83
Interest on term Loans and Finance Charges	328.92	362.43
Interest on Working Capital	45.78	44.62
Operation & Maintenance Expenses	113.34	113.34
Recovery of ARR & Tariff Petition Fees	0.33	0.33
Return on Equity	106.55	118.91
Insurance Expenses	6.52	7.30
Gross Fixed Charges	776.76	832.76
Less: Non-Tariff Income	0.10	0.01
Net Fixed Cost (i.e. Capacity Charges)	776.75	832.75
Fixed Charges (Rs/kWh sent out)	1.73	1.83

Determination of Variable Charges for FY 2017-18

Petitioner's submission

5.42 RVUN has submitted Station Heat Rate of CTPP Unit-5 has been considered as 2247.97kCal/kWh. As the PG test of CTPP Unit # 5 has not been done so SHR has been taken as per the Commission maximum design unit heat rate as prescribed at Annexure- 2 of RERC Tariff Regulations, 2014. According to this Turbine cycle heat rate is taken as 1850 kCal/kWh and boiler efficiency is taken as 86%, so maximum design heat rate comes out 2151 kCal/kWh & with consideration of factor 1.045 station heat rate

comes out to be 2247.97 kCal/kWh.

5.43 RVUN further submitted that the PLF has been considered as 83% as per RERC norms and Auxiliary consumption has been considered as 6.31% as per the actual auxiliary connected at the plant.

5.44 RVUN further submitted that as CTPP Unit#5 is a new unit and there is no previous fuel consumption data for this unit and therefore, the GCV oil (HSD/LDO) has been taken as the fuel used in CTPP Unit 3 & 4 and the same is 10000 kcal/litres for HFO and 10000 kcal/litre for LDO, the prices of oil have also been taken as the weighted average price which works out to be Rs. 35000/KL for HFO and Rs. 43000/KL for LDO for FY 18.

5.45 RVUN further submitted that the average GCV of Indian Coal has been considered as 4200 kCal/Kg for FY 2017-18. The price has been taken as the weighted average price which works out to be Rs. 4000/MT for FY 2017-18.

Commission's Analysis

5.46 The Commission has approved variable charges for the FY 2017-18 on the basis of following.

(a)The Commission has considered PLF of 83% as per the RERC Tariff Regulations, 2014.

(b)The Commission with regards to station heat rate asked the Petitioner to submit the basis of heat rate claimed by the Petitioner. The Petitioner in response submitted that as per the specifications provided by the TCE station Turbine cycle Heat Rate is initially not guaranteed, however, RVUN will establish the same after the Performance Guarantee test which is still pending so RVUN claimed Station Heat rate is on the basis of Annexure-2 of the RERC Tariff Regulations, 2014. The Petitioner further submitted that as and when PG test is performed RVUN will submit the documents for guaranteed design heat rate/turbine cycle heat rate and boiler efficiency. The Commission has also considered the document

placed on record by the Petitioner where the OEM has stated the turbine cycle heat rate of 1820 kCal/kWh for the station. The boiler efficiency for computation of design efficiency is submitted as 86%. The Commission has accordingly worked out the provisional design heat rate after factoring in 4.50% as 2211.51kCal/kWh as against 2247.97kCal/kWh, claimed by the Petitioner. The Commission shall take final view regarding the allowable station heat rate in the approval of final tariff.

(c) With regards to auxiliary consumption, the Petitioner has submitted auxiliary consumption of 6.31% based on the actual auxiliary consumption at the station. The Commission in this regard asked the Petitioner to submit the details of Auxiliary consumption in respect of the details required as per RERC Tariff Regulation 2014. The Petitioner in response submitted that at CTPP Unit 5 BFP there are two type of Boiler feed pumps installed one is Motor driven boiler feed pump (MDBFP) & another is steam turbine driven boiler feed pump (TDBFP). Initially, MDBFP will be operated and when desired parameters of steam achieved then TDBFP will remain in service. Cooling tower is natural draft cooling tower. The Commission has considered the submission of the Petitioner and according to the RERC Tariff Regulations, 2014 has allowed auxiliary consumption of 5.25%.

(d) With regards to cost of coal to be considered, the Petitioner has submitted that the coal for CTPP is presently being arranged by transporting from CTPP (O&M), Chhabra stock pile area. The results of GCV & weighted average price of coal received by CTPP (O&M) for the period 2016-17 are as follows:

Period	Average GCV (kCal/kg)	Wt. Avg. Price (Rs/MT)	Loading and Trans. Charges (Rs/ MT)	Total (Rs/MT)
April 16 to June 16	4251.77	3910.40	-	-
July 16 to Sept 16	4145.03	3872.77	-	-
Oct 16 to Dec 16	4205.12	3877.85	30.74	3909.59
Jan 17 to Mar 17	4210.45	4035.08	30.74	4065.82

(e) The Commission has considered the submission of the Petitioner and is of the view that since the railway siding work is not yet done the CTPP Unit 5 will get coal from the Chhabra pile stock area. The Commission provisionally considers the GCV and the landed cost of coal as approved in order dated 20.6.2017 for CTPP unit 3 and 4.

(f) The Commission directs the Petitioner to submit the PG Test Report along with petition for determination of final capital cost and tariff for FY 2017-18.

5.47 The variable charges provisionally determined by the Commission for FY 2017-18 is as under:

Table25: Provisionally Approved Variable Charges for FY 2017-18 (Rs. Crore)

Particulars	Units	As per petition	As provisionally Approved
Total Capacity	MW	660	660
Availability	%	83.00%	83.00%
PLF (%)	%	83.00%	83.00%
Gross Generation (MU)	MU	4798.73	4798.73
Aux Cons (%)	%	6.31%	5.25%
Aux Cons (MU)	MU	302.80	251.93
Net generation (MU)	MU	4495.93	4546.79
Heat Rate	kcal/kWh	2247.97	2211.51
Fuel parameters (for each primary & secondary fuel)			
Gross Calorific Value			
Fuel 1 (Indigenous coal)	kCal/kg	4200.00	4205.12
Fuel 2 (HFO)	kCal/ltr	10000.00	10504.00
Fuel 3 (LDO)	kCal/ltr	10000.00	12000.00
Landed Fuel Price per unit			
Fuel 1 (Indigenous coal)	Rs/MT	4000.00	3815.96
Fuel 2 (HFO)	Rs/KL	35000.00	22962.85
Fuel 3 (LDO)	Rs/KL	43000.00	39619.71
Fuel Consumption & Heat Contribution			
Specific Fuel Consumption			
Fuel 1 (Indigenous coal)	kg/kWh	0.53	0.52
Fuel 2 (HFO)	ml/kWh	0.45	0.45
Fuel 3 (LDO)	ml/kWh	0.05	0.05
Total fuel consumption			
Fuel 1 (Indigenous coal)	MT	2562709.41	2517616.84
Fuel 2 (HFO)	KL	2159.43	2159.43
Fuel 3 (LDO)	KL	239.94	239.94
Heat Content			

Particulars	Units	As per petition	As provisionally Approved
Fuel 1 (Indigenous coal)	kCal/KWh	10763379.51	10586880.91
Fuel 2 (HFO)	kCal/KWh	21594.28	22682.63
Fuel 3 (LDO)	kCal/KWh	2399.36	2879.24
Total Heat Content		10787373.15	10612442.77
Total Fuel Cost			
Fuel 1 (Indigenous coal)	Rs Crore	1025.08	960.71
Fuel 2 (HFO)	Rs Crore	7.56	4.96
Fuel 3 (LDO)	Rs Crore	1.03	0.95
Total Fuel Cost	Rs Crore	1033.67	966.62
Total cost	Rs Crore	1033.67	966.62
Cost of generation per unit (at generation terminal)	Rs/kWh	2.154	2.014
Energy Charge per unit (ex-bus)	Rs/kWh	2.299	2.126

5.48 Commission accordingly provisionally approves the tariff for FY 2017-18 for Unit # 5 as follows.

Table26: Tariff for FY 2017-18

Particulars	As claimed by the Petitioner	Provisionally Approved
Fixed Charges – Rs Crore	776.75	832.75
Fixed Charge – Rs/kWh (Energy Sent out)	1.73	1.83
Variable Charge – Rs/kWh (Energy Sent out)	2.30	2.13
Total Tariff – Rs/kWh (Energy Sent Out)	4.03	3.96

5.49 The 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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