

Rajasthan Electricity Regulatory Commission

Petition No: RERC/1612/20

Petition filed by RVUN for determination of Provisional Capital Cost, Aggregate Revenue Requirement (ARR) & Provisional Tariff for Units 7&8 of Suratgarh Super Critical Thermal Power Station (SSCTPS) for FY 2019-20 and FY 2020-21.

Coram:

Shri Shreemat Pandey, Chairman
Shri S.C. Dinkar, Member
Shri Prithvi Raj, Member

Petitioner : Rajasthan Rajya Vidyut Utpadan Nigam Ltd.

Respondent: 1. Jaipur Vidyut Vitran Nigam Ltd.
2. Ajmer Vidyut Vitran Nigam Ltd.
3. Jodhpur Vidyut Vitran Nigam Ltd.
4. Rajasthan Urja Vikas Nigam Ltd.

Date of hearing : 24.12.2020 & 29.12.2020

Present : 1. Sh. Ankit Sharma, Authorized rep. for Petitioner
2. Ms. Swapna Seshadri, Advocate for Respondents
3. Sh. G.L. Sharma, Stakeholder
4. Sh. D. S. Agarwal, Stakeholder

Date of Order:

03.02.2021

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) and Provisional Tariff for SSCTPS Units 7&8 (2 X 660 MW) for FY 2019-20 and FY 2020-21.

- 1.2 In exercise of the powers conferred under Sections 62, 64 and other provisions of Electricity Act 2003, read with RERC (Terms and Conditions for Determination of Tariff) Regulations, 2019 and other enabling Regulations, the Commission, after carefully considering each of the submissions of the Petitioner and suggestions/objections submitted by the Stakeholder, has passed the following Order.
- 1.3 This order has been structured in following sections as given under:

- (1) Section 1: General
- (2) Section 2: Summary of filing of Provisional Capital Cost, Aggregate Revenue Requirement (ARR) and Provisional Tariff determination process
- (3) Section 3: Summary of objections/comments/suggestions received from stakeholders and RVUN's response thereon.
- (4) Section 4: Determination of Provisional Capital Cost of SSCTPS Units 7&8 (2X660 MW)
- (5) Section 5: Determination of Provisional ARR and Tariff for SSCTPS Unit 7&8 for FY 2020-21
- (6) Annexure 1

SECTION 2

Summary of filing of Provisional Capital Cost, Aggregate Revenue Requirement (ARR) & Provisional Tariff determination process.

- 2.1 In accordance with RERC (Terms & Conditions for Determination of Tariff) Regulations, 2019, hereinafter referred to as RERC Tariff Regulations, 2019, RVUN filed a petition on 27.01.2020 for approval of provisional Capital Cost, ARR and provisional Tariff in advance from the anticipated date of commercial operation of Suratgarh Super Critical Thermal Power Station Unit 7&8 (2x660MW), for FY 2019-20 & FY 2020-21.
- 2.2 The Petitioner in its petition submitted that Suratgarh Super Critical Thermal Power Station Unit 7&8 (2x660MW) is likely to achieve COD on 10.02.2020 and 20.03.2020 respectively.
- 2.3 As per regulation 42(4) of Rajasthan Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff) Regulations, 2019 generating company may file a petition for determination of provisional tariff within six months prior 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 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:

Table 1: Details of Newspapers

Sr. No.	Name of News Paper	Date of publishing
(i)	Dainik Bhaskar	13.02.2020
(ii)	Dainik Navjyoti	13.02.2020
(iii)	Times of India	13.02.2020

- 2.5 The petition was also placed on the websites of the Commission and the Petitioner. The objections/comments/suggestions were received from Shri G. L. Sharma, Rudraksh Energy and Rajasthan Urja Vikas Nigam Ltd. (RUVNL).
- 2.6 Notices were issued to Respondents on 27.01.2020 for filing comments. Accordingly, RUVN submitted common reply on behalf of Respondents on 29.06.2020. The Commission forwarded the objections/comments/suggestions of the stakeholders to RVUN on 17.03.2020 for filing its reply. The Petitioner replied to the objections/comments/suggestions made by objectors and Discoms vide its letters dated 24.07.2020 and 02.11.2020.
- 2.7 The Commission vide letter dated 26.08.2020 communicated some data gaps and deficiencies in the petition and thereafter sent a reminder letter on 26.10.2020 to furnish the desired information. The Petitioner furnished the information vide its letter dated 19.11.2020.
- 2.8 The public hearing in the matter was held on 24.12.2020 and 29.12.2020. Petitioner also made additional submissions vide its letter dated 31.12.2020.
- 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 received from Stakeholder's and RVUN's response thereon.

Admissibility of the Petition

Stakeholder's comments/suggestions

- 3.1 The Petitioner vide Petition No. 1506/19 sought for extension to supply infirm power to the Respondents. The Petitioner may be directed by the Commission to file a status report of its commissioning activities and the reasons as to why it could not declare COD, despite drawing start-up power from 18.12.2018 onwards. Further, it is submitted that a period of six months is usually accepted as an industry-wide norm to complete the synchronisation and commissioning activities and declare COD.
- 3.2 Also, during the proceedings of aforesaid petition, the Petitioner submitted that the COD of Units 7 & 8 could be achieved in November, 2020 and December, 2020 respectively. Accordingly, as per Regulation 42(4) of the RERC Tariff Regulations, 2019 the petition submitted is before time. Therefore, the Petitioner may be directed to withdraw the instant petition, declare the COD after obtaining proper time extension from the Commission and then file a petition with correct capital cost.

RVUN's Response

- 3.3 The Petitioner submitted a road map for achieving COD of Units 7&8. Further, the Petitioner submitted that the activities for achieving COD of the Unit 7 as per the schedule submitted before the Commission were in full swing but due to outbreak of COVID-19, where Ministry of Home Affairs, Government of India order dated 24.03.2020 declared COVID-19 as epidemic and imposed lockdown in whole India. Therefore, COD could not be achieved as per the schedule. Consequently, the revised estimated schedule for achieving COD for Units 7 & 8 are November, 2020 and March, 2021 respectively. Also, Regulation 2(a)(27) of the RERC Tariff Regulations, 2019, states that the act of God comes under Force Majeure Event. RVUN

subsequently submitted that the COD of Unit 7 has been achieved on 1.12.2020.

- 3.4 On sale of infirm power, the Petitioner submitted that the Regulation 44 of the RERC Tariff Regulations, 2019 stipulates as below:

“44. Capital Cost and sale of Infirm Power

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(2) The charges for sale of infirm power from the Thermal Generating Station to the Distribution Licensee shall be based on the actual fuel cost, including the limestone cost, as the case may be, incurred during that period:

Provided that the maximum permissible period for sale of infirm power shall be limited to six months or as extended by the Commission on case to case basis:

Provided further that any revenue other than the recovery of fuel cost earned by the Generating Company from sale of infirm power shall be taken for reduction in capital cost and shall not be treated as revenue.”

Whereas Regulation 7 of the CERC Tariff Regulations, 2019, on sale of infirm power stipulates as below:

*“7. **Sale of Infirm Power:** Supply of infirm power shall be accounted as deviation and shall be paid for from the regional deviation settlement fund accounts in accordance with the Central Electricity Regulatory Commission (Deviation Settlement Mechanism and Related matters) Regulations, 2014:*

Provided that any revenue earned by the generating company from supply of infirm power after accounting for the fuel expenses shall be applied in adjusting the capital cost accordingly.”

By comparing the above two regulations, it is observed that there is no such restriction of time limit in the CERC Tariff Regulations, 2019 for infirm power period as in the RERC Tariff Regulations, 2019. Further, RERC Tariff Regulations, 2019 allows extension for sale of infirm power by the Commission on case to case basis.

- 3.5 Therefore, the Petitioner submitted that the Petition is well maintainable and requested the Commission to determine the Provisional Capital Cost, ARR and Tariff.

Date of Synchronization

Stakeholder's comments/suggestions

- 3.6 The Petitioner to submit the dates of synchronization of Units 7 & 8 on oil, coal and with grid.

RVUN's Response

- 3.7 The date of synchronization for SSCTPS (Units 7&8) on oil and coal is as shown in the table below:

Table 2: Date of Synchronization

Particular	Synchronization on Oil	Synchronization on Coal
Unit - 7	18.12.2018	18.12.2018
Unit - 8	Not yet synchronized	Not yet synchronized

Project Schedule

Stakeholder's comments/suggestions

- 3.8 The Stakeholder sought the following with respect to the project schedule:
- Justification, for executing PPA with discoms on 18.05.2010 and 15.12.2010, without placing any order for procurement of the machines and for their erections;
 - Justification, for the variance in the expected commercial date of operation mentioned in the PPA and in the DPR. Also, the Petitioner to submit the unit wise tariff envisaged as per the estimated cost and schedule date of commissioning as per the DPR;
 - For Designing, Engineering, Manufacturing, Assembly, testing of works and Erection and Commissioning, order has been placed with M/s BHEL on 23.05.2013. The Petitioner to submit justification for taking four years in placing the order after receipt of Administrative and Financial approval from State Government on 02.03.2009;
 - Vide the aforesaid work order awarded to M/s BHEL, project schedule for Unit 7 is 42 months, i.e., up to 27.09.2016 and for Unit 8, is 45 months, i.e., up to 27.12.2016, whereas none of these units have come in operation on the mentioned dates. The Petitioner to submit justification in this regard.

RVUN's Response

- 3.9 The Petitioner submitted the following with respect to the project schedule:

- i. All necessary requirements such as fuel, land, sale of power, power evacuation and various clearances were made before placing an order. Accordingly, the Petitioner executed PPA for the sale of power;
- ii. The Petitioner submitted the tariff considering the estimated cost as per the DPR vide the instant petition;
- iii. Notice Inviting Tenders for 2 X 660 MW Suratgarh Supercritical Project was floated in the year 2009 and price bids were received on 30.01.2010. However, the environment clearance certificate was not received from Ministry of Environment and Forest (MoEF), and therefore, the Petitioner decided to cancel the tender. The environment clearance certificate was received on 23.05.2012. Accordingly, retendering was done on June, 2012 and EPC contract was awarded on 28.03.2013 to M/s BHEL;
- iv. Justification for delay in COD of each units has been submitted with the instant petition along with the relevant documents.

MoEF Clearance

Stakeholder's comments/suggestions

- 3.10 The Petitioner is required to submit the copy of Ministry of Environment and Forest (MoEF) clearance for taking up construction activities of SSCTPS (Units 7 & 8).

RVUN's Response

- 3.11 The Petitioner submitted copy of Ministry of Environment and Forest (MoEF) clearance certificate for taking up construction activities of SSCTPS (Units 7 & 8).

Capital Cost

Stakeholder's comments/suggestions

- 3.12 In accordance to the Regulation 42(3) of the RERC Tariff Regulations, 2019 the stakeholder sought the allocation statement of capital cost related to the common facilities and of combined cost across all units, along with the basis of allocation of expenditure for Units 7 & 8, duly audited and certified by the statutory auditor.
- 3.13 The Petitioner with the instant petition submitted certificate of Chartered Accountant in respect of capital investment for Unit 7 & 8 as on 31.03.2019. Accordingly, the opening balance of FY 2019-20 for

Unit 7 & 8 is Rs. 5268.20 Crore and Rs. 3545.78 Crore respectively, whereas in the statement of Fixed assets and provisions for depreciation, opening balance of FY 2019-20 for Unit 7 & 8 is Rs. 29.63 Crore and Rs. 24.96 Crore respectively. In this regard, the stakeholder sought justification for the variance.

- 3.14 The anticipated COD considered by the Petitioner for Unit 7 & 8 is 10.02.2020 and 20.03.2020 respectively. In this regard, the stakeholder sought the certificate of expenditure from Chartered Accountant up to 31.12.2019.
- 3.15 The Petitioner is required to submit the statement of annual expenditure incurred under various heads of the project from the date of start of the project, along with the unit wise allocation of expenditure, year wise amount of debt and equity separately infused for the project from the date of start of the project and the amount of IDC payable from date of start of this project to till date.
- 3.16 The BOD vide meeting dated 09.03.2017 revised the project cost from Rs. 7920.00 Crore to Rs. 9161.35 Crore. In this regard, the Petitioner to submit revised sanction letter from the Government. In case, if it is not availed justification for the same be submitted. Also, from the instant petition it is observed that expenditure up to 31.03.2019 in respect of Unit 7 is Rs. 5268.20 Crore and of Unit 8 is Rs. 3535.78 Crore. Besides these, a sum of Rs. 1954.05 Crore is the expenditure, which is to be incurred. Thus, totalling it to Rs. 10,758.03 Crore. In this regard, the Petitioner to justify that which amount is to be considered as a cost of project.
- 3.17 The Petitioner is required to submit the justification for substantial increase in cost of followings:
- i. For Land, the cost is increased to Rs. 28.00 Crore, whereas per DPR it is Rs. 8.80 Crore;
 - ii. For Township, the cost is increased to Rs. 90.00 Crore, whereas per DPR it is Rs. 10.00 Crore;
 - iii. For marshalling yard, the cost is increased to Rs. 300.00 Crore, whereas per DPR it is Rs. 50.00 Crore;

- iv. For Fly Over Bridge, Ash Development area and CSR works, the cost is being claimed of Rs. 64.88 Crore, Rs.80.00 Crore and Rs. 33.00 Crore respectively, whereas for the same, there was no provision in the DPR;
 - v. For purchase of various equipment like Bulldozers, Locomotives, Trucks and cost of power for construction is being claimed at Rs. 38.00 Crore and Rs. 36.00 Crore respectively, whereas per DPR it is nil.
- 3.18 The stakeholder sought justification for considering the cost of LDO for Rs. 100.00 Crore under head of "Overhead" as a part of capital cost.
- 3.19 The Petitioner submitted the details of "Capital Expenditure to be incurred". In this regard following is required to be submitted:
- i. For upfront charges, details of coal block allotted for Units 7 & 8 with supporting documents;
 - ii. Details of miscellaneous items, against which Rs. 30.77 Crore is being claimed;
 - iii. Details of Land, against which Rs. 0.25 Crore is being claimed;
 - iv. Details of colony, i.e., number of houses to be constructed or already constructed and other activities therein with its cost;
 - v. Details of various category of employee, presently working and officials to be employed;
 - vi. Details of Physical Contingency, for which Rs. 12.62 Crore is being claimed;
 - vii. Details of Pre-Operative expenses, for which Rs. 106.19 Crore is being claimed;
 - viii. Details of Finance Charges, for which Rs. 37.66 Crore is being claimed;
 - ix. Details of Additional implication due to statutory variance in service tax and new imposition of tax, for which Rs. 15.61 Crore is being claimed;
 - x. Details of expected escalation considered of Rs. 333.48 Crore during the execution of the project;
 - xi. Details against, development of Ash Dyke for which Rs. 90.00 Crore is being claimed;
 - xii. The Petitioner claimed an amount of Rs. 21.88 Crore for energy provided to M/s BHEL at free of cost for construction purpose and

for energy to be consumed for commissioning of Units 7 & 8. In this regard, following is required to be submitted:

- a) From which unit of SSCTPS power has been made available to M/s BHEL for construction;
- b) Year wise quantum of power supplied to M/s BHEL from date of start of construction with its cost;
- c) Quantum of free power supplied for commissioning and cost incurred for the same from the date of synchronizing of Unit 7 & 8 with the grid;
- d) Year wise energy supplied to M/s BHEL for their offices, quarters, canteens and purpose other than construction from the date of start of construction, cost incurred for the same and under which head of account such amount has been adjusted.

RVUN's Response

- 3.20 The Petitioner submitted allocation statement of unit wise capital cost duly certified by the statutory auditor with the instant petition.
- 3.21 As per the certificate of Chartered Accountant in respect of capital investment for Units 7 & 8 as on 31.03.2019, the opening balance of Unit 7 as on 01.04.2019 is Rs. 5268.20 Crore. Accordingly, tariff computations are done. The Petitioner requested the Commission to allow the tariff as claimed. The Petitioner submitted revised Form 6.1 (Fixed Asset and provisions for depreciation).
- 3.22 The Petitioner submitted that the audit of FY 2019-20 is in process and the auditor certificate for capital expenditure will be submitted as soon as the audit is completed.
- 3.23 The Petitioner submitted the statement of annual expenditure incurred under various heads of the project from the date of start of the project, along with the unit wise allocation of expenditure. Whereas, year wise amount of debt and equity separately infused for the project from the date of start of the project and the amount of IDC payable from date of start of this project up to 31.03.2019 has been submitted with the instant petition.
- 3.24 The revised sanction letter from the Government of Rajasthan of Rs.

8966.47 Crore has been submitted with the instant petition. The reason for reduction of the cost has been pursued. The cost of the project approved by the BOD, RVUN was considering IDC up to December, 2017, i.e., one year delay from the scheduled COD. As the scheduled COD has been delayed further, the capital cost would be finalized after achieving COD of the project, which will be submitted after achievement of COD.

3.25 With respect to the increase in cost, the Petitioner submitted the following:

- i. Cost of township in the DPR was an estimated amount, which increased as per the actual requirement of site wise construction activities of additional quarters, residential accommodations and awarding contract through open competitive bidding;
- ii. Cost of marshalling yard in the DPR was an estimated amount. The consultancy for preparation of DPR was awarded to M/s Rites. M/s Rites submitted final DPR in January, 2017 at the cost estimate of Rs. 284.00 Crore. However, following items were not included in the cost:
 - a) Cost of future work;
 - b) Cost of over-head electrification work;
 - c) Cost of wagon tippler;
 - d) Payment to Government agencies for railway siding work;
 - e) Cost of any additional work, which may crop up during construction stage;
 - f) Cost of cutting of trees and payment to forest department;
 - g) Cost of land;
 - h) Cost of railway staff to be deployed exclusively on power plant rail siding facilities;
 - i) O&M cost of siding facilities;
 - j) Firefighting and safety arrangement;
 - k) Cost of diversion/ raising of 220 kV crossing line, chain fencing, entry gate, way-bridge and sick wagon shed.
- iii. In the DPR, the provision for the work of Fly over bridges were kept. However, cost was not envisaged. The cost was decided in 268th meeting of BOD, RVUN for these works as Rs. 64.88 Crore;

- iv. In the DPR, the provision for Ash handling system structure, fly ash pipe trestles, compressor house, foundation, fly ash silos and bottom ash silo, development of ash disposal area and pipe racks up to disposal area were kept at Rs. 10 Crore, which were included in direct and indirect cost of DPR of Rs. 5517.71 Crore. The cost was finally decided in 268th meeting of BOD, RVUN for these works as Rs. 80.00 Crore;
- v. In the DPR, there were no provisions for CSR expenses, as the CSR policy was not formulated at the time of preparation of DPR, i.e., December, 2009. The Petitioner applied for the Environment Clearance for SSCTPP (Units 7-8). The MoEF issued Terms of Reference (TOR) on 17.07.2009, where it was directed as below:

“(xxxi) Measures of socio economic influence to local community proposed to be provided by project proponent. As far as possible, quantitative dimension to be given.”

Considering the above direction of MoEF, the Petitioner formulated a comprehensive policy on Corporate Socio Responsibility (CSR).

According to the CSR policy, the Petitioner has estimated cost for social development “@ Rs. 2.5 Lakhs, 2.0 Lakhs, 1.5 Lakhs per MW (one time) for coal based thermal projects on supercritical technology, coal based thermal projects on sub-critical technology and gas based thermal projects respectively”. Accordingly, the cost was decided in 268th meeting of BOD, RVUN for these works as Rs. 33.00 Crore;

- vi. In the DPR, the provisions for various equipment's like bulldozers, locomotives, trucks, canter, transformer oil, filter machines, cranes, vacuum pumps, DG Sets were kept, which were included in direct and indirect cost of DPR of Rs. 5517.71 Crore. The cost was finally decided in 268th meeting of BOD, RVUN for these works as Rs. 38.00 Crore.

3.26 The cost of LDO claimed in the capital cost is for the preparation of boiler, steam blowing, running of machine before commissioning.

3.27 With respect to the details of “Capital Expenditure to be incurred” the Petitioner submitted the following:

- i. Coal for SSCTPP (Units 7-8) is allotted from Parsa coal mines. The relevant documents are submitted with the instant petition;
- ii. Miscellaneous items, against which Rs. 30.77 Crore is being claimed are bulldozers, locomotives, truck fork lifter;

- iii. Land, against which Rs. 0.25 Crore is being claimed pertains to SSCTPP project;
- iv. Details of colony as sought by the stakeholder are as under:

Type of Unit	No. of units
R2 type	1
R3 type	4
R4 type	148
R5 type	58
Senior field hostel	47
Junior field hostel	49
Total	307

- v. Details of employee as sought by the stakeholder are as under:

Particulars	No. of Employee
Sanction strength	1332
Working strength	375

- vi. With respect to the claimed amount of Rs. 12.62 Crore, against Physical Contingency, the Petitioner submitted that these expenditure are related to establishment and commissioning. The revised statutory auditor certificate up to 31.03.2020 is submitted with the reply of data gaps of the Commission;
- vii. With respect to the claimed amount of Rs. 37.66 Crore, against Finance Charges, the Petitioner submitted that these are mandatory charges. The cost taken is 1% of 60% of direct and indirect cost. As the direct and indirect cost has increased, expenditure against this has also been increased;
- viii. With respect to the claimed amount of Rs. 15.61 Crore, against Additional implication due to statutory variance in service tax and new imposition of tax, the Petitioner submitted that these are statutory variations and implemented at any stage of the contract and are liable to be paid;
- ix. Details of pre-operative expenses, escalation expected and development of Ash Dyke, for which Rs. 106.19 Crore, Rs. 333.48 Crore and Rs. 90.00 Crore is being claimed respectively are submitted with the instant petition;
- x. With respect to the claimed amount of Rs. 21.88 Crore, against energy provided to M/s BHEL, the Petitioner submitted the following:
 - a) Electricity for construction purpose has been drawn from STPS (Units 1-6);

- b) Year wise quantum of power supplied to M/s BHEL from date of start of construction with its cost have been submitted with the instant petition;
- c) Quantum of free power supplied for commissioning from the date of synchronizing of Unit 7 & 8 with the grid. Also, the power consumption has been recorded by STPS (Units 1-6) and the same power has not been accounted for sent out of STPS (Units 1-6) during that period;
- d) Year wise energy supplied to M/s BHEL for their offices, quarters, canteens and purpose other than construction.

Delay in Commissioning

Stakeholder's comments/suggestions

- 3.28 The Petitioner to submit justification for considering local hindrance in the area as a delay in execution of the project, as in the DPR the details of rehabilitation, population to be displaced etc. has been submitted as not applicable. Further, the correspondence letters submitted by the Petitioner with the EPC contractor does not show any sign of labour unrest, repeated strikes of labour, obstruction of work due to high absenteeism of labour, etc. as claimed by the Petitioner for the reason in delay of commissioning. Also, the Work Order for commencement of work to M/s BHEL is of May, 2013, whereas the report of M/s BHEL about agitation with local area people is of May, 2016, i.e., after a period of three years. Therefore, claim of time overrun for 132 days against the same is not acceptable.
- 3.29 Climate conditions of the area of June, 2016 has been considered as one of the reason for delay in commissioning of the project, i.e., after a period of three years from the date of work order awarded to M/s BHEL, which is not reasonable. Also, these reasons pertain to the contractor. Further, the documents submitted shows that the temperature was nowhere near to 50° to 54° as claimed by the Petitioner. Hence, the claim of time overrun for 15 days against the same is not acceptable.
- 3.30 For marshalling yard, the Petitioner to submit the following:

- i. DPR of the project was prepared in December, 2009, where it was clear that railway siding is a required. In this regard, the Petitioner to submit justification for not taking the action simultaneously with Notice Inviting Tender for procuring the machines;
- ii. Justification for stating that the North Western Railway took more than 2 years, i.e., January, 2015 to January, 2017 for approving the DPR;
- iii. To substantiate its claim that the delay was on part of the North Western Railway.

3.31 With respect to land acquisition, the Petitioner to submit the following:

- i. Details of land required for the project as per DPR and the land acquired against that requirement;
- ii. Justification for having additional land for ash disposal;
- iii. Work order for having consultancy for preparing feasibility report and DPR for railway siding has been placed after a period of seven months from placing the LOI for the machines. The Petitioner to submit justification for the same;
- iv. Feasibility for Railway siding was ready in January, 2014. However, request for acquisition of land has been made in August, 2014, i.e., after a period of seven months. The Petitioner to submit justification for the same;
- v. To substantiate its claim that the SDM delayed the land acquisition.

3.32 The stakeholder sought justification for not taking up the matter with RVPN against shifting of 220 kV line timely, along with the process of acquisition of land. Also, the Petitioner to submit the details of project which were disturbed by shifting of line.

3.33 The stakeholder referred to the judgement of APTEL dated 12.07.2018 in Appeal No. 175/2015 in the case of "Pragati Power Limited", wherein the delay in execution of EPC Contract by M/s BHEL was pleaded as an uncontrollable factor. The observation of the Hon'ble APTEL are as below:

- ii. ... From the above it emerges that the Central Commission while holding that there is no imprudence in selection of EPC Contractor and dealing the issue of time overrun has held that the delay in commissioning of

Pragati-III was attributable to the Appellant as the delays were mainly due to lack of due diligence, improper planning & execution, slackness in project management, co-ordination issues between BHEL and its sub-contractors, availability of material, mobilization of resources etc. by the EPC Contractor. The Central Commission has also observed that the reasons of delay cannot be said to be beyond the control of the EPC Contractor and the Appellant has failed to enforce the terms of the contract with the EPC Contractor and hence in accordance with the MSPGCL Judgment the entire cost due to time overrun is to be borne by the Appellant as per situation (i).

.....

iv. We further hold that the reasons for delay in commissioning of Pragati-III are generally related to slackness in project management, deployment of lesser resources, lack of planning/due diligence for transportation of GTs, unavailability of equipment in time etc. These are all contractual issues between the Appellant and the EPC Contractor and between EPC Contractor and its Sub-Contractors. These type of issues are covered in situation (i) of the MSPGCL Judgment. We also observe that the contracts have provisions to deal with such type of situations and the Appellant can levy Liquidated Damages (LDs). In the instant case. We have not come across even a single issue, which is beyond the control of the EPC Contractor/ appellant leading to delay in the commissioning of the Pragati-III. The Appellant has failed to impress upon the EPC Contractor to construct the project in scheduled time. Accordingly, the Appellant is not eligible for grant of time overrun and corresponding increase in IDC/IEDC. However, in terms of the MSPGCL Judgment, the Appellant is eligible to retain the insurance proceeds on account of delay, if any and LD amount recovered from the EPC Contractor.

.....

vii. In the present case, the Central Commission also held that there is no imprudence in selecting BHEL as an EPC Contractor as it was expected from a major state owned manufacturing company of repute like BHEL to carry out the works expeditiously with proper project management techniques. However, it does not mean that prudent selection of a company to execute the project is enough and the Appellant can be excused of situation (i) of the MSPGCL Judgment. Selection of the contractor and execution of the project are two different things. The Respondent No. 4 has submitted that prudence in selection of BHEL as EPC Contractor reflects the capabilities of BHEL yet the conduct of parties in executing the contractual agreement is vital which depends on case-to-case basis. We tend to agree with this contention of the Respondent No. 4. Further, we also observe that the scenarios mentioned under situation (i) of the MSPGCL Judgment are indicative only and not exhaustive.

viii. Hence, in view of our discussions as above, we are of the considered opinion that the issues raised by the Appellant are decided against it.

....."

RVUN's Response

- 3.34 The area where the plant is located is fertile due to availability of canal water for irrigation. As a result, frequent agitations were held on the issue of water and the works of power projects were stalled. Also, the local manpower had their vested interest and created hurdles for other labour to carry out the construction activities. The documents submitted with the instant petition are sufficient to prove that the work at the site has been hindered by the local public. The time indicated by the stakeholder for agitation is well before the scheduled date of commissioning of the units. Therefore, the Petitioner requested the Commission to consider the delay in the project as claimed against the same.
- 3.35 The climatic conditions of June, 2016 were abnormal and affected the construction activities in the area. Therefore, the Petitioner requested the Commission to consider the delay in project as claimed against the same.
- 3.36 For marshalling yard, the Petitioner submitted the following:
- i. Proposal for railway siding started after placement of EPC work order, i.e., 28.05.2013, as it was excluded from the scope of EPC contract;
 - ii. After placement of work order of EPC work, M/s RITES was requested to submit offer for preparing feasibility report and DPR on 14.08.2013. Consequently, order was placed for the work on 21.10.2013. In principal approval for the feasibility report was communicated by the railways on 03.06.2014. The final DPR was submitted on 24.04.2015 to North Western Railway. Also, the matter of railway is not related with contractor/subcontractor, it is a deposit work to be carried out by Indian Railway.
- 3.37 With respect to land acquisition, the Petitioner submitted the following:
- i. Land requirement as per DPR was 474 Hectare and actual land acquired is 587.53 Hectare, which includes the residential colony area as well. The details of land acquired have been submitted with the instant petition.
 - ii. The work order for EPC was awarded on 28.05.2013, in line with the 145th meeting of BoD, RVUN, dated 19.08.2008. Also, MD, M/s

Rites was requested to attend meeting with CMD, RVUN on 13.08.2013. After the meeting, M/s Rites on 14.08.2013 requested to submit offer for preparing feasibility report and DPR. Subsequently, order was placed for the work on 21.10.2013. The time taken in placing order for preparing feasibility report and DPR is normal processing time and there is no considerable delay. Hence, there is no delay as such in acquisition of land for railway siding.

- iii. The Petitioner submitted various correspondences with the land allotting authority.

3.38 The layout and construction of 220 kV lines pertains to RVPN and the same was approved by the CMD, RVPN on 26.03.2009. The Petitioner submitted that all efforts were made to execute the shifting of 220 kV work at the earliest possible. The works under pipeline got delayed and there is no separate head for such expenditure to incur. Therefore, the Petitioner requested the Commission to consider delay as claimed against the same.

3.39 The Petitioner submitted that the EPC contractor delayed the project despite rigorous follow up. The matter was taken up several times up with the State Government. The CEA also intervened in the matter and asked M/s BHEL to carry out the works in time. The relevant documents of the Petitioner's effort are submitted with the instant petition. Therefore, the Petitioner requested the Commission to consider delay as claimed against the same.

EPC Contract

Stakeholder's comments/suggestions

3.40 The Petitioner to submit the copy of evaluation statement of the bids received against EPC Contract.

3.41 The stakeholder sought the list of materials covered under Rs. 2443.30 Crore, 86.1 MUSD and 106.40 Million Euro separately, against first contract awarded to M/s BHEL, along with the details of foreign exchange variation considered for the materials included in MSUD and Million Euro, with their date of dispatch and payments modes.

3.42 The aforesaid amount includes Rs. 33.24 Crore against central sales tax applicable on interstate sales. However, it is also stated that the

price is inclusive of packing and forwarding charges and all taxes and duties as applicable in and outside India. In view of above, petitioner to submit the justification for including Rs. 33.24 Crore towards central sales tax in the schedule of price.

- 3.43 Also, as per the terms and conditions of the contract, 5% advance payment is on acceptance of LOI, second instalment of 5% within 6 months from the date of issue of LOI and 70% amount against receipt of equipment on-site. In this regard, the Petitioner to submit the dates on which advance payment is done, amount of advance payment, details of material against which 70% advance payment is done and date of receipt of materials at site.

Further, as per the terms of the contract, *"In case the supply of equipment is delayed from the contracted supply cut-off date, then the currency amount claimed by the contractor for the delayed supplies shall be restricted to the equivalent Indian rupees prevailing as on the cut-off date for completion of supplies of the equipment or actual date of supply of the equipment whichever is less and shall be paid...."*

In this regard, the Petitioner to submit the cut-off date referred above and actual date of supply of equipment.

- 3.44 First work order awarded to M/s BHEL has clause regarding personnel training. In this regard, following information be submitted:
- i. Copy of relevant clauses and amendments thereof against personnel training;
 - ii. Whether such training was for manufacture's works or for some other purpose;
 - iii. Name and designation of officials deployed for the training and period of such training;
 - iv. Whether the officials deployed for training are employed at SSCTPS and if not, details of their present work;
 - v. In case, no official was deployed for training, justification thereof, be submitted.
- 3.45 From schedule of prices for supply of contract it is submitted that the cost of design, engineering, manufacture, assembly, testing of works

and supply of all equipment's includes training charges. The Commission may disallow the training charges.

- 3.46 The second contract awarded to M/s BHEL is for providing all services, i.e., unloading, storage, handling and in-plant transportation at site, erection testing and commissioning. Also, the cost of employees for above works is to be borne by the contractor. In view of the above, contract tax and labour welfare cess does not arise. However, such charges are included in the work order. The Petitioner to submit justification for the same.
- 3.47 The Petitioner is required to submit the copy of Sheet 3 of the Tata Consulting Engineers Ltd. against schedule of performance guarantee and guaranteed auxiliary power consumption.
- 3.48 The Petitioner is required to submit the information as below:
- i. Copy of PERT Chart approved by the M/s BHEL and the Petitioner from manufacturing stage of units up to the date of commissioning;
 - ii. Scheduled and Actual date at site for receipt of each part of machines, BOP (Electrical), BOP (Mechanical) and Mandatory spares;
 - iii. Details of the amount and the manner in which the EPC contractor or other contractor are liable for payment of penal charges for delays, rate at which the amount has been recovered. In case, no amount is recovered from the contractor, justification for the same be submitted;
 - iv. Total IDC, if the work of commissioning would have completed as per the schedule given in the contract letter;
 - v. Complete copy of Annexure IV, V and VI attached with the first work order and Annexure IV attached with second work order towards M/s BHEL;
 - vi. Scheduled and Actual date in respect of each part of steam generator and auxiliaries as should have been manufactured, assembled and tested at works as per work order. In case of any delay, amount recovered for each cause.
- 3.49 Petitioner to submit the cost of maintenance tools and tackles included in the second work order awarded to M/s BHEL.

RVUN's Response

- 3.50 The Petitioner submitted the copy of evaluation statement of the bids received against EPC Contract.
- 3.51 The Petitioner submitted the details of materials covered under Rs. 2443.30 Crore, 86.1 MUSD and 106.40 Million Euro separately, against first contract awarded to M/s BHEL and details of payments as sought by the stakeholder. The payments of certain equipment's are made in USD & Euro as per the purchase order.
- 3.52 As per the provisions of the contract, the total contract price is inclusive of ex-works price, mandatory spares price, taxes & duties (CST, WCT & labour welfare cess) and P&F charges.
- 3.53 The details of advance payments are as under:

First advance of 5% on 01.05.2013 (Rs. Crore)			
Order No.	380	381	382
INR	108.32	61.30	25.53
USD in INR	23.14	-	-
EURO in INR	37.68	-	-
Total	169.15	61.30	25.53
Second advance of 5% on 06.01.2014 (Rs. Crore)			
Order No.	380	381	382
INR	108.32	61.30	25.53
USD in INR	26.88	-	-
EURO in INR	45.15	-	-
Total	180.36	61.30	25.53
Grand Total			523.18

The remaining payment milestones were as and when bill received on receipt of material. Also, supply cut-off date as per the contract was 27.09.2016 and 27.12.2016 for Units 7 & 8 respectively. However, the competent authority has allowed a provisional extension up to 30.06.2020 for the same.

- 3.54 With respect to the clause regarding personnel training in the first work order awarded to M/s BHEL, the Petitioner submitted the following:
- Copy of clause 3.17 of Schedule 2, Vol - I and other relevant clauses of the specification and amendments thereof;

- ii. Training of RVUN staff has been provided by M/s BHEL;
 - iii. List of staff participated in training;
 - iv. The training has been taken by employees associated with the SSCTPP plant.
- 3.55 The cost of design, engineering, manufacturing, assembly, testing at works and supply of all equipment's, training is the part of the contract and is being dealt accordingly. Therefore, the Petitioner requested the Commission to allow as claimed.
- 3.56 The taxes as mentioned by the stakeholder are included in the contract and its bifurcation is also given in the work order. Accordingly, the payments are done.
- 3.57 The Petitioner submitted the copy of Sheet 3 of the Tata Consulting Engineers Ltd. against schedule of performance guarantee and guaranteed auxiliary power consumption.
- 3.58 The Petitioner submitted the following information as sought by the stakeholder as under:
- i. Copy of PERT Chart;
 - ii. Schedule of receipt of each part of machines, BOP (Electrical), BOP (Mechanical) and Mandatory spares has been provided in L - 2 schedule and actual receipt has been executed as per the contract;
 - iii. Delay in construction of plant is on account of the contractor and the penalty and liquidated damage shall be levied as per the conditions of contract on completion of work and closing of contract;
 - iv. The Capital cost of Rs 7920.67 Crore includes IDC of Rs 1517.00 Crore, with hard cost of Rs 6403.67 Crore and the Capital Cost of Rs. 9161.35 Crore includes IDC of Rs. 2000 Crore, with hard cost of Rs. 7161.35 Crore up to 27.12.2017. Considering hard cost as Rs. 7161.35 Crore, the IDC would have been Rs. 1696.49 Crore, if the project would have been brought within schedule period;
 - v. Complete copy of the Annexure as sought against the first and second contract;

- vi. Details in respect of each part of steam generator and auxiliaries as should have been manufactured, assembled and tested at works as per the work order.

3.59 The Petitioner submitted the cost of maintenance tools and tackles included in the second work order awarded to M/s BHEL.

Railway System

Stakeholder's comments/suggestions

3.60 The marshalling yard is to be constructed within the generating station by extending the railway track existing within the generating station to newly built Unit 7 and 8 site. In this regard, the Petitioner is required to justify as to how and where the question of any Road Over Bridges (ROBs) has arisen along with its requirement.

3.61 The Petitioner is required to submit the position of the present track coming from the railway station to the generating station and extension thereof in the premises of the station for Unit 7 and 8, and the position of proposed ROBs in the pictorial form.

3.62 The stakeholder requested the Commission to disallow the cost claimed against ROBs, i.e., Rs. 7.55 Crore, as the construction for the same is outside the plant area. Also, the Commission vide order dated 24.02.2016 against Petition No. 464/14 did not capitalize such expenditure.

RVUN's Response

3.63 The proposed project is not in the same premises. Separate marshalling yard is to be built for SSCTPP (Units 7-8). Further, six number of racks are transporting coal on a daily basis and the number will double to twelve after commissioning of SSCTPP (Units 7-8). As a result, the railway crossing road remains closed for most of the time. Also, the area falls under firing range and there is frequent military movement. Therefore, Road Over Bridge is essential to have uninterrupted passes over the road.

3.64 The proposal for construction of Road Over Bridges is for easy access to the plant. The capital expenditure claimed against it is specifically for plant purpose and it is a fixed asset.

Spares

Stakeholder's comments/suggestions

- 3.65 As per the terms of the work order against M/s BHEL under "*Payment towards supply of mandatory spares*" it has been mentioned that "*90% of price of mandatory spares plus price variation inclusive of 100% taxes and duties shall be paid....*" In this regard, following is to be submitted:
- i. As per the work order, Price for mandatory spares is Rs. 174.84 Crore. Petitioner to justify, as to how price variation has arisen in above referred 90% payment of mandatory spares. In case, mandatory spares other than Indian origin have been included in the work order, then cost thereof be submitted. Also, as per the work order, the price is "*inclusive of packing, forwarding charges and all taxes and duties as applicable in and outside India*". In view of the above, the Petitioner to justify as to how mention of 100% tax and duties has been made in the aforesaid clause;
 - ii. Copy of Clause No. 1.4, Section 3, Volume – I of the aforesaid work order.
- 3.66 Further, the initial spares are approximately 8% and more. The Commission may restrict the cost of same in accordance to the RERC Tariff Regulations, 2019.

RVUN's Response

- 3.67 With respect to the terms and conditions of the work order against M/s BHEL under "*Payment towards supply of mandatory spares*" the Petitioner submitted the following:
- i. Payment of mandatory spares is done in Indian rupees. Also, price variation and taxes & duties will be as per the provisions of the contract;
 - ii. Copy of Clause No. 1.4, Section 3, Vol-1 of the aforesaid work order.
- 3.68 The Petitioner submitted revised Form 6.1 (Fixed assets and provisions for depreciation). The expenditure up to 31.03.2019 against plant and machinery is Rs. 6174.32 Crore. If remaining amount of plant and machinery is included, the cost of initial spares will remain within the limit. Therefore, the Petitioner requested to allow initial spares as claimed.

Annual Fixed Charges (AFC) for FY 2019-20 & FY 2020-21

Stakeholder's comments/suggestions

- 3.69 O&M expenses, Interest on Working Capital may be allowed by the Commission on normative basis.
- 3.70 Depreciation may be allowed by the Commission on the basis of provisionally determined capital cost.
- 3.71 Interest on Loan and Return on Equity may be allowed by the Commission on the amount of debt and equity arrived, while determining the provisional capital cost of the project.
- 3.72 As per Regulation 43(3) of the RERC Tariff Regulations, 2019, the stakeholder submitted that Insurance charges and Terminal benefits are not the components of tariff.
- 3.73 Non-Tariff Income (NTI) may be allowed by the Commission as per RERC Tariff Regulations, 2019 and the Petitioner is required to give an undertaking stating that it has no other NTI other than the amount claimed vide the instant petition.

RVUN's Response

- 3.74 O&M expenses, Interest on working capital and depreciation have been claimed on normative basis and therefore, requested to allow the same.
- 3.75 Interest on term loan have been computed considering actual debt ratio of the project cost and therefore, requested to allow the same.
- 3.76 The Petitioner submitted year wise infusion of equity with the instant petition and accordingly, computations of ROE has been done. Therefore, the Petitioner requested to allow the same.
- 3.77 Insurance and terminal benefits have been claimed as per Regulation 25 and Regulation 47(7) of RERC Tariff Regulations, 2019 and therefore, requested to allow the same.
- 3.78 Non-Tariff Income (NTI) is being claimed on estimated basis and the actual will be submitted at the time of true-up as per the audited

accounts.

Variable Charges for FY 2019-20 and FY 2020-21
Stakeholder's comments/suggestions

- 3.79 The Petitioner vide the instant petition submitted designed Heat rate as 2043.60 kCal/kWh. Accordingly, Gross station heat rate works out to be 2145.78 kCal/kWh as per Regulation 45(3)(b) of the RERC Tariff Regulations, 2019, as against 2149.98 kCal/kWh submitted by the Petitioner. The Commission may consider the Gross Station Heat Rate as 2145.78 Kcal/kWh.
- 3.80 The Stakeholder sought the following information:
- i. Analysis report in respect to GCV of coal "As received" and "As fired";
 - ii. Copy of calculation of coal price.
- 3.81 The Stakeholder sought the following with respect to Performance guarantee mentioned in work order awarded to M/s BHEL:
- i. Vide the aforesaid work order it is mentioned that "*the detailed performance requirement and performance guarantee shall be as per Section C-3, Vol - 11 and other relevant clauses*". In this regard, the Petitioner to submit the copy of Section C-3 of Vol – II and Annexure VI;
 - ii. Dates on which the performance guarantee tests are made, along with the copy of test results;
 - iii. In case, the performance tests have been repeated, then dates on which such repetition has been done and their results;
 - iv. On account of failure of performance tests, details of liquidated damages recovered, i.e., its amount and where it has been adjusted.

RVUN's Response

- 3.82 The design heat rate guaranteed by the OEM is 2047.60 kCal/kWh. Accordingly, station heat rate works out to be 2149.98 kCal/kWh.
- 3.83 The Petitioner submitted sample copy of coal analysis report, whereas computation on coal price have been submitted with the instant petition.

- 3.84 With respect to the Performance guarantee as mentioned in work order awarded to M/s BHEL, the Petitioner submitted the following:
- i. Copy of Section C-3 of Vol-II and Annexure VI;
 - ii. Performance Guarantee Test is yet to be conducted and results of the test shall be submitted before the Commission once it is performed;
 - iii. Liquidated damages if any, will be finalized on closing of contract and accordingly, it will be intimated to the Commission.

SECTION 4

Determination of Provisional Capital Cost of SSCTPS Units 7&8 (2X660 MW)

- 4.1 RVUN vide its petition dated 23.01.2020 submitted that coal firing of SSCTPS Unit 7 was started on 13.12.2018 and was first synchronized with grid on 18.12.2018. Vide reply to the stakeholder's objections, RVUN submitted that SSCTPS Unit 7 was synchronized on oil and coal on 18.12.2018. Whereas, Unit 8 has not yet synchronized. RVUN further submitted that the Units 7&8 of SSCTPS are likely to achieve COD on 10.02.2020 and 20.03.2020 respectively. Accordingly, in anticipation of COD, RVUN filed this petition in advance for approval of provisional Capital Cost and determination of provisional tariff for FY 2019-20 and FY 2020-21.
- 4.2 Further, vide reply to the stakeholder's objections and replies to the data gaps of the Commission, RVUN submitted that the activities for achieving COD of the Unit 7 as per the schedule submitted before the Commission were in full swing, but due to outbreak of COVID-19, where Ministry of Home Affairs, Government of India vide order dated 24.03.2020 declared COVID-19 as epidemic and imposed lockdown in whole India, COD could not be achieved as per the schedule. Consequently, the revised estimated schedule for achieving COD for Units 7&8 submitted by RVUN were November, 2020 and March, 2021 respectively.
- 4.3 The proposal for setting up 2 X 660 MW SSCTPS Units 7&8 was approved by the Board of Directors (BoD) in its 153rd meeting held on 02.02.2009. The State Government vide letter dated 13.01.2009 accorded in-principle approval for setting up of 2x660 MW SSCTPS Units 7&8. The State Government accorded "Administrative and Financial" approval vide its letter dated 02.03.2009 at an estimated project cost of Rs. 7920 Crores for Units 7&8, which included equity support of Rs. 1584 Crore by the Government of Rajasthan and balance amount of Rs. 6336 Crore was to be arranged as loan from financial institutions.
- 4.4 RVUN further submitted that the project cost was revised to Rs.

9161.35 Crore in the 268th BOD meeting held on 09.03.2017. RVUN further requested the State Government for approval of the revised enhanced cost vide letter dated 31.01.2019. The Government of Rajasthan has accorded approval of capital cost of Rs. 8966.47 Crore vide letter dated 19.07.2019. RVUN further requested the State Government to provide details of reduction in Capital Cost vide letter dated 19.07.2019. The State Government vide letter dated 09.07.2020 submitted the details of reduction in Capital Cost. The total amount of Rs. 194.88 Crore deducted by the State Government pertains to Construction of Fly over bridge on railway crossing at NH 15 (T Point) and Road Works, i.e., Rs. 64.88 Crore, Colony, i.e., Rs. 80.00 Crore and Marshalling Yard, i.e., Rs. 50.00 Crore. RVUN further submitted that they are in continuous pursuance with the authorities for further approval of revised enhanced project cost.

- 4.5 RVUN has filed the instant petition considering the project cost of Rs. 9161.35 Crore (excluding the cost of additional capitalization of Rs. 1360.00 Crore for implementation of revised norms of MOEF) for SSCTPS, considering the equity support from the State Government to the tune of Rs. 1832.27 Crore and balance amount to be arranged as loan from financial institutions.
- 4.6 Power Finance Corporation (PFC) vide letter dated 13.01.2011 & 06.11.2017 sanctioned a loan of Rs. 5831.08 Crore. Another loan of Rs. 3971.78 Crore was sanctioned by Rural Electrification Corporation Limited (REC) vide letter dated 21.03.2011 & 23.11.2017 to RVUN for SSCTPS Units 7&8.
- 4.7 Power Finance Corporation (PFC) vide letter dated 25.06.2018 revised the loan amount to Rs. 5017.85 Crore and Rural Electrification Corporation Limited vide letter dated 22.06.2018 revised the loan amount to Rs. 3345.47 Crore. The sanctioned amount of loan by the financial institutions are considering the project cost of Rs. 9161.35 Crore and additional capitalization cost of Rs. 1360 Crore for implementation of Selective Catalyst Reduction (SCR) and Flue gas desulphurization (FGD) as per new MoEF guidelines.
- 4.8 RVUN in its petition submitted that the total expenditure incurred till

31.03.2019 is Rs. 8813.98 Crore, out of which Rs. 5268.20 Crore and Rs. 3545.78 Crores have been incurred for Units 7&8 respectively. The cost for EPC contract and related heads has been considered in the ratio of 60:40 for Units 7&8 respectively as per EPC contract. The package wise details of earlier approved project cost as per the DPR vis-à-vis approved revised project cost as per the 268th BoD meeting held on 09.03.2017 and project cost as per Statutory Auditor Certificate up to 31.03.2019 is as shown in the table below:

Table 3: Break up of Capital Cost as submitted by the Petitioner (Rs. Crore)

S. No.	Particulars	Project Cost as per DPR	Revised Project Cost as on 09.03.2017	Actual Capital Expenditure of Unit 7&8 up to 31.03.2019	Actual Expenditure of SSCTPP Unit 7 up to 31.03.2019	Actual Expenditure of SSCTPP Unit 8 up to 31.03.2019	Expenditure to be incurred after 31.03.2019
1	Direct and Indirect Cost						
A	Direct and indirect cost including BTG, BOP, CIVIL works, all electrical & mechanical works, all taxes & duties, freight & insurance, colony, land, preliminary investigation and marshalling yard.	5517.71	5584.00	5428.51	3257.11	2171.40	155.49
B	Upfront charges paid/to be paid against coal block	0.00	52.50	0.00	0.00	0.00	52.50
C	Various equipment's included in the cost of Direct & Indirect cost like bulldozers, locomotives, truck fork lifter and other miscellaneous items.	0.00	38.00	7.23	3.62	3.62	30.77
D	Construction of Fly over bridge on railway crossing at NH 15(T Point) & Road works	0.00	64.88	7.88	3.94	3.94	57.00
E	Preliminary investigation such as site survey, soil investigations and oceanographic surveying	Included in 1(A)	2.00	0.28	0.14	0.14	1.72
F	Land	Included in 1(A)	28.00	27.75	13.88	13.88	0.25
G	Colony	Included in 1(A)	90.00	20.19	10.10	10.10	69.81
H	Marshalling Yard	Included in 1(A)	300.00	133.22	66.61	66.61	166.78

S. No.	Particulars	Project Cost as per DPR	Revised Project Cost as on 09.03.2017	Actual Capital Expenditure of Unit 7&8 up to 31.03.2019	Actual Expenditure of SSCTPP Unit 7 up to 31.03.2019	Actual Expenditure of SSCTPP Unit 8 up to 31.03.2019	Expenditure to be incurred after 31.03.2019
I	Shifting of 220 KV line, 33 KV line conversion and 33 KV bay for construction power.	0.00	5.10	5.34	2.67	2.67	0.24
J	Development of Ash Dyke	0.00	80.00	0.00	0.00	0.00	80.00
K	CSR Works	0.00	33.00	8.44	5.06	3.38	24.56
	Total Direct & Indirect Cost	5517.71	6277.48	5638.84	3363.12	2275.73	639.12
2	Physical Contingency @ 3% of the total direct & Indirect costs	165.53	165.53	152.91	91.75	61.16	12.62
3	Overhead Construction Cost						
A	Pre-operative Expenses(EPC Consultancy for SSCTPS	50.00	121.20	15.01	9.01	6.00	106.19
B	Insurance during construction @ 1% of total direct/indirect cost and contingency	55.17	0.00	0.00	0.00	0.00	0.00
C	Finance Charges@ 1% of 60% of Total direct & indirect cost (of Sl. No. 1.12)	33.10	37.66	0.00	0.00	0.00	37.66
	Total Over Head Construction Cost.	138.28	158.86	15.01	9.01	6.00	143.85
4	Total project cost excluding IDC & margin money(Sl. No. 1+2+3)	5821.52	6601.87	5806.76	3463.87	2342.89	795.59
5	Cost of construction power provided free of cost to M/s BHEL for construction purpose and power to be consumed for commissioning of Units 7 & 8	0.00	36.00	14.12	8.47	5.65	21.88
6	Additional implication due to statutory variance in Service Tax and New imposition of taxes	0.00	33.00	48.61	29.17	19.44	15.61
7	Expected Escalation during project execution period	582.15	490.48	157.00	94.20	62.80	333.48
8	Total Hard Cost	6403.67	7161.35	6026.49	3595.71	2420.78	1166.56
9	IDC (Interest During Construction)	1517.00	2000.00	2787.49	1672.49	1115.00	787.49
10	Total Project Cost	7920.67	9161.35	8813.98	5268.20	3545.78	1954.05

4.9 The Petitioner vide its reply to the additional information/data gaps dated 19.11.2020 of the Commission has revised its submission and

has furnished the revised cost as on 31.03.2020 as approved by the BoD of the Petitioner along with the Auditor's Certificate.

4.10 The details of the revised capital expenditure incurred on Units 7&8 as on 31.03.2020 is as shown in the table below:

Table 4: Revised Break up of Capital Cost as submitted by the Petitioner (Rs. Crore)

S. No.	Particulars	Project Cost as per DPR	Revised Project Cost as on 09.03.2017	Actual Capital Expenditure of Unit 7&8 up to 31.03.2020	Actual Expenditure of SSCTPP Unit 7 up to 31.03.2020	Actual Expenditure of SSCTPP Unit 8 up to 31.03.2020	Expenditure to be incurred after 31.03.2020
1	Direct and Indirect Cost						
A	Direct and indirect cost including BTG, BOP, CIVIL works, all electrical & mechanical works, all taxes & duties, freight & insurance, colony, land, preliminary investigation and marshalling yard.	5517.71	5584.00	5491.97	3295.18	2196.79	92.03
B	Upfront charges paid/to be paid against coal block	0.00	52.50	0.00	0.00	0.00	52.50
C	Various equipment's included in the cost of Direct & Indirect cost like bulldozers, locomotives, truck fork lifter and other miscellaneous items.	0.00	38.00	7.28	3.64	3.64	30.71
D	Construction of Fly over bridge on railway crossing at NH 15(T Point) & Road works	0.00	64.88	8.76	4.38	4.38	56.12
E	Preliminary investigation such as site survey, soil investigations and oceanographic surveying	Included in 1(A)	2.00	0.28	0.14	0.14	1.72
F	Land	Included in 1(A)	28.00	27.62	13.81	13.81	0.37
G	Colony	Included in 1(A)	90.00	25.32	12.66	12.66	64.69
H	Marshalling Yard	Included in 1(A)	300.00	133.22	66.61	66.61	166.78
I	Shifting of 220 KV line, 33 KV line conversion and 33 KV bay for construction power.	0.00	5.10	5.34	2.67	2.67	0.00
J	Development of Ash Dyke	0.00	80.00	0.00	0.00	0.00	80.00
K	CSR Works	0.00	33.00	8.86	5.32	3.54	24.14
	Total Direct & Indirect Cost	5517.71	6277.48	5708.65	3404.41	2304.24	569.06

S. No.	Particulars	Project Cost as per DPR	Revised Project Cost as on 09.03.2017	Actual Capital Expenditure of Unit 7&8 up to 31.03.2020	Actual Expenditure of SSCTPP Unit 7 up to 31.03.2020	Actual Expenditure of SSCTPP Unit 8 up to 31.03.2020	Expenditure to be incurred after 31.03.2020
2	Physical Contingency @ 3% of the total direct & Indirect costs	165.53	165.53	129.07	77.44	51.63	36.46
3	Overhead Construction Cost						
A	Pre-operative Expenses(EPC Consultancy for SSCTPS	50.00	121.20	92.80	55.68	37.12	28.40
B	Insurance during construction @ 1% of total direct/indirect cost and contingency	55.17	0.00	0.00	0.00	0.00	0.00
C	Finance Charges@ 1% of 60% of Total direct & indirect cost (of Sl. No. 1.12)	33.10	37.66	14.18	8.51	5.67	23.48
	Total Over Head Construction Cost.	138.28	158.86	106.98	64.19	42.79	51.88
4	Total project cost excluding IDC & margin money(Sl. No. 1+2+3)	5821.52	6601.87	5944.70	3546.04	2398.66	657.40
5	Cost of construction power provided free of cost to M/s BHEL for construction purpose and power to be consumed for commissioning of Units 7 & 8	0.00	36.00	26.02	15.61	10.41	9.98
6	Additional implication due to statutory variance in Service Tax and New imposition of taxes	0.00	33.00	56.70	34.02	22.68	0.00
7	Expected Escalation during project execution period	582.15	490.48	158.22	94.93	63.29	332.26
8	Total Hard Cost	6403.67	7161.35	6185.64	3690.60	2495.04	999.64
9	IDC (Interest During Construction)	1517.00	2000.00	3543.55	2126.13	1417.42	770.00
10	Total Project Cost	7920.67	9161.35	9729.19	5816.73	3912.46	1769.64

4.11 RVUN submitted the package wise reasons for increase in the revised estimated Capital Cost with respect to the original estimated Capital Cost as below:

A. EPC Contract

4.12 RVUN submitted that in the DPR, the provisional head for EPC contract was kept as Rs. 5446.91 Crore (Direct and in direct cost

including BTG, BOP, Civil Works, all Electrical and Mechanical works, taxes and duties, Freight and insurance, excluding colony, land, preliminary investigation and marshalling yard).

- 4.13 RVUN further submitted that the EPC contract of SSCTPS Units 7&8 was awarded to M/s BHEL through International Competitive Bidding (ICB). The order was awarded with total contract price of Rs. 5584.00 Crore on supply, ETC and certain civil works. The statutory variations, exchange rate variations and new imposition of taxes were payable at actuals during currency of the contract. The cost of initial spares of Rs. 174.84 Crore and taxes has also been considered in EPC order. As, the DPR costs for EPC Contract was estimated one, therefore, it has increased to Rs. 5584.00 Crore.

Increase in Cost due to

B. Work included in DPR but not in the scope of EPC contractor

Land

- 4.14 RVUN submitted that in the DPR provision for land cost was considered as Rs. 8.80 Crore (part of direct and indirect cost). The increase in cost of head "Land" from Rs. 8.80 Crore to Rs. 28.00 Crore is due to additional acquisition of land for intake marshalling yard and Silo area and due to revision of District Level Committee (DLC) rates.

Township/Colony

- 4.15 RVUN submitted that in the DPR, the provisional cost of colony was estimated to be Rs. 10.00 Crore (Part of direct and indirect cost). However, as per actual cost estimates, it could rise up to Rs. 90.00 Crore as more number of residential quarters are to be constructed as per on site requirement. The work orders covered in the head are as below:

- i. Construction of Residential Units (R-4 type, 64 No.) at Rs. 4.78 Crore;
- ii. Construction of Residential Units (R-4 type 52 No.) at Rs. 9.68 Crore;

- iii. Construction of field hostel for Senior Officer 47 No. and for Junior Officers 49 No. at Rs. 8.90 Crore;
- iv. Construction of various type residential accommodation for CISF at Rs. 9.98 Crore. Also, remaining work orders are yet to be placed as per the site requirement.

Construction of Fly over bridge on railway crossing at NH 15 (T Point) & Road works

- 4.16 RVUN submitted that the provision for Construction of Fly over bridge on railway crossing at NH 15 (T Point) & Road works was made in the DPR but cost was not envisaged for the following:
- i. Construction of Railway Over Bridge on railway crossing at NH 15 (T Point);
 - ii. Widening and strengthening of approach road NH 15 to plant;
 - iii. Construction of road from Silo of Units 7&8 from ROB of Raiyanwali Faridsar Road and bypass of Raiyanwali village.
- 4.17 As the same are considered now, the cost under this head has increased to Rs. 64.88 Crore.
- 4.18 The work order for construction of ROB has been placed by Railway at Rs. 8.51 Crore and work order for Road connecting to ROB has been placed by RVUN at Rs. 7.55 Crore.
- 4.19 Further, it is submitted that at present six (6) no. of racks are transporting coal daily, which will double, i.e., twelve (12) after commissioning of SSCTPS Units 7&8. As a result the railway crossing road shall remain closed for most of the time. Also, it is submitted that the area falls under the firing range of defense and there is frequent military movement on this road during exercise. Therefore, ROB is essential to have uninterrupted passes over the road.

Development of Ash Dyke

- 4.20 RVUN submitted that the provision for Ash handling system structure/ houses, fly ash pipe trestles, compressor house, foundation, fly ash silos and bottom ash/ mill reject silo, development of ash disposal area and pipe racks up to disposal area was made in the DPR with

Rs. 10 Crore and this cost was included in direct and indirect cost of DPR of Rs. 5517.71 Crore. Now, the existing Ash Dyke of Units 1-6 of STPS was envisaged to be used by raising its height by 8 meters. No separate cost provision for development of Ash disposal area was made and the same is included in the ash handling system. Therefore, in the revised cost, Rs. 80.00 Crore is proposed for development of Ash Disposal Area.

Marshalling Yard

4.21 RVUN submitted that in the DPR, Rs. 50.00 Crore was considered for marshalling yard. The consultancy for preparation of DPR for construction of Railway Marshalling Yard was awarded to M/s Rites. M/s Rites submitted Final Detailed Project Report for providing railway track line for Units 7&8 (2x660 MW) at Suratgarh supercritical TPS in January, 2017 with the cost estimate of Rs. 284.00 Crore, but following items were not included in the cost:

- i. Cost of future work;
- ii. Cost of Pol decanting terminal;
- iii. Cost of overhead electrification work;
- iv. Cost of wagon tippler;
- v. Payment to Government agencies for any railway siding work;
- vi. Cost of any additional work, which may crop up during construction stage;
- vii. Cost of cutting of trees and payment to forest department;
- viii. Cost of land;
- ix. Cost of railway staff to be deployed exclusively on power plant rail siding facilities;
- x. O&M cost of siding facilities;
- xi. Firefighting and safety arrangement for FO decanting terminal;
- xii. Cost of diversion/raising of 220 kV crossing line, chain fencing, entry gate, Way Bridge and sick wagon shed.

4.22 RVUN further submitted that considering the estimated cost as per

DPR of railway works submitted by M/s Rites and cost of works not included in DPR, the cost estimate has been revised to Rs. 300.00 Crore.

Various equipment's included in the cost of Direct & Indirect cost like bulldozers, locomotives, truck fork lifter and other miscellaneous items.

- 4.23 RVUN submitted that the provision for various equipment's like Bulldozers, Locomotives, Trucks, Canter, Transformer Oil, Filter machines, Cranes, Vacuum pumps, DG Sets and Miscellaneous Items were made in the DPR and this cost was included in direct and indirect cost of DPR of Rs. 5517.71 Crore.
- 4.24 The scope of above work was included in DPR but not included in the EPC contract. Since, EPC contractor is not manufacturing these items and if procured through them it will increase the cost of items. Therefore, separate work orders were to be placed for the same and hence, the cost has been revised to Rs. 38.00 Crore. RVUN submitted the supporting documents related to purchase of bulldozers and other locomotives. RVUN further submitted that other such items such as Ambulance, Telescopic boom lift, Vacuum pump, tyre mounted 40 ton Crane with adjustable boom, Truck 9 ton pay load capacity half body etc. are under process of procurement.

C. Increase in cost due to others heads not included in DPR and also not included in the scope of EPC contractor:

CSR Works

- 4.25 RVUN submitted that CSR works were not included in the DPR, as it was not mandatory. When, applied for according approval of the Environment Clearance for SSCTPS Units 7&8, the MOEF issued Terms of Reference (TOR) on 17.07.2009 in which it was directed to RVUN as under:

"(xxxi) Measures of socio economic influence to local community proposed to be provided by project proponent. As far as possible, quantitative dimension to be given."

- 4.26 Considering the above direction of MOEF, RVUN formulated a comprehensive policy known as Corporate Socio Responsibility (CSR) policy. According to the CSR policy, RVUN estimated cost for social development at Rs. 2.5 Lakhs/Rs. 2.0 Lakhs/Rs. 1.5 Lakhs per MW (one time) for Coal based Thermal Projects on Supercritical technology/ Coal based Thermal Projects on Sub-critical technology and Gas based Thermal Projects respectively. Therefore, revised cost under this head has been taken as Rs. 33.00 Crore.

Shifting of 220 kV line, 33 kV line conversion and 33 kV bay for construction power

- 4.27 RVUN submitted that the aforesaid works were essential works. The cost has been included in the capital cost as per requirement of the site. The line was required to shift to carry out construction work of the plant. The work has been carried out as a deposit work by RVPN. Therefore, revised cost has been taken as Rs. 5.10 Crore.

Upfront Fees for Coal Mines Allotment

- 4.28 RVUN submitted that no provision was made earlier under the head of upfront fees for coal mine allotment. However, now an amount of Rs. 52.50 Crore has been considered for the same. Parsa Coal mine, Parsa East and Kanta Basan mines have been allotted to RVUN for supply of coal to SSCTPS Units 7&8.
- 4.29 The accounting treatment is done for expenditure incurred/to be incurred in respect of payment made towards upfront amount from Parsa Coal mine, Parsa East and Kanta Basan coal blocks based on coal to be delivered in the entire life of 30 years.

Cost of construction power provided free of cost to M/s BHEL for construction purpose and power to be consumed for construction of Units 7&8

- 4.30 RVUN submitted that in the DPR, it was not considered and provision was made in EPC contract to supply construction power to reduce the Capital Cost and the same has been provided by RVUN.
- 4.31 The total cost of Rs. 36.00 Crore has been taken against construction

power provided free of cost to M/s BHEL. The total expected construction power requirement was 900 LU. The electricity consumption of SSCTPS Unit 7&8 till November, 2019 is 738.90 LU.

Additional implication due to statutory variance in Service Tax and New imposition of Taxes:

- 4.32 RVUN submitted that in the DPR, it was not considered. The total cost of Rs. 33.00 Crore has been taken against change in percentage rise of service tax, Swachha Bharat Cess, GST etc.

D. Overhead Construction cost:

Preoperative expenses:

- 4.33 RVUN submitted that in the DPR, total cost against preoperative expenses work were taken as Rs. 50.00 Crore. It includes consultancy services of EPC Contract, consultancy services of township, Railway survey and estimated cost of LDO before commissioning.
- 4.34 The cost has been revised mainly due to the LDO, i.e., Rs. 100.00 Crore, which has increased due to hike in price of LDO as compared to the price of LDO at the time of project report preparation in the year 2009. Also, LDO is very essential for light up, acid cleaning and steam blowing activities before commissioning of the plant. Therefore, the cost has been increased to Rs. 121.21 Crore under this head.

Finance Charges

- 4.35 RVUN submitted that as per DPR, it was 1% of 60% of total direct and indirect cost, i.e., the provision was made for Rs. 33.10 Crore. However, the total direct and indirect cost is proposed to be increased to Rs. 6277.48 Crore. Therefore, finance charges also increased from Rs. 33.10 to Rs. 37.66 Crore.

E. Interest during Construction

- 4.36 RVUN submitted that in the DPR, provision of Rs. 1517.00 Crore was made considering commissioning of units in time. M/s BHEL was

awarded the EPC package on turnkey basis on 28.03.2013 with 42 months for Unit 7 and 45 months for Unit 8 as commissioning schedule. Counting from Zero date, Unit 7 was to be commissioned by 27.09.2016 and Unit 8 by 27.12.2016. However, the above target could not be achieved due to various reasons as below:

Local hindrance in area

- 4.37 RVUN submitted that local population caused a lot of troubles for project by threatening outside labours, contractors. RVUN submitted that about 102 working days were lost due to labour unrest, repeated strikes of labour, accidents of labourers and attack by unsocial elements on engineers & employees of contractor in the plant area. Further, RVUN submitted that nearby villagers obstructed work of project several times for fulfilling their demand of Etah-Singrasar Minor Canal and work remained closed for 30 days.
- 4.38 Thus, continuous strikes and public agitation for various issues kept delaying the plant activities and there was total delay of 132 days on this account, which was beyond the control of RVUN. Therefore, RVUN requested the Commission to consider the delay as uncontrollable.

Climatic Conditions of the Area

- 4.39 RVUN submitted that due to extreme weather conditions, i.e., temperature rising close to 50° to 54° in the area during June, 2016 the works were severely hampered for 15 days, which was beyond the control of RVUN. Therefore, RVUN requested the Commission to consider the delay as uncontrollable.

Railway Marshalling Yard

- 4.40 RVUN submitted that for preparation of marshalling yard plan, M/s Rites was engaged by RVUN on 21.10.2013. M/s Rites submitted Feasibility Study Report for setting up new infrastructure/handling yard in SSCTPS for handling additional coal rakes for its two new Units 7&8. Northern Western Railway approved the Feasibility Report vide letter dated 03.06.2014. M/s Rites prepared Detailed Project Report

for railway track link of Units 7&8 and subsequently submitted reply to the comments of the Northern Western Railway on 24.04.2015. RVUN submitted that continuous efforts were made for approval of DPR vide letters dated 11.05.2015, 08.01.2016, 03.03.2016, 29.04.2016. Whereas DPR was approved on January, 2017. Therefore, RVUN submitted that despite rigorous efforts, North Western Railways took more than 2 years, i.e., from January, 2015 to January, 2017 for approving the DPR, which was beyond control of RVUN. Therefore, RVUN requested the Commission to consider the delay as uncontrollable.

Land acquisition issue

- 4.41 RVUN submitted that extra land was needed to be acquired for diversion of railway siding, ash raw water piping. The process of land acquisition took a long time of 2 years due to change in Land Acquisition Law and other administrative reasons. During this process, SDM did not remain appointed at Suratgarh for a long period and consequently related works were assigned to SDMs of other sub divisions, which was beyond the control of RVUN. Therefore, RVUN requested the Commission to consider the delay as uncontrollable.

Shifting of 220 KV line at site

- 4.42 RVUN submitted that a 220 kV line was passing diagonally across the land of power project. The process of diversion of this line took 18 months delaying project works, being carried out under and nearby this charged line, which was beyond the control of RVUN. Therefore, RVUN requested the Commission to consider the delay as uncontrollable.

Delay due to EPC Contractor (M/s BHEL)

- 4.43 RVUN submitted that the EPC contractor delayed the project by 18 months despite rigorous follow up. The matter was taken up several times up with the State Government. The Central Electricity Authority also intervened in the matter and asked M/s BHEL to carry out the works in time. RVUN has made its dedicated efforts to complete the

work, vigorous correspondences were done with EPC Contractor M/s BHEL. Therefore, RVUN requested the Commission to consider the delay as uncontrollable and to consider this 18 month delay on the part of Contractor.

- 4.44 Due to delay in COD, RVUN submitted that the IDC has been increased from Rs. 1517.00 Crore as per DPR to Rs. 3543.55 Crore up to 31.03.2020. Further, RVUN submitted that the reasons for delay explained above are uncontrollable factors. Some period of delay are overlapped, the total delay worked out is 40 months. RVUN submitted that all out efforts were made to bring the COD of the plant in time by following up all activities of M/s BHEL through various correspondences and meetings held at level of Chief Secretary, GoR. The contractor assured at all levels to achieve targets of schedule. The Project has been delayed by 40 months due to uncontrollable factors. Therefore, RVUN requested the Commission to consider the delay and allow full IDC of the overrun period as claimed.

Commission's Analysis

- 4.45 Regulation 42 of the RERC Tariff Regulations, 2019 specifies as under:

"42. Petition for determination of generation tariff

.....

- (4) *A Generating Company may file a Petition for determination of provisional tariff within six months prior 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.*
- (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.

.....”

- 4.46 Further, Regulation 16 of the RERC Tariff Regulations, 2019 specifies as under:

“16. Capital Cost and Capital Structure

.....

- (5) The capital cost shall be admitted by the Commission after prudence check and shall form the basis for determination of tariff. Provided that the actual capital expenditure as on COD for the original scope of work based on audited accounts of the company may be considered subject to prudence check by the Commission. If sufficient justification is provided for any escalation in the capital cost beyond the original scope of works, the same may be considered by the Commission during prudence check.*

.....”

- 4.47 The 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 up to 31.03.2020 in the books of accounts of the Petitioner is also combined for both the units. The Petitioner has filed the petition for determination of the provisional capital cost of Unit 7&8 based on allocation of actual capital expenditure on certain assumption basis.
- 4.48 The orders have also been placed combined for both the units. During the proceedings of Petition No. 1506/19, the Petitioner vide its additional submission dated 08.12.2020 submitted that SSCTPS Unit 7 has achieved COD on 01.12.2020. Since, the complete project has not achieved COD as on date of filing of the petition, the completed project cost for Units 7&8 of SSCTPS is not available and the Petitioner in its petition as well as in the replies to the data gaps of the

Commission has only submitted revised estimates of the Capital Cost for the entire Project.

- 4.49 The Commission vide order dated 30.06.2011 in Petition No. 229/10, i.e., in the matter of "in principle" approval of capital cost of 2x660 MW coal based Super Critical Thermal Power Project at Suratgarh (SSCTPS - Stage V - Units 7 & 8) ruled as below:

"55. Therefore, Commission on the basis of the above analysis, approves in principle capital cost of STPS (2x 660 MW) Stage V -Unit-7&8 provisionally as Rs 7208.39 Crores, i.e., Rs 5.46 Crores/MW. The final capital cost shall be approved after the plant is commissioned on the basis of audited accounts and prudence check carried out by the Commission. Further, the Petitioner is hereby also directed to maintain detailed accounts of actual expenditure with supporting documentary evidence for submission to the Commission during final approval of capital cost."

- 4.50 The Commission is therefore of the view that as the actual capital expenditure incurred for the entire Project is not available and also the plant is yet to be commissioned, it would not be possible to carry out the detailed prudence check of actual capital cost. Even if the Commission attempts to carry out the prudence check at this stage based on actual project cost incurred till date, it will be incomplete exercise and in any case, the detailed prudence check of the actual capital cost will have to be done after the plant is commissioned. Further, the Order issued by the Commission dated 30.06.2011 in Petition No. 229/10 for in-principle approval of Capital Cost only provides for the approval of final capital cost after the plant is commissioned and does not have any provision for intermittent approval of Capital Cost. 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 delay in execution of the project and has also not taken into cognizance of the expenses towards additional scope of work as submitted by the Petitioner. The Commission shall undertake final determination of capital cost based on detailed prudence check after the project achieves COD and the capital cost as on COD is audited.

4.51 The Commission at this stage has provisionally considered the project cost of the Unit 7&8, same as in-principally approved by the Commission vide its Order dated 30.06.2011 against Petition No. 229/10. Further, the allocation of cost between Units 7&8 has been considered by the Commission in the ratio of 60:40 as claimed by the Petitioner vide the instant petition.

4.52 Thus, the provisionally approved Project Cost of SSCTPS Units 7&8 is as shown in the table below:

Table 5: Provisionally approved project cost by the Commission (Rs. Crore)

S. No.	Particulars	Actual Capital Expenditure of Unit 7&8 up to 31.03.2020 (Rs. Crore)	Provisionally approved for SSCTPP Units 7&8 (Rs. Crore)	Cost allocated to Unit 7 by the Commission (Rs. Crore)	Cost allocated to Unit 8 by the Commission (Rs. Crore)
1	Direct and Indirect Cost				
A	Direct and indirect cost including BTG, BOP, CIVIL works, all electrical & mechanical works, all taxes & duties, freight & insurance, colony, land, preliminary investigation and marshalling yard.	5491.97	5021.51	3002.18	2019.33
B	Upfront charges paid/to be paid against coal block	0.00	0.00	0.00	0.00
C	Various equipment's included in the cost of Direct & Indirect cost like bulldozers, locomotives, truck fork lifter and other miscellaneous items.	7.28	0.00	0.00	0.00
D	Construction of Fly over bridge on railway crossing at NH 15(T Point) & Road works	8.76	0.00	0.00	0.00
E	Preliminary	0.28	Included in	Included in	Included in

S. No.	Particulars	Actual Capital Expenditure of Unit 7&8 up to 31.03.2020 (Rs. Crore)	Provisionally approved for SSCTPP Units 7&8 (Rs. Crore)	Cost allocated to Unit 7 by the Commission (Rs. Crore)	Cost allocated to Unit 8 by the Commission (Rs. Crore)
	investigation such as site survey, soil investigations and oceanographic surveying		1 (A)	1 (A)	1 (A)
F	Land	27.62	Included in 1 (A)	Included in 1 (A)	Included in 1 (A)
G	Colony	25.32	Included in 1 (A)	Included in 1 (A)	Included in 1 (A)
H	Marshalling Yard	133.22	Included in 1 (A)	Included in 1 (A)	Included in 1 (A)
I	Shifting of 220 KV line, 33 KV line conversion and 33 KV bay for construction power.	5.34	0.00	0.00	0.00
J	Development of Ash Dyke	0.00	0.00	0.00	0.00
K	CSR Works	8.86	0.00	0.00	0.00
	Total Direct & Indirect Cost	5708.65	5021.51	3002.18	2019.33
2	Physical Contingency @ 3% of the total direct & Indirect costs	129.07	150.65	90.07	60.58
3	Overhead Construction Cost				
A	Pre-operative Expenses(EPC Consultancy for SSCTPS	92.80	45.50	27.20	18.30
B	Insurance during construction @ 1% of total direct/indirect cost and contingency	0.00	50.22	30.02	20.20
C	Finance Charges@ 1% of 60% of Total direct & indirect cost (of Sl. No. 1.12)	14.18	30.13	18.01	12.12
	Total Over Head Construction Cost.	106.98	125.85	75.24	50.61
4	Total project cost excluding IDC & margin money(Sl. No. 1+2+3)	5944.70	5298.01	3167.49	2130.52

S. No.	Particulars	Actual Capital Expenditure of Unit 7&8 up to 31.03.2020 (Rs. Crore)	Provisionally approved for SSCTPP Units 7&8 (Rs. Crore)	Cost allocated to Unit 7 by the Commission (Rs. Crore)	Cost allocated to Unit 8 by the Commission (Rs. Crore)
5	Cost of construction power provided free of cost to M/s BHEL for construction purpose and power to be consumed for commissioning of Units 7 & 8	26.02	0.00	0.00	0.00
6	Additional implication due to statutory variance in Service Tax and New imposition of taxes	56.70	0.00	0.00	0.00
7	Expected Escalation during project execution period	158.22	529.80	316.75	213.05
8	Total Hard Cost	6185.64	5827.81	3484.24	2343.57
9	IDC (Interest During Construction)	3543.55	1380.58	825.40	555.18
10	Total Project Cost	9729.19	7208.39	4309.64	2898.75

4.53 The Debt:Equity ratio of 80:20 was considered by the Government of Rajasthan while according approval to the project vide its letter dated 02.03.2009. The Commission, therefore, has provisionally considered the Debt: Equity ratio as 80:20 for arriving at the amount of debt & equity for provisional capital cost.

4.54 The Petitioner is 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 after both the units are commissioned. 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. The relevant supporting documents should also be submitted by RVUN.

- 4.55 Further, the Commission directs the Petitioner to submit the following information also along with its petition for approval of final tariff based on actual audited capital cost till COD of Units.
- i. Activity wise Original L2 level Schedule agreed with EPC Contractor;
 - ii. Activity wise Actual L2 level schedule;
 - iii. Steps taken by the Petitioner to mitigate the delay with supporting documents;
 - iv. 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, along with the details of Liquidated damages levied.
 - v. Bifurcation of the impact of each reason whether the same is attributable to the contractor or the Petitioner or due to uncontrollable factor. Whether reason for delay was within or beyond control of the Petitioner with supporting documents;
 - vi. 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.
- 4.56 The Commission also 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.
- i. Actual quarter wise phasing of capital expenditure incurred till COD of the Complete Project;
 - ii. The Petitioner should submit the desired information separately for debt funding and equity infused;
 - iii. Detailed computations of actual IDC with phasing of expenditure;
 - iv. Justification for delay quantifying the delay in number of days on account of each reason submitted by the Petitioner.

- 4.57 Commission also directs the Petitioner to submit the following details alongwith its petition for approval of final capital cost of the project.
- i. Details of requirement of land as per Environment Clearance and actual land acquired by the Petitioner. Petitioner should also indicate out of total land area acquired for the project how much is Government and Private Land.
 - ii. Justification and details of actual impact of FERV on the project cost indicating impact of FERV before scheduled COD and after scheduled COD of the project along with supporting documents.
 - iii. Justification and details of free power supplied to the EPC contractor alongwith supporting documents. Petitioner should also submitted from where this power was procured, i.e., from Discoms or from Auxiliary Power of the existing units of power plant and how the metering and accounting was done for this power.
 - iv. Justification and details of expenditure on CSR activities alongwith supporting documents.
 - v. Justification and details of expenditure on RoB, Colony and marshalling yard when the State Govt in its letter dated 09.07.2020 has reduced the capital expenditure on these heads.
 - vi. It is also required to clearly indicate the total no. of employees in SSTPS unit 7 & 8 and requirement of different category of quarters. The cost estimated in DPR and actual expenditure incurred o this head justifying any variation in capital expenditure on this head.
 - vii. Justification and details of expenditure on Ash dike along with supporting documents when no capital expenditure has been done upto 31.03.2020 as per revised submissions of Petitioner.
 - viii. Justification and basis of claiming upfront Fees for Coal Mines Allotment in the capital cost.
 - ix. RVUN should submit Complete Bid evaluation report for the EPC contract alongwith its petition for approval of final capital cost.

- 4.58 Commission observes slackness on part of Discoms also, when there have been inordinate delays in the project completion, no communication or follow up whatsoever was done by the Discoms. Discoms had already signed PPA for procurement of power from this power plant however complete apathy on part of Discoms is shocking. Delays in completion of project has direct bearing on the cost of the project and ultimate sufferer is end consumer, therefore, it is duty of all stakeholders to take necessary actions and follow up so that project gets completed in time.
- 4.59 The Commission has allocated the provisionally approved capital cost of Unit 7&8 to class wise assets in the proportion as submitted by the Petitioner. Accordingly, the asset class wise Capital Cost provisionally approved by the Commission is as shown in the table below:

Table 6: Asset wise Break up Capital Cost of SSCTPS Unit 7&8 (Rs. Crore)

Particulars	Unit 7	
	Claimed	Approved as on COD (01.12.2020)
Land & land rights	22.86	16.94
Hydraulic works	205.27	152.09
Building & Civil works of Power plant	1088.50	806.47
Other Civil Works	204.25	151.33
Plant & machinery including sub-station equipment's	4084.78	3026.43
Communication equipment (lines and cable network)	32.44	24.03
Vehicles	0.00	0.00
Furniture & fixtures	0.12	0.09
Office Equipment's	0.06	0.04
Capital spares	178.46	132.22
IT Equipment's	0.00	0.00
IT/ SCADA Software	0.00	0.00
Any other items	0.00	0.00
Total	5816.73	4309.64

Particulars	Unit 8	
	Claimed	Approved as on anticipated COD (01.03.2021)
Land & land rights	22.86	16.94
Hydraulic works	136.85	101.39

Particulars	Unit 8	
	Claimed	Approved as on anticipated COD (01.03.2021)
Building & Civil works of Power plant	725.66	537.64
Other Civil Works	136.17	100.89
Plant & machinery including sub-station equipment's	2750.21	2037.64
Communication equipment (lines and cable network	21.63	16.03
Vehicles	0.00	0.00
Furniture & fixtures	0.08	0.06
Office Equipment's	0.04	0.03
Capital spares	118.97	88.15
IT Equipment's	0.00	0.00
IT/ SCADA Software	0.00	0.00
Any other items	0.00	0.00
Total	3912.46	2898.75

SECTION 5

Determination of Provisional ARR and Tariff for SSCTPS Units 7&8 for FY 2020-21

- 5.1 As submitted in the aforesaid paragraphs, RVUN vide petition submitted that the Units 7&8 of SSCTPS were likely to achieve COD on 10.02.2020 and 20.03.2020 respectively. Accordingly, in anticipation of COD, RVUN filed this petition for determination of provisional tariff for FY 2019-20 and FY 2020-21. Further, vide reply to the stakeholder's objections and replies to the data gaps of the Commission, RVUN submitted the revised estimated schedule for achieving COD for Units 7&8 as November, 2020 and March, 2021 respectively. Also, during the proceedings of Petition No. 1506/19, the Petitioner vide its additional submission dated 08.12.2020 submitted that SSCTPS Unit 7 has achieved COD on 01.12.2020. Therefore, considering the same, the Commission in this section determines the provisional tariff only for FY 2020-21 for SSCTPS Units 7&8 considering the actual COD of Unit 7 as 01.12.2020 and anticipated COD of Unit 8 as 01.03.2021 respectively,
- 5.2 The tariff determination for FY 2020-21 for SSCTPS Unit 7&8 for 121 days and 31 days respectively has been done in accordance with the RERC Tariff Regulations, 2019.
- 5.3 The Annual Fixed Charges comprise of the following elements:
- (i) Operation and Maintenance (O&M) Expenses
 - (ii) Depreciation
 - (iii) Interest on Long-Term Loans and Finance Charges
 - (iv) Return on Equity
 - (v) Interest on Working Capital
 - (vi) Insurance Charges
 - (vii) Terminal Benefit
 - (viii) Less: Non-tariff Income
- 5.4 It is observed that the Petitioner vide reply to data gaps of the Commission submitted the revised capital cost of SSCTPS Units 7&8 as

on 31.03.2020 as per the statutory auditor certificate and expected expenditure to be incurred after 31.03.2020. However, the Petitioner did not submit the revised claims against each of the aforesaid tariff components considering the revised capital cost and revised estimated COD of Units 7&8.

5.5 The Commission has computed the revised claim of the Petitioner considering the revised class wise assets claimed by the Petitioner, as discussed in Section 4 of this Order.

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

Operation and Maintenance (O&M) Expenses

RVUN's Submission

5.7 RVUN submitted that the Operation & Maintenance Expenses have been computed on the basis of norms prescribed under Regulation 47 of the RERC Tariff Regulations, 2019.

5.8 The details of the O&M expenses as claimed for FY 2020-21 are as shown in the table below:

Table 7: O&M expenses claimed by RVUN for FY 2020-21 (Rs. Crore)

Particulars	Unit 7 (121 Days)	Unit 8 (31 Days)
Claimed	41.17	10.55

Commission's Analysis

5.9 The O&M expenses provisionally approved by the Commission as per provisions of the RERC Tariff Regulations, 2019 for FY 2020-21 are as shown in the table below:

Table 8: O&M expenses provisionally approved by the Commission for FY 2020-21 (Rs. Crore)

Particulars	Unit 7 (121 Days)	Unit 8 (31 Days)
Provisionally Approved	41.17	10.55

Depreciation

RVUN's Submission

5.10 RVUN for computation of depreciation considered the opening GFA for FY 2020-21 for Units 7&8 as discussed in Section 4 of this Order, i.e.,

Rs. 5816.73 Crore and Rs. 3912.46 Crore. Further, in FY 2020-21 RVUN is expecting an additional capitalization of Rs. 974.01 Crore and Rs. 650.61 Crore against Units 7&8 respectively. Therefore, while computing the depreciation, these additional capitalizations has also been considered. Accordingly, the depreciation claimed for FY 2020-21 is as shown in the table below:

Table 9: Depreciation claimed by RVUN (Rs. Crore)

Particulars	FY 2020-21	
	Unit-7 (121 Days)	Unit-8 (31 Days)
Claimed	100.90	17.35

Commission's Analysis

5.11 Depreciation has been computed considering the approved asset class wise GFA for FY 2020-21 in the above mentioned passages of Section 4 of this Order and considering the rates of depreciation as specified in the RERC Tariff Regulations, 2019. The depreciation provisionally approved by the Commission for FY 2020-21 is as shown in the table below:

Table 10: Depreciation provisionally approved by the Commission (Rs. Crore)

Particulars	FY 2020-21	
	Unit-7 (121 Days)	Unit-8 (31 Days)
Provisionally Approved	68.98	11.87

Interest on Long-Term Loans and Finance Charges

RVUN's Submission

5.12 RVUN submitted that loan wise interest expenses & finance charges have been worked out and taken as part of fixed cost. The depreciation for the year has been considered as normative repayment for the year. The interest charges on long term loans as submitted by RVUN for FY 2020-21 are as shown in the table below:

**Table 11: Interest on long term loan and Finance Charges
Claimed by RVUN for FY 2020-21 (Rs. Crore)**

Particulars	Unit-7 (121 Days)	Unit-8 (31 Days)
Claimed	162.51	30.59

Commission's Analysis

5.13 The Commission has not considered any GFA addition for FY 2020-21.

The allowable depreciation for the year has been considered as the normative repayment. Therefore, the Loan balance provisionally considered by the Commission for FY 2020-21 is as shown in the table below:

Table 12: Loan balance provisionally approved by the Commission for FY 2020-21 (Rs. Crore)

Particulars	Unit 7 (121 Days)
	Provisionally Approved
Opening loan	3447.71
Addition	0.00
Repayment	68.98
Closing loan	3378.74

Particulars	Unit 8 (31 Days)
	Provisionally Approved
Opening loan	2319.01
Addition	0.00
Repayment	11.87
Closing loan	2307.14

- 5.14 As per Regulation 21(5) of the RERC Tariff Regulations, 2019, the rate of interest to be considered is weighted average rate of interest calculated on the basis of actual loan portfolio at the beginning of each year. The Commission has considered interest rates as 10.65 % as submitted by RVUN. The interest on long-term loans provisionally approved by the Commission for FY 2020-21 is as shown in the table below:

Table 13: Interest on long-term loans and finance charges Provisionally approved by the Commission for FY 2020-21 (Rs. Crore)

Particulars	Unit-7 (121 Days)	Unit-8 (31 Days)
Approved	120.51	20.92

Return on Equity (RoE)

RVUN's Submission

- 5.15 Return on Equity has been claimed at the rate of 15.00% for FY 2020-21 as per the norms specified in Regulation 20 of the RERC Tariff Regulations, 2019. The RoE claimed by RVUN for FY 2020-21 is as shown in the table below:

Table 14: Return on Equity Claimed by RVUN for FY 2020-21 (Rs. Crore)

Particulars	Unit-7 (121 Days)	Unit-8 (31 Days)
Claimed	62.69	10.80

Commission's Analysis

- 5.16 The Commission has not considered any GFA addition for FY 2020-21. Therefore, the equity base provisionally considered by the Commission for FY 2020-21 is as shown in the table below:

Table 15: Equity base provisionally approved by the Commission for FY 2020-21 (Rs. Crore)

Particulars	Unit 7 (121 Days)
	Provisionally Approved
Opening Equity	861.93
Addition	0.00
Closing Equity	861.93

Particulars	Unit 8 (31 Days)
	Provisionally Approved
Opening Equity	579.75
Addition	0.00
Closing Equity	579.75

- 5.17 Hence, in view of the above, the Commission provisionally approves Return on Equity at the rate of 15.00% for FY 2020-21, i.e., in accordance with the Regulation 20 of the RERC Tariff Regulations, 2019, which is as shown in the table below:

Table 16: Return on Equity provisionally approved by the Commission for FY 2020-21 (Rs. Crore)

Particulars	Unit-7 (121 Days)	Unit-8 (31 Days)
Provisionally Approved	42.86	7.39

Interest on Working Capital (IoWC)
RVUN's Submission

- 5.18 The interest on working capital loan for FY 2020-21 has been computed as per the norms specified in Regulation 27 of the RERC Tariff Regulations, 2019. The rate of interest has been considered as equal to 300 basis points higher than the average Base Rate of State

Bank of India prevalent during first six months of the previous year. Accordingly, IoWC claimed by RVUN for FY 2020-21 is as shown in the table below:

Table 17: IoWC claimed by RVUN for FY 2020-21 (Rs. Crore)

Particulars	Unit-7 (121 Days)	Unit-8 (31 Days)
Claimed	18.28	4.48

Commission's Analysis

5.19 In accordance with the Regulation 27(2) of the RERC Tariff Regulations, 2019 the rate of interest on working capital is to be computed on normative basis and shall be 300 basis points higher from SBI Base Rate prevalent during first six months of the year previous to the relevant year. Accordingly, for working out interest on working capital for FY 2020-21, weighted rate of interest has been considered as per admissible rates during the previous year. The same works out to 11.39% p.a., which has been used for calculating interest on working capital for FY 2020-21. The computation of the bank rate is as shown in the table below:

Table 18: Computations of IoWC as considered by the Commission

Year	From Date	To Date	No. of Days	SBI Base Rate	300 Basis Point	Approved Interest Rate
FY 2019-20	01-04-2019	09-04-2019	9	8.55%	3.00%	11.39%
	10-04-2019	09-05-2019	30	8.50%		
	10-05-2019	09-06-2019	31	8.45%		
	10-06-2019	09-07-2019	30	8.45%		
	10-07-2019	09-08-2019	31	8.40%		
	10-08-2019	09-09-2019	31	8.25%		
	10-09-2019	30-09-2019	21	8.15%		

5.20 Further, the Commission has worked out the working capital requirement in accordance with the Regulation 27 of the RERC Tariff Regulations, 2019. The Interest on Working Capital as provisionally approved by the Commission for FY 2020-21 is as shown in the table below:

Table 19: IoWC provisionally approved for FY 2020-21 (Rs. Crore)

Particulars	Unit-7 (121 Days)	Unit-8 (31 Days)
Provisionally Approved	16.95	4.21

Insurance Charges

RVUN's Submission

- 5.21 RVUN in its petition has claimed insurance charges for FY 2020-21 based on the norms defined under Regulation 25 of the RERC Tariff Regulations, 2019. The details are as shown in the table below:

Table 20: Insurance Charges claimed by RVUN for FY 2020-21 (Rs. Crore)

Particulars	Unit 7 (121 Days)	Unit 8 (31 Days)
Claimed	10.21	6.90

Commission's Analysis

- 5.22 The Commission has provisionally considered the insurance expenses as claimed by RVUN. Any variation, shall be adjusted during the final tariff petition for FY 2020-21. The insurance charges provisionally approved by the Commission for FY 2020-21 is as shown in the table below:

Table 21: Insurance Charges provisionally approved by the Commission for FY 2020-21 (Rs. Crore)

Particulars	Unit 7 (121 Days)	Unit 8 (31 Days)
Provisionally Approved	10.21	6.90

Terminal benefit

RVUN's Submission

- 5.23 RVUN submitted that terminal benefits have been separately allowed over and above the normative O&M expenses in accordance with Regulation 47(7) of the RERC Tariff Regulations, 2019 as specified below:

"Provided that terminal liabilities based on actuarial valuation, over and above the normative O&M Expenses, subject to prudence check shall be allowed through tariff separately."

- 5.24 RVUN has claimed terminal benefits for FY 2020-21 based on actuarial valuation for FY 2018-19. The details are as shown in the table below:

Table 22: Terminal Benefits claimed by RVUN for FY 2020-21 (Rs. Crore)

Particulars	Unit 7 (121 Days)	Unit 8 (31 Days)
Claimed	13.93	13.93

Commission's Analysis

- 5.25 The Commission has provisionally approved the terminal benefits in

this order as claimed by RVUN. Any variation shall be adjusted during the during the final tariff petition for FY 2020-21. The terminal benefits as Provisionally approved by the Commission are as shown in the table below:

Table 23: Terminal Benefits provisionally approved for FY 2020-21 (Rs. Crore)

Particulars	Unit 7 (121 Days)	Unit 8 (31 Days)
Provisionally Approved	13.93	13.93

Annual Fixed Charges

5.26 Based on the above analysis, the Annual Fixed Charges provisionally approved by the Commission for FY 2020-21 is as shown in the table below:

Table 24: AFC provisionally approved by the Commission for FY 2020-21 (Rs. Crore)

Particulars	Unit 7 (121 Days)		Unit 8 (31 Days)	
	Claimed	Provisionally Approved	Claimed	Provisionally Approved
Operation & Maintenance expenses	41.17	41.17	10.55	10.55
Interest on loan and finance charges	162.51	120.51	30.59	20.92
Depreciation	100.90	68.98	17.35	11.87
Interest on working capital	18.28	16.95	4.48	4.21
Return on Equity	62.69	42.86	10.80	7.39
Insurance	10.21	10.21	6.90	6.90
Terminal Benefit	13.93	13.93	13.93	13.93
Less: Non-Tariff Income	0.00	0.00	0.00	0.00
Annual Fixed Charges	409.69	314.60	94.59	75.77

Energy Charges

RVUN's Submission

5.27 RVUN submitted that the design gross heat rate as per specification is 2047.60 kcal/kWh. Therefore, in accordance with the Regulation 45(3) (b) of the RERC Tariff Regulations, 2019, SHR has been considered as 2149.98 kcal/kWh for FY 2020-21.

5.28 The PLF has been considered as 85% for Units 7&8 and the auxiliary consumption is considered as 5.25% for FY 2020-21, i.e., in accordance with the RERC Tariff Regulations, 2019.

5.29 RVUN submitted that the coal for Units 7&8 is being supplied from 'Parsa' and 'Parsa East & Kanta Basan' coal blocks. The Ministry of Coal vide letter dated 31.03.2015 has allocated Parsa East & Kanta

Basan coal blocks to RVUN under Government Company dispensation route for SSCTPS Units 7&8. The copy of Allotment Agreement between President of India through Ministry of Coal and RRVUNL in respect Parsa and Parsa East Kanta Basan Coal mine dated 10.05.2015, Coal Mining and Delivery Agreement signed by RRVUNL with Rajasthan Collieries Limited on dated 03.10.2013 and 24.05.2016, are submitted by the Petitioner.

- 5.30 RVUN has formed Joint Ventures with Adani Enterprises Ltd. vide Joint Venture Agreements dated 09.12.2011. The price of coal for SSCTPS Units 7&8 has been determined by Government approved mechanism.
- 5.31 The GCV and price of fuel for FY 2020-21 has been taken on the basis of weighted average of FY 2019-20 for the months of April, 2019 to June, 2019.

Commission's Analysis

- 5.32 The Commission has considered the PLF of 85% for Units 7&8 in accordance with the provisions of RERC Tariff Regulations, 2019.
- 5.33 It is observed that the Petitioner submitted incomplete set of documents in support of its claim for Gross Station Heat Rate. The Commission therefore has provisionally considered the SHR as 2149.98 kCal/kWh for FY 2020-21 as claimed by the Petitioner only on provisional basis. Commission directs RVUN to submit OEM certificate for design SHR of the units clearly indicating guaranteed turbine cycle heat rate and boiler efficiency alongwith its petition for approval of final capital cost.
- 5.34 The normative auxiliary consumption considered by RVUN is in line with the provisions of the Tariff Regulations. The Commission has considered the normative auxiliary consumption as submitted by RVUN for the purpose of this order.
- 5.35 The Commission has considered the secondary fuel oil consumption of 0.50 ml/kWh in accordance with the RERC Tariff Regulations, 2019.

- 5.36 As regards GCV and Price of fuels, the Commission has considered the price and GCV of primary fuel and secondary fuel for the months of April, 2019 to June, 2019 as submitted by RVUN vide its Petition.
- 5.37 Since, RVUN has JV Agreement with Adani Enterprises Ltd. regarding Parsa East Kanta Basan Coal mines through the procedure laid down by Govt. of Rajasthan and rates mentioned in these agreements have also been reported to be approved by Govt. of Rajasthan, onus to adhere to laid down procedures and rates are on RVUN. Therefore, RVUN must ensure compliance of the same strictly. The price of coal for SSTPS Units 7 & 8 must be as determined by Govt. approved mechanism.
- 5.38 Regulation 51(2) of Tariff Regulations, 2019 stipulates the GCV of coal or gas to be considered as the higher value of 'as received less 85 kcal/kg' or 'as fired'. For the purpose of tariff determination, the Commission has considered the GCV of coal "as received" as submitted by the Petitioner and subtracted 85 kcal/kg from the same. The Commission directs the Petitioner to submit both 'as received' and 'as fired' GCV of primary fuel for each station separately along with supporting documents for the same in its forthcoming Petitions for tariff determination.
- 5.39 The Energy Charges provisionally approved by the Commission for FY 2020-21 is as shown in the table below:

Table 25: Energy Charges approved by the Commission for FY 2020-21

Particulars	Units	Unit 7 (121 Days)		Unit 8 (31 Days)	
		Claimed	Provisionally Approved	Claimed	Provisionally Approved
Gross Generation	MU	1629.14	1629.14	417.38	417.38
Auxiliary Consumption	%	5.25%	5.25%	5.25%	5.25%
Net Generation	MU	1543.61	1543.61	395.47	395.47
Landed Price of Coal	Rs./kg	5.13	5.13	5.13	5.13
Gross Station Heat Rate	kcal/kWh	2149.98	2149.98	2149.98	2149.98
Price of Secondary fuel oil	Rs./ml	0.05	0.05	0.05	0.05
Secondary fuel oil Consumption	ml/kWh	0.50	0.5	0.50	0.50
Gross Calorific Value of Secondary fuel oil	kcal/ml	10.70	10.70	10.70	10.70
Heat Contribution from Secondary fuel oil	kcal/kWh	5.35	5.35	5.35	5.35

Particulars	Units	Unit 7 (121 Days)		Unit 8 (31 Days)	
		Claimed	Provisionally Approved	Claimed	Provisionally Approved
Heat Contribution from Coal	kcal/kWh	2144.63	2144.63	2144.63	2144.63
Gross Calorific Value of Coal	kcal/kg	4301.00	4301	4301.00	4301
Specific coal consumption	kg/kWh	0.50	0.50	0.50	0.50
Rate of Energy Charge	Rs./kWh	2.73	2.73	2.73	2.73
Other Charges	Rs. Crore	0.00	0.00	0.00	0.00
Total Energy Charges	Rs. Crore	420.79	420.79	107.81	107.81
	Rs./kWh	2.726	2.726	2.726	2.726

5.40 The Commission accordingly provisionally approves the tariff for FY 2020-21 for SSCTPS Units 7&8 as shown in the table below:

Table 26: Final Tariff provisionally approved by the Commission for FY 2020-21 (Rs. Crore)

Particulars	Unit 7 (121 Days)		Unit 8 (31 Days)	
	Claimed	Provisionally Approved	Claimed	Provisionally Approved
AFC (Rs. Crore)	409.69	314.60	94.59	75.77
AFC per Unit (Rs./kWh)	2.654	2.038	2.392	1.916
Energy Charges (Rs. Crore)	420.79	420.79	107.81	107.81
Energy Charge Rate (Rs./kWh)	2.726	2.726	2.726	2.726
Total Tariff (Rs./kWh)	5.38	4.76	5.12	4.64

5.41 The tariff approved by the Commission for SSCTPP units 7&8 for FY 2020-21 shall be effective from date of COD for SSTPS Unit 7, i.e., 01.12.2020 and from anticipated COD, i.e., 01.03.2021 for SSTPS Unit 8 and shall remain in force till next order of the Commission.

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

(Prithvi Raj)
Member

(S.C. Dinkar)
Member

(Shreemat Pandey)
Chairman

Annexure-1

Index

Section/ Annexure	Particulars	Page No.
Section 1	General	1-2
Section 2	Summary of filing of Provisional Capital Cost, Aggregate Revenue Requirement (ARR) and Provisional Tariff determination	3-4
Section 3	Summary of objections/comments/suggestions received from stakeholders and RVUN's response thereon.	5-28
Section 4	Determination of Provisional Capital Cost of SSCTPS Units 7&8 (2X660 MW)	29-52
Section 5	Determination of Provisional ARR and Tariff for SSCTPS Unit 7&8 for FY 2020-21	53-63
Annexure 1	Index	64