CHHATTISGARH STATE ELECTRICITY REGULATORY COMMISSION

RAIPUR

Jindal Steel & Power Limited (JSPL)...Suo-Motu Petition No. 61 of 2022

Present: **Hemant Verma, Chairman**
Vinod Deshmukh, Member (Judicial)
Pramod Kumar Gupta, Member

In the matter of –

Suo-motu Determination of Generation Tariff for Raigarh Captive Power Plant (RCPP) for the period from FY 2011-12 to FY 2020-21

ORDER

(Passed on 28/11/2022)

This Order is issued in respect of the Suo-motu Petition registered for Determination of Generation Tariff for RCPP for the period from FY 2011-12 to FY 2020-21, under the provisions of Section 62 read with Section 86(1) of the Act. The Commission, before isssuing the Order on this Petition, has considered the data available with the Commission, the assumptions made in the suo-motu petition and comments and suggestions received on this suo-motu petition.

The Commission published a notice for inviting objections/suggestions on draft assumptions for determination of Generation Tariff for RCPP vide Notice dated 21/09/2022. The draft assumptions were made available on the Commission's website. A Public Hearing was conducted in physical as well as video conferencing mode on the Petitions in the Commission's office at Raipur on October 12, 2022.

The Commission has determined the tariff for RCPP for each year for the period from FY 2011-12 to FY 2020-21 in accordance with the following applicable Tariff Regulations:

a) CSERC (Terms and Conditions of determination of tariff according to Multi-Year tariff Principles) Regulations, 2010 **("CSERC Tariff Regulations, 2010")** applicable for the period from FY 2010-11 to FY 2012-13;

b) CSERC (Terms and Conditions for determination of tariff according to Multi-Year Tariff principles and Methodology and Procedure for determination of Expected revenue from Tariff and Charges) Regulations, 2012 **("CSERC Tariff Regulations, 2012")**, applicable for the period from FY 2013-14 to FY 2015-16;

c) Chhattisgarh State Electricity Regulatory Commission (Terms and Conditions for determination of tariff according to Multi-Year Tariff principles and Methodology and Procedure for determination of Expected revenue from Tariff and Charges) Regulations, 2015 **("CSERC Tariff Regulations, 2015")**, applicable for determination of tariff for the Generating Company, Licensees, and CSLDC for the period from FY 2016-17 to FY 2020-21.

Sd/-	Sd/-	Sd/-
(PRAMOD KUMAR GUPTA)	**(VINOD DESHMUKH)**	**(HEMANT VERMA)**
MEMBER	**MEMBER (JUDICIAL)**	**CHAIRMAN**

LIST OF ABBREVIATIONS

Abbreviation	Description
A&G	Administrative and General
ARR	Aggregate Revenue Requirement
CERC	Central Electricity Regulatory Commission
COD	Date of Commercial Operation
CPI	Consumer Price Index
CPP	Captive Power Plant
CSERC	Chhattisgarh State Electricity Regulatory Commission
CSLDC	Chhattisgarh State Load Despatch Centre
CSPGCL	Chhattisgarh State Power Generation Company Limited
DCPP	Dongamahua Captive Power Plant
FY	Financial Year
GFA	Gross Fixed Assets
GoI	Government of India
IoWC	Interest on Working Capital
JSPL	Jindal Steel and Power Limited
JSPL-D	Jindal Steel and Power Limited- Distribution
km	kilometre
kV	kilo Volt
kWh	kilo Watt-hour
MAT	Minimum Alternative Tax
MCLR	Marginal Cost of Funds based Lending Rate
MU	Million Units
MYT	Multi Year Tariff
NAPAF	Normative Plant Availability Factor
NPV	Net Present Value
NTI	Non-Tariff Income
O&M	Operation and Maintenance
PLR	Prime Lending Rate
RCPP	Raigarh Captive Power Plant
R&M	Repair and Maintenance
RoE	Return on Equity

Abbreviation	**Description**
Rs.	Rupees
SERC	State Electricity Regulatory Commission
SLDC	State Load Despatch Centre
WPI	Wholesale Price Index

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1 BACKGROUND AND BRIEF HISTORY

1.1 Background

Jindal Steel and Power Limited ("**JSPL**") has been issued a Distribution Licence, under Section 14 of the Electricity Act, 2003 in the area of O.P.Jindal Industrial Park ("**JIP**"), Tumdih and Punjipathra villages of Gharghoda Tahsil of Raigarh District in the State of Chhattisgarh.

JSPL has set-up Captive Power Plant ("**CPP**") Units in Patrapali, Raigarh **("Raigarh CPP" or "RCPP")** and Dongamahua **("Dongamahua CPP"** or **"DCPP").**

This Order is issued by the Commission on the post-facto determination of Generation Tariff for RCPP for the period from FY 2011-12 to FY 2020-21, in accordance with the directions of the Hon'ble Appellate Tribunal for Electricity ("**APTEL**") given vide its Judgment dated May 06, 2022 in Appeal No. 72 of 2016 and 100 of 2016.

1.2 The Electricity Act, 2003, Tariff Policy and Regulations

Section 61 of the Electricity Act, 2003 (herein after referred as 'the EA, 2003' or 'the Act') stipulates the guiding principles for determination of tariff by the Commission and mandates that the tariff should progressively reflect the cost of supply of electricity, reduce cross subsidy, safeguard consumers interest and recover the cost of electricity in a reasonable manner. This Section also stipulates that the Commission while framing the Tariff Regulations shall be guided by the principles and methodologies specified by the Central Electricity Regulatory Commission for determination of the tariff applicable to generating companies and transmission licensees.

Section 62 of the Act stipulates that the Commission shall determine the tariff for:

- Supply of electricity by a Generating Company to a Distribution Licensee;
- Transmission of electricity;
- Wheeling of electricity; and
- Retail sale of electricity.

The Tariff Policy notified by the Government of India in January 2006, as well as the amended Tariff Policy notified in January 2016, provides the framework to balance the conflicting objectives of attracting investments to ensure availability of quality power and protecting the interest of consumers by ensuring that the electricity tariffs are affordable.

As per provisions of the Act and the Tariff Policy, the Commission notified the following Regulations:

d) CSERC (Terms and Conditions of determination of tariff according to Multi-Year tariff Principles) Regulations, 2010 **("CSERC Tariff Regulations, 2010")** applicable for the period from FY 2010-11 to FY 2012-13;

e) CSERC (Terms and Conditions for determination of tariff according to Multi- Year Tariff principles and Methodology and Procedure for determination of Expected revenue from Tariff and Charges) Regulations, 2012 **("CSERC Tariff Regulations, 2012")**, applicable for the period from FY 2013-14 to FY 2015-16;

f) Chhattisgarh State Electricity Regulatory Commission (Terms and Conditions for determination of tariff according to Multi-Year Tariff principles and Methodology and Procedure for determination of Expected revenue from Tariff and Charges) Regulations, 2015 **("CSERC Tariff Regulations, 2015")**, applicable for determination of tariff for the Generating Company, Licensees, and CSLDC for the period from FY 2016-17 to FY 2020-21.

1.3 Procedural History

The Hon'ble APTEL passed its Judgment dated May 06, 2022 in Appeal No. 72 of 2016 and 100 of 2016 filed by JSPL, setting aside certain Orders of the Commission, and issued certain directions to the Commission as reproduced below:

"76. We are of the firm opinion that the Appellant is bound by the provisions of the Act 2003 and the conditions of the Licence as granted by the State Commission. Any provision of the MoU, if it is inconsistent with the provisions of the Act 2003 and the Licencing conditions stands annulled. Therefore, the Appellant shall supply the surplus power from the Raigarh CPP to the extent it is available and is firm power.

…

80. In case of failure of the Appellant, the State Commission can always discover the tariff under its regulatory powers by examining the technology, cost of equipment, *life of the plants etc and declaring the normative costs to arrive at the most optimised solution which could have been in the benefit of the consumers...*

…

88. ***We are of the firm opinion that the State Commission should immediately determine the tariff of both the captive plants i.e. Raigarh CPP and Dongamahua CPP either through the information furnished by the Appellant or through the methodology adopted for deciding the Generic Tariff in case of failure of the Appellant in furnishing the information****.*

89. ***At the same time, in the process of determination of tariff, the State Commission shall endeavour to ensure safeguarding of consumers' interest and at the same time, recovery of the cost of electricity in a reasonable manner****.*

…

100. We are again directing the State Commission to determine the surplus capacity as available from the Appellant's CPP in a real time mode along with its pattern immediately and analyse it whether it can be supplied to the industrial consumers.

…

106. The State Commission is directed to immediately:

1. *determine the available surplus capacity and its pattern;*
2. *carry out technical analysis for supply of surplus power for the distribution business from the Raigarh CPP and Dongamahua CPP;*
3. *allow JSPL to procure required quantum of electricity through competitive bidding for long term;*
4. *determine the tariff for the Distribution Licensee i.e. JSPL from the FY 2011-12, on the basis of already available data and data further furnished by JSPL or otherwise gathered suo-moto by the Commission." (****emphasis added****)*

In accordance with the above-said Judgment of the Hon'ble APTEL, in case surplus quantum is arrived at from RCPP and/or DCPP for any of the years under consideration, the generation tariff for RCPP and DCPP have to be determined, for consideration towards the power purchase cost of JSPL-D. Hence, vide its letter dated 16^{th} June 2022 and Reminder dated 4^{th} July 2022, the Commission directed JSPL to file the Truing up Petitions with all supporting data for DCPP and RCPP for the period from FY 2011-12 to FY 2020-21, in accordance with the Judgment of the Hon'ble

APTEL dated 6th May 2022. The Commission also directed JSPL to file the Petitions for determination of Tariff for DCPP and RCPP for the MYT Control Period from FY 2022-23 to FY 2024-25.

However, JSPL did not file any Petition or submit any additional data to facilitate determination of Generation Tariff for RCPP for the past period and future MYT period. Hence, in order to comply with the aforesaid Hon'ble APTEL Judgment, the Commission decided to take suo-motu initiative to determine the generation tariff of RCPP, and registered a Suo-motu Petition No. 61 of 2022 for determination of Generation Tariff of RCPP from FY 2022-23 to FY 2024-25 along with true-up from FY 2011-12 to FY 2020-21.

For the period from FY 2011-12 to FY 2020-21, the Commission published the draft assumptions for determination of Generation Tariff for RCPP vide Notice dated 21/09/2022 and invited comments and suggestions from the stakeholders on the same. In response, only JSPL has submitted that there was no surplus power available from RCPP suitable for supply to distribution consumers and the entire power from RCPP was used for fulfilling captive requirements, therefore, determination of Generation Tariff is not necessary for RCPP.

During the Hearing held on September 06, 2022, JSPL submitted that it has already submitted all the available information to the Commission in Petition No. 46 of 2022. JSPL added that the Commission may proceed for tariff determination based on the information available with it.

In the instant Order, the Generation Tariff has been determined suo-motu for RCPP for FY 2011-12 to FY 2020-21, in accordance with the applicable CSERC Tariff Regulations.

1.4 Admission of the Petition and Hearing Process

The Suo-motu Petition has been registered as Petition No. 61 of 2022 on 17/08/2022, for Suo-motu determination of Generation Tariff for RCPP for the period from FY 2011-12 to FY 2020-21.

The Suo-motu Petition No. 61 of 2022 and all related documents were made available on the website of the Commission. The Commission issued the Public Notice on

21/09/2022 in the leading newspapers of the State inviting suggestions/comments/objections from the stakeholders on the above Suo-motu Petition.

A period of twenty-one (21) days was given for submission of written objections and suggestions by the public.

The hearing was scheduled on October 12, 2022 and Public Notice in this regard was also published. Only JSPL has submitted that there was no surplus power available from RCPP suitable for supply to distribution consumers and the entire power from RCPP was used for fulfilling captive requirements, therefore, determination of Generation Tariff is not necessary for RCPP.

1.5 Organization of the Order

This Order includes the following Chapters:

Chapter 1: Background and brief history (present Chapter) - provides a brief background of the regulatory process undertaken by the Commission.

Chapter 2: Hearing Process, including the comments made by various stakeholders and views of the Commission

Chapter 3: Determination of Generation Tariff for FY 2011-12 to FY 2015-16 - deals with determination of Generation Tariff for FY 2011-12 to FY 2015-16 for RCPP. The power generation tariff for RCPP has been determined in accordance with the provisions under the CSERC Tariff Regulations, 2010 for FY 2011-12 to FY 2012-13 and CSERC Tariff Regulations, 2012 for FY 2013-14 to FY 2015-16.

Chapter 4: Determination of Generation Tariff for FY 2016-17 to FY 2020-21 - deals with determination of Generation Tariff for RCPP for FY 2016-17 to FY 2020-21 in accordance with CSERC Tariff Regulations, 2015.

Chapter 5: Determination of Generation Tariff of RCPP for FY 2022-23 to FY 2024-25 – deals with determination of Generation Tariff for RCPP for the period from FY 2022-23 to FY 2024-25 in accordance with CSERC Tariff Regulations, 2021.

2 HEARING PROCESS, INCLUDING THE COMMENTS MADE BY VARIOUS STAKEHOLDERS AND VIEWS OF THE COMMISSION

The hearing was scheduled on October 12, 2022 and Public Notice in this regard was also published. However, only JSPL has submitted that there was no surplus power available from RCPP suitable for supply to distribution consumers and the entire power from RCPP was used for fulfilling captive requirements, therefore, determination of Generation Tariff is not necessary for RCPP.

Commission's View

The Commission has determined the surplus power quantum available with RCPP after meeting the captive power requirements, as detailed in the Combined Order dated 28/11/2022 passed in Petition No. 46 of 2022 for JSPL-D. As there is surplus power available with RCPP in each year from FY 2011-12 to FY 2020-21, the Generation Tariff has been determined for RCPP for the period from FY 2011-12 to FY 2020-21.

The Commission has given ample opportunities to JSPL to submit its Petition for determination of Generation Tariff for RCPP, with all supporting documents. In the absence of the same, the Commission has proceeded with the suo-motu tariff determination for RCPP based on the available data and certain appropriate assumptions.

3 DETERMINATION OF GENERATION TARIFF FOR RCPP FOR FY 2011-12 TO FY 2015-16

3.1 Background

The Commission notified the CSERC Tariff Regulations, 2010 for the period from FY 2010-11 till FY 2012-13 and the CSERC Tariff Regulations, 2012 for the period from FY 2013-14 till FY 2015-16. The Commission has determined the Generation Tariff for JSPL's Raigarh CPP from FY 2011-12 till FY 2015-16 in accordance with the above-said Regulations for the applicable periods.

For past periods, the Commission normally undertakes true-up based on audited accounts vis-à-vis the expenses and revenue approved in the Tariff Order for the respective year. However, in case of RCPP, the Commission has not issued any Tariff Order till date, and neither has JSPL submitted Audited Accounts to enable prudence check of the actual expenses.

Hence, in the present Chapter, the Generation Tariff has been determined for FY 2011-12 to FY 2015-16 for RCPP based on normative parameters on a post-facto basis and available data, in accordance with the Judgment of the Hon'ble APTEL.

3.2 Installed Capacity and Technical Configuration

In its replies to the queries raised by the Commission regarding installed capacities and technical configuration of its captive units, JSPL had submitted the Unit-wise Installed Capacity and Date of Commercial Operation (COD) of these Units, as shown in the Table below:

Table 3-1: COD of RCPP Generating Units as submitted by JSPL

Sl.	Particulars	Installed Capacity (MW)	COD
1	TG-3 Unit 1	25 MW	29.10.1999
2	TG-7 Unit 1	24 MW	15.10.2003
3	TG-1 Unit 2	55 MW	03.11.2001
4	TG-2 Unit 2	55 MW	16.04.2004
5	TG-1 Unit 2 Ph-2	25 MW	01.11.2004
6	TG-2 Unit 2 Ph-2	25 MW	15.07.2005
7	TG-1 Unit 3	25 MW	09.10.2006

Sl.	Particulars	Installed Capacity (MW)	COD
8	TG-2 Unit 3	25 MW	09.10.2006
9	TG-3 Unit 3	25 MW	09.10.2006
10	**Total**	**284 MW**	

In the Suo-motu Petition, the Commission had considered that the 2 Units of 55 MW (TG-1 Unit 2 and TG-2 Unit 2) were Waste Heat Recovery (WHR) Units. The Commission had further assumed that these WHR Units use the waste heat generated by the sponge iron manufacturing process, and hence, there is no fuel cost involved in generation from these 2 Units of 55 MW each. Accordingly, the fuel cost of generation was proposed only for the balance 174 (= 284 – 110) MW.

Commission's View

The Installed Capacity and COD of RCPP Units have been considered as submitted by JSPL. Further, the Commission asked JSPL to clarify the technology/type of boiler used for generation. JSPL, vide its reply dated 18.10.2022, submitted the following details:

Table 3-2: Boiler Type for RCPP Generating Units as submitted by JSPL

Sl.	Particulars	Installed Capacity (MW)	Type
1	TG-3 Unit 1	25 MW	WHR
2	TG-7 Unit 1	24 MW	WHR
3	TG-1 Unit 2	55 MW	AFBC
4	TG-2 Unit 2	55 MW	AFBC
5	TG-1 Unit 2 Ph-2	25 MW	WHR
6	TG-2 Unit 2 Ph-2	25 MW	WHR
7	TG-1 Unit 3	25 MW	WHR
8	TG-2 Unit 3	25 MW	WHR
9	TG-3 Unit 3	25 MW	CFBC
10	**Total**	**284 MW**	

The Commission also received confirmation from the Office of the Chief Electrical Inspector (CEI) vide letter dated 18.10.2022, which confirmed the COD and boiler type for RCPP Units, as submitted by JSPL, except for TG-3 Unit 3, which is stated to be

AFBC Unit, whereas JSPL has claimed the same to be CFBC Unit. The Commission has considered the details as submitted by JSPL, for the purpose of this Order.

As can be seen from the above Table, the assumption in the Suo-motu Petition that the 55 MW Units are WHR Units is incorrect. Rather, all Units other than the 55 MW Units and one 25 MW Unit are WHR Units. The Commission has accordingly considered that these WHR Units use the waste heat generated by sponge iron manufacturing process, and hence, there is no fuel cost involved in generation from these units with combined capacity of 149 MW. Accordingly, the fuel cost of generation has been considered only for the balance 135 (= 284 – 149) MW.

3.3 Gross Fixed Assets

In the Suo-motu Petition, the Commission proposed the average Capital Cost for RCPP as Rs. 3 Crore/MW. It may be noted that JSPL has submitted the Capital Cost of DCPP as Rs. 3.98 Crore/MW for Units achieving COD during the period from 2010 to 2012, though no documentary evidence has been submitted by JSPL in support of the same. The Gross Fixed Assets (GFA) for RCPP is thus, estimated as Rs. 852 Crore for each Year from FY 2011-12 to FY 2015-16, as shown in the following Table:

Table 3-3: Gross Fixed Assets for FY 2011-12 to FY 2015-16 (Rs. Crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
GFA	852.00	852.00	852.00	852.00	852.00

Commission's View

No comments have been received on the same, even from JSPL. The Commission has hence, considered the GFA for RCPP as proposed in the Suo-motu Petition.

The Commission has thus, approved the Opening and Closing Gross Fixed Assets (GFA) for each year from FY 2011-12 to FY 2015-16, as shown in the following Table:

Table 3-4: Gross Fixed Assets approved by the Commission for FY 2011-12 to FY 2015-16 (Rs. Crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Opening GFA	852.00	852.00	852.00	852.00	852.00
Addition during the year	0.00	0.00	0.00	0.00	0.00
Closing GFA	852.00	852.00	852.00	852.00	852.00

3.4 Depreciation

The depreciation rates applicable were 3.6% till FY 2009-10 and 5.28% thereafter. Further, the applicable CSERC MYT Regulations specify that these depreciation rates shall be applicable for the first 12 years, and the balance depreciation shall be spread over the remaining Useful Life of the asset. Hence, in the Suo-motu Petition, the Commission proposed the Unit-wise depreciation accounted for till the close of FY 2010-11, and spread the balance depreciation after 12 years, over the remaining Useful Life of the respective asset, in accordance with the CSERC MYT Regulations.

The Depreciation proposed for FY 2011-12 to FY 2015-16 is as shown in the Table below:

Table 3-5: Depreciation for FY 2011-12 to FY 2015-16 (Rs. Crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Depreciation	43.63	43.63	40.22	40.22	38.54

Commission's View

No comments have been received on the same, even from JSPL. The Depreciation for RCPP has hence, been considered as proposed in the Suo-motu Petition, as shown in the following Table:

Table 3-6: Depreciation approved by the Commission for FY 2011-12 to FY 2015-16 (Rs. Crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Depreciation	43.63	43.63	40.22	40.22	38.54

3.5 O&M Expenses

In the Suo-motu Petition, the Commission proposed the normative Operation & Maintenance (O&M) expenses for the period from FY 2011-12 to FY 2015-16, as submitted by JSPL for DCPP for the respective years.

The normative O&M expenses per MW considered for calculating the normative O&M expenses for RCPP is as shown in the following Table:

Table 3-7: Normative O&M Expenses per MW for FY 2011-12 to FY 2015-16 (Rs. Lakh/MW)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Normative O&M expenses	20.34	21.51	28.73	30.12	32.53

Commission's View

The CSERC Tariff Regulations 2010 specify that the O&M norms specified by the CERC in the CERC Tariff Regulations, 2009 shall be applicable, as reproduced below:

"The O&M expenses, for the units/stations coming into commercial operation after 01.04.2005, shall be in accordance with the norms specified in CERC (Terms and Conditions of tariff) Regulations, 2009 as amended from time to time."

Hence, the normative O&M expenses/MW for FY 2011-12 have been considered in accordance with the applicable CERC Tariff Regulations.

For the period from FY 2012-13 to FY 2015-16, the provisions of the CSERC Tariff Regulations, 2012 are applicable, as reproduced below:

> *"40.2 The O&M expenses for the base year i.e. FY 2012-13 for the units/stations coming into commercial operation after 01.04.2005, shall be considered as under:*

40.2.1 The normative O&M expenses as specified in the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulation, 2009 above regulation for the year 2009-10 shall be admissible at the rate of 90% of the value allowed by CERC. Such normative value shall be exclusive of water taxes payable to the State government which shall be pass through to the beneficiary on actual basis. However, except for pension fund liabilities, normative value, so derived, shall be considered inclusive of all expenses incurred to meet head office or holding company expenses.

40.2.2 The adjusted value for 2009-10, as arrived above, shall be escalated by the actual inflation at weighted average of 60:40 of CPI:WPI ratio, on year to year basis till 2011-12.

40.2.3 For projecting the normative value for 2012-13 and onwards, average inflation of last three years (i.e. 2009-10, 2010-11, 2011-12) shall be applied.

Provided, at the time of true up, the normative O&M cost shall be readjusted to take into account the effect of actual inflation for that period.

Provided, further that impact of pay revision (including arrears), if any, shall be considered separately during the true-up as per audited /unaudited accounts, subject to prudence check and any other factor considered appropriate by the Commission"

Accordingly, for FY 2012-13, 90% of the O&M norm specified by CERC for 2009-10 has been escalating with the applicable escalation indices for FY 2010-11 and FY 2011-12, and again escalated by the average escalation index for the last 3 years, to arrive at the O&M norm for FY 2012-13. For FY 2013-14, the O&M norms of FY 2012-13 have been escalated by the average escalation index for the last 3 years.

From FY 2014-15 onwards, CERC has specified separate O&M norms for coal-reject based plants, which are higher than the norms specified for conventional coal thermal plants. As the CSERC Tariff Regulations have not specified separate O&M norms for coal-reject based plants, the separate O&M norms specified by CERC have been used for allowing the O&M norms for RCPP.

The normative O&M expenses per MW considered for the period from FY 2011-12 to FY 2015-16 in accordance with the above approach, are shown in the Table below:

Table 3-8:Normative O&M Expenses per MW considered for FY 2011-12 to FY 2015-16 (Rs. Lakh/MW)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Normative O&M expenses	20.34	21.41	23.40	29.10	30.94

The normative O&M expenses have been computed by multiplying the per MW normative expenses with the installed capacity of the plant as shown in the Table below:

Table 3-9: Normative O&M expenses for FY 2011-12 to FY 2015-16 (Rs. Crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Normative O&M Expenses	57.77	60.80	66.45	82.64	87.87

3.6 Return on Equity

In the Suo-motu Petition, the Commission proposed the opening equity for FY 2011-12 equal to 30% of the GFA of Rs. 852 Crore. No equity addition was proposed for the years under consideration, as no increase in Installed Capacity and addition to GFA has been estimated. The rate of Return on Equity was considered as 15.5% in accordance with the applicable CSERC MYT Regulations. The rate of Return on Equity was not grossed up with Income Tax rate, since, there is no documentary evidence that RCPP has paid Income Tax, and for the applicable rate of Income Tax, if any.

Therefore, the parameters for allowing Return on Equity for FY 2011-12 to FY 2015-16 were proposed as shown in Table below:

Table 3-10: Return on Equity for FY 2011-12 to FY 2015-16 (Rs. Crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Opening Equity	255.60	255.60	255.60	255.60	255.60
Addition during the year	0.00	0.00	0.00	0.00	0.00
Closing Equity	255.60	255.60	255.60	255.60	255.60
Rate of Return	15.50%	15.50%	15.50%	15.50%	15.50%

Commission's View

No comments have been received on the amount of equity and rate of return on equity, even from JSPL. The Commission has hence, considered the Opening and Closing equity for RCPP, and the rate of return, as proposed in the Suo-motu Petition.

The RoE considered for FY 2011-12 and FY 2015-16 is shown in the following Table:

Table 3-11: Return on Equity approved for FY 2011-12 to FY 2015-16 (Rs. Crore)

Particulars	**FY 2011-12**	**FY 2012-13**	**FY 2013-14**	**FY 2014-15**	**FY 2015-16**
Opening Equity	255.60	255.60	255.60	255.60	255.60
Addition during the year	0.00	0.00	0.00	0.00	0.00
Closing Equity	255.60	255.60	255.60	255.60	255.60
Average Balance	255.60	255.60	255.60	255.60	255.60
Rate of Return	15.50%	15.50%	15.50%	15.50%	15.50%
Tax Rate	-	-	-	-	-
Grossed up rate of return	-	-	-	-	-
Return on Equity	**39.62**	**39.62**	**39.62**	**39.62**	**39.62**

3.7 Interest on Loan

In the Suo-motu Petition, the Commission proposed the opening loan for FY 2011-12 after deducting the accumulated depreciation till the end of FY 2010-11. No loan addition was proposed for the years under consideration, as no increase in Installed Capacity and addition to GFA was estimated. The loan repayment for each year was proposed equal to the depreciation for the respective year, in accordance with the applicable CSERC MYT Regulations. The interest rate for the period from FY 2011-12 to FY 2015-16 was considered as submitted by JSPL for DCPP.

The parameters for computing interest on loan capital for FY 2011-12 to FY 2015-16 were proposed as shown in the following Table:

Table 3-12: Interest on Loan for FY 2011-12 to FY 2015-16 (Rs. Crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Opening Balance	352.37	308.74	265.11	224.90	184.68
Loan Addition during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	43.63	43.63	40.22	40.22	38.54
Closing Balance	308.74	265.11	224.90	184.68	146.14
Interest rate	11.00%	11.55%	11.79%	11.88%	11.88%

Commission's View

No comments have been received on the amount of loan and rate of interest on the loans, even from JSPL. The Commission has hence, considered the Opening and Closing loans for RCPP as proposed in the Suo-motu Petition. The allowable depreciation for the year has been considered as the normative repayment for the year. The Interest Rate has been considered as approved in the True-up for JSPL-T for the respective years, as there are no separate loans. Interest on loan capital approved by the Commission for FY 2011-12 to FY 2015-16 is shown in the following Table:

Table 3-13: Interest on Loan approved for FY 2011-12 to FY 2015-16 (Rs. Crore)

Particulars	**FY 2011-12**	**FY 2012-13**	**FY 2013-14**	**FY 2014-15**	**FY 2015-16**
Opening Balance	352.37	308.74	265.11	224.90	184.68
Loan Addition during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	43.63	43.63	40.22	40.22	38.54
Closing Balance	308.74	265.11	224.90	184.68	146.14
Average Balance	**330.56**	**286.93**	**245.00**	**204.79**	**165.41**
Interest rate	11.00%	11.50%	11.50%	11.50%	11.50%
Interest on normative debt	**36.36**	**33.00**	**28.18**	**23.55**	**19.02**

3.8 Interest on Working Capital

In the Suo-motu Petition, the normative rate of interest on working capital was considered equal to the applicable short-term Prime Lending Rate **("PLR")** of State Bank of India for FY 2011-12 and FY 2012-13. For FY 2013-14 to

FY 2015-16, the normative rate of interest on working capital was considered equal to the Base Rate of State Bank of India as on 30th September of the financial year plus 350 basis points.

The rate of interest on working capital considered in the Suo-motu Petition for the period from FY 2011-12 to FY 2015-16 are as shown in the Table below:

Table 3-14: Rate of Interest on Working Capital for FY 2011-12 to FY 2015-16 (%)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Interest rate	14.75%	14.45%	14.75%	14.75%	14.05%

Commission's View

The normative Interest on Working Capital (IoWC) has been computed in accordance with Regulation 25 of the CSERC Tariff Regulations, 2010 for FY 2011-12 and FY 2012-13. The normative O&M expenses has been considered for computing the working capital requirement. The normative rate of interest on working capital has been considered equal to the short-term Prime Lending Rate ("**PLR**") of State Bank of India. Maintenance Spares have been considered equal to 20% of O&M Expenses.

The normative IoWC for FY 2013-14 to FY 2015-16 has been computed in accordance with Regulation 25 of CSERC MYT Regulations, 2012. The normative O&M expenses has been considered for computing the working capital requirement. The normative rate of interest on working capital has been considered equal to the Base Rate of State Bank of India for the financial year plus 350 basis points. Maintenance Spares have been considered equal to 20% of O&M Expenses.

The normative IoWC approved for FY 2011-12 to FY 2015-16 is shown in the following Table:

Table 3-15: Working Capital approved for FY 2011-12 to FY 2015-16 (Rs. Crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Cost of Coal	16.92	19.31	13.40	14.40	12.46
Cost of Secondary Fuel	1.02	1.28	0.82	0.99	0.61
O&M Expenses	4.81	5.07	5.54	6.89	7.32
Maintenance Spares	11.55	12.16	13.29	16.53	17.57
Receivables	40.26	43.36	40.40	47.57	42.23

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Total Working Capital Requirement	**74.56**	**81.17**	**73.45**	**86.37**	**80.20**
Rate of IoWC	12.00%	13.25%	13.30%	13.50%	9.85%
Interest on Working Capital	**8.95**	**10.76**	**9.77**	**11.66**	**7.90**

3.9 Non-Tariff Income (NTI)

Some amount of NTI is inevitable while generating electricity. Hence, in the Suo-motu Petition, the Commission proposed the NTI for the period from FY 2011-12 to FY 2015-16 as 0.4% of the revenue, based on the pattern observed in case of the State-owned Generation Company, i.e., Chhattisgarh State Power Generation Company Ltd. (CPSGCL), based on its audited accounts.

Commission's View

JSPL has submitted details of NTI for DCPP for the period from FY 2016-17 to FY 2018-19. The NTI earned by DCPP works out to around 0.6% of the revenue of JSPL in the respective years. Hence, the NTI has been considered equivalent to 0.6% of the revenue, as shown in the Table below:

Table 3-16: Non-Tariff Income considered for FY 2011-12 to FY 2015-16 (Rs. Crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Non-Tariff Income	1.45	1.56	1.45	1.71	1.52

3.10 Annual Fixed Charges

Commission's View

The AFC approved for FY 2011-12 to FY 2015-16 is summarized in the Table below:

Table 3-17: Annual Fixed Charges approved for RCPP for FY 2011-12 to FY 2015-16 (Rs. Crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Return on equity	39.62	39.62	39.62	39.62	39.62
Interest on Loan	36.36	33.00	28.18	23.55	19.02
Depreciation	43.63	43.63	40.22	40.22	38.54
Interest on Working Capital	8.95	10.76	9.77	11.66	7.90

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
O&M Expenses	57.77	60.80	66.45	82.64	87.87
Secondary Fuel Oil Cost	6.10	7.68			
Less: Non-Tariff Income	1.45	1.56	1.45	1.71	1.52
Total	**190.97**	**193.91**	**182.78**	**195.98**	**191.43**

3.11 Gross Generation

The actual generation from RCPP for the period from FY 2011-12 to FY 2015-16 was proposed based on the data submitted by JSPL for computation of surplus from captive Units, as shown in the Table below:

Table 3-18: Actual Units Generated at RCPP for FY 2011-12 to FY 2015-16 (MU)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Gross Generation	2132.52	2137.48	1887.74	2187.06	1642.23

Commission's View

The Gross Generation has been considered for RCPP based on the data submitted by JSPL for determination of the surplus quantum from RCPP, as the same is consistent with the data submitted to the CEI for determination of captive status. The approved Gross Generation is shown in the following Table:

Table 3-19: Actual Units Generated by RCPP considered for FY 2011-12 to FY 2015-16 (MU)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Gross Generation	2132.52	2137.48	1887.74	2187.06	1642.23

3.12 Plant Availability Factor (PAF)

The Normative Plant Availability Factor (NAPAF) for the period from FY 2011-12 to FY 2015-16 was proposed as submitted by DCPP in its Petition, as shown in the Table below:

Table 3-20: Normative Plant Availability Factor for FY 2011-12 to FY 2015-16 (%)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
NAPAF	75%	75%	75%	80%	80%

In the Suo-motu Petition, the Commission considered the actual Plant Availability Factor (PAF) for the period from FY 2011-12 to FY 2015-16 equal to the computed Plant Load Factor (PLF) for the respective year, based on the generation data submitted by JSPL.

The Plant Availability Factor (PAF) for RCPP as shown in the Table below:

Table 3-21: Actual Availability of RCPP for FY 2011-12 to FY 2015-16 (%)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Actual Availability	86%	86%	76%	88%	66%

Commission's View

The Commission has considered the NAPAF in accordance with the norms specified in the applicable CSERC Tariff Regulations, as shown in the Table below:

Table 3-22: Normative Plant Availability Factor for FY 2011-12 to FY 2015-16 (%)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
NAPAF	85%	85%	85%	85%	85%

As regards actual PAF, normally, the Generator is required to produce the certificate for the same from the State Load Despatch Centre (SDLC). However, in this case, no such certificate has been submitted by JSPL. The variation between the normative PAF and actual PAF is relevant, as the recovery of the Annual Fixed Charges (AFC) is linked to the actual PAF vis-à-vis the normative PAF. There is no sharing of loss and 1/3 of the gains can be retained by the Generator for FY 2011-12 and FY 2012-13. From FY 2013-14 onwards, both gains and losses are to be shared equally, i.e., 50:50. The actual PAF has been considered equal to the PLF for all years from FY 2011-12 to FY 2015-16, as proposed in the suo-motu Petition, and as shown in the Table below:

Table 3-23: Actual Availability of RCPP considered for FY 2011-12 to FY 2015-16 (%)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Actual Availability	86%	86%	76%	88%	66%

3.13 Auxiliary Consumption

In the Suo-motu Petition, the Commission proposed the normative Auxiliary Consumption for the period from FY 2011-12 to FY 2015-16 as claimed by JSPL for DCPP, as shown in the following Table:

Table 3-24: Normative Auxiliary Consumption by RCPP (%)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Normative Auxiliary Consumption	10%	10%	10%	10%	10%

Commission's View

The normative Auxiliary Consumption for RCPP has been considered based on CERC norms for coal reject plants, as shown in the Table below:

Table 3-25: Normative Auxiliary Consumption approved by the Commission for RCPP (%)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Normative Auxiliary Consumption	10%	10%	10%	10%	10%

The actual Auxiliary Consumption for RCPP has been computed based on the data submitted by JSPL for determination of the surplus quantum from RCPP, as the same is consistent with the data submitted to the CEI for determination of captive status. The actual Auxiliary Consumption for RCPP for the period from FY 2011-12 to FY 2015-16 is shown in the Table below:

Table 3-26: Actual Auxiliary Consumption of RCPP approved by the Commission (%)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Actual Auxiliary Consumption	10.00%	10.00%	10.00%	10.00%	10.00%

As the actual Auxiliary Consumption of RCPP is verifiable based on JSPL's submissions to the Chief Electrical Inspector, the Commission has undertaken the sharing of efficiency gains/losses based on the difference between the normative values and actual values, in accordance with the approach adopted for other regulated entities in the State of Chhattisgarh. The net generation computed on normative basis, based on actual generation and normative Auxiliary Consumption, is shown in the Table below:

Table 3-27: Net Generation from RCPP for FY 2011-12 to FY 2015-16 (MU)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Gross Generation	2132.52	2137.48	1887.74	2187.06	1642.23
Aux. Consumption (%)	10.00%	10.00%	10.00%	10.00%	10.00%
Aux. Consumption	213.25	213.75	188.77	218.71	164.22
Net Generation	**1919.27**	**1923.73**	**1698.97**	**1968.35**	**1478.01**

3.14 Station Heat Rate

In the Suo-motu Petition, the Commission considered the Station Heat Rate (SHR) as 2300 kcal/kWh as claimed by JSPL for DCPP for the period from FY 2011-12 to FY 2015-16, as shown in the following Table.

Table 3-28: Normative Station Heat Rate by RCPP (kcal/kWh)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Station Heat Rate (Normative)	2300	2300	2300	2300	2300

Commission's View

The Normative SHR has been considered as 2300 kcal/kWh for FY 2011-12 to FY 2015-16, as proposed in the suo-motu Petition, and as shown in the following Table:

Table 3-29: Normative Station Heat Rate approved by the Commission (kcal/kWh)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Station Heat Rate (Normative)	2300	2300	2300	2300	2300

3.15 Specific Fuel Consumption (SFC)

In the Suo-motu Petition, the Commission proposed the normative Secondary Oil Consumption for the period from FY 2011-12 to FY 2015-16 as claimed by JSPL for DCPP, as shown in the following Table.

Table 3-30: Specific Fuel Consumption for FY 2011-12 to FY 2015-16 (ml/kWh)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Normative Specific Oil Consumption	1.50	1.50	1.00	1.00	1.00

Commission's View

The Normative SFC has been considered in accordance with the Regulation 33.3 of the CSERC Tariff Regulations, 2010 and Regulation 39.3 of the CSERC Tariff Regulations, 2012, as shown in the Table below:

Table 3-31: Specific Fuel Consumption for FY 2011-12 to FY 2015-16 (ml/kWh)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Normative Specific Oil Consumption	1.50	1.50	1.00	1.00	1.00

3.16 Landed Price of Primary Fuel and Secondary Fuel

In the Suo-motu Petition, the Commission proposed the price of coal for the period from FY 2011-12 to FY 2015-16 based on the coal price claimed by DCPP for the same period. The price of Secondary Oil for the period from FY 2011-12 to FY 2015-16 was proposed as estimated for DCPP for the same period. The price of coal and secondary oil is as shown in the Table below:

Table 3-32: Price of Coal and Oil proposed in Suo-motu Petition for FY 2011-12 to FY 2015-16

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Price of Coal (Rs./MT)	660	710	820	860	939
Price of Oil (Rs./kL)	60000	80000	80000	70000	70000

Commission's View

The Price of Primary Coal for the period from FY 2011-12 to FY 2014-15 has been considered based on the actual price of coal claimed by JSPL for DCPP for the same period, as the same are consistent with the Landed Price of Primary Fuel based on average heat value of CSPGCL for the same period. For FY 2015-16, the Landed Price of Primary Fuel has been considered based on average heat value of CSPGCL, for the same period.

As regards secondary fuel, the prices have been considered based on the highest actual oil price incurred by CSPGCL for the respective years.

The Landed Price of Primary Fuel and Secondary Fuel for RCPP for the period from FY 2011-12 to FY 2015-16 has been considered as shown in the Table below:

Table 3-33: Price of Coal and Oil considered for FY 2011-12 to FY 2015-16

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Price of Coal (Rs./MT)	660	710	820	860	928
Price of Oil (Rs./kL)	45655	50195	60353	54171	40027

3.17 Gross Calorific value of Primary Fuel (CVPF) and Calorific value of Secondary Fuel (CVSF)

In the Suo-motu Petition, the Commission proposed the GCV of Coal and Secondary Oil for the period from FY 2011-12 to FY 2015-16 based on the average GCV claimed by DCPP for the period from FY 2011-12 to FY 2015-16, as shown in the Table below:

Table 3-34: Gross Calorific Value of Primary and Secondary Fuel proposed in Suo-motu Petition for FY 2011-12 to FY 2015-16

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
GCV of Primary Fuel (CVPF) (kcal/kg)	2152.50	2033.42	1992.32	2253.69	2253.69
GCV of Secondary Fuel (CVSF) (kcal/ml)	10.00	10.00	10.00	10.00	10.00

Commission's View

For the period from FY 2011-12 to FY 2014-15, the actual GCV of primary fuel and secondary fuel have been considered as proposed in the suo-motu Petition. For FY

2015-16, the GCV of primary fuel and secondary fuel have been considered based on average GCV of primary fuel and secondary fuel as claimed by JSPL for DCPP for the previous 4 years.

The GCV of fuel is relevant for determination of the fuel cost in terms of heat value, i.e., Rs/kcal. In the present case, the coal cost has been considered based on the comparable cost in terms of heat value, and the secondary fuel cost as submitted by JSPL for DCPP, hence, the fuel cost will be adjusted based on the GCV considered.

The GCV of coal and secondary fuel considered for RCPP for the period from FY 2011-12 to FY 2015-16, is shown in the Table below:

Table 3-35: Gross Calorific Value of Fuels considered for FY 2011-12 to FY 2015-16

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
GCV of Primary Fuel (CVPF) (kcal/kg)	2152.50	2033.42	1992.32	2253.69	2107.98
GCV of Secondary Fuel (CVSF) (kcal/ml)	10.00	10.00	10.00	10.00	10.00

3.18 Energy Charges

Commission's View

The Energy Charge Rate (ECR) has been computed in accordance with CSERC Tariff Regulations, 2010 for FY 2011-12 to FY 2012-13 and CSERC Tariff Regulations, 2012 for FY 2013-14 to FY 2015-16, as shown in the following Table:

Table 3-36: Approved Energy Charge Rate for RCPP (Rs/kWh)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Energy Charge Rate (ECR)	0.70	0.80	0.94	0.87	1.01

The break-up of the generation from the AFBC/CFBC boiler Units and WHR Units has been considered based on the data submitted by JSPL for determination of surplus power quantum from RCPP, as shown in the Table below:

Table 3-37: RCPP Generation from AFBC and WHR Units (MU)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Generation from AFBC Units	801.29	917.62	736.33	985.03	827.08
Generation from WHR Units	1117.97	1006.11	962.63	983.32	650.93
Total Net Generation	**1919.27**	**1923.73**	**1698.97**	**1968.35**	**1478.01**

As stated earlier, there is no fuel cost for the generation from the WHR Units, as these Units use the waste heat generated from the process. The total fuel costs have thus, been approved for the period from FY 2011-12 to FY 2015-16, by considering the fuel costs only for the generation from AFBC Units, as shown in the Table below:

Table 3-38: Approved Total Fuel Cost for RCPP (Rs. Crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Net Generation (MU)	1919.27	1923.73	1698.97	1968.35	1478.01
Generation from AFBC Units (MU)	801.29	917.62	736.33	985.03	827.08
ECR (Rs/kWh)	0.70	0.80	0.94	0.87	1.01
Total Fuel Costs	**50.04$**	**65.54$**	**69.40**	**86.08**	**83.34**
Effective ECR (Rs/kWh)*	0.29	0.38	0.41	0.44	0.56

Note: ** Considering Total Generation*

$ - The Secondary Fuel Oil cost has been included in the Fixed Charges for FY 2011-12 and FY 2012-13 and has hence, been reduced from the total Fuel Costs

3.19 Total Generation Tariff

Commission's View

The AFC for RCPP has been approved in the previous Sections. In accordance with the applicable CSERC MYT Regulations, the entire AFC is recoverable on achievement of the normative PAF, and in case the actual PAF is lower than the normative PAF, then the difference between the total AFC and AFC recoverable in proportion to the PAF, is shared between the Generator and the Beneficiary. The AFC recoverable in case of RCPP for the period from FY 2011-12 to FY 2015-16 is shown in the Table below:

Table 3-39: AFC Recoverable for RCPP (Rs. Crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Annual Fixed Charges	190.97	193.91	182.78	195.98	191.43
Normative PAF (%)	85%	85%	85%	85%	85%
Actual PAF (%)	86%	86%	76%	88%	66%
AFC Reduction due to lower PAF	-0.54	-0.70	9.81	-3.35	21.38
AFC Recoverable	**191.51**	**194.61**	**172.97**	**199.33**	**170.05**

Normally, for generating stations, the AFC is recoverable separately in Rs. Crore/month from the beneficiaries, in proportion to their contracted capacity as a percentage of the total generation capacity. However, in the present case, there is no such contracted capacity, and the Generation Tariff is being determined for RCPP for the purpose of consideration towards meeting JSPL-D's power purchase requirement in case of surplus power availability, in accordance with the Judgment of the Hon'ble APTEL. Hence, in the present case, the AFC has to also be computed in terms of per unit charges, as shown in the Table below:

Table 3-40: AFC for RCPP (Rs./kWh)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
AFC Recoverable	191.51	194.61	172.97	199.33	170.05
Net Generation (MU)	1919.27	1923.73	1698.97	1968.35	1478.01
Per Unit AFC	**1.00**	**1.01**	**1.02**	**1.01**	**1.15**

The total Generation Tariff for RCPP is the summation of the AFC per unit and the effective ECR. The Generation Tariff approved for FY 2011-12 to FY 2015-16 is shown in the following Table:

Table 3-41: Approved Generation Tariff for RCPP (Rs./kWh)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Per Unit AFC	1.00	1.01	1.02	1.01	1.15
Effective ECR	0.26	0.34	0.41	0.44	0.56
Generation Tariff	**1.26**	**1.35**	**1.43**	**1.45**	**1.71**

4 DETERMINATION OF GENERATION TARIFF FOR RCPP FOR FY 2016-17 TO FY 2020-21

4.1 Background

The Commission notified the CSERC Tariff Regulations, 2015 for the third MYT Control Period from FY 2016-17 to FY 2020-21 on September 9, 2015. Subsequently, the Commission notified the First Amendment to CSERC Tariff Regulations on June 16, 2017.

As stated in the previous Chapter, for past periods, the Commission normally undertakes true-up based on audited accounts vis-à-vis the expenses and revenue approved in the Tariff Order for the respective year. However, in case of RCPP, the Commission has not issued any Tariff Order till date, and neither has JSPL submitted Audited Accounts to enable prudence check of the actual expenses.

For the period from FY 2016-17 to FY 2020-21, JSPL has not filed any Petition for determination of Generation Tariff. Hence, the Commission, in the present Chapter, has determined Generation Tariff for RCPP for FY 2016-17 to FY 2020-21 based on normative parameters on a post-facto basis and available data, in accordance with the Judgment of the Hon'ble APTEL.

The Commission has suo-motu determined the Generation Tariff of RCPP for the period from FY 2016-17 to FY 2020-21, in accordance with the applicable CSERC Tariff Regulations and available data, and based on appropriate assumptions wherever necessary.

For the period from FY 2016-17 to FY 2020-21, the Commission published the draft assumptions for determination of Generation Tariff for RCPP vide Notice dated 21/09/2022, and invited comments and suggestions from the stakeholders on the same. No stakeholder including JSPL has submitted any comments and suggestions on the assumptions to be considered for RCPP for the period from FY 2016-17 to FY 2020-21.

4.2 Gross Fixed Assets

The various Units of RCPP have achieved COD during the period from 1999 to 2006. The Commission proposed the average Capital Cost for RCPP as Rs. 3 Crore/MW, as elaborated in the earlier Chapter. The GFA for RCPP is thus, estimated as Rs. 852 Crore for each Year from FY 2016-17 to FY 2020-21, as shown in the following Table:

Table 4-1: Gross Fixed Assets for FY 2016-17 to FY 2020-21 (Rs. Crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
GFA	852.00	852.00	852.00	852.00	852.00

Commission's View

No comments have been received from any stakeholder, including JSPL, on the Capital Cost proposed for RCPP in the Suo-motu Petition. The GFA for FY 2016-17 to FY 2020-21 has been approved as proposed in the Suo-motu Petition, as shown in the following Table:

Table 4-2: Gross Fixed Assets approved by the Commission for FY 2016-17 to FY 2020-21 (Rs. Crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
GFA	852.00	852.00	852.00	852.00	852.00

4.3 Depreciation

As stated in the previous Chapter, the Unit-wise depreciation already accounted for till the close of FY 2010-11 has been computed, and the balance depreciation after 12 years has been spread over the remaining Useful Life of the respective asset, in accordance with the CSERC MYT Regulations. Accordingly, the Depreciation proposed for FY 2016-17 to FY 2020-21 is as shown in the Table below:

Table 4-3: Depreciation for FY 2016-17 to FY 2020-21 (Rs. Crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
Depreciation	33.77	32.42	28.35	28.35	28.35

Commission's View

The Depreciation for FY 2016-17 to FY 2020-21 has been considered as proposed in the Suo-motu Petition, as shown in the following Table:

Table 4-4: Depreciation approved by the Commission for FY 2016-17 to FY 2020-21 (Rs. Crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
Depreciation	33.77	32.42	28.35	28.35	28.35

4.4 O&M Expenses

In the Suo-motu Petition, the Commission proposed normative O&M expenses for each year as submitted by JSPL for DCPP for FY 2016-17. The O&M norms for FY 2017-18 to FY 2018-19 were derived by escalating the O&M norm for FY 2016-17 by the applicable Consumer Price Index (CPI) and Wholesale Price Index (WPI) in the ratio of 60:40, in accordance with the CSERC MYT Regulations, 2015. The normative O&M expenses per MW considered for calculating the normative O&M expenses for the plant is as shown in the following Table:

Table 4-5: Normative O&M Expenses for FY 2016-17 to FY 2020-21 (Rs. Lakh/MW)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
Normative O&M expenses	32.88	34.34	35.63	37.03	38.56

Commission's View

As elaborated in the earlier Chapter, from FY 2014-15 onwards, the separate O&M norms specified by CERC for coal reject-based plants have been considered. Hence, the O&M norms for RCPP for FY 2016-17 to FY 2018-19 have been considered as specified by CERC for coal reject-based plants in the CERC Tariff Regulations, 2014. The O&M norms for RCPP for FY 2019-20 and FY 2020-21 have been considered as specified by CERC for coal reject-based plants in the CERC Tariff Regulations, 2019.

The normative O&M expenses per MW computed by the Commission in accordance with the applicable CSERC Tariff/MYT Regulations for the period from FY 2016-17 to FY 2020-21, are shown in the Table below:

Table 4-6: Normative O&M Expenses per MW approved for FY 2016-17 to FY 2020-21 (Rs. Lakh/MW)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
Norms for O&M Expenses	32.88	34.95	37.15	31.15	32.24

The normative O&M expenses have been computed by multiplying the per MW normative expenses with the installed capacity of the plant as shown in the Table below:

Table 4-7: Normative O&M expenses approved by the Commission (Rs. Crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
Normative O&M Expenses	93.38	99.26	105.51	88.47	91.56

4.5 Return on Equity

In the Suo-motu Petition, the Commission proposed the opening equity for FY 2016-17 as equal to the closing equity for FY 2015-16. No equity addition was proposed for the years under consideration, as no increase in Installed Capacity and addition to GFA was estimated. The rate of Return on Equity was considered as 15.5% in accordance with the CSERC MYT Regulations, 2015. The rate of Return on Equity was not grossed up with Income Tax rate, since, there is no documentary evidence that RCPP has paid Income Tax, and for the applicable rate of Income Tax, if any.

Therefore, the parameters for allowing Return on Equity for FY 2016-17 to FY 2020-21 were proposed as shown in the Table below:

Table 4-8: Return on Equity for FY 2016-17 to FY 2020-21 (Rs. Crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
Opening Equity	255.60	255.60	255.60	255.60	255.60
Addition during the year	0.00	0.00	0.00	0.00	0.00
Closing Equity	255.60	255.60	255.60	255.60	255.60
Rate of Return	15.50%	15.50%	15.50%	15.50%	15.50%

Commission's View

The RoE has been computed in accordance with Regulation 22 of the CSERC MYT Regulations, 2015, which specifies as under:

> *"22. RETURN ON EQUITY*
>
> *22.1 Generation, Transmission and SLDC: Return on equity shall be computed in rupee terms on the equity base determined in accordance with Regulations 17. Return on equity shall be computed on pre-tax basis at the base rate of 15.5 % to be grossed up as per Regulation 22.3 of these Regulations.*
>
> .....
>
> *22.3... In case, no tax is payable during the financial year, the tax rate for the purpose of truing up shall be taken as nil."*

For computation of RoE, the closing equity as approved after True-up for FY 2015-16 has been considered as opening equity for FY 2016-17 and so on. Equity addition during the year is 30% of the addition to GFA for the respective year.

The rate of return has been considered as 15.50% in accordance with the CSERC MYT Regulations, 2015. The rate of RoE has not been grossed up with the Income Tax rate, as no documentary evidence has been submitted to prove that Income Tax has actually been paid by RCPP in these years. The approved RoE for FY 2016-17 to FY 2020-21 is shown in the following Table:

Table 4-9: Return on Equity approved for FY 2016-17 to FY 2020-21 (Rs. Crore)

Particulars	**FY 2016-17**	**FY 2017-18**	**FY 2018-19**	**FY 2019-20**	**FY 2020-21**
Opening Equity	255.60	255.60	255.60	255.60	255.60
Addition during the year	0.00	0.00	0.00	0.00	0.00
Closing Equity	255.60	255.60	255.60	255.60	255.60
Average Equity	255.60	255.60	255.60	255.60	255.60
Rate of Return (%)	15.50%	15.50%	15.50%	15.50%	15.50%
Income Tax Rate (%)	-	-	-	-	-
Grossed up rate of return	-	-	-	-	-
Return on Equity	**39.62**	**39.62**	**39.62**	**39.62**	**39.62**

4.6 Interest on Loan

In the Suo-motu Petition, the Commission proposed the opening loan for FY 2016-17 as equal to the closing loan for FY 2015-16. No loan addition was proposed for the years under consideration, as no increase in Installed Capacity and addition to GFA was estimated. The loan repayment for each year was proposed equal to the depreciation for the respective year, in accordance with the applicable CSERC MYT Regulations. The interest rate for the period from FY 2011-12 to FY 2015-16 was proposed as submitted by JSPL for DCPP and for the remaining years, were proposed same as that considered in the true-up for JSPL-T for the respective years and as submitted by JSPL-T, since the same interest rate is based on interest rates for JSPL as a whole.

The parameters for computing interest on loan capital for FY 2016-17 to FY 2020-21 are shown in the following Table:

Table 4-10: Interest on Loan for FY 2016-17 to FY 2020-21 (Rs. Crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
Opening Balance	146.14	112.36	79.95	51.60	23.26
Loan Addition during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	33.77	32.42	28.35	28.35	23.26
Closing Balance	112.36	79.95	51.60	23.26	0.00
Interest rate	10.42%	10.42%	10.25%	10.69%	10.30%

Commission's View

The interest on loan capital has been computed for FY 2016-17 to FY 2020-21 as per Regulation 23 of the CSERC MYT Regulations, 2015.

The opening loan for FY 2016-17 has been considered equal to the closing loan for FY 2015-16, while the loan addition for each year has been considered as 70% of the addition to GFA for the respective year. The loan repayment for each year has been considered equal to the depreciation for the respective year, in accordance with the CSERC MYT Regulations, 2015. The interest rate for the respective year has been considered same as that considered in the true-up for JSPL-T for the respective years.

Interest on loan capital approved for FY 2016-17 to FY 2020-21 is shown in the following Table:

Table 4-11: Interest on Loan approved for FY 2016-17 to FY 2020-21 (Rs. Crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
Opening Balance	146.14	112.36	79.95	51.60	23.26
Loan Addition during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	33.77	32.42	28.35	28.35	23.26
Closing Balance	112.36	79.95	51.60	23.26	0.00
Average Loan	129.25	96.16	65.77	37.43	11.63
Interest rate (%)	11.50%	10.42%	10.25%	10.69%	10.30%
Interest Expenses	**14.86**	**10.02**	**6.74**	**4.00**	**1.20**

4.7 Interest on Working Capital

In the Suo-motu Petition, the Commission proposed the normative Interest on Working Capital (IoWC) in accordance with the CSERC MYT Regulations, 2015. In the absence of data about Repair & Maintenance (R&M) expenses, Maintenance Spares @40% of R&M expenses were estimated by considering R&M expenses as 20% of normative O&M expenses.

The rate of interest on working capital considered in the Suo-motu Petition for the period from FY 2016-17 to FY 2020-21 is as shown in the following Table:

Table 4-12: Rate of Interest on Working Capital for FY 2016-17 to FY 2020-21 (%)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
Interest Rate	12.80%	12.60%	12.20%	12.55%	11.65%

Commission's View

The normative Interest on Working Capital (IoWC) has been computed in accordance with Regulation 25 of the CSERC MYT Regulations, 2015, as shown in the Table below:

Table 4-13: Interest on Working Capital as approved by the Commission for FY 2016-17 to FY 2020-21 (Rs. Crore)

Particulars	**FY 2016-17**	**FY 2017-18**	**FY 2018-19**	**FY 2019-20**	**FY 2020-21**
Cost of Coal	15.59	13.32	14.64	13.18	13.55
Cost of Secondary Fuel	1.24	1.27	1.49	1.07	1.33
O&M Expenses	7.78	8.27	8.79	7.37	7.63
Maintenance Spares	18.68	19.85	21.10	17.69	18.31
Receivables	21.10	19.75	20.56	17.46	16.80
Total Working Capital Requirement	64.39	62.47	66.59	56.78	57.62
Rate of IoWC (%)	12.80%	12.60%	12.20%	12.55%	11.65%
Interest on Working Capital	**8.24**	**7.87**	**8.12**	**7.13**	**6.71**

4.8 Non-Tariff Income (NTI)

Some amount of NTI is inevitable while generating electricity. Hence, in the Suo-motu Petition, the Commission proposed the NTI for the period from FY 2016-17 to FY 2020-21 as 0.4% of the revenue, based on the pattern observed in case of the State-owned Generation Company, i.e., CPSGCL, based on its audited accounts.

Commission's View

The NTI earned by DCPP in FY 2016-17 to FY 2018-19 works out to around 0.6% of the revenue of JSPL in the respective years. Hence, the NTI has been considered equivalent to 0.6% of the revenue, to estimate NTI for RCPP for FY 2016-17 to FY 2020-21.

The NTI for the period from FY 2016-17 to FY 2020-21 has been considered as shown in the Table below:

Table 4-14: Non-Tariff Income approved for FY 2016-17 to FY 2020-21 (Rs. Crore)

Particulars	**FY 2016-17**	**FY 2017-18**	**FY 2018-19**	**FY 2019-20**	**FY 2020-21**
Non-Tariff Income	1.52	1.42	1.48	1.26	1.21

4.9 Annual Fixed Charges

Commission's View

The AFC approved for FY 2016-17 to FY 2020-21, is summarized in the Table below:

Table 4-15: AFC approved for FY 2016-17 to FY 2020-21 (Rs. Crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
Return on equity	39.62	39.62	39.62	39.62	39.62
Interest on Loan	14.86	10.02	6.74	4.00	1.20
Depreciation	33.77	32.42	28.35	28.35	28.35
Interest on Working Capital	8.24	7.87	8.12	7.13	6.71
O&M Expenses	93.38	99.26	105.51	88.47	91.56
Less: Non-Tariff Income	1.52	1.42	1.48	1.26	1.21
Total	**188.36**	**187.76**	**186.86**	**166.30**	**166.23**

4.10 Installed Capacity and Technical Configuration

In the Suo-motu Petition, the Commission had considered the Installed Capacity of 284 MW comprising 9 Units, as explained in the previous Chapter.

In the Suo-motu Petition, the Commission had considered that the 2 Units of 55 MW were WHR Units. The Commission had further assumed that these WHR Units use the waste heat generated by the generation from the other Turbo-Generator (TG) Units to generate electricity, and hence, there is no fuel cost involved in generation from these 2 Units of 55 MW each. Accordingly, the fuel cost of generation was proposed only for the balance 174 MW (284 – 110).

Commission's View

There has been no change in the Installed Capacity of RCPP. The Commission has considered the 9 Units of RCPP with total Installed Capacity of 284 MW each for computation of Generation Tariff for the period from FY 2016-17 to FY 2020-21.

However, as detailed in the previous Chapter, the assumption in the Suo-motu Petition that the 55 MW Units are WHR Units is incorrect. Rather, all Units other than the 55 MW Units and one 25 MW Unit are WHR Units. Accordingly, it has been considered that these WHR Units use the waste heat generated by the process, and hence, there is no fuel cost involved in generation from these Units amounting to 149 MW. Accordingly, the fuel cost of generation has been considered only for the balance 135 MW (284 – 149).

4.11 Gross Generation

The actual generation from RCPP for the period from FY 2011-12 to FY 2020-21 was proposed in the Suo-motu Petition based on the data submitted by JSPL for computation of surplus from captive Units, as shown in the Table below:

Table 4-16: Actual Units Generated at RCPP for FY 2016-17 to FY 2020-21 (MU)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
Gross Generation	1438.30	1418.12	1421.74	1302.71	1315.38

Commission's View

The Gross Generation for DCPP has been considered based on the data submitted by JSPL for determination of the surplus quantum from DCPP, as the same is consistent with the data submitted to the CEI for determination of captive status.

The approved Gross Generation for the period from FY 2016-17 to FY 2020-21 is shown in the following Table:

Table 4-17: Gross Generation at RCPP for FY 2016-17 to FY 2020-21 (MU)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
Gross Generation	1438.30	1418.12	1421.74	1302.71	1315.38

4.12 Plant Availability Factor (PAF)

In the Suo-motu Petition, the Commission proposed the NAPAF for FY 2016-17 as submitted for DCPP by JSPL-D in its Petition, and the same NAPAF was proposed for the period from FY 2017-18 to FY 2020-21 for RCPP.

Table 4-18: Normative Plant Availability Factor for FY 2016-17 to FY 2020-21 (%)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
NAPAF	80%	80%	80%	80%	80%

In the Suo-motu Petition, the Commission proposed the Plant Availability Factor (PAF) for the period from FY 2016-17 to FY 2020-21 equal to the computed Plant Load Factor (PLF) for the respective year, based on the generation data submitted by JSPL, as shown in the Table below:

Table 4-19: Actual Availability of RCPP for FY 2016-17 to FY 2020-21 (%)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
Actual Availability	58%	57%	57%	52%	53%

Commission's View

The NAPAF for FY 2016-17 to FY 2020-21 has been considered in accordance with the CSERC MYT Regulations, 2015, as shown in the following Table:

Table 4-20: Normative Plant Availability Factor approved by the Commission for FY 2016-17 to FY 2020-21 (%)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
NAPAF	85%	85%	85%	85%	85%

As regards actual PAF, normally, the Generator is required to produce the certificate for the same from the State Load Despatch Centre (SDLC). However, in this case, no such certificate has been submitted by JSPL. The variation between the normative PAF and actual PAF is relevant, as the recovery of the Annual Fixed Charges (AFC) shall be allowed proportionate to the actual PAF vis-à-vis the normative PAF. The Commission has considered the actual PAF equal to the PLF for all years from FY 2016-17 to FY 2020-21, as shown in the Table below:

Table 4-21: Actual Availability of RCPP as approved by the Commission for FY 2016-17 to FY 2020-21 (%)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
Actual Availability	58%	57%	57%	52%	53%

4.13 Auxiliary Consumption

In the Suo-motu Petition, the Commission proposed the normative Auxiliary Consumption for FY 2016-17 as 11.50% as claimed by JSPL for DCPP in its Petition in Case No. 62 of 2018. The same Auxiliary Consumption norms were proposed for FY 2017-18 to FY 2020-21, as shown in the Table below:

Table 4-22: Normative Auxiliary Consumption by RCPP (%)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
Normative Auxiliary Consumption	11.50%	11.50%	11.50%	11.50%	11.50%

Commission's View

The Auxiliary Consumption for RCPP has been considered based on CERC norms for coal reject-based plants for FY 2016-17 to FY 2020-21, as shown in the Table below:

Table 4-23: Normative Auxiliary Consumption as approved by the Commission for RCPP (%)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
Normative Auxiliary Consumption	11.50%	11.50%	11.50%	11.50%	11.50%

The actual Auxiliary Consumption for RCPP has been computed based on the data submitted by JSPL for determination of the surplus quantum from RCPP, as the same is consistent with the data submitted to the CEI for determination of captive status. The actual Auxiliary Consumption for RCPP for the period from FY 2016-17 to FY 2020-21 is shown in the Table below:

Table 4-24: Actual Auxiliary Consumption of DCPP approved by the Commission (%)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
Actual Auxiliary Consumption	10.00%	10.00%	10.00%	10.00%	10.00%

As the actual Auxiliary Consumption of DCPP is verifiable based on JSPL's submissions to the Chief Electrical Inspector, the Commission has undertaken the sharing of efficiency gains/losses based on the difference between the normative values and actual values, in accordance with the approach adopted for other regulated entities in the State of Chhattisgarh. The net generation computed on normative basis, based on actual generation and normative Auxiliary Consumption, is shown in the Table below:

Table 4-25: Net Generation approved by the Commission for RCPP (MU)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
Gross Generation	1438.3	1418.12	1421.74	1302.71	1315.38
Aux. Consumption (%)	11.50%	11.50%	11.50%	11.50%	11.50%
Aux. Consumption	165.40	163.08	163.50	149.81	151.27
Net Generation	**1272.90**	**1255.04**	**1258.24**	**1152.90**	**1164.11**

4.14 Station Heat Rate

In the Suo-motu Petition, the Commission considered the Station Heat Rate as 2450 kcal/kWh in accordance with the CSERC MYT Regulations, 2015, as shown in the following Table:

Table 4-26: Normative Station Heat Rate for FY 2016-17 to FY 2020-21(kcal/kWh)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
Normative SHR	2450	2450	2450	2450	2450

Commission's View

The Normative SHR has been considered as 2450 kcal/kWh in accordance with CSERC MYT Regulations, 2015, as shown in the following Table:

Table 4-27: Normative Station Heat Rate approved for FY 2016-17 to FY 2020-21(kcal/kWh)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
Normative SHR	2450	2450	2450	2450	2450

4.15 Specific Fuel Consumption (SFC)

In the Suo-motu Petition, the Commission proposed the normative Secondary Oil

Consumption for FY 2016-17 as 2 ml/kWh as claimed by JSPL for DCPP. The same Secondary Oil Consumption norms were proposed for FY 2017-18 to FY 2020-21, as shown in the Table below:

Table 4-28: Specific Fuel Consumption for FY 2016-17 to FY 2020-21(ml/kWh)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
Normative Specific Oil Consumption	2.00	2.00	2.00	2.00	2.00

Commission's View

The Normative SFC for FY 2016-17 to FY 2020-21 has been considered as proposed in the Suo-motu Petition. The normative SFC considered by the Commission for FY 2016-17 to FY 2020-21 is shown in the following Table:

Table 4-29: Normative Specific Fuel Consumption approved for FY 2016-17 to FY 2020-21(ml/kWh)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
Normative Specific Oil Consumption	2.00	2.00	2.00	2.00	2.00

4.16 Landed Price of Primary Fuel and Secondary Fuel

In the Suo-motu Petition, the Commission proposed the price of coal for the period from FY 2016-17 to FY 2020-21 based on the average actual coal price of CSPGCL for the same period in terms of Rs/kcal, so that the GCV of coal does not affect the coal cost. The price of Secondary Oil for the period from FY 2016-17 to FY 2020-21 was proposed based on the average actual price as claimed by DCPP for the period from FY 2011-12 to FY 2015-16 as shown in the Table below:

Table 4-30: Price of Coal and Oil proposed in Suo-motu Petition for FY 2016-17 to FY 2020-21

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
Price of Coal (Rs./MT)	1282	1111	1218	1197	1218
Price of Oil (Rs./kL)	72000	72000	72000	72000	72000

Commission's View

The Price of Primary Fuel has been considered based on average heat value of

CSPGCL and Price of oil has been considered based on highest of actual oil prices incurred by CSPGCL in the respective years, as shown in the Table below:

Table 4-31: Price of Coal and Oil as approved by the Commission for FY 2016-17 to FY 2020-21

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
Price of Coal (Rs./MT)	1265	1096	1202	1180	1202
Price of Oil (Rs./kL)	50758	53194	60753	51291	73404

4.17 Gross Calorific value of Primary Fuel (CVPF) and Calorific value of Secondary Fuel (CVSF)

In the Suo-motu Petition, the Commission proposed the GCV of Coal and Secondary Oil for the period from FY 2016-17 to FY 2020-21 based on the average GCV claimed by DCPP for the period from FY 2011-12 to FY 2015-16, as shown in the Table below:

Table 4-32: Gross Calorific Value of Primary and Secondary Fuel proposed in Suo-motu Petition for FY 2016-17 to FY 2020-21

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
GCV of Primary Fuel (CVPF) (kcal/kg)	2137.12	2137.12	2137.12	2137.12	2137.12
GCV of Secondary Fuel (CVSF) (kcal/ml)	10.00	10.00	10.00	10.00	10.00

Commission's View

The GCV of fuel is relevant for determination of the fuel cost in terms of heat value, i.e., Rs/kcal. In the present case, the coal cost has been considered based on the comparable cost in terms of heat value, and the secondary fuel cost has been considered as submitted by JSPL for DCPP, hence, the fuel cost will be adjusted based on the GCV considered.

The GCV of coal for the period from FY 2016-17 to FY 2020-21 has been considered at the same level as considered for FY 2015-16, in this Order. The GCV of Secondary Fuel has been considered as proposed in the Suo-motu Petition. The GCV considered for the period from FY 2016-17 to FY 2020-21 is shown in the Table below:

Table 4-33: Gross Calorific Value of Primary and Secondary Fuel as approved by the Commission for FY 2016-17 to FY 2020-21

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
GCV of Primary Fuel (CVPF) (kcal/kg)	2107.98	2107.98	2107.98	2107.98	2107.98
GCV of Secondary Fuel (CVSF) (kcal/ml)	10.00	10.00	10.00	10.00	10.00

4.18 Energy Charges

Commission's View

The ECR has been computed in accordance with CSERC MYT Regulations, 2015 for FY 2016-17 to FY 2020-21, as shown in the following Table:

Table 4-34: ECR approved by the Commission for FY 2016-17 to FY 2020-21 (Rs./kWh)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
Energy Charge Rate (ECR)	1.46	1.26	1.39	1.36	1.39

The Commission has considered the break-up of the generation from the AFBC/CFBC boiler Units and WHR Units, based on the data submitted by JSPL for determination of surplus power quantum from RCPP, as shown in the Table below:

Table 4-35: RCPP Generation from AFBC and WHR Units (MU)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
Generation from AFBC Units	651.08	634.57	653.01	552.53	481.76
Generation from WHR Units	621.82	620.47	605.23	600.37	682.35
Total Net Generation	**1272.90**	**1255.04**	**1258.24**	**1152.90**	**1164.11**

As stated earlier, there is no fuel cost for the generation from the WHR Units, as these Units use the waste heat generated from the process. The total fuel costs for the period from FY 2016-17 to FY 2020-21 have thus, been approved by considering the fuel costs only for the generation from AFBC Units, as shown in the Table below:

Table 4-36: Approved Total Fuel Cost for RCPP (Rs. Crore)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Net Generation (MU)	1272.90	1255.04	1258.24	1152.90	1164.11
Generation from AFBC Units (MU)	651.08	634.57	653.01	552.53	481.76
ECR (Rs/kWh)	1.46	1.26	1.39	1.36	1.39
Total Fuel Costs	**94.93**	**80.18**	**90.45**	**75.19**	**66.73**
Effective ECR (Rs/kWh)*	**0.75**	**0.64**	**0.72**	**0.65**	**0.57**

Note: ** Considering Total Generation*

4.19 Generation Tariff

Commission's View

The AFC for RCPP has been approved in the previous Sections. In accordance with the applicable CSERC MYT Regulations, 2015, the entire AFC is recoverable on achievement of the normative PAF, and in case the actual PAF is lower than the normative PAF, then the difference between the total AFC and AFC recoverable in proportion to the PAF, is shared between the Generator and the Beneficiary. The AFC recoverable in case of RCPP for the period from FY 2016-17 to FY 2020-21 is shown in the Table below:

Table 4-37: AFC Recoverable for RCPP (Rs. Crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
Annual Fixed Charges	188.36	187.76	186.86	166.30	166.23
Normative PAF (%)	85%	85%	85%	85%	85%
Actual PAF (%)	58%	57%	57%	52%	53%
AFC Reduction due to lower PAF	30.12	30.92	30.61	31.93	31.41
AFC Recoverable	**158.24**	**156.84**	**156.24**	**134.37**	**134.81**

Normally, for generating stations, the AFC is recoverable separately in Rs. Crore/month from the beneficiaries, in proportion to their contracted capacity as a percentage of the total generation capacity. However, in the present case, there is no such contracted capacity, and the Generation Tariff is being determined for RCPP for the purpose of consideration towards meeting JSPL-D's power purchase requirement in case of surplus power availability, in accordance with the Judgment of the Hon'ble APTEL. Hence, in the present case, the AFC has to also be computed in terms of per unit charges, as shown in the Table below:

Table 4-38: AFC for RCPP (Rs./kWh)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
AFC Recoverable	158.24	156.84	156.24	134.37	134.81
Net Generation (MU)	1272.90	1255.04	1258.24	1152.90	1164.11
Per Unit AFC	**1.24**	**1.25**	**1.24**	**1.17**	**1.16**

The total Generation Tariff for RCPP is the summation of the AFC per unit and the effective ECR. The Generation Tariff approved for FY 2016-17 to FY 2020-21 is shown in the following Table:

Table 4-39: Approved Generation Tariff for RCPP for FY 2016-17 to FY 2020-21 (Rs./kWh)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
Per Unit AFC	1.24	1.25	1.24	1.17	1.16
Effective ECR	0.75	0.64	0.72	0.65	0.57
Generation Tariff	**1.99**	**1.89**	**1.96**	**1.82**	**1.73**

5 DETERMINATION OF GENERATION TARIFF FOR RCPP FOR FY 2022-23 TO FY 2024-25

5.1 Background

JSPL has submitted that it does not have any coal on account of the prevalent coal shortage in the market, and has hence, not generated any electricity from RCPP for FY 2022-23. For FY 2023-24 and FY 2024-25 also, JSPL has proposed to enter into long-term Power Purchase Agreements (PPAs) to meet the requirement of JSPL-D.

5.2 Suo-motu Generation Tariff for FY 2023-24 to FY 2024-25

RCPP is primarily a captive power plant (CPP), and the need for determination of Generation Tariff for RCPP arises only if any quantum of power generated at RCPP is used for meeting the power purchase requirement of the Distribution Licensee, viz., JSPL-D.

If there is no generation at RCPP as contended by JSPL, then there will be no surplus power for supply to JSPL-D. Hence, the Commission has not determined the Suo-motu generation tariff for RCPP for FY 2023-24 to FY 2024-25 in this Order.

In case there is actual generation at RCPP in this period, and there is surplus power available that can be used to meet the power purchase requirement of JSPL-D, then the Generation Tariff for the surplus power quantum shall be computed at the time of true-up for RCPP for the respective years from FY 2023-24 to FY 2024-25, and the corresponding amount shall be booked while truing up the power purchase cost of JSPL-D for the same period.

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Annexure - I – List of persons who submitted written submissions

S. No.	Name
1.	Jindal Steel & Power Limited

Annexure-II – List of persons who submitted comments during hearing

S. No.	Name
1.	Jindal Steel & Power Limited