

Provisional Tariff Petition
and
Aggregate Revenue Requirement (ARR)
For
FY 2017-18
For
Chhabra Thermal Power Station (CTPP) Stage – II
(Unit-5)

Submitted to

Rajasthan Electricity Regulatory Commission

Jaipur

By

Rajasthan Rajya Vidyut Utpadan Nigam Limited

Vidyut Bhavan, Janpath, Jaipur

March -2017

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DEFINITIONS

Act	The Electricity Act, 2003
Application	This anticipated ARR Petition for FY 17-18 for Unit-5 for Chhabra Stage-II of Rajasthan Rajya Vidyut Utpadan Nigam Limited, Jaipur
Auxiliary Consumption (Aux. Con.)	Auxiliary Consumption in relation to a period means the quantum of energy consumed by auxiliary equipments of the generating station or Unit and transformer losses within the generating station or Unit, and shall be expressed as a percentage of the sum of gross energy generated at the generator terminals of all the Units of the generating station
Availability	Availability shall have the same meaning as defined in the RERC Tariff Regulations 2014.
Distribution Company / Discoms	Discoms or Distribution Company shall mean a company engaged primarily in the business of distribution & supply of electricity in its area of supply including Jaipur Vidyut Vitran Nigam Ltd. (JVVN), Ajmer Vidyut Vitran Nigam Ltd. (AVVN) and Jodhpur Vidyut Vitran Nigam Ltd. (JdVVN).
Gross Calorific Value (GCV)	Gross Calorific Value in relation to a thermal power generating station means the heat produced in kCal by complete combustion of one kilogram of solid fuel or one litre of liquid fuel or one standard cubic meter of gaseous fuel, as the case may be.
Regulation	The Rajasthan Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff) Regulations, 2014
State	The State of Rajasthan.
Gross Station Heat Rate	Station Heat Rate (SHR) means the heat energy input in kCal required to generate one kWh of electrical energy at generator terminals.
Unit	Unit in relation to a thermal power generating station means electric generator, its prime mover, and auxiliaries and in relation to a combined cycle thermal generating station includes combustion turbine – generators, associated waste heat recovery boilers, connected steam turbine – generator and auxiliaries.

Abbreviations

ARR	Aggregate Revenue Requirement
Ajmer Discom	Ajmer Vidyut Vitran Nigam Limited
CERC	Central Electricity Regulatory Commission
FY	Financial Year
FY – 18	Financial Year 2017-18
GCV	Gross Calorific Value
GFA	Gross Fixed Assets
GoI	Government of India
GoR	Government of Rajasthan
Jaipur Discom	Jaipur Vidyut Vitran Nigam Limited
Jodhpur Discom	Jodhpur Vidyut Vitran Nigam Limited
KWh	Kilo Watt Hour or Unit
MU	Million Units
MW	Megawatts
NRLDC	Northern Regional Load Despatch Centre
PLF	Plant Load Factor
PPA	Power Purchase Agreement
R&M	Repairs and Maintenance
RERC/ Commission	Rajasthan Electricity Regulatory Commission
RVUN	Rajasthan Rajya Vidyut Utpadan Nigam Limited
RVPN	Rajasthan Rajya Vidyut Prasaran Nigam Limited
Rs.	Indian Rupees
SHR	Station Heat Rate
Transfer Scheme	The Rajasthan Power Sector Reforms Transfer Scheme, 2000

Notes:

In this Petition:

All currency figures used in this Application, unless specifically stated otherwise, are in Rs Crores.

Capacity figures used in this Application, unless specifically stated otherwise, are in Megawatt (MW).

All energy unit figures used in this Application, unless specifically stated otherwise, are in Million Units (MU).

A1: BACKGROUND

- 1.1 Rajasthan Rajya Vidyut Utpadan Nigam Ltd (RVUN) was incorporated under the Companies Act 1956, as one of the five successor companies of erstwhile Rajasthan State Electricity Board (RSEB) to take over the electricity generation business in the state of Rajasthan. The existing power stations and those under commissioning in the state sector were transferred to RVUN as per the Rajasthan Power Sector Reforms Transfer Scheme, 2000 notified by State Government provisionally on 19th July 2000 and finally on 18th January 2002.
- 1.2 RVUN had entered into a Power Purchase Agreement (PPA) with RVPN on 20th October 2001. As per the provisions of the PPA, the RVPN was responsible for purchase of all the generation from RVUN plants. The PPA was for the period upto 31.03.2003 with a provision to extend the same with mutual agreement.
- 1.3 From 1st April 2004 onwards, RVPN is no longer responsible for the bulk purchase of power in Rajasthan. The capacity allocated to RVPN from RVUN generating stations has been reallocated to the three Discoms (Jaipur, Ajmer and Jodhpur) in the ratio of 38:31:31 (till October 2011), in the ratio of 39:29:32(till May 2015) and in the ratio of 40:28:32 (from June 2015) or as modified by competent authority from time to time. RVUN has entered into Long Term Power supply-Purchase Agreements (PPA) in respect of existing and future power projects for 25 Years with the three Discoms on 18.05.2010, 15.12.2010, 26.06.2015 (**Annexure-L**).
- 1.4 The CTPP Unit 5 is likely to achieve COD on 01.04.2017. As per regulation 42(4) of 'Rajasthan Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff) Regulations, 2014 Generating Company may file a Petition for determination of provisional tariff in advance of the anticipated Date of Commercial Operation of the Unit or Stage or Generating Station as a whole, as the case may be, based on the capital expenditure actually incurred up to the date of making the Petition or a date prior to making of the Petition, duly certified by the Statutory Auditors and the provisional tariff shall be charged from the date of commercial operation of such Unit or Stage or Generating Station, as the case may be. Accordingly, RVUN is filing this petition for determination of provisional tariff in advance of the anticipated date of commercial operation of CTPP unit 5 for FY 2017-18.

A2: BRIEF HISTORY

- 1.5 The Board of Director in its 152nd meeting held on 31.12.2008 has accorded principal approval for setting up of 660 MW Unit-5 Chhabra Thermal Power Station by RVUN in state sector, the Minutes of meeting are available at **Annexure A**.
- 1.6 RVUN submitted a letter dated 06.01.2009 to Principal Secretary (Energy) for In-principal approval for setting up of additional CTPP Unit 5 (**Annexure-B**). The State Government vide letter dated 13.01.2009 (**Annexure-C**) accorded In-principal approval for setting up of 660 MW Unit-5 Chhabra Thermal Power Station.

- 1.7 The Board of Director in its 153rd meeting held on dated 02.02.2009 has proposed to request the State Government for “Administrative” & “Financial” approval for setting up of 660 MW Unit-5&6 Chhabra Thermal Power Station by RVUN in state sector, the Minutes of meeting are available at **Annexure - D**.
- 1.8 The State Government vide letter dated 02.03.2009 (**Annexure-E**) accorded “Administrative” & “Financial” approval for setting up of 660 MW Unit-5 Chhabra Thermal Power Station having total project cost of Rs. 7920 crores for Unit 5 & 6, out of which the project cost for Unit 5 was Rs 3960 crores. Copy of DPR available at **Annexure-K**.
- 1.9 The said project cost of Rs. 3960 Crores for Phase II of CTPP Unit 5 has to be funded by equity support from GoR was Rs. 792 Crores and balance was to be arranged as loan from financial institutions.
- 1.10 Initially, Power Finance Corp. (PFC) vide letter dated 13.01.2011 (Loan No. 07301025) sanction a loan of Rs.3794 Crores to RVUN for setting up of Unit 5 & 6 at Chhabra, District Baran, Rajasthan (**Annexure-F**). Another loan of Rs 2530 Crores for Unit 5 & 6 is sanctioned by Rural Electrification Corporation Limited (REC) vide letter dated 21.03.2011 (**Annexure -G**).
- 1.11 The detail break up of revised capital cost of CTPP unit 5&6, Order value of CTPP unit 5, actual cost incurred as on 30.09.2016 of CTPP unit 5 and cost to be incurred of CTPP unit 5, duly certified by Chartered Accountant (Copy enclosed as **Annexure- H**) is shown in table below:

Table 1: Total Estimated project cost of CTPP-Unit 5 (Rs in Crore)

Sl. No	Description of Equipment / Material / Works	Supplier/Contractor	Project Cost as per DPR	Revised Project Cost of unit 5&6	capital expenditure incurred on unit 5&6	Order Value of unit 5	Actual Expenditure of CTPP unit 5	Exp. to be incurred for CTPP unit 5
1	EPC Contract	M/s Larsen & Tunbro Ltd	5833.81	5997.13	4487.45	2998.56	2692.47	306.10
2	Consultancy Engg services	M/s TCE Consulting Eng. Ltd	50	13.46	6.41	6.73	3.846	2.88
3	River Water System (Supply)	M/s Zuberi Engg. Co	250	339.51	107.52	169.75	64.512	105.24
		M/s Zuberi Engg. Co		37.38	36.1	18.69	18.69	0.00
		M/s Zuberi Engg. Co		45.68	8.75	22.84	5.25	17.59
		M/s Zuberi Engg. Co		44.08	8.32	22.04	4.992	17.05
		Order to be placed		31.77		15.88	0	15.89
4	Town Ship	Millerium Cream Build	10	6.61	5	3.305	3	0.31
		Order to be placed		200.4		100.2	0	100.20
5	Intake Well	Order to be placed		100		50	0	50.00
6	Lhasi Dam	Waterwer Resource Dept.		58.93	47	29.465	28.2	1.27
7	Other Civil Work(railway siding)	Order to be placed only inspection charges paid	50	252	5.55	126	3.33	122.67

Sl. No	Description of Equipment / Material / Works	Supplier/Contractor	Project Cost as per DPR	Revised Project Cost of unit 5&6	capital expenditure incurred on unit 5&6	Order Value of unit 5	Actual Expenditure of CTPP unit 5	Exp. to be incurred Exp. to be incurred for CTPP unit 5
8	Raising of height of Anicut	Water Resource Dept.		61.02	3.63	30.51	2.178	28.33
9	CSR activities			33	2.25	16.5	1.35	15.15
10	Licence fee for coal stock			52.5	45.84	26.25	26.25	0.00
11	Land		8.8	56.11	52.36	28.055	28.055	0.00
12	Others	Furniture Fixture	167.52	0.28	0.28	0.14	0.14	0.00
		Office Equipment		0.11	0.11	0.055	0.055	0.00
		Others		242.2	32.89	121.1	19.734	101.37
13	Locomotives	Order to be placed		18		9	0	9.00
14	Buildozers	Order to be placed		12		6	0	6.00
15	Truck, Lift, Oil, Filtration machine	Order to be placed		15		7.5	0	7.50
16	IDC		1517	1517	891.5	534.9	534.9	0.00
17	Finance Charges		33.1	33.1				
GRAND TOTAL			7920.23	9167.27	5740.96	4343.49	3436.95	906.53

1.12 The fuel requirement is fulfilled from Parsa, Parsa East and Kanta Basan & Kente Extension Coal Block allocated by Ministry of Coal through Govt. Dispensation Route dated 10.03.2015, 26.10.2015 (**Annexure I**). Coal Mining and delivery agreement between RVUN and Rajasthan Collieries Limited dated 03.10.2013 and dated 24.05.16 is available at **Annexure- J**.

1.13 RVUN has incurred capital expenditure of Rs. 3436.95 Cr. till 30.09.2016 and the remaining cost of Rs. 906.53 Cr. will be incurred during FY 2017-18. Accordingly, as per Tariff Regulation the ARR is determined based on the cost incurred till 30.09.2016 for FY 2017-18.

1.14 With the above details, the fixed charges and variable charges have been calculated and accordingly, the ARR and Tariff petition for FY 2017-18 for Unit -5 has been prepared and is being submitted to the Hon'ble Commission.

A3: GENERATION FORECAST OF CTPP-UNIT 5 FOR FY 2017-18

1.15 The installed capacity of CTPP-Unit#5 is 660 MW and considering date of COD as 01/04/2017, the estimated figures of Gross generation, PLF & net energy sale to three Discoms from CTPP-unit#5 for 2017-18 is as shown in table below:

Table 2: Gross generation, PLF & Ex-bus energy sale from CTPP-Unit 5 for FY18

Sr. No	Particular	(Anticipated) FY 2017-18
1	Capacity (MW)	660
2	PLF (%)	83.00%
3	Gross generation(MU)	4798.73
4	Aux Cons. (%)	6.31%
5	Aux Cons. (MU)	302.80
6	Net Generation (MU)	4495.93

FIXED CHARGES

- Depreciation
- Interest on term Loans and Finance Charges
- Interest on Working Capital
- Operation & Maintenance Expenses
- Recovery of ARR & Tariff Petition Fees
- Insurance Charges

A4: FIXED CHARGES OF CTPP-UNIT 5 FOR FY 2017-18

1.16 The details of various components of the fixed cost areas under: -

Depreciation:-

1.17 Depreciation of CTPP-Unit 5, for FY17-18 has been calculated based on the regulation No.22 of RERC Tariff Regulations 2014. Estimated figures of depreciation are summarised in Table below:

Table 3 : Depreciation of CTPP-Unit 5 (Rs. in Crore)

PARTICULARS	FY18
Depreciation	175.31

Interest on Term Loans and Finance Charges:-

1.18 The loan-wise interest expenses have been worked-out and taken as part of fixed cost. Finance charges for FY17-18 have been estimated as Rs. 328.92 Crore for unit 5. Estimated figures of Interest on Loans and finance charges are summarised in Table below:

Table 4: Interest on term Loans and Finance Charges of CTPP-Unit 5 (Rs. in Crore)

PARTICULARS	FY18
Interest on term Loans and Finance Charges	328.92

Interest on Working Capital

1.19 The requirement of working capital loan has computed as per norms defined under regulation 27 of RERC Tariff regulation 2014 and rate of interest on has been taken equal to 250 basis points higher than the average Base Rate of State Bank of India prevalent during the first six months of the year previous to the relevant year. Estimated figures of Interest on Working Capital Loans are summarised in Table below:

Table 5: Interest on working Capital CTPP-Unit 5 (Rs. in Crore)

PARTICULARS	FY18
Interest on Working Capital Loans	45.78

Operation & Maintenance Expenses

1.20 The Operation & Maintenance Expenses have been computed as per the norms prescribed in regulation 47 of RERC Tariff Regulation 2014. Estimated figures of O & M Expenses are summarised in Table below.:

Table 6: O & M Expenses CTPP-Unit 5 (Rs. in Crore)

PARTICULARS	FY18
O & M Expenses	113.34

Recovery of ARR & Tariff Petition Fees

1.21 The Hon'ble Commission has allowed to pass through the fees levied for filling up of ARR & tariff petition, as expenses in the ARR. Accordingly, RVUN has claimed the fee for FY18 as under. The Commission may consider and allow the same. The ARR & Tariff Petition Fees are summarised in Table below:

Table 7: Recovery of ARR & Tariff Petition of CTPP-Unit 5 (Rs. In Crore)

PARTICULARS	FY18
Recovery of ARR & Tariff Petition Fees	0.33

Insurance Charges

1.22 The insurance charges are claimed as per norms defined under regulation No.25 of RERC Tariff regulation 2014 which allows actual insurance charges or provision for contingency reserve up to 0.2% of average Net Fixed Assets for the year. Accordingly, the insurance charges have been claimed for FY 2017-18 are shown in the table below:

Table 8: Insurance Charges CTPP-Unit 5 (Rs. in Crore)

PARTICULARS	FY18
Insurance Charges	6.52

Return on Equity (ROE)

1.23 The Return on Equity has been computed as per the norms prescribed under Regulation 20 of RERC Tariff Regulation 2014.

1.24 The Return on Equity (ROE) for FY 2017-18 are summarised in Table below:

Table 9: Return on Equity (Rs. in Crore)

Station	FY18
ROE	106.55

Non-Tariff Income

1.25 Estimated figures of Non Tariff Income for FY 2017-18 are summarised in Table below:

Table 10: Non-Tariff Income (Rs. in Crore)

Station	FY 18
Non Tariff Income	0.01

A5: ESTIMATED CAPACITY CHARGES OF CTPP-UNIT 5 FOR FY 2017-18

1.26 The net fixed charges are computed in Table below:

Table 11: Net Capacity Charges of CTPP Unit 5 for FY 18 (Rs. in Cr.)

Particular	2017-18
Fixed Charge	
O & M Expenses	
Depreciation	
Interest on Term Loans & Fin. Charges	
Interest on Working Capital Loans	
Insurance Charges	
Recovery of ARR & Tariff Petition Fees	
ROE	
Total Fixed Charge	
Less: Non-Tariff Income	
Net Fixed Charge	

A6: VARIABLE CHARGES OF CTPP UNIT-5 FOR FY 2017-18

- 1.27 SHR of CTPP Unit-5 has been taken as 2247.97 kcal/kwh. As the PG test of CTPP Unit # 5 has not been done so SHR has been taken as per the RERC maximum design unit heat rate as prescribed at Annexure- 2 of RERC Regulation 2014. According to this Turbine cycle heat rate is taken as 1850 kCal/kWh) and boiler efficiency is taken as 86 % ,so maximum design heat rate comes out 2151 kCal/kWh & with consideration of factor 1.045 station heat rate comes out to be 2247.9 k Cal/kWh.
- 1.28 The PLF has been considered as 83% as per RERC norms and Auxiliary consumption has been considered as 6.31% as per the actual auxiliary connected at the plant.
- 1.29 As CTPP-Unit#5 is a new unit and there is no previous fuel consumption data for this unit and therefore, the GCV oil (HSD/LDO) has been taken as the fuel used in Unit 3 & 4 and the same is 10000 kcal/litres for HFO and 10000 kcal/litre for LDO, the prices of oil have also been taken as the weighted average price which comes out to be Rs. 35000/KL for HFO and Rs. 43000/KL for LDO for FY 18.
- 1.30 The average GCV of Indian Coal has been considered as 4200 Kcal/Kg for FY 2017-18. The price has been taken as the weighted average price which comes out to be Rs. 4000/MT for FY 2017-18.
- 1.31 The overall estimated figures of variable cost for the period under consideration, are summarised in Table below.

Table 12: Variable Cost of CTPP-Unit 5 for FY 18 (Rs. in Crore)

S.No.	Particulars	Units	FY 17-18
1	Operational Parameters		
1.1	Total Capacity	MW	660
1.2	Availability	%	83%
1.3	PLF	%	83%
1.4	Gross Generation	MU	4798.73
1.5	Auxiliary Energy Consumption	%	6.31%
1.6	Auxiliary Energy Consumption	MU	302.80
1.7	Net Generation	MU	4495.93
1.8	Heat Rate	kcal/kWh	2247.97
2	Fuel Parameters (for each primary and secondary fuel)		
2.1	Gross Calorific Value		
2.1.1	Fuel 1 HFO	kcal/ltr	10000
2.1.2	Fuel 2 LDO	kcal/ltr	10000
2.1.3	Fuel 3 Coal	kcal/kg	4200

2.2	Landed Fuel Price per unit (Please specify the fuel)		
2.2.1	Fuel 1 HFO	Rs/KL	35000
2.2.2	Fuel 2 LDO	Rs/KL	43000
2.2.3	Fuel 3 Coal	Rs/MT	4000
3	Fuel Consumption and Heat Contribution (for each fuel separately)		
3.1	Specific Fuel Consumption		
3.1.1	Fuel 1 HFO	ml/kWh	0.45
3.1.2	Fuel 2 LDO	ml/kWh	0.05
3.1.3	Fuel 3 Coal	kg/kWh	0.53
3.2	Total Fuel Consumption		
3.2.1	Fuel 1 HFO	KL	2159.43
3.2.2	Fuel 2 LDO	KL	239.94
3.2.3	Fuel 3 Coal	MT	2562709.41
3.3	Heat Content (each fuel separately)		
3.3.1	Fuel 1 HFO (2.1.1 x 3.1.1)	Million kcal	21594.28
3.3.2	Fuel 2 LDO (2.1.2 x 3.1.2)	Million kcal	2399.36
3.3.3	Fuel 3 Coal (2.1.3 x 3.1.3)	Million kcal	10763379.51
	Total Heat Content		10787373.15
4	Total Fuel Cost		
4.1.1	Fuel 1 HFO (2.2.1 x 3.2.1)	Rs Crore	7.56
4.1.2	Fuel 2 LDO (2.2.2 x 3.2.2)	Rs Crore	1.03
4.1.3	Fuel 3 Coal (2.2.3 x 3.2.3)	Rs Crore	1025.08
	Total Fuel Cost	Rs Crore	1033.67
5	Other Charges and Adjustments		
6	Total Cost (4+5)	Rs Crore	1033.67
7	Cost of Generation per unit (at Generation Terminal) (6/1.4)	Rs/kWh	
8	Energy Charge per unit (ex-bus) (6/1.7)		
8.1.1	Fuel 1 HFO	Rs/kWh	0.017
8.1.2	Fuel 2 LDO	Rs/kWh	0.002
8.1.3	Fuel 3 Coal	Rs/kWh	2.280
	Total---(8)	Rs/kWh	2.299

A7: ESTIMATED AGGREGATE REVENUE REQUIREMENT OF CTPP-UNIT 5 FOR FY 2017- 18

1.32 The recovery Of ARR proposed for CTPP-unit#5 is summarised in table below:

Table 12: ARR OF CTPP-UNIT 5 for FY 18 (Rs. in Crore)

Parameter	FY 2017-18
Capacity Charges	776.75
Variable Cost	1033.67
Aggregate Revenue Requirement	1810.42

A8: ESTIMATED TARIFF OF UNIT-5 FOR FY 2017-18

1.33 Total per unit charge in Rs. / kwh is given in given table below:-

Table 13: TARIFF of CTPP UNIT 5 for FY18

Parameter	FY18
Ex-Bus Generation (MU)	4495.93
Capacity charges/Fixed charge (Rs. In Crore)	776.75
Variable Cost (Rs. in Crore)	1033.67
Fixed cost (Rs/KWh sent out)	1.728
Variable Cost (Rs/KWh sent out)	2.299
Total cost (Rs/KWh sent out)	4.027

A9: FUEL COST ADJUSTMENT FORMULA

1.34 The Commission in their Tariff Regulations, 2014 have provided a fuel cost adjustment formula for adjustment of tariff on account of fuel related costs of electricity generation to take care of any variation in the variable cost and the same is proposed to be recovered from Discoms.

A10: RESPONDENTS:-

1.35 All the three Discom's (i.e JVVNL/AVVNL/ Jd.VVNL) Jaipur/ Ajmer/ Jodhpur are respondents for the above petition.

A11: PRAYER

RVUN humbly requests the Hon'ble Commission to:

- ◆ Approval of provisional Tariff for FY 2017-18 as per regulation 42 of RERC Regulation 2014 for Unit-5.
- ◆ Approval ARR for period FY 2017-18 for Chhabra Unit 5.
- ◆ To allow provisional tariff for Unit 5 to be applicable immediately after actual COD as proposed in this petition till final tariff order is issued.
- ◆ And pass other further orders as are deemed fit and proper in the facts and circumstances of the case.

(Y. K. Upadhyay)
CAO (Comml., A/cs & Taxation and PPM-IT)
RVUN, Jaipur

(Ajay Saxena)
Addl. CE (PPMC&IT)
RVUN, Jaipur

Form G 1.1

Summary of Tariff Proposal

Name of the Petitioner

RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM LIMITED

Name of the Power Station /Unit :

Chhabra Super Thermal Power Station-Unit-5

(Rs. Crore)

S.No.	Particulars	Ref.of Form No	Previous year (2015-16)	Current year (2016-17)			Ensuing Year (2017-18)	Remark
			Actual/Audited	Approved by the Commission	Apr-Sep (Actual)	Estimated for the year	Anticipated	
1	2	3	4	5	6	7	8	9
1	Capacity (Fixed) Charge							
1.1	Depreciation	6.1					175.31	
1.2	Interest on term Loan & Finance charges	6.2					328.92	
1.3	Return on Equity	6.9					106.55	
1.4	Interest on Working Capital	6.11					45.78	
1.5	O & M Expenses	4.1					113.34	
1.6	Insurance Charges	6.12					6.52	
1.7	ARR and Tariff petition fee						0.33	
	Any other item (to be specified)							
1.6	Less: Non-Tariff income	3.2					0.01	
	Total (1)- Capacity (Fixed Charges)						776.75	
2	Total- Energy (variable) charges						1033.67	
3	Units sold to Discoms (MU)						4495.93	
4	Rate of Fixed Charges. (1/3)						1.73	
5	Rate of Variable Charges.						2.299	
5.1	Rate of Energy Charge from Primary Fuel (REC) _p	5.3						
	(i) Coal/ Lignite						2.280	
	(ii) Imported Coal						0.00	
	(iii) Any Other fuel						0.00	
	Total 2.1						2.28	
5.2	Rate of Energy Charge from Secondary Fuel (REC) _s	5.3					0.02	
5.3	Total-(2) Rate of Energy Charge ex-bus(REC) ^{3A,3B,3C}						4.03	

Aggregate Revenue Requirement

Name of the Petitioner

RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM LIMITED

Name of the Power Station/Unit:

Chhabra Super Thermal Power Station-Unit-5

(Rs. Crore)

S.No.	Particulars	Reference Form	Previous year (2015-16)	Current Year (2016-17)			Ensuing Year (2017-18)	Remarks
			Actual/Audited	Approved by the Commission	Apr-Sep (Actual)	Estimated for the year	Anticipated	
1	2	3	4	5	6	7	8	9
A	Receipts							
1	Revenue from Sale of Power (Tariff income)	3.1					1810.42	
2	Non Tariff income	3.2					0.01	
3	Revenue Subsidies, Grants & Subvention from State Govt.						0.00	
	Total- (A)						1810.43	
B	Expenditure							
1	Variable Costs, including Fuel Cost	5.1					1033.67	
2	Depreciation	6.1					175.31	
3	Interest on term Loan & Finance charges	6.2					328.92	
4	Return on Equity	6.9					106.55	
5	ARR and Tariff Petition Fee						0.33	
6	Interest on Working Capital	6.11					45.78	
7	O & M Expenses	4.1					113.34	
8	Insurance Charges	6.12					6.52	
9	Any other item (to be specified)							
C	Total- (B) Expenditure						1810.43	
D	A.R.R. (C-A.2)						1810.42	

Plant Characteristics

Name of the Petitioner

RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM LIMITED

Name of the Power Station/Unit:

Chhabra Super Thermal Power Station-Unit-5

Basic characteristics of the plant ¹	Super critical pressure, once through steam generator						
Special Features of the Plant							
Site Specific Features ²	Close cycle cooling system						
Special Technological Features ³							
Environmental Regulation related features ⁴	ESP						
Any other special features							
Fuel Details ⁵	Primary Fuel		Secondary Fuel			Alternate Fuels	
	Pulverised Coal		HFO/ LDO			NA	
Details	Unit number						
	1	2	3	4	5	6	& so on
Installed Capacity (IC)					660MW		
Date of Commercial Operation (COD)					01-04-2017		
Type of cooling system ⁶					Natural Draft Cooling-Tower(closed cycle)		
Type of Boiler Feed Pump ⁷					Horizontal, Centrifugal Multistage Barrel Type Main Pum and Single casing, double suction, single stage, Horizontal/ Radial Split Type Booster Pump		
Pressure (kg/ cm2)					321		
Temperature 0C							
-At Superheater Outlet					568		
-At Reheater Outlet					596		
Turbine Cycle heat Rate(Kcal/ Kwh)					1850		
Boiler Efficiency (%)					86		
Guaranteed Design Heat rate (kCal/kWh) ⁸					2151.163		
Conditions on which guaranteed							
% MCR					100%STG MCR		
% Makeup					0% Make up		
Design Fuel					4000 Kcal/ Kg (GCV of Coal)		
Design cooling water Temperature					31		
Back Pressure							

Operational Parameters - Generation

Name of Petitioner

RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM LIMITED

Name of the Station/Unit:

Chhabra Super Thermal Power Station-Unit-5

S. No.	Particulars	Units	Previous year (2015-16)	Current Year (2016-17)			Ensuing Year (2017-18)	Remarks
			Audited/Actual	Approved by the Commission	Apr-Sep (Actual)	Estimated for the year	Anticipated	
1	2	3	4	5	6	7	8	9
1	Operational Parameters - Hydel							
1.1	Total Capacity	MW						
1.2	Capacity Index	%						
1.3	Design Energy	MU						
1.4	Gross Generation	MU						
1.5	Auxiliary Energy Consumption	%						
1.6	Auxiliary Energy Consumption	MU						
1.7	Net Generation	MU						
2	Operational Parameters - Thermal							
2.1	Total Capacity	MW					660	
2.2	Availability	%					83%	
2.3	Plant Load Factor	%					83%	
2.4	Gross Generation	MU					4798.73	
2.5	Auxiliary Energy Consumption	%					6.31%	
2.6	Auxiliary Energy Consumption	MU					302.80	
2.7	Net Generation	MU					4495.93	
2.6	Heat Rate	Kcal/ Kwh)					2247.97	

Revenue from Sale of Power

Name of the Company

RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM LIMITED

Name of the Power Station :

Chhabra Super Thermal Power Station-Unit-5

Year (2016-17)

Rs. Crore

S.No.	Particulars	Allocation (in %) /contract demand	Unit Sold (M.U.)	% of total Unit Sold	Demand/fix ed Charges @	Energy Charges @	Others, if any	Total (6+7+8)	Average' rate/kWh (paisa/kWh)	Remarks
1	2	3	4	5	6	7	8	9	10	11
A)	Revenue from sale of Electricity(as per approved tariff)									
1	Dist.Licensee/ trader/ consumers									
(a)	JVVNL		1798.37	40%	310.70	413.47	0	724.17	40.27	
(b)	AVVNL		1258.86	28%	217.49	289.43	0	506.92	40.27	
(c)	JDVVNL		1438.70	32%	248.56	330.78	0	579.33	40.27	
2	Other recoveries		0	0	0	0	0	0	0	
6	Net revenue		4495.93		776.75	1033.67		1810.42	402.68	

NON-TARIFF INCOME

Name of the Petitioner

RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM LIMITED

Name of the Power Station/ Unit:

Chhabra Super Thermal Power Station-Unit-5

Rs. Crore

S.No	Particulars	Previous year (2015-16)	Current Year (2016-17)		Ensuing Year (2017-18)	Remarks	
		(Actuals/audited)	Approved by the Commission	Apr-Sep (Actual)	Estimated for the year		(Anticipated)
1	2	3	4	5	6	7	8
	Non-tariff income						
i.	Interest on loans and advances to employees						
ii.	Interest on loans and advances to suppliers/ contractors						
iii.	Interest and other income from investments and deposits						
iv.	Income from rent on land/ building						
v.	Income from sale of scrap						
vi.	Interest on subvention received from govt.						
vii.	Net Income from sale of power to housing colony/ township for its staff						
viii.	Income from sale of ash/ rejected coal						
ix.	Rebate for early payment						
x.	Income from advertisement						
xi.	Other miscellaneous receipts					0.01	
	Total non-tariff income					0.01	

REVENUE SUBSIDIES & GRANTS

Name of the Petitioner:

RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM LIMITED

Name of the Power Station/Unit :

Chhabra Super Thermal Power Station-Unit-5

S. No.	Particulars	Previous year (2015-16)	Current Year (2016-17)			Ensuing Year (2017-18)	Remarks
		(Actuals/audited)	Approved by the Commission	Apr-Sep (Actual)	Estimated for the year	(Anticipated)	
1	2	3	4	5	6	7	8
A)	Revenue Subsidies & Grants	NIL					
1	Subvention from State Government towards sale of electricity						
2	State Govt. Grant against addl. Intt. Liability on Company						
3	Any Other item						
	Total						

Capital Subsidies and Grants

Name of the Petitioner:

RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM LIMITED

Name of the Power Station/Unit :

Chhabra Super Thermal Power Station-Unit-5

Rs. Crore

S. No.	Particulars	Previous year (2015-16)	Current Year(2016-17)			Ensuing Year (2017-18)	Remarks
		(Actuals / audited)	Approved by the Commission	Apr-Sep (Actual)	Estimated for the year	(Anticipated)	
1	2	3	4	5	6	7	8
A	Capital Cost					3436.95	
	Subsidy towards cost of Capitals Asset					0	
	Grant towards cost of Capitals Assets					0	
	Receipts from State Govt. under any scheme as grant/subsidy					0	
	Total					3436.952	

O&M Expenses

Name of the Petitioner:

RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM LIMITED

Name of the Station/Unit:

Chhabra Super Thermal Power Station-Unit-5

(Rs. Crore)

S.No.	Particulars	Previous year (2015-16)	Current year (2016-17)			Ensuing Year (2017-18)
		(Actuals/audited)	Approved by the Commission	Apr-Sep (Actual)	Estimated for the year	(Anticipated)
1	2	3	4	5	6	7
1	O&M Expense norms (Rs. per MW)					0.17
2	Total Capacity in MW					660
3	O&M expense					113.34
4	Special O&M expense for Water pipe lines>50 km					
a	Details of Water pumping Stations beyond 50 K.M. from Water intake point					
b	<u>Pumping Station No.1 :-</u>					
b.1	Power consumption Cost					
b.2	Repair / Maintenance / Employee / other Cost					
b.3	Sub total (b)					
c	<u>Pumping Station No.2 :-</u>					
	and so on					
d	Total (4) Special O&M Expenses					
5	Total O&M expenses					113.34

Details/Information in respect of Fuel for Computation of Energy Charges¹

Name of the Petitioner:

RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM LIMITED

Name of the Power Station/unit:

Chhabra Super Thermal Power Station-Unit-5

S.No	Particulars	Unit	For preceeding 3rd Month		For preceeding 2nd Month		For preceeding 1st month		Average for # Months	
			Domestic coal	Imported coal	Domestic coal	Imported coal	Domestic coal	Imported coal	Domestic coal	Imported coal
1	2	3	4	5	6	7			8	9
1	Quantity of coal/lignite in stock at the beginning of the month	(MMT)	NA							
2	Quantity of Coal/ Lignite supplied by Coal/ Lignite Company	(MMT)								
3	Adjustment (+/-) in quantity supplied made by Coal/ Lignite Company for diversion of wagons etc.	(MMT)								
4	Coal supplied by Coal/ Lignite Company (2+3)	(MMT)								
5	Normative Transit & Handling Losses (For coal/ Lignite based Projects)	(MMT)								
6	Net coal/ Lignite Supplied (4-5)	(MMT)								
7	Total coal (Receipts & Opening Stock) (1)+(6)	(MMT)								
8	Coal/lignite burnt/consumed	(MMT)								
9	Coal/lignite in stock at the end of the month (7)-(8)	(MMT)								
10	Value of coal/lignite in stock	(Rs.)								
11	Amount charged by the Coal / Lignite Company	(Rs.)								
12	Adjustment (+/-) in amount charged made by Coal/ Lignite Company	(Rs.)								
13	Total amount Charged (11+12)	(Rs.)								
14	Transportation charges by rail/ ship/ road transport	(Rs.)								
15	Adjustment (+/-) in amount charged made by Railways/ Transport Company	(Rs.)								
16	Demurrage Charges, if any	(Rs.)								
17	Cost of diesel in transporting coal through MGR system, if applicable	(Rs.)								
18	Total Transportation Charges (14+15+16+17)	(Rs.)								
19	Total amount Charged for coal/ lignite supplied including Transportation (13+18)	(Rs.)								
20	Average cost of coal/lignite (Opening stock + receipts) (19/7)	(Rs/ MMT)								
21	Cost of coal in stock at the end of the month (20)x(9)	(Rs.)								
22	Weighted average GCV of coal/ Lignite as Received	(kCal/ Kg)								
22	Weighted average GCV of coal/ Lignite as fired	(kCal/ Kg)								
23	Weighted average Sulphur content	(%)								

Limestone for computation of Energy Rate

Name of the Petitioner: _____

Name of the Power Station/ Unit: _____

S. No.	Month	Unit	For preceeding 3rd Month	For preceeding 2nd Month	For preceeding 1st Month	Remarks
1	2	3	4	5	6	7
1	Quantity of Limestone supplied by limestone Supply Company	(MMT)				
2	Adjustment (+/-) in quantity supplied made by Limestone supply Company	(MMT)				
3	Limestone supplied by Limestone supply Company (1+2)	(MMT)				
4	Amount charged by limestone Supply Company	(Rs.)				
5	Adjustment (+/-) in amount charged made by limestone Supply Company	(Rs.)				
6	Total amount Charged (4+5)	(Rs.)				
7	Transportation charges by rail/ship/road transport	(Rs.)				
8	Adjustment (+/-) in amount charged made by Railways/Transport Company	(Rs.)				
9	Demurrage Charges, if any	(Rs.)				
10	Total Transportation Charges (7+8+9)	(Rs.)				
11	Total amount Charged for Limestone supplied including Transportation (6+10)	(Rs.)				NA

Energy Charges for Thermal Generation

Name of the Petitioner:

Name of the Power Station/Unit:

S.No.	Particulars	Units	FY 17-18	Remarks
1	Operational Parameters			
1.1	Total Capacity	MW	660	
1.2	Availability	%	83%	
1.3	PLF	%	83%	
1.4	Gross Generation	MU	4798.73	
1.5	Auxiliary Energy Consumption	%	6.31%	
1.6	Auxiliary Energy Consumption	MU	302.80	
1.7	Net Generation	MU	4495.93	
1.8	Heat Rate	kcal/kWh	2247.97	
2	Fuel Parameters (for each primary and secondary fuel)			
2.1	Gross Calorific Value			
2.1.1	Fuel 1 HFO	kcal/ltr	10000	
2.1.2	Fuel 2 LDO	kcal/ltr	10000	
2.1.3	Fuel 3 Coal	kcal/kg	4200	
2.2	Landed Fuel Price per unit (Please specify the fuel)			
2.2.1	Fuel 1 HFO	Rs/KL	35000	
2.2.2	Fuel 2 LDO	Rs/KL	43000	
2.2.3	Fuel 3 Coal	Rs/MT	4000	
3	Fuel Consumption and Heat Contribution (for each fuel separately)			
3.1	Specific Fuel Consumption			
3.1.1	Fuel 1 HFO	ml/kWh	0.45	
3.1.2	Fuel 2 LDO	ml/kWh	0.05	
3.1.3	Fuel 3 Coal	kg/kWh	0.53	
3.2	Total Fuel Consumption			
3.2.1	Fuel 1 HFO	KL	2159.43	
3.2.2	Fuel 2 LDO	KL	239.94	
3.2.3	Fuel 3 Coal	MT	2562709.41	
3.3	Heat Content (each fuel separately)			
3.3.1	Fuel 1 HFO (2.1.1 x 3.1.1)	Million kcal	21594.28	
3.3.2	Fuel 2 LDO (2.1.2 x 3.1.2)	Million kcal	2399.36	
3.3.3	Fuel 3 Coal (2.1.3 x 3.1.3)	Million kcal	10763379.51	
	Total Heat Content		10787373.15	
4	Total Fuel Cost			
4.1.1	Fuel 1 HFO (2.2.1 x 3.2.1)	Rs Crore	7.56	
4.1.2	Fuel 2 LDO (2.2.2 x 3.2.2)	Rs Crore	1.03	
4.1.3	Fuel 3 Coal (2.2.3 x 3.2.3)	Rs Crore	1025.08	
	Total Fuel Cost	Rs Crore	1033.67	
5	Details of limestone consumption (Applicable for Lignite based generating stations)			
6	Other Charges and Adjustments			
7	Total Cost (4+5+6)	Rs Crore	1033.67	
8	Cost of Generation per unit (at Generation Terminal) (7/1.4)	Rs/kWh		
9	Energy Charge per unit (ex-bus) (7/1.7)			
9.1.1	Fuel 1 HFO	Rs/kWh	0.017	
9.1.2	Fuel 2 LDO	Rs/kWh	0.002	
9.1.3	Fuel 3 Coal	Rs/kWh	2.280	
	Total---(9)	Rs/kWh	2.299	

Note

Fixed assets & provisions for depreciation

Name of the Petitioner

RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM LIMITED

Name of the Power Station :

Chhabra Super Thermal Power Station-Unit-5

Year (2017-2018)

(Figures in Rs Crore)

S. No.	Particular	Rate of depreciation %	Gross fixed assets				Provisions for depreciation				Net fixed assets at the beginning of the year	Net Fixed Asset at the end of the year
			At the beginning of the year	Additions during the year	Adjustment & deducitons	At the end of the year	Cumulative upto the beginning of the year	Additions during the year	Adjustment during the year	Cumulative at the end of the year		
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Land & land rights	0.00		31.35	0.00	31.35	0.00	0.00		0.00	0.00	31.35
1A	Hydraulic works	5.28		146.74	0.00	146.74	0.00	7.75		7.75	0.00	139.00
2	Building & Civil works of Power plant	3.34		229.02	0.00	229.02	0.00	7.65		7.65	0.00	221.37
3	Plant & machinery including sub-station equipments	5.28		3026.27	0.00	3026.27	0.00	159.79		159.79	0.00	2866.49
4	Communication equipment	5.28		0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00
5	Vehicles	6.33		0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00
6	Furniture & fixtures	6.33		0.17	0.00	0.17	0.00	0.01		0.01	0.00	0.16
7	Office Equipments	6.33		0.07	0.00	0.07	0.00	0.00		0.00	0.00	0.07
8	Capital spares	5.28		0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00
9	IT Equipments			0.00				0.00				0.00
10	IT/ SCADA Software			0.00				0.00				0.00
11	Any other items	3.34		3.32	0.00	3.32	0.00	0.11		0.11	0.00	3.21
	Total (1) to (11)		0.00	3436.95	0.00	3436.95	0.00	175.31	0.00	175.31	0.00	3261.64

LOAN REPAYMENT & INTREST LIABILITY

Name of the Petitioner RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM LIMITED
 Name of the Power Station : Chhabra Super Thermal Power Station-Unit-5

S. No.	Source (loan)	Currency	Opening Balance	Anticipated Receipts	Anticipated Repayment	Year (2017-18)		Closing Balance	Average Rate of Interest#	Liability of Interest during the year	Financial charges	Total interest & finance charges	Less: Interest charges capitalised	Net interest & finance charges	Year (2017-18)			
						Rs. Crore									Rs. Crore			
						Interest rate									Loan swapped during the Year			
Fixed	Floating	Domestic loan	Foreign loan	old Interest rate	New Interest rate													
1	2	2A	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	Term Loan from PFC and REC			2749.56	175.31			2574.25	12.36	328.92	0.00	328.92		328.92				

Details of Project Specific Loans

Name of the Petitioner
Name of the Power Station
Commercial Operation Date

RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM LIMITED
Chhabra Super Thermal Power Station-Unit-5
01.04.2017

Particulars	Year (2017-18)						Rs. Crore
	Package1	Package2	Package3	Package4	Package5	Package6	
1	2	3	4	5	6	7	
Source of Loan	PFC	REC					
Currency	Rupees	Rupees					
Amount of Loan sanctioned	3794	2530	for unit 5&6				
Amount of Gross Loan drawn upto previous year/during current/ensuing year/ COD	3794	2530					
Interest Type	fixed	fixed					
Fixed Interest Rate, if applicable	12.29	11.79					
Base Rate, if Floating Interest ⁷							
Margin, if Floating Interest ⁸							
Are there any Caps/ Floor ⁹							
If above is yes,specify caps/ floor							
Moratorium Period ¹⁰							
Moratorium effective from							
Repayment Period ¹¹							
Repayment effective from							
Repayment Frequency ¹²							
Repayment Instalment ^{13,14}							
Base Exchange Rate ¹⁶							

(Loan for both Unit 5 & 6)

Consolidated report on additions to Fixed Assets during the year

Name of the Petitioner

RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM LIMITED

Name of the Power Station :

Chhabra Super Thermal Power Station-Unit-5

(Rs. in crores)

S.No.	Asset Description	Asset Code	Previous year (2015-16)							Current Year (2016-17)							Ensuing Year (2017-18)							
			(Actuals/audited)							(Actuals & Anticipated)							(Anticipated)							
			Cost	Interest	Finance Charges	Pre-Operative expenses	Exchange fluctuations	Total	Date of commissioning	Cost	Interest	Finance Charges	Pre-Operative expenses	Exchange fluctuations	Total	Date of commissioning	Cost	Interest	Finance Charges	Pre-Operative expenses	Exchange fluctuations	Total	Date of commissioning	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	11	12	13	14	15	16	17	
1	Land & land rights																	31.35						31.35
1A	Hydraulic works																	146.74						146.74
2	Building & Civil works of Power																	229.02						229.02
3	Plant & machinery including sub-																	3026.27						3026.27
4	Communication equipment																	0.00						0.00
5	Vehicles																	0.00						0.00
6	Furniture & fixtures																	0.17						0.17
7	Office Equipments																	0.07						0.07
8	Capital spares																	0.00						0.00
9	IT Equipments																	0.00						0.00
10	IT/ SCADA Software																	0.00						0.00
11	Any other items																	3.32						3.32
	Total (1) to (11)																	3436.95						3436.95

Form G 6.5

Abstract of Capital Cost Estimates and Schedule of Commissioning for the New projects

Name of the Petitioner :	RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM LIMITED					
Name of the Power Station :	Chhabra Super Thermal Power Station-Unit-5					
New Projects						
Capital Cost Estimates	9167.27					
Board of Director/ Agency approving the Capital cost estimates:						
Date of approval of the Capital cost estimates:	26/ 12/ 2008					
	Present Day Cost			Completed Cost		
Price level of approved estimates	As on 30.09.16			As on Scheduled COD of the Station(01.04.17)		
Foreign Exchange rate considered for theCapital cost estimates						
<u>Capital Cost excluding IDC & FC</u>						
Foreign Component, if any (In Million US \$ or the relevant Currency)		0				
Domestic Component (Rs. Cr.)		0				
Capital cost excluding IDC & FC (Rs. Cr)		2902.052				
<u>IDC & FC</u>						
Foreign Component, if any (In Million US \$ or the relevant Currency)		0				
Domestic Component (Rs. Cr.)						
Total IDC & FC (Rs.Cr.)		534.9				
Rate of taxes & duties considered						
Capital cost Including IDC & FC						
Foreign Component, if any (In Million US \$ or the relevant Currency)		0				
Domestic Component (Rs. Cr.)		3436.952				
Capital cost Including IDC & FC (Rs. Cr)		3436.952				
<u>Schedule of Commissioning</u>						
COD of Unit-5		01.04.2017				
Note:						

Break-up of Capital Cost for Coal / Lignite / gas / liquid fuel based projects

Name of the Petitioner:

RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM LIMITED

Name of the Power Station :

Chhabra Super Thermal Power Station-Unit-5

Break Down		Cost in Rs. Crores			Liabilities/Provisions	Rs. Crore.		
		As per Estimates for unit 5&6	Amount Booked as on 30.09.16 for unit 5&6	Actual Expenditure as on as on 30.09.16 of unit 5 for unit 5&6		Variation (Rs. Cr.)	Reasons for Variation	Admitted Cost (Rs. Cr.)
2	3			4	5	6	7	8
EPC Contract	M/ s Larsen & Tunbro Ltd	5997.13	4487.45	2,692.47				
Consultancy Engg services	M/ s TCE Consulting Eng. Ltd	13.46	6.41	3.85				
River Water System (Supply)	M/ s Zuberi Engg. Co	339.51	107.52	64.51				
	M/ s Zuberi Engg. Co	37.38	36.1	18.69				
	M/ s Zuberi Engg. Co	45.68	8.75	5.25				
	M/ s Zuberi Engg. Co	44.08	8.32	4.99				
	Order to be placed	31.77	0	-				
Town Ship	Millerium Cream Build	6.61	5	3.00				
	Order to be placed	200.4	0	-				
Intake Well	Order to be placed	100	0	-				
Lhasi Dam	Waterwer Resource Dept.	58.93	47	28.20				
Other Civil Work(railway siding)	Order to be placed only inspection charges paid	252	5.55	3.33				
Raising of height of Anicut	Waterwer Resource Dept.	61.02	3.63	2.18				
CSR activities		33	2.25	1.35				
Licence fee for coal stock		52.5	45.84	26.25				
Land		56.11	52.36	28.06				
Others	Furniture Fixture	0.28	0.28	0.14				
	Office Equipment	0.11	0.11	0.06				
	Others	242.2	32.89	19.73				
Locomotives	Order to be placed	18	0	-				
Buildozers	Order to be placed	12	0	-				
Truck, Lift, Oil, Filtration machine	Order to be placed	15	0	-				
IDC		1517	891.5	534.90				
Finance Charges		33.1	0	-				
GRAND TOTAL		9167.27	5740.96	3,436.95				

Break-up of Construction / Supply / Service packages

Name of the Petitioner :
Name of the Power Station :

RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM LIMITED
Chhabra Super Thermal Power Station-Unit-5

S.No.	Name/No. of Construction / Supply / Service Package	Scope of works ¹ (in line with head of cost break-ups as applicable)	Whether awarded through ICB/DCB/ Deptamentally/ Deposit Work	No. of bids received	Date of Award	Date of Start of work	Date of Completion of Work	Value of Award ² in (Rs. Cr.)	Firm or With Escalation in prices	Actual expenditure till the completion or up to COD whichever is earlier(Rs.Cr.)	Taxes & Duties and Pre-operative Expenses	IDC, FC, FERV & Hedging cost	Variation (Rs.Cr.)	Variation on account of change in Price (Rs. Cr.)	Reason for change in Price	Variation on account of change in Scope of Work (Rs. Cr.)	Reason for Change in Scope of Work
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
<p>Given in Petition</p>																	
27																	
28																	
29																	
30																	
31																	
32																	

Draw Down Schedule for Calculation of IDC & Financing Charges (year wise from commencement of works to COD)

Name of the Petitioner:

Name of the Power Station

Rs. Crore

S.No.	Draw Down Particulars	Quarter 2			Quarter 3			Quarter 4		
		Quantum in Foreign currency	Exchange Rate on draw down date	Amount in Indian Rupee	Quantum in Foreign currency	Exchange Rate on draw down date	Amount in Indian Rupee	Quantum in Foreign currency	Exchange Rate on draw down date	Amount in Indian Rupee
1	2	6	7	8	9	10	11	12	13	14
1	Loans									
1.2	Indian Loans									
1.2.1	Indian Loan 1									
	Draw down Amount	--	--	2749.56	--	--		--	--	
	IDC	--	--	0	--	--				
	Financing charges	--	--		--	--				
1.2	Total Indian Loans									
	Draw down Amount	--	--	2,749.56	--	--				
	IDC	--	--	-	--	--				
	Financing charges	--	--		--	--				
1	Total of Loans drawn			2,749.56						
	IDC									
	Financing charges			-						
2	Equity									
2.1	Foreign equity drawn									
2.2	Indian equity drawn	--	--	687.39	--	--				
	Total equity deployed			687.39						

Note: Drawal of debt and equity shall be on paripassu basis to meet the commissioning schedule. Drawal of higher equity in the beginning is permissible.

RETURN ON EQUITY

Name of the Petitioner:

RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM LIMITED

Name of the Power Station :

Chhabra Super Thermal Power Station-Unit-5

Rs. Crore

S.No.	Particulars	Reference	Previous year (2015-16)	Current Year (2016-17)			Ensuing Year (2017-18)	Remarks
			(Actuals/audited)	Approved by the Commission	Apr-Sep (Actual)	Estimated for the year	(Anticipated)	
1	2	3	4	5	6	7 = 5+6	8	9
1	Equity at the beginning of the year						0	
2	Capitalisation						3436.95	
3	Equity portion of capitalisation						687.39	
4	Equity at the end of the year						687.39	
	Return Computation							
5	Return on Equity at the beginning of the year	15.50%*(1)					0	
6	Return on Equity portion of capitalisation (on pro-rata basis)	15.5%*(3)/ (n/ 12)					106.55	
7	Total Return on Equity	(5)+(6)					106.55	

Statement of Additional Capitalisation after COD and Details for Financing

Name of the Petitioner:
Name of the Power Station
COD

RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM LIMITED
Chhabra Super Thermal Power Station-Unit-5
01.04.2017

(Rs. Crore)

S.No.	Work/Equipment added after COD up to Cut off Date / Beyond Cut off Date	Amount Capitalised / Proposed to be capitalised	Justification	Regulations under which such additional capitalisation has been claimed	Source of Finance					Admitted Cost ¹
					Loan 1	Loan 2 and so on	Total Loan	Equity	Internal Sources or Others (mention details)	
	1 Land & land rights	8.27								
1A	Hydraulic works	38.71								
	2 Building & Civil works of Power plant	60.41								
	3 Plant & machinery including sub-station equipments	798.21								
	4 Communication equipment	0.00								
	5 Vehicles	0.00								
	6 Furniture & fixtures	0.04								
	7 Office Equipments	0.02								
	8 Capital spares	0.00								
	9 IT Equipments	0.00								
	10 IT/ SCADA Software	0.00								
	11 Any other items	0.88								
	Total (1) to (11)	906.53								
Total										

Interest on Working Capital

Name of the Petitioner

RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM LIMITED

Name of the Power Station

Chhabra Super Thermal Power Station-Unit-5

Rs. Crore

S. No.	Particulars	Previous year (2015-16)	Current Year (2016-17)		Ensuing Year (2017-18)	Remarks	
		(Actuals / audited)	Approved by the Commission	Apr-Sep (Actual)	Estimated for the year		(Anticipated)
1	2	3	4	5	6 = 4+5	7	8
1	Fuel Stock (one and half month)					128.14	
2	Secondary fuel stock (two months)					1.43	
3	O & M expenses (one month)					9.45	
4	Maintenance Spares (@20% of O&M expenses)					22.67	
5	Receivables (one and half month)					226.30	
6	limestone, if applicable (as per norms)						
	Total Working Capital					387.98	
	Rate of Interest (as per norms)					11.80%	
	Interest on Working Capital					45.78	

Insurance Expenses

Name of the Petitioner:

RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM LIMITED

Name of the Power Station :

Chhabra Super Thermal Power Station-Unit-5

Rs. Crore

S. No.	Particulars	Previous year (2015-16)	Current Year (n)			Ensuing Year (2017-18)	Remarks
			2016-17				
		(Actuals/audited)	Approved by the Commission	Apr-Sep (Actual)	Estimated for the year	(Anticipated)	
1	2	4	5	6	7=6+5	8	9
	Insurance Expenses						
a)	Provision made/ proposed for the year					6.52	
b)	Actual insurance expenses incurred						
c)	Average Net Fixed Assets					3261.64	

Form G 6.13

Tax on R.O.E.

Name of the Petitioner:

RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM LIMITED

Name of the Power Station :

Chhabra Super Thermal Power Station-Unit-5

Rs.

S. No.	Particulars	Previous year (2015-16)	Current Year (2016-17)	Ensuing Year (2017-18)	Remarks
		(Actuals/audited)	Actual/ Estimated	Proposed to be recovered	
1	2	3	4	5	6
A)	Advance Tax assessed & deposited on-----	NIL			
a)	for Quarter I & deposited on 15 th June.				
b)	for Quarter II & deposited on 15 th Sept.				
c)	for Quarter III & deposited on 15 th Dec.				
d)	for Quarter IV & deposited on 15 th March.				
	Total---(A)				
B)	Deffered tax liability before 01.04.2009				

Name of the Petitioner
Name of the Power Station :

Proposed improvement in performance
RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM LIMITED
Chhabra Super Thermal Power Station-Unit-5

Rs. Crore

S.No	Particulars	Previous year	Current year			MYT Control Period					Remarks	
		n-1	2016-17			2017-18	n+2	n+3	n+4	n+5		
		(Actuals / audited)	Apr-Sep (Actual)	Oct-Mar (Estimated)	Total (April - March)	(Anticipated)						
1	2	3	4	5	6 = 4+5	7	8	9	10	11	12	
1	Plant load factor					83%						
2	Auxiliary consumption					6.31%						
3	Specific fuel consumption											
(I)	coal, kg / kWh					0.53						
ii)	gas, SCM / kWh											
(iii)	oil, ml / kwh					0.5						
(iv)	Limestone kg / kWh											
(v)	any other fuel											
4	Station heat rate, kcal / kwh					2247.97						
5	Annual Maitenance shut down days											
6	Forced / planned shut down except annual shut down											
(I)	number / year											
(ii)	cumulative duration, hours / year											
7	Fly ash utilisation, %											
8	Other bye product utilisation(give list)											
9	Outstanding dues, days of receivables											
10	Availability											