

Application for
Annual performance Review (FY09-10)
&
Tariff Petition
For
FY 2011-2012
For
Dholpur Combined cycle Thermal Power Project
(DCCPP)

Submitted to

Rajasthan Electricity Regulatory Commission

Jaipur

By

Rajasthan Rajya Vidyut Utpadan Nigam Limited

Vidyut Bhavan, Janpath, Jaipur

November-2010

	TABLE OF CONTENTS	PAGE NO
A1:	BACKGROUND	07
A2:	GENERATION FORECAST	07
	GROSS GENERATION, PLF AND ENERGY SALE TO DISCOMS	
A3:	DCCPP FIXED CHARGES	08
	DEPRECIATION INTEREST ON LOANS INTEREST ON WORKING CAPITAL O & M EXPENSES INTEREST EXPENSES ON TRANSITIONAL LOANS RECOVERY OF ARR & TARIFF PETITION FEES UNFUNDED LIABILITY OF PENSION AND GRATUITY	
A4:	NON-TARIFF INCOME	10
A5:	ACTUAL/ESTIMATED CAPACITY(FIXED) CHARGES FOR FY10 TO FY12	10,11
A6:	VARIABLES CHARGES FOR FY10 TO FY12	12
A7:	ACTUAL/ ESTIMATED ANNUAL PERFORMANCE REVIEW, ARR AND TARIFF FOR FY-12	12
A8:	ACTUAL/ESTIMATED TARIFF FOR FY10 TO FY-12	13
A09:	FUEL COST ADJUSTMENT FORMULA	13
A10:	INCENTIVE	13
A11:	MVARH TARIFF	14
A12	PETITION FOR TRUING UP OF ARR /TARIFF FY10	14
A13:	RESPONDENTS	14
A14:	PRAYER	14

TABLES				PAGE NO
TABLE	1	:	Gross generation, PLF & Ex-bus energy sale from DCCPP	7
TABLE	2	:	Depreciation	8
TABLE	3	:	Interest on Loans & Transitional Loans	8
TABLE	4	:	Interest on working Capital	9
TABLE	5	:	O & M Expenses	9
TABLE	6	:	Recovery of ARR & Tariff Petition Fees	9
TABLE	7	:	Unfunded Liability of Pension and Gratuity	10
TABLE	8	:	Non-Tariff Income	10
TABLE	9	:	Net Capacity Charges for FY10, FY 11 and FY12	11
TABLE	10	:	Variable Cost	11
TABLE	11	:	DCCPP ARR for FY10, FY11 and FY12	12
TABLE	12	:	DCCPP TARIFF for FY10 to FY12	13

Form No.	ANNEXURES	PAGE No.
Form G 1.1	Summary of Tariff proposal	15
Form G 1.2	Aggregate Revenue Requirement	16
Form G 2.1	Plant characteristics	17,28,29
Form G 2.2	Operational Parameters - Generation	18
Form G 2.4	Planned & Forced Outage	19,20 to27
Form G 3.1	Revenue from sale of power	30,31,32
Form G 3.2	Income from Investment 7 other non tariff income	33
Form G 4.1	O&M Expenses	34
Form G 5.1	Details/ Information to be submitted in respect of gas for computation of Energy charges for FPA	35
Form G 5.2	Energy Charges for Thermal Generation	36,37
Form G 6.1	Fixed assets & provisions for depreciation	38,39
Form G 6.2	Loan Repayment, Lease & Interest liability	29,30
Form G 6.15	Interest on Working capital	40
	statement showing repayments of term loan & transitional	41
Form G 7.1	Proposed improvement in performance	42
	GAIL letter regarding revision of price of PMT gas	43

DEFINITIONS

Act	The Electricity Act, 2003
Application	This Petition for APR FY-08-09 and Tariff for FY-10-11 for 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 equipment of the generating station and transformer losses within the generating station, 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 Section 1(7) of the RERC Tariff Regulations 2009.
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, 2009 notified by RERC on Jan-23, 2009
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 generating station means electric generator, its prime mover and auxiliaries and in relation to a combined cycle thermal power generating station includes combustion turbine – generators, associated waste heat recovery boilers, connected steam turbine-generator and auxiliaries.

ABBREVIATIONS

ABT	Availability Based Tariff
ARR	Aggregate Revenue Requirement
Ajmer Discom	Ajmer Vidyut Vitran Nigam Limited
CERC	Central Electricity Regulatory Commission
FRP	Financial Restructuring Plan
FY	Financial Year
FY – 10	Financial Year 2009-10
FY – 11	Financial Year 2010-11
FY – 12	Financial Year 2011-12
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

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 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 28.09.06, 07.06.2007 and further supplementary PPA was signed on dt 18.5.10 which includes DCCPP (3X110MW).
- 1.4 The Commission passed tariff regulation 2009 MYT for the period FY09-10 to Fy2013-14 on dated 23.1.09 .As per clause no.8 of tariff regulation2009, RVUN should have to file the petition for Annual performance Review for 2009-10 and/or determination of tariff for 2011-12 of RVUN power station by 30.11.09. Accordingly, this petition is being submitted for DCCP Unit to RERC for tariff determination.

A2: GENERATION FORECAST

- 2.1 The installed capacity of DCCPP is 330 MW as on 31.03.10 .The Actual figures / estimated figures of Gross generation , PLF & net energy sale to three Discoms from DCCPP of RVUN for the period FY10, FY11 and FY12 are as shown in table below:

Table 1: Gross generation, PLF & Ex-bus energy sale from DCCPP Station

Particular	FY 09-10		FY 10-11		FY 11-12
	As per tariff order	Actual	As per tariff order	Estimated	estimated
Capacity (MW)			330	330	330
PLF (%)			80	72.53	80.00
Gross generation(MU)			2312.64	2096.598	2318.97
Aux Cons.(%)			3	2.91	3.00
Ex-Bus Generation(MU)			2243.26	2035.59	2249.04

- 2.2 The fixed cost elements as detailed hereunder for DCCPP for the period FY10, FY11 and FY12 are as below.

FIXED CHARGES

- Depreciation
- Interest on Term Loan & Transitional Loan
- Interest on Working Capital
- Operation & Maintenance Expenses
- Recovery of ARR & Tariff Petition Fees
- Unfunded liability of pension and gratuity

A3: DCCPP FIXED CHARGES

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

DEPRECIATION:-

- 3.2 Depreciation of DCCPP, for period FY11 and FY12 have been calculated based on the clause No.23 (5) of RERC Tariff Regulations 2009. Estimated figures of depreciation for period FY11 and FY12 are summarised in Table below

Table 2: Depreciation (Rs. in Lakhs)

Station	FY 09-10		FY 10-11		FY 11-12
DCCPP	As per tariff order	Actual (audited)	As per tariff order	Estimated	Estimated
			5819	5752	5752

INTEREST ON LOANS:-

- 3.3 The interest on term loans and transitional loan has been calculated according to Clause NO.22 of RERC tariff Regulation-2009 and details calculation for the same is enclosed as annexure-
- 3.4 Estimated figures for the period under review (FY11 and FY12) are summarised in Table below:

Table 3: Interest on Loans (Rs. in Lakhs)

Station	FY 09-10		FY 10-11		FY 11-12
	As per tariff order	Actual (audited)	As per tariff order	Estimated	estimated
Term loans			7664	7050	6350
Transitional loan			241	237	237

INTEREST ON WORKING CAPITAL

- 3.5 The requirement of working capital loan has been computed on the norms defined under clause No.49 of RERC Tariff regulation 2009 and rate of interest on WLC has taken equal to the short interest prime landing of SBI as on 1.4.10.
- 3.6 Estimated figures for the period FY11 and FY12 are summarised in Table below:

Table 05: Interest on working Capital (Rs. in Lakhs)

Station	FY 09-10		FY 10-11		FY 11-12
DCCPP	As per tariff order	Actual (audited)	As per tariff order	Estimated	estimated
			1512	1478	1738

OPERATION & MAINTENANCE EXPENSES

- 3.7 The Operation & Maintenance Expenses have been computed as per the norms prescribed under RERC tariff Regulation 2009.
- 3.8 Estimated figures for the period FY11 and FY12 are summarised in Table below.

Table 06: O & M Expenses (Rs. in Lakhs)

Station	FY 09-10		FY 10-11		FY 11-12
DCCPP	As per tariff order	Actual (audited)	As per tariff order	Estimated	estimated
			3182	3182	3364

Recovery of ARR & Tariff Petition Fees

- 3.9 The Hon'ble Commission vide order dated 10.03.08 has allowed to pass through the fees levied for filling up of ARR & tariff petition, as expenses in the ARR. Accordingly, RVUN has claim the fee for FY 12 as under. The Commission may consider and allow the same.
- 3.10 The ARR & Tariff Petition Fees for FY11 and FY12 are summarised in Table below.

Table 07: Recovery of ARR & Tariff Petition Fees (Rs. in Lakhs)

Station	FY 09-10		FY 10-11		FY 11-12
DCCPP	As per tariff order	Actual (audited)	As per tariff order	Estimated	estimated
			16.5	16.5	16.5

Unfunded Liability of Pension and Gratuity

3.11 Estimated figures for the period FY 2010-11 and FY 2011-12 are summarised in Table below.

Table 08: Unfunded Liability of Pension and Gratuity (Rs. in Lakhs)

Station	FY 09-10		FY 10-11		FY 11-12
DCCPP	As per tariff order	Actual (audited)	As per tariff order	Estimated	estimated
			459	459	459

A4: NON-TARIFF INCOME

4.1 The following are the main head of accounts of Non tariff income:

- a) Sale of Scrap
- b) Interest on FD/ Staff Loans
- c) Miscellaneous receipts (rebates etc)

Estimated figures of Non Tariff Income for the Period FY-11 and FY12 are summarised in Table below.

Table 09: Non-Tariff Income (Rs. in Lakhs)

Station	FY 09-10		FY 10-11		FY 11-12
DCCPP	As per tariff order	Actual (audited)	As per tariff order	Estimated	estimated
			50	50	50

As per the RERC Regulations 2009, the non-tariff income has been deducted from the fixed charges computed and only the net fixed charges are to be recovered from the three Discoms.

Late Payment Surcharge

4.2 The late payment Surcharge liveable to Discoms has not been included, as we cannot anticipate future delay in payment of energy bill by Discoms.

A5: DCCPP ACTUAL /ESTIMATED CAPACITY CHARGES (FIXED) FOR FY09, FY 10 AND FY11

The net fixed charges are computed for FY10, FY 11 and FY12 in Table 11.

Table10: Net Capacity Charges for FY10, FY 11 and FY12 (Rs. in Lakhs)

Particular	FY 09-10		FY 10-11		FY 11-12
	As per tariff order	Actual (audited)	As per tariff order	Estimated	Estimated
Dep.			5819	5752	5752
Int. on Loans			7664	7050	6350
Int. on Working Cap.			1512	1478	1738
O&M Exp.			3182	3182	3364
Int. on Transitional Loan			241	237	237
Recovery of ARR & Tariff Petition Fees			16.5	16.5	16.5
Unfunded Liability of Pension and Gratuity			459	459	459
Gross Fixed charge			18893	18174	17917
Less Non-Tariff Income			50	50	50
Net Fixed. Charges			18843	18124	17867

A6: VARIABLE CHARGES

- 6.1 The normative parameter of aux. Consumption, and SHR has been taken as per Commission's regulations 2009 for the FY-12. As there is no provision for liquid firing at the moment, no provision for liquid fuel has been considered for the period of FY-12. For FY-11 the average Net Calorific Value of the gas has been considered as 8644.38Kcal/Scm and the average price of gas has been taken as Rs. 12928.93 /1000scm on the basis of receipt of previous three months during Jul-10, Aug-10 & Sep-10 with escalation of 25.18% as per commission formats.
- 6.2 GAIL (India) Limited has revised the price of PMT gas & levy w.e.f 1.10.2010 from Us \$ 4.6 /MMBTU to US\$ 5.57&5.73 / MMBTU Plus Levied, as intimated vide their letter dt. 30.9.10(Copy enclosed as annexure-).
- 6.3 The overall figures/estimated figures of energy, fuel gas consumptions and price of Gas for Dholpur CCPP are given in the table below. The variable cost has been accordingly worked out therein.

Table11: Variable Cost

(Rs. in Lakhs)

Parameter	FY-09-10		FY-10-11		FY 11-12
	As per tariff order	Actual/Audited	As per tariff order	Estimated	Estimated
Capacity (MW)			330	330	330
PLF (%)			80	72.53	80.00
Gross Generation (MU)			2312.64	2096.598	2318.97
Aux Consumption (%)			3.00	2.91	3.00
Net Generation (MU)			2243.26	2035.587	2249.04
Station Heat rate (Kcal/KWh)			1950	1928	1950
NCV of Gas (kcal/SCM)			9343.6	8593.18	8644.38
Sp. gas Cons. (SCM/kWh)			0.2087	0.2244	0.2256
Price of gas (Rs/1000SCM)			10887	11598	12928.93
Cost of Gas (Rs.in lacs)			52547.41	54577	67622
Fuel cost (Total Variable Cost) (Rs. In Lacs)			52547.41	54577	67622
Variable Cost (Rs/KWh sent out)			2.3425	2.681	3.007

A7: ACTUAL/ ESTIMATED ANNUAL PERFORMANCE REVIEW AND ARR FOR FY10, FY11 AND TARIFF FOR FY-12

THE RECOVERY OF ARR PROPOSED FOR DCCPP IS SUMMARISED IN TABLE 12 BELOW

Table12: DCCPP ARR for FY10, FY11 AND FY12

(Rs. in Lakhs)

Parameter	FY 09-10		FY 10-11		FY 11-12
	As per tariff order	Actual (audited)	As per tariff order	Estimated	Estimated
Capacity(fixed) Charges			18843	18124	17867
Variable Cost			52547	54577	67622
Aggregate Revenue Requirement			71391	72701	85489

A8: DCCPP ACTUAL/ESTIMATED TARIFF FOR FY 10 TO FY12

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

Table13: DCCPP TARIFF for FY10 to FY12

Parameter	FY 09-10		FY 10-11		FY 11-12
	As per tariff order	Actual	As per tariff order	Estimated	Estimated
Ex-Bus Generation (MU)			2243.26	2035.587	2249.04
Capacity charges /Fixed charge (in lacs)			18843	18124	17867
Variable Cost (in lacs)			52547	54577	67622
Fixed cost (Rs/KWh sent out)			0.84	0.8904	0.7944
Variable Cost (Rs/KWh sent out)			2.3425	2.681	3.007
Total cost (Rs/KWh sent out)			3.1825	3.5715	3.8011

A9: FUEL COST ADJUSTMENT FORMULA

9.1 As per RERC Tariff Regulation 2009 Clause No.54(4) there is provision of fuel cost adjustment formula on account of fuel related costs of electricity generation to take care of any variation in the variable cost. The fuel cost adjustment will be made accordingly.

A10: INCENTIVE

10.1 As per RERC Regulations 2009, Coal/Lignite and Gas based stations are allowed to be paid an incentive at a flat rate of 25.0 paise/kWh for ex-bus scheduled energy corresponding to target Plant Load Factor, which is 80% for DCCP power station.

10.2 RVUN proposes recovery of incentive as per the Regulations.

A11: MVARH TARIFF

11.1 The Commission has provided that MVARH generation at the power stations shall be as per directions of SLDC. The tariff for MVARh generation was allowed. 5.75 paise /kVARh for FY 2009-10 escalated at 0.25paise/kVARh aggregately in subsequent years, unless otherwise revised by Commission. It is however submitted that RVUN has been declaring its day ahead capacity both in terms of MW and MVAR as well as MU/MVARh. However SLDC is not including reactive generation in its day ahead generation schedules. In absence of such directives from SLDC, the machines are allowed to float and adapt the system voltage conditions. The reactive generation as a consequence of such conditions is being charged by the power stations as per rates allowed by the commission. The Discoms are disallowing such claims on the pretext of absence of reactive generation scheduling by SLDC. The commission may impart suitable directions in the matter while allowing MVARh tariff.

A12: PETITION FOR ANNUAL PERFORMANCE REVIEW/TRUING UP OF ARR/ TARIFF FOR FY 10:-

12.1 The data for Annual performance review/truing up of ARR/tariff for FY10 will be filed as supplementary petition after actual/audited figures of account are finalized.

A13: RESPONDENTS:-

13.1 All the three Discom's (i.e JVNL/AVNL/ Jd.VNL) Jaipur/ Ajmer/ Jodhpur are respondents for the above petition.

A14: PRAYER

RVUN humbly requests the Hon'ble Commission to:

- ◆ Approval of Annual Performance review / truing up of ARR/tariff for FY-2009-10 on the basis of Audited data to be submitted in supplementary petition.
- ◆ Approval of ARR & tariff for FY-2011-12.
- ◆ To allow provisional tariff w.e.f 1.4.11 for FY2011-12 till final tariff order is issued as proposed in the petition.
- ◆ And pass such other further orders as are deemed fit and proper in the facts and Circumstances of the case.

(S.K.Rajpurawala)
Chief Accounts Officer (W&M)

(A. K. Purohit)
Chief Engineer (PPM&C)