

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No.107/2009

Coram:

1. Dr. Parmod Deo, Chairperson
2. Shri S.Jayaraman, Member
3. Shri V.S.Verma, Member
4. Shri M.Deena Dayalan, Member

DATE OF HEARING: 11.11.2010

DATE OF ORDER: 16.12.2010

In the matter of

Approval of tariff for transmission system associated with Uri Hydroelectric project (4x120 MW) in Northern Region for the period 2009-14.

And

In the matter of

Power Grid Corporation of India Limited, Gurgaon **..Petitioner**
Vs

1. Rajasthan Rajya Vidyut Prasaran Nigam Limited, Jaipur
2. Ajmer Vidyut Vitaran Nigam Ltd., Jaipur
3. Jaipur Vidyut Vitaran Nigam Ltd, Jaipur
4. Jodhpur Vidyut Vitaran Nigam Ltd, Jaipur
5. Himachal Pradesh State Electricity Board, Shimla
6. Punjab State Electricity Board, Patiala
7. Haryana Power Purchase Centre, Panchkula
8. Power Development Department, Govt. of J&K, Jammu
9. Uttar Pradesh Power Corporation Ltd, Lucknow
10. Delhi Transco Ltd, New Delhi
11. BSES Yamuna Power Limited, New Delhi
12. BSES Rajdhani Power Ltd., New Delhi
13. North Delhi Power Ltd., New Delhi
14. Chandigarh Administration, Chandigarh
15. Uttarakhand Power Corporation Ltd, Dehradun
16. North Central Railway, Allahabad
17. New Delhi Municipal Council, New Delhi **.....Respondents**



The following were present:

1. Shri U.K.Tyagi, PGCIL
2. Shri M.M. Mondal, PGCIL
3. Shri Rajiv Gupta, PGCIL

ORDER

The petition has been filed for approval of tariff transmission system associated with Uri Hydroelectric project (4x120 MW) (the transmission system) in Northern Region for the period 1.4.2009 to 31.3.2014, based on the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as "the 2009 regulations"). The petitioner has made the following additional prayers:-

- (a) Permit recovery of abnormal O & M expenses towards deployment of additional security forces based on statutory auditors certification after closing of annual account by way of direct billing on the respondents for each year during the tariff period;
 - (b) To approve reimbursement of petition filing fee, licence fee and publication of notices in the newspaper as per the 2009 regulations; and
 - (c) To consider and approve for inclusion of service tax as one of the components to be recovered in transmission charges.
3. The annual transmission charges for the period from 1.4.2004 to 31.3.2009 were approved by the Commission in its order dated 23.11.2005 in Petition No.



100/2004 at a gross block of ₹23000.00 lakh as on 31.3.2009 and thereafter, no projected additional capital expenditure is involved for the transmission asset. The transmission system was declared under commercial operation w.e.f. 1.4.1997 to 1.2.1998.

4. The petitioner has claimed the transmission charges as under:

(₹ in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	524.76	524.76	524.76	524.76	524.76
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	1619.79	1619.79	1619.79	1619.79	1619.79
Interest on Working Capital	65.82	67.03	68.31	69.66	71.09
O & M Expenses	422.33	446.52	472.08	499.05	527.55
Total	2632.70	2658.10	2684.94	2713.26	2743.19

5. The details submitted by the petitioner in support of its claim for interest on working capital are given hereunder:

(₹ in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	63.35	66.98	70.81	74.86	79.13
O & M expenses	35.19	37.21	39.34	41.59	43.96
Receivables	438.78	443.02	447.49	452.21	457.20
Total	537.32	547.21	557.64	568.66	580.29
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
Interest	65.82	67.03	68.31	69.66	71.09

6. Reply to the petition has been filed by the respondents Ajmer Vidyut Vitaran Nigam Ltd. (AVVNL), Jaipur Vidyut Vitaran Nigam Ltd. (JVVNL), Jodhpur Vidyut Vitaran Nigam Ltd. (JdVVNL) and Uttar Pradesh Power Corporation Ltd. (UPPCL). No comments or suggestions have been received from the general

public in response to the notices published by the petitioner under section 64 of the Electricity Act, 2003.

7. AVVNL , JVVNL, JdVVNL and UPPCL in its reply have made following submission:

- (i) In Form of the petition, the date of commercial operation of the transmission line has been shown as 1.4.1997. The useful life of the transmission line as specified in the 2009 regulations is 35 years. Therefore, up to 31.3.2009, the transmission system has been in use for 12 years and the balance useful life remains as 23 years whereas the In Form 11 it has to be considered as 20 years. As such amount of depreciation would work out to be less than considered in petition. The petitioner should be asked to revise the same and consequential the interest on working capital amount will also go under change;
- (ii) In regard to revision of O & M expenses, once the normative parameters have been defined, the question of considering actual does not arise. In case actual are to be considered then the whole tariff needs to be based on actual and the 2009 regulations needs to be amend. The pick and choose approach should not be permitted. It has been further submitted that PGCIL has assumed that the

norms of O & M expenses have been arrived at by the Commission considering certain factors. All such need no consideration, once the regulations have been framed after detailed consultations, discussions and public hearing and the sanctity of the same should be maintained ; and

- (iii) In regard to recovery of abnormal O & M expenses on account of deployment of additional security forces during the tariff period, it has been submitted that the request made under Regulation 44 of the 2009 regulations be rejected.

8. The petitioner in its rejoinder dated 4.11.2010 has made following submissions:

- (i) In regard to depreciation, the petitioner has submitted that the remaining useful life of the asset is 25 years as on 1.4.2004 as per order dated 23.11.2005 in Petition 100/2004 and accordingly, remaining life has been considered as 20 years as on 1.4.2009;

- (ii) In regard to O & M expenses, the petitioner has submitted that per ckt. km. and per bay O & M rates considered are based on the 2004 regulations. In the context of framing of the 2009 regulations, PGCIL had furnished the actual O & M cost, line and bay details of its transmission system for the 5 years, without taking into account expected manpower

cost implications on account of wage revision due w.e.f. 1.1.2007. The Commission has considered certain %age (50%) in the wage hike so as to stipulate the norms for 2009-10. The petitioner has further submitted that the wage revision for the executive levels has already been done, however, for the non-executive levels, the wage revision is being carried out now. In its opinion the total impact of wage hike would be more as compared to the compensation provided in the O & M rates. Accordingly, he will approach before the Commission for additional manpower cost on account of wage revision during the period 2009-14 for claiming in the tariff;

(iii) In regard to recovery of abnormal O & M expenses on account of deployment of additional security forces, the petitioner has submitted that O & M expenses for the period 2004-09 were prescribed by the Commission on normative basis. While deciding the normative rates, the abnormal expenses already incurred were excluded from the actual O & M expenses furnished on regional basis for the period of 5 years. Similar approach has been adopted by the Commission for finalizing the normative O & M rates for the tariff period 2009-14, since the PGCIL has furnished the actual O & M expenses for the 5 years (2003-04 to 2007-08) after excluding the abnormal O & M expenses. It has been submitted that the PGCIL is required to incur abnormal O & M expenses on account of deployment of special

security forces due to the specific requirements and therefore, these expenses should be reimbursed by the respondents.

9. We have carefully considered the objections of AVVNL , JVVNL, JdVVNL and UPPCL and reply filed by the petitioner. The tariff of the transmission system including treatment of depreciation and abnormal O & M expenses has been determined in this order strictly in accordance with the provisions of 2009 regulations. As regards the reimbursement of licence fee, decision on the same will be intimated in due course. In regard to service tax, reimbursement of filing fee and publication expenditure, the same has been dealt with in relevant paras of the order.

CAPITAL COST

10. As per clause (2) of Regulation 7 of the 2009 regulations, the project cost admitted by the Commission for determination of tariff prior to 1.4.2009 shall form the basis for determination of tariff.

11. The petitioner has claimed the capital expenditure of ₹23000.00 lakh, which was admitted vide order dated 23.11.2005 in Petition No. 100/2004. The petitioner has not claimed any projected additional capitalization.

12. Accordingly, gross block of ₹23000.00 lakh as on 31.3.2009 has been considered for the purpose of tariff.



DEBT- EQUITY RATIO

13. Clause (2) of Regulation 12 of the 2009 regulations *inter alia* provides that,-

“(2) In case of the generating station and the transmission system declared under commercial operation prior to 1.4.2009, debt-equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2009 shall be considered.”

14. The petitioner has claimed tariff based on debt-equity ratio of 59.71:40.29 as admitted on 31.3.2009. The same debt-equity ratio has been considered for the purpose of tariff.

RETURN ON EQUITY

15. Regulation 15 of the 2009 regulations provides that,-

“15. (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 12.

(2) Return on equity shall be computed on pre-tax basis at the base rate of 15.5% to be grossed up as per clause (3) of this regulation:

Provided that in case of projects commissioned on or after 1st April, 2009, an additional return of 0.5% shall be allowed if such projects are completed within the timeline specified in **Appendix-II**:

Provided further that the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever.

(3) The rate of return on equity shall be computed by grossing up the base rate with the normal tax rate for the year 2008-09 applicable to the concerned generating company or the transmission licensee, as the case may be:

Provided that return on equity with respect to the actual tax rate applicable to the generating company or the transmission licensee, as the case may be, in line with the provisions of the relevant Finance Acts of the respective year during the tariff period shall be trued up separately for each year of the tariff period along with the tariff petition filed for the next tariff period.



(4) Rate of return on equity shall be rounded off to three decimal points and be computed as per the formula given below:

Rate of pre-tax return on equity = Base rate / (1-t)

Where t is the applicable tax rate in accordance with clause (3) of this regulation.

Illustration.-

(i) In case of the generating company or the transmission licensee paying Minimum Alternate Tax (MAT) @ 11.33% including surcharge and cess:

Rate of return on equity = $15.50 / (1 - 0.1133) = 17.481\%$

(ii) In case of generating company or the transmission licensee paying normal corporate tax @ 33.99% including surcharge and cess:

Rate of return on equity = $15.50 / (1 - 0.3399) = 23.481\%$."

16. The petitioner has computed return on equity on pre-tax basis on 11.33% MAT in accordance with tax rate applicable for the year 2008-09 and claimed return on equity of ₹1619.79 lakh each year during the tariff period @ 17.481% against the equity base of ₹9266.00 lakh. This has been found to be in order. Accordingly, the petitioner shall be entitled to return on equity @ ₹1619.79 lakh each year during the tariff period, as claimed.

17. The Commission vide its order dated 3.8.2010 in Petition No. 17/2010 has already taken a decision to amend the 2009 regulations for allowing grossing up of the base rate of return with the applicable tax rate as per the Finance Act for the relevant year and for direct settlement of tax liability of between the generating company/transmission licensee and the beneficiaries/long term transmission customers on year to year basis. The process of amendment to the



2009 regulation is under way and will address the grievance of the petitioner with regard to the MAT rate.

INTEREST ON LOAN

18. Regulation 16 of the 2009 regulations provides that,-

"16. (1) The loans arrived at in the manner indicated in regulation 12 shall be considered as gross normative loan for calculation of interest on loan.

(2) The normative loan outstanding as on 1.4.2009 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2009 from the gross normative loan.

(3) The repayment for the year of the tariff period 2009-14 shall be deemed to be equal to the depreciation allowed for that year:

(4) Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the annual depreciation allowed,.

(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio at the beginning of each year applicable to the project:

Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered:

Provided further that if the generating station or the transmission system, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company or the transmission licensee as a whole shall be considered.

(6) The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.

(7) The generating company or the transmission licensee, as the case may be, shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such re-financing shall be borne by the beneficiaries and the net savings shall be shared between the beneficiaries and the generating company or the transmission licensee, as the case may be, in the ratio of 2:1.

(8) The changes to the terms and conditions of the loans shall be reflected from the date of such re-financing.

(9) In case of dispute, any of the parties may make an application in accordance with the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999, as amended from time to time, including statutory re-enactment thereof for settlement of the dispute:

Provided that the beneficiary or the transmission customers shall not withhold any payment on account of the interest claimed by the generating company or the transmission licensee during the pendency of any dispute arising out of re-financing of loan."

19. There is no interest on loan as entire loan has been repaid prior to 1.4.2004.

DEPRECIATION

20. Regulation 17 of the 2009 regulations provides for computation of depreciation in the following manner, namely:

"17. (1) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission.

(2) The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset.

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(3) Land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.

(4) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-III to these regulations for the assets of the generating station and transmission system:

Provided that, the remaining depreciable value as on 31st March of the year closing after a period of 12 years from date of commercial operation shall be spread over the balance useful life of the assets.

(5) In case of the existing projects, the balance depreciable value as on 1.4.2009 shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to 31.3.2009 from the gross depreciable value of the assets.

(6) Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis."

21. Commission vide its order dated 5.8.2003 in Petition No. 18/2002 had assigned the weighted average life of the asset as 32 years and balance useful life as on 1.4.2001 as 28 years and as per the order dated 23.11.2005 in Petition No. 100/2004 the balance useful life of the asset as on 1.4.2004 is 25 years. It implies that the balance useful life of the asset as on 1.4.2009 is 20 years. In the said orders, the depreciation was worked out by spreading the remaining depreciable value over the balance useful life of the asset as the entire loan was repaid prior to 1.4.2004. The same methodology has been applied in the present case also .

22. For the period 1.4.2009 to 31.3.2014 the depreciation works out to ₹524.76 lakh each year by applying rate of depreciation of 5.2069% as shown below:

(₹ in lakh)

Details of Depreciation		Up to 31.3.2009	2009-10	2010-11	2011-12	2012-13	2013-14
Gross block as per order dated 23.11.2005		23000.00	23000.00	23000.00	23000.00	23000.00	23000.00
Addition during 2009-14 due to projected Additional Capitalisation			0.00	0.00	0.00	0.00	0.00
Gross block as on 31.3.2009			23000.00	23000.00	23000.00	23000.00	23000.00
Average gross block			23000.00	23000.00	23000.00	23000.00	23000.00
Rate of Depreciation			5.2069%	5.2069%	5.2069%	5.2069%	5.2069%
Depreciable Value	90%		20700.00	20700.00	20700.00	20700.00	20700.00
Elapsed Life			12	13	14	15	16
Weighted Balance Useful life of			20	19	8	17	16



the asset							
Remaining Depreciable Value			10495.22	9970.46	9445.70	8920.94	8396.18
Depreciation			524.76	524.76	524.76	524.76	524.76

OPERATION & MAINTENANCE EXPENSES

23. In accordance with clause (g) of Regulation 19 the 2009 regulations, the following norms for 400 kV series compensation, bay are prescribed for O & M expenses:

	Year				
	2009-10	2010-11	2011-12	2012-13	2013-14
220 kV D/C Double conductor transmission line (₹ in lakh/per ckt.km.)	0.627	0.663	0.701	0.741	0.783
400 kV D/C Double conductor transmission line (₹ in lakh/per ckt.km.)	0.627	0.663	0.701	0.741	0.783
220 kV bays (₹ in lakh per bay)	36.68	38.78	41.00	43.34	45.82
400 kV bays (₹ in lakh per bay)	52.40	55.40	58.57	61.92	65.46

24. The petitioner has claimed O & M expenses for one bay which have been allowed. Accordingly, the petitioner's entitlement to O & M expenses has been worked out as given hereunder:

	Year				
	2009-10	2010-11	2011-12	2012-13	2013-14
220 and 400 kV D/C Double conductor transmission line (10.29+94.99 ckt.km.)	66.01	69.80	73.80	78.01	82.43
220 kV bays (4 bays)	146.72	155.12	164.00	173.36	183.28
400 kV bays (4 bays)	209.60	221.60	234.28	247.68	261.84
Total	422.33	446.52	472.08	499.05	527.55

25. The petitioner has submitted that transmission charges claimed for the year 2009-14 is inclusive of O & M expenses for project derived based on the norms for expenditure as specified under Regulation 19 (g) of the 2009 regulation. Accordingly, O & M expenses for the transmission assets have been considered



as per Regulation 19 (g) of the 2009 regulations. The petitioner has further submitted that he reserves the right to approach the Commission for suitable revision in the norms for O & M expenditure in case the impact of wage hike w.e.f 1.1.2007 is more than 50%. The petitioner has further submitted that O & M norms for the period 2009-14, the cost associated with license fees had not been captured and the licence fee be allowed to be recovered separately from the respondents.

26. The issues have been raised by the petitioner in other petitions also. A view is yet to be taken by the Commission on reimbursement of the cost of wage hike and reimbursement of licence fees. The decision as and when taken will be applicable to the present case also.

INTEREST ON WORKING CAPITAL

27. The components of the working capital and the interest thereon are discussed hereunder:

(i) Receivables

As per Regulation 18(1)(c)(i) of the 2009 regulations, receivables will be equivalent to two months average billing calculated on target availability level. The petitioner has claimed the receivables on the basis 2 months' transmission charges claimed in the petition. In the tariff being allowed, receivables have been worked out on the basis 2 months' transmission charges.



(ii) Maintenance spares

Regulation 18(1)(c)(ii) of the 2009 regulations provides for maintenance spares @ 15% per annum of the O & M expenses from 1.4.2009. The value of maintenance spares works out to ₹63.35 lakh as on 1.4.2009.

(iii) O & M expenses

Regulation 18(1) (c) (iii) of the 2009 regulations provides for operation and maintenance expenses for one month as a component of working capital. The petitioner has claimed O&M expenses for 1 month of O&M expenses of the respective year as claimed in the petition. This has been considered in the working capital.

(iv) Rate of interest on working capital

As per Regulation 18(3) of the 2009 regulations, rate of interest on working capital shall be on normative basis and shall be equal to the short-term Prime Lending Rate of State Bank of India as on 1.4.2009 or on 1st April of the year in which the project or part thereof (as the case may be) is declared under commercial operation, whichever is later. The interest on working capital is payable on normative basis notwithstanding that the transmission licensee has not taken working capital loan from any outside agency. The petitioner has claimed interest on working capital @ 12.25%

based on SBI PLR as on 1.4.2009, which is in accordance with the 2009 regulations and has been allowed.

28. The necessary computations in support of interest on working capital are appended hereinbelow:

(₹ in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	63.35	66.98	70.81	74.86	79.13
O & M expenses	35.19	37.21	39.34	41.59	43.96
Receivables	438.78	443.02	447.49	452.21	457.20
Total	537.33	547.21	557.64	568.66	580.29
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
Interest	65.82	67.03	68.31	69.66	71.09

TRANSMISSION CHARGES

29. The transmission charges being allowed for the transmission asset are summarised below:

(₹ in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	524.76	524.76	524.76	524.76	524.76
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	1619.79	1619.79	1619.79	1619.79	1619.79
Interest on Working Capital	65.82	67.03	68.31	69.66	71.09
O & M Expenses	422.33	446.52	472.08	499.05	527.55
Total	2632.70	2658.10	2684.94	2713.26	2743.19

Application fee and the publication expenses

30. The petitioner has sought approval for the reimbursement of fee paid by it for filing the petition. In accordance with our decision in order dated 11.1.2010 in

Petition No. 109/2009, the petitioner shall be entitled to recover the filing fee from the beneficiaries.

31. Accordingly, expenses incurred by the petitioner on application filing fees and publication of notices in connection with the present petition shall be directly recovered from the beneficiary on pro rata basis.

32. As regards the reimbursement of licence fee, a view in the matter is yet to be taken by the Commission.

Service Tax

33. The prayer of the petitioner for reimbursement of service tax has become infructuous as transmission service has been exempted from the ambit of the service tax.

34. The transmission charges allowed shall be recovered on monthly basis in accordance with Regulation 23 and shall be shared by the respondents in accordance with Regulation 33 of the 2009 regulations.

35. This order disposes of Petition No. 107/2009.

Sd/-
(M.Deena Dayalan)
Member

Sd/-
(V.S.Verma)
Member

Sd/-
(S.Jayaraman)
Member

Sd/-
(Dr. Pramod Deo)
Chairperson

