# CENTRAL ELECTRICITY REGULATORY COMMISSION NEW DELHI

## Petition No.147/2010

#### Coram:

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

DATE OF HEARING: 7.9.2010 DATE OF ORDER: 16.12.2010

#### In the matter of

Approval of transmission tariff for LILO of 220 kV S/C Panki-Naubasta transmission line at Kanpur in Northern Region for the period from 1.4.2009 to 31.3.2014.

#### 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
- 4. Shri T.P.S.Bawa, HPCC



#### **ORDER**

The petition has been filed for approval of tariff for LILO of 220 kV S/C Panki-Naubasta transmission line (the transmission line) 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 further prayed for the reimbursement of expenditure from the beneficiaries towards publication of notices in newspapers and petition filing fee be approved. The petitioner has made the following additional prayers:-

- (a) To invoke the provision of Regulation 44 of the 2009 regulations for relaxation of regulations 15 (3) of the 2009 regulations so that grossing up the base rate shall be considering the revised rate of MAT as per the Finance Act, 2009 for the year 2009-10 and as per the Finance Act, 2010 for the year 2010-11 and subsequent years and allow consequential impact on tariff for 2009-14 period accordingly;
- (b) To approve reimbursement of petition filing fee and publication of notices in the newspaper as per the 2009 regulations;
- (c) Allow to recover the service tax on transmission charges separately from the respondents, if the petitioner is subjected to such service tax; and
- (d) Allow reimbursement of licence fee separately from the respondents.



- 2. The revised approval for the cost estimate of ₹135.15 crore, including IDC of ₹11.93 crore for the Unchahar Transmission System was accorded by the Central Government in Ministry of Power vide letter dated 31.7.2001.
- 3. The annual transmission charges including additional capital expenditure for the period from 1.4.2004 to 31.3.2005 were determined by the Commission in its order dated 22.1.2007 in I.A.No. 1/2007 in Petition No. 102/2005 at a gross block of ₹814.05 lakh as on 31.3.2009.
- 4. The petitioner has claimed the transmission charges as under:

(₹ in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	42.75	42.75	42.75	42.75	42.75
Interest on Loan	4.00	1.08	0.00	0.00	0.00
Return on Equity	109.88	109.88	109.88	109.88	109.88
Interest on Working Capital	7.13	7.29	7.51	7.75	8.01
O & M Expenses	77.36	81.78	86.47	91.41	96.63
Total	241.12	242.78	246.61	251.79	257.27

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	11.60	12.27	12.97	13.71	14.49
O & M expenses	6.45	6.82	7.21	7.62	8.05
Receivables	40.19	40.46	41.10	41.97	42.88
Total	58.24	59.55	61.28	63.30	65.42
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
Interest	7.13	7.29	7.51	7.75	8.01

6. 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. Uttar Pradesh Power Corporation Ltd. (UPPCL) has made following submission:
  - (i) In the absence of creation of any depreciation fund to meet the investment on future assets, depreciation of ₹42.75 lakh for the year 2011-12 to 2013-14 is an additional amount earned by the petitioner over and above the ROE. It has been suggested that a fund may be created for the excess amount left over as depreciation after adjusting the same in O & M expenses and the same may be ploughed into the capital cost of the new schemes so that the beneficiaries who have over paid now may reap the benefit of lower capital cost in future;
  - (ii) The figures of cumulative repayment of normative loan up to previous period in Form 13(A) are mismatched. The figures of interest on loan should be corrected by the petitioner;
  - (iii) The prayer in regard to wage revision w.e.f. 1.1.2007 is not tenable since the Commission vide its order dated 11.2.1010 in Petition No. 262/2009 decided that "the base norms at 2007 price level is escalated at 5.72% per annum to reach to 2009-10 price level. It is estimated that 55% of the substation O & M expenditure, 52% of the line O & M expenditure and 30% of the HVDC station O & M expenditure is on account t of employee cost. Wage hike of 50% has been applied accordingly in the norms for O & M expenditure.

- (iv) Licence fee being the onus of the licensee, it should not be passed over to the beneficiaries. Uttar Pradesh Power Corporation Ltd. (UPPCL) in its reply has raised the issue of MAT, depreciation, wages revision, service tax, filing fee and licence fee etc.
- 8. Haryana Power Purchase Centre (HPCC) in its reply dated 22.7.2010 has submitted that capital cost approved by the Commission and claimed by the petitioner is mismatched. The capital cost of ₹805.87 lakh need to be taken for determination of tariff. The petitioner has claimed higher O & M expenses which are not in accordance with 2009 regulations.
- 9. We have considered the objections of UPPCL and HPCC. The tariff of the transmission system including treatment of depreciation has been determined in this order strictly in accordance with the provisions of the 2009 regulations. In regard to capital cost, the capital cost of ₹814.05 lakh already approved vide order dated 22.1.2007 in I.A.No. 1/2007 in Petition No. 102/2005 has been considered for determination of tariff. As regards the reimbursement of licence fee, a view in the matter is yet to taken by the Commission. As regards the MAT rate and service tax, the same has been dealt with in later part 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 ₹814.05 lakh, which was admitted vide order dated 22.1.2007 in I.A.No. 1/2007 in Petition No. 102/2005. The petitioner has not claimed any additional capitalization.
- 12. Accordingly, gross block of ₹814.05 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 22.78:77.22 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 ₹109.88 lakh each year during the tariff period @ 17.481% against the equity base of ₹628.59 lakh. This has been found to be in order. Accordingly, the petitioner shall be entitled to return on equity @ ₹109.88 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 and directed the staff to initiate the process accordingly. The draft regulations have already been published. The Commission is in the process of finalizing the amendment to 2009



regulations after considering the responses to the draft amendments. It is however, clarified that the existing provision of the 2009 regulation will be applicable with regard to the MAT rate till the regulations are amended.

#### **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. The interest on loan has been worked out as detailed below:
  - (i) Details of net outstanding loan as on 31.3.2009, cumulative repayment up to 31.3.2009, repayment schedules for the loans, rate of interest etc. have been taken from the order dated 22.1.2007 in I.A. No. 1/2007 in Petition No. 102/2005 for working in out weighted average rate of interest;
  - (ii) Tariff has been worked out considering normative loan and normative repayments. Depreciation allowed has been taken as normative repayment for the period 2009-14;
  - (iii) Weighted average rate of interest on actual loan worked out as per(i) above is applied on the notional average loan during the year to arrive at the interest on loan; and
  - (iv) The entire notional loan has been repaid during 2010-11.



20. Based on the above, the year-wise details of interest worked out are given hereunder:

(₹ in lakh)

Details of loan	Up to 31.3.2009	2009-10	2010-11	2011-12	2012-13	2013-14
Gross Normative Loan	185.46	185.46	185.46	185.46	185.46	185.46
Cumulative Repayment up to Previous Year		117.72	160.47	185.46	185.46	185.46
Net Loan-Opening		67.74	24.99	0.00	0.00	0.00
Addition due to Additional Capitalisation		0.00	0.00	0.00	0.00	0.00
Repayment during the year		42.75	24.99	0.00	0.00	0.00
Net Loan-Closing		24.99	0.00	0.00	0.00	0.00
Average Loan		46.37	12.50	0.00	0.00	0.00
Weighted Average Rate of Interest on Loan		8.6300%	8.6300%	8.6300%	8.6300%	8.6300%
Interest		4.00	1.08	0.00	0.00	0.00

21. The detailed calculations in support of the weighted revised average rate of interest are contained in **Annexure** attached.

## **DEPRECIATION**

- 22. 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.

XXXX XXXX

- (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."
- 23. The depreciation has been worked out on the admitted capital expenditure of ₹814.05 lakh as on 31.3.2009.
- 24. For the period 1.4.2009 to 31.3.2014 the depreciation works out to ₹42.75 lakh by applying rate of depreciation of 5.2513% as shown below:

(₹in lakh)

Details of Depreciation		Up to	2009-10	2010-11	2011-12	2012-13	2013-14
		31.3.2009					
Gross block as per order 22.1.2007		814.05	814.05	814.05	814.05	814.05	814.05
Addition during 2009-14 due to			0.00	0.00	0.00	0.00	0.00
projected Additional							
Capitalisation							
Gross block as on 31.3.2009			814.05	814.05	814.05	814.05	814.05
Average gross block			814.05	814.05	814.05	814.05	814.05
Rate of Depreciation			5.2513%	5.2513%	5.2513%	5.2513%	5.2513%
Depreciable Value	90%		732.65	732.65	732.65	732.65	732.65
Elapsed Life (Beginning of the			6	7	8	9	10
year)							
Weighted Balance Useful life of the			-	-	-	-	1
combine assets							
Remaining Depreciable Value			603.38	560.63	517.88	475.13	432.38
Depreciation			42.75	42.75	42.75	42.75	42.75

# **OPERATION & MAINTENANCE EXPENSES**

25. In accordance with clause (g) of Regulation 19 the 2009 regulations, the following norms for 220 kV D/C, Single Conductor, Transmission line and 220 kV bays are prescribed for O & M expenses:

	Year					
	2009-10	2010-11	2011-12	2012-13	2013-14	
220 kV D/C, Single Conductor,	0.269	0.284	0.301	0.318	0.336	
Transmission line (₹ in lakh/ km)						
220 kV bays (₹ in lakh/ bay)	36.68	38.78	41.00	43.34	45.82	

26. The petitioner has claimed O & M expenses for 14.86 ckt.km. and 2 bays which has been allowed. Accordingly, the petitioner's entitlement to O & M expenses has been worked out as given hereunder:

(₹ in lakh)

	Year					
	2009-10 2010-11 2011-12 2012-13 2013-14					
220 kV D/C, Single Conductor, Panki-Nubasta Transmission line (14.86 ckt.km)	4.00	4.22	4.47	4.73	4.99	
220 kV Panki-Nubasta bays at Kanpur sub-station (2 bays)	73.36	77.56	82.00	86.68	91.64	
Total	77.36	81.78	86.47	91.41	96.63	

27. The petitioner has submitted that O & M expenditure for the year 2009-14 had been arrived at on the basis of normalized actual O & M expenses during the year 2003-04 to 2007-08. The wage hike of 50% on account of pay revision of the employees of public sector undertaking has also been considered while calculating the O & M charges for the tariff period 2009-14. The petitioner has further submitted that it 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 then 50%. The petitioner has further submitted that in O & M norms for the period 2009-14, the cost associated with license fees had not been

captured and therefore, licence fee be allowed to be recovered separately from the respondents.

28. 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**

29. 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 ₹11.60 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.

30. 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	11.60	12.27	12.97	13.71	14.49
O & M expenses	6.45	6.82	7.21	7.62	8.05
Receivables	40.19	40.46	41.10	41.97	42.88
Total	58.24	59.55	61.28	63.29	65.43
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
Interest	7.13	7.29	7.51	7.75	8.01



## **TRANSMISSION CHARGES**

31. 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	42.75	42.75	42.75	42.75	42.75
Interest on Loan	4.00	1.08	0.00	0.00	0.00
Return on Equity	109.88	109.88	109.88	109.88	109.88
Interest on Working Capital	7.13	7.29	7.51	7.75	8.01
O & M Expenses	77.36	81.78	86.47	91.41	96.63
Total	241.13	242.78	246.61	251.80	257.28

# Application fee and the publication expenses

- 32. 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.
- 33. 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.

#### Service Tax

34. 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.

## Licence fee

- 35. The petitioner has prayed to allow reimbursement of licence fee separately from the respondents. A view in the matter is yet to taken by the Commission.
- 36. The transmission charges allowed shall be recovered on monthly basis in accordance with Regulation 23 and shall be shared by the respondent in accordance with Regulation 33 of the 2009 regulations.
- 37. This order disposes of Petition No. 147/2010.

Sd/- sd/- sd/- sd/- sd/- (M.DEENA DAYALAN) (V.S.VERMA) (S.JAYARAMAN) (Dr. PRAMOD DEO) MEMBER MEMBER CHAIRPERSON



# **Annexure**

## CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN

	(₹ in lakh)							
	Details of Loan	2009-10	2010-11	2011-12	2012-13	2013-14		
1	Bond XIII- Option I							
	Gross loan opening	179.00	179.00	179.00	179.00	179.00		
	Cumulative Repayment	44.75	59.67	74.59	89.51	104.43		
	up to the date of							
	commercial							
	operation/previous year							
	Net Loan-Opening	134.25	119.33	104.41	89.49	74.57		
	Additions during the year	0.00	0.00	0.00	0.00	0.00		
	Repayment during the	14.92	14.92	14.92	14.92	14.92		
	year							
	Net Loan-Closing	119.33	104.41	89.49	74.57	59.65		
	Average Loan	126.79	111.87	96.95	82.03	67.11		
	Rate of Interest	8.63%	8.63%	8.63%	8.63%	8.63%		
	Interest	10.94	9.65	8.37	7.08	5.79		
	Rep Schedule		12 Annual I	nstalment fro	m 31.7.2006			
	Total Loan							
	Gross loan opening	179.00	179.00	179.00	179.00	179.00		
	Cumulative Repayment	44.75	59.67	74.59	89.51	104.43		
	up to the date of							
	commercial operation							
	/previous year							
	Net Loan-Opening	134.25	119.33	104.41	89.49	74.57		
	Additions during the year	0.00	0.00	0.00	0.00	0.00		
	Repayment during the	14.92	14.92	14.92	14.92	14.92		
	year							
	Net Loan-Closing	119.33	104.41	89.49	74.57	59.65		
	Average Loan	126.79	111.87	96.95	82.03	67.11		
	Rate of Interest	8.6300%	8.6300%	8.6300%	8.6300%	8.6300%		
	Interest	10.94	9.65	8.37	7.08	5.79		