CENTRAL ELECTRICITY REGULATORY COMMISSION NEW DELHI

Petition No.123/2010

Coram: Dr. Pramod Deo, Chairperson Shri S. Jayaraman, Member Shri V.S.Verma, Member Shri M. Deena Dayalan, Member

DATE OF HEARING: 16.9.2010

DATE OF ORDER: 8.3.2011

In the matter of

Approval of transmission tariff for combined elements of (a) LILO of Nagarjunasagar-Raichur 400 kV S/C line at Mehboobnagar; and (b) LILO of both the circuits of Nellor-Sriperumbudur 400 kV D/C line at Almathi along with associated bays under system strengthening scheme-IV in Southern 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

- 1 Kerala State Electricity Board, Thiruvanathapuram
- 2 Tamil Nadu Electricity Board, Chennai
- 3 Electricity Department, Govt. of Pondicherry, Pondicherry
- 4 Electricity Department, Government of Goa, Panaji
- 5 Transmission Corporation of Andhra Pradesh Ltd., Hyderabad
- 6 Northern Power Distribution Company of Andhra Pradesh Limited, Warangal
- 7 Eastern Power Distribution Company of Andhra Pradesh Limited, Vishakhapatnam
- 8 Southern Power Distribution Company of Andhra Pradesh Limited, Tirupati
- 9 Central Power Distribution Company of Andhra Pradesh Limited, Hyderabad
- 10 Karnataka Power Transmission Corporation Limited, Bangalore
- 11 Bangalore Electricity Supply Company Ltd., Bangalore
- 12 Gulbarga Electricity Supply Company Ltd. Gulburga
- 13 Hubli Electricity Supply Company Ltd., Hubli
- 14 MESCOM Corporate office, Mangalore
- 15 Chamundeswari Electricity Supply Corporation Ltd., Mysore.

.Respondents

The following were present:

- 1 Shri M.M. Mondal, PGCIL
- 2 Shri R.K.Gupta, PGCIL
- 3 Shri Rakesh Prasad, PGCIL

<u>ORDER</u>

The petition has been filed for approval of tariff for combined elements of (a) LILO of Nagarjunasagar-Raichur 400 kV S/C line at Mehboobnagar (Asset-I); and (b) LILO of both the circuits of Nellor-Sriperumbudur 400 kV D/C line at Almathi (Asset-II) along with associated bays (hereinafter collectively referred to as "the transmission assets") under system strengthening scheme-IV (hereinafter referred to as "the transmission scheme") in Southern 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) 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 allowed considering the revised rate of MAT, surcharge, any other cess, charges, levies etc. as per the relevant Finance Act and allow consequential impact on account of truing up, to be billed and settled directly with the beneficiaries every year in tariff block;
- (b) In case of assets being combined to calculate the transmission charges, allow to it to recover full depreciation (90% of the gross block)

of the assets during its useful life (25 years for sub-station and 35 years for transmission lines) reckoning from its actual date of commercial operation and to permit to treat the recovery of depreciation after achieving the useful life by an asset (to be reckoned from the actual date of commercial operation) in accordance with para 6.4 of the petition;

- (c) To approve reimbursement of petition filing fee and publication of notices in the newspaper as per the 2009 regulations;
- (d) Allow to bill and recover the service tax on transmission charges separately from the respondents, if the petitioner is subjected to such service tax; and
- (e) Allow reimbursement of licence fee separately from the respondents;

2. Administrative approval and expenditure sanction for the scheme was accorded by the Board of Directors of the petitioner company vide Memorandum dated 25.2.004 at an estimated cost of ₹10194 lakh, which included IDC of ₹703 lakh. The notional date of commercial operation of the combined assets has been taken as 1.4.1997.

3. The annual transmission charges of the transmission assets for the period up to 31.3.2009 approved by the Commission vide order dated 12.5.2006 in Petition No. 143/2007 were revised by the Commission vide order dated 13.5.2009 in Petition No. 23/2009 based on admitted capital of ₹1167.43 lakh and ₹8531.29 lakh for Asset-I and Asset-II, respectively, after accounting for the additional capital expenditure during 2007-08.

				(₹ ii	n lakh)
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	513.18	513.18	513.18	513.18	513.18
Interest on Loan	447.36	409.12	370.49	331.87	293.28
Return on Equity	482.92	482.92	482.92	482.92	482.92
Interest on Working Capital	48.41	48.66	48.96	49.33	49.76
O & M Expenses	366.26	387.24	409.40	432.81	457.52
Total	1858.13	1841.12	1824.95	1810.11	1796.66

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

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	54.94	58.09	61.41	64.92	68.63
O & M expenses	30.52	32.27	34.12	36.07	38.13
Receivables	309.69	306.85	304.16	301.69	299.44
Total	395.15	397.21	399.69	402.68	406.20
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
Interest	48.41	48.66	48.96	49.33	49.76

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. Reply to the petition has been filed by Tamil Nadu Electricity Board (TNEB). The submissions of TNEB pertain to MAT, wages hikes, fling fees, service tax and licence fee etc. and reply of the petitioner in its rejoinder have been dealt with in relevant paras of this order.

CAPITAL COST

8. As per the last proviso to clause (2) of Regulation 7 of the 2009 regulations, in case of the existing projects, capital cost admitted by the Commission prior to 1.4.2009 and the additional capital expenditure projected to be incurred for the respective year of the tariff period 2009-14 as may be admitted by the Commission, shall form the basis for determination of tariff.

9. As per the order dated 13.5.2009 in Petition No. 23/2009, the admitted capital expenditure of the transmission scheme is ₹9698.72 lakh which has been considered as the opening capital cost as on 1.4.2009 for the purpose of determination of tariff during 2009-14. The petitioner has not claimed any projected additional capital expenditure during 2009-14.

DEBT- EQUITY RATIO

10. Clause (2) of Regulation 12 of the 2009 regulations *inter-alia* provides as under:-

"(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."

11. The petitioner has claimed tariff based on debt-equity ratio of 71.52:28.48 as admitted on 31.3.2009 vide order dated 13.5.2009 in Petition No. 23/2009. The same debt-equity ratio has been considered for the purpose of tariff during the period 2009-14.

RETURN ON EQUITY

12. 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 <u>Appendix-II</u>:

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."

13. TNEB has submitted that the petitioner has prayed to invoke the provisions of Regulation 44 of the 2009 regulations to allow revised MAT rate as per the applicable Finance Act. As such there is no provision in the 2009 regulations for reimbursement on account of change in the rate of MAT/ corporate tax on yearly basis.

14. 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 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. Accordingly, the return on equity has been computed as per the existing provisions of Regulations 15 (3) of the 2009 regulations.

15. 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 ₹482.92 lakh each year during the tariff period @ 17.481% against the equity base of ₹2762.55 lakh. This has been found to be in order. Accordingly, the petitioner shall be entitled to return on equity @ ₹482.92 lakh each year during the tariff period, as claimed.

INTEREST ON LOAN

16. 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."

17. In our calculation, 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 schedule for the loans,

rate of interest etc. have been taken from the order dated 13.5.2009 in Petition No. 23/2009 for working 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; and
- (iii) Weighted average rate of interest on actual loan has been worked out and applied on the notional average loan during the year to arrive at the interest on loan.

18. The detailed calculations in support of the weighted revised average rate of interest are contained in <u>Annexure</u> attached to this order. Interest on loan has been worked out are given hereunder:

(₹ in lakh)

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Details of loan	Up to 31.3.2009	2009-10	2010-11	2011-12	2012-13	2013-14
Gross Normative Loan	6936.17	6936.17	6936.17	6936.17	6936.17	6936.17
Cumulative Repayment up to Previous		773.15	1286.33	1799.51	2312.70	2825.88
Year						
Net Loan-Opening		6163.02	5649.84	5136.66	4623.48	4110.29
Addition due to Additional Capitalisation		0.00	0.00	0.00	0.00	0.00
Repayment during the year		513.18	513.18	513.18	513.18	513.18
Net Loan-Closing		5649.84	5136.66	4623.48	4110.29	3597.11
Average Loan		5906.43	5393.25	4880.07	4366.89	3853.70
Weighted Average Rate of Interest on Loan		7.5741%	7.5858%	7.5919%	7.5997%	7.6103%
Interest		447.36	409.12	370.49	331.87	293.28

DEPRECIATION

19. 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."

20. The depreciation has been worked out on the basis of capital

expenditure of ₹9698.72 lakh as on 31.3.2009 as under:

(₹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 dated 13.5.2009		9698.72	9698.72	9698.72	9698.72	9698.72	9698.72	
Addition during 2009-14 due toprojectedAdditionalCapitalisation			0.00	0.00	0.00	0.00	0.00	
Gross block as on 31.3.2009			9698.72	9698.72	9698.72	9698.72	9698.72	
Average gross block			9698.72	9698.72	9698.72	9698.72	9698.72	
Rate of Depreciation			5.2912%	5.2912%	5.2912%	5.2912%	5.2912%	
Depreciable Value	90%		8728.85	8728.85	8728.85	8728.85	8728.85	
Elapsed Life			2	3	4	5	6	
Weighted Balance Useful life of			32	31	30	29	28	
the combine assets								
Remaining Depreciable Value			7955.70	7442.52	6929.33	6416.15	5902.97	
Depreciation			513.18	513.18	513.18	513.18	513.18	

OPERATION & MAINTENANCE EXPENSES

21. In accordance with clause (g) of Regulation 19 the 2009 regulations, the following norms for 400 kV D/C, Twin conductor transmission line and 400 kV bays are prescribed for O & M expenses:

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

22. The petitioner has claimed O & M expenses for 82.711 ckt. Km. and 6 bays. 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	
400 kV D/C, Twin conductor						
transmission line	51.86	54.82	57.98	61.29	64.76	
(0.518+82.193=82.711 ckt km)						
400 kV bays (6 bays)	314.40	332.40	351.42	371.52	392.76	
Total	366.26	387.24	409.40	432.81	457.52	

23. The petitioner has submitted that O & M expenditure for 2009-14 tariff block had been arrived on the basis of normalized actual O & M expenses of the petitioner 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 was also considered while calculating the O & M charges for 2009-14 periods. The petitioner has submitted that it would approach the Commission for suitable revision in the norms of O & M expenses in case the impact of wage hike w.e.f. 1.1.2007 is more than 50%. 24. TNEB has submitted that the O & M expenses for the period 2009-14 has been specified on normative basis and the regulations do not provide for revisiting the normative O & M expenses. In response, the petitioner in its rejoinder has submitted that the wages for the executive level has been done but the non-executive level it is to be computed shortly. The petitioner has submitted that it shall approached the Commission separately for additional manpower cost on account of wage revision. With reference to the submission of the petitioner, it is clarified that if any such application is made by the petitioner, the same shall be dealt with in accordance with law.

INTEREST ON WORKING CAPITAL

25. 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 ₹54.94 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 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.

26. 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	54.94	58.09	61.41	64.92	68.63
O & M expenses	30.52	32.27	34.12	36.07	38.13
Receivables	309.69	306.85	304.16	301.69	299.44
Total	395.15	397.21	399.69	402.67	406.20
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
Interest	48.41	48.66	48.96	49.33	49.76

TRANSMISSION CHARGES

27. 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	513.18	513.18	513.18	513.18	513.18
Interest on Loan	447.36	409.12	370.49	331.87	293.28
Return on Equity	482.92	482.92	482.92	482.92	482.92
Interest on Working Capital	48.41	48.66	48.96	49.33	49.76
O & M Expenses	366.26	387.24	409.40	432.81	457.52
Total	1858.13	1841.12	1824.95	1810.11	1796.66

Application fee and the publication expenses

28. The petitioner has sought approval for the reimbursement of fee paid by it for filing the petition. TENB has submitted that the prayer for reimbursement of filing fee rejected in view of the decision of the Commission in order dated 11.9.2008 in Petition No. 129/2005. It is clarified that the said decision was applicable to the tariff period 2004-09. However, Regulations 42 of the 2009 regulations provides for reimbursement of filing fees and expenses on publication of notices may be allowed in the direction of the Commission. The Commission has taken a decision in Petition No. 109/2009. 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 on pro rata basis. The petitioner shall also be entitled for reimbursement of publication expenses from the beneficiaries on pro rata basis.

Service Tax

29. The petitioner has prayed for reimbursement of service tax, if it is subjected to such tax in future. As the petitioner has no liability for service tax at present, the prayer is infructuous and is accordingly rejected.

Licence fee

30. The petitioner has prayed for reimbursement of licence fee as it is an extra cot on the petitioner. TNEB has objected the prayer of the petitioner. A view in the matter is yet to be taken by the Commission.

31. 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.

32. This order disposes of Petition No. 123/2010.

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

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN Annexure

	Details of Loan	2009-10	2010-11	2011-12	2012-13	(₹ in_lakh) 2013-14
		2009-10	2010-11	2011-12	2012-13	2013-14
1	Bond XVII					
-	Gross loan opening	5750.00	5750.00	5750.00	5750.00	5750.00
	Cumulative Repayment up to	0.00	575.00	1150.00	1725.00	2300.00
	the date of commercial					
	operation /previous year					
	Net Loan-Opening	5750.00	5175.00	4600.00	4025.00	3450.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	575.00	575.00	575.00	575.00	575.00
	Net Loan-Closing	5175.00	4600.00	4025.00	3450.00	2875.00
	Average Loan	5462.50	4887.50	4312.50	3737.50	3162.50
	Rate of Interest	7.39%	7.39%	7.39%	7.39%	7.39%
	Interest	403.68	361.19	318.69	276.20	233.71
	Rep Schedule		10 Annual In	stallments w.e	e.f 22.9.2009	
2	Bond XIX					
	Gross loan opening	600.00	600.00	600.00	600.00	600.00
	Cumulative Repayment up to	0.00	0.00	50.00	100.00	150.00
	the date of commercial					
	operation /previous year					
	Net Loan-Opening	600.00	600.00	550.00	500.00	450.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	50.00	50.00	50.00	50.00
	Net Loan-Closing	600.00	550.00	500.00	450.00	400.00
	Average Loan	600.00	575.00	525.00	475.00	425.00
	Rate of Interest	9.25%	9.25%	9.25%	9.25%	9.25%
	Interest	55.50	53.19	48.56	43.94	39.31
	Rep Schedule		12 Annual In	stallments w.e	e.f 24.7.2010	
	Total Loan					
	Gross loan opening	6350.00	6350.00	6350.00	6350.00	6350.00
	Cumulative Repayment up to	0.00	575.00	1200.00	1825.00	2450.00
	the date of commercial					
	operation /previous year					
	Net Loan-Opening	6350.00	5775.00	5150.00	4525.00	3900.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	575.00	625.00	625.00	625.00	625.00
	Net Loan-Closing	5775.00	5150.00	4525.00	3900.00	3275.00
	Average Loan	6062.50	5462.50	4837.50	4212.50	3587.50
	Rate of Interest	7.5741%	7.5858%	7.5919%	7.5997%	7.6103%
	Interest	459.18	414.37	367.26	320.14	273.02