# CENTRAL ELECTRICITY REGULATORY COMMISSION NEW DELHI

#### Coram:

- 1. Shri Bhanu Bhushan, Member
- 2. Shri R.Krishnamoorthy, Member

Petition No.52/2007

#### In the matter of

Approval under Section 17(3) of the Electricity Act, 2003 for transfer of ownership of switchyard associated with Faridabad Gas Power Project situated at Faridabad to NTPC.

#### And in the matter of

Power Grid Corporation of India Limited, Gurgaon Vs

..Petitioner

- 1. Haryana Vidyut Prasaran Nigam Limited, Panchkula
- 2. National Thermal Power Corporation Ltd., New Delhi ..... Respondents

### The following were present:

- 1. Shri U.K. Tyagi, PGCIL
- 2. Shri C. Kannan, PGCIL
- 3. Shri M.M. Mondal, CM (Fin), PGCIL
- 4. Shri Rakesh Prasad, PGCIL
- 5. Shri V.V.Sharma, PGCIL
- 6. Shri Harmeet Singh, PGCIL
- 7. Shri A.K.Nagpal, PGCIL
- 8. Shri S.N.Goel, NTPC
- 9. Shri Sameer Agarwal, NTPC
- 10. Shri A.K.Juneja, NPTC
- 11. Shri D.G.Salpekar, NTPC
- 12. Shri R.K.Arora, HPGCL

# ORDER (DATE OF HEARING: 26.2.2008)

The petition has been filed seeking approval under Section 17(3) of the Electricity Act, 2003 (the Act) for transfer of ownership of switchyard, forming part of 220 kV Faridabad-Samaypur D/C transmission line (Asset-I) and 220 kV Faridabad-Palla D/C transmission line (Asset-II), associated with Faridabad Gas Based Combined Cycle Power Project (the generating station) to the second respondent, NTPC, based on Ministry of Power letter No. 5/33/99-Th.2 dated 31.8.2000. The petitioner has prayed that after approval of de-capitalization on account of transfer of

switchyard to NTPC it be allowed to pass on the credit to/ adjust the transmission charges for the transferred assets with the first respondent.

- 2. Ministry of Power vide its letter dated 31.8.2000 ibid, *inter alia*, decided to transfer ownership and control of the switchyard from the petitioner to the second respondent, NTPC.
- 3. In response to query from the Commission, the petitioner vide IA No. 21/2007 had prayed for 'in principle' approval for effective date of transfer of ownership of the switchyard as 1.4.2007 or any other date as deemed proper by the Commission. Subsequently, the petitioner informed that the switchyard was transferred to NTPC on 1.9.2007. The petitioner submitted a copy of the Memorandum of Agreement signed with NTPC. Thus, the effective date of transfer of the switchyard to NTPC, as agreed to between the parties is 1.9.2007. We have accepted this date.
- 4. The annual transmission charges for Asset-I and Asset-II, for the period 2004-09 were approved by the Commission in its order dated 27.1.2006 in Petition No. 97/2004, which were subsequently revised for Asset-II (which involves FERV) vide order dated 19.5.2008 based on the Appellate Tribunal's judgment dated 4.10.2006 in Appeals No. 135-140/2005 as under:

(Rs.in lakh)

	Asset-I (Order dated 27.1.2006)				Asset-II (Order dated 19.5.2008)					
	2004-05	2005-06	2006- 07	2007- 08	2008-09	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	72.49	72.49	72.49	72.49	72.49	61.12	61.12	61.12	61.12	61.12
Interest on Loan	69.52	56.40	43.28	30.16	18.04	60.55	50.08	39.61	29.14	19.43
Return on Equity	217.61	217.61	217.61	217.61	217.61	164.03	164.03	164.03	164.03	164.03
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.99	32.93
Interest on Working Capital	11.91	11.96	12.02	12.10	12.21	11.31	11.43	11.56	11.85	12.47
O & M Expenses	120.51	125.35	130.38	135.54	141.01	147.72	153.66	159.82	166.15	172.85
Total	492.03	483.80	475.78	467.90	461.36	444.73	440.33	436.15	440.30	462.84

5. The petitioner vide its affidavit dated 15.1.2008 filed its claim for the revised transmission charges for the years 2007-08 and 2008-09 in both the assets after decapitalization on account of transfer of switchyard, as under:

(Rs. in lakh)

	200	2008-09	
	1.4.2007 to 31.8.2007		
Asset-I	199.80	99.15	170.54
Asset-II	184.14	40.35	67.72

6. The line length and number of bays left with the petitioner after transfer of the switchyard to NTPC are as under:

		Line Length (0	No of bays			
	As per order dated 27.1.2006	Transferred to NTPC	Balance with petitioner, subsequent to transfer	As per order dated 27.1.2006	Transferred to NTPC	Balance with petitioner subsequent to transfer
Asset-I	35.38	0.00	35.38	04	02	02
Asset-II	31.38	0.00	31.38	05	05	0
Total	66.76	0.00	66.76	09	07	02

7. The petitioner has submitted the auditor's certificate dated 28.11.2007 containing the following details of the capital cost of the switchyard transferred to NTPC:

(Rs in lakh)

	Asset-I			Asset-II			Total		
	Gross	Depreciation	Net	Gross	Depreciation	Net Block	Gross	Depreciation	Net Block
	Block as	recovered as	Block as	Block as on	recovered as on	as on	Block as	recovered	as on
	on 31.8.2007	on 31.8.2007*	on 1.9.2007	31.8.2007	31.8.2007*	1.9.2007	on 31.8.2007	as on 31.8.2007*	1.9.2007
Land	302.73	0.00	302.73	303.03	0.00	303.03	605.76	0.00	605.76
Building	32.50	11.17	21.33	52.58	14.80	37.78	85.08	25.97	59.11
Transmission									
line	1388.46	477.16	911.30	1262.43	355.35	907.08	2650.89	832.51	1818.38
Total	1723.69	488.33	1235.36	1618.04	370.15	1247.89	3341.73	858.48	2483.25

<sup>\*</sup> Cumulative deprecation on pro rata basis to the depreciation allowed for entire transmission system vide order dated 27.1.2006 in Petition No. 97/2004.

.....

- 8. The reply to the petition has been filed by NTPC and Haryana Power Generation Corporation Limited (HPGCL) for the first respodent.
- 9. The second respondent, NTPC vide its affidavit dated 8.2.2008 sought 'in principle' approval, that it shall approach the Commission at a later date to claim revision of capacity charges of the generating station from the date of transfer, based on final transfer price along with additional statutory duties or taxes and other related cost through a separate petition. Pending revision of the capacity charges, NTPC has prayed for approval of provisional billing of the additional capacity charges of the generating station, as was being billed by the petitioner, subject to retrospective adjustment after determination of the revised capacity charges.
- 10. NTPC has no objection to the transfer value of the switchyard as extracted in para 7 above. However, the additional charges in the form of stamp duty levied by the State Government and paid by NTPC have been sought to be capitalised.
- 11. HPGCL has agreed for capitalisation of stamp duty charges to be paid by NTPC and stated that NTPC may not be allowed to bill 100% of additional capacity charges equivalent to reduction in the transmission charges for the transmission lines as it anticipates reduction in these charges. HPGCL has urged that NTPC should seek approval of final tariff, consequent to transfer of the switchyard.

### CAPITAL COST

12. The petitioner has considered the capital expenditure admitted by the Commission in the order dated 27.1.2006 ibid. The petitioner has considered decapitalization of Rs. 1723.69 lakh and Rs. 1618.04 lakh as on 31.8.2007 on account of transfer of the switchyard to NTPC for Asset-I and Asset-II respectively. Accordingly, based on the audited accounts the capital expenditure including de-capitalization as

on 1.9.2007 considered by the petitioner for tariff of the left-over portion of transmission line is given hereunder:

			(Rs.in lakh)
Name of the Assets	Capital cost as on 31.8.2007	Expenditure de- capitalized as on 31.8.2007	Capital expenditure as on 1.9.2007 left with the petitioner
Asset-I	2438.33	1723.69	714.64
Asset-II	2112.19	1618.04	494.15

13. The details submitted by the petitioner in support of its claim for de-capitalisation are given hereunder:

A	Asset-I		Asset-II		
Nature of expendit	ture	Nature of expenditure			
					= Rs. 303.03 lakh = Rs. 52.58 lakh = Rs 1262.43 lakh
Total	= Rs.	1723.69	lakh	Total	= Rs. 1618.04 lakh

- 14. The de-capitalization claimed is based on the audited accounts and accordingly, has been allowed.
- 15. Based on the above, gross block as given below has been considered for the purpose of tariff for each of the assets, after allowing de-capitalization on works and as claimed by the petitioner as given in para 12 above:

### .DEBT- EQUITY RATIO

16. The petitioner has claimed tariff based on debt-equity ratio as considered by the Commission in its order dated 9.5.2006 for Asset-I and dated 19.5.2008 for Asset-II. Based on this, the debt-equity ratio claimed by the petitioner for the purpose of revision of tariff in the present petition is indicated below:

Name of the Element	Debt-equity ratio
Asset-I	36.25:63.75
Asset-II	44.53:55.47

17. The petitioner has claimed tariff after accounting for the de-capitalization of expenditure of Rs. 1723.69 lakh and Rs. 1618.04 lakh for Asset-I and Asset-II respectively. For the purpose of approval of tariff, de-capitalised amount has been segregated into same debt-equity ratio as considered in the orders dated 27.1.2006 and 19.5.2008. Therefore, equity considered for tariff for each asset is as under:

(Rs. in lakh)

Name of the Element	Equity as per order dated 9.5.2006 and	Expenditure De- capitalised	Equity corresponding to de-capitalised	Balance equity as on 1.9.2007
	19.5.2008		expenditure	
Asset-I	1554.33	1723.69	1098.78	455.55
Asset-II	1171.66	1618.04	897.55	274.11

## **RETURN ON EQUITY**

18. The petitioner has claimed return on equity on the basis of order dated 27.1.2006 ibid along with minus equity corresponding to de-capitalization on account of transfer of the switchyard to NTPC. We have already arrived at equity as given in the table under para 17. Thus, return on equity recoverable each year is given hereunder:

(Rs. in lakh)

Name of the	Equity	Return on equity					
Asset							
		200	2008-09				
		1.4.2007 to 31.8.2007	1.9.2007 to 31.3.2008				
Asset-I	455.55	90.67	37.20	63.78			
Asset-II	274.11	68.35	22.39	38.38			

# **INTEREST ON LOAN**

- 19. The petitioner has claimed interest on loan in the following manner:
  - (i) Gross loans opening has been considered from 2005-06;
  - (ii) On the basis of actual rate of interest on actual average loan, the weighted average rate of interest on loan is worked out for various years.

- (iii) Gross loans at (i) above has been considered and the weighted average rate of interest on loan for respective years as per above has been has been multiplied to arrive at interest on loan.
- (iv) For the years 2007-08 and 2008-09, the petitioner has considered the net loan opening in proportion to the value of the asset being transferred.
- (v) Repayment during 2007-08 as per the order dated 16.4.2008 in petition No. 97/2004 has been considered and calculated on pro rata for the period 1.4.2007 to 31.8.2007.
- (vi) Cumulative repayment up to previous year (corresponding to 1.4.2007 to 31.8.2007) has been added to the pro rata figure arrived at in (v) above and this sum has been considered proportionately to the percentage of assets left with the petitioner as on 1.9.2007 to arrive at the cumulative repayment of loan figure for the period 1.9.2007 to 31.3.2008.
- (vii) Finally, the repayment of the loan for the period from 1.9.2007 to 31.3.2008 has been arrived at by using the following formula:

Repayment=(Actual repayment of loans during the year/Actual net loan opening)x (notional net loan opening)x (1.9.2007 to 31.3.2008 in years)

20. In our calculation, interest on loan has been worked out as detailed below:

- (i) Gross amount of loan, repayment of instalments and rate of interest as per the loan details considered in the order dated 27.1.2006 ibid for Asset-I and order dated 19.5.2008 in Petition No. 97/2008 for Asset-II have been used to work out weighted average rate of interest on actual loan.
- (ii) Normative loan and normative repayments up to 31.3.2007 as those considered in the order dated 16.4.2008 have been taken. Repayment for the period 1.4.2007 to 31.8.2007 has been worked out on pro rata basis against repayment for the year 2007-08.
- (iii) Gross normative loan as on 1.9.2007 is the loan part remaining after decapitalization. Cumulative repayment up to the previous period has been multiplied by the percentage of the assets remaining after decapitalization to arrive at the cumulative repayment for the period from 1.9.2007 to 31.3.2008.
- (iv) Repayment of loan during the period from 1.9.2007 to 31.3.2008 has been calculated by using the following formula:

{(Gross normative loan during Period-II)/ (Gross normative loan for the period from 1.4.2007 to 31.8.2007)} X [(Repayment during Period-I converted to yearly repayment) X (for the period from 1.9.2007 to 31.3.2008 in years)]

- (v) Weighted average rate of interest on actual loan worked out as per (i) above has been applied on the average loan during the year to arrive at the interest on loan.
- 21. Based on the above, the year-wise details of interest worked out are given hereunder:

(Rs. in lakh)

	(170: 111						
		Asset-I		Asset-II			
	2007·	-08	2008-09	200	2007-08		
	1.4.2007 to	1.9.2007 to		1.4.2007	1.9.2007 to		
	31.8.2007	31.3.2008		to	31.3.2008		
				31.8.2007			
Gross Normative Loan	884.00	259.09	259.09	940.52	220.03	220.03	
Cumulative Repayment	532.37	171.68	193.59	448.98	115.99	131.33	
upto Previous Year							
Net Loan-Opening	351.63	87.41	65.49	491.54	104.04	88.70	
Repayment during the year	53.40	21.91	33.28	46.83	15.34	23.69	
Net Loan-Closing	298.23	65.49	32.21	444.71	88.70	65.01	
Average Loan	324.93	76.45	48.85	468.13	96.37	76.86	
Weighted Average Rate of	10.4901%	10.4901%	10.8246	6.6945%	6.6945%	5.9158%	
Interest on Loan			%				
Interest	14.20	4.68	5.29	13.06	3.76	4.55	

# **DEPRECIATION**

22. Depreciation allowed has been worked out as calculated below:

Rs.in	

		Asset-I		Asset-II			
	200	7-08	2008-09	2007	2008-09		
	1.4.2007 to 31.8.2007	1.9.2007 to 31.3.2008		1.4.2007 to 31.8.2007	1.9.2007 to 31.3.2008		
Gross Block as	2438.33	714.64	714.64	2112.18	494.14	494.14	
Rate of Depreciation	3.06724%	3.06724%	3.06724%	2.98091%	2.98091%	2.98091%	
Depreciable Value	1922.04	563.32	563.32	1628.24	380.92	380.92	
Balance Useful life of the asset		-	-		-	-	
Remaining Depreciable Value	1217.15	347.88	335.09	1135.98	259.80	251.21	
Depreciation	30.20	12.79	21.92	25.47	8.59	14.73	

# **ADVANCE AGAINST DEPRECIATION**

- 23. The petitioner has claimed Advance Against Depreciation in the following manner:
  - (i) 1/10th of gross loan has been considered from the gross notional loan for tariff computation.
  - (ii) Cumulative loan as well as repayment of notional loan considered during the year.
  - (iii) Depreciation as claimed in the petition.
- 24. In our calculation, Advance Against Depreciation has been worked as under:

- 1/10th of gross loan has been worked out from the gross notional loan as per para 21 above.
- (ii) Repayment of notional loan during the year has been considered as per para 21 above.
- (iii) Depreciation as worked out as per para 22 above has been taken into account.
- (iv) In calculations of Advance Against Depreciation, cumulative depreciation/
  Advance Against Depreciation up to preceding year along with the
  depreciation of the current year has been considered for working out the
  Advance Against Depreciation. Therefore this figure of cumulative
  depreciation/ Advance Against Depreciation would be different from the
  figure appearing under the similar head elsewhere in tariff calculations
  where Advance Against Depreciation for the current year is also included for
  90% restriction of the depreciation.
- (iv) The cumulative repayment of loan for the period from 1.4.2007 to 31.8.2007 is the sum of the cumulative repayment up to the previous year and the repayment during the period for the period from 1.4.2007 to 31.8.2007 as considered for working out the interest on loan.
- 25. The petitioner is not entitled to Advance Against Depreciation allowed as per the details given hereunder:

	Asset-I			Asset-II		
			2008-09	2006-07		2008-09
	200	07-08			2007-08	
	1.4.2007	1.9.2007 to		1.4.2007 to	1.9.2007 to	
	to	31.3.2008		31.8.2007	31.3.2008	
	31.8.2007					
1/10th of Gross Loan(s)	88.40	25.91	25.91	94.05	22.00	22.00
Repayment of the Loan	53.40	21.91	33.28	46.83	15.34	23.69
Minimum of the above	53.40	21.91	25.91	46.83	15.34	22.00
Depreciation during the	30.20	12.79	21.92	25.47	8.59	14.73
year						
(A) Difference	23.20	9.13	3.99	21.36	6.75	7.27
Cumulative Repayment of	585.77	193.59	226.88	495.81	131.33	155.02
the Loan						
Cumulative Depreciation/	735.10	259.55	281.47	517.73	156.17	170.90
Advance against						
Depreciation						
(B) Difference	-149.33	-65.96	-54.60	-21.92	-24.84	-15.88
Advance against	0.00	0.00	0.00	0.00	0.00	0.00
Depreciation Minimum of						
(A) and (B)						

# **OPERATION & MAINTENANCE EXPENSES**

26. In accordance with clause (iv) of Regulation 56 the 2004 regulations, the following norms are prescribed for O & M expenses

	Year				
	2004-05	2005-06	2006-07	2007-08	2008-09
O&M expenses (Rs in lakh per ckt-km)	0.227	0.236	0.246	0.255	0.266
O&M expenses (Rs in lakh per bay)	28.12	29.25	30.42	31.63	32.90

27. The petitioner has claimed the revised O & M expenses for 35.38 ckt-km of line length for Asset-I and 31.38 ckt.km of line length and 2 bays for Asset-II, which have been allowed. Accordingly, the petitioner's entitlement to O & M expenses has been worked out as given hereunder:

	Asset-I			Asset-II	
	2007-08	2008-09		2007-08	2008-09
	(1.9.2007 to 31.3.2008)			(1.9.2007 to 31.3.2008)	
O&M expenses for	5.26	9.41	O&M expenses for	4.67	8.35
35.38 Ckt km of			31.38 Ckt km of		
line length			line length		
O&M expenses for	36.90	65.80			
2 bays					
	42.16	75.21		4.67	8.35

28. O&M expenses for the period 1.4.2007 to 31.8.2007 have been calculated on pro rata basis for 5 months of O&M expenses for the year 2007-08 approved by the Commission in the order dated 27.1.2006 ibid.

# **INTEREST ON WORKING CAPITAL**

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

## (i) Maintenance spares

Regulation 56(v) (1) (b) of the 2004 regulations provides for maintenance spares @ 1% of the historical cost escalated @ 6% per annum from the date of commercial operation. In the present case, the capital cost as on 1.9.2007, for the left-over Asset-I and Asset-II by the petitioner is Rs. 714.64 lakh and Rs. 494.15 lakh, respectively of gross blocks as on 1.4.2004.

## (ii) O & M expenses

The 2004 regulations provide for operation and maintenance expenses for one month as a component of working capital, which has been considered in the working capital.

### (iii) Receivables

In the tariff being allowed, receivables have been worked out on the basis 2 months' transmission charges.

## (iv) Rate of interest on working capital

The petitioner has claimed interest on working capital @ 10.25% based on SBI PLR as on 1.4.2004, as in the Petition No, 97/2004 which is in accordance with the 2004 regulations and has been allowed.

30. The necessary computations in support of interest on working capital are appended herein below.

(Rs. in lakh)

	Asset-I			Asset-II		
	2007-08		2008-09	2007-08		2008-09
	1.4.2007 to 1.9.2007 to 31.8.2007 31.3.2008			1.4.2007 to	1.9.2007 to	
				31.8.2007	31.3.2008	
Maintenance Spares	27.79	8.23	8.72	27.48	6.49	6.88
O & M expenses	4.71	3.51	6.27	5.77	0.39	0.70
Receivables	33.04	16.62	28.44	30.44	6.80	11.32
Total	65.54	28.36	43.43	63.69	13.68	18.90
Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%
Interest	6.72	2.91	4.45	6.53	1.40	1.94

## **TRANSMISSION CHARGES**

31. The revised transmission charges for the year 2007-08 and 2008-09 being allowed are summarized below.

(Rs.in lakh)

	Asset-I			Asset-II		
	2007-08		2008-09	2007-08		2008-09
	1.4.2007	1.9.2007		1.4.2007	1.9.2007	
	to	to		to	to	
	31.8.2007	31.3.2008		31.8.2007	31.3.2008	
Depreciation	30.20	12.79	21.92	25.47	8.59	14.73
Interest on Loan	14.20	4.68	5.29	13.06	3.76	4.55
Return on Equity	90.67	37.20	63.78	68.35	22.39	38.38
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	6.72	2.91		6.53	1.40	1.94
			4.45			
O & M Expenses	56.48	42.16	75.21	69.23	4.67	8.35
Total	198.27	99.74	170.65	182.63	40.81	67.94

- 32. In addition to the transmission charges, the petitioner shall be entitled to other charges like income-tax, incentive, surcharge and other cess and taxes in accordance with the 2004 regulations.
- 33. The petitioner is allowed to pass credit to/adjust the revised transmission charges with HPGCL. The excess recovery of the transmission charges, if any, made

by the petitioner based on the orders dated 27.1.2006 and 19.5.2008, shall be adjusted in three months against the future bills.

34. We permit NTPC to provisionally claim the charges for the switchyard transferred from the petitioner w.e.f. 1.9.2007 as under:

(Rs. in lakh)

	Ass	et-l	Asset-II		
	2007-08 (1.9.2007 to 31.3.2008)	2008-09	2007-08 (1.9.2007 to 31.3.2008)	2008-09	
Depreciation	29.50	50.57	27.06	46.39	
Interest on Loan	11.28	12.75	12.32	14.88	
Return on Equity	89.74	153.83	73.29	125.65	
Advance against Depreciation	0.00	0.00	7.99	32.93	
Interest on Working Capital	2.47	7.76	3.92	10.53	
O & M Expenses	36.90	65.80	92.25	164.50	
Total	169.89	290.71	216.83	394.90	

- 35. The provisional charges being allowed as above are the difference of the transmission charges for Asset-I and Asset-II approved by order dated 27.1.2006 and 19.5.2008 and the transmission charges approved in para 31 above, for the period from 1.9.2007 to 31.3.2009. NTPC is directed to file a petition for approval of the revised capacity charges for the generating station after accounting for the capital cost of the switchyard transferred to it, by 31.10.2008.
- 36. The petitioner is directed to deposit balance filing fee of Rs. 80,000/-, since it has paid fee of Rs. 20,000/- only.
- 37. This order disposes of Petition No.52/2007.

Sd/(R.KRISHNAMOORTHY)
MEMBER
New Delhi dated the 18th June 2008

sd/-(BHANU BHUSHAN) MEMBER