

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Coram:

- 1. Shri Ashok Basu, Chairman**
- 2. Shri K.N. Sinha, Member**
- 3. Shri Bhanu Bhushan, Member**

Petition No. 108/2000

In the matter of

Transmission Tariff for Transmission System associated with Gandhar Gas Power Project (Stage I) in Western Region.

And in the matter of

Power Grid Corporation of India Ltd. ... **Petitioner**

Vs

1. Madhya Pradesh Electricity Board, Jabalpur
2. Maharashtra State Electricity Board, Mumbai
3. Gujarat Electricity Board, Baroda
4. Electricity Department, Govt. of Goa, Panaji, Goa
5. Electricity Department, Admn of Daman & Diu, Daman
6. Electricity Department, Admn of Dadra & Nagar Haveli, Silvassa
7. Chhattisgarh State Electricity Board, Raipur**Respondents**

The following were present:

1. Shri Umesh Chandra ED(Comml.), PGCIL
2. Shri V.K. Prasher, ED(LD&C), PGCIL
3. Shri Y.K. Dixit, PGCIL
4. Shri V. Srinivas, PGCIL
5. Dr.L. Hari, PGCIL
6. Shri A.K. Sharma, PGCIL
7. Shri U.K. Tyagi, DGM, PGCIL
8. Shri Ramesh Bahri, PGCIL
9. Shri D. D. Dayaseelan, PGCIL
10. Shri P.C. Pankaj, PGCIL
11. Shri V.K. Gupta, PGCIL
12. Shri C. Kannan, PGCIL
13. Shri V.C. Jaganannathan, PGCIL
14. Shri R.G. Yadav, PGCIL
15. Shri V.V. Sharma, PGCIL
16. Shri Samir Kumar, PGCIL
17. Shri T.S.P. Rao, PGCIL

ORDER
(DATE OF HEARING: 15.6.2004)

The petitioner, Power Grid Corporation of India Ltd had made the application for approval of tariff in respect of the elements of the transmission system associated with Gandhar Gas Power Project Stage I (the transmission system) in Western Region from the date of commercial operation of the respective asset till 31.3.2001. The details of the different assets of the transmission system and the date of commercial operation of each of them are as indicated below:

	Name of the Asset	Date of commercial operation
(a)	220 kV Gandhar-Bharuch D/C line with associated bays	1.8.1994
(b)	400 kV Gandhar-Dehgam D/C line with sub-station at Dehgam	1.6.1995
(c)	400 kV Gandhar-Padghe S/C line with associated bays	1.3.1998
(d)	400 KV Gandhar-Gandhar S/C line	1.6.1998

2. The transmission charges for the transmission system were approved by the Commission under its order dated 12.8.2002 after considering, among other things, the information placed on record by the petitioner. The Commission had allowed the following transmission charges:

(Rs. in lakh)

220 kV Gandhar-Bharuch D/C line

Transmission Charges	1994-95	1995-96	1996-97	1997-98	1998-99	1999-200	2000-2001
Interest on Loan	31.23	31.23	31.23	26.66	22.41	18.16	13.92
Depreciation	21.02	21.02	21.02	28.03	28.03	28.03	28.03
O&M expenses	4.77	4.77	4.77	8.44	9.00	9.53	10.10
Return on Equity	24.90	24.90	24.90	30.40	30.40	30.40	30.40
Interest on working capital	2.77	2.77	2.77	3.14	2.89	2.63	2.50
TOTAL	84.69	84.69	84.69	96.67	92.72	88.75	84.94
220 kV Gandhar-Dehgam D/C line							
Interest on Loan		839.28	839.28	752.49	648.58	544.66	440.73
Depreciation		371.98	371.98	686.22	686.44	686.44	686.44
O&M expenses		117.51	117.51	201.89	215.41	228.03	241.71
Return on Equity		665.65	665.65	850.14	850.14	850.14	850.14
Interest on working capital		75.08	75.08	81.21	74.63	68.07	64.62
TOTAL		2069.50	2069.50	2571.95	2475.20	2377.33	2283.63
400 kV Gandhar-Padghe S/C line							
Interest on Loan				86.26	975.44	524.20	524.20
Depreciation				51.95	624.27	624.27	624.27
O&M expenses				14.27	172.46	182.57	193.52
Return on Equity				61.04	735.12	735.12	735.12
Interest on working capital				6.64	72.71	58.93	57.61
TOTAL				220.16	2580.00	2125.09	2134.72
400 kV Gandhar-Gandhar S/C line							
Interest on Loan					37.43	24.13	24.13
Depreciation					25.20	30.24	30.24
O&M expenses					6.95	8.75	9.28
Return on Equity					30.40	36.48	36.48
Interest on working capital					2.91	2.84	2.77
TOTAL					102.89	102.44	102.90

3. The petitioner in support of its claim for interest on loan had indicated that there was no repayment of Grid Bond I loan taken for the transmission system, before 31.3.2002. In other words, no repayments up to 31.3.2001 were shown. However, in Petition No. 74/2002 made by the petitioner for approval of tariff in respect of the same transmission system for the period from 1.4.2001 to 31.3.2004, part payment of Grid Bond 1 loan was shown prior to 31.3.2001. Subsequently, affidavits were also filed on behalf of the petitioner showing the loan allocation details. These details also

supported the fact of repayment of Grid Bond 1 loan prior to 31.3.2001. Thus, the details furnished in the affidavits filed on behalf of the petitioner are in agreement with the details of loan furnished in the main petition. Based on these details, the tariff for the period 1.4.2001 to 31.3.2004 was approved by the Commission by considering part repayment of Grid Bond 1 loan prior to 31.3.2001. This necessitated revision of tariff earlier approved by the Commission in present petition by order dated 12.8.2002.

4. Accordingly, a notice was issued to the petitioner directing it to show cause why the tariff already approved by the Commission by order dated 12.8.2002 should not be reviewed. The petitioner was also directed to show cause for filing the incorrect affidavit before the Commission in the proceedings in the present petition in so far as repayment of Grid Bond I loan was concerned. The petitioner has shown cause on both these counts. On perusal of the reply to the notice for show cause, we are satisfied that there was no willful concealment on the part of the petitioner of the information in regard to repayment of Grid Bond 1 loan or intention to draw any undue benefit. The mistake was bonafide. Therefore, the proceedings against the petitioner or any of its officers for filing false affidavit before the Commission are hereby dropped. At the hearing, however, the representative of the petitioner accepted that the tariff approved by the Commission by order dated 12.8.2002 needed revision. The representative of the petitioner had further submitted that the transmission charges for some other transmission lines also, which involved Grid Bond I loan, the tariff for the period ending 31.3.2001 in respect of which has already been approved by the Commission, called for revision. It was stated by the representative of the petitioner that the Commission could revise the tariff in all such cases *suo motu* and without any further notice to the petitioner. We have noted down the submission made by the

petitioner. The tariff in all other similar cases would be, therefore, revised without a fresh show cause notice to the petitioner.

5. As seen from para 2 above, the transmission charges allowed by order of 12.8.2002, comprise of five components, namely interest on loan, depreciation, O&M charges, return on equity and the interest on working capital. The discrepancy regarding repayment of Grid Bond I loan, affects interest on loan component of the transmission charges. Further, interest on loan forms part of the working capital on which interest is allowed. The correction of interest on loan component of tariff will involve further correction of interest on working capital component of the transmission charges. The other components of the transmission charges approved earlier will accordingly remain unaffected and unchanged. Therefore, through this order, we are confining our consideration to interest on loan and interest on working capital components of the transmission charges already approved.

Interest on Loan

6. The salient features of recalculation of interest on loan are summarised below:

(a) Details of loan repaid before 31.3.2001 have been taken as per the affidavit dated 30.4.2002 filed by the petitioner in the proceedings in petition No. 78/2002 for approval of tariff for the period commencing 1.4.2001.

(b) As per Annual Report of the petitioner, Grid Bond-I consisted of three components, namely, Issue I, Issue II and Issue III, having different interest rates, these being 16.75%, 17% and 9%. According to the petitioner, repayment of the first two components, Issue I and Issue II, was due on 10th/13th March 1999. However, the break-up of

rate of interest between Issue I and Issue II is not made available by the petitioner. Therefore, month-wise interest up to February 1999 has been worked out by considering that the entire amount carried 16.75% rate of interest.

(c) In case of assets commissioned before 1.4.1997, details of weighted average rate of interest submitted by the petitioner under its affidavit dated 30.4.2002 do not contain issue-wise break up of Grid Bond I and Grid Bond III loans. Further, loan allocation details do not contain separate details for Gandhar-Bharuch and Gandhar-Dehgam transmission lines and both these assets are clubbed. Therefore, loan for each asset has been worked out on *pro rata* basis.

(d) Year-wise weighted average rate for Gandhar-Bharuch and Gandhar-Dehgam transmission lines worked out has been applied to calculate the interest on loan component on notional loan component of the transmission charges. In respect of Gandhar – Padghe and Gandhar-Gandhar transmission lines, commissioned after 1.4.1997, actual rate of interest, except for Issue I and Issue II of Grid Bond I loan, have been considered. For Issue I and Issue II of Grid Bond I loan, rate of interest considered is 16.75% as indicated in sub-para (b) above.

7. The calculations in support of the weighted average rate of interest and the actual interest payable in respect of Gandhar-Bharuch and Gandhar-Dehgam transmission lines are appended in the tables herein below. The interest up to 31.3.1997 has been allowed based on the average interest for the previous years.

Calculation of Weighted Average Rate of Interest

(Rs. in lakh)

	Gandhar-Bharuch Transmission Line							Gandhar-Dehgam Transmission Line						
Details of Loan	1994-95	1995-96	1996-97	1997-98	1998-99	1999-2000	2000-2001	1995-96	1996-97	1997-98	1998-99	1999-2000	2000-01	
Actual DOCO					01.06.1995						01.06.1995			
Period from date of commercial operation (Year)	0.67	1.00	1.00	1.00	1.00	1.00	1.00	0.83	1.00	1.00	1.00	1.00	1.00	
Loan 1a - GOI-1														
Gross Loan -Opening	66.88	66.88	66.88	66.88	66.88	66.88	66.88	1595.00	1595.00	1595.00	1595.00	1595.00	1595.00	
Cumulative Repayment upto Previous Year	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Net Loan-Opening	66.88	66.88	66.88	66.88	66.88	66.88	66.88	1595.00	1595.00	1595.00	1595.00	1595.00	1595.00	
Repayment during the year	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	159.50	
Net Loan-Closing	66.88	66.88	66.88	66.88	66.88	66.88	66.88	1595.00	1595.00	1595.00	1595.00	1595.00	1435.50	
Average Loan	66.88	66.88	66.88	66.88	66.88	66.88	66.88	1595.00	1595.00	1595.00	1595.00	1595.00	1515.25	
Rate of Interest	16.00%	16.00%	16.00%	16.00%	16.00%	16.00%	16.00%	16.00%	16.00%	16.00%	16.00%	16.00%	16.00%	
Interest	7.13	10.70	10.70	10.70	10.70	10.70	10.70	212.67	255.20	255.20	255.20	255.20	242.44	
Repayment Schedule	No repayment up to 31.03.2001													
Loan 1b - GOI-2														
Gross Loan -Opening	10.12	10.12	10.12	10.12	10.12	10.12	10.12	690.88	690.88	690.88	690.88	690.88	690.88	
Cumulative Repayment upto Previous Year	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Net Loan-Opening	10.12	10.12	10.12	10.12	10.12	10.12	10.12	690.88	690.88	690.88	690.88	690.88	690.88	
Repayment during the year	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Net Loan-Closing	10.12	10.12	10.12	10.12	10.12	10.12	10.12	690.88	690.88	690.88	690.88	690.88	690.88	
Average Loan	10.12	10.12	10.12	10.12	10.12	10.12	10.12	690.88	690.88	690.88	690.88	690.88	690.88	
Rate of Interest	16.00%	16.00%	16.00%	16.00%	16.00%	16.00%	16.00%	16.00%	16.00%	16.00%	16.00%	16.00%	16.00%	
Interest	1.08	1.62	1.62	1.62	1.62	1.62	1.62	92.12	110.54	110.54	110.54	110.54	110.54	
Repayment Schedule	No repayment up to 31.03.2001													

Loan 1c - GOI-3													
Gross Loan -Opening	27.00	27.00	27.00	27.00	27.00	27.00	27.00	407.12	407.12	407.12	407.12	407.12	407.12
Cumulative Repayment upto Previous Year	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Net Loan-Opening	27.00	27.00	27.00	27.00	27.00	27.00	27.00	407.12	407.12	407.12	407.12	407.12	407.12
Repayment during the year	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Net Loan-Closing	27.00	27.00	27.00	27.00	27.00	27.00	27.00	407.12	407.12	407.12	407.12	407.12	407.12
Average Loan	27.00	27.00	27.00	27.00	27.00	27.00	27.00	407.12	407.12	407.12	407.12	407.12	407.12
Rate of Interest	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	16.00%	16.00%	16.00%	16.00%	16.00%	16.00%
Interest	2.70	4.05	4.05	4.05	4.05	4.05	4.05	54.28	65.14	65.14	65.14	65.14	65.14
Repayment Schedule	No repayment up to 31.03.2001												
Loan 1 - GOI													
Gross Loan -Opening	104.00	104.00	104.00	104.00	104.00	104.00	104.00	2693.00	2693.00	2693.00	2693.00	2693.00	2693.00
Cumulative Repayment upto Previous Year	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Net Loan-Opening	104.00	104.00	104.00	104.00	104.00	104.00	104.00	2693.00	2693.00	2693.00	2693.00	2693.00	2693.00
Repayment during the year	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	159.50
Net Loan-Closing	104.00	104.00	104.00	104.00	104.00	104.00	104.00	2693.00	2693.00	2693.00	2693.00	2693.00	2533.50
Average Loan	104.00	104.00	104.00	104.00	104.00	104.00	104.00	2693.00	2693.00	2693.00	2693.00	2693.00	2613.25
Rate of Interest	15.74%	15.74%	15.74%	15.74%	15.74%	15.74%	15.74%	16%	16%	16%	16%	16%	16%
Interest	10.91	16.37	16.37	16.37	16.37	16.37	16.37	359.07	430.88	430.88	430.88	430.88	418.12
Repayment Schedule	Repayment schedule not mentioned here												
Loan 2 - Grid-I (Issue-I/II)													
Gross Loan -Opening	2.43	2.43	2.43	2.43	2.43	2.43	2.43	58.25	58.25	58.25	58.25	58.25	58.25
Cumulative Repayment upto Previous Year	0.00	0.00	0.00	0.00	0.00	0.00	2.43	2.43	0.00	0.00	0.00	0.00	58.25
Net Loan-Opening	2.43	2.43	2.43	2.43	2.43	0.00	0.00	58.25	58.25	58.25	58.25	0.00	0.00
Repayment during the year	0.00	0.00	0.00	0.00	2.43	0.00	0.00	0.00	0.00	0.00	58.25	0.00	0.00
Net Loan-Closing	2.43	2.43	2.43	2.43	0.00	0.00	0.00	58.25	58.25	58.25	0.00	0.00	0.00
Average Loan	2.43	2.43	2.43	2.43	1.21	0.00	0.00	58.25	58.25	58.25	29.13	0.00	0.00
Rate of Interest	16.75%	16.75%	16.75%	16.75%	16.75%	16.75%	16.75%	16.75%	16.75%	16.75%	16.75%	16.75%	16.75%
Interest	0.27	0.41	0.41	0.41	0.20	0.00	0.00	8.13	9.76	9.76	4.88	0.00	0.00
Repayment Schedule	10/13 March1999												

Loan 3 - Grid-I (Issue-III)														
Gross Loan -Opening	2.57	2.57	2.57	2.57	2.57	2.57	2.57	61.75	61.75	61.75	61.75	61.75	61.75	
Cumulative Repayment upto Previous Year	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Net Loan-Opening	2.57	2.57	2.57	2.57	2.57	2.57	2.57	61.75	61.75	61.75	61.75	61.75	61.75	
Repayment during the year	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Net Loan-Closing	2.57	2.57	2.57	2.57	2.57	2.57	2.57	61.75	61.75	61.75	61.75	61.75	61.75	
Average Loan	2.57	2.57	2.57	2.57	2.57	2.57	2.57	61.75	61.75	61.75	61.75	61.75	61.75	
Rate of Interest	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	
Interest	0.15	0.23	0.23	0.23	0.23	0.23	0.23	4.63	5.56	5.56	5.56	5.56	5.56	
Repayment Schedule	No repayment up to 31.03.2001													
Loan 4 - Bonds-II														
Gross Loan -Opening	79.00	79.00	79.00	79.00	79.00	79.00	79.00	2039.00	2039.00	2039.00	2039.00	2039.00	2039.00	
Cumulative Repayment upto Previous Year	0.00	0.00	0.00	0.00	0.00	79.00	79.00	0.00	0.00	0.00	0.00	2039.00	2039.00	
Net Loan-Opening	79.00	79.00	79.00	79.00	79.00	0.00	0.00	2039.00	2039.00	2039.00	2039.00	0.00	0.00	
Repayment during the year	0.00	0.00	0.00	0.00	79.00	0.00	0.00	0.00	0.00	0.00	2039.00	0.00	0.00	
Net Loan-Closing	79.00	79.00	79.00	79.00	0.00	0.00	0.00	2039.00	2039.00	2039.00	0.00	0.00	0.00	
Average Loan	79.00	79.00	79.00	79.00	39.50	0.00	0.00	2039.00	2039.00	2039.00	1019.50	0.00	0.00	
Rate of Interest	14.78%	14.78%	14.78%	14.78%	14.78%	14.78%	14.78%	14.78%	14.78%	14.78%	14.78%	14.78%	14.78%	
Interest	7.78	11.68	11.68	11.68	5.84	0.00	0.00	251.14	301.36	301.36	150.68	0.00	0.00	
Repayment Schedule	Feb,99													
Loan 5 - UTI														
Gross Loan -Opening	47.00	47.00	47.00	47.00	47.00	47.00	47.00	1222.00	1222.00	1222.00	1222.00	1222.00	1222.00	
Cumulative Repayment upto Previous Year	0.00	0.00	0.00	0.00	0.00	47.00	47.00	0.00	0.00	0.00	0.00	1222.00	1222.00	
Net Loan-Opening	47.00	47.00	47.00	47.00	47.00	0.00	0.00	1222.00	1222.00	1222.00	1222.00	0.00	0.00	
Repayment during the year	0.00	0.00	0.00	0.00	47.00	0.00	0.00	0.00	0.00	0.00	1222.00	0.00	0.00	
Net Loan-Closing	47.00	47.00	47.00	47.00	0.00	0.00	0.00	1222.00	1222.00	1222.00	0.00	0.00	0.00	
Average Loan	47.00	47.00	47.00	47.00	23.50	0.00	0.00	1222.00	1222.00	1222.00	611.00	0.00	0.00	
Rate of Interest	16.70%	16.70%	16.70%	16.70%	16.70%	16.70%	16.70%	16.70%	16.70%	16.70%	16.70%	16.70%	16.70%	
Interest	5.23	7.85	7.85	7.85	3.92	0.00	0.00	170.06	204.07	204.07	102.04	0.00	0.00	
Repayment Schedule	Jan.1999													

Loan 6 - Bonds-III (Issue-II)													
Gross Loan -Opening	22.41	22.41	22.41	22.41	22.41	22.41	22.41	594.83	594.83	594.83	594.83	594.83	594.83
Cumulative Repayment upto Previous Year	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Net Loan-Opening	22.41	22.41	22.41	22.41	22.41	22.41	22.41	594.83	594.83	594.83	594.83	594.83	594.83
Repayment during the year	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Net Loan-Closing	22.41	22.41	22.41	22.41	22.41	22.41	22.41	594.83	594.83	594.83	594.83	594.83	594.83
Average Loan	22.41	22.41	22.41	22.41	22.41	22.41	22.41	594.83	594.83	594.83	594.83	594.83	594.83
Rate of Interest	9.75%	9.75%	9.75%	9.75%	9.75%	9.75%	9.75%	9.75%	9.75%	9.75%	9.75%	9.75%	9.75%
Interest	1.46	2.19	2.19	2.19	2.19	2.19	2.19	48.33	58.00	58.00	58.00	58.00	58.00
Repayment Schedule	No repayment up to 31.03.2001												
Loan 7- Bonds-III (Issue-I)													
Gross Loan -Opening	3.59	3.59	3.59	3.59	3.59	3.59	3.59	95.17	95.17	95.17	95.17	95.17	95.17
Cumulative Repayment upto Previous Year	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Net Loan-Opening	3.59	3.59	3.59	3.59	3.59	3.59	3.59	95.17	95.17	95.17	95.17	95.17	95.17
Repayment during the year	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Net Loan-Closing	3.59	3.59	3.59	3.59	3.59	3.59	3.59	95.17	95.17	95.17	95.17	95.17	95.17
Average Loan	3.59	3.59	3.59	3.59	3.59	3.59	3.59	95.17	95.17	95.17	95.17	95.17	95.17
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%	13.50%	13.50%	13.50%	13.50%	13.50%	13.50%	13.50%	13.50%
Interest	0.32	0.48	0.48	0.48	0.48	0.48	0.48	10.71	12.85	12.85	12.85	12.85	12.85
Repayment Schedule	No repayment up to 31.03.2001												
TOTAL													
Gross Loan -Opening	261.00	261.00	261.00	261.00	261.00	261.00	261.00	6764.00	6764.00	6764.00	6764.00	6764.00	6764.00
Cumulative Repayment upto Previous Year	0.00	0.00	0.00	0.00	0.00	0.00	128.43	128.43	0.00	0.00	0.00	3319.25	3319.25
Net Loan-Opening	261.00	261.00	261.00	261.00	261.00	132.57	132.57	6764.00	6764.00	6764.00	6764.00	3444.75	3444.75
Repayment during the year	0.00	0.00	0.00	0.00	128.43	0.00	0.00	0.00	0.00	0.00	3319.25	0.00	159.50
Net Loan-Closing	261.00	261.00	261.00	261.00	132.57	132.57	132.57	6764.00	6764.00	6764.00	3444.75	3444.75	3285.25
Average Loan	261.00	261.00	261.00	261.00	196.79	132.57	132.57	6764.00	6764.00	6764.00	5104.38	3444.75	3365.00
Rate of Interest	15.02%	15.02%	15.02%	15.02%	14.86%	14.54%	14.54%	15.12%	15.12%	15.12%	14.98%	14.73%	14.70%
Interest	26.14	39.20	39.20	39.20	29.24	19.27	19.27	852.06	1022.48	1022.48	764.88	507.28	494.52

Calculation of Actual Interest

(Rs. in lakh)

	Gandhar-Bharuch Transmission Line							Gandhar-Dehgam Transmission Line					
	1994-95	1995-96	1996-97	1997-98	1998-99	1999-2000	2000-2001	1995-96	1996-97	1997-98	1998-99	1999-2000	2000-01
Opening Notional Loan				189.97	161.94	133.91	105.88			5313.35	4627.13	3940.69	3254.25
Repayment				28.03	28.03	28.03	28.03			686.22	686.44	686.44	686.44
Closing Notional Loan				161.94	133.91	105.88	77.85			4627.13	3940.69	3254.25	2567.81
Average Notional Loan	218.00	210.99	196.98	175.96	147.93	119.90	91.87	5636.10	5472.96	4970.24	4283.91	3597.47	2911.03
Rate of interest	15.02%	15.02%	15.02%	15.02%	14.86%	14.54%	14.54%	15.12%	15.12%	15.12%	14.98%	14.73%	14.70%
Interest	21.83	31.69	29.59	26.43	21.98	17.43	13.35	709.98	827.32	751.32	641.93	529.77	427.81

8. The interest payable in case of Gandhar-Padghe S/C transmission line and Gandhar-Gandgar S/C transmission line has been calculated as given hereunder.

Calculation of Interest on Loan

(Rs. In lakh)

Details of Loan	Gandhar-Padghe S/C Line				Gandhar-Gandhar S/C Line		
	1997-98	1998-99	1999-2000	2000-01	1998-99	1999-2000	2000-01
Actual DOCO	01.03.98				01.06.98		
Period from DOCO (Year)	0.08	1.00	1.00	1.00	0.83	1.00	1.00
Loan 1 - GOI							
Opening Balance	2723.00	2723.00	2723.00	2723.00	132.00	132.00	132.00
Addition	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Repayment	0.00	0.00	0.00	272.30	0.00	0.00	0.00
Closing Balance	2723.00	2723.00	2723.00	2450.70	132.00	132.00	132.00
Rate of Interest	16.00%	16.00%	16.00%	16.00%	15.00%	15.00%	15.00%
Interest	36.31	435.68	435.68	435.68	16.50	19.80	19.80
Repayment Schedule	15.03.2001				No repayment up to 31.03.2001		
Loan 2 - Grid-I (Issue-I/II)							
Opening Balance	58.74	58.74	0.00	0.00	2.91	0.00	0.00
Addition	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Repayment	0.00	58.74	0.00	0.00	2.91	0.00	0.00
Closing Balance	58.74	0.00	0.00	0.00	0.00	0.00	0.00
Rate of Interest	16.75%	16.75%	16.75%	16.75%	16.75%	16.75%	16.75%
Interest	0.82	9.02	0.00	0.00	0.37	0.00	0.00
Repayment Schedule	10/13 March, 1999				10/13 March, 1999		
Loan 3 - Grid-I (Issue-III)							
Opening Balance	62.26	62.26	62.26	62.26	3.09	3.09	3.09
Addition	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Repayment	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Closing Balance	62.26	62.26	62.26	62.26	3.09	3.09	3.09
Rate of Interest	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%
Interest	0.47	5.60	5.60	5.60	0.23	0.28	0.28
Repayment Schedule	No repayment up to 31.03.2001				No repayment up to 31.03.2001		
Loan 4 - Bonds-II							
Opening Balance	2061.00	2061.00	0.00	0.00	96.00	0.00	0.00
Addition	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Repayment	0.00	2061.00	0.00	0.00	96.00	0.00	0.00
Closing Balance	2061.00	0.00	0.00	0.00	0.00	0.00	0.00
Rate of Interest	14.78%	14.78%	14.78%	14.78%	14.78%	14.78%	14.78%
Interest	25.38	279.23	0.00	0.00	10.64	0.00	0.00
Repayment Schedule	Feb.,99				Feb.,99		
Loan 5 - UTI							
Opening Balance	1236.00	1236.00	0.00	0.00	60.00	0.00	0.00
Addition	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Repayment	0.00	1236.00	0.00	0.00	60.00	0.00	0.00
Closing Balance	1236.00	0.00	0.00	0.00	0.00	0.00	0.00
Rate of Interest	16.70%	16.70%	16.70%	16.70%	16.70%	16.70%	16.70%
Interest	17.20	172.01	0.00	0.00	6.68	0.00	0.00
Repayment Schedule	Jan.,99				Jan.,99		

Loan 6 - Bonds-III (Issue-II)							
Opening Balance	601.72	601.72	601.72	601.72	29.31	29.31	29.31
Addition	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Repayment	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Closing Balance	601.72	601.72	601.72	601.72	29.31	29.31	29.31
Rate of Interest	9.75%	9.75%	9.75%	9.75%	9.75%	9.75%	9.75%
Interest	4.89	58.67	58.67	58.67	2.38	2.86	2.86
Repayment Schedule	No repayment up to 31.03.2001				No repayment up to 31.03.2001		
Loan 7 - Bonds-III (Issue-I)							
Opening Balance	96.28	96.28	96.28	96.28	4.69	4.69	4.69
Addition	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Repayment	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Closing Balance	96.28	96.28	96.28	96.28	4.69	4.69	4.69
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%	13.50%	13.50%
Interest	1.08	13.00	13.00	13.00	0.53	0.63	0.63
Repayment Schedule	No repayment up to 31.03.2001				No repayment up to 31.03.2001		
TOTAL							
Opening Balance	6839.00	6839.00	3483.26	3483.26	328.00	169.09	169.09
Addition	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Repayment	0.00	3355.74	0.00	272.30	158.91	0.00	0.00
Closing Balance	6839.00	3483.26	3483.26	3210.96	169.09	169.09	169.09
Interest	86.15	973.21	512.95	512.95	37.33	23.57	23.57

Interest on Working Capital

9. The revised calculations in support of interest on working capital are appended hereinbelow. The Interest on Working Capital for the period up to 31.3.1997 has been allowed on the average working capital.

(Rs in lakh)

220 kV Gandhar-Bharuch D/C line

		1994-95	1995-96	1996-97	Average	1997-98	1998-99	1999-00	2000-01
Operation & Maintenance Expenses	1 month's of O&M expenses				0.40	0.70	0.75	0.79	0.84
Maintenance Spares	1% of capital cost				4.40	5.63	6.00	6.35	6.73
Receivables	2 months' average billing				13.64	16.07	15.38	14.67	14.06
Total					18.44	22.40	22.13	21.81	21.63
Rate of Interest					15%	14%	13%	12%	11.5%
Interest on Working Capital					2.77	3.14	2.88	2.62	2.49

220 kV Gandhar-Dehgam D/C line

		1994-95	1995-96	1996-97	Average	1997-98	1998-99	1999-2000	2000-01
Operation & Maintenance Expenses	1 month's of O&M expenses				9.79	16.82	17.95	19.00	20.14
Maintenance Spares	1% of capital cost				112.87	134.61	143.62	152.03	161.15
Receivables	2 months' average billing				332.28	428.46	411.40	393.69	378.41
Total					454.94	579.89	572.97	564.72	559.70
Rate of Interest					16.5%	14%	13%	12%	11.5%
Interest on Working Capital					75.07	81.19	74.49	67.77	64.37

400 kV Gandhar-Padghe S/C line

		1994-95	1995-96	1996-97	Average	1997-98	1998-99	1999-2000	2000-01
Operation & Maintenance Expenses	1 month's of O&M expenses					14.27	14.37	15.21	16.13
Maintenance Spares	1% of capital cost					114.17	114.97	121.71	129.01
Receivables	2 months' average billing					440.08	429.62	352.27	353.88
Total						568.52	558.96	489.19	499.02
Rate of Interest						14%	13%	12%	11.5%
Interest on Working Capital						6.63	72.66	58.70	57.39

400 kV Gandhar-Gandhar S/C line

		1994-95	1995-96	1996-97	Average	1997-98	1998-99	1999-2000	2000-01
Operation & Maintenance Expenses	1 months of O&M expenses						0.70	0.73	0.77
Maintenance Spares	1% of capital cost						5.56	5.83	6.18
Receivables	2 months' average billing						20.56	16.98	17.06
Total							26.82	23.54	24.01
Rate of Interest							13%	12%	11.5%
Interest on Working Capital							2.91	2.82	2.76

10. Based on the above, the revised transmission charges payable by the respondents are summarised as under:

(Rs. in lakh)

220 kV Gandhar-Bharuch D/C line with associated bays at Bharuch

Transmission Charges	1994-95	1995-96	1996-97	1997-98	1998-99	1999-2000	2000-2001
Interest on Loan	31.23	31.23	31.23	26.43	21.98	17.43	13.35
Depreciation	21.02	21.02	21.02	28.03	28.03	28.03	28.03
O&M expenses	4.77	4.77	4.77	8.44	9.00	9.53	10.10
Return on Equity	24.90	24.90	24.90	30.40	30.40	30.40	30.40
Interest on working capital	3.01	3.01	3.01	3.14	2.88	2.62	2.49
TOTAL	84.93	84.93	84.93	96.43	92.28	88.00	84.36

220 kV Gandhar-Dehgam D/C line with substation at Dehgam

Interest on Loan		838.53	838.53	751.32	641.93	529.77	427.81
Depreciation		371.98	371.98	686.22	686.44	686.44	686.44
O&M expenses		117.51	117.51	201.89	215.41	228.03	241.71
Return on Equity		665.65	665.65	850.14	850.14	850.14	850.14
Interest on working capital		75.07	75.07	81.19	74.49	67.77	64.37
TOTAL		2069.50	2069.50	2570.75	2468.40	2362.14	2270.46

400 kV Gandhar-Padghe S/C line with bays at Padghe sub-station

Interest on Loan				86.15	973.21	512.95	512.95
Depreciation				51.95	624.27	624.27	624.27
O&M expenses				14.27	172.46	182.57	193.52
Return on Equity				61.04	735.12	735.12	735.12
Interest on working capital				6.63	72.66	58.70	57.39
TOTAL				220.04	2577.72	2113.61	2123.25

400 kV Gandhar-Gandhar S/C line

Interest on Loan					37.33	23.57	23.57
Depreciation					25.20	30.24	30.24
O&M expenses					6.95	8.75	9.28
Return on Equity					30.40	36.48	36.48
Interest on working capital					2.91	2.82	2.76
TOTAL					102.79	101.86	102.33

11. The revised transmission charges shall be shared by the respondents in accordance with the principles contained in paragraph 18 of the order dated 12.8.2002.

Sd/-
(BHANU BHUSHAN)
MEMBER

Sd/-
(K.N. SINHA)
MEMBER

Sd/-
(ASHOK BASU)
CHAIRMAN

New Delhi dated the 30th July 2004