

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Coram:

- 1. Shri R.Krishnamoorthy, Member**
- 2. Shri V.S. Verma, Member**

**Petition No. 64/2008
With IA No. 13/2009**

In the matter of

Fixation of and adjudication on the transmission charges for use of the Gujarat transmission system for conveyance of central sector power to Union Territory of Daman & Diu (DD) under section 62 and 79 of the Electricity Act, 2003

Petition No. 67/2008

In the matter of

Fixation of and adjudication on the transmission charges for use of the Gujarat transmission system for conveyance of central sector power to Union Territory of Dadra and Nagar Haveli (DNH) under section 62 and 79 of the Electricity Act, 2003

And in the matter of

Gujarat Energy Transmission Corporation Ltd., Vadodra **Petitioner**

Vs.

1. Union Territory of Daman and Diu,
through Electricity Department, Administration of Daman and Diu, Daman
2. Union Territory of Dadra and Nagar Haveli,
Through Electricity Department, Administration of Dadra and Nagar Haveli,
Silvassa
3. Maharashtra State Electricity Distribution Company Limited, Mumbai
4. Gujarat Urja Vikas Nigam Ltd., Vadodra
5. Madhya Pradesh Power Trading Company Ltd., Jabalpur
6. Chhattisgarh State Electricity Board, Raipur
7. Electricity Department, Govt. of Goa, Panaji
8. Power Grid Corporation of India Ltd (WRHQ)., Nagpur
9. Western Regional Power Committee, Mumbai

... Respondents

The following were present

Shri Anand K.Ganesan, Advocate for applicants
Shri Sakesh Kumar, Advocate for DNH
Shri G.T.Chandan, Advocate for DD
Shri Mansoor Ali, Advocate for Govt. of Goa
Shri P.J.Jani, GETCO
Shri S.K.Trivedi, GETCO
Shri P.S.Deve, DNH
Ms. Poonam Verma, Govt. of Goa
Shri S.Patel, MS, WRPC
Shri D.Khandelwal, MPPTCL

ORDER (Date of Hearing: 19.5.2009)

Through these two petitions, the petitioner sought fixation of transmission charges for use of Gujarat Transmission system for conveyance of central sector power to Union Territories of Daman & Diu (DD) and Dadra and Nagar Haveli (DNH) and also adjudication of any dispute and differences between the parties including consequential relief for payment of transmission charges for the period from 28.02.2006. The prayer in petition 64/2008 is extracted below:

“(i) entertain the present petition and determine the applicable network charges and loss level to be allowed by adjustments in time for the use by DD of the transmission network of GETCO for the period from 28.2.2006

(ii) Pass such further orders as be deemed fit and appropriate under the circumstances of the case”

2. Similar prayer was made in petition 67/2008 except that conveyance of power was facilitated to DNH using Gujarat transmission system. Apart from the fact that the parties involved in the proceedings are common, to a large extent, the techno-legal issues involved in the two petitions are also similar in nature. Therefore, we are dealing with these petitions through this common order.

3. Upon hearing the representatives of the parties and perusal of pleadings, the Commission, vide its order dated 3.2.2009, directed Western Regional Power Committee (WRPC) to submit, within one month of issuance of that order, the detailed calculation of the transmission charges for transmission of power to DD and DNH, by applying contract path method based on the guidelines given therein. WRPC vide its letter dated 3.3.2009 submitted the calculations of transmission charges, the copies of which were transmitted to the parties.

4. The present proceedings are for the purpose of taking a final view on the calculations of transmission charges submitted by WRPC.

5. In the meantime, seventh respondent, Goa had filed IA No. 13/2009 seeking calculation of transmission charges in addition to DD and DNH. Learned counsel for Goa requested that, as a respondent in the current proceedings, it was entitled to seek calculation of the transmission charges for conveyance of electricity to the State of Goa. He requested the Commission to direct the WRPC to carry out similar calculations of transmission charges for Goa also along with the calculations for DD and DNH.

6. During the hearing, the petitioner reiterated that the transmission charges as per WRPC calculation should be applied prospectively, else it would suffer revenue loss. We observe that this issue has already been settled vide commission's order dated 3.2.2009 as may be seen from the para extracted hereunder:

“25. The first issue to be addressed is the date from which transmission charges determined pursuant to these petitions shall be applicable. The petitioner has prayed that transmission charges be determined from 28.2.2006, the date on which GERC had issued orders prescribing transmission charges and loss adjustments. However, during the hearing held on 7.8.2008, in response to query of the Commission, learned counsel for the petitioner submitted that transmission charges would need to be determined from 1.4.2006 onwards and they would not make any claim for the period prior thereto. As has been pointed out by the respondents, Regulation 4.9.2 of the Central Electricity Regulatory Commission (Terms & Conditions of Tariff) Regulations, 2001 (the 2001 regulations) notified on 26.3.2001 specifically dealt with wheeling system of SEB/State utility. It may be pointed out that prior to the Act the term ‘wheeling’ was used to denote third party use of the transmission system. However, these regulations were applicable only up to 31.3.2004, after which the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2004, (the 2004 regulations) notified on 26.3.2004 become applicable from 1.4.2004 to 31.3.2009. The 2004 regulations do not have any specific provision for use of SEB/STU network for third party transmission. Thus, with effect from 1.4.2004, there is a vacuum with regard to determination of transmission charges for use of transmission system of a utility, which is neither buyer nor seller of the power flowing through this system. Therefore, we are in agreement with MPPTCL that we have to determine transmission charges with effect from 1.4.2004. “

7. We find no justification for re-opening the settled issue. We further notice that the transmission charges being paid by the constituents shall be based on WRPC calculation for use of the petitioner’s system for the period 2004-05 and are provisional charges, to be adjusted subsequently. Thus, the petitioner’s argument that the charges calculated by WRPC are lower than provisional charges and so the same should be applied prospectively, is not tenable. As decided vide order dated 3.2.2009, the transmission charges calculated by WRPC shall be applicable with effect from 1.4.2004.

8. As regards the methodology adopted in the calculation by WRPC, the petitioner urged that maximum power flow through the line should be taken

instead of the average (MW) contracted power. In this connection, we observe that as per order dated 3.2.2009, the methodology adopted in the present case is contract path method finalized by CEA for calculating transmission charges. In this method, the annual fixed charges are apportioned to wheeling of central sector power in the ratio of average 'MW' drawal during the year and surge impedance loading (SIL) of the 400/220 kV lines. The same method is adopted by WRPC for apportionment of the transmission charges. Further, the regional transmission charges are also shared on the basis of respective entitlement (in MW) in the inter-state generating stations during the month, which is a weighted average (MW) figure only. Thus, we feel that the method used by WRPC is in order and does not call for any modification.

9. The petitioner further contended that while calculating transmission charges for DD the path up to Diu should be considered. This issue of considering the specific contract path was also discussed in the order dated 3.2.2009 and WRPC has considered the same for calculation. Regarding the identification of the contract path used for transmission of power to DD following assumption was suggested:

“Thus, in case of power transmission to DD, power to terminal sub-station in Gujarat namely Vapi and Bhilad can be assumed to be flowing from Ambheti (Vapi) sub-station of POWERGRID after commissioning of Ambeti -Bhilad and Ambeti-Vapi lines of POWERGRID. As a corollary, it will be fair to assume that after commissioning of Ambheti sub-station of POWERGRID, power meant to flow to DD will not follow the Asoj-Ukai-Vav-Navsari-Vapi-Bhilad path.”

10. As already decided, for the sake of simplicity, the power flow to DD may be assumed from Ambethi (Vapi) sub-station of PGCIL even though a fraction of power flows through alternate path. WRPC in the calculation has taken the same path. Since the load of Diu is very small, considering the path up to Diu will not make significant difference in calculation. Further, the total power flow of Daman and Diu, through the path considered in the GETCO system for calculation includes the Diu power also. Thus, there is no need for modification of calculation.

11. The petitioner further requested that after connectivity of DD and DNH, with the network of the Central Transmission Utility (CTU). Transmission charges according to open Access regulations should be applicable. WRPC in their calculation has considered the connectivity of DD and DNH with the network of CTU with effect from 1.7.2008 and calculations are made accordingly. This issue was taken into consideration in para 32 of the Commission's order dated 3.2.2009 extracted hereunder:

“32. We are conscious of the fact that in the interim order dated 21.7.2004 in Petition No. 6/2004, in the matter related to determination of wheeling charges for the use of Orissa transmission system for transmission of power to MPSEB under the 2001 tariff Regulation for the period 2001-04 , the Commission had stated that after implementation of open access regulations, charges shall be payable under those regulations. However, we are of the opinion that the matter relating to use of State transmission system for conveyance of power to other licensees is more appropriately covered under Sections 35 and 36 of the Act. These explicit statutory provisions cannot be ignored. We are therefore proceeding by specifying method of calculation of the transmission charges in the present case. In due course, the Commission will come out with draft regulations under Section 36 of the Act so as to deal with the issue of determination of transmission charges for intervening inter-State transmission facilities.”

12. Thus, this issue has also been already decided. For removal of doubts we further clarify that the charges on the basis of WRPC calculation shall be applicable till 31.3.2009 and thereafter with effect from 1.4.2009, WRPC shall

calculate the charges payable for use of GETCO system in same manner and the charges shall be shared by Western Region Constituents as decided earlier vide order dated 3.2.2009. The parties are at liberty to approach the Commission for resolving disputes, if any, regarding calculation / payment of charges in accordance with law.

13. While expressing agreement with the calculations made by WRPC, the representative of MPPTCL pointed out that in Table –II (b) of the calculation submitted by WRPC for the period 2005-06, the capital cost of Vapi-Bhilad line was taken as Rs. 1295.00 Lakh. He argued that the average cost amounting to Rs. 795.00 Lakh of Vapi-Bhilad S/C (I) (Rs. 1295 lakh) and S/C(II) (Rs. 295.00 Lakh) should be taken as the capital cost of Vapi-Bhilad S/C line . We are of the opinion that the argument of MPPTCL is not logical as the Vapi-Bhilad S/C line capital cost should include cost of towers etc. which was included in the cost of Vapi-Bhilad S/C-I, having capital cost of Rs. 1295.00 Lakh. The capital cost of Vapi-Bhilad S/C should be same as capital cost of Vapi-Bhilad S/C-I i.e. Rs. 1295.00 Lakh instead of Rs. 795.00 Lakh as suggested by the respondent. Thus, the capital cost of Vapi-Bhilad S/C line taken by WRPC in table II (b) is correct..

14. In view of foregoing, we hold the calculation of transmission charges by WRPC is in order and direct that these charges be applicable for the period from 1.4.2004 to 31.3.2009. These charges shall be shared in the manner decided in Commission's order dated 3.2.2009, which provided that the applicable transmission charges for conveyance of power to DD and DNH shall be shared by all long-term customers of WR in the same manner as regional assets of POWERGRID . The calculation by WRPC is Annexed to this order as Annexure-I.

IA No. 13/2009 in Petition No. 64/2008

15. As regards IA No. 13/2009 in Petition No. 64/2008, we hold that the prayer made therein is not within the purview of the present proceedings and

direct that the applicant may initiate appropriate proceedings, in accordance with law, for seeking the relief is so advised.

16. Petitions No 64-2008 and 67-2008 are disposed of.

Sd/= **(V.S. Verma)**
Member

Sd/= **(R. Krishnamoorthy)**
Member

New Delhi, dated the 31st July 2009

**CALCULATION OF TRANSMISSION CHARGES OF GETCO SYSTEM
FOR TRANSFER OF POWER TO DD AND DNH**

Table I

PERIOD 1.4.2004 TO 31.3.2005		
Line Type		
220 kV S/C lines	6.83	Lakh/k.m
220 kV D/C lines	12	Lakh/k.m
400 kV S/C lines	14.82	Lakh/k.m
400 kV D/C lines	27.5	Lakh/k.m
66 kV lines	As indicated by GEB	

	Drawal from Grid (MUs)		
	DD	DNH	Total
2004-05	1216	2105	3321
	Average Load (MW)		
	DD	DNH	Total
2004-05	139	240	379

Line name		Asoj-Ukai	Ukai-Vav	Vav-Navsari		Navsari-Vapi	Vapi-Bhilad	
		s/c	d/c	d/c	S/C(II)	d/c	S/C(I)	S/C(II)
Single/double circuit								
Circuit				S/C(I)	S/C(II)		S/C(I)	S/C(II)
No. of bays		2	4	2	2	4	2	2
Date of commissioning (1991-92 level)		1988	1992	1973	1994	1967	1995	1996
Years since commissioning (up to 31.03.2001)		13	12	13	10	13	9	8
years since commissioning after 2001-02		3	3	3	3	3	3	3
Voltage level (kV)		400	220	220	220	220	220	220
Line length(km)		140	66	33.3	33.3	70	22.81	22.81
Total capital cost (Rs. in lakh)		2074.80	1320.00	227.44	392.56	840.00	1295.00	295.00
Equity (30 % of capital cost)		622.44	396.00	68.23	117.77	252.00	388.50	88.50
Debt (70 % of capital cost)=Loan taken	p	1452.36	924.00	159.21	274.79	588.00	906.50	206.50
Cum. Depreciation upto 2000-01*	q	740.70	424.12	81.20	98.10	299.88	277.39	52.66
Cum. Depreciation from 2001-02 to 2003-04 #	r	159.97	101.77	17.54	30.27	64.76	99.84	22.74
Net loan at the end of last year (p-q-r)	s	551.69	398.11	60.48	146.43	223.36	529.27	131.10
Calculation of Fixed charges (Rs. in lakh)								
Return on equity (@ 14%)	a	87.14	55.44	9.55	16.49	35.28	54.39	12.39

Interest on loan (10.25% of Net Loan) (s x rate)	b	56.55	40.81	6.20	15.01	22.89	54.25	13.44
Depreciation(2.57% of 90 % capital cost)	c	47.99	30.53	5.26	9.08	19.43	29.95	6.82
O&M Expenses (as per tariff notification)	d	88.02	127.46	63.80	63.80	128.37	61.42	61.42
Components of working capital								
<i>O&M Expenses for one Month</i>	e1	7.34	10.62	5.32	5.32	10.70	5.12	5.12
<i>Maintenance spares(1% escalated 6% p.a.)</i>	e2	44.25	26.56	4.85	7.03	17.92	21.88	4.70
<i>Receivables equivalent to two month</i>	e3	35.40	43.76	14.56	17.91	35.42	34.38	16.12
Interest on working capital(10.25%)	e	8.92	8.30	2.53	3.10	6.56	6.29	2.66
Total Fixed Charges for year 2004-05 (a+b+c+d+e)	f	288.62	262.54	87.35	107.48	212.54	206.30	96.73
Avg. contracted Power in MW	g	379	379	190	190	379	160	160
SIL in MW	h	515	264	132	132	264	132	132
Chargeable fixed charges (f x g/h)	i	212.40	262.54	87.35	107.48	212.54	206.30	96.73
Total chargeable fixed charges (Rs. in lakh)	j	1185.32						

Actual drawal by DD from the Grid and wheeled through GETCO system during 2004-05 (in MUs)	1216
Applicable transmission charges for DD for the year 2004-05 (Rs. in lakh)	434.01
Actual drawal by DNH from the Grid and wheeled through GETCO system during 2004-05 (in MUs)	2105
Applicable transmission charges for DNH for the year 2004-05 (Rs. in lakh)	751.31
* As per old method on full capital cost @3.57 % p.a.	
# as per Anenxure-II of T&C of Tariff 2001 @2.57% p.a.	

Table II (a)

PERIOD 1.4.2005 TO 31.8.2005		
Line Type		
220 kV S/C lines	6.83	Lakh/k.m
220 kV D/C lines	12	Lakh/k.m
400 kV S/C lines	14.82	Lakh/k.m
400 kV D/C lines	27.5	Lakh/k.m
66 kV lines	As indicated by GEB	

Drawal from Grid (MUs)			
	DD	DNH	Total
2005-06	1321	2529	3850
Average Load (MW)			
	DD	DNH	Total
2005-06	151	289	439

Line name		Asoj-Ukai	Ukai-Vav	Vav-Navsari		Navsari-Vapi	Vapi-Bhilad	
Single/double circuit		s/c	d/c	d/c		d/c	d/c	
Circuit				S/C(I)	S/C(II)		S/C(I)	S/C(II)
No. of bays		2	4	2	2	4	2	2
Date of commissioning (1991-92 level)		1988	1992	1973	1994	1967	1995	1996
Years since commissioning (up to 31.03.2001)		14	13	14	11	14	10	9
years since commissioning after 2001-02		4	4	4	4	4	4	4
Voltage level (kV)		400	220	220	220	220	220	220
Line length(km)		140	66	33.3	33.3	70	22.81	22.81
Total capital cost (Rs. in lakh)		2074.80	1320.00	227.44	392.56	840.00	1295.00	295.00
Equity (30 % of capital cost)		622.44	396.00	68.23	117.77	252.00	388.50	88.50
Debt (70 % of capital cost)=Loan taken	p	1452.36	924.00	159.21	274.79	588.00	906.50	206.50
Cum. Depreciation upto 2000-01*	q	740.70	424.12	81.20	98.10	299.88	277.39	52.66
Cum. Depreciation from 2001-02 to 2003-04 #	r	213.29	135.70	23.38	40.36	86.35	133.13	30.33
Net loan at the end of last year (p-q-r)	s	498.37	364.19	54.63	136.34	201.77	495.99	123.52
Calculation of Fixed charges (Rs. in lakh)								
Return on equity (@ 14%)	a	87.14	55.44	9.55	16.49	35.28	54.39	12.39
Interest on loan (10.25% of Net Loan) (s x rate)	b	51.08	37.33	5.60	13.97	20.68	50.84	12.66
Depreciation(2.57% of 90 % capital cost)	c	47.99	30.53	5.26	9.08	19.43	29.95	6.82
O&M Expenses (as per tariff notification)	d	91.54	132.58	66.36	66.36	133.52	63.88	63.88
Components of working capital								

O&M Expenses for one Month	e1	7.63	11.05	5.53	5.53	11.13	5.32	5.32
Maintenance spares(1% escalated 6% p.a.)	e2	46.91	28.15	5.14	7.45	18.99	23.19	4.98
Receivables equivalent to two month	e3	40.85	44.07	14.90	18.18	35.95	34.25	16.42
Interest on working capital(10.25%)	e	9.78	8.54	2.62	3.19	6.77	6.43	2.74
Total Fixed Charges for year 2004-05 (a+b+c+d+e)	f	287.53	264.41	89.39	109.10	215.68	205.50	98.50
Avg. contracted Power in MW	g	439	439	220	220	439	160	160
SIL in MW	h	515	264	132	132	264	132	132
Chargeable fixed charges (f x g/h)	i	245.10	264.41	89.39	109.10	215.68	205.50	98.50
Total chargeable fixed charges (Rs. in lakh) (for five months)	j	511.53						

Actual drawal by DD from the Grid and wheeled through GETCO system during 2005-06 (in MUs)	550
Applicable transmission charges for DD for the year 2005-06 (Rs. in lakh)	175.52
Actual drawal by DNH from the Grid and wheeled through GETCO system during 2005-06 (in MUs)	1054
Applicable transmission charges for DNH for the year 2005-06 (Rs. in lakh)	336.02
* As per old method on full capital cost @3.57 % p.a.	
# as per Anenxure-II of T&C of Tariff 2001 @2.57% p.a.	

Table II(b)

PERIOD 1.9.2005 TO 31.3.2006			
	Drawal from Grid (MUs)		
	DD	DNH	Total
2005-06	1321	2529	3850
	Average Load (MW)		
	DD	DNH	Total
2005-06	151	289	439

Line name		Vapi(PG)-Vapi(G)	Vapi(PG)-Bhilad	Vapi-Bhilad
Single/double circuit		s/c	s/c	s/c
Circuit				
No. of bays		2	4	2
Date of commissioning (1991-92 level)		2005	2005	1995
Years since commissioning (upto 31.03.2001)		0	0	10
years since commissioning after 2001-02		0	0	4
Voltage level (kV)		220	220	220
Line length(km)		14.18	20.77	22.81
Total capital cost (Rs. in lakh)		282.88	282.88	1295.00
Equity (30 % of capital cost)		84.86	84.86	388.50
Debt (70 % of capital cost)=Loan taken	p	198.02	198.02	906.50
Cum. Depreciation upto 2000-01*	q	0.00	0.00	277.39
Cum. Depreciation from 2001-02 to 2003-04 #	r	0.00	0.00	133.13
Net loan at the end of last year (p-q-r)	s	198.02	198.02	495.99
Calculation of Fixed charges (Rs. in lakh)				
Return on equity (@ 14%)	a	11.88	11.88	54.39
Interest on loan (10.25% of Net Loan) (s x rate)	b	20.30	20.30	50.84
Depreciation(2.57% of 90 % capital cost)	c	6.54	6.54	29.95
O&M Expenses (as per tariff notification)	d	61.85	121.90	63.88
Components of working capital				
<i>O&M Expenses for one Month</i>	e1	5.15	10.16	5.32
<i>Maintenance spares(1% escalated 6% p.a.)</i>	e2	2.83	2.83	23.19
<i>Receivables equivalent to two month</i>	e3	17.19	27.46	34.25
Interest on working capital(10.25%)	e	2.58	4.15	6.43
Total Fixed Charges for year 2004-05 (a+b+c+d+e)	f	103.15	164.77	205.50
Avg. contracted Power in MW	g	220	220	220
SIL in MW	h	132	132	132
Chargeable fixed charges (f x g/h)	i	103.15	164.77	205.50
Total chargeable fixed charges (Rs. in lakh)	j	276.16		
(for seven months)				

Actual drawal by DD from the Grid and wheeled through GETCO system during 2005-06 (in MUs)	771
Applicable transmission charges for DD for the year 2005-06 (Rs. in lakh)	94.75
Actual drawal by DNH from the Grid and wheeled through GETCO system during 2005-06 (in MUs)	1475
Applicable transmission charges for DNH for the year 2005-06 (Rs. in lakh)	181.40
* As per old method on full capital cost @3.57 % p.a.	
# as per Anexure-II of T&C of Tariff 2001 @2.57% p.a.	

Table III

PERIOD 1.4.2006 TO 31.3.2007			
Drawal from Grid (MUs)			
	DD	DNH	Total
2006-07	1408	2880	4288
Average Load (MW)			
	DD	DNH	Total
2006-07	161	329	489

Line name		Vapi(PG)-Vapi(G)	Vapi(PG)-Bhilad	Vapi-Bhilad
Single/double circuit		s/c	s/c	s/c
Circuit				
No. of bays		2	4	2
Date of commissioning (1991-92 level)		2005	2005	1995
Years since commissioning (up to 31.3.2001)		1	1	11
years since commissioning after 2001-02		1	1	5
Voltage level (kV)		220	220	220
Line length(km)		14.18	20.77	22.81
Total capital cost (Rs. in lakh)		282.88	282.88	1295.00
Equity (30 % of capital cost)		84.86	84.86	388.50
Debt (70 % of capital cost)=Loan taken	p	198.02	198.02	906.50
Cum. Depreciation up to 2000-01*	q	0.00	0.00	277.39
Cum. Depreciation from 2001-02 to 2003-04 #	r	7.27	7.27	166.41
Net loan at the end of last year (p-q-r)	s	190.75	190.75	462.70
Calculation of Fixed charges (Rs. in lakh)				
Return on equity (@ 14%)	a	11.88	11.88	54.39
Interest on loan (10.25% of Net Loan) (s x rate)	b	19.55	19.55	47.43
Depreciation(2.57% of 90 % capital cost)	c	6.54	6.54	29.95
O&M Expenses (as per tariff notification)	d	64.33	126.79	66.45
Components of working capital				
<i>O&M Expenses for one Month</i>	e1	5.36	10.57	5.54
<i>Maintenance spares(1% escalated 6% p.a.)</i>	e2	3.00	3.00	24.58
<i>Receivables equivalent to two month</i>	e3	17.49	28.17	34.13
Interest on working capital(10.25%)	e	2.65	4.28	6.59
Total Fixed Charges for year 2004-05 (a+b+c+d+e)	f	104.95	169.04	204.81
Avg. contracted Power in MW	g	245	245	245
SIL in MW	h	132	132	132
Chargeable fixed charges (f x g/h)	i	104.95	169.04	204.81
Total chargeable fixed charges (Rs. in lakh)	j	478.80		

Actual drawal by DD from the Grid and wheeled through GETCO system during 2006-07 (in MUs)	1408
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Applicable transmission charges for DD for the year 2006-07 (Rs. in lakh)	157.22
Actual drawal by DNH from the Grid and wheeled through GETCO system during 2006-07 (in MUs)	2880
Applicable transmission charges for DNH for the year 2006-07 (Rs. in lakh)	321.59
* As per old method on full capital cost @3.57 % p.a.	
# as per Anenxure-II of T&C of Tariff 2001 @2.57% p.a.	

Table IV(a)

PERIOD 1.4.2007 TO 29.2.2008			
Drawal from Grid (MUs)			
	DD	DNH	Total
2007-08	1580	3371	4951
Average Load (MW)			
	DD	DNH	Total
2007-08	180	385	565

Line name		Vapi(PG)-Vapi(G)	Vapi(PG)-Bhilad	Vapi-Bhilad
Single/double circuit		s/c	s/c	s/c
Circuit				
No. of bays		2	4	2
Date of commissioning (1991-92 level)		2005	2005	1995
Years since commissioning (up to 31.3.2001)		2	2	12
years since commissioning after 2001-02		2	2	6
Voltage level (kV)		220	220	220
Line length(km)		14.18	20.77	22.81
Total capital cost (Rs. in lakh)		282.88	282.88	1295.00
Equity (30 % of capital cost)		84.86	84.86	388.50
Debt (70 % of capital cost)=Loan taken	p	198.02	198.02	906.50
Cum. Depreciation up to 2000-01*	q	0.00	0.00	277.39
Cum. Depreciation from 2001-02 to 2003-04 #	r	14.54	14.54	199.69
Net loan at the end of last year (p-q-r)	s	183.48	183.48	429.42
Calculation of Fixed charges (Rs. in lakh)				
Return on equity (@ 14%)	a	11.88	11.88	54.39
Interest on loan (10.25% of Net Loan) (s x rate)	b	18.81	18.81	44.02
Depreciation(2.57% of 90 % capital cost)	c	6.54	6.54	29.95
O&M Expenses (as per tariff notification)	d	66.88	131.82	69.08
Components of working capital				
<i>O&M Expenses for one Month</i>	e1	5.57	10.98	5.76
<i>Maintenance spares(1% escalated 6% p.a.)</i>	e2	3.18	3.18	26.06
<i>Receivables equivalent to two month</i>	e3	17.80	28.91	34.03
Interest on working capital(10.25%)	e	2.72	4.42	6.75
Total Fixed Charges for year 2004-05 (a+b+c+d+e)	f	106.83	173.46	204.18
Avg. contracted Power in MW	g	141	141	141
SIL in MW	h	132	132	132
Chargeable fixed charges (f x g/h)	i	106.83	173.46	204.18
Total chargeable fixed charges (Rs. in lakh)	j	444.10		
(for eleven months)				

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Actual drawal by DD from the Grid and wheeled through GETCO system during 2007-08 (in MUs)	1580
Applicable transmission charges for DD for the year 2007-08 (Rs. in lakh)	141.73
Actual drawal by DNH from the Grid and wheeled through GETCO system during 2007-08 (in MUs)	3371
Applicable transmission charges for DNH for the year 2007-08 (Rs. in lakh)	302.38
* As per old method on full capital cost @3.57 % p.a.	
# as per Anenxure-II of T&C of Tariff 2001 @2.57% p.a.	

Table IV(b)

PERIOD 1.3.2008 TO 31.3.2008			
	Drawal from Grid (MUs)		
	DD	DNH	Total
2007-08	1580	3371	4951
	Average Load (MW)		
	DD	DNH	Total
2007-08	180	385	565

Line name		Vapi(PG)- Vapi(G)	Vapi(PG)- Bhilad	Vapi-Bhilad	Vapi(PG)- Bhilad
Single/double circuit		s/c	s/c	s/c	d/c
Circuit					
No. of bays		2	4	2	4
Date of commissioning (1991-92 level)		2005	2005	1995	2008
Years since commissioning (up to 31.3.2001)		2	2	12	0
years since commissioning after 2001-02		2	2	6	0
Voltage level (kV)		220	220	220	220
Line length(km)		14.18	20.77	22.81	43.48
Total capital cost (Rs. in lakh)		282.88	282.88	1295.00	1467.98
Equity (30 % of capital cost)		84.86	84.86	388.50	440.39
Debt (70 % of capital cost)=Loan taken	p	198.02	198.02	906.50	1027.59
Cum. Depreciation up to 2000-01*	q	0.00	0.00	277.39	0.00
Cum. Depreciation from 2001-02 to 2003-04 #	r	14.54	14.54	199.69	0.00
Net loan at the end of last year (p-q-r)	s	183.48	183.48	429.42	1027.59
Calculation of Fixed charges (Rs. in lakh)					
Return on equity (@ 14%)	a	11.88	11.88	54.39	61.66
Interest on loan (10.25% of Net Loan) (s x rate)	b	18.81	18.81	44.02	105.33
Depreciation(2.57% of 90 % capital cost)	c	6.54	6.54	29.95	33.95
O&M Expenses (as per tariff notification)	d	66.88	131.82	69.08	137.61
Components of working capital					
<i>O&M Expenses for one Month</i>	e1	5.57	10.98	5.76	11.47
<i>Maintenance spares(1% escalated 6% p.a.)</i>	e2	3.18	3.18	26.06	14.68
<i>Receivables equivalent to two month</i>	e3	17.80	28.91	34.03	57.86
Interest on working capital(10.25%)	e	2.72	4.42	6.75	8.61
Total Fixed Charges for year 2004-05 (a+b+c+d+e)	f	106.83	173.46	204.18	347.16
Avg. contracted Power in MW	g	141	141	141	283
SIL in MW	h	132	132	132	264
Chargeable fixed charges (f x g/h)	i	106.83	173.46	204.18	347.16
Total chargeable fixed charges (Rs. in lakh)	j	69.30			

(for one month)					
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Actual drawal by DD from the Grid and wheeled through GETCO system during 2007-08 (in MUs)	1580
Applicable transmission charges for DD for the year 2007-08 (Rs. in lakh)	22.12
Actual drawal by DNH from the Grid and wheeled through GETCO system during 2007-08 (in MUs)	3371
Applicable transmission charges for DNH for the year 2007-08 (Rs. in lakh)	47.19
* As per old method on full capital cost @3.57 % p.a.	
# as per Anenxure-II of T&C of Tariff 2001 @2.57% p.a.	

Table V(a)

PERIOD 1.4.2008 TO 30.6.2008			
	Drawal from Grid (MUs)		
	DD	DNH	Total
2008-09	1738	3708	5446
	Average Load (MW)		
	DD	DNH	Total
2008-09	198	423	622

Line name		Vapi(PG)- Vapi(G)	Vapi(PG)- Bhilad	Vapi-Bhilad	Vapi(PG)- Bhilad
Single/double circuit		s/c	s/c	s/c	d/c
Circuit					
No. of bays		2	4	2	4
Date of commissioning (1991-92 level)		2005	2005	1995	2008
Years since commissioning (up to 31.3.2001)		3	3	13	0
years since commissioning after 2001-02		3	3	7	0
Voltage level (kV)		220	220	220	220
Line length(km)		14.18	20.77	22.81	43.48
Total capital cost (Rs. in lakh)		282.88	282.88	1295.00	1467.98
Equity (30 % of capital cost)		84.86	84.86	388.50	440.39
Debt (70 % of capital cost)=Loan taken	p	198.02	198.02	906.50	1027.59
Cum. Depreciation up to 2000-01*	q	0.00	0.00	277.39	0.00
Cum. Depreciation from 2001-02 to 2003-04 #	r	21.81	21.81	232.97	0.00
Net loan at the end of last year (p-q-r)	s	176.21	176.21	396.14	1027.59
Calculation of Fixed charges (Rs. in lakh)					
Return on equity (@ 14%)	a	11.88	11.88	54.39	61.66
Interest on loan (10.25% of Net Loan) (s x rate)	b	18.06	18.06	40.60	105.33
Depreciation(2.57% of 90 % capital cost)	c	6.54	6.54	29.95	33.95
O&M Expenses (as per tariff notification)	d	69.57	137.12	71.87	143.17
Components of working capital					
<i>O&M Expenses for one Month</i>	e1	5.80	11.43	5.99	11.93
<i>Maintenance spares(1% escalated 6% p.a.)</i>	e2	3.37	3.37	27.62	14.68
<i>Receivables equivalent to two month</i>	e3	18.14	29.70	33.96	58.81
Interest on working capital(10.25%)	e	2.80	4.56	6.93	8.76
Total Fixed Charges for year 2004-05 (a+b+c+d+e)	f	108.86	178.17	203.74	352.86
Avg. contracted Power in MW	g	156	156	156	311
SIL in MW	h	132	132	132	264
Chargeable fixed charges (f x g/h)	i	108.86	178.17	203.74	352.86
Total chargeable fixed charges (Rs. in lakh)	j	210.91			

(for three months)					
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Anticipated drawal by DD from the Grid and wheeled through GETCO system during 2008-09 (in MUs)	435
Applicable transmission charges for DD for the year 2008-09 (Rs. in lakh)	67.31
Anticipated drawal by DNH from the Grid and wheeled through GETCO system during 2008-09 (in MUs)	927
Applicable transmission charges for DNH for the year 2008-09 (Rs. in lakh)	143.60
* As per old method on full capital cost @3.57 % p.a.	
# as per Anenxure-II of T&C of Tariff 2001 @2.57% p.a.	

Table V(b)

PERIOD 1.7.2008 TO 31.3.2009			
	Drawal from Grid (MUs)		
	DD	DNH	Total
2008-09	1738	3708	5446
	Average Load (MW)		
	DD	DNH	Total
2008-09	198	423	622

Line name		Vapi(PG)- Vapi(G)	Vapi(PG)- Bhilad	Vapi-Bhilad	Vapi(PG)- Bhilad
Single/double circuit		s/c	s/c	s/c	d/c
Circuit					
No. of bays		2	4	2	4
Date of commissioning (1991-92 level)		2005	2005	1995	2008
Years since commissioning (up to 31.3.2001)		3	3	13	0
years since commissioning after 2001-02		3	3	7	0
Voltage level (kV)		220	220	220	220
Line length(km)		14.18	20.77	22.81	43.48
Total capital cost (Rs. in lakh)		282.88	282.88	1295.00	1467.98
Equity (30 % of capital cost)		84.86	84.86	388.50	440.39
Debt (70 % of capital cost)=Loan taken	p	198.02	198.02	906.50	1027.59
Cum. Depreciation up to 2000-01*	q	0.00	0.00	277.39	0.00
Cum. Depreciation from 2001-02 to 2003-04 #	r	21.81	21.81	232.97	0.00
Net loan at the end of last year (p-q-r)	s	176.21	176.21	396.14	1027.59
Calculation of Fixed charges (Rs. in lakh)					
Return on equity (@ 14%)	a	11.88	11.88	54.39	61.66
Interest on loan (10.25% of Net Loan) (s x rate)	b	18.06	18.06	40.60	105.33
Depreciation(2.57% of 90 % capital cost)	c	6.54	6.54	29.95	33.95
O&M Expenses (as per tariff notification)	d	69.57	137.12	71.87	143.17
Components of working capital					
<i>O&M Expenses for one Month</i>	e1	5.80	11.43	5.99	11.93
<i>Maintenance spares(1% escalated 6% p.a.)</i>	e2	3.37	3.37	27.62	14.68
<i>Receivables equivalent to two month</i>	e3	9.34	15.28	17.48	30.27
Interest on working capital(10.25%)	e	1.90	3.08	5.24	5.83
Total Fixed Charges for year 2004-05 (a+b+c+d+e)	f	107.95	176.69	202.05	349.93
Avg. contracted Power in MW	g	69	69	69	137
SIL in MW	h	132	132	132	264

Chargeable fixed charges (f x g/h)	i	56.02	91.69	104.85	181.59
Total chargeable fixed charges (Rs. in lakh)	j	325.62			
(for nine months)					

Anticipated drawal by DD from the Grid and wheeled through GETCO system during 2008-09 (in MUs)	1304
Applicable transmission charges for DD for the year 2008-09 (Rs. in lakh)	103.91
Anticipated drawal by DNH from the Grid and wheeled through GETCO system during 2008-09 (in MUs)	2781
Applicable transmission charges for DNH for the year 2008-09 (Rs. in lakh)	221.71
* As per old method on full capital cost @3.57 % p.a.	
# as per Anenxure-II of T&C of Tariff 2001 @2.57% p.a.	
\$ Bulk power to DD & DNH is transmitted directly from PGCIL, Ambheti(Vapi) S/s after commissioning of 220 kV Vapi-Magarwada D/c and Vapi-Kharadpada D/c lines. Accordingly distribution of power flow to DD/DNH through PGCIL & GETCO network has been worked out based on historical data	