

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Coram:**

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

**Petition No. 91/2008**

**In the matter of**

Approval of incentive based on availability of transmission system for the year 2007-08 for Western Region.

**And in the matter of**

Power Grid Corporation of India Limited, Gurgaon

**..Petitioner**

Vs

1. Madhya Pradesh Power Transmission Company Ltd., Jabalpur, Patna
2. Maharashtra State Electricity Distribution Co. Ltd., Mumbai
3. Gujarat Urja Vikas Nigam Ltd., Baroda
4. Electricity Department, Government of Goa, Panaji
5. Electricity Department, Administration of Daman & Diu, Daman
6. Electricity Department, Administration of Dadra Nagar Haveli, Silvassa
7. Chhattisgarh State Electricity Board, Raipur
8. Madhya Pradesh Audyogik Kandra Vikas Nigam (Indore) Ltd., Indore

**....Respondents**

**The following were present:**

1. Shri U.K.Tyagi, PGCIL
2. Shri S.K.Niranjan, PGCIL
3. Shri M.M.Mondal, PGCIL
4. Shri D.Khandelwal, MPPTCL

**ORDER  
(DATE OF HEARING: 19.5.2009)**

The petitioner seeks approval for incentive for the year 2007-08 for its transmission system in Western Region, in terms of the Central Electricity Regulatory Commission (Terms & Conditions of Tariff) Regulations, 2004 (hereinafter referred to as "the regulations").

2. Regulation 51 of the regulations provides that:

51. Target Availability for recovery of full transmission charges:

- (1) AC System: 98%
- (2) HVDC bio-pole links and HVDC back-to-back stations: 95%

3. Regulation 60 of the regulations, as amended, *inter alia*, provides that,-

(1) The transmission licensee shall be entitled to incentive @ 1% of equity for each percentage point of increase in annual availability beyond the target availability prescribed under regulation 51, in accordance with the following formula:

$$\text{Incentive} = \text{Equity} \times [\text{Annual availability achieved} - \text{Target availability}] / 100$$

(2) Incentive shall be shared by the long-term customers in the ratio of their average allotted transmission capacity for the year.

4. Member-Secretary, WRPC under his letter dated 16.4.2008 has certified the availability of intra-regional system of Western Region and inter-regional links connecting WR to other regions except links with Northern Region and Southern Region. The availability of the Ramagudam-Bhadrawati AC links, Vindhyachal HVDC back-to-back and 765 kV S/C Agra-Gwalior transmission line has been certified during 2007-08 by Member-Secretary, SRPC and NRPC under their letters dated 12.5.2008 and 19.5.2008, respectively. The necessary details of certified availability are as under:

S.No.	Assets	Availability
1	<b>Intra-regional AC transmission system</b>	99.76%
2.	<b>Inter-regional HVDC systems (AC)</b>	
	Ramagundam-Bhadrawati I & II (SR-WR)	99.05%
	Raipur-Rourkela (WR-ER)	99.46%
	Agra-Gwalior 765 kV S/C transmission line (NR-WR)	99.51%
3.	<b>Inter-regional HVDC systems</b>	
	Bhadrawati back-to-back I & II (SR-WR)	99.93%
	Vindhyachal HVDC back-to-back (WR-NR)	98.9088%
4.	<b>Inter-regional AC System</b>	
	Korba-Budhipadar transmission line	99.46%

5. The petitioner has claimed incentive as under:

(Rs. in lakh)			
S. No.	Assets	Pro rata equity	Incentive
1	<b>Intra-regional AC transmission system</b>	119174.42	2097.47
2.	<b>Inter-regional HVDC systems (AC)</b>		
	Ramagundam-Bhadrawati I & II (SR-WR)	1211.75	12.72
	Raipur-Rourkela (WR-ER)	1538.92	22.47
	Agra-Gwalior 765 kV S/C transmission line (NR-WR)	2727.12	41.18
3.	<b>Inter-regional HVDC system</b>		
	Bhadrawati back-to-back I & II (SR-WR)	3958.57	195.16
	Vindhyachal HVDC back-to-back (WR-NR)	4156.44	162.47
4.	<b>Inter-regional AC System</b>		
	Korba-Budhipadar transmission line	441.29	6.44
	<b>Total</b>		<b>2537.91</b>

6. M. P. Power Trading Company Ltd. (MPPTCL) has filed its reply. Although, MPPTCL has not been impleaded as respondent in the petition, MPPTCL has stated that incentive may be allowed on revision of equity.

7. In respect of the transmission assets whose equity has been revised as a result of judgment of the Appellate Tribunal, the revised equity has been considered.

8. Incentive has been worked out considering the availability as certified by the Member-Secretary, WRPC, Member-Secretary SRPC and Member-Secretary, NRPC. Based on the above, the petitioner shall be entitled to incentive as under:

(Rs. in lakh)				
S. No.	Assets	Actual % availability	Pro rata Equity (Rs. in lakh)	Incentive Amount (Rs. in lakh)
1	<b>Intra-regional AC transmission system</b>	98.00	115152.12	2026.68
2.	<b>Inter-regional HVDC systems (AC)</b>			
	Ramagundam-Bhadrawati I & II (SR-WR)	99.05	1211.75	12.72
	Raipur-Rourkela (WR-ER)	99.46	1538.92	22.47
	Agra-Gwalior 765 kV S/C transmission line (NR-WR)	99.51	2727.12	41.18
3.	<b>Inter-regional HVDC system</b>			
	Bhadrawati back-to-back I & II (SR-WR)	99.93	3958.57	195.16
	Vindhyachal HVDC back-to-back (WR-NR)	98.91	4156.44	162.47
4.	<b>Inter-regional AC System</b>			
	Korba-Budhipadar transmission line	99.46	441.29	6.44
	<b>Total</b>		<b>129186.20</b>	<b>2467.12</b>

9. The details of calculations in support of the incentive allowed by us are given in the Annexure attached.

10. There are differences between the incentive amount claimed by the petitioner and allowed by us due to pro rata equity and worked out as under:

- (i) For 400 kV Bina-Nagda D/C transmission line along with associated bays equipment at Nagda and Bina, assets covered under Sipat-II transmission system, Bhadrawati-Chandrapur 400 kV D/C transmission line including bays at Bhadrawati (Power Grid) switching station (extension) and Chandrapur (MSEB) Switchyard (extension) and fixed

and Thyristor controlled series compensation for 400 kV D/C Raipur-Rourkela Transmission line (Petition Nos. 168/2008, 3/2009, 56/2009 and 73/2009), pro rata equity of Rs. 4085.39 lakh , Rs. 10575.71 lakh, Rs. 1076.76 lakh, Rs. 3156.95 lakh, respectively has been considered as per the order dated 27.5.2009, 15.6.2009, 18.6.2009 and 7.8.2009, respectively whereas petitioner has considered pro rata equity of Rs. 4109.28 lakh, 10580.10 lakh, Rs. 1077.53 lakh and Rs. 3218.56 lakh, respectively.

- (ii) For the assets covered under Bus Reactor at Kolhapur transmission system, only provisional transmission charges have been approved. There are some more assets covered under the same transmission system which were commissioned after 2006-07. The petition for final transmission charges is yet to be filed by the petitioner. The petitioner has claimed equity of Rs. 38.37 lakh as per the provisional transmission charges awarded. For the purpose of the incentive, as equity claimed has not been considered. The petitioner is granted liberty to file separate petition for approval of incentive after approval of the final transmission charges.
- (iii) For the assets covered under Vindhyachal Stage-III transmission system (Petition No. 132/2008), the petitioner has considered the complete year for the purpose of computation of incentive. However, we have considered the period after date of the commercial operation.

11. The Commission in its order dated 11.8.2008, had provisionally allowed incentive of 80% of that claimed by the petitioner in this petition. The provisional incentive charged by the petitioner shall be adjusted against final incentive for the year 2006-07 approved by us in this order.

12. The incentive approved shall be shared by the respondents, the beneficiaries in the Western Region, in proportion of the transmission charges for the year 2007-08 paid by them in the region. The incentive for Korba-Budhipadar transmission line shall be shared by the long-term customers of Western Region in the ratio of their allotted transmission capacity as per order dated 16.3.2006 in Petition No. 69/2004.

13. This order disposes of Petition No.91/2008.

Sd/-  
**(V.S.VERMA)**  
**MEMBER**  
**New Delhi dated the 28th August 2009**

sd/-  
**(R. KRISHNAMOORTHY)**  
**MEMBER**

## ANNEXURE

### Western Region Transmission System

(Rs. in lakh)

Name of the Company: PGCIL									
Name of the Region: Western									
Petition No.:91/2008- Incentive for the years 2007-08									
Name of the Transmission System/ Line (1)		Petition No. And date of Tariff Order (2)	D.O.C.O. (3)	Equity as per order (4)	Period during the year (Year) (5)	Pro- rata equity (6) = (4)*(5)	Availability of the Transmission System Elements (7)	Availability eligible for incentive (8)	Incentive amount (9) = (4)*(5)*(8)
(A)	<b>INTRA REGIONAL AC SYSTEM</b>								
	Basic availability for incentive								
									<b>98.00%</b>
1	KORBA	117/2004 order dated 14-2-2008	Before 31.3.2001	11538.51	1.00	11538.51	99.76%	1.76%	203.08
2	VINDHYACHAL STAGE-I TR.SYSTEM	111/2004 order dated 14-2-2008	-do-	13494.13	1.00	13494.13	99.76%	1.76%	237.50
3	KAWAS	114/2004 order dated 14-3-2008	-do-	1569.86	1.00	1569.86	99.76%	1.76%	27.63
4	KAKARPAR	115/2004 order dated 14-3-2008	-do-	2485.50	1.00	2485.50	99.76%	1.76%	43.74
5.1	GANDHAR-DEHGAM & GHANDHAR-BHARUCH	112/2004 order dated 11-3-2008	-do-	5872.33	1.00	5872.33	99.76%	1.76%	103.35
5.2	GANDHAR-PADHE I/C PADGHE S/S	112/2004 order dated 14-2-2006	-do-	4594.51	1.00	4594.51	99.76%	1.76%	80.86
5.3	GANDHAR-GANDHAR	112/2004 order dated 14-2-2006	-do-	227.97	1.00	227.97	99.76%	1.76%	4.01
6	VINDHAYACHAL ADDITIONS-STAGE-I TR. SYSTEM	72/2004 order dated t 29-4-2008	-do-	5327.50	1.00	5327.50	99.76%	1.76%	93.76
7	REACTOR AT CHANDRAPUR	116/2004 order dated 29-4-2008	-do-	207.92	1.00	207.92	99.76%	1.76%	3.66
8.1	400 kV D/C VINDHAYACHAL-SATNA & SATNA-BINA LINE	73/2004 order dated 29-4-2008	-do-	4013.69	1.00	4013.69	99.76%	1.76%	70.64
8.2	400 kV S/C KORBA-RAIPUR T/L,315 MVA ICT-I ,BUS REACTOR AT RAIPUR & LILO OF KORBA-BHILAI CKT.-III,		-do-	961.06	1.00	961.06	99.76%	1.76%	16.91
8.3	315 MVA ICT II WITH LILO OF 400 KV D/C BHILAI CHANDRAPUR LINE CKT--II		-do-	131.62	1.00	131.62	99.76%	1.76%	2.32
9.1	400 kV D/C Kolhapur-Mapusa (Circuit-I),ICT-I with associated bays	61/2005 order dated 29-4-2008	1.1.2003	1025.35	1.00	1025.35	99.76%	1.76%	18.05
9.2	400 kV D/C Kolhapur-Mapusa (Circuit-II) ,ICT-II,Bus Reactor II and associated bays		1.12.2002	2159.11	1.00	2159.11	99.76%	1.76%	38.00
10	FSC & TCSC for Raipur-Rourkela line	73/2009 order dated 7-8-2009	1.11.2004	3155.95	1.00	3155.95	99.76%	1.76%	55.54
11	Khandwa S/S & LILO of Itarsi-Dhule at Khandwa	88/2009 order dated 22-7-2009	1.2.2005	2296.44	1.00	2296.44	99.76%	1.76%	40.42
12.1	Tarapur- Padghe Ckt-I	46/2009 order dated 19-6-2009	1.3.2005	1544.52	1.00	1544.52	99.76%	1.76%	27.18
12.2	Tarapur- Padghe Ckt-II, 400 kV Tarapur- Boisar TL & LILO of Gandhar- Padghe TL		1.8.2005	2286.24	1.00	2286.24	99.76%	1.76%	40.24
12.3	220 kV Tarapur- Boisar TL		1.9.2005	2366.74	1.00	2366.74	99.76%	1.76%	41.65
13	Raipur- Chandrapur (Bhadrawati) Line	50/2009 order dated 15.6.2009	1.6.2005	6379.77	1.00	6379.77	99.76%	1.76%	112.28
14	Bhadrawati- Chandrapur	56/2009 order dated 18-6-2009	1.5.2006	1076.76	1.00	1076.76	99.76%	1.76%	18.95
15	LILO of Korba- Raipur at Sipat	42/2009 order dated 17-6-2009	1.5.2006	160.91	1.00	160.91	99.76%	1.76%	2.83
16.1	Vindhyachal III Satna- Bina Ckt-3	48/2009 order dated 19-6-2009	1.10.2006	5739.69	1.00	5739.69	99.76%	1.76%	101.02
16.2	Vindhyachal III Satna- Bina Ckt-4	45/2008 order dated 17-9-2008	1.12.2006	1854.62	1.00	1854.62	99.76%	1.76%	32.64
16.3	ICT-II at Satna	48/2009 order dated 19-6-2009	1.11.2006	481.70	1.00	481.70	99.76%	1.76%	8.48

17.1	Bina - Gwalior 765 kV S/C line	3/2009 order dated 15-6-2009	1.4.2007	9544.25	1.00	9544.25	99.76%	1.76%	167.98
17.2	400/220 kV, 315 MVA ICT I at Gwalior		1.5.2007	563.35	0.92	516.40	99.76%	1.76%	9.09
17.3	LILO of Korba - Raipur at Bhattapara S/S of Sipat II		1.12.2007	1545.19	0.33	515.06	99.76%	1.76%	9.07
18	400 kV D/C Bina - Nagda line	168/2008 order dated 27-5-2009	1.11.2007	9804.93	0.42	4085.39	99.76%	1.76%	71.90
19	400 kV S/C Vindhyachal - Korba Ckt II	127/2008 order dated 9.4.2009	1.6.2007	5359.74	0.83	4466.45	99.76%	1.76%	78.61
20.1	LILO of 400 kV Satna - Bina Ckt I & Ckt II at Bina	132/2008 order dated 20-4-2009	1.4.2007	803.98	1.00	803.98	99.76%	1.76%	14.15
20.2	Ckt IV of 400 kV Satna - Bina line of Vindhyachal III system		1.7.2007	4719.61	0.75	3539.71	99.76%	1.76%	62.30
20.3	Ckt III of 400 kV Satna - Bina line of Vindhyachal III system		1.9.2007	1907.64	0.58	1112.79	99.76%	1.76%	19.59
20.4	LILO of 400 kV Raipur - Rourkela at Raigarh of Vindhyachal III system		1.1.2008	2077.29	0.25	519.32	99.76%	1.76%	9.14
20.5	400 /220 kV Raigarh S/S with 1x315 MVA transformer		1.2.2008	339.29	0.17	56.55	99.76%	1.76%	1.00
21.1	765 kV Sipat-Seoni Ckt-I, 765/400 KV ICT-I at Seoni and LILO of 400 kV Bhilai-Satpura line	2/2009 order dated 22-7-2009	1.11.2007	15207.54	0.42	6336.48	99.76%	1.76%	111.52
21.2	400/220 kV ICT-I along with two 220 kV line bays at Seoni		1.12.2007	608.76	0.33	202.92	99.76%	1.76%	3.57
21.3	Ckt II of 400 kV D/C Nagda-Dehgam line		1.1.2008	8205.08	0.25	2051.27	99.76%	1.76%	36.10
21.4	Ckt I of 400 kV D/C Nagda-Dehgam line		1.2.2008	2694.90	0.17	449.15	99.76%	1.76%	7.91
	<b>SUB TOTAL (A)</b>			<b>144333.95</b>		<b>115152.12</b>			<b>2026.68</b>
<b>(B)</b>	<b>INTER REGIONAL AC PROJECTS</b>								
	Basic availability for incentive								<b>98.00%</b>
22	RAMGUNDAM-CHANDRAPUR (50%)	138/2004 order dated 14-2-2008	Before 31.3.2001	1211.75	1.00	1211.75	99.05%	1.05%	12.72
23	RAIPUR- ROURKELA (50%)	63/2005 order dated 9-5-2006	1.4.2003	1538.92	1.00	1538.92	99.46%	1.46%	22.47
24	Korba-Budhipadar line in Western Region (2/3 <sup>rd</sup> equity for WR)	69/2004 order dated 29-4-2008	Before 31.3.2001	441.29	1.00	441.29	99.46%	1.46%	6.44
25	Agra - Gwalior 765 kV S/C line	167/2008 order dated 29.4.2009	1.4.2007	2727.12	1.00	2727.12	99.51%	1.51%	41.18
	<b>SUB TOTAL (B)</b>			<b>5919.08</b>		<b>5919.08</b>			<b>82.81</b>
<b>(C)</b>	<b>INTER REGIONAL HVDC PROJECTS</b>								
	Basic availability for incentive								<b>95.00%</b>
26	Singrauli-Vindhyachal TL alongwith HVDC back to back station at Vindhyachal in NR & WR (50%)	113/2004 order dated 14-2-2008	Before 31.03.2001	4156.44	1.00	4156.44	98.91%	3.91%	162.47
27	CHANDRAPUR (Bhadrawati) HVDC Back to Back (50%)	137/2004 order dated 16-4-2008	-do-	3958.57	1.00	3958.57	99.93%	4.93%	195.16
	<b>SUB TOTAL (C)</b>			<b>8115.00</b>		<b>8115.00</b>			<b>357.62</b>
	<b>TOTAL</b>			<b>158368.03</b>		<b>129186.20</b>			<b>2467.12</b>



