

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 205/2009**

**Coram:**

**Shri Girish B. Pradhan, Chairperson  
Shri M. Deena Dayalan, Member  
Shri A.K. Singhal, Member**

**Date of Hearing: 11.03.2014  
Date of Order: 23.06.2014**

**In the matter of**

Approval of incentive under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2004 based on availability of transmission system of Western Region for year 2008-2009

**And in the matter of**

Power Grid Corporation of India Limited  
"Saudamini", Plot No.2, Sector-29,  
Gurgaon-122 001

.....**Petitioner**

Vs

1. Madhya Pradesh Power Management Company Ltd.,  
Shakti Bhawan, Rampur  
Jabalpur-482 008
2. Maharashtra State Electricity Distribution Company Limited,  
Prakashgad, 4th floor  
Andheri (East), Mumbai-400 052
3. Gujarat Urja Vikas Nigam Ltd.,  
Sardar Patel Vidyut Bhawan,  
Race Course Road, Vadodara-390 007
4. Electricity Department, Government of Goa,  
Vidyut Bhawan, Panaji,  
Near Mandvi Hotel, Goa-403 001



5. Electricity Department,  
Administration of Daman and Diu,  
Daman-396 210
6. Electricity Department,  
Administration of Dadra Nagar Haveli,  
U.T., Silvassa-396 230
7. Chhattisgarh State Electricity Board,  
P.O. Sunder Nagar, Dangania, Raipur  
Chhattisgarh-492 013
8. Madhya Pradesh Audyogik Kendra Vikas Nigam (Indore) Ltd.,  
3/54, Press Complex, Agra-Bombay Road  
Indore -452 008

.....**Respondents**

**Representatives of the Petitioner** : Shri S.S Raju, PGCIL  
Ms. Sangeeta Edwards, PGCIL  
Shri P. Saraswat, PGCIL

**Representatives for the Respondents** : None

### **ORDER**

Power Grid Corporation of India Limited (PGCIL) has filed this petition seeking approval of incentive for the year 2008-09 for its transmission system in Western Region under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2004 (hereinafter referred to as "the 2004 Tariff Regulations").

2. Regulation 51 of the 2004 Tariff Regulations provides that:-

"51. Target Availability for recovery of full transmission charges

(1) AC System : 98%

(2) HVDC bi-pole links and HVDC back-to-back stations : 95%



Note 1

Recovery of fixed charges below the level of target availability shall be on pro rata basis. At zero availability, no transmission charges shall be payable.

Note 2

The target availability shall be calculated in accordance with procedure specified in Appendix-III."

3. Clause (1) of Regulation 60 of the 2004 Tariff Regulations provides as under:-

"60. Incentive:

- (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:  
Incentive=Equity x [Annual availability achieved –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. The petitioner has, vide its affidavit dated 23.4.2013, submitted revised availability of its transmission elements for the year 2008-09, in Western Region as under:-

Transmission Elements	Certified Availability (%)	Target Availability (%)	Availability Eligible for Incentive %
(1)	(2)	(3)	(4)= (3)-(2)
<b>POWERGRID AC Transmission System in Western Region</b> (Excluding inter regional AC, HVDC system & ICTs commissioned after 28.3.2008)	99.55	98.00	1.55
<b>ICTs commissioned after 28.3.2008</b>			
a. CSPTCL	100.00	98.00	2.00
b. MPPTCL	97.96	98.00	-0.04

<b>Inter-Regional Transmission Elements (A.C)</b>			
Ramagundam- Chandrapur I & II (SR-WR)	99.80	98.00	1.80
Raipur-Rourkela (WR-ER)	99.82	98.00	1.82
Agra- Gwalior 765 kV S/C line (WR-NR)	99.91	98.00	1.91
Korba- Budhipadar (WR-ER)	99.64	98.00	1.64
Ranchi-Sipat (ER-WR)	100	98.00	2.00
<b>Inter-Regional HVDC System</b>			
Bhadrawati Back to Back I&II (SR-WR)	99.13	95.00	4.13
Vindhyachal HVDC back to back (WR-NR)	98.8122	95.00	3.8122

5. As provided in the 2004 Tariff Regulations, the incentive for the year 2008-09 has been worked out, based on details of pro-rata equity submitted in the petition and considering the availability of transmission system as certified by the Member Secretary, WRPC on 12.6.2012. The details of the incentive claimed by the petitioner and the incentive allowed are as under:-

(₹ in lakh)						
S. No	System	Equity Amount as claimed in the petition	Incentive amount as claimed in the petition	Equity amount as worked out	Incentive amount as worked out	Difference between incentive claimed and worked out
	(1)	(2)	(3)	(4)	(5)	(6)= (5-3)
<b>A</b>	<b>Intra Regional AC system</b>	196655.88	3048.17	196917.79	3039.58	-8.59
<b>B</b>	<b>Inter Regional AC System</b>					0.00
	Ramagundam- Chandrapur(Badrawati-I&IISR_WR)	1211.75	21.81	1211.75	21.81	0.00
	Raipur Rourkela(WR-ER)	3077.84	56.02	3077.84	56.02	0.00

	Agra Gwalior 765 kV S/C line(WR-NR)	2795.22	53.39	2831.23	54.08	0.69
	Kobra-Budhipadar (WR-ER)	661.94	10.86	661.94	10.86	0.00
	Ranchi-Sipat(ER-WR)	3650.36	73.01	3644.91	72.90	-0.11
<b>C</b>	<b>Inter Regional HVDC System</b>					0.00
	Bhadrawati Back to Back I & II (SR-WR)	3958.57	163.49	3958.57	163.49	0.00
	Vindhyachal HVDC Back to Back(WR_NR)	4156.44	158.36	4156.44	158.36	0.00
	<b>Total</b>	<b>216168.00</b>	<b>3585.10</b>	<b>216460.47</b>	<b>3577.09</b>	<b>-8.01</b>

6. The details of calculation in support of the incentive allowed are given in the attached Annexure.

7. The petitioner has claimed equity in respect of the assets indicated at Sl. Nos. 12.1 to 22, 24 to 27 and 29 to 36 as approved in the earlier petitions without considering the respective additional capital expenditure. In the instant tariff order we have considered the factual position as per the respective tariff orders.

8. The assets at Sl. Nos. 38, 39 and 41 of the Annexure (i.e. Raipur- Rourkela, Korba- Budhipadar and Ranchi- Sipat respectively) were part of the Inter-Regional Transmission till the end of the year 2007-08. However, as per the Commission's order dated 28.3.2008 in Petition No.85/2007, in the matter of "Proposed Approach for Sharing of Charges for and Losses in inter-State Transmission System", the above said assets are considered in the Regional Assets pool since 1.4.2008 and accordingly, the incentive has been calculated for the year 2008-09.

9. The Commission in its order dated 2.12.2009, as an interim measure allowed 90% of the incentive claimed by the petitioner in the petition. The provisional incentive charges allowed shall be adjusted by the petitioner against final incentive allowed for the year 2008-09 in the instant order.

10. The incentive allowed in the instant order in respect of Western Regional transmission assets shall be shared by the respondents, the beneficiaries in the Western Region, in proportion to the transmission charges shared by them in the region as specified in the 2004 Tariff Regulations.

11. This order disposes of Petition No. 205/2009

Sd/-

**(A.K. Singhal)**  
**Member**

Sd/-

**(M. Deena Dayalan)**  
**Member**

Sd/-

**(Gireesh B. Pradhan)**  
**Chairperson**



**ANNEXURE**  
(₹ in lakh)

Name of the Transmission System/ Line	Petition No.	Date of order	DOCO	Equity as per CERC order	Period during the year (Year)	Pro- rata equity	Availability of the Transmission System Elements	Availability eligible for incentive	Incentive amount
	(1)	(2)	(3)	(4)	(5)	(6) =(4)*(5)	(7)	(8)	(9)= (6)*(8)
(A) INTRA REGIONAL AC SYSTEM									
Basic availability for incentive									<b>98.00%</b>
1 KORBA	117/2004	14.02.2008	Before 31.03.2001	11538.51	1.00	11538.51	99.55%	1.55%	178.85
2 VINDHYACHAL STAGE-I TR.SYSTEM			-do-	13494.13	1.00	13494.13	99.55%	1.55%	209.16
3 KAWAS	114/2004	14.03.2008	-do-	1569.86	1.00	1569.86	99.55%	1.55%	24.33
4 KAKARPAR	115/2004	14.03.2008	-do-	2485.50	1.00	2485.50	99.55%	1.55%	38.53
5.1 GANDHAR-DEHGAM & GHANDHAR-BHARUCH	112/2004	14.03.2008	-do-	5872.33	1.00	5872.33	99.55%	1.55%	91.02
5.2 GANDHAR-PADHE I/C PADGHE S/S	112/2004	14.02.2006	-do-	4594.51	1.00	4594.51	99.55%	1.55%	71.21
5.3 GANDHAR-GANDHAR	112/2004	14.02.2006	-do-	227.97	1.00	227.97	99.55%	1.55%	3.53
6 VINDHAYACHAL ADDITIONS- STAGE-I TR. SYSTEM			-do-	5327.50	1.00	5327.50	99.55%	1.55%	82.58
7 REACTOR AT CHANDRAPUR	116/2004	29.04.2008	-do-	207.92	1.00	207.92	99.55%	1.55%	3.22
8.1 400 kV D/C VINDHAYACHAL- SATNA & SATNA-BINA LINE			-do-	4013.69	1.00	4013.69	99.55%	1.55%	62.21
8.2 400 kV S/C KORBA-RAIPUR T/L,315 MVA ICT-I, BUS REACTOR AT RAIPUR & LILO OF KORBA-BHILAI CKT.-III,	73/2004	29.04.2008	-do-	961.06	1.00	961.06	99.55%	1.55%	14.90



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	99.55%	1.55%	2.04
9.1	400 kV D/C Kolhapur-Mapusa (Circuit-I),ICT-I with associated bays	61/2005	29.04.2008	01.01.2003	1025.35	1.00	1025.35	99.55%	1.55%	15.89
9.2	400 kV D/C Kolhapur-Mapusa (Circuit-II) ,ICT-II, Bus Reactor II and associated bays		29.04.2008	01.12.2002	2159.11	1.00	2159.11	99.55%	1.55%	33.47
10	FSC & TCSC for Raipur-Rourkela line	73/2009	07.08.2009	01.11.2004	3155.95	1.00	3155.95	99.55%	1.55%	48.92
11	Khandwa S/S & LILO of Itarsi-Dhule at Khandwa	88/2009	22.07.2009	01.02.2005	2297.81	1.00	2297.81	99.55%	1.55%	35.62
12.1	Tarapur- Padghe Ckt-I	09/2010	01.06.2010	01.03.2005	1545.60	1.00	1545.60	99.55%	1.55%	23.96
12.2	Tarapur- Padghe Ckt-II, 400 kV Tarapur- Boisar TL & LILO of Gandhar- Padghe TL			01.08.2005	2295.91	1.00	2295.91	99.55%	1.55%	35.59
12.3	220 kV Tarapur- Boisar TL			01.09.2005	2384.07	1.00	2384.07	99.55%	1.55%	36.95
13	Raipur- Chandrapur (Bhadrawati) Line	309/2009	07.04.2010	01.06.2005	6398.74	1.00	6398.74	99.55%	1.55%	99.18
14	Bhadrawati- Chandrapur	314/2009	07.04.2010	01.05.2006	1107.81	1.00	1107.81	99.55%	1.55%	17.17
15	LILO of Korba- Raipur at Sipat	03/2010	10.05.2010	01.05.2006	173.95	1.00	173.95	99.55%	1.55%	2.70
16.1	Vindhyachal III Satna- Bina Ckt-3	44/2010	18.06.2010	01.10.2006	5814.14	1.00	5814.14	99.55%	1.55%	90.12
16.2	Vindhyachal III Satna- Bina Ckt-4	44/2010	18.06.2010	01.12.2006	1862.86	1.00	1862.86	99.55%	1.55%	28.87
16.3	ICT-II at Satna	44/2010	18.06.2010	01.11.2006	488.80	1.00	488.80	99.55%	1.55%	7.58
17.1	Bina - Gwalior 765 kV S/C line	330/2009	10.05.2010	01.04.2007	10402.28	1.00	10402.28	99.55%	1.55%	161.24
17.2	400/220 kV, 315 MVA ICT I at Gwalior			01.05.2007	577.35	1.00	577.35	99.55%	1.55%	8.95





17.3	LILO of Korba - Raipur at Bhattapara S/S of Sipat II			01.12.2007	1720.11	1.00	1720.11	99.55%	1.55%	26.66
18	400 kV D/C Bina - Nagda line	306/2009	07.04.2010	01.11.2007	10110.51	1.00	10110.51	99.55%	1.55%	156.71
19	400 kV S/C Vindhyaachal - Korba Ckt II	307/2009	08.04.2010	01.06.2007	5533.77	1.00	5533.77	99.55%	1.55%	85.77
20.1	LILO of 400 kV Satna - Bina Ckt I & Ckt II at Bina	44/2010	18.06.2010	01.04.2007	968.45	1.00	968.45	99.55%	1.55%	15.01
20.2	Ckt IV of 400 kV Satna - Bina line of Vindhyaachal III system			01.07.2007	4944.06	1.00	4944.06	99.55%	1.55%	76.63
20.3	Ckt III of 400 kV Satna - Bina line of Vindhyaachal III system			01.09.2007	2007.52	1.00	2007.52	99.55%	1.55%	31.12
20.4	LILO of 400 kV Raipur - Rourkela at Raigarh of Vindhyaachal III system			01.01.2008	2233.57	1.00	2233.57	99.55%	1.55%	34.62
20.5	400 /220 kV Raigarh S/S with 1x315 MVA transformer			01.02.2008	361.06	1.00	361.06	99.55%	1.55%	5.60
21.1	765 kV Sipat-Seoni Ckt-I, 765/400 KV ICT-I at Seoni and LILO of 400 kV Bhilai-Satpura line	03/2010	10.05.2010	01.11.2007	15507.01	1.00	15507.01	99.55%	1.55%	240.36
21.2	400/220 kV ICT-I along with two 220 kV line bays at Seoni			01.12.2007	674.01	1.00	674.01	99.55%	1.55%	10.45
21.3	Ckt II of 400 kV D/C Nagda-Dehgam line			01.01.2008	8641.36	1.00	8641.36	99.55%	1.55%	133.94
21.4	Ckt I of 400 kV D/C Nagda-Dehgam line			01.02.2008	2783.09	1.00	2783.09	99.55%	1.55%	43.14
22	400 kV D/C Seoni-Khandwa TL of Sipat I....	165/2009	01.06.2010	01.04.2008	21772.76	1.00	21772.76	99.55%	1.55%	337.48
23	765 kV Sipat-Seoni Ckt alongwith 3x80 MVAR of Sipat I....			01.05.2008	13448.92	0.92	12328.18	99.55%	1.55%	191.09
24	400 kV Khnadaw-Rajgarh Ckt II of Sipat II....	166/2009	19.05.2010	01.04.2008	6560.99	1.00	6560.99	99.55%	1.55%	101.70
25	400 kV Khnadaw-Rajgarh Ckt I of Sipat II....			01.05.2008	1969.19	0.92	1805.09	99.55%	1.55%	27.98



26	40% series compensation for Seoni-Khandwa of WRSS I...	168/2009	19.04.2010	01.04.2008	1421.22	1.00	1421.22	99.55%	1.55%	22.03
27	315 MVA, 400/220 kV ICT with associated bays of WRSS I- <b>MPPTCL</b>			01.05.2008	786.67	0.92	721.11	<b>97.96%</b>	0.00%	0.00
28	400 kV D/C Raipur-Sipat line of WRSS I...			01.08.2008	4474.57	0.67	2983.05	99.55%	1.55%	46.24
29	400/220 kV Damoh S/S of WRSS IV...	167/2009	16.03.2010	01.09.2008	677.82	0.58	395.40	99.55%	1.55%	6.13
30	400/220 kV 315 MVAICT II at Damoh of WRSS IV- <b>MPPTCL</b>			01.12.2008	378.42	0.33	126.14	<b>97.96%</b>	0.00%	0.00
31	400 kV 63 MVAR Reactor of WRSS IV....			01.01.2009	549.44	0.25	137.36	99.55%	1.55%	2.13
32	315 MVA ICT II at Bhattapara of Sipat II system- <b>CSPTCL</b>	242/2009	18.06.2010	01.01.2009	431.28	0.25	107.82	<b>100.00%</b>	2.00%	2.16
33	40% FSC at Ranchi S/S under K'halgaon Stage II Ph II	247/2009	13.05.2010	01.03.2009	993.02	0.08	82.75	99.55%	1.55%	1.28
34	Bus Reactor at Kolhapur S/S of WRSS III	217/2009	23.02.2010	1.12.2006	143.54	1.00	143.54	99.55%	1.55%	2.22
35	220 kV D/C Vapi-Magarwada line of WRSS III			01.05.2008	482.93	0.92	442.69	99.55%	1.55%	6.86
36	220 kV D/C Vapi-Kharadpada line of WRSS III			01.07.2008	387.79	0.75	290.84	99.55%	1.55%	4.51
<b>SUB TOTAL (A)</b>					<b>202077.41</b>		<b>196917.79</b>			<b>3039.58</b>
<b>(B)</b>	<b>INTER REGIONAL AC PROJECTS</b>									
	Basic availability for incentive									<b>98.00%</b>
37	RAMGUNDAM-CHANDRAPUR (50%)	138/2004	14.2.2008	Before 31.03.2001	1211.75	1.00	1211.75	99.80%	1.80%	21.81
38	RAIPUR- ROURKELA	63/2005	9.5.2006	01.04.2003	3077.84	1.00	3077.84	99.82%	1.82%	56.02
39	Korba-Budhipadar line in Western Region	69/2004	29.4.2008	Before 31.03.2001	661.94	1.00	661.94	99.64%	1.64%	10.86
40	Agra - Gwalior 765 kV S/C line (50%)	313/2009	8.4.2010	01.04.2007	2831.23	1.00	2831.23	99.91%	1.91%	54.08
41	400 kV D/C Ranchi- Sipat Line of K'gaon- stage II	247/2009	13.5.2010	01.01.2009	14579.62	0.25	3644.91	100.00%	2.00%	72.90
<b>SUB TOTAL (B)</b>					<b>22362.38</b>		<b>11427.67</b>			<b>215.66</b>
<b>(C)</b>	<b>INTER REGIONAL HVDC</b>									



	PROJECTS									
	Basic availability for incentive									95.00%
42	Singrauli-Vindhyachal TL alongwith HVDC back to back station at Vindhyachal in NR & WR (50%)	113/2004	14.2.08	Before 31.3.2001	4156.44	1.00	4156.44	98.81%	3.81%	158.36
43	CHANDRAPUR (Bhadrawati) HVDC Back to Back (50%)	137/2004	16.4.2008	-do-	3958.57	1.00	3958.57	99.13%	4.13%	163.49
	<b>SUB TOTAL (C)</b>				<b>8115.00</b>		<b>8115.00</b>			<b>321.85</b>
	<b>TOTAL</b>				<b>232554.79</b>		<b>216460.45</b>			<b>3577.09</b>

