

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Coram:

1. Dr. Pramod Deo, Chairperson
2. Shri R.Krishnamoorthy, Member
3. Shri S.Jayaraman, Member
4. Shri V.S.Verma, Member

Petition No.92/2007

In the matter of

Approval of incentive based on availability of transmission system for the year 2006-07 for Eastern Region.

And in the matter of

Power Grid Corporation of India Limited, Gurgaon
Vs

..Petitioner

1. Bihar State Electricity Board, Patna
2. West Bengal State Electricity Board, Kolkata
3. Grid Corporation of Orissa Ltd., Bhubaneswar
4. Damodar Valley Corporation, Kolkata
5. Power Department, Govt. of Sikkim, Gangtok
6. Jharkhand State Electricity Board, Ranchi

.. Respondents

The following were present:

1. Shri U.K.Tyagi, PGCIL
2. Shri A.K.Nagpal, PGCIL
3. Shri B.C.Pant, PGCIL
4. Shri S.K.Niranjan, PGCIL
5. Shri Mohd. Mohsin, PGCIL
6. Shri H.H.Sharan, PGCIL
7. Shri C.Kannan PGCIL

**ORDER
(DATE OF HEARING: 28.5.2007)**

The petitioner seeks approval for incentive for the year 2006-07 for its transmission system in Eastern Region, in terms of the Central Electricity Regulatory Commission (Terms & Conditions of Tariff) Regulations, 2004 (hereinafter referred to as "the regulations").

2. Regulation 51 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. Clause (1) of 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, EPRC under his letter dated 7.5.2007 certified the availability of intra-regional system and inter-regional links connecting Eastern Region to other regions, during 2006-07. The necessary details in this regard are as under:

S.No.	Assets	Availability
1	Intra-Regional AC system AC Transmission System of ER	99.48%
2	Inter-Regional AC system	
(i)	ER-NER link (400 kV D/C Bongaigaon- Malda transmission line)	99.52%
(ii)	ER- NR link (Biharshariff-Sasaram-Sarnath-Allahabad transmission line and AC Station)	99.78%
(iii)	AC portion of ER-SR link (400 kV D/C Jeypore-Gazuwaka transmission line)	99.85%
(iv)	ER-WR link (400 kV D/C Raipur- Rourkela transmission line)	99.71%
(v)	ER-WR link (220 kV S/C Korba- Budhipadar transmission line)	99.72%
3	Inter-Regional HVDC system	
(i)	ER-NR (Sasaram HVDC back-to-back)	99.11%
(ii)	ER-SR (Gazuwaka HVDC back-to-back)	97.10%

5. The petitioner has claimed incentive as under based on the availability certified by the Member-Secretary, ERPC.

Sl. No	Assets	(Rs. in lakh)	
		Pro rata equity	Incentive
1	Intra-regional AC system AC System of ER	80977.36	1198.46
2	Inter-regional AC system		
(i)	Bongaigaon-Malda (ER-NER) transmission line	3525.29	53.58
(ii)	Biharshariff-Sasaram-Sarnath-Allahabad transmission line and AC Station	2668.83	47.51
(iii)	AC portion of HVDC back-to-back Gazuwaka ER-SR and FSC on Jeypore-Gazuwaka transmission line	2451.96	45.36
(iv)	ER-WR link (Raipur- Rourkela transmission line)	1538.92	26.32
(v)	ER-WR link (Korba- Budhipadar transmssion line)	220.65	3.80
3	Inter-Regional HVDC System		
(i)	ER-NR (Sasaram HVDC back-to-back)	809.05	33.25
(ii)	ER-SR (Gazuwaka HVDC back-to-back – I & II)	7564.31	158.85
	Total	99756.37	1567.13

6. West Bengal State Electricity Distribution Company Ltd. has filed its reply.

7 In case of the assets where additional capital expenditure for the year 2006-07 have been approved, average equity has been considered for computation of incentive.

8 In case of certain assets, namely Jeypore-Gazuwaka transmission line and 1x 500 MW HVDC back-to-back station at Sasaram with associated AC Switchyard including 400 kV Sarnath-Allahabad transmission line with associated bays etc. under Eastern-Northern inter-regional HVDC Transmission System (Petition Nos.70/2004 and 64/2005) the Commission had allowed tariff for the period 2004-09 for combined transmission line (AC portion) as well as HVDC back-to-back System. As per the 2004 regulations, incentive is to be worked out separately for the transmission lines and HVDC System. The petitioner has segregated the equity pro rata on the basis of capital cost of HV AC portion and HVDC portion. As cost break-up was not available in the tariff petitions, the segregation as claimed

by the petitioner in the present petition in case of Jeypore-Gazuwaka transmission line (ER portion) and Sasaram HVDC has been considered. The same apportionment of equity was considered while approving incentive for the year 2005-06 vide order dated 28.5.2009.

9. Incentive has been worked out considering the availability as certified by the Member-Secretary, ERPC in the light of above discussion. Based on the above, the petitioner shall be entitled as under:

(Rs. in lakh)				
Sl. No	Assets	Qualifying % availability	Equity (Rs. in lakh)	Incentive Amount (Rs. in lakh)
1	Intra-regional AC system AC System of ER	98.00%	80897.49	1197.28
2	Inter-regional AC system			
(i)	Bongaigaon- Malda (ER-NER) transmission line	99.52%	3525.30	53.58
(ii)	Biharshariff-Sasaram-Sarnath-Allahabad transmsion line and AC Station	99.78%	2668.83	47.51
(iii)	AC portion of HVDC Back-to-Back Gazuwaka ER-SR and FSC on Jeypore-Gazuwaka transmsion line	99.85%	2452.13	45.36
(iv)	ER-WR link (Raipur- Rourkela transmsion line)	99.71%	1538.92	26.32
(v)	ER-WR link (Korba- Budhipadar transmission line)	99.72%	220.65	3.80
3.	Inter-regional HVDC System			
(i)	ER-NR (Sasaram HVDC Back-to-Back)	99.11%	809.05	33.25
(ii)	ER-SR (Gazuwaka HVDC Back-to-Back- I & II)	97.10%	7564.13	158.85
Total			99676.49	1565.95

10. The difference of Rs. 1.18 lakh in the incentive claimed by the petitioner and allowed is because the equity considered by the petitioner for the asset "Bihar Grid Strengthening Scheme (except ICT at Biharshariff)" is Rs. 2240.17 lakh against equity of Rs. 2160.34 approved vide order dated 7.8.2009 in Petition No. 78/2009 and considered in this order.

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

12. The Commission in its order dated 30.7.2007, had provisionally allowed incentive of 80% of that claimed by the petitioner in this petition. The provisional incentive charges by the petitioner shall be adjusted against final incentive for the year 2006-07 approved by us in this order.

13. The incentive in respect of Eastern Regional transmission assets shall be shared by the respondents, the beneficiaries in the Eastern Region, in proportion of the transmission charges shared by them in the region.

14. This order disposes of Petition No.92/2007.

Sd/-	sd/-	sd/-	sd/-
(V.S.VERMA)	(S.JAYARAMAN)	(R.KRISHNAMOORTHY)	(DR PRAMOD DEO)
MEMBER	MEMBER	MEMBER	CHAIRPERSON

New Delhi dated the 7th September 2009

Petition No. 92/2007									
Name of the Company: PGCIL									
Name of the Region: Eastern									
Petition No.:92/20076- Incentive for the year 2006-07									
ER Transmission System									
Name of the Transmission System/ Line (1)		Petition No. (2)	Tariff order dated (3)	D.O.C.O. (4)	Period during the year (Year) (5)	Equity as per Tariff Order (6)	Pro-rata Equity for the year 2006-07 (7)	Availability of the Transmission System Elements as (8)	Availability eligible for incentive (9)
A	Intra Regional AC System								
	Target availability for incentive (AC Syatem)								
1	CHUKHA	124/2004	31.3.2008	Before 31.3.2001	1.00	6894.72	6894.72	99.48%	1.48%
2	FARAKKA	126/2004	7.2.2008	-do-	1.00	15300.50	15300.50	99.48%	1.48%
3	KAHALGAON	127/2004	-do-	-do-	1.00	9723.50	9723.50	99.48%	1.48%
4	JTTS	122/2004	31.3.2008	-do-	1.00	6020.00	6020.00	99.48%	1.48%
5	TALCHER	125/2004	-do-	-do-	1.00	5810.50	5810.50	99.48%	1.48%
6	MALDA AUTO TRANSFORMER	120/2004	23.11.2005	-do-	1.00	130.62	130.62	99.48%	1.48%
7	RANGIT-RAMMAM & RANGIT-MELLI	118/2004	17.1.2006	-do-	1.00	802.00	802.00	99.48%	1.48%
8	RANGIT-SILIGURI	-do-	-do-	-do-	1.00	1309.85	1309.85	99.48%	1.48%
9	DEHRI-KARAMNASA	123/2004	12.1.2006	-do-	1.00	377.31	377.31	99.48%	1.48%
10	NEW SILIGURI -MALDA (previously part of Inter-Regional Asset named Bongaigaon -Malda): (w.ef. 01.10.2005)	75/2008	15.5.2009	-do-	1.00	4832.77	4832.77	99.48%	1.48%
11	1X63 MVA REACTOR AT KOLAGHAT-RENGALI LINE AT RENGLI END	119/2004	2.9.2005	-do-	1.00	191.81	191.81	99.48%	1.48%
12	HATHIDAH RIVER CROSSING SECTION OF 220 kV BIHARSHARIFF BEGUSARAI T/L	67/2004	16.4.2008	-do-	1.00	204.80	204.80	99.48%	1.48%
13	ICT AT MALDA	53/2005		1.5.2002	1.00	88.17	88.17	99.48%	1.48%
14	ICT AT JEYPORE	50/2005	27.1.2006	1.10.2002	1.00	97.43	97.43	99.48%	1.48%
15	JAMSHEDPUR- RURKELA	61/2009	22.7.2009	1.1.2003	1.00	925.07	925.07	99.48%	1.48%
16	LILO BONGAIGAON-MALDA AT SILIGURI	112/2005		1.8.2003	1.00	526.69	526.69	99.48%	1.48%
17	PURNIA DALKOLA LINE AND EXTN. AT PURNIA S/STN	144/2005	29.4.2008	1.11.2003	1.00	115.80	115.80	99.48%	1.48%
18	LILO BONGAIGAON-MALDA AT PURNIA	116/2006	13.2.2007	1.11.2003	1.00	1199.31	1199.31	99.48%	1.48%
19	TALCHER-MERAMUNDALI	102/2006	10.1.2007	1.12.2003	1.00	588.64	588.64	99.48%	1.48%
20	ICT AT Biharshariff	78/2009	7.8.2009	1.4.2004	1.00	197.50	197.50	99.48%	1.48%
21	Meramundali-Jeyapore	18/2009	13.5.2009	1.6.2004	1.00	3443.62	3443.62	99.48%	1.48%
22	BiharGrid Strengthening Scheme (Except ICT at Biharshariff)	78/2009	7.8.2009	1.11.2004	1.00	2160.34	2160.34	99.48%	1.48%
23	Kahalgaoon- Biharshariff ??	137/2006	6.2.2007	1.12.2004	1.00	3406.95	3406.95	99.48%	1.48%
24	LILO of Kolaghat -Rengali Line at Baripada	1/2007	15.10.2007	1.7.2005	1.00	1541.33	1541.33	99.48%	1.48%
25	LILO of Siliguri - Rangit Line at Gangtok	12/2007	15.10.2007	1.10.2005	1.00	1100.80	1100.80	99.48%	1.48%
26	LILO of Siliguri - Gangtok Section of Rangit Siliguri Line at Melli	21/2007	15.2.2008	-do-	1.00	81.91	81.91	99.48%	1.48%
27	40% Fixed Series Compensation on Rengali- Indrawati Line	141/2008	31.3.2009	-do-	1.00	431.44	431.44	99.48%	1.48%
28	Tala-Siliguri (Part commissioned w.e.f. 01.10.2005) @	136/2007	23.5.2008	-do-	1.00	3566.44	3566.44	99.48%	1.48%

29	@ Balance portion of Tala -Siliguri commissioned w.e.f. 01.05.2006	136/2007	23.5.2008	1. 5.2006	0.92	3408.83	3124.76	99.48%	1.48%
30	Tala ICT at Purnea (Under Tala E-N Interconnector)	141/2007	23.5.2008	1. 6.2006	0.83	254.1	211.75	99.48%	1.48%
31	Siliguri S/s Extn., Purnea S/s Extn. & TCSC on Purnea - Muzaffarpur Line at Purnea (Under Tala E-N Interconnector)	141/2007	23.5.2008	1.05.2006	0.916667	2911.29	2668.68	99.48%	1.48%
32	Muzaffarpur Sub-Station (New) and 220 kV Muzaffarpur S/Stn. Extn. (Under Tala E-N Interconnector)	141/2007	23.5.2008	1. 9.2006	0.58	1428.09	833.05	99.48%	1.48%
33	ICT -II at Indrawati	137/2007	29.8.2008	1. 5.2006	0.92	346.79	317.89	99.48%	1.48%
34	ICT at Siliguri under system strengthening scheme in ER	97/2007 & IA 32/2007	6.5.2008	1.10.2006	0.50	269.57	134.79	99.48%	1.48%
35	Biharshariff- Muzaffarpur Line under system strengthening scheme in ER	97/2007 & IA 32/2007	6.5.2008	1.11.2006	0.42	5242.84	2184.52	99.48%	1.48%
36	LILO of 400kV Farakka - Jeerat Line at Subhasgram along with associated bays	160/2007	1.5.2008	1. 3.2007	0.08	2921.98	243.50	99.48%	1.48%
37	40% Series Compensation on 400kV Meramundali - Jeypore S/C line	103/2007	19.5.2008	1. 1.2007	0.25	434.97	108.74	99.48%	1.48%
	SUB-TOTAL (A)					88288.27	80897.49		
B	Inter Regional AC Elements								
	Inter Regional lines between ER and NR								
1	400 kV D/C Bongaigaon-Malda TL (50%)	75/2008	15.5.2009	1. 4.2000	1.00	7050.59	3525.30	99.52%	1.52%
	Inter Regional lines between ER and NR								
1	Biharshariff-Sasaram-Sarnath TL (50%)	51/2005	28.4.2008	1. 7.2001	1.00	1656.43	1656.43	99.78%	1.78%
2	AC Stn and Sarnath- Allahabad TL of Sasaram HVDC Back to Back (50%)	64/2005	9.5.2006	1.12.2002	1.00	135.72	135.72	99.78%	1.78%
3	TCSC and 2 Nos. of 400 kV bays at Gorakhpur S/Stn. Associated with 400 KV Muzaffarpur- Gorakhpur Line of Powerlinks Transmission Ltd. (50%)	142/2007	28.3.2008	1. 9.2006	0.58	1253.72	731.34	99.78%	1.78%
4	2 Nos. 400 KV bays at Muzaffarpur with Line Reactors for Muzaffarpur - Gorakhpur Line of Powerlinks Transmission Ltd. (50%)	142/2008	28.3.2008	1. 9.2006	0.583333	249.16	145.34	99.78%	1.78%
	SUB-TOTAL (B)					3295.03	2668.83		
	SUB-TOTAL (B)					10345.62	6194.1204		
C	AC Portion of HVDC Stn package Between ER and SR								
1	AC Portion of HVDC BtoB Jeypore-Gazuwaka (Gazuwaka 50%)	70/2004	9.4.2008	1. 9.1999	1.00	2366.11	2366.11	99.85%	1.85%
2	50% FSC at Jeypore S/S associated with 400 kV Jeypore - Gazuwaka D/C line (50%)	103/2007	19.5.2008	1. 1.2007	0.25	688.16	86.02	99.85%	1.85%
	SUB-TOTAL (C)					3054.27	2452.13		
D	Inter Regional line between ER and WR								
1	Raipur-Rourkela (50%)	63/2005		1. 4.2003	1.00	1538.92	1538.92	99.71%	1.71%
2	Korba-Budhipadar (1/3rd)	69/2004	29.4.2008	1. 9.1999	1.00	220.65	220.65	99.72%	1.72%
	SUB-TOTAL (D)					1759.57	1759.57		
	Inter-regional Assets (AC) TOTAL (B+C+D)					15159.46	10405.82		
E	HVDC Inter Regional Assets								
	Target availability for incentive (HVDC System)								
	HVDC Stn between ER and NR								

1	Sasaram HVDC BtoB (50%) (Excluding AC Stn and Sarnath-Allahabad line of Sasaram HVDC BtoB) (50%)	64/2005	9. 5.2006	1.12.2002	1.00	809.05	809.05	99.11%	4.110%
	<u>HVDC Stn between ER and SR</u>								
2	HVDC BtoB Gazuwaka (50%)	70/2004	9.4.2008	1. 9.1999	1.00	2480.48	2480.48	97.10%	2.100%
3	Gazuwaka-II (50%)	40/2008	28.8.2008	1. 3.2005	1.00	5083.65	5083.65	97.10%	2.100%
						7564.13	7564.13		
	SUB-TOTAL (E)					8373.18	8373.18		
	TOTAL INCENTIVE (Total A+E)						99676.49		