

**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.98/2008

In the matter of

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

And in the matter of

Power Grid Corporation of India Limited, Gurgaon

..Petitioner

Vs

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 B.C.Pant, PGCIL
3. Shri S.S.Raju, PGCIL
4. Shri M.M.Mondal, PGCIL
5. Shri R.Prasad, PGCIL

**ORDER
(DATE OF HEARING: 28.5.2009)**

The petitioner seeks approval for incentive for the year 2007-08 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 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. 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 4.8.2008 certified the availability of intra-regional system and inter-regional links connecting Eastern Region to other regions during 2007-08. The necessary details in this regard are as under:

S.No.	Assets	Availability
1	Intra-Regional AC system AC Transmission System of ER	99.66%
2	Inter-Regional AC system	
(i)	ER-NER link (400 kV D/C Bongaigaon- Malda transmission line)	99.69%
(ii)	ER- NR link (Biharshariff-Sasaram-Sarnath-Allahabad transmission line and AC Station)	99.89%
(iii)	AC portion of ER-SR link (400 kV D/C Jeypore-Gazuwaka transmission line)	99.78%
(iv)	ER-WR link (400 kV D/C Raipur- Rourkela transmission line)	99.36%
(v)	ER-WR link (220 kV S/C Korba- Budhipadar transmission line)	99.46%
3	Inter-Regional HVDC system	
(i)	ER-NR (Sasaram HVDC Back-to-Back)	97.85%
(ii)	ER-SR (Gazuwaka HVDC Back-to-Back)	99.56%
4	Bilateral element (LILO of Patratu-Hatia-Chandil D/C transmission line at Ranchi)	100%

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	109883.56	1824.07

2	Inter-regional AC system		
(i)	Bongaigaon- Malda (ER-NER) transmission line	3525.30	59.58
(ii)	Biharshariff-Sasaram-Sarnath-Allahabad transmission line and AC Station	3311.90	62.59
(iii)	AC portion of HVDC Back-to-Back Gazuwaka ER-SR and FSC on Jeypore-Gazuwaka transmission line	2717.25	48.37
(iv)	ER-WR link (Raipur- Rourkela transmission line)	1538.92	20.93
(v)	ER-WR link (Korba- Budhipadar transmssion line)	220.65	3.22
3	Inter-Regional HVDC System		
(i)	ER-NR (Sasaram HVDC Back-to-Back)	809.05	23.06
(ii)	ER-SR (Gazuwaka HVDC Back-to-Back – I & II)	7575.05	345.42
4	Bilateral element (LILO of Patratu-Hatia-Chandil D/C transmission line at Ranchi)	161.87	3.24
	Total	129743.56	2390.48

6. Reply to the petition has been filed by West Bengal State Electricity Distribution Company Ltd. (WBSEB). WBSEB has submitted that in case of some tariff orders of the period year 2004-09, the petitioner has filed appeals before Appellate Tribunal for Electricity. The Appellate Tribunal vide its judgment dated 16.5.2006 in Appeal No. 121/2005 directed the Commission to re-determine equity for these assets. It has been stated that some of the State utilities have approached the Hon'ble Supreme Court for staying the said judgment dated 16.5.2006 in Appeal No 121 of 2005. Thus, determination of equity is sub-judice. Therefore, it has been stated that the approval of Incentive for these assets be kept in abeyance till such time equity is finally determined. We have considered the submission. For present, there is no stay of the Appellate Tribunal's judgment dated 16.5.2006. Therefore, equity has been re-determined in accordance with the Appellate Tribunal's judgment. It goes without saying that re-determination of equity is subject to the decision of the Hon`ble Supreme Court in the pending appeals.

7. 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	Pro rata equity (Rs. in lakh)	Incentive Amount (Rs. in lakh)
1	Intra-regional AC system AC System of ER	99.66%	111056.30	1843.53
2	Inter-regional AC system			
(i)	Bongaigaon- Malda (ER-NER) transmission line	99.69%	3525.30	59.58
(ii)	Biharshariff-Sasaram-Sarnath-Allahabad transmission line and AC Station	99.89%	3311.91	62.60
(iii)	AC portion of HVDC Back-to-Back Gazuwaka ER-SR and FSC on Jeypore-Gazuwaka transmission line	99.78%	2717.43	48.37
(iv)	ER-WR link (Raipur- Rourkela transmission line)	99.36%	1538.92	20.93
(v)	ER-WR link (Korba- Budhipadar transmission line)	99.46%	220.65	3.22
3	Inter-regional HVDC System			
(i)	ER-NR (Sasaram HVDC Back-to-Back)	97.85%	809.05	23.06
(ii)	ER-SR (Gazuwaka HVDC Back-to-Back- I & II)	99.56%	7574.89	345.41
4	Bilateral element (LILO of Patratu-Hatia-Chandil D/C transmission line at Ranchi)	100%	179.27	3.59
	Total		130933.70	2410.29

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

9. In case of the assets where additional capital expenditure for the year 2007-08 has been approved, average equity has been considered for computation of incentive.

10. 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 and Sasaram

and Allahabad and Auxiliary system including 400 kV Sarnath-Allahabad line 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 principle was applied while approving incentive for the year 2005-06 vide order dated 28.5.2009 in Petition No. 118/2006.

11. In case of certain assets, equity has been revised as per Appellate Tribunal for Electricity order pertaining to segregation of FERV into loan and restoration of equity amount. Equity so revised has been taken into account while working out the incentive.

12. Incentive allowed is Rs. 19.81 lakh in excess of the incentive claimed by the petitioner. This is for the reason that higher pro rata equity considered by us in case of some assets viz, (i) 400 kV S/C Jameshedpur-Rourkela (Ckt-II) transmission line, (ii) Bihar Grid Strengthening Scheme, (iii) Meramundali-Jeypore, (iv) LILO of Kolaghat-Rengali transmission line at Baripada, (v) LILO of Siliguri-Gangtok Section of Rangit-Siliguri transmission line at Melli,(vi) 40% Fixed Series Compensation on Rengali-Indrawati transmission line , (vii) Tala-Siliguri transmission line , (viii) 315 MVA ICT-II at Muzaffarpur sub-Station, (ix) Feeder-I of 400KV, D/C Teesta (Stage-V)- Siliguri Transmission System, (x) Kahalgaon Stage-II, Phase-I Transmission System and LILO of Ckt I & II of Patratu-Hatia-Chandil 220kV D/C transmission line at Ranchi sub-station under bilateral arrangement with JSEB etc. This is in accordance with the revised equity allowed in the

Commission's orders passed consequent to implementation of Appellate Tribunal Judgment.

13. The Commission in its order dated 8.9.2008, 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 2007-08 approved by us in this order.

14. The incentive approved in respect of Eastern Regional transmission assets, except for LILO of Patratu-Hatia-Chandil D/C transmission line at Ranchi shall be shared by the respondents, the beneficiaries in the Eastern Region, in proportion of the transmission charges shared by them in the region. The incentive in respect of LILO of Patratu-Hatia-Chandil D/C transmission line at Ranchi shall be payable by Jharkhand State Electricity Board only.

15. This order disposes of Petition No.98/2008.

Sd/-
(V.S.VERMA)
MEMBER

sd/-
(S.JAYARAMAN)
MEMBER

sd/-
(R.KRISHNAMOORTHY)
MEMBER

sd/-
(DR PRAMOD DEO)
CHAIRPERSON

New Delhi dated the 7th September 2009

ANNEXURE

Name of the Company: PGCIL										
Name of the Region: Eastern										
Incentive for the year 2007-08										
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 (8)	Availability eligible for incentive (9)	(Rs in lakh) Incentive amount (10)= (7)*(9)
A	Intra Regional AC System									
	Target availability for incentive (AC System)									98%
1	CHUKHA	124/2004	31.0.2008	Before 31.3.2001	1.00	6894.72	6894.72	99.66%	1.66%	114.45
2	FARAKKA	126/2004	7.2.2008	-do-	1.00	15300.50	15300.50	99.66%	1.66%	253.99
3	KAHALGAON	127/2004	-do-	-do-	1.00	9723.50	9723.50	99.66%	1.66%	161.41
4	JTTS	122/2004	31.3.2008	-do-	1.00	6020.00	6020.00	99.66%	1.66%	99.93
5	TALCHER	125/2004	-do-	-do-	1.00	5810.50	5810.50	99.66%	1.66%	96.45
6	MALDA AUTO TRANSFORMER	120/2004	23.11.2005	-do-	1.00	130.6	130.62	99.66%	1.66%	2.17
7	RANGIT-RAMMAM & RANGIT-MELLI	118/2004	17.1.2006	-do-	1.00	802.0	802.00	99.66%	1.66%	13.31
8	RANGIT-SILIGURI	-do-	-do-	-do-	1.00	1309.85	1309.85	99.66%	1.66%	21.74
9	DEHRI-KARAMNASA	123/2004	12.1.2006	-do-	1.00	377.31	377.31	99.66%	1.66%	6.26
10	NEW SILIGURI -MALDA (previously part of Inter-Regional Asset named Bongaigaon -Malda): (w.e.f. 01.10.2005)	75/2008	15.5.2009	-do-	1.00	4832.77	4832.77	99.66%	1.66%	80.22
11	1X63 MVA REACTOR AT KOLAGHAT-RENGALI LINE AT RENGLI END	119/2004	2.9.2005	-do-	1.00	191.81	191.81	99.66%	1.66%	3.18
12	HATHIDAH RIVER CROSSING SECTION OF 220 KV BIHARSHARIFF BEGUSARAI T/L	67/2004	16.4.2008	-do-	1.00	204.80	204.80	99.66%	1.66%	3.40
13	ICT AT MALDA	53/2005		1.5.2002	1.00	88.17	88.17	99.66%	1.66%	1.46
14	ICT AT JEYPORE	50/2005	27.1.2006	1.10.2002	1.00	97.43	97.43	99.66%	1.66%	1.62
15	JAMSHEDPUR- RURKELA	61/2009	22.7.2009	1.1.2003	1.00	962.70	962.70	99.66%	1.66%	15.98
16	LILONGAON-MALDA AT SILIGURI	112/2005		1.8.2003	1.00	526.69	526.69	99.66%	1.66%	8.74
17	PURNIA DALKOLA LINE AND EXTN. AT PURNIA S/STN	144/2005	29.4.2008	1.11.2003	1.00	115.80	115.80	99.66%	1.66%	1.92
18	LILONGAON-MALDA AT PURNIA	116/2006	13.2.2007	1.11.2003	1.00	1199.31	1199.31	99.66%	1.66%	19.91
19	TALCHER-MERAMUNDALI	102/2006	10.1.2007	1.12.2003	1.00	588.64	588.64	99.66%	1.66%	9.77
20	ICT AT Biharsharif	78/2009	7.8.2009	1.4.2004	1.00	199.48	199.48	99.66%	1.66%	3.31
21	Meramundali-Jeypore	18/2009	13.5.2009	1.6.2004	1.00	3443.62	3443.62	99.66%	1.66%	57.16
22	BiharGrid Strengthening Scheme (Except ICT at Biharsharif)	78/2009	7.8.2009	1.11.2004	1.00	2174.85	2174.85	99.66%	1.66%	36.10
23	Kahalgaon- Biharsharif	137/2006	6.2.2007	1.12.2004	1.00	3406.95	3406.95	99.66%	1.66%	56.56
24	LILONGAON -Rengali Line at Baripada	142/2008	19.3.2009	1.7.2005	1.00	1557.15	1557.15	99.66%	1.66%	25.85
25	LILONGAON - Rangit Line at Gangtok	144/2008	2.4.2009	1.10.2005	1.00	1167.07	1167.07	99.66%	1.66%	19.37
26	LILONGAON - Gangtok Section of Rangit Siliguri Line at Melli	21/2007	15.2.2008	-do-	1.00	81.91	81.91	99.66%	1.66%	1.36
27	40% Fixed Series Compensation on Rengali- Indrawati Line	141/2008	31.3.2009	-do-	1.00	452.70	452.70	99.66%	1.66%	7.51
28	Tala-Siliguri (Part commissioned w.e.f. 01.10.2005) @	99/2008	29.1.2009	-do-	1.00	3705.56	3705.56	99.66%	1.66%	61.51
29	@ Balance portion of Tala -Siliguri commissioned w.e.f. 01.05.2006	99/2008	29.1.2007	1.5.2006	1.00	3555.62	3555.62	99.66%	1.66%	59.02
30	Tala ICT at Purnea (Under Tala E-N Interconnector)	141/2007	23.5.2008	1.6.2006	1.00	254.1	254.10	99.66%	1.66%	4.22
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	1.5.06	1.00	2927.52	2927.52	99.66%	1.66%	48.60
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	1.00	1473.69	1473.69	99.66%	1.66%	24.46
33	ICT -II at Indrawati	137/2007	29.8.2008	1.5.2006	1.00	349.84	349.84	99.66%	1.66%	5.81
34	ICT at Siliguri under system strengthening scheme in ER	68/2009	6.5.2008	1.10.2006	1.00	288.24	288.24	99.66%	1.66%	4.78
35	Biharsharif- Muzaffarpur Line under system strengthening scheme in ER	68/2009	6.5.2008	1.11.2006	1.00	5242.84	5242.84	99.66%	1.66%	87.03
36	LILONGAON - Jeerat Line at Subhasgram alongwith associated bays	160/2007	1.5.2008	1.3.2007	1.00	2947.75	2947.75	99.66%	1.66%	48.93
37	40% Series Compensation on 400kV Meramundali - Jeypore S/C line	103/2007	19.5.2008	1.1.2007	1.00	446.3	446.33	99.66%	1.66%	7.41

38	400/220KV, 315 MVA ICT-II at Muzaffarpur Sub-Station	133/2008	8.4.2009	1.6.2007	0.83	471.27	392.73	99.66%	1.66%	6.52
39	315 MVA, 400/220KV , ICT-I at Subhasgram Sub-Station (NEW)	160/2007	1.5.2008	1.4.2007	1.00	310.9	310.90	99.66%	1.66%	5.16
40	Feeder-I of 400KV , D/C Teesta(Stage-V)- Siliguri Transmission System, associated with Teesta (stage-V) HEP	130/2008	16.3.2009	1.2.2008	0.17	5827.39	971.23	99.66%	1.66%	16.12
41	400 KV D/c Kahalgaon- Patna line (including 1x 50 MVAR line Reactor), 1x 80 MVAR Bus Reactor with associated bays at Patna S/S, 2 nos 220 kV line bays at Patna S/S for BSEB S/S and 400 & 220 kV bays for ICT-I at Patna S/S.	I/2009	6.5.2009	1.5.2007	0.92	14354.81	13158.58	99.66%	1.66%	218.43
42	400 kV D/C Maithon –Ranchi line along with associated bays, 400/220 kV, 315 MVA, ICT-II along with associated bays at Ranchi S/S and 220 kV Patratu & Chandil bays at Ranchi S/S.	I/2009	6.5.2009	1.6.2007	0.83	7986.44	6655.37	99.66%	1.66%	110.48
43	80 MVAR Bus Reactor at Ranchi and 2 nos. of 220 kV line bays at Ranchi	I/2009	6.5.2009	1.9.2007	0.58	440.92	257.20	99.66%	1.66%	4.27
44	ICT-I at Patna S/S	I/2009	6.5.2009	1.11.2007	0.42	296.54	123.56	99.66%	1.66%	2.05
45	400/220 kV ICT-I at Ranchi S/S along with associated bays and 2 nos line bays at Patna S/S	I/2009	6.5.2009	1.12.2007	0.33	642.15	214.05	99.66%	1.66%	3.55
46	ICT-II at Patna S/S along with associated bays	I/2009	6.5.2009	1.1.2008	0.25	481.43	120.36	99.66%	1.66%	2.00
	SUB-TOTAL (A)					119664.18	111056.30			1843.53
B	Inter Regional AC Elements									
	Inter Regional lines between ER and NER									
1	400 kV D/C Bongaigaon-Malda TL (50%)	75/2008	15.5.2009	1.4.2000	1.00	7050.59	3525.30	99.69%	1.69%	59.58
	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	99.89%	1.89%	31.31
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	99.89%	1.89%	2.57
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	1.00	1265.95	1265.95	99.89%	1.89%	23.93
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	1.00	253.81	253.81	99.89%	1.89%	4.80
	SUB-TOTAL (B)					10362.50	6837.20			122.17
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	99.78%	1.78%	42.12
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	1.00	702.63	351.32	99.78%	1.78%	6.25
	SUB-TOTAL (C)					3068.74	2717.43			48.37
D	Inter Regional line between ER and WR									
1	Raipur-Rourkela (50%)	63/2005		1.4.2003	1.00	1538.92	1538.92	99.36%	1.36%	20.93
2	Korba-Budhipadar (1/3rd)	69/2004	29.4.2008	1.9.1999	1.00	220.65	220.65	99.46%	1.46%	3.22
	SUB-TOTAL (D)					1759.57	1759.57			24.15
	Inter-regional Assets (AC) TOTAL (B+C+D)					15190.81	11314.20			194.69
E	HVDC Inter Regional Assets									
	Target availability for incentive (HVDC System)									95%
	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	97.85%	2.85%	23.06
	<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	99.56%	4.56%	113.11
3	Gazuwaka-II (50%)	40/2008	28.8.2008	1.3.2005	1.00	5094.41	5094.41	99.56%	4.56%	232.30
						7574.89	7574.89			345.41
	SUB-TOTAL (E)					8383.94	8383.94			368.47
	TOTAL INCENTIVE (A+B+C+D+E)						130754.43			2406.70
F	Bilateral Element with Jharkhand State Electricity Board (JSEB) : (AC Syuatem)									
	Target availability for incentive (AC System)									98%
	LILO of Ckt I Patratu – Hatai – Chandil 220kV D/C line at Ranchi S/s	4 /2009	6.5.2009		0.83	123.00	102.50	100.00%	2.00%	2.05
	LILO of Ckt II Patratu – Hatai – Chandil 220kV D/C line at Ranchi S/s	4/ 2009	6.5.2009	1.6.07 1.9.07	0.58	131.60	76.77	100.00%	2.00%	1.54
	TOTAL INCENTIVE with Bilateral Element (A+B+C+D+E+F)						130933.70			2410.29