

**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.118/2006

In the matter of

Approval of incentive based on availability of transmission system for the year 2005-06 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 V.V.Sharma, PGCIL
3. Shri M.M.Mondal, PGCIL
4. Shri A.K.Nagpal, PGCIL
5. Shri B.C.Pant, PGCIL

**ORDER
(DATE OF HEARING: 16.4.2009)**

The petitioner seeks approval for incentive for the year 2005-06 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 2004 regulations 2004 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 2004 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 (earlier EREB) under his letter dated 4.8.2008 has certified the availability of intra-regional system and inter-regional AC system, inter-regional HVDC system and bilateral elements. The necessary details in this regard are as under:

S.No.	Assets	Availability
1	Intra-Regional AC system AC Transmission System of ER	99.379%
2	Inter-Regional AC system	
(i)	ER-NER link (400 kV D/C Bongaigaon- Malda transmission line)	99.617%
(ii)	ER- NR link (Biharshariff-Sasaram-Sarnath-Allahabad transmission line and AC Station)	99.875%
(iii)	AC portion of ER-SR link (400 kV D/C Jeypore-Gazuwaka transmission line)	99.594%
(iv)	ER-WR link (400 kV D/C Raipur- Rourkela transmssion line)	99.125%
(v)	ER-WR link (220 kV S/C Korba- Budhipadar transmission line)	99.495%
3	Inter-Regional HVDC system	
(i)	ER-NR (Sasaram HVDC back-to-back)	97.704%
(ii)	ER-SR (Gazuwaka HVDC back-to-back- I & II)	96.597%

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

(Rs. in lakh)			
Sl. No	Assets	Pro rata equity	Incentive
1	Intra-regional AC system AC System of ER	63441.16	874.85
2	Inter-regional AC system		
(i)	Bongaigaon- Malda (ER-NER) transmission line	4939.71	79.88
(ii)	Biharshariff-Sasaram-Sarnath-Allahabad transmission line and AC Station	1787.58	33.52
(iii)	AC portion of HVDC back-to-back Gazuwaka ER-SR and FSC on Jeypore-Gazuwaka transmission line	2803.63	44.69
(iv)	ER-WR link (Raipur- Rourkela transmssion line)	1538.92	17.31
(v)	ER-WR link (Korba- Budhipadar transmssion line)	218.49	3.27
3	Inter-Regional HVDC System		
(i)	ER-NR (Sasaram HVDC back-to-back)	809.05	21.88
(ii)	ER-SR (Gazuwaka HVDC back-to-back – I & II)	7609.22	121.53
	Total	83147.76	1196.92

6. Equity as per the respective tariff orders mentioned in the annexure attached has been considered for the purpose of incentive.

7. In case of the assets where additional capital expenditure incurred during 2005-06 has been approved, average equity has been considered.

8. In case of certain assets (covered under Petitions 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 on *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 assets Jeypore-Gazuwaka transmission line (ER portion) and Sasaram HVDC has been considered. The cost break-up was

considered by the Commission in its order dated 1. 9.2008 wherein incentive for the year 2004-05 had been approved, has been taken into account.

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 to incentive as indicated hereunder:

(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%	62739.25	844.82
2	Inter-regional AC system			
(i)	Bongaigaon- Malda (ER-NER) transmission line	98.00%	4969.70	80.36
(ii)	Biharshariff-Sasaram-Sarnath-Allahabad transmsion line and AC Station	98.00%	1792.15	33.60
(iii)	AC portion of HVDC back-to-back Gazuwaka ER-SR and FSC on Jeypore-Gazuwaka transmsion line	98.00%	2366.11	37.72
(iv)	ER-WR link (Raipur- Rourkela transmsion line)	98.00%	1575.97	17.73
(v)	ER-WR link (Korba- Budhipadar transmission line)	98.00%	220.65	3.30
3	Inter-regional HVDC System			
(i)	ER-NR (Sasaram HVDC back-to-back)	95.00%	809.05	21.88
(ii)	ER-SR (Gazuwaka HVDC back-to-back- I & II)	95.00%	7125.83	133.80
	Total		81598.71	1153.20

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

11. The Commission in its order dated 23.10.2006, 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 2005.06 approved by us in this order.

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

13. This order disposes of Petition No. 118/2006.

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

New Delhi dated the 28th May 2009

ANNEXURE

Name of the Region: Eastern									
Petition No.:118/2006- Incentive for the year 2005-06									
ER Transmission System									(Rs in lakh)
Name of the Transmission System/ Line (1)	Petition No. (2)	D.O.C.O. (3)	CERC Tariff order dated	Equity as per Tariff Order (4)	Period during the year (Year) (5)	Availability of the Transmission System Elements (6)	Availability eligible for incentive (7)	Incentive amount (8)= (4)*(5)*(7)	
A Intra Regional AC System									
	Target availability for incentive (AC Syatem)								98%
1	CHUKHA	124/2004	Before 31. 3.2001	31. 3.2008	6894.72	1.00	99.379%	1.379%	95.08
	FARAKKA	126/2004	-do-	7. 2.2008	15300.50	1.00	99.379%	1.379%	210.99
	KAHALGAON	127/2004	-do-	-do-	9723.50	1.00	99.379%	1.379%	134.09
	JTTS	122/2004	-do-	31. 3.2008	6020.00	1.00	99.379%	1.379%	83.02
	TALCHER	125/2004	-do-	-do-	5810.50	1.00	99.379%	1.379%	80.13
	MALDA AUTO TRANSFORMER	120/2004	-do-	23.11.2005	130.62	1.00	99.379%	1.379%	1.80
	RANGIT-RAMMAM & RANGIT-MELLI	118/2004	-do-	17. 1.2006	802.00	1.00	99.379%	1.379%	11.06
	RANGIT-SILIGURI	-do-	-do-	-do-	1309.85	1.00	99.379%	1.379%	18.06
	DEHRI-KARAMNASHA	123/2004	-do-	12. 1.2006	377.31	1.00	99.379%	1.379%	5.20
	1X63 MVA REACTOR AT KOLAGHAT-RENGALI LINE AT RENGLI END	119/2004	-do-	2. 9.2005	191.81	1.00	99.379%	1.379%	2.65
	HATHIDAH RIVER CROSSING SECTION OF 220 kV BIHARSHARIFF BEGUSARAI T/L	67/2004	-do-	16. 4.2008	204.80	1.00	99.379%	1.379%	2.82
	ICT AT MALDA	53/2005	1. 5.2002		88.17	1.00	99.379%	1.379%	1.22
	ICT AT JEYPORE	50/2005	1.10.2002	27. 1.2006	97.43	1.00	99.379%	1.379%	1.34
	JAMSHEDPUR- RURKELA	67/2005	1. 1.2003	4. 5.2006	918.02	1.00	99.379%	1.379%	12.66
	LILONGAIGAON-MALDA AT SILIGURI	112/2005	1.8.2003		526.69	1.00	99.379%	1.379%	7.26
	PURNIA DALKOLA LINE AND EXTN. AT PURNIA S/STN	144/2005	1.11.2003	29. 4.2008	115.80	1.00	99.379%	1.379%	1.60
	LILONGAIGAON-MALDA AT PURNIA	116/2006	1.11.2003	13.02.2007	1199.31	1.00	99.379%	1.379%	16.54
	TALCHER-MERAMUNDALI	102/2006	1.12.2003	10. 1.2007	588.64	1.00	99.379%	1.379%	8.12
	ICT AT Biharshariff	73/2005	1. 4.2004	9. 5.2006 & 23.05.2008	189.54	1.00	99.379%	1.379%	2.61
	Meramundali-Jeypore	18/2009	1. 6.2004	13. 5.2009	3305.52	1.00	99.379%	1.379%	45.58
	BiharGrid Strengthening Scheme (Except ICT at Biharshariff)	31/2007	1.11.2004	23. 5.2008	2076.39	1.00	99.379%	1.379%	28.63
	Kahalgaon- Biharshariff	137/2006	1.12.2004	6. 2.2007	3392.08	1.00	99.379%	1.379%	46.78
	LILO of Kolaghat -Rengali Line at Baripada	1/2007	1.07.2005	15.10.2007	1047.92	0.75	99.379%	1.379%	10.84
	LILO of Siliguri - Rangit Line at Gangtok	12/2007	1.10.2005	15.10.2007	495.26	0.50	99.379%	1.379%	3.41
	LILO of Siliguri - Gangtok Section of Rangit Siliguri Line at Melli	21/2007	-do-	15. 2.2008	37.58	0.50	99.379%	1.379%	0.26
	40% Fixed Series Compensation on Rengali- Indrawati Line	49/2007	-do-	15.10.2007	192.14	0.50	99.379%	1.379%	1.32
	Tala-Siliguri (Part commissioned w.e.f. 01.10.2005) @	77/2006	-do-	1.10.2005	1703.16	0.50	99.379%	1.379%	11.74
	@ Balance portion of Tala -Siliguri commissioned w.e.f. 01.05.2006								
	SUB-TOTAL (A)				62739.25				844.82
B Inter Regional AC Elements									
	Inter Regional lines between ER and NER								
1	400 kV D/C Bongaigaon-Malda TL (50%)	121/2004	1. 4.2000	16. 4.2008	4969.70	1.00	99.617%	1.617%	80.36
	Inter Regional lines between ER and NR								
2	Biharshariff-Sasaram-Sarnath TL (50%)	51/2005	1. 7.2001	28. 4.2008	1656.43	1.00	99.875%	1.875%	31.06
3	AC Stn and Sarnath- Allahabad TL of Sasaram HVDC Back to Back (50%)	64/2005	1.12.2002	9. 5.2006	135.72	1.00	99.875%	1.875%	2.54
	SUB-TOTAL (B)				6761.85				113.96
C AC Portion of HVDC Stn package Between ER and SR									
1	AC Portion of HVDC BtoB Jeypore- Gazuwaka (Gazuwaka 50%)	70/2004	1. 9.1999	9. 4.2008	2366.11	1.00	99.594%	1.594%	37.72
	SUB-TOTAL (C)				2366.11				37.72
D Inter Regional line between ER and WR									

Annexure (Cont.)

1	Raipur-Rourkela (50%)	63/2005	1. 4.2003		1575.97	1.00	99.125%	1.125%	17.73
2	Korba-Budhipadar (1/3rd)	69/2004	1. 9.1999	29.04.2008	220.65	1.00	99.495%	1.495%	3.30
	SUB-TOTAL (D)				1796.62				21.03
	Inter-regional Assets (AC)				10924.58				172.71
	TOTAL (B+C+D)								
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	1.12.2002	9. 5.2006	809.05	1.00	97.704%	2.704%	21.88
	HVDC Stn between ER and SR								
2	HVDC BtoB Gazuwaka (50%)	70/2004	1. 9.1999	9. 4.2008	2480.49	1.00	96.597%	1.597%	39.61
3	Gazuwaka-II (50%)	138/2005	1. 3.2005	23.10.2006	4645.34	1.00	96.597%	1.597%	74.19
	SUB-TOTAL (E)				7934.88				135.68
	TOTAL INCENTIVE (Total A+E)				81598.71				1153.20