

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Coram:

1. Dr. Pramod Deo, Chairperson
2. Shri Bhanu Bhushan, Member
3. Shri R.Krishnamoorthy, Member

Petition No.159/2005

In the matter of

Approval of incentive based on availability of transmission system for the year 2004-05 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: 10.6.2008)**

The petitioner seeks approval for incentive for the year 2004-05 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 13.4.2005 certified the availability of intra-regional system and inter-regional links connecting Eastern Region to other regions, except 220 kV S/C Korba-Budhipadar transmission line during 2004-05. The availability of 220 kV S/C Korba-Budhipadar transmission line was subsequently certified by Member-Secretary WRPC vide his letter dated 13.9.2005. It is also noted that Member-Secretary, ERPC has certified availability of Gazuwaka HVDC Back-to-Back Pole-I and Pole-II separately. However, the average availability has been claimed by the petitioner for station as a whole which is in accordance with regulations 2004. The necessary details in this regard are as under:

S.No.	Assets	Availability
1	Intra-Regional AC system AC Transmission System of ER	99.906%
2	Inter-Regional AC system	
(i)	ER-NER link (400 kV D/C Bongaigaon- Malda transmission line)	99.585%
(ii)	ER- NR link (Biharshariff-Sasaram-Sarnath-Allahabad transmission line and AC Station)	99.799%
(iii)	AC portion of ER-SR link (400 kV D/C Jeypore-Gazuwaka transmission line)	99.867%
(iv)	ER-WR link (400 kV D/C Raipur- Rourkela transmsion line)	99.564%
(v)	ER-WR link (220 kV S/C Korba- Budhipadar transmission line)	99.564%
3	Inter-Regional HVDC system	
(i)	ER-NR (Sasaram HVDC Back-to-Back)	90.684%
(ii)	ER-SR (Gazuwaka HVDC Back-to-Back)	99.703%

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	54942.09	1047.20
2	Inter-regional AC system		
(i)	Bongaigaon- Malda (ER-NER) transmission line	5941.68	94.18
(ii)	Biharshariff-Sasaram-Sarnath-Allahabad transmission line and AC Station	1792.15	32.24
(iii)	AC portion of HVDC Back-to-Back Gazuwaka ER-SR and FSC on Jeypore-Gazuwaka transmission line	2365.94	44.17
(iv)	ER-WR link (Raipur- Rourkela transmssion line)	1538.92	24.07
(v)	ER-WR link (Korba- Budhipadar transmssion line)	220.65	3.45
3	Inter-Regional HVDC System		
(i)	ER-NR (Sasaram HVDC Back-to-Back)	809.05	0.00
(ii)	ER-SR (Gazuwaka HVDC Back-to-Back – I & II)	7125.99	335.14

6. In Petitions Nos. 102/2006 (Talcher-Meramundali transmission line) and 138/2005 (Pole-II at Gazuwaka), the petitioner had considered 100% equity corresponding to the additional capital expenditure incurred during 2004-05. However, in our calculations, average equity corresponding to the additional capital expenditure was taken for the year 2004-05 for the purpose of determination of tariff in those petitions. Therefore for computations of incentive also, average equity has been considered.

7. In case of the ICT at Biharshariff, additional capital expenditure for 2004-05 approved in the Petition No. 31/2007 has been taken into account.

8. In case of Bongaigaon- Malda transmission line, although the petitioner has claimed that equity has been taken based on considering the judgment of the Appellate Tribunal for Electricity, the equity amount considered in our calculations differs from that of the petitioner. Equity as per the Commission's tariff order subsequent to the Appellate Tribunal for Electricity judgment has been considered.

9. 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 basis 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 correctness of the cost break-up was confirmed by the representative of the petitioner during the hearing/.

10. 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%	58785.69	1047.11
2	Inter-regional AC system			
(i)	Bongaigaon- Malda (ER-NER) transmission line	98.00%	4969.69	78.77
(ii)	Biharshariff-Sasaram-Sarnath-Allahabad transmsion line and AC Station	98.00%	1792.15	32.24
(iii)	AC portion of HVDC Back-to-Back Gazuwaka ER-SR and FSC on Jeypore-Gazuwaka transmsion line	98.00%	2365.94	44.17
(iv)	ER-WR link (Raipur- Rourkela transmsion line)	98.00%	1538.92	24.07
(v)	ER-WR link (Korba- Budhipadar transmission line)	98.00%	220.65	3.45
3	Inter-regional HVDC System			
(i)	ER-NR (Sasaram HVDC Back-to-Back)	95.00%	809.05	0.00
(ii)	ER-SR (Gazuwaka HVDC Back-to-Back- I & II)	95.00%	6980.86	134.30
	Total		77462.95	1364.12

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 6.7.2006, 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 2004-05 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.159/2005.

Sd/-
(R.KRISHNAMOORTHY)
MEMBER

Sd/-
(BHANU BHUSHAN)
MEMBER

Sd/-
(DR. PRAMOD DEO)
CHAIRPERSON

New Delhi dated the 1st September 2008

ANNEXURE

Name of the Company: PGCIL								
Name of the Region: Eastern								
Petition No.:159/2005- Incentive for the year 2004-05								
ER Transmission System								
(Rs in lakh)								
Name of the Transmission System/ Line (1)		Petition No. (2)	D.O.C.O. (3)	Equity as per Tariff Order (4)	Period during the year (Year) (5)	Availability of the Transmission System (6)	Availability eligible for incentive (7)	Incentive amount (6)= (4)*(5) *(7)
A	Intra Regional AC System							
	Target availability for incentive (AC System)							
1	FARAKKA	126/2004	Before 31.3.2001	15300.50	1.00	99.91%	1.91%	291.63
2	KAHALGAON	127/2004	-do-	9723.50	1.00	99.91%	1.91%	185.33
3	JTTS	122/2004	-do-	6020.00	1.00	99.91%	1.91%	114.74
4	TALCHER	125/2004	-do-	5810.50	1.00	99.91%	1.91%	110.75
5	CHUKHA	124/2004	-do-	6894.72	1.00	99.91%	1.91%	131.41
6	RANGIT-RAMMAM & RANGIT-MELLY	118/2004	-do-	802.00	1.00	99.91%	1.91%	15.29
7	RANGIT-SILIGURI	-do-	-do-	1309.85	1.00	99.91%	1.91%	24.97
8	DEHRI-KARAMNASA	123/2004	-do-	377.31	1.00	99.91%	1.91%	7.19
9	HATHIDAH RIVER CROSSING SECTION OF 220 kV BIHARSHARIFF BEGUSARAI TRANSMISSION LINE	67/2004	-do-	204.80	1.00	99.91%	1.91%	3.90
10	1X63 MVA REACTOR AT KOLAGHAT-RENGALI LINE AT RENGALI END	119/2004	-do-	191.81	1.00	99.91%	1.91%	3.66
11	ICT AT JEYPORE	50/2005	1.10.2002	97.43	1.00	99.91%	1.91%	1.86
12	ICT AT MALDA	53/2005	1.5.2002	88.17	1.00	99.91%	1.91%	1.68
13	JAMSHEDPUR- RURKELA	67/2005	1.1.2003	918.02	1.00	99.91%	1.91%	17.50
14	TALCHER-MERAMUNDALI	102/2006	1.12.2003	584.26	1.00	99.91%	1.91%	11.14
15	LILLO BONGAIGAON-MALDA AT SILIGURI	112/2005	1.8.2003	526.69	1.00	99.91%	1.91%	10.04
16	PURNIA DALKOLA LINE AND EXTN. AT PURNIA SUB-STATION	144/2005	1.11.2003	115.80	1.00	99.91%	1.91%	2.21
17	LILLO BONGAIGAON-MALDA AT PURNIA	116/2006	1.11.2003	1199.31	1.00	99.91%	1.91%	22.86
18	ICT AT Biharshariff	73/2005	1.4.2004	183.31	1.00	99.91%	1.91%	3.49
19	Meramundali-Jeypore	48/2006	1.6.2004	3061.22	0.83	99.91%	1.91%	48.62
20	Bihar Grid Strengthening Scheme (Except ICT at Biharshariff)	31/2007	1.11.2004	1914.19	0.42	99.91%	1.91%	15.20
21	Kahalgaoon- Biharshariff	137/2006	1.12.2004	3331.69	0.33	99.91%	1.91%	21.17
22	MALDA AUTO TRANSFORMER	120/2004	Before 31.3.2001	130.62	1.00	99.91%	1.91%	2.49
	SUB-TOTAL (A)			58785.69				1047.11
B	Inter Regional AC Elements							
	<u>Inter Regional lines between ER and NER</u>							
1	400 kV D/C Bongaigaon-Malda transmission line (50%)	121/2004	1.4.2000	4969.69	1.00	99.59%	1.59%	78.77
	<u>Inter Regional lines between ER and NR</u>							
2	Biharshariff-Sasaram-Sarnath transmission line (50%)	51/2005	1.7.2001	1656.43	1.00	99.80%	1.80%	29.80
3	AC sub-station and Sarnath-Allahabad transmission line of Sasaram HVDC Back to Back (50%)	64/2005	1.12.2002	135.72	1.00	99.80%	1.80%	2.44
	SUB-TOTAL (B)			6761.84				111.01
C	AC Portion of HVDC sub-station package Between ER and SR							
1	AC Portion of HVDC back-to-back Jeypore- Gazuwaka (50%)	70/2004	1.9.1999	2365.94	1.00	99.87%	1.87%	44.17

	SUB-TOTAL (C)			2365.94				44.17
D	Inter Regional line between ER and WR							
1	Raipur-Rourkela (50%)	63/2005	1.4.2003	1538.92	1.00	99.56%	1.56%	24.07
2	Korba-Budhipadar (1/3rd)	69/2004	1.9.1999	220.65	1.00	99.56%	1.56%	3.45
	SUB-TOTAL (D)			1759.56				27.52
	Inter-regional Assets (AC) TOTAL (B+C+D)			10887.34				
E	HVDC Inter Regional Assets							
	Target availability for incentive (HVDC System)							95%
	<u>HVDC sub-station between ER and NR</u>							
1	Sasaram HVDC back-to-back (50%) (Excluding AC sub-station and Sarnath-Allahabad line of Sasaram HVDC back-to-back (50%))	64/2005	1.12.2002	809.05	1.00	90.68%	0.00%	0.00
	<u>HVDC sub-station between ER and SR</u>							
2	HVDC back-to-back Gazuwaka (50%)	70/2004	1.9.1999	2480.65	1.00	99.70%	4.70%	116.66
3	Gazuwaka-II (50%)	138/2005	1.3.2005	4500.21	0.08	99.70%	4.70%	17.64
	SUB-TOTAL (E)			7789.91				134.30
	TOTAL INCENTIVE (Total A+E)			77462.95				1364.12