

**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.102/2007

In the matter of

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

And in the matter of

Power Grid Corporation of India Limited, Gurgaon
Vs

..Petitioner

1. Karnataka Power Transmission Corporation Ltd., Bangalore
2. Transmission Corporation of Andhra Pradesh Ltd., Hyderabad
3. Kerala State Electricity Board, Thiruvananthapuram
4. Tamil Nadu Electricity Board, Chennai
5. Electricity Department, Govt. of Pondicherry, Pondicherry
6. Electricity Department, Govt. of Goa, Panaji

Respondents

The following were present:

1. Shri U.K.Tyagi, PGCIL
2. Shri V.V.Sharma, PGCIL
3. Shri A.K.Nagpal, PGCIL
4. Shri M.M.Mondal, PGCIL
5. Shri B.C.Pant, PGCIL
6. Shri R.Prasad, PGCIL
7. Shri Mohd. Mohsin, PGCIL

**ORDER
(DATE OF HEARING: 21.5.2009)**

The petitioner seeks approval for incentive for the year 2006-07 for the transmission system in Southern 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. In terms of Note1 below Regulation 51, recovery of fixed charges below the level of target availability is on pro rata basis and at zero availability no transmission charges are payable.

4. 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.

5. Member-Secretary, SPRC (earlier SREB) in his letter dated 3.5.2007 has certified the availability of the transmission system in the Southern Region and the inter-regional AC system, inter-regional HVDC system and bi-lateral assets during 2006-07 as under:

S.No.	Assets	Availability
1.	Intra-Regional AC system AC transmission system of Southern Region	99.74%
2.	Intra-Regional HVDC system HVDC Talcher-Kolar	96.98%
3.	Inter-Regional AC system	
(i)	Ramagundam-Chandrapur (Bhadrawati) (SR-WR)	99.68%
(ii)	Jeypore-Gazuwaka Ckt I & II (SR-ER)	99.34%

4.	Inter-Regional HVDC system	
(i)	Bhadrawati back-to-back I & II (SR-WR)	97.29%
(ii)	Gazuwaka back-to-back I & II (SR-ER)	96.99%
5.	Bilateral Transmission System	
	Kayamkulam Transmission System (with KSEB)	99.92%

6. Based on the availability certified by Member-Secretary, SRPC, the petitioner has claimed incentive as under:

S.No.	Assets	Equity (Rs. in lakh)	Incentive (Rs. in lakh)
1.	Intra-Regional AC system	110095.13	1915.66
2.	Intra-Regional HVDC system HVDC Talcher-Kolar	50274.53	995.44
3.	Inter-Regional AC system Ramagundam-Chandrapur (Bhadrawati) (SR-WR) Jeypore-Gazuwaka I & II (SR-ER)	1211.75 2365.94	20.36 31.70
4.	Inter-Regional HVDC system Bhadrawati back-to-back I & II (SR-WR) Gazuwaka back-to-back I & II (SR-ER)	3958.57 7564.30	90.65 150.53
5.	Bilateral Transmission System Kayamkulam Transmission System (KSEB only)	2955.93	56.75
		178426.15	3261.09

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

8. In case of (i) ICT-III at Nagarjunasagar (Petition No. 47/2009), (ii) Vijaywada-Nellore-Sriperumbdur (Petition No. 43/2009), (iii) 400 kV D/C Mysore- Neelamangala transmission line (Petition No. 51/2009), (iv) 40% FSC on Gooty- Neelamangala Ckt-II (Petition No. 49/2009) and (v) 400 kV Madurai- Thiruvanathpuram transmission line (Petition No. 45/2009), the petitioner has claimed equity corresponding to additional capital expenditure for the year 2006-07. The transmission charges on account of additional capital expenditure in respect of these transmission assets are yet to be

approved. Therefore, equity as approved in the Petition No. 48/2005 has been considered. The petitioner is granted liberty to approach the Commission after approval of transmission charges.

9. In case of certain assets (covered under Petition No.70/2004) 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 has been considered.

10. Incentive has been worked out considering the availability as certified by the Member-Secretary, SRPC in the light of the above discussion. Based on the above, the petitioner shall be entitled to incentive as indicated hereunder:

S.No.	Assets	Equity (Rs. in lakh)	Incentive Amount (Rs. in lakh)
1.	Intra-Regional AC system	111011.92	1902.03
2.	Intra-Regional HVDC system HVDC Talcher-Kolar	50274.53	995.44
3.	Inter-Regional AC system Ramagundam-Chandrapur (Bhadrawati) (SR-WR) Jeypore-Gazuwaka I & II (SR-ER)	1211.75 2365.94	20.36 31.70
4.	Inter-Regional HVDC system Bhadrawati back-to- back Pole-I & II (SR-WR) Gazuwaka back-to-back Pole--I & II (SR-ER)	3958.57 7564.31	90.65 150.53
5.	Bilateral Transmission System Kayamkulam Transmission System (KSEB only)	2955.93	56.75

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

12. The Commission in its order dated 17.8.2007, 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 except for the Kayamkulam Transmission System shall be shared by the respondents, the beneficiaries in the Southern Region, in proportion of the transmission charges shared by them in the region. As regards the Kayamkulam Transmission System, the entire incentive shall be borne by Kerala State Electricity Board.

14. This order disposes of Petition No. 102/2007.

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

New Delhi dated the 9th June 2009

ANNEXURE

Name of the Region: Southern

Petition No.: 102/2007- Incentive for the year 2006-07

1. SOUTHERN REGION								Rs. in lakh
Name of the Transmission System/ Line (1)	Petition No. for the period 2001-04 & date of Tariff Order (2)	D.O.C.O. (3)	Equity as per order(4)	Period during the year (Year) (5)	Availability of the Transmission System Elements of PGCIL of Southern Region (6)	Availability eligible for incentive (7)	Incentive amount (8)= (4)*(5)*(7)	
(i) INTRA REGIONAL AC SYSTEM								
Basic Availability for Incentive calculation							98.00%	
1	RAMAGUNDUM I&II (INCL. ICT AT KHAMMAM & REACTOR AT GAZUWAKA)	130/2004 order dt.17.3.2008	Before 31.3.2001	17541.21	1.00	99.74%	305.22	
2	CTP I	135/2004 order dt.17.03.2008	-do-	13217.50	1.00	99.74%	229.98	
3	AUTO T/F AT HYDERABAD S/S	129/2004 order dt.17.3.2008	-do-	355.07	1.00	99.74%	6.18	
4	CUDDAPAH REACTOR	-do-	-do-	339.03	1.00	99.74%	5.90	
5	SPECIAL ENERGY METERS	132/2004 order dt.31.10.2005	-do-	263.03	1.00	99.74%	4.58	
6	RAMGUNDUM-HYDERABAD	137/2004 order dt.16.4.2008	-do-	1045.45	1.00	99.74%	18.19	
7	ICT AT NAGARJUNASAGAR	133/2004 order dt.16.4.2008	-do-	352.98	1.00	99.74%	6.14	
8	NLC I	134/2004 order dt.24.01.2008	-do-	3997.08	1.00	99.74%	69.55	
9	NLC II	131/2004 order dt.24.01.2008	-do-	20203.50	1.00	99.74%	351.54	
10	KAIGA -SIRSI	136/2004 order dt.16.4.2008	-do-	2492.66	1.00	99.74%	43.37	
11	NEYVELI- BAHOR	6/2005 order dt.29.4.2008	1.7.2001	462.53	1.00	99.74%	8.05	
12	LILo of One Ckt. of NEYVELI-TRICHY	36/2005 order dt.17.1.2006	1.2.2002	165.67	1.00	99.74%	2.88	
13	LILo of 400 KV Cuddapah-Bangalore line at Kolar & 400 KV KOLAR- Madras transmission line	84/2005 order dt.09.5.2006	1.12.2002	2374.81	1.00	99.74%	41.32	
14	400 KV HOSUR-SALEM transmission line, Auto Transformer-I at Hossur	-do-	1.12.2002	1535.51	1.00	99.74%	26.72	
15	315 MVA AUTO TRANSFORMER-II AT HOSSUR	-do-	1.2.2003	144.70	1.00	99.74%	2.52	
16	500 MVA Auto transformer & 400 KV D/C Kolar-Hoody line	-do-	1.2.2003	1482.30	1.00	99.74%	25.79	
17	VIJAYAWADA-NELLORE SRIPERUMBUR	48/2005 order dt.14.1.2006	1.3.2003	5758.39	1.00	99.74%	100.20	
18	400 KV D/C Kolar-Hosur Transmission Line	127/2005 order dt. 9.5.2006	1.4.2003	1299.92	1.00	99.74%	22.62	
19	400 KV S/C Salem-Udumalpet Transmission Line	-do-	1.6.2003	1494.62	1.00	99.74%	26.01	

20	Additional Bays at Kolar and Hosur	63/2008 order dt.1.9.2008	1.9.2003	106.57	1.00	99.74%	1.74%	1.85
21	Hiryur S/S including 315 MVA Auto Transformer and LILO of Davangere-Hoody	-do-	1.2.2004	1202.95	1.00	99.74%	1.74%	20.93
22	Khammam-Nagarjunasagar	113/2008 order dt. 3.2.2009	1.3.2004	927.11	1.00	99.74%	1.74%	16.13
23	400 KV D/C Ramagundam-Hyderabad Transmission Line (Ramagundam-III)	21/2006 order dt.22.11.2006 & 113/2008 dt 3-2-2009	1.11.2004	1902.74	1.00	99.74%	1.74%	33.11
24	40%FSC on Gooty-Neelmangla 400 KV S/C line & Nagarjunasagar-Cuddapah	129/2006 order dt.23.3.2007	1.11.2004	944.73	1.00	99.74%	1.74%	16.44
25	400 KV D/C Vijaywada-Gazuwaka Transmission Line	40/2008 order dt.28.8.2008	1.3.2005	6569.94	1.00	99.74%	1.74%	114.32
26	Hyderabad-Kurnool- Gooty	113/2008 order dt. 3.2.2009	1.3.2005	1992.54	1.00	99.74%	1.74%	34.67
27	40%FSC on Gooty-Neelmangla (Ckt- II)	129/2006 order dt.23.3.2007	01.05.2005	438.43	1.00	99.74%	1.74%	7.63
28	Gooty- Neelmangala (Ramagundam-III)	113/2008 order dt. 3.2.2009	1.05.2005	1643.35	1.00	99.74%	1.74%	28.59
29	400 kV Madurai-Thiruvananthapuram TL	136/2006 order dt 6.2.2007	1. 8.2005	7004.53	1.00	99.74%	1.74%	121.88
30	Kaiga- Narendra TL	123/2007 order dt 30-5-2008	1.11.2005	4423.04	1.00	99.74%	1.74%	76.96
31	Narendra- Sub station	123/2007 order dt 30-5-2008	1.11.2005	1560.54	1.00	99.74%	1.74%	27.15
32	400 kV Nagarjunasagar- Raichur line & extn of Mehboobnagar S/S	23/2009 order dt 13-5-2009	1. 1.2006	322.88	1.00	99.74%	1.74%	5.62
33	400 kV Mysore- Neelamangala TL	127/2007 order dt 19-2-2008	1. 5.2006	3806.34	0.92	99.74%	1.74%	60.71
34	400 kV D/C Nellore-Sriperumbdur line at Almati	23/2009 order dt 13-5-2009	1. 6.2006	2200.54	0.83	99.74%	1.74%	31.91
35	2nd 315 MVA ICT at Narendra S/S	123/2007 order dt 30-5-2008	1. 9.2006	191.71	0.58	99.74%	1.74%	1.95
36	400 kV Neelmangala-Somanhalli TL	126/2008 order dt 24-4-2009	1. 1.2007	1248.02	0.25	99.74%	1.74%	5.43
	Sub Total-(i)			111011.92				1902.03
(ii)	INTRA REGIONAL HVDC SYSTEM							
	Basic Availability for Incentive calculation							95.00%
37	Talcher -Kolar HVDC Line(Pole I)	84/2005 order dt.29.4.2008	1.12.2002	36833.18	1.00	96.98%	1.98%	729.30
38	HVDC Terminal station at Talcher & Kolar related to Pole II	127/2005 order dt.29.4.2008	1.3.2003	13441.35	1.00	96.98%	1.98%	266.14
	Sub Total-(ii)			50274.53				995.44
(iii)	INTER REGIONAL AC SYSTEMS							
	Basic Availability for Incentive calculation							98.00%
39	RAMAGUNDUM-CHANDRAPUR I & II (SR-	138/2004 order	Before 31.3.2001	1211.75	1.00	99.68%	1.68%	20.36

	WR)(50%)	dt.14.02.2008						
40	400 KV JEYPORE-GAZUWAKA Transmission Line (SR-ER) (50%)	70/2004 order dt. 9-4-2008	Before 31.3.2001	2365.94	1.00	99.34%	1.34%	31.70
	Sub Total-(iii)			3577.69				52.06
(iv)	INTER REGIONAL HVDC System							
	Basic Availability for Incentive calculation							95.00%
41	HVDC Back to Back at Chandrapur (50%) Pole-I & II	137/2004 order dt.16.4.2008	Before 31.3.2001	3958.57	1.00	97.29%	2.29%	90.65
42	HVDC Back to Back station at GAZUWAKA (Pole-I) (50%)	70/2004 order dt. 9-4-2008	Before 31.3.2001	2480.65	1.00	96.99%	1.99%	49.36
43	HVDC Back to Back station at GAZUWAKA (Pole-II) (50%)	40/2008 order dt.28.8.2008	1.3.2005	5083.66	1.00	96.99%	1.99%	101.16
	Sub Total-(iv)			11522.87				241.18
(v)	BI LATERAL SYSTEM (KSEB only)							
	KAYAMKULAM TRANSMISSION SYSTEM							
	Basic Availability for Incentive calculation							98.00%
44	KAYAMKULAM-PALLOM	74/2004 order dt.16.4.2008	Before 31.3.2001	1429.31	1.00	99.92%	1.92%	27.44
45	KAYAMKULAM-EDMON	-do-	-do-	1526.62	1.00	99.92%	1.92%	29.31
	Sub Total(v)			2955.93				56.75
	TOTAL			179342.94				3247.46