

**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.78/2006**

**In the matter of**

Approval of incentive based on availability of transmission system for the year 2005-06 for Southern Region.

**And in the matter of**

Power Grid Corporation of India Limited, Gurgaon

**..Petitioner**

Vs

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: 21.4.2009)**

The petitioner seeks approval for incentive for the year 2005-06 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 10.5.2006 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 2005-06 as under:

S.No.	Assets	Availability
1.	Intra-Regional AC system <b>AC transmission system of Southern Region</b>	<b>99.64%</b>
2.	Intra-Regional HVDC system <b>HVDC Talcher-Kolar</b>	<b>97.81%</b>
3.	Inter-Regional AC system	
(i)	<b>Ramagundam-Chandrapur I &amp; II (SR-WR)</b>	<b>99.69%</b>
(ii)	<b>Jeypore-Gazuwaka Ckt I &amp; II (SR-ER)</b>	<b>97.54%</b>
4.	Inter-Regional HVDC system	
(i)	<b>Bhadrawati back-to-back I&amp;II (SR-ER)</b>	<b>99.00%</b>
(ii)	<b>Gazuwaka back-to-back I&amp;II (SR-ER)</b>	<b>99.44%</b>
5.	Bilateral Transmission System <b>Kayamkulam Transmission System (with KSEB)</b>	<b>99.94%</b>

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	102775.98	1588.12
2.	Intra-Regional HVDC system <b>HVDC Talcher-Kolar</b>	52074.53	1412.71
3.	Inter-Regional AC system <b>Ramagundam-Chandrapur I &amp; II (SR-WR)</b> <b>Jeypore-Gazuwaka I &amp; II (SR-ER)</b>	1211.75 2365.94	20.48 0.00
4.	Inter-Regional HVDC system <b>Bhadravati back-to-back I&amp;II (SR-ER)</b> <b>VSP (Gazuwaka) back-to-back I&amp;II (SR-ER)</b>	3958.57 7339.77	158.34 105.69
5.	Bilateral Transmission System <b>Kayamkulam Transmission System (KSEB only)</b>	2955.93	57.35

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 Vijaywada-Nellore-Sriperumbadur (SR system strengthening), the petitioner has claimed equity corresponding to additional capital expenditure for the year 2005-06. The transmission charges in respect of additional capital expenditure 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	102737.09	1585.34
2.	Intra-Regional HVDC system <b>HVDC Talcher-Kolar</b>	50274.53	1412.71
3.	Inter-Regional AC system <b>Ramagundam-Chandrapur I &amp; II (SR-WR)</b> <b>Jeypore-Gazuwaka I &amp; II (SR-ER)</b>	3577.69	20.48
4.	Inter-Regional HVDC system <b>Chandrapur back-to-back Pole-I &amp; II</b> <b>Bhadrawati back-to-back Pole-I</b> <b>Gazuwaka back-to-back Pole-II</b>	3958.57 2480.65 4859.12	158.34 35.72 69.97
5.	Bilateral Transmission System <b>Kayamkulam Transmission System (KSEB only)</b>	2955.93	57.35

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

12. The Commission in its order dated 24.8.2006, 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.

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

14. This order disposes of Petition No. 78/2006.

Sd/- (V.S.VERMA) MEMBER  
Sd/- (S.JAYARAMAN) MEMBER  
Sd/- (R.KRISHNAMOORTHY) MEMBER  
Sd/- (DR. PRAMOD DEO) CHAIRPERSON  
New Delhi dated the 8th June 2009

## ANNEXURE

Name of the Company: PGCIL  
 Name of the Region: Southern  
 Petition No.:78/2006- Incentive for the year 2005-06

## 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	99.64%	287.68
2	CTP I	135/2004 order dt.17. 3.2008	-do-	13217.50	1.00	99.64%	216.77
3	AUTO T/F AT HYDERABAD S/S	129/2004 order dt.17.3.2008	-do-	355.07	1.00	99.64%	5.82
4	CUDDAPAH REACTOR	-do-	-do-	339.03	1.00	99.64%	5.56
5	SPECIAL ENERGY METERS	132/2004 order dt.31.10.2005	-do-	263.03	1.00	99.64%	4.31
6	RAMGUNDUM-HYDERABAD	137/2004 order dt.16.4.2008	-do-	1045.45	1.00	99.64%	17.15
7	ICT AT NAGARJUNASAGAR	133/2004 order dt.16.4.2008	-do-	352.98	1.00	99.64%	5.79
8	NLC I	134/2004 order dt.24.01.2008	-do-	3997.08	1.00	99.64%	65.55
9	NLC II	131/2004 order dt.24.01.2008	-do-	20203.50	1.00	99.64%	331.34
10	KAIGA -SIRSI	136/2004 order dt.16.4.2008	-do-	2492.66	1.00	99.64%	40.88
11	NEYVELI- BAHOR	6/2005 order dt.29.4.2008	1.7.2001	462.53	1.00	99.64%	7.59
12	LIL0 of One Ckt. of NEYVELI- TRICHY	36/2005 order dt.17.1.2006	1.2.2002	165.67	1.00	99.64%	2.72
13	LIL0 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	99.64%	38.95
14	400 KV HOSUR-SALEM transmission line, Auto Transformer-I at Hossur	-do-	1.12.2002	1535.51	1.00	99.64%	25.18
15	315 MVA AUTO TRANSFORMER-II AT HOSSUR	-do-	1.2.2003	144.70	1.00	99.64%	2.37
16	500 MVA Auto transformer & 400 KV D/C Kolar-Hoody line	-do-	1.2.2003	1482.30	1.00	99.64%	24.31
17	VIJAYAWADA-NELLORE SRIPERUMBDUR	48/2005 order dt.14.1.2006	1.3.2003	5758.39	1.00	99.64%	94.44
18	400 KV D/C Kolar-Hosur Transmission Line	127/2005 order dt. 9.5.2006	1.4.2003	1299.92	1.00	99.64%	21.32
19	400 KV S/C Salem-Udumalpet Transmission Line	-do-	1.6.2003	1494.62	1.00	99.64%	24.51
20	Additional Bays at Kolar and Hosur	63/2008 order dt.1.9.2008	1.9.2003	106.27	1.00	99.64%	1.74
21	Hiryur S/S including 315 MVA Auto Transformer and LIL0 of Davangere-Hoody	-do-	1.2.2004	1200.07	1.00	99.64%	19.68
22	Khammam-Nagarjunasagar	113/2008 order dt. 3.2.2009	1.3.2004	927.11	1.00	99.64%	15.20
23	400 KV D/C Ramagundam- Hyderabad Transmission Line (Ramagundam-III)	21/2006 order dt.22.11.2006	1.11.2004	1902.74	1.00	99.64%	31.20
24	40%FSC on Gooty-Neelmangla 400 KV S/C line & Nagarjunasagar-Cuddapah	129/2006 Order dt.23.3.2007	1.11.2004	930.52	1.00	99.64%	15.26
25	400 KV D/C Vijaywada- Gazuwaka Transmission Line	40/2008 Order dt.28.8.2008	1.3.2005	6268.22	1.00	99.64%	102.80
26	Hyderabad-Kurnool- Gooty	113/2008 Order dt. 3.2.2009	1.3.2005	1896.22	1.00	99.64%	31.10

27	40%FSC on Gooty-Neelmangla (Ckt- II)	129/2006 Order dt.23.3.2007	1. 5.2005	426.61	0.92	<b>99.64%</b>	1.64%	6.41
28	Gooty- Neelmangala (Ramagundam-III)	113/2008 Order dt. 3.2.2009	1. 5.2005	1560.22	0.92	<b>99.64%</b>	1.64%	23.46
29	400 kV Madurai-Thiruvananthapuram TL	136/2006 Order dt 06.2.2007	1. 8.2005	6914.50	0.67	<b>99.64%</b>	1.64%	75.60
30	Kaiga- Narendra TL	128/2006 Order dt 15-3-2007	1.11.2005	4357.47	0.42	<b>99.64%</b>	1.64%	29.78
31	Narendra- Sub station	128/2006 Order dt 15-3-2007	1.11.2005	1398.30	0.42	<b>99.64%</b>	1.64%	9.56
32	400 kV Nagarjunasagar-Raichur line & extn of Mehboobnagar S/S	143/2007 Order dt 12-5-2008	1. 1.2006	322.88	0.25	<b>99.64%</b>	1.64%	1.32
	<b>Sub Total-(i)</b>			<b>102737.09</b>				<b>1585.34</b>
<b>(ii)</b>	<b>INTRA REGIONAL HVDC SYSTEM</b>							
	Basic Availability for Incentive calculation							<b>95.00%</b>
33	Talcher -Kolar HVDC Line( Pole I)	84/2005 order dt.29.4.2008	1.12.2002	<b>36833.18</b>	1.00	97.81%	2.81%	<b>1035.01</b>
34	HVDC Terminal station at Talcher & Kolar related to Pole II	127/2005 order dt.29.4.2008	1.3.2003	<b>13441.35</b>	1.00	97.81%	2.81%	<b>377.70</b>
	<b>Sub Total-(ii)</b>			<b>50274.53</b>				<b>1412.71</b>
<b>(iii)</b>	<b>INTER REGIONAL AC SYSTEMS</b>							
	Basic Availability for Incentive calculation							<b>98.00%</b>
35	RAMAGUNDUM-CHANDRAPUR I & II (SR-WR)(50%)	138/2004 order dt.14.02.2008	Before 31.3.2001	1211.75	1.00	99.69%	1.69%	<b>20.48</b>
36	400 KV JEYPORE-GAZUWAKA Transmission Line (SR-ER) (50%)	70/2004 order dt.09-04-2008	Before 31.3.2001	2365.94	1.00	97.54%	0.00%	<b>0.00</b>
	<b>Sub Total-(iii)</b>			<b>3577.69</b>				<b>20.48</b>
<b>(iv)</b>	<b>INTER REGIONAL HVDC System</b>							
	Basic Availability for Incentive calculation							<b>95.00%</b>
37	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	99.00%	4.00%	<b>158.34</b>
38	HVDC Back to Back station at GAZUWAKA (Pole-I) (50%)	70/2004 Order dt.09-04-2008	Before 31.3.2001	2480.65	1.00	96.44%	1.44%	<b>35.72</b>
39	HVDC Back to Back station at GAZUWAKA (Pole-II) (50%)	40/2008 order dt.28.08.2008	1.3.2005	4859.12	1.00	96.44%	1.44%	<b>69.97</b>
	<b>Sub Total-(iv)</b>			<b>11298.33</b>				<b>264.04</b>
<b>(v)</b>	<b>BI LATERAL SYSTEM (KSEB only)</b>							
	<b>KAYAMKULAM TRANSMISSION SYSTEM</b>							
	Basic Availability for Incentive calculation							<b>98.00%</b>
40	KAYAMKULAM-PALLOM	74/2004 order dt.16.4.2008	Before 31.3.2001	1429.31	1.00	99.94%	1.94%	<b>27.73</b>
41	KAYAMKULAM-EDMON	-do-	-do-	1526.62	1.00	99.94%	1.94%	<b>29.62</b>
	<b>Sub Total(v)</b>			<b>2955.93</b>				<b>57.35</b>
	<b>TOTAL</b>			<b>170843.58</b>				<b>3339.91</b>