

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 118/2009

Coram:

**Shri V.S. Verma, Member
Shri M. Deena Dayalan, Member**

Date of Hearing : 17.09.2013

Date of Order : 05.11.2013

In the matter of:

Approval of incentive under Regulation-86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations 1999 and Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2004 based on availability of transmission system of Southern Region for year 2008-09

And

In the matter of:

Power Grid Corporation of India Limited,
"Saudamani", Plot No.2,
Sector-29, Gurgaon -122 001.

.....**Petitioner**

VERSUS

1. Karnataka Power transmission Corporation Ltd.,
Kaveri Bhawan, Banglore-560 009
2. Transmission corporation of Andhra Pradesh Ltd.,
Vidyut Soudha, Hyderabad-500 082
3. Kerla State Electricity Board,
Vaidyuthi Bhavanam,
Pattom, Thriuvananthapuram – 695 004
4. Tamilnadu Electricity Board
NPKRR Maaligai, 800, Anna Salai
Chaennai-600 002



5. Electricity Department
Government of Pondicherry
Pondicherry – 605 001
6. Eastern Power Distribution Company of Andhra Pradesh
Limited (APEPDCL)
APEDCL, P&T Colony,
Seethmahadara, Vishakhapatnam
Andhra Pradesh
7. Southern Power Distribution Company of Andhra Pradesh
Limited (APSPDCL)
Srinivasasa Kalyana Mandapam Backside,
Tiruchanoor Road, Kesavayana Gunta
Tirupati-517 501
8. Central Power Distribution Company of Andhra Pradesh
Limited (APCPDCL)
Corporate office, Mint Compound
Hyderabad-500063
9. North Power Distribution Company of Andhra Pradesh
Limited (APNPDCL)
Opp. NIT Petrol Pump,
Chaitanayapuri, Kazipet
Warangal-506 004
10. Bangalore Electricity Supply Company Limited
(BESCOM) Corporate Office, K.R. circle
Bangalore-560 001
11. Gulbarga Electricity Supply Company Limited (GESCOM)
Station Main Road, Gulbarga
Karnataka
12. Hubli Electricity supply Company Limited (HESCOM)
Navanagar, PB Road
Hubli, Karnataka
13. Mescom Corporate Office
Paradigm plaza, Ab Shetty circle
Mangalore-575 001
14. Chamundeswari Electricity Supply Corporation Ltd.

(CESC)
927, LJ avenue
Ground Floor, New Kantharaj Urs Road
Saraswatipuram, Mysore-570 009

15. Electricity Department
Government of Goa
Vidyuti Bhawan, Panaji
Goa-403 001

...Respondents

Representatives of the Petitioner : Shri S.S Raju, PGCIL
Shri B.K. Sahoo, PGCIL
Shri B.C. Pant, PGCIL
Shri M.M. Mondal, PGCIL
Shri J. Mazumdar, PGCIL
Shri Shashi Bhusan, PGCIL

Counsel for the Respondent : None

ORDER

This is a petition filed by Power Grid Corporation Limited (PGCIL) seeking approval for incentive for the year 2008-09 for its transmission system in Southern Region under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2004 (hereinafter referred to as "the 2004 Tariff Regulations").

2. Regulation 51 of the 2004 Tariff Regulations provides that:-

"51. Target Availability for recovery of full transmission charges

- (1) AC System : 98%
- (2) HVDC bi-pole links and HVDC back-to-back stations : 95%



Note 1

Recovery of fixed charges below the level of target availability shall be on pro rata basis. At zero availability, no transmission charges shall be payable.

Note 2

The target availability shall be calculated in accordance with procedure specified in Appendix-III."

3. Clause(1) of Regulation 60 of the 2004 Tariff Regulations provides that:-

"60. Incentive :

- (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. The petitioner initially submitted along with the petition, the availability of the intra-regional and inter-regional AC and HVDC systems on the basis of the availability certificate issued by the Member Secretary, SRPC on 6.5.2009. The petitioner submitted the revised availability of the various transmission systems, vide affidavit dated 3.1.2012, on the basis of the availability certificate issued by the Member Secretary SRPC on 16.12.2011. Accordingly, the petitioner has submitted the revised the incentive calculations based on the revised availability and the equity of all the assets commissioned in the Southern Region upto 31.3.2009. The details of certified availability, target availability and availability eligible for incentive are given hereunder:-

(All figures in %)

SYSTEM	AVAILABILITY (%)	TARGET AVAILABILITY (%)	% FOR INCENTIVE
1	2	3	4
Intra Regional			
AC System Intra Regional (SR)	99.53	98.00	1.53
HVDC Talcher - Kolar (SR)	99.23	95.00	4.23
AC System Jeypore - Gazuwaka Circuit - I & II (SR – ER Link)	99.94	98.00	1.94
HVDC Gazuwaka Back to back – I & II (SR - ER)	99.63	95.00	4.63
Inter Regional			
AC Ramagundam - Chanderpur (Bhadrawati) (SR - WR)	99.80	98.00	1.80
HVDC Bhadrawati Back to Back I & II (SR-WR)	99.12	95.00	4.12
c) Bilateral Transmission System			
Kayamkulam Transmission System (With KSEB)	99.71	98.00	1.71

5. As provided in the 2004 Tariff Regulations, the incentive for the year 2008-09 has been worked out considering the availability of transmission system as certified by the Member Secretary, SRPC and the equity of all the assets commissioned during the period 2004-09 in the Southern Region. The details of the incentive claimed by the petitioner and the incentive worked are given overleaf:-

(₹ in lakh)

SYSTEM	Equity Amount as per PGCIL	Incentive amount as per PGCIL	Equity amount as worked Out	Incentive amount as worked out	Difference in incentive claimed and worked out.
1	2	3	4	5	(3-5)
Intra-Regional					
AC System Intra Regional (SR)	136799.34	2093.03	136945.05	2095.26	-2.23
AC Jeypore - Gazuwaka - I & II (SR - ER)	5440.11	105.54	5440.11	105.54	0.00
HVDC Talcher - Kolar (SR)	53346.17	2256.54	53338.40	2256.21	0.33
HVDC Gazuwaka Back to back - I & II (SR – ER)	15159.61	701.89	15159.61	701.89	0.00
Inter-Regional					
AC Ramagundam - Chandrapur (Bhadrawati) (SR - WR)	1211.75	21.81	1211.75	21.81	0.00
HVDC Bhadrawati Back to Back I & II (SR-WR)	3958.57	163.09	3958.57	163.09	0.00
Bilateral					
Kayamkulam Transmission System (Bilateral KSEB)	1776.39	30.38	1776.39	30.38	0.00
Down Stream					
APTRANSCO	539.17	8.68	516.12	7.90	0.78
KPTCL	708.92	13.97	708.92	10.85	3.14
TNEB	1726.40	34.53	1915.63	29.31	5.22
TOTAL	220666.43	5429.46	220970.56	5422.23	7.23

6. The details of calculation in support of the incentive allowed are given in the attached Annexure.

7. The petitioner has not considered the additional capital expenditure allowed by the Commission vide order dated 18.10.2010 in Petition No. 55/2010, order dated 3.2.2010 in Petition No. 291/2009, order dated 8.4.2010 and order dated 4.4.2013 in Petition No. 8/2010 while claiming the incentive in the petition. The additional capital expenditure allowed by the Commission in the said orders has been taken into consideration for working out the equity and the incentive in the instant order and hence there is difference in the equity and incentive amount claimed by the petitioner and the equity and incentive allowed by the Commission. Incentive for the assets covered under downstream System has been worked out as per availability % of Intra-Regional AC transmission system and this has resulted in difference in incentive worked out for APTRANSCO, KPTCL and TNEB. Further, in case of TNEB, difference in the equity and incentive amounts claimed by the petitioner and allowed in the instant petition is due to error in pro-rata equity calculations by the petitioner.

8. The Commission in its order dated 17.7.2009, as an interim measure allowed 90% of the incentive claimed by the petitioner in the petition. The provisional incentive charges allowed shall be adjusted by the petitioner against final incentive allowed for the year 2008-09 in the instant order.

9. The incentive in respect of Southern Regional transmission assets excluding bilateral project shall be shared by the respondents, the beneficiaries in the Southern Region, in proportion to the transmission charges shared by them in the region as provided in the 2004 Tariff Regulations. In case of bilateral system, Kayamkulam Transmission System, the incentive amount shall be payable by KSEB.

10. This order disposes of Petition No. 118/2009

sd/-
(M. Deena Dayalan)
Member

sd/-
(V.S. Verma)
Member

ANNEXURE

(₹ in lakh)

Name of the Transmission System/ Line (1)	date of Tariff Order (2)	Petition No for transmission system during 2009-14 block (3)	D.O.C.O. (4)	Average Equity as per tariff order(5)	Period during the year (Year) (6)	Average Equity (7)= (5)*(6)	Availability (8)	Availability eligible for incentive (9)	Incentive amount (10)= (9)*(7)	
(A) (i) INTRA REGIONAL AC SYSTEM										
									98.00%	
1	RAMAGUNDUM I&II (INCL. ICT AT KHAMMAM & REACTOR AT GAZUWAKA)	10.12.2009	76/2009	Before 31.3.2001	17571.99	1.00	17571.99	99.53%	1.53%	268.85
2	CTP I	17.03.2008	135/2004	-do-	13217.50	1.00	13217.50	99.53%	1.53%	202.23
3	AUTO T/F AT HYDERABAD S/S	17.03.2008	129/2004 119/2010	-do-	355.07	1.00	355.07	99.53%	1.53%	5.43
4	CUDDAPAH REACTOR	17.03.2008	129/2004	-do-	339.03	1.00	339.03	99.53%	1.53%	5.19
5	SPECIAL ENERGY METERS	31.10.2005	132/2004	-do-	263.03	1.00	263.03	99.53%	1.53%	4.02
6	RAMGUNDUM-HYDERABAD	16.04.2008	137/2004 178/2010 Asset-1	-do-	1045.45	1.00	1045.45	99.53%	1.53%	16.00
7	ICT-III AT NAGARJUNASAGAR	01.07.2009, 23.10.2009 08.02.2011	47/2009 62/2010	-do-	355.80	1.00	355.80	99.53%	1.53%	5.44
8	NLC I	18.10.2010	55/2010	-do-	4024.58	1.00	4024.58	99.53%	1.53%	61.58
9	NLC II	24.01.2008 01.08.2011	131/2004 90/2009	-do-	20203.50	1.00	20203.50	99.53%	1.53%	309.11
10	KAIGA -SIRSI	16.04.2008 01.04.2011	136/2004 206/2010	-do-	2492.66	1.00	2492.66	99.53%	1.53%	38.14



11	NEYVELI- BAHOR	29.04.2008 03.11.2010	06/2005 98/2010	1.7.2001	462.53	1.00	462.53	99.53%	1.53%	7.08
12	LILLO of One Ckt. of NEYVELI- TRICHY	17.01.2006 01.12.2010	36/2005 150/2010	1.2.2002	165.67	1.00	165.67	99.53%	1.53%	2.53
13	LILLO of 400 KV Cuddapah- Bangalore line at Kolar & 400 KV KOLAR- Madras transmission line	29.06.2011	58/2010 Asset-4	1.12.2002	2385.40	1.00	2385.40	99.53%	1.53%	36.50
14	400 KV HOSUR-SALEM transmission line, Auto Transformer-I at Hossur	29.06.2011	58/2010 Asset-2	1.12.2002	1588.80	1.00	1588.80	99.53%	1.53%	24.31
15	315 MVA AUTO TRANSFORMER-II AT HOSSUR	09.05.2006 and 29.04.2008	84/2005	1.2.2003	144.70	1.00	144.70	99.53%	1.53%	2.21
16	500 MVA Auto transformer & 400 KV D/C Kolar-Hoody line	29.06.2011	58/2010 Asset-5	1.2.2003	1430.64	1.00	1430.64	99.53%	1.53%	21.89
17	VIJAYAWADA-NELLORE SRIPERUMBDUR	20.07.2009 24.06.2010	43/2009 56/2010	1.3.2003	5786.52	1.00	5786.52	99.53%	1.53%	88.53
18	400 KV D/C Kolar-Hosur Transmission Line	127/2005 Order dt. 09.5.2006 & revised order dated 26.04.2007	127/2005 49/2010	1.4.2003	1300.16	1.00	1300.16	99.53%	1.53%	19.89
19	400 KV S/C Salem- Udumalpet Transmission Line	127/2005 Order dt. 09.5.2006 .	127/2005	1.6.2003	1494.62	1.00	1494.62	99.53%	1.53%	22.87
20	Additional Bays at Kolar and Hosur	01.09.2008	63/2008	1.9.2003	106.57	1.00	106.57	99.53%	1.53%	1.63
21	Hiryur S/S including 315 MVA Auto Transformer and LILLO of Davangere-Hoody	01.09.2008	63/2008	1.2.2004	1202.95	1.00	1202.95	99.53%	1.53%	18.41



22	Khammam-Nagarjunasagar	03.02.2009-113/2008 193/2010-05.05.2011 Combined Assets equity as on 01.04.2009	113/2008 193/2010	1.3.2004	927.11	1.00	927.11	99.53%	1.53%	14.18
23	400 KV D/C Ramagundam-Hyderabad Transmission Line (Ramagundam-III)	03.02.2009-113/2008 193/2010-05.05.2011 Combined Assets equity as on 01.04.2009	113/2008 193/2010	1.11.2004	1902.74	1.00	1902.74	99.53%	1.53%	29.11
24	40%FSC on Gooty-Neelmangla 400 KV S/C line & Nagarjunasagar-Cuddapah	23.03.2007 09.02.2011	129/2006 11/2/2010	1.11.2004	944.73	1.00	944.73	99.53%	1.53%	14.45
25	400 KV D/C Vijaywada-Gazuwaka Transmission Line	17.06.2010	23/2010	1.3.2005	6633.01	1.00	6633.01	99.53%	1.53%	101.49
26	Hyderabad-Kurnool- Gooty	03.02.2009-113/2008 193/2010-05.05.2011 Combined Assets equity as on 01.04.2009	113/2008 193/2010	1.3.2005	2000.72	1.00	2000.72	99.53%	1.53%	30.61
27	40%FSC on Gooty-Neelmangla (Ckt- II)	26.06.2009 9.2.2011- Combined assets	49/2009 112/2010	01.05.2005	439.69	1.00	439.69	99.53%	1.53%	6.73
28	Gooty- Neelmangala (Ramagundam-III)	03.02.2009-113/2008 193/2010-05.05.2011 Combined Assets equity as on 1.04.2009	113/2008 193/2010	01.05.2005	1667.12	1.00	1667.12	99.53%	1.53%	25.51
29	400 kV Madurai-	03.02.2010	291/2009	01.08.2005	7160.60	1.00	7160.60	99.53%	1.53%	109.56



	Thiruvananthapuram TL									
30	Kaiga- Narendra TL	123/2007-31.03.2009	123/2007 211/2010	01.11.2005	4482.68	1.00	4482.68	99.53%	1.53%	68.59
31	Narendra- Sub station	24.05.2010	5/2010	01.11.2005	1631.20	1.00	1631.20	99.53%	1.53%	24.96
32	400 kV Nagarjunasagar-Raichur line & extn of Mehboobnagar S/S	13.05.2009 08.03.2010	23/2009 123/2010	01.01.2006	324.24	1.00	324.24	99.53%	1.53%	4.96
33	400 kV Mysore-Neelamangala TL	23.02.2010	289/2009	01.05.2006	3987.28	1.00	3987.28	99.53%	1.53%	61.01
34	400 kV D/C Nellore-Sriperumbdur line at Almati	13.05.2009 08.03.2010	23/2009 123/2010	01.06.2006	2438.30	1.00	2438.30	99.53%	1.53%	37.31
35	2nd 315 MVA ICT at Narendra S/S	24.05.2010	5/2010	01.09.2006	206.57	1.00	206.57	99.53%	1.53%	3.16
36	400 kV Neelamangala-Somanhalli TL	19.03.2010	328/2009	01.01.2007	1439.53	1.00	1439.53	99.53%	1.53%	22.02
37	Gooty- Raichur 400kV D/c TL (SR SS-III)	19.03.2010	328/2009	01.05.2007	6348.78	1.00	6348.78	99.53%	1.53%	97.14
38	Nellore Extension (SR SS-V)	18.03.2010	331/2009	01.07.2007	311.22	1.00	311.22	99.53%	1.53%	4.76
39	Cuddapah Extension (SR SS-V)	18.03.2010	331/2009	01.08.2007	461.68	1.00	461.68	99.53%	1.53%	7.06
40	Kolar, Gooty & Somahally Extension (SR SS-V)	18.03.2010	331/2009	01.09.2007	1295.32	1.00	1295.32	99.53%	1.53%	19.82
41	Gazuwaka Extension (SR SS-V)	18.03.2010	331/2009	01.10.2007	445.91	1.00	445.91	99.53%	1.53%	6.82
42	Munirabad Extension	18.03.2010	331/2009	01.11.2007	584.46	1.00	584.46	99.53%	1.53%	8.94
43	Khammam Extension	18.03.2010	331/2009	01.02.2008	403.24	1.00	403.24	99.53%	1.53%	6.17
44	50 MVAR Reactor at Narendra under Kaiga 3&4	13.05.2010	290/2009	01.01.2008	598.01	1.00	598.01	99.53%	1.53%	9.15
45	50 MVAR Reactor at Mysore and 400 kV D/c Narendra-Devangiri Line under Kaiga 3&4	13.05.2010	290/2009	01.02.2008	5006.41	1.00	5006.41	99.53%	1.53%	76.60
46	LILO of both circuits of 400 kV D/C Gazuwaka-	08.04.2010	329/2009	01.04.2008	3107.86	1.00	3107.86	99.53%	1.53%	47.55



	Vijayawada T/L at Vemagiri under SR SS- VI									
47	LILO of Madurai - Trivendrum 400 kV D/C Line at Tirunelveli under Kudankulam TS	06.07.2011	12/2011 Asset-1	01.05.2008	4439.40	0.92	4069.45	99.53%	1.53%	62.26
48	2nd 400 kV, 63 MVAR Bus Reactor under Kudankulam TS	06.07.2011	12/2011 Asset-3	01.11.2008	291.98	0.42	121.66	99.53%	1.53%	1.86
49	3 no. 1x 63 MVAR Reactor under Kudankulam TS	06.07.2011	12/2011 Asset-5	01.02.2009	924.33	0.17	154.06	99.53%	1.53%	2.36
50	LILO of Kolar- Sriperumbudur 400 kV S/C line at Kalvindeapaltu (Matakottaiyur) with one No. 315 MVA ICTs and one 50 MVAR Reactor Kaiga 3 & 4	11.03.2010	180/2009	01.06.2008	2297.17	0.83	1914.31	99.53%	1.53%	29.29
	Sub total				138638.46		136945.05			2095.26
51	400 KV JEYPORE- GAZUWAKA Transmission Line (SR-ER) (50%)	20.07.2010 & 10.05.2011	35/2010 & 297/2010	Before 31.3.2001	4696.22	1.00	4696.22	99.94%	1.94%	91.11
52	50% equity for FSC at Jeypore S/S associated with 400 kV Jeypore - Gazuwaka D/C T/L	28.08.2009	104/2009	01.01.2007	743.89	1.00	743.89	99.94%	1.94%	14.43
	Sub Total				5440.11		5440.11			105.54
(ii)	INTRA REGIONAL HVDC SYSTEM									
Basic	Availability for Incentive calculation									95.00%
53	Talcher -Kolar HVDC Line (Pole I)	29.06.2011	58/2010	1.12.2002	36871.9	1.00	36871.86	99.23%	4.23%	1559.68
54	HVDC Terminal station at Talcher & Kolar related to Pole II	01.06.2010	49/2010	1.3.2003	13510.8	1.00	13510.76	99.23%	4.23%	571.51
55	Upgradation of Capacity of	04.04.2013	8/2010	01.08.2007	2955.78	1.00	2955.78	99.23%	4.23%	125.03



	Talcher -II									
	Sub Total				53338.40		53338.40			2256.21
56	HVDC Back to Back station at GAZUWAKA (Pole-I) (50%)	20.07.2010 & 10.05.2011	35/2010 & 297/2010	Before 31.3.2001	4969.42	1.00	4969.42	99.63%	4.63%	230.08
57	HVDC Back to Back station at GAZUWAKA (Pole-II) (50%)	17.06.2010	23/2010	1.3.2005	10190.19	1.00	10190.19	99.63%	4.63%	471.81
	Sub Total				15159.61		15159.61			701.89
(B)	INTER REGIONAL AC SYSTEMS									
	Basic Availability for Incentive calculation									98.00%
58	RAMAGUNDUM-Bhardrawati (CHANDRAPUR) I & II (SR-WR)(50%)	14.02.2008	138/2004	Before 31.3.2001	1211.75	1.00	1211.75	99.80%	1.80%	21.81
	Sub Total				1211.75		1211.75			21.81
(ii)	INTER REGIONAL HVDC System									
	Basic Availability for Incentive calculation									95.00%
59	HVDC Back to Back at Bhardrawati Chandrapur (50%) Pole-I & II	16.04.2008	178/2010 Asset-2	Before 31.3.2001	3958.57	1.00	3958.57	99.12%	4.12%	163.09
	Sub Total				3958.57		3958.57			163.09
C	BI LATERAL SYSTEM (KSEB only)									
	KAYAMKULAM TRANSMISSION SYSTEM									
	Basic Availability for Incentive calculation									98.00%
60	KAYAMKULAM-EDMON	17.06.2008	53/2007	1.11.1998	886.63	1.00	886.63	99.71%	1.71%	15.16

61	KAYAMKULAM-PALLOM	17.06.2008	53/2007	01.12.1999	889.76	1.00	889.76	99.71%	1.71%	15.21
	Sub Total(v)				1776.39		1776.39			30.38
	Down Stream System									98.00%
	APTRANSCO									
62	Extension of 400/220 kV substation at Vijayawada (315 MVA ICT) (Powergrid) SR SS VI	08.04.2010	329/2009	01.04.2008	516.12	1.00	516.12	99.53%	1.53%	7.90
	KPTCL									
63	2nd 315 MVA Transformer associated bays at Hiriyr Under Kaiga 3&4	13.05.2010	290/2009	01.04.2008	708.92	1.00	708.92	99.53%	1.53%	10.85
	TNEB									
64	1st 315 MVA Auto Transformer at Kaivinadapattu under Kaiga 3&4	11.03.2010	180/2009	01.06.2008	756.61	0.83	630.51	99.53%	1.53%	9.65
65	2nd 315 MVA Auto Transformer at Kaivinadapattu under Kaiga 3&4	11.03.2010	180/2009	01.07.2008	378.53	0.75	283.90	99.53%	1.53%	4.34
67	1st 315 400 kV MVA Transformer under Kudankulam TS	06.07.2011	12/2011	01.05.2008	822.97	0.92	754.39	99.53%	1.53%	11.54
68	2nd 315 400 kV MVA Transformer under Kudankulam TS	06.07.2011	12/2011	1.11.2008	592.4	0.42	246.83	99.53%	1.53%	3.78
	Sub-Total				2550.51		1915.63			29.31
	Total				223298.84		220970.55			5422.23

