

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 85/TT/2011

Coram:

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

Date of Hearing: 20.6.2013

Date of Order : 20.1.2014

In the matter of:

Approval under Regulation-86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 for determination of Transmission Tariff from Anticipated date of commercial operation to 31.3.2014 (I) Koteshwar - Tehri Pooling Point (Koteshwar) 400 kV D/C line (Expected date of commercial operation: 1.4.2011), (II) LILO of Tehri- Meerut 765 kV Lines (Charged at 400 kV level) at Tehri Pooling Point (Koteshwar) (Loop in with 400 kV D/C Triple Snowbird line & Loop out with 765 kV S/C lines) (Expected date of commercial operation: 1.4.2011), (III) 400 kV Tehri- Pooling Point (Koteshwar) Gas Insulated Sub-station (GIS) – New (Expected date of commercial operation: 1.4.2011) under Transmission System associated with Koteshwar HEP, for tariff block 2009-14 period in Northern Region.

And in the matter of:

Power Grid Corporation of India Limited
Soudamini, Plot No 2, Sector 29
Gurgaon - 122001

..... Petitioner

Vs

1. Rajasthan Rajya Vidyut Prasaran Nigam Limited,
Vidyut Bhawan, Vidyut Marg, Jaipur-302005
2. Ajmer Vidyut Vitran Nigam Ltd.
400 KV GSS Building (Ground Floor),
Ajmer Road, Heerapura, Jaipur



3. Jaipur Vidyut Vitran Nigam Ltd.,
400 KV GSS Building (Ground Floor),
Ajmer Road, Heerapura, Jaipur.
 4. Jodhpur Vidyut Vitran Nigam Ltd.,
400 KV GSS Building (Ground Floor), Ajmer Road, Heerapura, Jaipur.
 5. Himachal Pradesh State Electricity Board, Vidyut Bhawan,
Kumar House Complex Building-II, Shimla-171004.
 6. Punjab State Electricity Board,
The Mall, Patiala-147001
 7. Haryana Power Purchase Centre,
Shakti Bhawan, Sector-6, Panchkula (Haryana) 134109.
 8. Power Development Department,
Govt. of Jammu & Kashmir, Mini Secretariat, Jammu
 9. Uttar Pradesh Power Corporation Limited,
Shakti Bhawan, 14, Ashok Marg, Lucknow-226001.
 10. Delhi Transco Limited,
Shakti Sadan, Kotla Road, New Delhi-110002.
 11. BSES Yamuna Power Limited,
BSES Bhawan, Nehru Place, New Delhi.
 12. BSES Rajdhani Power Limited,
BSES Bhawan, Nehru Place, New Delhi
 13. North Delhi Power Limited,
Power Trading & Load Dispatch Group,
CENNET Building, Adjacent to 66/11 kV Pitampura-3 GRID Building,
Near PP Jewelers, Pitampura, New Delhi-110034.
 14. Chandigarh Administration,
Sector-9, Chandigarh.
 15. Uttarakhand Power Corporation Limited,
Urja Bhawan, Kasnwali Road, Dehradun.
 16. North Central Railway, Allahabad.
 17. New Delhi Municipal Council, Palika Kendra,
Sansad Marg, New Delhi-110001.
-Respondents**



Counsel/Representatives of the Petitioner : Shri S.S Raju, PGCIL
Shri Upendra Pandey, PGCIL
Shri M.M. Mondal, PGCIL

Counsel/Representative of the Respondents : Shri Padmajit Singh, PSPCL
Shri T.P.S. Bawa, PSPCL
Shri R.B.Sharma, Advocate,
BRPL

ORDER

The petition has been filed by Power Grid Corporation of India (PGCIL) seeking approval for the transmission charges in respect of Koteshwar - Tehri Pooling Point (Koteshwar) 400 kV D/C line (**Asset-I**), LILO of Tehri- Meerut 765 kV Lines (Charged at 400 kV level) at Tehri Pooling Point (Koteshwar) (Loop in with 400 kV D/C Triple Snowbird line and Loop out with 765 kV S/C lines) (**Asset-II**), and 400 kV Tehri- Pooling Point (Koteshwar) Gas Insulated Sub-station (GIS) – New (**Asset-III**), collectively referred to as “**the assets**”, forming part of the transmission system associated with Koteshwar HEP (**Koteshwar transmission system**) in Northern Region in accordance with the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as "The 2009 Tariff Regulations").

2. Investment approval for Koteshwar transmission system was accorded by the Board of Directors of the petitioner company vide letter dated 1.6.2005 for ₹26034 lakh, including Interest During Construction (IDC) of ₹1334 lakh based on 4th Quarter, 2004 price level. The scope of works covered under Koteshwar transmission system includes:-



Transmission Lines

- (i) Koteshwar-Tehri Pooling Point (Koteshwar) 400 kV D/C line
- (ii)** LILO of Tehri-Meerut 765 kV lines (charged at 400 kV level) at Tehri Pooling Point (Koteshwar)(Loop in with 400 kV D/C Triple Snowbird line & Loop out with 765 kV S/C lines)

Sub-stations

- (i) 400 kV Tehri pooling Point (Koteshwar) Gas Insulated Substation (GIS)-New 50% series compensation at existing Sub-station of POWERGRID at Meerut (Extension) on Tehri Pooling Point (Koteshwar)-Meerut 765 kV 2*S/C lines (charged at 400 kV level).

3. The petitioner, had initially claimed combined tariff for the following assets on the basis of anticipated date of commercial operation i.e. 1.4.2011:-

S. No	Assets
1.	Koteshwar –Tehri Pooling Point (Koteshwar) 400 kV D/C line Asset-I
2.	LILO of Tehri-Meerut 765 kV lines (charged at 400 kV level) at Tehri Pooling Point (Koteshwar)(Loop in with 400kV D/C Triple Snowbird line & Loop out with 765 kV S/C lines) Asset-II
3.	400 kV Tehri (Koteshwar) pooling Substation (GIS)-new Asset-III

4. The petitioner, vide affidavit dated 18.6.2012, has submitted the actual date of commercial operation and stated that the pooling substation at Koteshwar was commissioned in parts as mentioned below:-

- a) 400kV D/C Koteshwar HEP –Koteshwar Pooling Station Circuit I & II – date of commercial operation 1.4.2011

- b) LILO of Ckt-I of 765 kV Tehri-Meerut line at Koteshwar Pooling Station along with associated bays- date of commercial operation 1.3.2011
- c) 400 kV Tehri –Koteshwar Pooling Station Circuit-II- date of commercial operation DOCO 1.7.2011
- d) 765 kV Koteshwar Pooling Station –Meerut Circuit-II- date of commercial operation 1.7.2011.

5. During the hearing on 6.9.2012, the representative of the petitioner submitted that the cost incurred against Asset-III [400 kV Tehri (Koteshwar) pooling Sub-station] has been apportioned and included in the capital expenditure against the Asset-I and Asset-II.

6. The petitioner, vide affidavit dated 18.6.2012 has submitted the Management Certificates and vide affidavit dated 17.5.2013 submitted separate tariff forms for the regrouped assets with actual date of commercial operation. Accordingly final tariff for the following three assets is being worked out in the current petition.

S. No	Assets	date of commercial operation
1.	400kV D/C Koteshwar HEP –Koteshwar Pooling Station Circuit I & II (hereinafter referred to as " Asset-1 ")	1.4.2011
2.	LILO of Circuit-I of 765 kV Tehri-Meerut line at Koteshwar Pooling Station along with associated bays (hereinafter referred to as " Asset -2 ")	1.3.2011
3.	LILO of Circuit-II of 765 kV Tehri-Meerut line at Koteshwar Pooling Station along with associated bays (hereinafter referred to as " Asset-3 ")	1.7.2011

7. The scheduled, anticipated and actual dates of commercial operation of the respective asset are as follows:-

Asset	Scheduled Date of Commercial operation	Anticipated date of commercial operation	Actual date of commercial operation
Asset-1	1.7.2008	1.4.2011	1.4.2011
Asset-2	1.7.2008	1.4.2011	1.3.2011
Asset-3	1.7.2008	1.4.2011	1.7.2011

8. The transmission charges claimed by the petitioner are given hereunder: -

(₹ in lakh)

Particulars	Asset - 1			Asset - 2				Asset - 3		
	2011-12	2012-13	2013-14	2010-11	2011-12	2012-13	2013-14	2011-12	2012-13	2013-14
Depreciation	406.15	445.93	477.93	18.80	232.64	257.89	277.10	177.13	260.63	279.78
Interest on Loan	469.95	479.35	474.35	23.68	281.29	289.82	288.44	209.35	288.73	286.78
Return on Equity	408.25	447.97	479.26	19.06	235.94	261.22	280.30	179.57	263.92	282.94
Interest on Working Capital	31.36	33.46	34.97	1.59	19.51	20.91	21.93	15.73	22.49	23.57
O & M Expenses	119.06	125.87	133.07	9.75	122.71	129.39	136.79	92.36	130.20	137.64
Total	1434.77	1532.58	1599.38	72.88	892.09	959.23	1004.56	674.14	965.97	1010.71

9. The details submitted by the petitioner in support of its claim for interest on working capital are given hereunder:-

(₹ in lakh)

Particulars	Asset - 1			Asset - 2				Asset - 3		
	2011-12	2012-13	2013-14	2010-11	2011-12	2012-13	2013-14	2011-12	2012-13	2013-14
Maintenance Spares	17.86	18.88	19.96	17.55	18.41	19.41	20.52	18.47	19.53	20.65
O & M Expenses	9.92	10.49	11.09	9.75	10.23	10.78	11.40	10.26	10.85	11.47
Receivables	239.13	255.43	266.56	145.76	148.68	159.87	167.43	149.81	161.00	168.45
Total	266.91	284.80	297.61	173.06	177.32	190.06	199.35	178.54	191.38	200.57
Rate of Interest	11.75%	11.75%	11.75%	11.00%	11.00%	11.00%	11.00%	11.75%	11.75%	11.75%
Interest	31.36	33.46	34.97	1.59	19.51	20.91	21.93	15.73	22.49	23.57



10. No comments or suggestions have been received from the general public in response to the notices published by the petitioner under Section 64 of the Electricity Act. The Respondent No. 2, Ajmer Vidyut Vitran Nigam Ltd (AVVNL) has filed its reply vide affidavit dated 26.5.2011, Respondent No. 3, Jaipur Vidyut Vitran Nigam Ltd (JVVNL) has filed its reply vide affidavit dated 30.5.2011 and Respondent No. 4, Jodhpur Vidyut Vitran Nigam Ltd (Jd.VVNL) has filed reply vide affidavit dated 23.5.2011. Respondent No. 6, Punjab state Power Corporation Limited (PSPCL), has filed its reply vide affidavits dated 1.8.2011, 7.9.2012 and 25.6.2013. Respondent No. 9, Uttar Pradesh Power Corporation Limited (UPPCL) and Respondent No. 12, BSES Rajdhani Power Ltd (BRPL), have filed their replies vide affidavit dated 3.9.2012. The petitioner has filed separate rejoinders to the reply of JVVNL, AVVNL, Jd.VVNL, vide affidavits dated 27.4.2013. Further, the petitioner has filed separate rejoinders to the replies filed by PSPCL, UPPCL and BRPL vide affidavits dated 11.4.2013 and 6.12.2012. The objections raised by the respondents in their reply and the clarifications given by the petitioner in its rejoinder are addressed in the relevant paragraphs of this order.

11. We have heard the representatives of the parties present at the hearing and have perused the material available on record. We proceed to dispose of the petition. While doing so, the submissions of the respondents shall be duly taken note of.

Capital cost

12. Regulation 7 of the 2009 Tariff Regulations so far as relevant provides as follows:-



“(1) Capital cost for a project shall include:-

- (a) The expenditure incurred or projected to be incurred, including interest during construction and financing charges, any gain or loss on account of foreign exchange risk variation during construction on the loan – (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the fund deployed, - up to the date of commercial operation of the project, as admitted by the Commission, after prudence check.
- (b) capitalised initial spares subject to the ceiling rates specified in regulation 8; and
- (c) additional capital expenditure determined under regulation 9:

Provided that the assets forming part of the project, but not in use shall be taken out of the capital cost.

(2) The capital cost admitted by the Commission after prudence check shall form the basis for determination of tariff:

Provided that in case of the thermal generating station and the transmission system, prudence check of capital cost may be carried out based on the benchmark norms to be specified by the Commission from time to time:

Provided further that in cases where benchmark norms have not been specified, prudence check may include scrutiny of the reasonableness of the capital expenditure, financing plan, interest during construction, use of efficient technology, cost over-run and time over-run, and such other matters as may be considered appropriate by the Commission for determination of tariff.”

13. The details of original apportioned approved capital cost, actual capital cost as on the dates of commercial operation and the additional capital expenditure projected to be incurred after those dates as stated by the petitioner are as follows:-

(₹ in lakh)

Particulars	Apportioned approved cost	Actual cost on date of commercial operation	Projected additional capital expenditure			Estimated completion cost
			2010-11	2011-12	2012-13	
Asset-1	21834.00	7623.93	-	321.36	1193.35	9138.64
Asset-2		4343.16	37.83	236.07	727.84	5344.90
Asset-3		4461.17	-	208.77	725.24	5395.18
Total	21834.00	16428.26	37.83	766.20	2646.43	19878.72

Time over-run

14. As per the investment approval, the assets were scheduled to be commissioned within 27 months from the Letter of Award (LoA). The LoA is dated 24.3.2006. The assets were thus to be commissioned latest by 1.7.2008, but were put under commercial operation in 2011 as shown below:-

Assets	Scheduled completion	Actual date of commercial operation	Time overrun
Asset-1	1.7. 2008	1.4.2011	33 months
Asset-2		1.3.2011	32 months
Asset-3		1.7.2011	36 months

15. The petitioner has stated that LoA was placed in March 2006 with completion schedule as October 2007, January 2008 and February 2009 for tower, insulator and conductor packages respectively, matching with the time schedule given in the investment approval. The petitioner, vide affidavit dated 28.9.2011, has submitted that the supplies of tower, insulator, conductor and Sub-station equipment were delayed due to non-freezing of site activities such as route alignment due to RoW, acquisition of sub-station land etc for the reasons which were not within its control. The petitioner has made detailed submissions, vide affidavits dated 19.6.2012 and 6.9.2012, as discussed in the succeeding paras to explain the reasons for delay.

Acquisition and possession of land

16. The entire process for acquisition of land for sub-station through the State Government of Uttarakhand took more than a year. The revenue authorities gave the possession of the land in piecemeal. A part of land was handed over in the

month of April, 2006. The site leveling package involved cutting of earth and dumping of excavated earth outside the leveling boundary of the sub-station as dumping of excavated earth in the slope was not permitted. Therefore, additional land measuring 0.962 hectare was acquired in October, 2007. The process caused delay of 18 months from March, 2006 to October, 2007 in starting excavation activities.

17. The villagers/landlords were not ready to hand over the possession of the acquired land as they demanded higher monetary compensation/ employment. The petitioner got possession of small land initially and thereafter in piecemeal. So the site leveling agency, M/s Kamal Builders had to start work with limited manpower/machinery. This led to delay in site leveling works, as a result on 1.9.2006 only a small portion of land was available for L&T (main contractor) to work with. This, according to the petitioner, caused delay of 6 months, March 2006 to August 2006.

Local hindrances

18. The construction of LILO portions as well as GIS sub-station under Koteshwar transmission system faced severe RoW problems on account of continuous interference from the villagers, local leaders and negligible or inadequate support from the local administration. There were frequent obstructions of work by the villagers in the area during the months of May, 2006, July, 2006, February, 2007, July, 2007, August, 2007, October, 2007, July, 2008 and October, 2008. Work was suspended on numerous occasions before the issue was resolved. Every time the



villagers caused obstruction, the work was held up for 20 to 30 days, resulting in total delay of about eight months. The physical possession of land acquired in October, 2007 for dumping the excavated earth outside the leveling boundary was given in December 2007 only after intervention by the Chief Secretary, Uttarakhand. Again, the work remained suspended from 7.10.2007 to 19.12.2007, as the villagers did not allow site leveling work to start in October 2007.

19. On 3.7.2010, one of the officials of the petitioner and an official of the contractor were beaten up by the villagers and the stringing gangs were forced to leave the site. The work was resumed in the month of October, 2010.

Unprecedented rain

20. Koteshwar transmission system has been constructed in hilly terrain. Because of the unprecedented rains and heavy sliding of hills/soil in the year 2007, the local highway to the construction site was closed to traffic by the local administration. The interior approach road to the site was also damaged heavily because of rains, which impacted the movement of men and material to the construction site.

21. Responding to the Commission's observations that the petitioner should have foreseen these problems based on the past experience as it was not the first case, the petitioner has submitted that it had not executed project in similar terrain prior to Koteshwar Sub-station. It has been submitted that Pithoragarh Sub-station which can be considered closer to Koteshwar Sub-station in terms of terrain, weather, etc



was awarded contemporaneously with Koteshwar Sub-station (LoA for Koteshwar Sub-station was issued in March, 2006 and LoA of Pithoragarh Sub-station in August, 2005). Therefore, at the time of LoA, the petitioner did not have any experience in working in hilly terrain. It has been stated that in process of time, it was noted that compared to Pithoragarh Sub-station, Koteshwar Sub-station was located in tougher terrain and had more severe problems in terms of difference of levels, approach etc.

Slope protection package

22. Slope protection package was awarded to M/s Bharat Construction in April, 2008 on the recommendation of consultant from IIT, Delhi. The work was completed in November 2008, resulting in delay of 7 months

Terrace- 6 (Location of Out-going Gantry)

23. As Terrace-6 collapsed twice, the revised location drawing was submitted and finally approved on 11.12.2008. The work could not be carried out in revised location due to inadvertent mistake of revenue authorities, who left out a part land measuring 0.052 hectare during acquisition. The land was acquired subsequently after undergoing the fresh acquisition process and the petitioner got possession of land on 3.6.2010. The delay was beyond the control of the petitioner.

24. The petitioner has stated that total delay on account of above factors was approximately 46 months. Efforts were made to minimize the delay and it was reduced to 33 months. The petitioner has submitted that the delay was beyond its control and requested to condone the delay.



25. The petitioner has filed certain documents in support of delay in land acquisition, ROW problems and obstruction by the villagers during the construction period.

26. The respondents, AVVNL, JVVNL and Jd.VVNL in their reply have stated that the delay in commissioning of the assets was not justified and therefore IDC for the period of delay should not be allowed. It has been submitted that land was handed over to the petitioner on 20.4.2006 and thus there was no delay on acquisition and giving possession of land. These respondents have pointed out that as per the schedule Koteshwar transmission system was to be completed by June 2008 and, therefore, obstruction of work by the villagers in July and October 2008 cannot be said to have delayed the commissioning and is of no consequence. It has been further submitted that the documents placed on record by the petitioner in support of its plea of the objections by the villagers on land for dumping purpose, do not relate to the land for Koteshwar transmission system and the delay was of only 2.5 months on this account.

27. PSPCL has raised the issues similar to those raised by the Rajasthan utilities. PSPCL has further stated that servicing of capital cost of 400 kV GIS switchgear after its dismantling and replacement with 765 kV system should not be allowed. It has been pointed out that 50% series compensation at existing Sub-station of the petitioner at Meerut (Extension) on Tehri Pooling Point (Koteshwar), which also forms part of Koteshwar transmission system has not been completed in time though there is no issue of land acquisition at Meerut.

28. UPPCL has submitted that the time overrun is of 36 months as a consequence of which the actual IDC is ₹1710.17 lakh as against the original estimate of ₹1119.16 lakh which means that there is increase of ₹591.01 lakh in IDC which is 52.8% above the original estimate of IDC. BRPL has requested not to allow the IDC & IEDC during the time over-run of 38 months by the Commission

29. We have considered the submissions of the petitioner in support of time overrun and the objections of the respondents. In the instant case commissioning of the generation project has been delayed. The transmission line was declared under commercial operation on 1.3.2011 matching with the 1st unit of Koteshwar HEP in April 2011. The petitioner has submitted some documents in support of RoW problem during construction phase. From the documents it is seen that there were instances of stoppage of work as well as manhandling of the officials involved in the construction. We now analyze in detail the reasons given by the petitioner in support of its plea for condonation of delay.

30. The plea raised by PSPCL in regard to delay of commissioning of 50% series compensation is not relevant since the petitioner is presently not seeking approval for the transmission charges for that asset. The implications of delay in case of that asset are left to be considered when the petitioner approaches the Commission for approval of its transmission charges.

31. The petitioner's plea of delay in land acquisition is not justified as possession of major chunk of land was handed over to the petitioner on 20.4.2006. The petitioner has not brought to our notice any serious impediment on construction from

any side at the time possession of land was given. The possession of only a small portion of land (0.962 hectare) meant for dumping of excavated material was delayed and land was handed over to the petitioner on 8.10.2007. For this delay too the petitioner cannot be allowed to draw any advantage. The petitioner is supposed to be aware of requirement of dumping area and should have taken timely steps to arrange for land to be used as dumping area for excavated material. The petitioner's plea leads us to believe that there was no adequate planning on this aspect. As regards the delay in acquisition of land measuring 0.052 hectare it is pointed out that the petitioner does not seem to have exercised due diligence and has contributed to the delay attributed to non-acquisition as the acquisition of land was completed by October, 2007 with acquisition of 0.926 hectare of land, and the petitioner became aware of non-acquisition only in December, 2008. As per the schedule Koteshwar transmission system ought to have been completed by June, 2008.

32. Similarly, there is no merit in the petitioner's plea that the delay in commissioning of Koteshwar transmission system was attributed to rain etc. It is pointed out that the rain and other related activities is the normal feature in hilly areas which could be easily foreseen at the stage of preparation of FR. Rain and related activities in the hilly areas cannot be categorised as extraordinary situations to justify delay. It is also to be noted that the petitioner has not produced any documentary evidence to support its claim of prevalence of the so-called extraordinary situations which prevented it from continuing with the construction at site. It is also pointed out that the specific period during which the local highway/roads remained closed has also not been stated by the petitioner.



33. From the documents made available by the petitioner, it is noted that there were severe RoW problems triggered by agitations by the villagers during August, 2007, July 2008 and October 2008 which led to suspension of work repeatedly. Therefore, considering the duration for which the work was held up, the total delay of 3 months can be said to be beyond the control of the petitioner and delay is hereby condoned. Another period during which the work remained suspended because of manhandling of the petitioner's and contractor's employees is also condoned. In our opinion, delay of maximum of one month can be apportioned to this cause.

34. There is delay in completion of the slope protection for which the petitioner hired a consultant from IIT Delhi, for conducting a survey in that area. The slope protection work is considered additional work to be carried out for Sub-station construction based on actual site conditions. The Commission has already dealt with similar issue in its order dated 22.4.2013 in Petition No. 7/TT/2011 (ICTs at Pithoragarh along with associated bays), and condoned the delay on slope protection work due to peculiar location of Sub-station and geographical factors. Accordingly, the delay of 7 months in the instant petition is condoned due to peculiar location of Sub-station.

35. Thus, in totality, the delay of 11 months is condoned. For the remaining period of delay, IDC/IEDC is being deducted from the gross block of the respective asset on the date of commercial operation.



36. The details of IDC and IEDC disallowed are as follows: -

	(₹ In lakh)	
	IDC	IEDC
ASSET-1		
IDC and IEDC Claimed as per Auditor's Certificate dated 4.6.2012		
Up to 31.3.2010	452.01	327.56
Expenditure from 1.4.2010-31.3.2011	377.11	90.97
Total IDC and IEDC Claimed	829.12	418.53
IDC and IEDC Disallowed for 22 months		
IDC and IEDC Disallowed for 12 months (1.4.2010-31.3.2011)	377.11	90.97
IDC and IEDC Disallowed for 10 months (Pro rata)	94.17	68.24
Total IDC and IEDC Disallowed	471.28	159.21
ASSET-2		
IDC and IEDC Claimed as per Management Certificate dated 4.6.2012		
Up to 31.03.2010	263.08	190.65
Expenditure from 1.4.2010-28.2.2011	150.39	50.14
Total IDC and IEDC Claimed	413.47	240.79
IDC and IEDC Disallowed for 21 months		
IDC and IEDC Disallowed for 11 months (1.4.2010-28.2.2011)	150.39	50.14
IDC and IEDC Disallowed 10 for months (Pro rata)	54.81	39.72
Total IDC and IEDC Disallowed	205.20	89.86
ASSET-3		
IDC and IEDC Claimed as per Management Certificate dated 4.6.2012		
Expenditure upto 31.3.2010	263.08	190.65
Expenditure for the year 2010-2011	204.49	50.14
Expenditure from 1.4.2011-30.6.2011	9.80	2.99
Total IDC and IEDC Claimed	477.37	243.78
IDC and IEDC Disallowed for 25 months		
IDC and IEDC Disallowed for 3 months (1.4.2011-30.6.2011)	9.80	2.99
IDC and IEDC Disallowed for 12 months (for 2010-2011)	204.49	50.14
IDC and IEDC Disallowed for 10 months (Pro rata)	54.81	39.72
Total IDC and IEDC Disallowed	269.10	92.85

37. According to PSPCL, for looping in of Tehri transmission line at Koteshwar, the line length was about 4 km while for looping out to Meerut the line length is 5 to 8 km. Thus, according to PSPCL, a portion of Tehri- Meerut line has become idle and shall remain unutilized. PSPCL has stated that the cost of the idle portion should be de-capitalized and reduced from the capital cost of LILO project. According to

PSPCL, it will also reduce the liability of the respondents to pay O&M charges since O&M charges are payable on normative per km basis.

38. In response to PSPCL's reply, the petitioner has submitted that Koteshwar Pooling Station was being operated as 400 kV switching station where power from Tehri-I and Koteshwar HEPs gets pooled and transmitted to Meerut by 2 nos. of 765 kV lines (being operated at 400 kV). With the coming up of Tehri PSP generation, 765/400 kV ICTs along with necessary Sub-station equipment shall be provided at Koteshwar Pooling Station and the transmission line from Koteshwar Pooling Station to Meerut shall be operated at 765 kV level. The power from Tehri PSP, Tehri-I HEP and Koteshwar HEP was pooled at Koteshwar Pooling Station at 400 kV level. The transmission system for Tehri PSP was approved in 27th Standing Committee meeting held on 11.6.2009. The petitioner has clarified that as per the information available, Tehri PSP generation is scheduled by January 2016 and accordingly timeframe of providing 765 kV level at Koteshwar Pooling Station shall be matching with the generation project. It has been further stated that though the existing 400 kV equipment remained unutilized, its replacement is not envisaged at this stage. The petitioner has submitted that the dismantled portion i.e. towers, conductor, etc, are being used as spares of the transmission system in the region, accordingly there is no need for de-capitalization of the original assets.

39. In view of the clarification given by the petitioner, no interference pursuant to the objection by PSPCL is called for at this stage. It is also pointed that the surplus portion range is negligible compared to the length of the transmission line of Koteshwar transmission system. Accordingly, O&M charges will also not be

materially affected.

40. During the hearing on 20.6.13, the representative of PSPCL pointed out that the firefighting system would be required only in 2016/2017, when the 765 kV system would get commissioned and there is no requirement at present whereas the petitioner has placed order for the firefighting system.

41. The petitioner in the affidavit dated 10.7.2013 has stated that the firefighting system is essential part of any Sub-station irrespective of the voltage level (400kV or 765kV) for fire protection of buildings being provided at the Sub-station. The firefighting system has been installed for protection of the Sub-station. It has been explained that the firefighting system has been in place since the date of commissioning of the Sub-station. The reply submitted by the petitioner on the necessity for firefighting system has been found to be in order.

Initial spares

42. The actual cost on the date of commercial operation claimed by the petitioner is inclusive of the cost of initial spares. Regulation 8 of the 2009 Tariff Regulations provide for ceiling norms for capitalization of initial spares in respect of Koteshwar transmission system as under:-

“8. Initial Spares. Initial spares shall be capitalised as a percentage of the original project cost, subject to following ceiling norms:

(iv) Transmission system

(a) Transmission line - 0.75%

(b) Transmission Sub-station - 2.5%

(c) Series Compensation devices and HVDC Station - 3.5%



Provided that where the benchmark norms for initial spares have been published as part of the benchmark norms for capital cost under first proviso to clause (2) of regulation 7, such norms shall apply to the exclusion of the norms specified herein.

43. Originally, the petitioner claimed initial spares amounting to ₹364.16 lakh, these being about 1.8% of the capital cost. The petitioner vide affidavit dated 30.9.2011 revised the amount of initial spares to ₹284.18 lakh, which as stated by the petitioner, pertain to GIS Sub-station for combined assets in original petition. The initial spares have not been claimed for the transmission line. Subsequently, vide separate Management Certificates dated 4.6.2012 and affidavit dated 19.6.2012, the initial spares have been allocated to three assets at ₹94.73 lakh each, which is about 3.02% of total Sub-station cost (₹9419.70 lakh). The petitioner has not claimed initial spares for transmission lines because the petitioner has submitted that the dismantled portion i.e. towers, conductors etc are being used as spares for transmission system.

44. BRPL and PSPCL have submitted that the capitalization of the initial spares in the capital cost should be limited to the ceiling norms prescribed in the 2009 Tariff Regulations. UPPCL has submitted that the Commission direct the petitioner to furnish the figure of initial spares and the cost of series compensation device for the knowledge of the beneficiaries. The petitioner has clarified that the capitalization of the initial spares in the capital cost should be as prescribed in the 2009 Tariff Regulations.

45. During hearing on 6.9.2012, learned counsel for BRPL submitted that initial spares at the rate of 2.5% may be allowed as the cost of GIS Sub-station is already high.

46. In accordance with the 2009 Tariff Regulations, the ceiling limit specified for the initial spares for GIS sub-station is 3.5% of the cost of sub-station as on the cut-off date. The spares claimed by the petitioner are within the ceiling limits and are allowed.

Cost variation

47. UPPCL and BRPL submitted that the apportioned FR cost is ₹21834 lakh against which the estimated cost of completion is ₹19865.92 lakh which means that there was no cost over-run. However, while analyzing the individual elements of the project it was found that there has been substantial increase in cost of certain items.

48. The estimated completion cost of the assets is within the apportioned approved cost of ₹21834.00 lakh. Thus, there is no cost overrun. However, as per Form 5-B of the Tariff Filing (Pages 42 and 43 of the petition), there is significant increase in cost of the preliminary investigation, RoW, forest clearance, PTCC, general civil works, conductor, hardware fittings, erection stringing and civil works, control room and office building including HVAC, control relay and protection panel and PLCC equipments etc. The petitioner in the affidavit dated 30.9.2011 has submitted that costs are based on actual RoW compensation and other statutory payments. The petitioner has explained that sub-station land is in hilly terrain and has been developed in different terraces. Therefore, there is extra cost implication

for site levelling, grading and slope protection work. The petitioner has further explained that the expenditure incurred on works like provision for construction power (11 kV), shifting of 11 kV line from site, permanent power supply (₹573 lakh paid for 33 kV feeder), water connection were not envisaged in the Feasibility Report (FR).

49. The petitioner, vide affidavit dated 5.12.2012, has further submitted cost of elements broadly envisaged at the stage of preparation of FR vis-a-vis cost at the stage of submission of tariff petition. As per the submission of the petitioner the main reasons for reduction in cost are on account of reduction in Sub-station cost and IEDC. The reasons for the same are given in the succeeding paragraphs.

Reduction in sub-station cost

50. The petitioner has stated that at the time of preparation of FR substantive cost data on deployment of new technology (GIS Sub-station) was not available for high altitude terrains and therefore, budgetary quotations were invited for preparation of cost estimates. It has been stated that the estimate was finalised on the basis of the average of the budgetary quotations received from the leading manufacturers viz. M/s ABB, Alstom & Sumitomo at the stage of preparation of FR in March 2004. However, the petitioner has stated, actual awarded cost based on the subsequent competitive bidding was lower. The reason for reduction in cost has been attributed to market forces and competition prevalent at the time of actual bidding process in March 2006.

Reduction in IEDC cost

51. The petitioner has stated that the provision for IEDC in FR for Koteshwar transmission system was made on normative basis @10.75% of equipment cost, the normative rate having been finalised in consultation with CEA and other appraising agencies during the process of approval of other projects. However, the actual expenditure which is dependent on the cost of manpower etc. is on the lower side.

52. In view of above explanation and the fact that there is no overall cost over-run the reasons given for cost – variation have been accepted. The petitioner is, however, advised to be more conscious in preparing estimates for capital cost of different components.

53. Based on the above decisions, gross block as given below has been considered for the purpose of computation of the transmission charges for the assets, after allowing additional capitalization as claimed, within the limits of apportioned approved cost: -

(₹ in lakh)

Particulars	Capital cost on date of commercial operation	IDC/IEDC Deducted	Net capital cost on date of commercial operation	Projected additional capital expenditure			Capital cost on 31.3.2014
				2010-11	2011-12	2012-13	
Asset-1	7623.93	630.49	6993.44	-	321.36	1193.35	8508.15
Asset-2	4343.16	295.06	4048.10	37.83	236.07	727.84	5049.84
Asset-3	4461.16	361.95	4099.21	-	208.76	725.24	5033.21

Projected additional capital expenditure

54. Clause (1) of Regulation 9 of the 2009 Tariff Regulations provides as under:-

“Additional Capitalisation: (1) The capital expenditure incurred or projected to be incurred, on the following counts within the original scope of work, after the date of commercial operation and up to the cut-off date may be admitted by the Commission, subject to prudence check:

- (i) Undischarged liabilities;
- (ii) Works deferred for execution;
- (iii) Procurement of initial capital Spares within the original scope of work, subject to the provisions of Regulation 8;
- (iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and
- (v) Change in Law.”

55. Regulation 3(11) of the 2009 Tariff Regulations defines “cut-off” date as under:-

“cut-off date” means 31st March of the year closing after 2 years of the year of commercial operation of the project, and in case the project is declared under commercial operation in the last quarter of the year, the cut-off date shall be 31st March of the year closing after 3 years of the year of commercial operation”.

56. Based on the dates of commercial operation of the assets, cut-off date arrived at is 31.3.2014 in respect of each of the assets. The additional capital expenditure claimed by the petitioner is within the cut-off date and is allowed.

Debt- equity ratio

57. Regulation 12 of the 2009 Tariff Regulations provides as under:-

“12. Debt-Equity Ratio (1) For a project declared under commercial operation on or after 1.4.2009, if the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:

Provided that where equity actually deployed is less than 30% of the capital cost, the actual equity shall be considered for determination of tariff:

Provided further that the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment.

Explanation- The premium, if any, raised by the generating company or the transmission licensee, as the case may be, while issuing share capital and investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on equity, provided such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station or the transmission system.

(2) In case of the generating station and the transmission system declared under commercial operation prior to 1.4.2009, debt-equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2009 shall be considered.

(3) Any expenditure incurred or projected to be incurred on or after 1.4.2009 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation.”

58. Details of debt and equity in respect of the assets as on dates of commercial operation and 31.3.2014 are as follows:-

(₹ in lakh)

Particulars	Capital Cost on Date of Commercial Operation			Capital Cost on 31.3.2014		
	Asset-1	Asset-2	Asset-3	Asset-1	Asset-2	Asset-3
Debt	4895.41	2833.67	2869.45	5955.70	3534.89	3523.25
Equity	2098.03	1214.43	1229.76	2552.44	1514.95	1509.96
Total	6993.44	4048.10	4099.21	8508.15	5049.84	5033.21

59. Debt and equity in all cases are in the ratio of 70:30 and therefore equity deployed by the petitioner has been considered for the purpose of determination of Return on Equity (RoE).

Return on equity

60. Regulation 15 of the 2009 Tariff Regulations provides as follows:-



“15. (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 12.

(2) Return on equity shall be computed on pre-tax basis at the base rate of 15.5% for thermal generating stations, transmission system and run of the river generating station, and 16.5% for the storage type generating stations including pumped storage hydro generating stations and run of river generating station with pondage and shall be grossed up as per clause (3) of this regulation:

Provided that in case of projects commissioned on or after 1st April, 2009, an additional return of 0.5% shall be allowed if such projects are completed within the timeline specified in **Appendix-II**:

Provided further that the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever.

(3) The rate of return on equity shall be computed by grossing up the base rate with the Minimum Alternate/Corporate Income Tax Rate for the year 2008-09, as per the Income Tax Act, 1961, as applicable to the concerned generating company or the transmission licensee, as the case may be:

(4) Rate of return on equity shall be rounded off to three decimal points and be computed as per the formula given below:

Rate of pre-tax return on equity = Base rate / (1-t)

Where t is the applicable tax rate in accordance with clause (3) of this regulation.

(5) The generating company or the transmission licensee as the case may be, shall recover the shortfall or refund the excess Annual Fixed charge on account of Return on Equity due to change in applicable Minimum Alternate/ Corporate Income Tax Rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission;

Provided further that Annual Fixed charge with respect to the tax rate applicable to the generating company or the transmission licensee, as the case may be, in line with the provisions of the relevant Finance Acts of the respective financial year during the tariff period shall be trued up in accordance with Regulation 6 of these regulations”.

61. The petitioner has claimed Return on Equity at the rate of 15.5% in accordance with clause (2) of Regulation 15 which is in order. Return on Equity allowed is as follows:-

(₹ in lakh)

Description	Equity on date of commercial operation	2010-11		2011-12		2012-13		2013-14	
		Average Equity	Return on Equity	Average Equity	Return on Equity	Average Equity	Return on Equity	Average Equity	Return on Equity
Asset-I	2098.03	-	-	2146.24	375.18	2373.44	414.90	2552.44	446.19
Asset-II	1214.43	1220.11	17.77	1261.19	220.47	1405.78	245.74	1514.95	264.83
Asset-III	1229.76	-	-	1261.08	165.34	1401.18	244.94	1509.96	263.96

Interest on loan

62. Regulation 16 of the 2009 Tariff Regulations provides as under:-

“16. **Interest on loan capital** (1) The loans arrived at in the manner indicated in regulation 12 shall be considered as gross normative loan for calculation of interest on loan.

(2) The normative loan outstanding as on 1.4.2009 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2009 from the gross normative loan.

(3) The repayment for the year of the tariff period 2009-14 shall be deemed to be equal to the depreciation allowed for that year:

(4) Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the annual depreciation allowed.

(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio at the beginning of each year applicable to the project:

Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered:

Provided further that if the generating station or the transmission system, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company or the transmission licensee as a whole shall be considered.

(6) The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.



(7) The generating company or the transmission licensee, as the case may be, shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such re-financing shall be borne by the beneficiaries and the net savings shall be shared between the beneficiaries and the generating company or the transmission licensee, as the case may be, in the ratio of 2:1.

(8) The changes to the terms and conditions of the loans shall be reflected from the date of such re-financing.

(9) In case of dispute, any of the parties may make an application in accordance with the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999, as amended from time to time, including statutory re-enactment thereof for settlement of the dispute:

Provided that the beneficiary or the transmission customers shall not withhold any payment on account of the interest claimed by the generating company or the transmission licensee during the pendency of any dispute arising out of re-financing of loan.”

63. In keeping with the provisions of Regulation 16, the petitioner’s entitlement to interest on loan has been calculated on the following basis:-

(a) Gross amount of loan, repayment of instalments and rate of interest and weighted average rate of interest on actual average loan have been considered as per the petition.

(b) The repayment for the tariff period 2009-14 shall be deemed to be equal to the depreciation allowed for that period.

(c) Weighted average rate of interest on actual average loan worked out as per (a) above is applied on the notional average loan during the year to arrive at the interest on loan.

64. Detailed calculations in support of the weighted average rates of interest have been given in Annexure I, II and III to this order.

65. Based on the above, interest on loan has been calculated as given hereunder:-

(₹ in lakh)

Particulars	Asset - 1			Asset - 2				Asset - 3		
	2011-12	2012-13	2013-14	2010-11	2011-12	2012-13	2013-14	2011-12	2012-13	2013-14
Gross Normative Loan	4895.41	5120.36	5955.70	2833.67	2860.15	3025.40	3534.89	2869.45	3015.58	3523.25
Cumulative Repayment upto previous year	0.00	373.15	786.08	0.00	17.53	234.83	477.39	0.00	163.02	404.82
Net Loan-Opening	4895.41	4747.21	5169.63	2833.67	2842.63	2790.57	3057.50	2869.45	2852.57	3118.42
Addition due to additional capital expenditure	224.95	835.35	0.00	26.48	165.25	509.49	0.00	146.13	507.67	0.00
Repayment during the year	373.15	412.93	444.44	17.53	217.31	242.55	261.77	163.02	241.81	260.95
Net Loan-Closing	4747.21	5169.63	4725.19	2842.63	2790.57	3057.50	2795.74	2852.57	3118.42	2857.47
Average Loan	4821.31	4958.42	4947.41	2838.15	2816.60	2924.04	2926.62	2861.01	2985.49	2987.95
Weighted Average Rate of Interest on Loan (%)	8.9581	8.9595	8.9451	9.3356	9.3323	9.3300	9.3240	8.9833	8.9798	8.9648
Interest	431.90	444.25	442.55	22.08	262.85	272.81	272.88	192.76	268.09	267.86

Depreciation

66. Regulation 17 of the 2009 Tariff Regulations provides as under:-

“17. **Depreciation** (1) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission.

(2) The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset.

Provided that in case of hydro generating stations, the salvage value shall be as provided in the agreement signed by the developers with the State Government for creation of the site;

Provided further that the capital cost of the assets of the hydro generating station for the purpose of computation of depreciable value shall correspond to the percentage of sale of electricity under long-term power purchase agreement at regulated tariff.

(3) Land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.



(4) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-III to these regulations for the assets of the generating station and transmission system:

Provided that, the remaining depreciable value as on 31st March of the year closing after a period of 12 years from date of commercial operation shall be spread over the balance useful life of the assets.

(5) In case of the existing projects, the balance depreciable value as on 1.4.2009 shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to 31.3.2009 from the gross depreciable value of the assets.

(6) Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis.”

67. The petitioner has claimed actual depreciation. In our calculations, depreciation has been calculated in accordance with clause (4) of Regulation 17 extracted above.

68. Asset-1, Asset-2 and Asset-3 were put under commercial operation on 1.4.2011, on 1.3.2011 and 1.7.2011 respectively. Accordingly, the assets will complete 12 years beyond 2013-14 and hence depreciation has been calculated annually based on Straight Line Method at the rates specified in Appendix-III to the 2009 Tariff Regulations for the transmission line and Sub-station, as follows:-

(₹ in lakh)

Particulars	Asset - 1			Asset - 2				Asset - 3		
	2011-12	2012-13	2013-14	2010-11	2011-12	2012-13	2013-14	2011-12	2012-13	2013-14
Opening Gross Block	6993.44	7314.80	8508.15	4048.10	4085.93	4322.00	5049.84	4099.21	4307.97	5033.21
Addition due to Projected Add Cap	321.36	1193.35	0.00	37.83	236.07	727.84	0.00	208.76	725.24	0.00
Closing Gross Block	7314.80	8508.15	8508.15	4085.93	4322.00	5049.84	5049.84	4307.97	5033.21	5033.21
Average Gross Block	7154.12	7911.47	8508.15	4067.02	4203.97	4685.92	5049.84	4203.59	4670.59	5033.21
Rate of Depreciation	5.2158%	5.2194%	5.2236%	5.1714%	5.1691%	5.1762%	5.1836%	5.1707%	5.1773%	5.1847%
Depreciable Value	6438.71	7120.33	7657.33	3660.32	3783.57	4217.33	4544.86	3783.23	4203.53	4529.89
Remaining Depreciable Value	6438.71	6747.18	6871.26	3660.32	3766.04	3982.50	4067.47	3783.23	4040.52	4125.07
Depreciation	373.15	412.93	444.44	17.53	217.31	242.55	261.77	163.02	241.81	260.95

Operation & maintenance expenses

69. Clause (g) of Regulation 19 of the 2009 Tariff Regulations prescribes the norms for operation and maintenance expenses for Koteshwar transmission system based on the type of Sub-station and the transmission line. Norms prescribed in respect of the elements covered in the instant petition are given overleaf:-

	2009-10	2010-11	2011-12	2012-13	2013-14
400 kV D/C twin/ triple conductor transmission line (₹ lakh/ km)	0.627	0.663	0.701	0.741	0.783
400 kV S/C twin/ triple conductor transmission line (₹ lakh/ km)	0.358	0.378	0.400	0.423	0.447
765 kV Quad conductor S/C transmission line (₹ lakh/ km)	0.537	0.568	0.600	0.635	0.671
400 kV Bay (₹ lakh/ bay)	52.40	55.40	58.57	61.92	65.46



70. The allowable O&M expenses for the assets are as under:-

(₹ in lakh)					
Element	2009-10	2010-11	2011-12	2012-13	2013-14
Asset-1					
2.74 km, 400 kV D/C twin/three conductor transmission line	-	-	1.92	2.03	2.15
2 nos, 400 kV bays			117.14	123.84	130.92
O&M Expenses for Asset-1	--	--	119.06	125.87	133.07
Asset-2					
8.312 km, 765 kV S/C Quad conductor transmission line	---	0.39	4.99	5.28	5.58
0.65 km, 400 kV S/C triple conductor transmission line	---	0.02	0.26	0.27	0.29
2 nos, 400 kV bays	---	9.23	117.14	123.84	130.92
O&M Expenses for Asset-2	---	9.64	122.39	129.39	136.79
Asset-3					
5.07 km, 765 kV S/C Quad conductor transmission line	-	-	2.28	3.22	3.40
3.265 km, 400 kV D/C triple conductor transmission line	--	--	1.72	2.42	2.56
2 nos, 400 kV bays	--	--	87.86	123.84	130.92
(1.7 km, 400 S/C triple conductor transmission line	-	-	0.51	0.72	0.76
O&M Expenses for Asset-3	---	---	92.37	130.20	137.64
Total O&M Expenses	---	9.64	333.83	385.46	407.50

71. The O&M expenses were calculated based on the petitioner's submission, vide affidavit dated 17.5.2013, in which it was indicated that the 400 kV S/C triple conductor transmission line (2.35 km) was commissioned in two parts 0.65 km on 1.3.2011 and 1.7 km on 1.7.2011.

72. The petitioner has stated that O&M expenditure for 2009-14 tariff block had been arrived on the basis of normalized actual O&M expenses of the petitioner during the year 2003-04 to 2007-08. The wage hike of 50% on account of pay revision of the employees of public sector undertaking was also considered while calculating the O&M charges for tariff period 2009-14. The petitioner has submitted that it reserved the right to approach the Commission for suitable revision in the norms for O&M expenditure in case the impact of wage hike w.e.f 1.1.2007 is more than 50%.

73. UPPCL and BRPL have submitted that the tariff is to be determined only as per the 2009 Tariff Regulations. The petitioner has clarified that the wage revision of the employees of the petitioner company has already been done.

74. The Commission has given effect to the impact of pay revision in the 2009 Tariff Regulations by factoring 50% on account of pay revision of the employees of PSUs after extensive stakeholders' consultation. We do not see any reason why the admissible amount is inadequate to meet the requirement of the employee cost. However, in case the petitioner approaches with any such application, the same shall be dealt with in accordance with law.

Interest on working capital

75. The petitioner is entitled to claim interest on working capital as per the 2009 Tariff Regulations. The components of the working capital and the petitioner's entitlement to interest thereon are discussed overleaf.

(i) Receivables

As per Regulation 18(1) (c) (i) of the 2009 Tariff Regulations, receivables as a component of working capital will be equivalent to two months' of fixed cost. The petitioner has claimed the receivables on the basis of 2 months' of annual transmission charges claimed in the petition. In the tariff being allowed, receivables have been worked out on the basis of 2 months' transmission charges.

(ii) Maintenance spares

Regulation 18 (1) (c) (ii) of the 2009 Tariff Regulations provides for maintenance spares @ 15% per annum of the O & M expenses as part of the working capital from 1.4.2009. The value of maintenance spares has accordingly been worked out.

(iii) O & M expenses

Regulation 18(1) (c) (iii) of the 2009 Tariff Regulations provides for operation and maintenance expenses for one month to be included in the working capital. The petitioner has claimed O&M expenses for 1 month of the respective year. This has been considered in the working capital.

(iv) Rate of interest on working capital

As per 2009 Tariff Regulations (Second Amendment) Regulations, 2011 dated 21.6.2011 SBI Base Rate (8.25%) Plus 350Bps i.e. 11.75% has been considered for Asset-1 and Asset-3 and SBI Base Rate (7.50%) Plus 350Bps



i.e. 11.00% has been considered for Asset-2 as the rate of interest on working capital.

76. Necessary computations in support of interest on working capital are appended hereunder:-

(₹ in lakh)

Particulars	Asset - 1			Asset - 2				Asset - 3		
	2011-12	2012-13	2013-14	2010-11	2011-12	2012-13	2013-14	2011-12	2012-13	2013-14
Maintenance Spares	17.86	18.88	19.96	17.35	18.36	19.41	20.52	18.47	19.53	20.65
O & M Expenses	9.92	10.49	11.09	9.64	10.20	10.78	11.40	10.26	10.85	11.47
Receivables	221.43	238.23	249.88	137.05	140.27	151.75	159.55	139.63	151.06	158.81
Total	249.21	267.60	280.93	164.04	168.83	181.94	191.47	168.36	181.44	190.92
Rate of Interest	11.75%	11.75%	11.75%	11.00%	11.00%	11.00%	11.00%	11.75%	11.75%	11.75%
Interest	29.28	31.44	33.01	1.50	18.57	20.01	21.06	14.84	21.32	22.43

Transmission charges

77. The transmission charges being allowed for the assets are as follows:-

(₹ in lakh)

Particulars	Asset - 1			Asset - 2				Asset - 3		
	2011-12	2012-13	2013-14	2010-11	2011-12	2012-13	2013-14	2011-12	2012-13	2013-14
Depreciation	373.15	412.93	444.44	17.53	217.31	242.55	261.77	163.02	241.81	260.95
Interest on Loan	431.90	444.25	442.55	22.08	262.85	272.81	272.88	192.76	268.09	267.86
Return on Equity	375.18	414.90	446.19	17.77	220.47	245.74	264.83	165.34	244.94	263.96
Interest on Working Capital	29.28	31.44	33.01	1.50	18.57	20.01	21.06	14.84	21.32	22.43
O & M Expenses	119.06	125.87	133.07	9.64	122.40	129.39	136.79	92.37	130.20	137.64
Total	1328.57	1429.39	1499.26	68.52	841.60	910.51	957.33	628.32	906.36	952.85

78. The transmission charges allowed are subject to truing up in accordance with the 2009 Tariff Regulations.



Filing fee and the publication expenses

79. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses. The BRPL submitted that the filing fee shall be governed as per the Commission's order. The petitioner has clarified that reimbursement of expenditure has been claimed in terms of Regulation 42 of 2009 Tariff Regulations. In accordance with the Commission's order dated 11.1.2010 in Petition No. 109/2009, the petitioner shall be entitled to recover the filing fee directly from the beneficiaries on *pro-rata* basis. The petitioner shall also be entitled for reimbursement of the publication expenses in connection with the present petition, directly from the beneficiaries on *pro-rata* basis.

Licence fee

80. The petitioner has submitted that in O&M norms for tariff block 2009-14 the cost associated with license fees had not been captured and the license fee may be allowed to be recovered separately from the respondents.

81. BRPL has submitted that the petitioner's request for reimbursement for licence fee should be rejected as license fee is the eligibility fee of a licence holder and it is the onus of the petitioner. The petitioner has clarified that the licence fee has been a new component of cost to the transmission licence under O&M stage of the project and has become incidental to the petitioner only from 2008-09. The petitioner shall be entitled for reimbursement of licence fee in accordance with Regulation 42 A (1) (b) of the 2009 Tariff Regulations

Service tax

82. The petitioner has made a prayer to be allowed to bill and recover the service tax on transmission charges separately from the respondents, if it is subjected to such service tax in future. The BRPL has objected to recovery of service tax from the beneficiaries in future as CBEC has exempted service tax on transmission. Vide notification No. 11/2010-service tax dated 20.7.2010. The petitioner clarified that if notifications regarding granting of exemption to transmission service are withdrawn at a later date, the beneficiaries shall have to share the service tax paid by the petitioner. We consider petitioner's prayer pre-mature and accordingly this prayer is rejected.

Sharing of Transmission Charges

83. The billing, collection and disbursement of the transmission charges approved shall be governed by the provisions of the 2009 Tariff Regulations for the period up to 30.6.2011 and thereafter in accordance with the Central Electricity Regulatory Commission (Sharing of inter-state transmission charges and losses) Regulations, 2010, as amended from time to time.

84. This order disposes of Petition No. 85/TT/2011.

sd/-
(M. Deena Dayalan)
Member

sd/-
(V.S. Verma)
Member



CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN ASSET- 1			
(₹ in lakh)			
Details of Loan	2011-2012	2012-2013	2013-14
Bond XXX			
Gross loan opening	110.00	110.00	110.00
Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
Net Loan-Opening	110.00	110.00	110.00
Additions during the year	0.00	0.00	0.00
Repayment during the year	0.00	0.00	9.17
Net Loan-Closing	110.00	110.00	100.83
Average Loan	110.00	110.00	105.42
Rate of Interest	8.80%	8.80%	8.80%
Interest	9.68	9.68	9.28
Rep Schedule	12 annual installments from 29.09.2013		
Bond XXXI			
Gross loan opening	546.80	546.80	546.80
Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
Net Loan-Opening	546.80	546.80	546.80
Additions during the year	0.00	0.00	0.00
Repayment during the year	0.00	0.00	45.57
Net Loan-Closing	546.80	546.80	501.23
Average Loan	546.80	546.80	524.02
Rate of Interest	8.90%	8.90%	8.90%
Interest	48.67	48.67	46.64
Rep Schedule	12 annual installments from 25.02.2014		
Bond XXIV			
Gross loan opening	274.00	274.00	274.00
Cumulative Repayment upto DOCO/previous year	22.83	45.67	68.50
Net Loan-Opening	251.17	228.33	205.50
Additions during the year	0.00	0.00	0.00
Repayment during the year	22.83	22.83	22.83
Net Loan-Closing	228.33	205.50	182.67
Average Loan	239.75	216.92	194.08
Rate of Interest	9.95%	9.95%	9.95%
Interest	23.86	21.58	19.31
Rep Schedule	12 annual installments from 26.03.2011		
Bond XXVII			

Gross loan opening	910.00	910.00	910.00
Cumulative Repayment upto DOCO/previous year	0.00	75.83	151.67
Net Loan-Opening	910.00	834.17	758.33
Additions during the year	0.00	0.00	0.00
Repayment during the year	75.83	75.83	75.83
Net Loan-Closing	834.17	758.33	682.50
Average Loan	872.08	796.25	720.42
Rate of Interest	9.47%	9.47%	9.47%
Interest	82.59	75.40	68.22
Rep Schedule	12 annual installments from 31.03.2012		
Bond XXVIII			
Gross loan opening	332.00	332.00	332.00
Cumulative Repayment upto DOCO/previous year	0.00	0.00	27.67
Net Loan-Opening	332.00	332.00	304.33
Additions during the year	0.00	0.00	0.00
Repayment during the year	0.00	27.67	27.67
Net Loan-Closing	332.00	304.33	276.67
Average Loan	332.00	318.17	290.50
Rate of Interest	9.33%	9.33%	9.33%
Interest	30.98	29.68	27.10
Rep Schedule	12 annual installments from 15.12.2012		
Bond XXIX			
Gross loan opening	263.00	263.00	263.00
Cumulative Repayment upto DOCO/previous year	0.00	0.00	21.92
Net Loan-Opening	263.00	263.00	241.08
Additions during the year	0.00	0.00	0.00
Repayment during the year	0.00	21.92	21.92
Net Loan-Closing	263.00	241.08	219.17
Average Loan	263.00	252.04	230.13
Rate of Interest	9.20%	9.20%	9.20%
Interest	24.20	23.19	21.17
Rep Schedule	12 annual installments from 12.03.2013		
Bond XXXIII			
Gross loan opening	2781.00	2781.00	2781.00
Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
Net Loan-Opening	2781.00	2781.00	2781.00
Additions during the year	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00
Net Loan-Closing	2781.00	2781.00	2781.00
Average Loan	2781.00	2781.00	2781.00
Rate of Interest	8.64%	8.64%	8.64%
Interest	240.28	240.28	240.28
Rep Schedule	12 annual installments from 08.07.2014		
Bond XXXIV			



Gross loan opening	119.95	119.95	119.95
Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
Net Loan-Opening	119.95	119.95	119.95
Additions during the year	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00
Net Loan-Closing	119.95	119.95	119.95
Average Loan	119.95	119.95	119.95
Rate of Interest	8.84%	8.84%	8.84%
Interest	10.60	10.60	10.60
Rep Schedule	12 annual installments from 21.10.2014		
Bond XXXV			
Gross loan opening	0.00	224.65	224.65
Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
Net Loan-Opening	0.00	224.65	224.65
Additions during the year	224.65	0.00	0.00
Repayment during the year	0.00	0.00	0.00
Net Loan-Closing	224.65	224.65	224.65
Average Loan	112.33	224.65	224.65
Rate of Interest	9.64%	9.64%	9.64%
Interest	10.83	21.66	21.66
Rep Schedule	12 annual installments from 31.05.2015		
Total Loan			
Gross loan opening	5336.75	5561.40	5561.40
Cumulative Repayment upto DOCO/previous year	22.83	121.50	269.75
Net Loan-Opening	5313.92	5439.90	5291.65
Additions during the year	224.65	0.00	0.00
Repayment during the year	98.67	148.25	202.98
Net Loan-Closing	5439.90	5291.65	5088.67
Average Loan	5376.91	5365.78	5190.16
Rate of Interest	8.9581%	8.9595%	8.9451%
Interest	481.67	480.74	464.26

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN ASSET- 2				
(₹ in lakh)				
Details of Loan	2010-11	2011-2012	2012-2013	2013-14
Bond XXX				
Gross loan opening	343.00	343.00	343.00	343.00
Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00
Net Loan-Opening	343.00	343.00	343.00	343.00
Additions during the year	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00	28.58
Net Loan-Closing	343.00	343.00	343.00	314.42
Average Loan	343.00	343.00	343.00	328.71
Rate of Interest	8.80%	8.80%	8.80%	8.80%
Interest	30.18	30.18	30.18	28.93
Rep Schedule	12 annual installments from 29.09.2013			
Bond XXXI				
Gross loan opening	332.20	332.20	332.20	332.20
Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00
Net Loan-Opening	332.20	332.20	332.20	332.20
Additions during the year	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00	27.68
Net Loan-Closing	332.20	332.20	332.20	304.52
Average Loan	332.20	332.20	332.20	318.36
Rate of Interest	8.90%	8.90%	8.90%	8.90%
Interest	29.57	29.57	29.57	28.33
Rep Schedule	12 annual installments from 25.02.2014			
Bond XXIV				
Gross loan opening	455.00	455.00	455.00	455.00
Cumulative Repayment upto DOCO/previous year	0.00	37.92	75.83	113.75
Net Loan-Opening	455.00	417.08	379.17	341.25
Additions during the year	0.00	0.00	0.00	0.00
Repayment during the year	37.92	37.92	37.92	37.92
Net Loan-Closing	417.08	379.17	341.25	303.33
Average Loan	436.04	398.13	360.21	322.29
Rate of Interest	9.95%	9.95%	9.95%	9.95%
Interest	43.39	39.61	35.84	32.07
Rep Schedule	12 annual installments from 26.03.2011			

Bond XXVII				
Gross loan opening	970.00	970.00	970.00	970.00
Cumulative Repayment upto DOCO/previous year	0.00	0.00	80.83	161.67
Net Loan-Opening	970.00	970.00	889.17	808.33
Additions during the year	0.00	0.00	0.00	0.00
Repayment during the year	0.00	80.83	80.83	80.83
Net Loan-Closing	970.00	889.17	808.33	727.50
Average Loan	970.00	929.58	848.75	767.92
Rate of Interest	9.47%	9.47%	9.47%	9.47%
Interest	91.86	88.03	80.38	72.72
Rep Schedule	12 annual installments from 31.03.2012			
Bond XXVIII				
Gross loan opening	493.00	493.00	493.00	493.00
Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	41.08
Net Loan-Opening	493.00	493.00	493.00	451.92
Additions during the year	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	41.08	41.08
Net Loan-Closing	493.00	493.00	451.92	410.83
Average Loan	493.00	493.00	472.46	431.38
Rate of Interest	9.33%	9.33%	9.33%	9.33%
Interest	46.00	46.00	44.08	40.25
Rep Schedule	12 annual installments from 15.12.2012			
Bond XXIX				
Gross loan opening	447.00	447.00	447.00	447.00
Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	37.25
Net Loan-Opening	447.00	447.00	447.00	409.75
Additions during the year	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	37.25	37.25
Net Loan-Closing	447.00	447.00	409.75	372.50
Average Loan	447.00	447.00	428.38	391.13
Rate of Interest	9.20%	9.20%	9.20%	9.20%
Interest	41.12	41.12	39.41	35.98
Rep Schedule	12 annual installments from 12.03.2013			
Bond XXXV ADD CAP 2011-2012				
Gross loan opening	0.00	0.00	165.25	165.25
Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00
Net Loan-Opening	0.00	0.00	165.25	165.25
Additions during the year	0.00	165.25	0.00	0.00
Repayment during the year	0.00	0.00	0.00	0.00
Net Loan-Closing	0.00	165.25	165.25	165.25
Average Loan	0.00	82.63	165.25	165.25
Rate of Interest	9.64%	9.64%	9.64%	9.64%
Interest	0.00	7.97	15.93	15.93
Rep Schedule	12 annual installments from 31.05.2015			



Bond XXXIV ADD CAP 2011-2012				
Gross loan opening	0.00	26.48	26.48	26.48
Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00
Net Loan-Opening	0.00	26.48	26.48	26.48
Additions during the year	26.48	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00	0.00
Net Loan-Closing	26.48	26.48	26.48	26.48
Average Loan	13.24	26.48	26.48	26.48
Rate of Interest	8.84%	8.84%	8.84%	8.84%
Interest	1.17	2.34	2.34	2.34
Rep Schedule	12 annual installments from 21.10.2014			
Total Loan				
Gross loan opening	3040.20	3066.68	3231.93	3231.93
Cumulative Repayment upto DOCO/previous year	0.00	37.92	156.67	353.75
Net Loan-Opening	3040.20	3028.76	3075.26	2878.18
Additions during the year	26.48	165.25	0.00	0.00
Repayment during the year	37.92	118.75	197.08	253.35
Net Loan-Closing	3028.76	3075.26	2878.18	2624.83
Average Loan	3034.48	3052.01	2976.72	2751.51
Rate of Interest	9.3356%	9.3323%	9.3300%	9.3240%
Interest	283.29	284.82	277.73	256.55

**CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN
ASSET-3**

(₹ in lakh)

Details of Loan	2011-2012	2012-2013	2013-14
Bond XXX			
Gross loan opening	47.00	47.00	47.00
Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
Net Loan-Opening	47.00	47.00	47.00
Additions during the year	0.00	0.00	0.00
Repayment during the year	0.00	0.00	3.92
Net Loan-Closing	47.00	47.00	43.08
Average Loan	47.00	47.00	45.04
Rate of Interest	8.80%	8.80%	8.80%
Interest	4.14	4.14	3.96
Rep Schedule	12 annual installments from 29.09.2013		
Bond XXXI			
Gross loan opening	361.00	361.00	361.00
Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
Net Loan-Opening	361.00	361.00	361.00
Additions during the year	0.00	0.00	0.00
Repayment during the year	0.00	0.00	30.08
Net Loan-Closing	361.00	361.00	330.92
Average Loan	361.00	361.00	345.96
Rate of Interest	8.90%	8.90%	8.90%
Interest	32.13	32.13	30.79
Rep Schedule	12 annual installments from 25.02.2014		
Bond XXIV			
Gross loan opening	159.00	159.00	159.00
Cumulative Repayment upto DOCO/previous year	13.25	26.50	39.75
Net Loan-Opening	145.75	132.50	119.25
Additions during the year	0.00	0.00	0.00
Repayment during the year	13.25	13.25	13.25
Net Loan-Closing	132.50	119.25	106.00
Average Loan	139.13	125.88	112.63
Rate of Interest	9.95%	9.95%	9.95%
Interest	13.84	12.52	11.21
Rep Schedule	12 annual installments from 26.03.2011		
Bond XXVII			

Gross loan opening	631.00	631.00	631.00
Cumulative Repayment upto DOCO/previous year	0.00	52.58	105.17
Net Loan-Opening	631.00	578.42	525.83
Additions during the year	0.00	0.00	0.00
Repayment during the year	52.58	52.58	52.58
Net Loan-Closing	578.42	525.83	473.25
Average Loan	604.71	552.13	499.54
Rate of Interest	9.47%	9.47%	9.47%
Interest	57.27	52.29	47.31
Rep Schedule	12 annual installments from 31.03.2012		
Bond XXVIII			
Gross loan opening	198.00	198.00	198.00
Cumulative Repayment upto DOCO/previous year	0.00	0.00	16.50
Net Loan-Opening	198.00	198.00	181.50
Additions during the year	0.00	0.00	0.00
Repayment during the year	0.00	16.50	16.50
Net Loan-Closing	198.00	181.50	165.00
Average Loan	198.00	189.75	173.25
Rate of Interest	9.33%	9.33%	9.33%
Interest	18.47	17.70	16.16
Rep Schedule	12 annual installments from 15.12.2012		
Bond XXIX			
Gross loan opening	150.00	150.00	150.00
Cumulative Repayment upto DOCO/previous year	0.00	0.00	12.50
Net Loan-Opening	150.00	150.00	137.50
Additions during the year	0.00	0.00	0.00
Repayment during the year	0.00	12.50	12.50
Net Loan-Closing	150.00	137.50	125.00
Average Loan	150.00	143.75	131.25
Rate of Interest	9.20%	9.20%	9.20%
Interest	13.80	13.23	12.08
Rep Schedule	12 annual installments from 12.03.2013		
Bond XXXIII			
Gross loan opening	1486.00	1486.00	1486.00
Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
Net Loan-Opening	1486.00	1486.00	1486.00
Additions during the year	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00
Net Loan-Closing	1486.00	1486.00	1486.00
Average Loan	1486.00	1486.00	1486.00
Rate of Interest	8.64%	8.64%	8.64%
Interest	128.39	128.39	128.39
Rep Schedule	12 annual installments from 08.07.2014		
Bond XXXIV			



Gross loan opening	90.82	90.82	90.82
Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
Net Loan-Opening	90.82	90.82	90.82
Additions during the year	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00
Net Loan-Closing	90.82	90.82	90.82
Average Loan	90.82	90.82	90.82
Rate of Interest	8.84%	8.84%	8.84%
Interest	8.03	8.03	8.03
Rep Schedule	12 annual installments from 21.10.2014		
Bond XXXVI Add cap for 2011-2012			
Gross loan opening	0.00	111.45	111.45
Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
Net Loan-Opening	0.00	111.45	111.45
Additions during the year	111.45	0.00	0.00
Repayment during the year	0.00	0.00	0.00
Net Loan-Closing	111.45	111.45	111.45
Average Loan	55.73	111.45	111.45
Rate of Interest	9.35%	9.35%	9.35%
Interest	5.21	10.42	10.42
Rep Schedule	15 annual installments from 29.08.2016		
Bond XXXV Add cap for 2011-2012			
Gross loan opening	0.00	34.69	34.69
Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
Net Loan-Opening	0.00	34.69	34.69
Additions during the year	34.69	0.00	0.00
Repayment during the year	0.00	0.00	0.00
Net Loan-Closing	34.69	34.69	34.69
Average Loan	17.35	34.69	34.69
Rate of Interest	9.64%	9.64%	9.64%
Interest	1.67	3.34	3.34
Rep Schedule	12 annual installments from 31.05.2015		
Total Loan			
Gross loan opening	3122.82	3268.96	3268.96
Cumulative Repayment upto DOCO/previous year	13.25	79.08	173.92
Net Loan-Opening	3109.57	3189.88	3095.04
Additions during the year	146.14	0.00	0.00
Repayment during the year	65.83	94.83	128.83
Net Loan-Closing	3189.88	3095.04	2966.21
Average Loan	3149.72	3142.46	3030.63
Rate of Interest	8.9833%	8.9798%	8.9648%
Interest	282.95	282.19	271.69