CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

Petition No. 224/TT/2013

Coram:

Shri Gireesh B.Pradhan, Chairperson
Shri M. Deena Dayalan, Member
Shri A.K. Singhal, Member

Date of Hearing : 21.11.2013
Date of Order : 04.03.2014

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 for (A) LILO of 400 kV Simhapuri and Meenakshi-Nellore D/C Quad line (b) Associated bays and common systems at Nellore Pooling station for ISGS projects in Krishnapatnam area of Andhra Pradesh for the period from DOCO to 31.3.2014 in Southern Region for tariff block 2009-14.

And in the matter of:

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

Vs

1. Karnataka Power Transmission Corporation Ltd. (KPTCL),
   Kaveri Bhawan, Bangalore-560 009.

2. Transmission Corporation of Andhra Pradesh Ltd. (APTRANCO),
   Vidyut Soudha,
   Hyderabad-500 082.

3. Kerala State Electricity Board (KSEB),
   Vaidyuthi Bhavanam,
   Pattom, Thiruvananthapuram-695 004.

4. Tamil Nadu Generation and Distribution Corporation Ltd.
   NPKRR Maaligai, 800, Anna Salai,
   Chennai-600 002.

5. Electricity Department, Government of Goa,
   Vidyut Bhawan, Panaji,
   Near Mandvi Hotel, Goa-403 001.

6. Electricity Department, Government of Pondicherry,
   Pondicherry-605 001.

7. Eastern Power Distribution Company of Andhra Pradesh Ltd. (APEPDCL),
   APEPDCL, P&T Colony,
   Seethmmadhara, Vishakhapatnam,
   Andhra Pradesh.

8. Southern Power Distribution Company of Andhra Pradesh Ltd. (APSPDCL),
   Srinivasasa Kalyana Mandapam Backside,
   Tiruchanoor Road, Kesavayana Gunta,
   Tirupati-517 501.

9. Central Power Distribution Company of Andhra Pradesh Ltd. (APCPDCL),
   Corporate Office, Mint Compound,
   Hyderabad-500 063.

10. Northern Power Distribution Company of Andhra Pradesh Ltd. (APNPDCL),
    Opp. NIT Petrol Pump,
    Chaitanyapuri, Kazipet,
    Warangal-506 004.

11. Bangalore Electricity Supply Company Ltd. (BESCOM),
    Corporate Office, K. R. Circle,
    Bangalore-560 001.

12. Gulbarga Electricity Supply Company Ltd. (GESCOM),
    Station Main Road, Gulbarga.
    Karnataka.

13. Hubli Electricity Supply Company Ltd. (HESCOM),
    Navanagar, PB Road,
    Hubli, Karnataka.

14. MESCOM Corporate Office,
    Paradigm Plaza, AB Shetty Circle,
    Mangalore-575 001.

15. Chamundeswari Electricity Supply Corporation Ltd. (CESC),
    # 927, L J Avenue, Ground Floor,
    New Kantharaj Urs Road,
    Saraswatipuram, Mysore-570 009. **….Respondents**

For petitioner : Shri B. K. Sahoo, PGCIL
Shri S.S Raju, PGCIL
Shri Anil Kumar Meena, PGCIL
Shri Mohd. Mohsin, PGCIL

For respondent : None

ORDER

The petition has been filed by Power Grid Corporation of India Limited (PGCIL) seeking approval of the transmission charges for (A) LILO of 400 kV Simhapuri and Meenakshi-Nellore D/C Quad line (b) associated bays and common systems at Nellore Pooling station for ISGS projects in Krishnapatnam area of Andhra Pradesh (hereinafter referred to as "transmission assets") from date of commercial operation to 31.3.2014 based on the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as "the 2009 Tariff Regulations").

2. The Investment Approval for the scheme was accorded by the Board of Directors of the petitioner, vide Memorandum No. C/CP/ISGS Krishnapatnam dated 4.8.2011 for ₹163734 lakh, including Interest During Construction (IDC) of ₹10228 lakh based on 1st Quarter, 2011 price level. The scope of work covered under the scheme broadly includes:-

Transmission Lines

(i) LILO of both circuits of MEPL/SEPL- Nellore 400 kV D/C (Quad) line at Nellore Pooling Station
(ii) Nellore Pooling Station – Kurnool 765 kV D/C Line
(iii) Kurnool-Raichur 2nd 765 kV S/C line

Substations

(i) Establishment of New 2x1500 MVA, 765/400 kV Substation at Nellore

(ii) Extension of Kurnool 765/400 kV Sub-station

(iii) Extension of Raichur 765/400 kV Sub-station

Reactive Compensation

(i) 1x240 MVAR, 765 kV Bus Reactor at New 765/400 kV Nellore Substation

(ii) 240 MVAR, 765 kV Line Reactor at each end of both circuits of Nellore - Kurnool 765 kV Line

3. The total scheme of work includes 3 transmission lines and 3 Sub-stations, out of which the instant petition covers only one Asset i.e. LILO of 400 kV Simhapuri & Meenkashi-Nellore D/C Quad line, associated bays and common system at Nellore Pooling Station.

4. The petitioner has claimed tariff for the transmission asset covered in the instant petition on the basis of anticipated date of commercial operation, i.e. 1.4.2013 and subsequently, vide affidavit dated 27.8.2013, the petitioner has confirmed that the transmission assets have been put under commercial operation on 1.4.2013 and has also submitted revised capital cost details along with revised tariff forms.

5. The transmission charges claimed by the petitioner based on the actual date of commercial operation are as given overleaf:-

(₹ in lakh)

Particulars	2013-14
Depreciation	397.41
Interest on Loan	655.48
Return on Equity	561.35
Interest on working capital	50.92
O & M Expenses	270.65
Total	**1935.81**

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

(₹ in lakh)

Particulars	2013-14
Maintenance Spares	40.60
O & M Expenses	22.55
Receivables	322.64
Total	**385.79**
Rate of Interest	13.20%
Interest	50.92

7. 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. None of the respondents have filed reply.

8. Having heard the representatives of the parties and perused the material on record, we proceed to dispose of the petition.

9. The petitioner was directed to explain the necessity of LILOing of dedicated lines of Simhapuri Energy Pvt. Ltd (SEPL) and Meenakshi Energy Pvt. Ltd (MEPL) and approval of Standing Committee on Transmission Planning in this regard. In response, the petitioner in its reply dated 17.5.2013 has submitted as follows:-

(a) The existing ISTS grid in the vicinity of Krishnapatnam comprised of bays Nellore 400 kV Sub-station of PGCIL. The existing two spare terminating lines from proposed generation projects and the evacuation outlet was not sufficient to handle the huge quantum of power. Therefore, establishment of high capacity 765 kV pooling station along with 765 kV evacuation lines are necessary.

(b) The generation projects were proposed to be materialized in two different time frame; two projects viz. SEPL and MEPL materializing in early 2011-12 (both have been commissioned) and balance in 2014-15 time frame.

(c) The above LTOA application were received under 2004 Regulations under which unlike the current 2009 Tariff Regulations did not have provision for undertaking dedicated (Connectivity) lines under coordinating transmission plan for CTU and CEA. The comprehensive transmission system planned for ISGS projects in Krishnapatnam area comprised of following elements.

Phase-I: As explained above in line with the extant regulations SEPL/MEPL-Nellore (existing) 400 kV Quad D/C line was dedicated transmission line and was mainly to facilitate initial evacuation of power from SEPL/MEPL subject to availability of margins in the grid)

SEPL/MEPL-Nellore (existing) 400 kV Quad D/C line

Phase-II: System covered under ISTS

a. Establishment of new 765/400 kV pooling station at Nellore

b. LILO of both the circuits of SEPL/MEPL-Nellore (existing) 400 kV Quad D/C line at Nellore Pooling station (in absence of spare bays at existing Nellore substation LILO was only option available for integration of new pooling station with the Southern grid)
c. Nellore Pooling station-Kurnool 765 kV D/C line
d. Kurnool-Raichur 765 kV S/C line

The above transmission systems were discussed and agreed in the 26th meeting of the Standing Committee on Power System Planning of Southern Region held on 13.6.2008 at Hyderabad and 8th meeting of SRPC held on 19.12.2008 at Hyderabad.

(d) In the same vicinity of Krishnapatnam, a 4000 MW UMPP was also proposed. The transmission system for KUMPP, inter-alia comprised of Krishnapatnam-Gooty 400 kV (Quad) D/C line. During the 12th Joint Monitoring Committee meeting of Krishnapatnam, UMPP generating project held on 22nd June, 2011 in CEA, it was informed that the developer of the KUMPP has stopped the work at site and the project may get delayed.

(e) The Transmission System is generally planned for grid requirement corresponding to a given time frame and likely load-generation scenario in that time frame. As there was a delay/uncertainty of KUMPP generation project, it was found prudent to identify the transmission systems that would otherwise also be required for development of southern grid.

(f) The KUMPP-Gooty 400 kV D/C line was in close proximity of Nellore pooling station and is required even in absence of KUMPP generation project. Further in conjunction with Gooty-Madhugiri 400 kV D/C, this line was found to help in strengthening the grid. Accordingly, in the 33rd meeting of Standing Committee in Southern Region held on 15.11.2011, it was decided to delink Krishnapatnam-Gooty 400 kV (Quad) D/C line from KUMPP and terminating the line at Nellore Pooling Station designating the line as Nellore-Gooty 400 kV (quad) D/C line and implement the same as regional strengthening scheme.

(g) The commissioning of Nellore Pooling-Gooty 400 kV Quad D/C approved for strengthening of SR, however required commissioning of 400 kV portion of Nellore Pooling station along with LILO of both circuits of SEPL/MEPL—Nellore 400 kV D/C at Nellore Pooling station ahead of other elements of "Common System associated with ISGS projects in Krishnapatnam area of Andhra Pradesh". Accordingly this aspect was approved in the 35th Meeting of Standing Committee of Power System Planning in Southern Region held on 4.1.2013.

10. We are convinced with the justification given by the petitioner for LILOing of dedicated lines of SEPL and MEPL. Further, the present arrangement has the approval of the Standing Committee of Power System Planning in the SR and hence the transmission tariff for the instant transmission assets is allowed.

Capital cost

11. 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."

12. The details of apportioned approved cost, capital cost incurred/projected to be incurred up to date of commercial operation and projected to be incurred during 2013-14 for the asset, as per affidavit dated 29.8.2013, is given below:-

(₹ in lakh)

Apportioned approved cost	Actual expenditure incurred as on DOCO	Projected additional capital expenditure	Estimated completion cost up to 31.3.2014	Projected add cap for 2014-15	Total estimated completion cost
		2013-14			
17794.00	9287.00*****	2166.00	11453.00	157.12	11610.12

*is inclusive of initials spares of ₹18.28 lakh for transmission Line and ₹227.50 lakh for sub-station respectively.

13. There is an over-estimation of the cost in the instant case. The apportioned approved cost of the instant assets is ₹17794 lakh whereas the total estimated completion cost is only ₹11610.12 lakh. It is observed that the cost estimates of the petitioner are not realistic not only in this petition but also in other similar petitions. The petitioner should adopt a prudent procedure to make cost estimates of different elements of the transmission projects more realistic.

Treatment of Initial Spares

14. The petitioner has claimed initial spares of ₹18.28 lakh and ₹227.50 lakh for transmission line and sub-station respectively. As per Regulation 8 of the 2009 Tariff Regulations, the initial spares are to be capitalised as a percentage of the original project cost at the rate of 2.5% and 0.75% of the sub-station and transmission line respectively. The petitioner has claimed the additional capital expenditure for the year 2014-15 which is within the cut-off date but beyond the current tariff block of 2009-14. In these calculations, the additional capital expenditure upto the end of the tariff period, i.e. 31.3.2014 is considered and accordingly initial spares, as a percentage of total cost, is allowed excluding the additional capital expenditure during 2014-15. The balance initial spares shall be considered in the year 2014-15 taking into account the additional capital expenditure in the year 2014-15 in accordance with the 2009 Tariff Regulations. The same shall be reviewed at the time of truing up on the submission of actual capital expenditure incurred.

15. The initial spares claimed by the petitioner for transmission line falls within the ceiling norms specified under Regulation 8 of the 2009 Tariff Regulations,

whereas the same exceeds for sub-station. Details of the initial spares claimed and allowed is as follows:-

(₹ in lakh)

Cost as on cut-off date	Initial spares claimed	Ceiling limit as per Regulation 8 of 2009 Tariff Regulations	Initial spares worked out/allowed	Excess initial spares claimed
(a)	(b)	(c)	(d)= {(a)-(b)}/{100%-(c)}	(e)=(d)-(b)
8983.18	227.50	2.50%	224.50	-3.00

16. The petitioner has claimed capital cost of ₹9287 lakh, vide Management Certificate dated 2.7.2013, as on the date of commercial operation. Capital cost of ₹9284 lakh (excluding excess initial spares of ₹3.00 lakh) as on date of commercial operation has been considered for the purpose of determination of tariff.

Projected additional capital expenditure

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

> "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:"

18. Clause (11) of Regulation 3 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".

19. The petitioner has claimed the following additional capital expenditure for the transmission assets covered in the instant petition:-

(₹ in lakh)

Particulars	**2013-14**
Building & Other Civil Works	418.82
Transmission Line	1541.71
Sub-Station Equipments	205.47
PLCC	418.82
Total	**2166.00**

20. The petitioner has submitted the following underlying reasons for additional capital expenditure for the instant transmission assets:-

(₹ in lakh)

Sr. No.	**Year**	**Work**	**Amount capitalized and proposed to be capitalized as per revised Management Certificate**	**Justification**
1.	1.4.2013 to 30.6.2013	Sub-station	228.00	Balance and Retention payment
		Transmission Line	101.00	Balance and Retention payment
		TOTAL	**329.00**	
2.	Balance Estimated Expenditure in 2013-14	Sub-Station	**1,313.71**	Balance and Retention payment
		Transmission Line	317.82	Balance and Retention payment
		PLCC	205.47	Balance and Retention payment
	TOTAL		**1,837.00**	
3.	Balance Estimated Expenditure in 2014-15	Sub-Station	**157.12**	Balance and Retention payment
		Transmission Line	Nil	Balance and Retention payment
		PLCC	Nil	Balance and Retention payment
	TOTAL		**157.12**	

21. The projected additional capital expenditure claimed by the petitioner from the date of commercial operation to 30.6.2013 and 1.7.2013 to 31.3.2014 is on account of Balance/Retention payments and it is within cut-off date and hence same has been considered for the purpose of tariff calculations as per Regulation 9 (1) of 2009 Tariff Regulations. The additional capital expenditure claimed by the petitioner for the year 2014-15, though within the cut-off period, is falling in the next tariff block. The additional capital expenditure for the year 2014-15 shall be dealt as per the Tariff Regulations for the 2014-19 tariff block.

Debt- equity ratio

22. 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."

23. Details of debt-equity in respect of the assets as on dates of commercial operation are given hereunder:-

(₹ in lakh)

Capital cost as on date of commercial operation		
Particulars	**Amount**	**%**
Debt	6498.80	70.00
Equity	2785.20	30.00
Total	**9284.00**	**100.00**

24. Detail of debt-equity ratio of assets as on 31.3.2014 is as follows:-

(₹ in lakh)

Capital cost as on 31.3.2014		
Particulars	**Amount**	**%**
Debt	8015.00	70.00
Equity	3435.00	30.00
Total	**11450.00**	**100.00**

25. The debt: equity ratio for projected additional capital expenditure considered is as follows:-

(₹ in lakh)

	Normative	
	2013-14	
Particulars	**Amount**	**%**
Debt	1516.20	70.00
Equity	649.80	30.00
Total	**2166.00**	**100.00**

Return on equity

26. Regulation 15 of the 2009 Tariff Regulations provides as under:-

> "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".

Additional return on equity

27. As per the Investment Approval dated 4.8.2011, the assets covered in the "Common System Associated with ISGS Projects in Krishnapatnam Area of Andhra Pradesh" are scheduled to be commissioned within 36 months from the date of Investment Approval i.e. by 4.8.2014. The actual date of commercial operation of the instant transmission assets was 1.4.2013 (20 months). The petitioner has submitted that the elements covered in the project have been commissioned within 32 months stipulated in Appendix II to the 2009 Tariff

Regulations and hence qualify for additional return on equity of 0.5% as provided in the first proviso to Regulation 15(2) of the 2009 Tariff Regulations.

28. We are of the considered view that for grant of additional return on equity under first proviso to Regulation 15(2) read with Appendix II of 2009 Tariff Regulations, all the elements of the transmission systems need to be completed within the time schedule specified in Appendix II of the 2009 Tariff Regulations. This view has been upheld by the Hon'ble Appellate Tribunal in its judgment dated 10.5.2012 in Appeal No. 155/2011. The relevant observations of the Appellate Tribunal are extracted as under:-

> "16. Now, the thrust of the of the argument of the learned counsel for the appellant lies in reading the definition of the word 'project' and that of the 'transmission system' together in order that, according to the learned counsel, there is no difficulty in accepting the proposition that even when one element or a unit or a line or a group of lines are completed the generator or the transmission licensee would be entitled to the additional return on equity of 0.5% as per regulation no 15 (2) of the Central Electricity Regulatory Commission Tariff Regulations,2009 and the efficacy of the Note 1 to the Appendix II to the said regulation 15(2) will have no effect. It is submitted that if the definition of the word 'project' and the definition of the words 'transmission system' are not read together then the very purpose of the scheme of the Act becomes otiose and gets defeated. After having read the relevant provisions of the Act and those of the Regulations as were referred to us it appears to us that the argument of the learned counsel for the appellant is difficult to accept for the primary reason that the import of the word 'project' as appearing in section 2(31) of the Act comprises both generation and transmission because the Regulations, 2009 is meant for both. Definitely, the import of the word 'transmission system' as occurring in section 2(40) of the Act has been incorporated in to the definition of the word 'project' because transmission system is also a project as a generation is also a project and the transmission system means a line or a group of lines with or without associated sub-station, and it also includes equipment associated with transmission lines and sub–stations. In fact, over emphasis on reading the two words together do not lead us anywhere. A transmission system may be in a case of a particular project a line or any number of groups of lines and they again may be with or without associated sub-station, and inclusively the transmission system may comprise equipment associated with transmission lines and sub-stations. Now, having seen the scope of the work or project it appears that this transmission project consisted of laying down a 400 kV D/C line and two extension works of the two existing substations and one reactive compensation on proposed Kanpur- Ballabhgarh 400 kV D/C line. This is the transmission

project that was required to be completed within the time frame. In this scenario the definition of the word 'project' as we find in section 2(31) of the Act does not really render any assistance to the appellant, for having read the regulation 15(2) together with the Appendix II as also the note 1 to the said regulation no 15 (2) of the Tariff Regulations, 2009 it does not appear that completion of a part of the project does entitle the appellant to claim for additional return on equity of 0.5%. The words ***'' up to the date of commercial operation of the units or block or element of transmission project as applicable''*** as occurring in Appendix II of the regulation 15(2) of the Regulations, 2009 has no magical charm in it. The argument of the learned counsel for the appellant that the impugned order of the Commission has the effect of substituting the words 'transmission project as a whole' in the place of the expression 'element of transmission project' can hardly be agreed to because the definition of the word 'transmission system' is a comprehensive one and the completion in time schedule may relate to, in case of any particular project, units, or block or element of transmission project as may be applicable to such project. The description of the work covered under the transmission project is what we have seen earlier. Completion of a part of the total work covered under the project is not what is contemplated in the regulation 15(2) read with the Appendix II and the Note thereto. The element of the transmission project appertains to the scope and ambit of the word transmission system. It means that element of the transmission work which is applicable in a given situation. If it had been the intention of the authors of the Regulations that completion of a part of a work or a part of the project or a part of the transmission system would entitle the transmission licensee to claim additional return on equity then they would have expressly made provision there for and made separate time frame for each of the units or each of the parts of the total works to be implemented within a specific timeframe from the date of investment approval. That has not been done. It is the scheme as a whole, not a part thereof, that would qualify a transmission licensee to the entitlement to the additional return on equity. Interpretation of different provisions of the Act does hardly have too much of relevance in the conspectus of the fact situation in which interpretation of the regulation 15 (2) of the Regulations, 2009 is called for. The element of the transmission project does not mean only one element to the exclusion of others, if there are more than one, and the Commission does appear to have rightly held that the project as a whole has not been commissioned within the time schedule."

29. The additional return on equity of 0.5% can be allowed only if all the elements of the project is commissioned within the timelines laid down in the Appendix II to the 2009 Tariff Regulations as held by the Appellate Tribunal. The instant petition covers only part of the project. The petitioner request for additional return on equity can be considered only if the petitioner provides documentary evidence clarifying that all the elements as per Original Scope of Work were commissioned within the time limit specified in the 2009 Tariff

Regulations. However, the petitioner has not clearly submitted whether all the elements in the scope of work, as mentioned in the Investment Approval dated 4.8.2011, have been commissioned within the specified timelines. Accordingly, the petitioner's prayer for additional return on equity is not allowed. The same will be reviewed on the petitioner submitting documentary proof showing that all the elements of the project are commissioned within the timelines specified in the 2009 Tariff Regulations.

30. The return on equity considered is as follows:-

(₹ in lakh)

Particulars	**2013-14**
Opening Equity	2785.20
Addition due to Additional Capitalisation	649.80
Closing Equity	3435.00
Average Equity	3110.10
Return on Equity (Base Rate)	15.50%
Tax rate for the year 2008-09 (MAT)	11.33%
Rate of Return on Equity (Pre Tax)	17.481%
Return on Equity (Pre Tax)	543.68

Interest on loan

31. 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."

32. In keeping with the provisions of Regulation 16 of the 2009 Tariff Regulations, 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) Notwithstanding moratorium period availed by the transmission licensee, the repayment of the loan shall be considered from the first year of commercial operation of the project and shall be equal to the annual depreciation allowed.

(d) 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.

33. Detailed calculations in support of the weighted average rates of interest have been given in Annexure to this order.

34. Accordingly, the interest on Normative Loan has been calculated on the basis of prevailing rate available as on date of commercial operation. Any change in rate of interest subsequent to date of commercial operation will be considered at the time of truing up.

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

(₹ in lakh)

Particulars	**2013-14**
Gross Normative Loan	6498.80
Cumulative Repayment upto previous year	0.00
Net Loan-Opening	6498.80
Addition due to additional capital expenditure	1516.20
Repayment during the year	397.25
Net Loan-Closing	7617.75
Average Loan	7058.28
Weighted Average Rate of Interest on Loan	9.2840%
Interest	**655.29**

Depreciation

36. Regulation 17 of the 2009 Tariff Regulations provides as follows:-

> "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."

37. The transmission assets covered in the instant petition were put under commercial operation on 1.4.2013. The transmission assets will complete 12 years beyond 2013-14. Accordingly, depreciation has been calculated annually based on Straight Line Method and at rates specified in Appendix-III of Tariff Regulation 2009-14.

38. Based on the above, the following depreciation has been considered:-

(₹ in lakh)

Particulars	**2013-14**
Opening Gross Block	9284.00
Addition due to Projected Additional Capitalisation	2166.00
Closing Gross Block	11450.00
Average Gross Block	**10367.00**
Rate of Depreciation	3.8319%
Depreciable Value	7401.07
Remaining Depreciable Value	7401.07
Depreciation	**397.25**

<u>Operation & maintenance expenses</u>

39. Clause (g) of Regulation 19 of the 2009 Tariff Regulations prescribes the norms for operation and maintenance expenses for the 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 as under:-

Norms for AC and HVDC lines:

(₹ lakh per km)

Element	**2009-10**	**2010-11**	**2011-12**	**2012-13**	**2013-14**
D/C (Quad Conductor) transmission line	0.940	0.994	1.051	1.111	1.174

Norms for sub-station:

(₹ lakh per bay)

Element	**2009-10**	**2010-11**	**2011-12**	**2012-13**	**2013-14**
400 kV Bay	52.40	55.40	58.57	61.92	65.46

40. As per the existing norms, allowable O&M expenses for the assets covered in the petition are as follows:-

(₹ in lakh)

Element	2013-14
7.5 km D/C LILO of Simhapuri/ Meenakshi- Nellore at Nellore Pooling Station (DOCO:01.04.2013)	**8.81**
4 No.s 400 kV associated bays and common systems at Nellore Pooling Station (DOCO: 01.04.2013)	**261.84**
Total	**270.65**

<u>Interest on working capital</u>

41. 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 hereunder:-

(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

In accordance with clause (3) of Regulation 18 of the 2009 Tariff Regulations, as amended, rate of interest on working capital shall be on normative basis and shall be equal to State Bank of India Base Rate of 9.70% plus 350 bps as on 1.4.2011 (13.20%). The interest on working capital for the assets covered in the petition has been worked out accordingly.

42. Necessary computations in support of interest on working capital are given hereunder:-

(₹ in lakh)

Particulars	**2013-14**
Maintenance Spares	40.60
O & M Expenses	22.55
Receivables	319.57
Total	382.72
Rate of Interest	13.20%
Interest	**50.52**

Transmission charges

43. The transmission charges being allowed for the assets are summarized hereunder:-

(₹ in lakh)

Particulars	**2013-14**
Depreciation	397.25
Interest on Loan	655.29
Return on Equity	543.68
Interest on Working Capital	50.52
O & M Expenses	270.65
Total	**1917.39**

Date of commercial operation

44. The transmission assets covered in the instant petition were put under commercial operation on 1.4.2013, however notification in this regard was issued by the petitioner only on 5.4.2013. We are of the view that the date of commercial operation should be brought to the notice of all the respondents before hand and not after the date of commercial operation. Accordingly, we direct the petitioner to intimate all the respondents about declaration of commercial operation in advance.

Filing fee and the publication expenses

45. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses. 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

46. 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. 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

47. 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. We consider petitioner's prayer pre-mature and accordingly this prayer is rejected.

Sharing of Transmission Charges

48. The billing, collection and disbursement of the transmission charges approved shall be governed by the provisions of Central Electricity Regulatory Commission (Sharing of inter-State Transmission Charges and Losses) Regulations, 2010, as amended from time to time.

49. This order disposes of Petition No. 224/TT/2013.

sd/-	sd/-	sd/-
(A. K. Singhal) **Member**	**(M. Deena Dayalan)** **Member**	**(Gireesh B. Pradhan)** **Chairperson**

Annexure

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN

(₹ in lakh)

	Details of Loan	2013-14
1	**Bond XLI**	
	Gross loan opening	**3385.90**
	Cumulative Repayment upto DOCO/previous year	**0.00**
	Net Loan-Opening	3385.90
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	3385.90
	Average Loan	3385.90
	Rate of Interest	8.85%
	Interest	299.65
	Rep Schedule	12 annual installments from 19.10.2016
2	**SBI (21.3.2012)**	
	Gross loan opening	**1200.00**
	Cumulative Repayment upto DOCO/previous year	**0.00**
	Net Loan-Opening	1200.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	1200.00
	Average Loan	1200.00
	Rate of Interest	10.45%
	Interest	125.40
	Rep Schedule	22 annual installments from 31.08.2016
3	**Bond XXXIV**	
	Gross loan opening	**185.00**
	Cumulative Repayment upto DOCO/previous year	**0.00**
	Net Loan-Opening	185.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	185.00
	Average Loan	185.00
	Rate of Interest	8.84%
	Interest	16.35
	Rep Schedule	12 annual installments from 21.10.2014
4	**Bond XXXVII**	
	Gross loan opening	**320.00**
	Cumulative Repayment upto DOCO/previous year	**0.00**
	Net Loan-Opening	320.00
	Additions during the year	0.00

	Repayment during the year	0.00
	Net Loan-Closing	320.00
	Average Loan	320.00
	Rate of Interest	9.25%
	Interest	29.60
	Rep Schedule	12 annual installments from 16.12.2015
5	**Bond XXXIX**	
	Gross loan opening	**1410.00**
	Cumulative Repayment upto DOCO/previous year	**0.00**
	Net Loan-Opening	1410.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	1410.00
	Average Loan	1410.00
	Rate of Interest	9.40%
	Interest	132.54
	Rep Schedule	Bullet payment 29.3.2027
	Total Loan	
	Gross loan opening	**6500.90**
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	6500.90
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	6500.90
	Average Loan	6500.90
	Rate of Interest	**9.2840%**
	Interest	603.55