

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 36/TT/2014

Coram:

**Shri Gireesh B. Pradhan, Chairperson
Shri A.K. Singhal, Member
Shri A.S. Bakshi, Member
Dr. M.K. Iyer, Member**

Date of Hearing : 06.10.2015

Date of Order : 31.05.2016

In the matter of:

Approval of transmission tariff for LILO of one Circuit of Neyvelli-Trichy 400 kV Line at Nagapattinam Pooling Station for initial arrangement which later shall be bypassed (COD: 3.5.2014) under Transmission System associated with Common Transmission Scheme associated with ISGS Projects in Nagapattinam/Cuddalore area of Tamil Nadu Part-A1(a) in Southern Region for tariff block 2014-19 under Regulation-86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations 1999, and Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations 2014.

And in the matter of:

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

.....**Petitioner**

Vs

1. Karnataka Power Transmission Corporation Limited,
(KPTCL), Kaveri Bhavan,
Bangalore-560 009
2. Transmission Corporation of Andhra Pradesh Limited,
(APTRANSCO), Vidyut Soudha,
Hyderabad-500 082
3. Kerala State Electricity Board (KSEB),
Vaidyuthi Bhavanam, Pattom,
Thiruvananthapuram-695 004



4. Tamil Nadu Generation and Distribution Corporation Limited,
(Formerly Tamil Nadu Electricity Board-TNEB)
NPKRR Maaligai, 800, Anna Salai,
Chennai-600 002
5. Electricity Department,
Government of Pondicherry,
Pondicherry-605 001
6. Eastern Power Distribution Company of Andhra Pradesh Limited,
(APEPDCL)
APEPDCL, P&T Colony, Seethmmadhara, Vishakhapatam,
Andhra Pradesh
7. Southern Power Distribution Company of Andhra Pradesh Limited,
(APSPDCL)
Srinivasasa Kalyana Mandapam Backside,
Tiruchanoor Road, Kesavayana Gunta,
Tirupati-517 501
Chittoor District, Andhra Pradesh
8. Central Power Distribution Company of Andhra Pradesh Limited,
(APCPDCL)
Corporate Office, Mint Compound,
Hyderabad-500 063, Andhra Pradesh
9. Northern Power Distribution Company of Andhra Pradesh Limited,
(APNPDCL)
Opposite NIT Petrol Pump,
Chaitanyapuri, Kazipet,
Warangal-506 004, Andhra Pradesh
10. Bangalore Electricity Supply Company Limited (BESCOM),
Corporate Office, K.R.Circle,
Bangalore-506 001, Karanataka
11. Gulbarga Electricity Supply Company Limited (GESCOM),
Station Main Road,
Gulbarga, Karanataka
12. Hubli Electricity Supply Company Limited (HESCOM),
Navanagar, PB Road,
Hubli, Karanataka
13. Mescom Corporate Office,
Paradigm Plaza, AB Shetty Circle,
Mangalore-575 001, Karanataka



14. Chamundeswari Electricity Supply Corporation Limited (CESC),
927, L J Avenue, Ground Floor,
New Kantharaj Urs Road,
Saraswatipuram, Mysore-570 009 Karanataka

15. IL & FS Tamil Nadu Power Company Limited,
B-Block, 4th Floor, Navin's Presidium,
103, Nelson Manickam Road, Aminjikarai,
Chennai-600 029, Tamil Nadu

16. PEL Power Limited,
8-2-293/A/76, Road No. 9A, Jubilee Hills,
Hyderabad-500 033, Andhra Pradesh

..... Respondents

For petitioner : Shri S.S. Raju, PGCIL
Shri S.K. Meena, PGCIL

For respondents : Shri S. Vallinayagam, Advocate for TANGEDCO
Ms. C. Lakshmi Devi, TANGEDCO
Shri S.C. Misra, ITPCL
Shri V.L. Dua, ITPCL
Shri Anil R. Sah, ITPCL

ORDER

This petition has been filed by Power Grid Corporation of India Limited (petitioner) seeking approval of transmission tariff for LILO of one Circuit of Neyvelli-Trichy 400 kV Line at Nagapattinam Pooling Station for initial arrangement which later shall be bypassed (hereinafter referred to as "transmission assets") under Transmission System associated with Common Transmission Scheme associated with ISGS Projects in Nagapattinam/Cuddalore area of Tamil Nadu Part-A1(a) in Southern Region for the period from the date of commercial operation to 31.3.2014, based on the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014, (hereinafter referred to as "the 2014 Tariff Regulations").



2. The petitioner has been entrusted with the implementation of transmission system associated with Common Transmission Scheme associated with ISGS Projects in Nagapattinam/Cuddalore area of Tamil Nadu Part-A1 (a). The scope of the scheme was discussed and agreed in the 31st meeting of Standing Committee on Power System Planning of Southern Region held on 16.11.2010 at New Delhi. The Investment Approval (IA) of the project was accorded by Board of Directors of the petitioner vide Memorandum No. C/CP/NAGAPATTINAM-PART-A1 (a) dated 28.1.2013 for the meeting held on 3.1.2012, at an estimated cost of ₹18220 lakh including IDC of ₹1026 lakh (based on October, 2012 price level). The project was scheduled to be commissioned within 21 months from the date of IA i.e. 3.1.2012. Therefore, the scheduled date of commissioning of the transmission system was 2.10.2014.

3. The broad scope of work covered under the project is as follows:-

Transmission Lines:

- i) **LILO of Neyvelli-Trichy 400 kV S/C line at Nagapattinam Pooling station for initial arrangement which later shall be bypassed;**

Substations:

- i) New 400 kV GIS Pooling station at Nagapattinam with sectionalisation arrangement to control short circuit MVA (provision of establishing a 765/400kV sub-station in future in the same switchyard);

Reactive Compensation:

Bus Reactors (400 kV)

- i) 1x125 MVAR Bus reactor at Nagapattinam pooling Station.



4. This order has been issued after considering petitioner's affidavit dated 7.3.2014, 24.5.2014, 3.6.2015, 7.1.2016 and 9.3.2016.

5. The petitioner initially claimed the transmission tariff for the instant asset as per the anticipated COD of 1.3.2014 under the 2009 Tariff Regulations. Subsequently, the petitioner vide affidavit dated 7.3.2014 has submitted that the instant asset was expected to be commissioned during 2014-19 i.e. on 1.4.2014. However, the petitioner vide affidavit dated 24.5.2014 submitted the actual COD as 3.5.2014. Accordingly, the transmission tariff for instant asset is allowed under the 2014 Tariff Regulations.

6. AFC was granted for the above mentioned transmission asset vide order dated 23.6.2014 under the first proviso to Regulation 7(7) of the 2014 Tariff Regulations, subject to proviso (iii) and (iv) of the said Regulation.

7. Details of the transmission charges claimed by the petitioner are as under:-

Particulars	(₹ in lakh)				
	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Depreciation	145.57	183.05	192.22	194.86	194.86
Interest on Loan	189.57	222.76	216.09	200.07	180.34
Return on equity	162.19	203.96	214.17	217.11	217.11
Interest on Working Capital	12.27	14.96	15.29	15.08	14.66
O & M Expenses	14.82	16.81	17.37	17.94	18.54
Total	524.42	641.54	655.14	645.06	625.51

8. The details submitted by the petitioner in support of its claim for Interest on



Working Capital are as below:-

Particulars	(₹ in lakh)				
	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	2.44	2.52	2.61	2.69	2.78
O & M expenses	1.36	1.40	1.45	1.50	1.55
Receivables	95.91	106.92	109.19	107.51	104.25
Total	99.71	110.84	113.25	111.70	108.58
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%
Interest	12.28	14.96	15.29	15.08	14.66

9. No comments have been received from the general public in response to the notices published in news papers by the petitioner under Section 64 of the Electricity Act, 2003. Tamil Nadu Generation and Distribution Corporation Limited, (TANGEDCO), Respondent No. 4, during the hearing dated 6.10.2015, through its counsel submitted that the line has been commissioned as per the agreement entered into between the petitioner and IL&FS and for the benefit of IL&FS. Accordingly, IL&FS should pay the transmission charges as provided in the agreement between them and it should not be included in the PoC calculations as prayed by the petitioner. In response, IL&FS Tamil Nadu Power Company Limited (IL&FS), Respondent No. 15 has filed reply dated 18.1.2016. IL&FS has submitted that the instant asset is a part of transmission scheme approved by Southern region constituents in its 11th meeting held on 16.11.2010 and by the Commission vide order dated 13.12.2011. The petitioner had merely advanced the commissioning of the instant asset on the request of IL&FS, for its start-up power requirement. IL&FS further submitted that as per the agreement with the petitioner, the transmission charges shall be paid by IL&FS from the COD till the operationalisation of the LTA i.e. from COD of 3.5.2014 to 29.9.2015 and thereafter the provisional transmission charges being paid by it to the petitioner be refunded/ adjusted in PoC Charges.



The petitioner has filed rejoinder dated 5.4.2016 to the reply of IL&FS. The petitioner has submitted that the LTA of IL&FS has been operationalised w.e.f. 29.9.2015 but the subject tariff could not be included in the YTC for PoC computations for Quarter 3 of 2015-16 as the YTC was already frozen and the subject tariff was continued to be billed to IL&FS. However, transmission charges for the instant asset collected from IL&FS for the period 1.10.2015 to 31.1.2016 shall be refunded/adjusted in the future PoC billing of transmission charges.

Date of Commercial Operation (COD)

10. The petitioner vide affidavit dated 24.5.2014 has submitted that as per the Investment Approval, the transmission scheme was scheduled to be commissioned within 21 months from the date of Investment Approval i.e. 3.1.2013. Hence, the commissioning schedule comes to 2.10.2014 and COD as 1.11.2014 against which the subject asset is commissioned and put under commercial operation w.e.f. 3.5.2014. The advancement of commissioning of this line is as per the transmission agreement dated 31.1.2012 entered into by IL&FS for availing start up power for commissioning. Further, as the Nagapattinam Pooling Station was delayed, the subject LILO is directly connected to the dedicated IL&FS Switchyard-Nagapattinam PS 400 kV D/C Quad Line (being constructed by IL&FS), bypassing the sub-station to enable the generator to draw start-up power and inject infirm power to complete the commissioning activities. This arrangement was taken up to ensure that the generation is not bottled up and restricted for want of connectivity. Further, this interim arrangement of the subject LILO being directly connected to the dedicated IL&FS Switchyard-Nagapattinam PS 400 kV D/C Quad line (being constructed by



IL&FS) was discussed and concurred in the 24th SRPC meeting held on 15.3.2014. Subsequently, the line was completed and all the necessary statutory clearances for energisation were obtained. Approval of CEA clearance for energisation dated 2.5.2014 was submitted. However, the dedicated IL&FS Switchyard-Nagapattinam PS 400 kV D/C Quad line (being constructed by IL&FS) was not completed due to which the "Trial Operation" and the subsequent "Regular Service" of the asset could not be achieved. The petitioner submitted that under these circumstances it has notified the deemed commercial operation of the instant asset with effect from 3.5.2014. The petitioner further submitted that the "Trial Operation" and the subsequent "Regular Service" of the instant asset could not be achieved for reasons which are not attributable to the petitioner and as per the provision 3(ii) of Regulation 4 of 2014 Tariff Regulations, the date of commercial operation be approved.

11. Regulation 4(3)(ii) of the 2014 Tariff Regulations provides as under:-

"3) Date of commercial operation in relation to a transmission system shall mean the date declared by the transmission licensee from 0000 hour of which an element of the transmission system is in regular service after successful trial operation for transmitting electricity and communication signal from sending end to receiving end:

Provided that:

i) where the transmission line or substation is dedicated for evacuation of power from a particular generating station, the generating company and transmission licensee shall endeavor to commission the generating station and the transmission system simultaneously as far as practicable and shall ensure the same through appropriate Implementation Agreement in accordance with Regulation 12(2) of these Regulations:

ii) in case a transmission system or an element thereof is prevented from regular service for reasons not attributable to the transmission licensee or its supplier or its contractors but is on account of the delay in commissioning of the concerned generating station or in commissioning of the upstream or downstream transmission system, the transmission licensee shall approach the Commission through an



appropriate application for approval of the date of commercial operation of such transmission system or an element thereof.

12. However, the petitioner was directed to submit as to how it had declared COD of the instant asset on its own without the approval of this Commission. In response, the petitioner vide affidavit dated 7.1.2016 has submitted as under:-

a) The instant LILO has been put into connection with IL&FS-Nagapattinam line with effective from 22.1.2015 and the same was LILLOed at Nagapattinam Sub-station with effective from 29.3.2015;

b) Nagapattinam sub-station has been put into commercial operation with effective from 1.4.2015;

c) As the Neyveli-Trichy transmission line has been LILLOed at Nagapattinam Sub-station to be bypassed later along with date of COD of IL&FS and status of LTA operationalisation for IL&FS;

d) For evacuation of power from IL & FS beyond Nagapattinam Pooling station, Nagapattinam Pooling Station-Dharmapuri (Salem New) 765 kV D/C (initially charged at 400 kV) and first circuit of Dharmapuri- Madhugiri 765 kV 2xS/C (initially charged at 400 kV) lines are under execution. Further, for reliable evacuation of power beyond Dharmapuri (Salem New), second circuit of Dharmapuri (Salem New)-Madhugiri 765 kV 2xS/C (initially charged at 400 kV), Dharmapuri (Salem New)-Salem 400 kV quad D/C and Dharmapuri (Salem New)-Somanhalli 400 kV quad D/C lines are also under implementation. The present interim arrangement would be bypassed with the commissioning of above referred transmission lines.

13. The petitioner vide affidavit dated 9.3.2016 also submitted that while planning the interim arrangement, it was envisaged that the implementation of all the generation projects in Nagapattinam/Cuddalore area, the short circuit levels at nearby stations may cross their designed limits and accordingly during planning stage itself bypassing arrangement of LILLO of Neyveli-Trichy line at Nagapattinam Pooling Stations was provided. At present only IL&FS with installed capacity of 1200 MW has been commissioned and other generation projects in the area are



uncertain. With the commissioning of only generator in the area, the short circuit levels at nearby stations may not cross the designed limits and bypassing arrangements may be carried out later, as LILO under the interim arrangements shall provided additional reliability. As such, the LILO of Neyveli-Trichy 400 kV line at Nagapattinam Pooling Station shall be bypassed in future based on the assessment of short circuit levels at nearby stations and after commissioning of the above referred transmission system. The COD of IL&FS unit-I is declared in September, 2015 and the COD of unit-II is expected in April, 2016. IL&FS has been granted LTA for 1150 MW, out of which 540 MW to Tamil Nadu is under operation. The balance LTA quantum shall be operationalised with the commissioning of adequate transmission system. The anticipated COD for upstream system of Nagapattinam Sub-station i.e. Nagapattinam-Salem line is March, 2016 and anticipated COD for Salem-Madhugiri (1st ckt, being executed by PGCIL) is March, 2016 and anticipated COD for 2nd Ckt (being executed under TBCB) is June, 2016.

14. We have considered the submissions of the petitioner and IL&FS. The petitioner has submitted that it completed the line in the month of May, 2014 as per IL&FS's request to commission the line by March, 2014 during meeting held in December, 2013. The same was also confirmed by the representative of IL&FS during the hearing held on 6.10.2015 that the petitioner had advanced the commissioning of the instant asset on its request for availing the start-up power and it is paying the transmission charges allowed by the Commission vide order dated 23.6.2014. He further submitted that once the generation of IL&FS comes up and the LTA gets operationalised, the instant transmission asset should be included in



the PoC calculations. Accordingly, we are inclined to permit COD of the instant asset from 3.5.2014 as per Regulation 4(3) (ii) of the 2014 Tariff Regulations and for the purpose of tariff, date of commercial operation has been considered as 3.5.2014.

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

Capital Cost

16. Clause (1) and (2) of Regulation 9 of the 2014 Tariff Regulations provides as follows:-

“(1) The Capital cost as determined by the Commission after prudence check in accordance with this regulation shall form the basis of determination of tariff for existing and new projects.”

(2) The Capital Cost of a new project shall include the following:

(a) the expenditure incurred or projected to be incurred up to the date of commercial operation of the project;

(b) Interest during construction and financing charges, on the loans (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 funds deployed;

(c) Increase in cost in contract packages as approved by the Commission;

(d) Interest during construction and incidental expenditure during construction as computed in accordance with Regulation 11 of these regulations;

(e) capitalised Initial spares subject to the ceiling rates specified in Regulation 13 of these regulations;

(f) expenditure on account of additional capitalization and de-capitalisation determined in accordance with Regulation 14 of these regulations; 39

(g) adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the COD as specified under Regulation 18 of these regulations; and



(h) adjustment of any revenue earned by the transmission licensee by using the assets before COD.

17. The petitioner has submitted vide affidavit dated 7.1.2016 details of the capital expenditure as on the date of commercial operation and estimated additional capital expenditure vide Auditors' Certificate dated 27.5.2015. According to Auditors' Certificate, the expenditure upto 31.3.2015 has been verified from the books of account and the expenditure for 2015-16 and 2016-17 are projected on the basis of details furnished by the Management.

18. The details of apportioned approved cost, actual expenditure incurred as on the date of commercial operation and details of additional capital expenditure (hereinafter "add cap") incurred/projected to be incurred for the asset covered in the petition are as follows:-

Apportioned approved cost	Cost incurred upto COD	Estimated Add-cap			Estimated completion cost
		2014-15	2015-16	2016-17	
3198.00	2707.33	623.67	259.53	100.00	3690.53

Cost over-run

19. There is cost over-run of approximately 15.38%, mainly on account of higher award cost received in competitive bidding compared to initial estimates as well as actual compensation amount of ₹238 lakh paid towards crop and PTCC compared to ₹108.91 lakh considered in FR. The petitioner has submitted that some of the assets covered under the project are yet to be commissioned. Therefore, capital



cost of the instant asset which works out to ₹3690.53 lakh which is exceeding approved apportioned cost. Hence, the overall estimated cost is restricted to approved apportioned cost i.e. ₹3198.00 lakh. The petitioner has further submitted that RCE of the project is under approval and shall be submitted after approval of the same.

20. We have considered the submissions made by the petitioner regarding the increase in cost. The petitioner is required to submit the revised cost estimate (RCE) duly approved by its Board. The petitioner has not furnished the RCE for the instant asset covered in the instant petition. Accordingly, the capital cost of the instant asset is restricted to the approved apportioned cost. However, the capital cost in case of the instant asset shall be reviewed at the time of truing up, subject to the petitioner filing justification for cost over-run.

21. The project was scheduled to be commissioned within 21 months from the date of IA i.e. 3.1.2013. Accordingly, the scheduled commissioning works out to 2.10.2014 i.e. 1.11.2014. The instant asset was commissioned within the specified timeline on 3.5.2014.

Treatment of IDC & IEDC

22. The petitioner has claimed Interest during Construction (IDC) of ₹94.40 lakh as per Auditors' Certificate. The petitioner vide affidavit dated 7.1.2016 has submitted the statement showing IDC discharged up to COD in which actual loan as well as proposed loan were considered for computing IDC. However, for the



purpose of determining the IDC, only actual loans are considered. Accordingly the IDC amounting to ₹27.28 lakh has been worked out. However, the petitioner is directed to submit details of proposed loan used in the instant petition alongwith date of infusion of debt and proof for interest rate at the time of truing-up.

23. The petitioner has claimed Incidental Expenditure during Construction (IEDC) of ₹62.35 lakh, details of actual IEDC discharged upto COD are given in Form-12 A submitted by petitioner vide affidavit dated 23.5.2014. Therefore, entire amount of IEDC has been allowed for tariff purpose.

Initial Spares

24. Regulation 13 of the 2014 Tariff Regulations specifies ceiling norms for capitalization of initial spares in respect of transmission system as under:-

“13. Initial Spares

Initial spares shall be capitalised as a percentage of the Plant and Machinery cost upto cut-off date, subject to following ceiling norms:

- (d) Transmission system
- (i) Transmission line - 1.00%
- (ii) Transmission Sub-station (Green Field) - 4.00%
- (iii) Transmission Sub-station (Brown Field) - 6.00%
- (iv) Series Compensation devices and HVDC Station - 4.00%
- (v) Gas Insulated Sub-station (GIS)-5.00%
- (vi) Communication system-3.5%

Provided that:

- (i) where the benchmark norms for initial spares have been published as part of the benchmark norms for capital cost by the Commission, such norms shall apply to the exclusion of the norms specified above:
- (ii) -----
- (iii) Once the transmission project is commissioned, the cost of initial spares shall be restricted on the basis of plant and machinery cost corresponding to the transmission project at the time of truing up:



(iv) for the purpose of computing the cost of initial spares, plant and machinery cost shall be considered as project cost as on cut-off date excluding IDC, IEDC, Land Cost and cost of civil works. The transmission licensee shall submit the breakup of head wise IDC & IEDC in its tariff application.”

25. The petitioner has claimed initial spares pertaining to transmission line. The petitioner was directed to clarify whether the entire liability pertaining to initial spares was discharged on COD. The petitioner vide affidavit dated 7.1.2016 has submitted year wise discharge of the initial spares and accordingly entire amount of initial spares shall be discharged during 2015-16. Thus, in view of the restriction of the capital cost due to cost over-run, no additional capital expenditure has been allowed during 2015-16, though the initial spares claimed by the petitioner are within the ceiling limit of the 2014 Tariff Regulations. The petitioner is directed to submit details of actual discharge of liability of initial spares and RCE, if any, for review at the time of truing-up.

26. The petitioner has claimed capital cost of ₹2707.33 lakh as on the date of commercial operation for the asset under consideration. The details of the capital cost considered as on the date of commercial operation after disallowing IDC for the purpose of the determination of transmission tariff is as follows:-

(₹ in lakh)

Capital cost as on COD claimed	IDC disallowed	Capital cost as on COD allowed
2707.33	67.12	2640.21



Additional Capital Expenditure

27. Clause (1) of Regulation 14 of the 2014 Tariff Regulations provides as under:-

“ (1) The capital expenditure in respect of the new project or an existing project 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 recognised to be payable at a future date;
- (ii) Works deferred for execution;
- (iii) Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 13;
- (iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and
- (v) Change in Law or compliance of any existing law.”

Provided that the details of works asset wise/work wise included in the original scope of work along with estimates of expenditure, liabilities recognized to be payable at a future date and the works deferred for execution shall be submitted along with the application for determination of tariff.

28. Clause (13) of Regulation 3 of the 2014 Tariff Regulations defines “cut-off” date as under:-

“cut-off date” means 31st March of the year closing after two years of the year of commercial operation of whole or part of the project, and in case the whole or part of 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 three years of the year of commercial operation”.

29. Therefore, the cut-off date for the instant assets is 31.3.2017.

30. The petitioner has claimed additional capital expenditure of ₹623.67 lakh, ₹259.53 lakh and ₹100 lakh for 2014-15, 2015-16 and 2016-17 respectively. However, the allowable add-cap is restricted to ₹490.67 lakh for 2014-15, in view of restriction of cost as discussed at para-20. The remaining add-cap of ₹133 lakh



(₹623.67 lakh-₹490.67 lakh), ₹259.53 lakh and ₹100 lakh for 2014-15, 2015-16 and 2016-17 respectively are disallowed. The disallowed add-cap shall be reviewed at the time of truing-up subject to submission of revised cost estimate.

Capital cost as on COD and as on 31.3.2019

31. It is seen that the additional capital expenditure claimed by the petitioner falls within the cut-off date and is mainly on account of balance and retention payments. However, Additional capital expenditure for financial year 2014-15 is being allowed for calculation of tariff as the capital cost is restricted to the approved apportioned cost as discussed at para-20. Thus, additional capital expenditure of ₹623.67 lakh claimed from the date of commercial operation to 31.3.2015 has been restricted to ₹490.67 lakh for tariff computation. Thus, total estimated completion cost as on 31.3.2019 has been considered as under:-

(₹ in lakh)		
Capital cost Allowed as on COD	Add-cap for 2014-15	Capital cost as on COD allowed
2640.21	490.67	3130.88

Debt- Equity Ratio

32. Clause 1 and 5 of Regulation 19 of the 2014 Tariff Regulations specifies as follows:-

“(1) For a project declared under commercial operation on or after 1.4.2014, the debt-equity ratio would be considered as 70:30 as on COD. 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:

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



ii. the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:

iii. any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt : equity ratio.

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, only if such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station or the transmission system.”

“(5) Any expenditure incurred or projected to be incurred on or after 1.4.2014 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.”

33. The petitioner has claimed debt: equity ratio of 70:30 as on the date of commercial operation of the asset. The details of debt-equity in respect of the asset covered in this petition as on date of commercial operation and as on 31.3.2019 respectively are as under:-

Particulars	Cost as on COD		Cost as on 31.3.2019	
	Amount (₹ in lakh)	% age	Amount (₹ in lakh)	% age
Debt	1848.15	70.00	2191.62	70.00
Equity	792.06	30.00	939.27	30.00
Total	2640.21	100.00	3130.88	100.00

34. The above stated debt-equity ratio has been applied for the purpose of tariff calculation in this order.



Return on Equity

35. Clause (1) and (2) of Regulation 24 and Clause (1) and (2) of Regulation 25 of the 2014 Tariff Regulations specify as follows:-

“ 24. Return on Equity: (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 19.

(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating stations, transmission system including communication system and run of the river hydro generating station, and at the base rate of 16.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run of river generating station with pondage:

Provided that:

- (i) in case of projects commissioned on or after 1st April, 2014, an additional return of **0.50 %** shall be allowed, if such projects are completed within the timeline specified in **Appendix-I**:
- (ii) the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever:
- (iii) additional RoE of 0.50% may be allowed if any element of the transmission project is completed within the specified timeline and it is certified by the Regional Power Committee/National Power Committee that commissioning of the particular element will benefit the system operation in the regional/national grid:
- (iv) the rate of return of a new project shall be reduced by 1% for such period as may be decided by the Commission, if the generating station or transmission system is found to be declared under commercial operation without commissioning of any of the Restricted Governor Mode Operation (RGMO)/ Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system:
- (v) as and when any of the above requirements are found lacking in a generating station based on the report submitted by the respective RLDC, RoE shall be reduced by 1% for the period for which the deficiency continues:
- (vi) additional RoE shall not be admissible for transmission line having length of less than 50 kilometers.”

“25. Tax on Return on Equity:

(1) The base rate of return on equity as allowed by the Commission under Regulation 24 shall be grossed up with the effective tax rate of the respective



financial year. For this purpose, the effective tax rate shall be considered on the basis of actual tax paid in the respect of the financial year in line with the provisions of the relevant Finance Acts by the concerned generating company or the transmission licensee, as the case may be. The actual tax income on other income stream (i.e., income of non generation or non transmission business, as the case may be) shall not be considered for the calculation of “effective tax rate”.

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

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

Where “t” is the effective tax rate in accordance with Clause (1) of this regulation and shall be calculated at the beginning of every financial year based on the estimated profit and tax to be paid estimated in line with the provisions of the relevant Finance Act applicable for that financial year to the company on pro-rata basis by excluding the income of non-generation or non-transmission business, as the case may be, and the corresponding tax thereon. In case of generating company or transmission licensee paying Minimum Alternate Tax (MAT), “t” shall be considered as MAT rate including surcharge and cess.”

36. The petitioner has submitted that RoE has been calculated after grossing up the RoE with MAT rate. The petitioner has further submitted that it may be allowed to recover the shortfall or refund the excess Annual Fixed Charges, on account of return on equity due to change in applicable Minimum Alternate Tax/Corporate Income Tax rate as per the Income Tax Act, 1961 of the respective financial year directly without making any application before the Commission. We have considered the submissions made by the petitioner. Regulation 24 read with Regulation 25 of the 2014 Tariff Regulations provides for grossing up of return on equity with the effective tax rate for the purpose of return on equity. It further provides that in case the generating company or transmission licensee is paying Minimum Alternative Tax (MAT), the MAT rate including surcharge and cess will be considered for the grossing up of return on equity. The petitioner has submitted that MAT rate is applicable to the petitioner's company. Accordingly, RoE has been



computed @ 19.610% based at the MAT rate applicable during 2013-14 @ 20.961% for the purpose of return on equity, which shall be trued up with actual tax rate in accordance with Regulation 25 (3) of the 2014 Tariff Regulations.

37. The petitioner in original petition has claimed additional RoE based on anticipated COD which falls in 2009-14 tariff period. However, no additional RoE was claimed by the petitioner in the revised tariff forms submitted as per affidavit dated 23.5.2014, which were based on actual COD (i.e. 2014-19 tariff period) of the asset. It is noted that as per proviso (vi) of Regulation 24 (2), additional RoE shall not be admissible for transmission line having length of less than 50 kilometers. The petitioner in Form-2 (submitted along with original petition based on anticipated COD) has mentioned the line length of the instant asset as 23 kilometers. Hence, the additional RoE is not admissible for the instant asset. Accordingly, Return on Equity has been computed @ 19.610% p.a. on average equity, after considering the MAT rate for 2013-14 for computing return on Equity.

38. Details of return on equity calculated are as given under:-

Particulars	(₹ in lakh)				
	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Opening Equity	792.06	939.27	939.27	939.27	939.27
Addition due to Additional Capitalisation	147.20	-	-	-	-
Closing Equity	939.27	939.27	939.27	939.27	939.27
Average Equity	865.66	939.27	939.27	939.27	939.27
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2013-14 (MAT)	20.961%	20.961%	20.961%	20.961%	20.961%
Rate of Return on Equity (Pre Tax)	19.610%	19.610%	19.610%	19.610%	19.610%
Return on Equity (Pre Tax)	154.87	184.19	184.19	184.19	184.19



Interest on Loan

39. Regulation 26 of the 2014 Tariff Regulations with regard to Interest on Loan specifies as under:-

“(1) The loans arrived at in the manner indicated in regulation 19 shall be considered as gross normative loan for calculation of interest on loan.

(2) The normative loan outstanding as on 1.4.2014 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2014 from the gross normative loan.

(3) The repayment for each of the year of the tariff period 2014-19 shall be deemed to be equal to the depreciation allowed for the corresponding year/period. In case of decapitalisation of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered upto the date of decapitalisation of such asset.

(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 depreciation allowed for the year or part of the year.

5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio after providing appropriate accounting adjustment for interest capitalized:

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.”

40. We have considered only actual loans for working out weighted average rate of interest, though the petitioner has considered actual as well as proposed loan in



Form-9C. Thus, in keeping with the provisions of Regulation 26 of the 2014 Tariff Regulations, the petitioner's entitlement to interest on loan has been calculated on the following basis:-

(a) Gross amount of actual loan, repayment of instalments & rate of interest have been considered as per Form-9C submitted vide affidavit dated 23.5.2014;

(b) The normative repayment for the tariff period 2014-19 has been considered to be equal to the depreciation allowed for that period; and

(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.

41. Detailed calculation of the weighted average rate of interest has been given at Annexure.

42. Details of Interest on Loan calculated are as follows:-

Particulars	(₹ in lakh)				
	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	1848.15	2191.62	2191.62	2191.62	2191.62
Cumulative Repayment upto Previous Year	-	139.00	304.31	469.62	634.93
Net Loan-Opening	1848.15	2052.62	1887.31	1722.00	1556.69
Addition due to Additional Capitalisation	343.47	-	-	-	-
Repayment during the year	139.00	165.31	165.31	165.31	165.31
Net Loan-Closing	2052.62	1887.31	1722.00	1556.69	1391.38



Average Loan	1950.38	1969.96	1804.65	1639.34	1474.03
Weighted Average Rate of Interest on Loan	9.6248%	9.6248%	9.6239%	9.6220%	9.6196%
Interest	171.26	189.60	173.68	157.74	141.80

Depreciation

43. Regulation 27 of the 2014 Tariff Regulations with regard to depreciation specifies as follows:-

"27. Depreciation:

(1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system including communication system or element thereof. In case of the tariff of all the units of a generating station or all elements of a transmission system including communication system for which a single tariff needs to be determined, the depreciation shall be computed from the effective date of commercial operation of the generating station or the transmission system taking into consideration the depreciation of individual units or elements thereof.

Provided that effective date of commercial operation shall be worked out by considering the actual date of commercial operation and installed capacity of all the units of the generating station or capital cost of all elements of the transmission system, for which single tariff needs to be determined.

(2) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission. In case of multiple units of a generating station or multiple elements of transmission system, weighted average life for the generating station of the transmission system shall be applied. 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

(3) 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 station, the salvage value shall be as provided in the agreement signed by the developers with the State Government for development of the Plant:

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



Provided also that any depreciation disallowed on account of lower availability of the generating station or generating unit or transmission system as the case may be, shall not be allowed to be recovered at a later stage during the useful life and the extended life.

(4) 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.

(5) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in **Appendix-II** 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 the effective date of commercial operation of the station shall be spread over the balance useful life of the assets.

(6) In case of the existing projects, the balance depreciable value as on 1.4.2014 shall be worked out by deducting the cumulative depreciation as admitted by the Commission upto 31.3.2014 from the gross depreciable value of the assets.”

44. The instant asset has been put under commercial operation on 3.5.2014 and will complete 12 years beyond 2018-19. Accordingly, the depreciation for the instant asset covered in the instant petition has been calculated annually based on Straight Line Method and at rates specified in Appendix-II to the 2014 Tariff Regulations.

45. Details of the depreciation allowed are as follows:-

Particulars	(₹ in lakh)				
	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	2640.21	3130.88	3130.88	3130.88	3130.88
Additional Capital expenditure	490.67	-	-	-	-
Closing Gross Block	3130.88	3130.88	3130.88	3130.88	3130.88
Average Gross Block	2885.55	3130.88	3130.88	3130.88	3130.88
Rate of Depreciation	5.2800%	5.2800%	5.2800%	5.2800%	5.2800%
Depreciable Value	2596.99	2817.80	2817.80	2817.80	2817.80
Remaining Depreciable Value	2596.99	2458.00	2292.62	2127.37	1962.06
Depreciation	139.00	165.31	165.31	165.31	165.31



Operation & Maintenance Expenses (O&M Expenses)

46. Regulation 29 (4) (a) of the 2014 Tariff Regulations specifies the norms for operation and maintenance expenses for the transmission system based on the type of sub-station and the transmission line. Norms specified in respect of the elements covered in the instant petition are as follows:-

Elements	2014-15	2015-16	2016-17	2017-18	2018-19
400 kV D/C twin conductor T/L (₹ lakh per km)	0.707	0.731	0.755	0.780	0.806

47. The elements covered and claimed in the instant petition by the petitioner are as under:-

Elements	COD	Length of line
LILO of one circuit of Neyveli-Trichy 400 kV line at Nagapattinam PS D/C	3.5.2014	23 km

48. Accordingly, the allowable O & M Expenses for the elements of the instant asset are as follows:-

(₹ in lakh)

Elements	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
23 km LILO of one circuit of Neyveli-Trichy 400 kV twin conductor T/line	14.82	16.81	17.37	17.91	18.54

49. The petitioner as per original petition has submitted that O&M Expenses for the year 2009-14 had been arrived at on the basis of normalized actual O&M Expenses during the period 2003-04 to 2007-08 and by escalating it by 5.72% per annum for arriving at norms for the years of tariff period. The wage hike of 50% on



account of pay revision of the employees of public sector undertaking has also been considered while calculating the O&M Expenses for the tariff period. The petitioner has further submitted that it may approach the Commission for suitable revision in norms for O&M Expenses in case the impact of wage hike is more than 50%.

50. The petitioner has also submitted that the claim for transmission tariff is exclusive of any statutory taxes, levies, duties, cess or any other kind of impositions etc. Such kinds of payments are generally included in the O & M Expenses. While specifying the norms for the O & M Expenses, the Commission has in the 2009 Tariff Regulations, given effect to impact of pay revision by factoring 50% on account of pay revision of the employees of PSUs after extensive consultations with the stakeholders, as one time compensation for employee cost. We do not see any reason why the admissible amount is inadequate to meet the requirement of the employee cost. Further, the O&M Expenses in this order have been worked out as per the norms of O&M Expenses specified in the 2014 Tariff Regulations. As regards impact of wage revision, we would like to clarify that any application filed by the petitioner in this regard will be dealt with in accordance with the appropriate provisions of the 2014 Tariff Regulations.

Interest on Working Capital

51. Clause 1 (c) and 3 of Regulation 28 and Clause 5 of Regulation 3 of the 2014 Tariff Regulations specify as follows:-

“28. Interest on Working Capital: (1) The working capital shall cover:

(a)-----



(c) Hydro generating station including pumped storage hydro electric generating station and transmission system including communication system:

(i) Receivables equivalent to two months of fixed cost;

(ii) Maintenance spares @ 15% of operation and maintenance expenses specified in regulation 29; and

(iii) Operation and maintenance expenses for one month”

(3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2014 or as on 1st April of the year during the tariff period 2014-15 to 2018-19 in which the generating station or a unit thereof or the transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later”

“(5) ‘Bank Rate’ means the base rate of interest as specified by the State Bank of India from time to time or any replacement thereof for the time being in effect plus 350 basis points;”

52. The interest on working capital is worked out in accordance with Regulation 28 of the 2014 Tariff Regulations. The rate of interest on working capital considered is 13.50% (SBI Base Rate of 10% plus 350 basis points). The interest on working capital determined is as follows:-

Particulars	(₹ in lakh)				
	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	2.44	2.52	2.61	2.69	2.78
O & M expenses	1.35	1.40	1.45	1.49	1.55
Receivables	89.79	94.88	92.26	89.64	87.03
Total	93.58	98.80	96.31	93.81	91.35
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%
Interest	11.53	13.34	13.00	12.66	12.33

Transmission Charges

53. The transmission charges being allowed for the transmission asset are as follows:-



Particulars	(₹ in lakh)				
	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Depreciation	139.00	165.31	165.31	165.31	165.31
Interest on Loan	171.26	189.60	173.68	157.74	141.80
Return on equity	154.87	184.19	184.19	184.19	184.19
Interest on Working Capital	11.53	13.34	13.00	12.66	12.33
O & M Expenses	14.82	16.81	17.37	17.91	18.54
Total	491.48	569.25	553.55	537.81	522.17

Filing Fee and the Publication Expenses

54. The petitioner in the original petition has sought reimbursement of fee paid by it for filing the petition and publication expenses as per the 2009 Tariff Regulations. However, the petitioner shall be entitled for reimbursement of the filing fees and publication expenses in connection with the present petition, directly from the beneficiaries on pro-rata basis in accordance with clause (1) of Regulation 52 of the 2014 Tariff Regulations.

Licence Fee

55. The petitioner in the original petition 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 as per the 2009 Tariff Regulations. However, the petitioner shall be entitled for reimbursement of licence fee and RLDC fees and charges in accordance with Clause (2)(b) and (2)(a), respectively, of Regulation 52 of the 2014 Tariff Regulations.



Service Tax

56. The petitioner has made a prayer to be allowed to bill and recover the service tax on transmission charges separately from the respondents, if notification regarding granting of exemption to transmission service is withdrawn at a later date and it is subjected to such service tax in future 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

57. The approved transmission charges from the date of COD to 28.9.2015 shall be billed to and paid by IL&FS. Thereafter, w.e.f. 29.9.2015, 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, as provided in Regulation 43 of the 2014 Tariff Regulations.

58. This order disposes of Petition No. 36/TT/2014.

sd/-
(M.K. Iyer)
Member

sd/-
(A.S. Bakshi)
Member

sd/-
(A.K. Singhal)
Member

sd/-
(Gireesh B. Pradhan)
Chairperson



Annexure

(₹ in lakh)

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN						
	Details of Loan	2014-15	2015-16	2016-17	2017-18	2018-19
1	SBI (21.03.2012)					
	Gross loan opening	80.00	80.00	80.00	80.00	80.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	7.27	14.55
	Net Loan-Opening	80.00	80.00	80.00	72.73	65.45
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	7.27	7.27	7.27
	Net Loan-Closing	80.00	80.00	72.73	65.45	58.18
	Average Loan	80.00	80.00	76.36	69.09	61.82
	Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%
	Interest	8.20	8.20	7.83	7.08	6.34
	Rep Schedule	22 Semi Annual Instalment from 31.08.2016				
2	Bond-XL					
	Gross loan opening	154.00	154.00	154.00	154.00	154.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	12.83	25.67
	Net Loan-Opening	154.00	154.00	154.00	141.17	128.33
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	12.83	12.83	12.83
	Net Loan-Closing	154.00	154.00	141.17	128.33	115.50
	Average Loan	154.00	154.00	147.58	134.75	121.92
	Rate of Interest	9.30%	9.30%	9.30%	9.30%	9.30%
	Interest	14.32	14.32	13.73	12.53	11.34
	Rep Schedule	12 Annual Instalment from 28.06.2016				
	Total Loan					
	Gross loan opening	234.00	234.00	234.00	234.00	234.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	20.11	40.21
	Net Loan-Opening	234.00	234.00	234.00	213.89	193.79
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	20.11	20.11	20.11
	Net Loan-Closing	234.00	234.00	213.89	193.79	173.68
	Average Loan	234.00	234.00	223.95	203.84	183.73
	Rate of Interest	9.6248%	9.6248%	9.6239%	9.6220%	9.6196%
	Interest	22.52	22.52	21.55	19.61	17.67

