CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

Petition No. 416/TT/2014

Coram:
Shri Gireesh B. Pradhan, Chairperson
Shri A.K. Singhal, Member
Shri A.S. Bakshi, Member

Date of Order : 22.08.2016

In the matter of:

Approval of transmission tariff for New 400 kV GIS pooling station at Nagapattinam with 1x125 MVAR Bus Reactor 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 Electricity Board (TNEB),
NPKRR Maaligai, 800, Anna Salai,
Chennai-600 002

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

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

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

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

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

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

11. Bangalore Electricity Supply Company Limited (BESCOM),
    Corporate Office, K.R.Circle,
    Bangalore-506 001, Karanataka

12. Gulbarga Electricity Supply Company Limited (GESCOM),
    Station Main Road,
    Gulbarga, Karanataka

13. Hubli Electricity Supply Company Limited (HESCOM),
    Navanagar, PB Road, Hubli, Karanataka

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

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

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

17. 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. Venkatesan, PGCIL
Shri M.M. Mondal, PGCIL

For respondents : Shri Mehtab Ahmed, ITPCL
Shri S.C. Misra, ITPCL
Shri V.L. Dua, ITPCL

ORDER

This petition has been filed by Power Grid Corporation of India Limited (petitioner) seeking approval of transmission tariff for New 400 kV GIS pooling station at Nagapattinam with 1x125 MVAR Bus Reactor (hereinafter referred to as "transmission asset") 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 3.1.2013, at an estimated cost of ₹18280 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. 3.1.2013. 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 4.12 2014, 20.2.2015, 5.4.2016, 27.4.2016 and 1.7.2016.

5. The petitioner submitted that the entire scope of the project is covered in two petitions i.e. the instant petition and Petition No. 36/TT/2014. The petitioner, in the instant petition, initially claimed the transmission tariff for the instant asset as a single asset, as per the anticipated COD of 15.12.2014. Subsequently, the petitioner vide affidavit dated 5.4.2016 has submitted that the instant asset was split into two assets i.e. Asset-1: New 400 kV GIS pooling station at Nagapattinam, actually commissioned on 1.4.2015 and Asset-2: 1x125 MVAR Bus Reactor at Nagapattinam, is yet to be commissioned. Accordingly, the transmission tariff for only New 400 kV GIS pooling station at Nagapattinam is allowed under the 2014 Tariff Regulations. The petitioner is directed to submit details of, 1x125 MVAR Bus Reactor at Nagapattinam, as soon as it is commissioned.

6. Annual Fixed Charges for the instant asset were approved by the Commission vide its order dated 11.5.2015, subject to adjustment as per Regulation 7 (7) (iii) and (iv) of the 2014 Tariff Regulations from the revised anticipated COD of 1.3.2015 for 2014-15 and 2015-16. However, the petitioner submitted the actual date of commercial operation as 1.4.2015. As such, vide order dated 6.4.2016, the applicability of PoC tariff was extended till 30.9.2016 or till the issue of final tariff, whichever is earlier.

7. The petitioner has claimed transmission charges for the combined asset. However, as the combined asset has been split in two parts, due to actual CODs, the claim also has been divided between Asset-1 and Asset-2 in 50:50 ratio. As such, the transmission charges are as follows:-

(₹ in lakh)

Particulars	Asset-1-New 400 kV GIS pooling station-Bay-1			
	2015-16	**2016-17**	**2017-18**	**2018-19**
Depreciation	180.34	210.41	215.19	215.19
Interest on Loan	245.82	270.64	257.91	237.74
Return on equity	236.54	276.66	283.37	283.37
Interest on Working Capital	18.70	21.00	21.09	20.75
O & M Expenses	62.30	64.37	66.51	68.71
Total	**743.68**	**843.07**	**844.06**	**825.75**
Particulars	**Asset-2-New 400 kV GIS pooling station-Bay-2**			
	2015-16 (pro-rata)	**2016-17**	**2017-18**	**2018-19**
Depreciation	180.34	210.41	215.19	215.19
Interest on Loan	245.82	270.64	257.91	237.74
Return on equity	236.54	276.66	283.37	283.37
Interest on Working Capital	18.70	21.00	21.09	20.75
O & M Expenses	62.30	64.37	66.51	68.71
Total	**743.68**	**843.07**	**844.06**	**825.75**

8. The details submitted by the petitioner in support of its claim for Interest on Working Capital for combined asset, which is divided in the 50:50 ration for Asset-1 and Asset-2, are as below:-

(₹ in lakh)

Particulars	Asset-1-New 400 kV GIS pooling station-Bay-1			
	2015-16	**2016-17**	**2017-18**	**2018-19**
Maintenance Spares	9.35	9.66	9.98	10.31
O & M expenses	5.19	5.37	5.55	5.73
Receivables	123.95	140.51	140.68	137.63
Total	**138.48**	**155.53**	**156.20**	**153.66**
Rate of Interest	13.50%	13.50%	13.50%	13.50%
Interest	**18.69**	**21.00**	**21.09**	**20.74**

Particulars	Asset-2-New 400 kV GIS pooling station-Bay-2			
	2015-16 (pro-rata)	**2016-17**	**2017-18**	**2018-19**
Maintenance Spares	9.35	9.66	9.98	10.31
O & M expenses	5.19	5.37	5.55	5.73
Receivables	123.95	140.51	140.68	137.63
Total	**138.48**	**155.53**	**156.20**	**153.66**
Rate of Interest	13.50%	13.50%	13.50%	13.50%
Interest	**18.70**	**21.00**	**21.09**	**20.74**

Note: There may be difference due to rounding off digits on account of splitting.

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. PEL Power Limited (PELPL), Respondent No. 17 has filed reply dated 29.12.2014. PELPL has submitted that due to non-availability of one of the statutory clearance, it has not been able to establish its generating station and it has not executed the Transmission Services Agreement. Thus, it had claimed force majeure condition due to non-availability of CFE vide its communication dated 16.12.2011 and the petitioner was kept well informed of the situation, much before the date of investment approval by its Board of Directors in January, 2013. Therefore, it is not responsible to pay any transmission charges. However, the petitioner has a Bank Guarantee of ₹4935 lakh executed by the respondent, which the petitioner is threatening to invoke. As such, in this regard, PELPL has filed a Petition No.315/MP/2013.

10. We have considered the submissions of PELPL. In Petition No. 315/MP/2013, PELPL has claimed that its project is affected by force majeure on account of non-grant of consent for establishment of the generating station by Tamil Nadu Pollution Control Board. The Commission in order dated 12.7.2016 in the said petition held that PELPLs' case was not covered under force majeure and therefore PELPL was not entitled to any relief under BPTA. The Commission also decided that the petitioner would have to relinquish its LTA, in terms of the Connectivity Regulations, if it wanted to abdicate its obligations under the BPTA. The payment of relinquishment charges would be decided by the Commission after considering the recommendations of the Committee formed vide order dated 28.8 2015 in Petition

No. 92/MP/2015. As regards, the Bank Guarantee, the Commission has directed CTU not to en-cash the Bank Guarantee without seeking directions from the Commission.

11. Tamil Nadu Generation and Distribution Corporation Limited, (TANGEDCO), a subsidiary of TNEB Limited and one of the successor entities to the erstwhile Tamil Nadu Electricity Board (TNEB), Respondent No. 4 has filed reply vide affidavit dated 13.5.2016. TANGEDCO has submitted that a transmission system associated with Common Transmission Scheme associated with ISGS projects in Nagapattinam/ Cuddalore Area of Tamil Nadu was approved in the 31st meeting of the SCM of Southern Region held on 16.11.2010, consisting of 10 sub-systems. The transmission system was designed by the petitioner to evacuate power from three private power plants namely, NSL Power Private Limited (NSPPL), PEL Power Limited (PELPL) and IL&FS Tamil Nadu Power Company Limited (IL&FS). Further, the transmission system, each consisting of 400 kV quad D/C line to Nagapattinam pooling station along with 80/125 MVAR Bus Reactor at generation switchyard was under the scope of these three respective generators. Thus, the transmission charges for the Common System, consisting of 10 sub-systems have to be recovered from the LTA applicants and the petitioner should have entered into appropriate agreement with them in case of any default.

12. TANGEDCO has also submitted that as per the approval of the SCM in its 34th meeting, the transmission charges for the instant asset, are to be borne by IL&FS, from COD till it becomes regional asset and accordingly provisional tariff has been

allowed vide order dated 23.6.2014 and 15.4.2015 in Petition No. 36/TT/2014 and Petition No. 51/TT/2015 for first circuit of LILO of Neyveli-Trichy 400 kV line at Nagapattinam Pooling Station and second circuit of LILO of Neyveli-Trichy 400 kV line at Nagapattinam Pooling Station respectively. Accordingly, as the petitioner is liable to develop the common transmission system associated with these three IPPs, the transmission charges should be recovered from the respective developers and the other respondents should not be burdened by including it in PoC calculations. TANGEDCO has further submitted that the first circuit of LILO of Neyveli-Trichy 400 kV line at Nagapattinam Pooling Station is commissioned as interim arrangement and second circuit of LILO of Neyveli-Trichy 400 kV line at Nagapattinam Pooling Station under a contingency plan, facilitating evacuation of power from IL&FS. As such, these two LILO circuits be made through and the LILO portion will become redundant after the common transmission system associated with these three IPPs are put under commercial operation. Therefore, the capital cost towards establishment of the concerned 400 kV bays in the instant asset also needs to be removed and the petitioner, be also directed to furnish the details of tentative commissioning of the upstream transmission system, arrangement for recovering the cost of the transmission lines and associated bays under interim arrangement and contingency plan on commissioning of common transmission system for the IPPs.

13. TANGEDCO has further submitted that the petitioner in its affidavit dated 5.4.2016 has stated that the part of the instant asset i.e. 1x125 MVAR Bus Reactor is not yet commissioned. However, the revised tariff forms furnished with the

affidavit reveal that the costs of the following equipments are included in arriving at the total cost as on COD:-

(a) 400 kV SF6 gas insulated line Reactor bay module
(b) 400 kV SF6 gas insulated ICT feeder bay module
(c) 400 kV GIS auxiliary bus module provision for spare transformer in future

However, the admissibility of the capital cost is subject to the provisions of Regulation 9(6) of the 2014 Tariff Regulations as under:-

"(6) The following shall be excluded or removed from the capital cost of the existing and new project:

(a) *The assets forming part of the project, but not in use;*
(b) *Decapitalisation of Asset;..."*

Therefore, in the absence of any Reactor, ICT and spare transformer being connected to the system and brought into beneficial use, inclusion of the costs of the above bay modules is illegitimate. The petitioner should be directed to make only legitimate claims and exclude such items from the capital cost. Moreover, provisional tariff has been allowed as the petitioner had included the Bus Reactor in the original petition, but the reactor has not been commissioned even after one year from COD. Hence, the petitioner needs to be directed to refund the excess tariff claimed from COD to till date with 1.20 times of bank interest rate as specified in Regulation 7(7)(iii) of the 2014 Tariff Regulations.

14. TANGEDCO has raised other issues of higher claim of IEDC, cost variation, claim for additional capital expenditure without any justification, wage revision of employees, license fee and service tax. The petitioner has filed rejoinder vide

affidavit dated 21.06.2016 to the reply of TANGEDCO. The issues raised by TANGEDCO and the clarification given by the petitioner are addressed in the relevant paragraphs of this order.

Date of Commercial operation (COD)

15. The petitioner has claimed the date of the commercial operation of the instant transmission asset as 1.4.2015. Regulation 4(3) of the 2014 Tariff Regulations provides as follows:-

> "**4. Date of Commercial Operation**
>
> The date of commercial operation of a generating station or unit or block thereof or a transmission system or element thereof shall be determined as under:
>
> xxxxxxxxx
>
> (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 endeavour 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."

16. The petitioner has submitted the CEA inspection certificates dated 27.3.2015 and 24.6.2015 and the self declaration certificate dated 31.3.2015, in respect of its claim of COD of the instant asset, in accordance with Regulation 5(2) of the 2014

Tariff Regulations, indicating completion of successful trial operation. The petitioner vide affidavit dated 5.4.2016 has also submitted the RLDC certificate for the trial run operation for the transmission asset. The petitioner has submitted that 1X125 MVAR Bus Reactor has not yet been commissioned and the COD letter shall be submitted as soon as it is commissioned.

17. The petitioner, vide RoP for hearing dated 24.11.2014 was directed to clarify how it has declared the deemed COD of LILO of Nevyeli-Trichy at Nagapattinam without prior approval of the Commission and when this line was actually brought under operation. The petitioner was also directed to indicate and confirm, whether they shall connect the LILO of Neyveli-Trichy at Nagapattinam Sub-station before COD of the sub-station, as the Nagapattinam Sub-station is anticipated to be commissioned in December, 2014.

18. The petitioner, in response, vide affidavit dated 20.2.2015, has submitted that in Petition No. 36/TT/2014, vide affidavit dated 27.5.2014, it has already submitted the reason for declaring the deemed COD of LILO and requested for approval of the same as per Regulation 4 (3)(ii) of the 2014 Tariff Regulations. The petitioner has further submitted that the LILO of one circuit of 400 kV Neyveli-Trichy D/C line at Nagapattinam PS was energised on 22.1.2015 by connecting it directly (by-passing Nagapattinam Sub-station) to the dedicated 400 kV IL&FS-Nagapattinam PS D/C Quad Line. The petitioner has also submitted that the LILO of Neyveli-Trichy at Nagapattinam Sub-station will be connected to Nagapattinam Sub-station along with the commissioning of the sub-station.

19. The issue of COD of LILO of Neyvelli-Trichy has been dealt with in Petition No. 36/TT/2014, and the COD of Nagapattinam Sub-station as covered under the instant petition is 1.4.2015 as per RLDC certificate dated 1.3.2016. We have perused the CEA certificate dated 27.3.2015, whereby, completion certificate is granted to bays covered in the instant petition. However, on a perusal of RLDC certificate dated 1.3.2016, it is observed that one bay was charged on 31.3.2015 and the other bay on 27.6.2015. Therefore, we are inclined to approve COD of one bay from 1.4.2015 and the other bay from 28.6.2015.

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

Capital Cost

21. 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;
(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.

22. The petitioner has submitted, vide affidavit dated 5.4.2016, details of the capital expenditure of both bays together as on the claimed date of commercial operation of 1.4.2015 and estimated additional capital expenditure vide CA Certificate dated 31.3.2016. According to CA Certificate, the expenditure upto 31.3.2015 has been verified from the books of account of the project and the expenditure for 2015-16 and 2016-17 are projected on the basis of details furnished by the Management.

23. 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 combined asset claimed in the petition are as under:-

(₹ in lakh)

Apportioned approved cost	Cost incurred upto COD	Estimated Add-cap		Estimated completion cost
		2015-16	2016-17	
11592.55	6893.87	1953.66	439.64	9287.17

24. As discussed at para-13, TANGEDCO has submitted that the petitioner has claimed the cost of even non-commissioned elements, but the capital cost should

be allowed, subject to the provisions of Regulation 9(6) of the 2014 Tariff Regulations.

25. The petitioner, in response, vide rejoinder dated 21.6.2016 has submitted that all the essential equipments, which are required for reliable and efficient operation have been charged in the Nagapattinam GIS Sub-station and the detailed justification is as given below:-

> "1**. ICT feeder module**: ICT feeder module has been included as the same is required for connecting line feeder to Bus-I under one and half breaker system for reliable operation of line feeder.
>
> 2. **GIS auxiliary bus module for** spare Transformer**:** GIS aux. bus module is integral part of the ICT feeder module and is required to be installed along with ICT feeder module.
>
> 3. **SF6 Gas insulated Reactor module:** Main breaker along with SF6 GIS insulated reactor module is charged for connecting line feeder to Bus-I under one and half breaker system for reliable operation of line feeder."

26. The petitioner, vide affidavit dated 1.7.2016 has further submitted that the equipments, whose cost has been mentioned by TANGEDCO (i.e. 400 kV SF6 gas insulated line Reactor bay module, 400 kV SF6 gas insulated ICT feeder bay module and 400 kV CHS auxiliary bus module provision for spare transformer in future) are part of the GIS sub-station only, as GIS sub-station is compact in nature and all the equipments are to be installed only in one stage during commissioning. Any modifications or inclusions of new provisions cannot be done in future. Accordingly, all the provisions have been made at the time of commissioning of the sub-station only. The petitioner has further submitted that though the costs for these future bays are included in the capital cost, O&M for these bays has not been claimed in the instant petition.

27. We have considered the submissions of the petitioner and respondent. We agree with the submissions of the respondent on this issue. The assets covered under the instant petition are 2 bays associated with LILO of Neyveli-Trichy 400 kV S/C Line at Nagapattinam Pooling Station. The GIS is a Modular Configuration and we do not agree with the submission of the petitioner that all equipments should be installed in one stage only. Thus, the modules such as ICT feeder, SF6 Gas insulated Reactor, Spare Transformer cannot be allowed to be capitalised unless they are commissioned and put to use. Hence, we are not inclined to allow the capital cost of the referred modules as on COD of the instant assets.

28. The instant asset has been segregated in two parts based on the respective CODs allowed and the details are as under:-

Asset-1: New 400 kV GIS Pooling station at Nagapattinam (Bay-ONE)-actual COD: 1.4.2015

Asset-2: New 400 kV GIS Pooling station at Nagapattinam (Bay-TWO)-actual COD: 28.6.2015.

However, the petitioner has submitted the CA Certificate and tariff forms for the combined asset based on claimed COD of 1.4.2015. Thus, as the details of capital cost, funding details etc. are not available for the COD allowed in this order, we have made certain assumptions to determine the transmission tariff separately for both the assets as follows:-

a) Capital cost as on COD and additional capital expenditure claimed by the petitioner (for the combined asset) is considered in the ratio of 50:50 for Asset-1 and Asset-2.

b) Actual loan submitted by the petitioner is considered in the ratio of 50:50 for Asset-1 and Asset-2.

Therefore, the petitioner is directed to submit all relevant and segregated details for each asset separately, as per the COD approved in this order, at the time of truing-up.

Capital Cost as on COD

29. As discussed at para-27, the cost of certain equipments has not been allowed as on COD and has to be reduced from the capital cost of the instant assets for the purpose of tariff in this order. The details of hard cost of these equipments are as under:-

(₹ in lakh)

S. No.	Particulars	As per Form-5	
		Estimated FR cost	Actual hard cost
1	400 kV SF6 gas insulated line Reactor bay module	1019.06	1196.39
2	400 kV SF6 gas insulated ICT feeder bay module	296.31	147.88
3	400 kV GIS auxiliary bus module provision for spare transformer.	258.33	330.65
	Total	**1573.70**	**1674.92**

30. The hard cost worked out above, is exclusive of initial spares, taxes, IEDC and IDC. Therefore, based on information available in Form-5, the total cost of above elements has been worked out as under:-

(₹ in lakh)

Sl. No.	Particulars	Amount
1	Hard Cost dis-allowed (excluding tax and spare portion)	1674.92
2	Pro-rata spare portion pertaining to dis-allowed hard cost	96.29

3	Pro-rata tax portion pertaining to dis-allowed hard cost	271.84
4	Hard Cost of dis-allowed elements (including tax & spare portion) (1+2+3)	**2043.04**
5	Pro-rata IEDC for dis-allowed elements	155.56
6	Pro-rata IDC for dis-allowed elements	65.70
7	**Total Cost of dis-allowed elements (4+5+6)**	**2264.30**

31. The cost of disallowed equipment (i.e. ₹2264.30 lakh) has been reduced from the claimed combined capital cost in the ratio of 50:50 i.e. ₹1132.15 lakh each for Asset-1 and Asset-2. Accordingly, capital cost allowed before adjustment of IDC, IEDC and initial spares is as under:-

(₹ in lakh)

Particulars	**Capital cost as on COD claimed**	**Equipment cost disallowed as on COD**	**Capital Cost as on COD allowed for tariff calculation**
1	2	3	4=(2-3)
Asset-1	3446.94	1132.15	2314.79
Asset-2	3446.94	1132.15	2314.79

Cost over-run/Cost Variation

32. TANGEDCO has submitted that the petitioner in the revised tariff forms has stated that the variation is due to change in price levels of awarded packages through competitive bidding. TANGEDCO further submitted that the price variation clause and its applicability are not supported by documentary evidence and the petitioner be directed to furnish the same justifying the price variation. The petitioner in its rejoinder has submitted the documentary evidence for price variation clause for the letter of award (LOA) of the said works.

33. We have considered the submissions of TANGEDCO and the petitioner. The total estimated completion cost of the combined asset is ₹9287.17 lakh as on

31.3.2017, claimed by the petitioner is within the approved apportioned cost of ₹11593 lakh. Thus, there is no cost over-run in the case of instant transmission assets.

Time Over-Run

34. TANGEDCO has submitted that there is time over-run in case of the instant assets. In response, the petitioner, in its rejoinder has submitted that details for justification of time over-run have already been submitted vide affidavit dated 5.4.2016.

35. 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 3.10.2014. Asset-1 and Asset-2 were put under commercial operation on 1.4.2015 and 28.6.2015 respectively. Therefore, there is a time over-run of 5 months 28 days and 8 months and 26 days in case of Asset-1 and Asset-2 respectively.

36. The petitioner has submitted that IL&FS wanted to avail start-up power for their generating plant and requested for advancement of commissioning of the assets under this project and have agreed to pay the transmission charges, for the period of advancement as per transmission agreement dated 31.1.2012. In line with transmission agreement and to ensure that the generation is not bottled up, it made an interim arrangement by directly connecting the LILO of Neyveli-Trichy 400 kV Line at Nagapattinam Pooling Station to the dedicated IL&FS Switchyard-Nagapattinam PS 400 kV D/C Quad line (being constructed by IL&FS) by-passing

the sub-station to enable the generator to draw start-up power and inject infirm power to complete the commissioning activities. The interim arrangement was agreed by IL&FS in the meeting held on 4.12.2013. 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. The petitioner has notified the deemed commercial operation of the LILO of Neyveli-Trichy 400 kV Line at Nagapattinam Pooling Station with effect from 3.5.2014.

37. The petitioner was directed vide RoP dated 24.11.2015 to submit reasons for delay. The petitioner vide affidavit dated 5.4.2016 has submitted the details alongwith documents and chronology of events, for delay in commissioning of instant assets as under:-

(i) Delay occurred in handing over possession of land for sub-station by the State Government Authorities. Application for allotment of land was submitted on 11.11.2011 and after the receipt of letter from RDO for payment dated 3.4.2012, payment of tentative cost of ₹363 lakh was made on 7.4.2012. However, handing over possession of land was completed in August, 2013 after a delay of nearly one and half year. This contributed to delay in awarding the sub-station package and consequently delayed the activities of supply and erection of GIS equipment for establishment of Nagapattinam substation.

(ii) Tendering process of sub-station package was initiated much in advance, however, the award was kept on hold considering the delay in land acquisition. Sub-station package for Nagapattinam could be awarded in August, 2013 i.e. at the time when it emerged that possession of land would be given very soon for establishment of sub-station. Accordingly, as per the LOA, Nagapattinam GIS Sub-station was scheduled to be completed by February, 2015, but, the same has been commissioned on 1.4.2015. Thus, even though there was delay of more than 1.5 years in land acquisition, the total overall delay was reduced to 6 months only. As such, the delay was beyond its control.

(iii) Land acquisition problem, as land owners filed case in Hon'ble High Court of Madras vide WP No.35096 of 2012 for 10.36 acres and WP No. 4618 of 2013 for 13.017 acres, in which the Hon'ble High Court of Madras had ordered interim stay for 4 weeks for dispossession of land vide order dated 27.6.2012 and 22.2.2013 respectively. The cases continued till 1.8.2013. On 2.8.2013, the cases were dismissed by the Hon'ble High Court of Madras.

38. We have considered the submissions of TANGEDCO and the petitioner. It is observed that the time over-run in commissioning of the instant assets is due to the delay occurred in handing over possession of land for sub-station by the State Government Authorities. Application for allotment of land was submitted on 11.11.2011 and after making payment of tentative cost, within three days of the receipt of letter from RDO, possession of land was completed in August, 2013, after a delay of nearly one and half year, which resulted in delay in awarding the sub-station package which, consequently delayed the activities of supply and erection of

GIS equipment for establishment of Nagapattinam Sub-station. In our opinion, the delay due to land acquisition and court cases is beyond the control of the petitioner. Hence, we are inclined to condone the delay of 5 months and 28 days and 8 months and 26 days in case of Asset-1 and Asset-2 respectively.

<u>Treatment of IDC & IEDC</u>

39. The petitioner has claimed Interest during Construction (IDC) of ₹269.48 lakh as per CA Certificate for the combined asset and has submitted a statement indicating IDC discharged upto COD for the combined asset. As discussed at para-28, IDC also has been considered in the ratio of 50:50 (i.e. ₹134.74 lakh each) for Asset-1 and Asset-2. Further, as discussed at para-30, a total amount of ₹65.70 lakh (₹32.85 lakh each), being pro-rata deduction of IDC for elements not commissioned, from the capital cost of the claimed combined capital cost, has also been removed. Thus, the IDC claim of the petitioner works out to ₹101.89 lakh each for Asset-1 and Asset-2. Further, based on information available, IDC has been worked out on cash basis and it works out to ₹16.35 lakh and ₹20.81 lakh for Asset-1 and Asset-2 respectively and the same is considered for the purpose of tariff in this order.

40. TANGEDCO has submitted that the petitioner has claimed IEDC, which works out to 11.75% of the capital cost as on COD and is exorbitant and highly escalated and should be restricted to a reasonable limit. The petitioner in its rejoinder has submitted that the entire amount of IEDC is on cash basis as per books of account and is discharged as on COD.

41. The petitioner has claimed Incidental Expenditure during Construction (IEDC) of ₹638.03 lakh as per CA Certificate for the combined asset. As discussed at para-28, IEDC also has been considered in the ratio of 50:50 (i.e. ₹319.02 lakh each) for Asset-1 and Asset-2. Further, as discussed at para-30, a total amount of ₹155.56 lakh (₹77.78 lakh each), being pro-rata deduction of IEDC for elements not commissioned from the capital cost of the claimed combined capital cost, has also been removed. Thus, the IEDC claim of the petitioner works out to ₹241.24 lakh each for Asset-1 and Asset-2. Thus the IEDC amount worked out is within the percentage of 10.75% on Hard Cost as submitted in the Abstract Cost Estimate. Therefore, the amount of ₹241.24 lakh each for Asset-1 and Asset-2 has been considered as on the COD for the purpose of tariff in this order.

42. The petitioner is directed to submit details of IDC pertaining disallowed elements and loan wise actual discharge of IDC pertaining to the assets allowed in the instant petition at the time of truing-up. The petitioner is also directed to submit details of IEDC pertaining to disallowed elements and allowed portion separately at time of truing-up.

Initial Spares

43. 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."

44. The petitioner has claimed initial spares of ₹285.20 lakh pertaining to sub-station for combined asset. As discussed at para-30, a total amount of ₹96.29 lakh, being pro-rata deduction of initial spares, from the capital cost of the claimed combined capital cost, against elements not commissioned has been removed. Thus, the initial spares claim of the petitioner works out to ₹188.91 lakh for combined asset. The capital cost claimed as on COD includes the amount of initial spares and as discussed at para-28, capital cost has already been considered in the ratio of 50:50 for Asset-1 and Asset-2. Accordingly, initial spares being within the norms specified in 2014 Tariff Regulations are allowed in case of Asset-1 and Asset-2 for tariff purpose in this order. However, the petitioner is directed to submit details of initial spares pertaining to cost of disallowed elements and allowed portion separately at the time of truing-up.

45. Accordingly, details of capital cost allowed after adjustment of IDC, IEDC and initial spares and considered for tariff purpose in this order is as under:-

(₹ in lakh)

Particulars	Capital cost as on COD claimed	Equipment cost disallowed as on COD	Un-discharged IDC	Capital Cost as on COD allowed for tariff calculation
1	2	3	4	5=(2-3-4)
Asset-1	3446.94	1132.15	85.54	2229.24
Asset-2	3446.94	1132.15	81.08	2233.70

Additional Capital Expenditure

46. 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.

47. 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".
>
> "Provided that the cut-off date may be extended by the Commission if it is proved on the basis of documentary evidence that the capitalisation could not be made within the cut-off date for reasons beyond the control of the project developer;"

48. Therefore, the "cut-off" date for the instant assets is 31.3.2018.

49. TANGEDCO has submitted that the petitioner has claimed additional capital expenditure without furnishing any justification and without disclosing details of amount withheld on account of balance and retention payment etc. As specified in Regulation 14 of the 2014 Tariff Regulations, the petitioner is required to prove the claim made by it, as such the petitioner's claim be disallowed. The petitioner in its rejoinder has submitted that the amount of projected additional capital expenditure as indicated in the Auditor Certificate is on account of contract closing and final settlement of bills against balance and retention payment.

50. The petitioner has claimed additional capital expenditure of ₹1953.66 lakh and ₹439.64 lakh for 2015-16 and 2016-17 respectively for combined asset. However, as discussed at para-28, additional capital expenditure has been considered in the ratio of 50:50 for Asset-1 and Asset-2.

51. The additional capital expenditure incurred/projected to be incurred for the instant assets is on account of balance/retention payments and is within "cut-off" date and the same is allowed as per 2014 Tariff Regulations upto 2016-17 period as claimed, which is subject to truing-up.

Capital cost as on COD and as on 31.3.2019

52. 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. Thus, the total estimated completion cost as on 31.3.2019 has been considered as under:-

(₹ in lakh)

<table>
<tr><th rowspan="2">Particulars</th><th rowspan="2">Capital cost allowed as on COD</th><th colspan="2">Add-cap for</th><th rowspan="2">Estimated completion cost as on 31.3.2019</th></tr>
<tr><th>2015-16</th><th>2016-17</th></tr>
<tr><td>Asset-1</td><td>2229.24</td><td>976.83</td><td>219.82</td><td>3425.89</td></tr>
<tr><td>Asset-2</td><td>2233.70</td><td>976.83</td><td>219.82</td><td>3430.35</td></tr>
</table>

Debt- Equity Ratio

53. 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."

54. 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:-

(₹ in lakh)

Particulars	**Asset-1**			
	Cost as on COD		**Cost as on 31.3.2019**	
	Amount	**% age**	**Amount**	**% age**
Debt	1560.47	70.00	2398.13	70.00
Equity	668.77	30.00	1027.77	30.00
Total	**2229.24**	**100.00**	**3425.89**	**100.00**
Particulars	**Asset-2**			
	Cost as on COD		**Cost as on 31.3.2019**	
	Amount	**% age**	**Amount**	**% age**
Debt	1563.59	70.00	2401.25	70.00
Equity	670.11	30.00	1029.10	30.00
Total	**2233.70**	**100.00**	**3430.35**	**100.00**

55. The additional capital expenditure has been considered in the debt: equity ratio of 70;30 and the above stated debt-equity ratio has been applied for the purpose of tariff calculation in this order.

Return on Equity

56. 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."

57. The petitioner has submitted that RoE has been calculated at the rate of 20.243% after grossing up the RoE with MAT rate of 20.961% based on the rate prescribed as per illustration under Regulation 25 (2) (i) of the 2014 Tariff Regulations. The petitioner has further submitted that the grossed up RoE is subject to truing up based on the actual tax paid along with any additional tax or interest, duly adjusted for any refund of tax including the interest received from IT authorities, pertaining to the tariff period 2014-19 on actual gross income of any financial year. Any under-recovery or over-recovery of grossed up RoE after truing up shall be recovered or refunded to the beneficiaries on year to year basis.

58. The petitioner has further submitted that adjustment due to any additional tax demand including interest duly adjusted for any refund of the tax including interest received from IT authorities shall be recoverable/ adjustable after completion of income tax assessment of the financial year.

59. Further, the petitioner in the instant petition has submitted that as specified in the 2014 Tariff Regulations, the instant assets have been put under commercial operation within the timeline of 30 months and has claimed additional RoE of 0.50%. 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 line length of the LILO of Neyveli-Trichy 400 kV line is 23 kilometers and the assets in the instant petition are bays at 400 kV GIS pooling station at Nagapattinam associated with LILO of Neyveli-Trichy 400 kV line of 23 kilometers. Hence, the additional RoE is not admissible for the instant assets.

60. 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, MAT rate applicable during 2013-14 has been considered 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.

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

(₹ in lakh)

Particulars	**Asset-1**			
	2015-16	**2016-17**	**2017-18**	**2018-19**
Opening Equity	668.77	961.82	1027.77	1027.77
Addition due to Additional Capitalisation	293.05	65.95	-	-
Closing Equity	961.82	1027.77	1027.77	1027.77
Average Equity	815.30	994.79	1027.77	1027.77
Return on Equity (Base Rate)	**15.50%**	**15.50%**	**15.50%**	**15.50%**
Tax rate for the year 2013-14 (MAT)	20.961%	20.961%	20.961%	20.961%
Rate of Return on Equity (Pre Tax)	19.610%	19.610%	19.610%	19.610%
Return on Equity (Pre Tax)	**159.88**	**195.08**	**201.55**	**201.55**
Particulars	**Asset-2**			
	2015-16 (pro-rata)	**2016-17**	**2017-18**	**2018-19**
Opening Equity	670.11	963.16	1029.10	1029.10
Addition due to Additional Capitalisation	293.05	65.95	-	-
Closing Equity	963.16	1029.10	1029.10	1029.10
Average Equity	816.63	996.13	1029.10	1029.10
Return on Equity (Base Rate)	**15.50%**	**15.50%**	**15.50%**	**15.50%**
Tax rate for the year 2013-14 (MAT)	20.961%	20.961%	20.961%	20.961%
Rate of Return on Equity (Pre Tax)	19.610%	19.610%	19.610%	19.610%
Return on Equity (Pre Tax)	**121.97**	**195.34**	**201.81**	**201.81**

Interest on Loan

62. 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."

63. The petitioner has submitted that the interest on loan has been considered on the basis of rate prevailing as on COD and the change in interest due to floating rate of interest applicable, if any, for the project needs to be claimed/ adjusted over the tariff block of 5 years directly from the beneficiaries. The interest on loan has been calculated on the basis of rate prevailing as on the date of commercial

operation. Any change in rate of interest subsequent to the date of commercial operation will be considered at the time of truing-up.

64. We have considered only actual loans, information of which has been submitted by the petitioner for combined asset, in the ratio of 50: 50 for working out weighted average rate of interest for the instant assets. 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 5.4.2016;

(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.

65. Detailed calculation of the weighted average rate of interest has been given at Annexure-I and Annexure-II to this order.

66. Details of Interest on Loan calculated are as under:-

(₹ in lakh)

Particulars	**Asset-1**			
	2015-16	**2016-17**	**2017-18**	**2018-19**
Gross Normative Loan	1560.47	2244.25	2398.13	2398.13
Cumulative Repayment upto Previous Year	-	119.38	265.88	417.16
Net Loan-Opening	1560.47	2124.87	2132.25	1980.97

Addition due to Additional Capitalisation	683.78	153.87	-	-
Repayment during the year	119.38	146.50	151.28	151.28
Net Loan-Closing	2124.87	2132.25	1980.97	1829.69
Average Loan	1842.67	2128.56	2056.61	1905.33
Weighted Average Rate of Interest on Loan	9.3709%	9.3709%	9.3709%	9.3709%
Interest	**172.68**	**199.47**	**192.72**	**178.55**

Particulars	**Asset-2**			
	2015-16 (pro-rata)	**2016-17**	**2017-18**	**2018-19**
Gross Normative Loan	1563.59	2247.37	2401.25	2401.25
Cumulative Repayment upto Previous Year	-	91.09	237.80	389.30
Net Loan-Opening	1563.59	2156.28	2163.44	2011.95
Addition due to Additional Capitalisation	683.78	153.87	-	-
Repayment during the year	91.09	146.71	151.50	151.50
Net Loan-Closing	2156.28	2163.44	2011.95	1860.45
Average Loan	1859.94	2159.86	2087.70	1936.20
Weighted Average Rate of Interest on Loan	9.3709%	9.3709%	9.3709%	9.3709%
Interest	**132.75**	**202.40**	**195.64**	**181.44**

Depreciation

67. 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.

(5) 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.

(6) 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."

68. The instant assets have been put under commercial operation during 2015-16 and will complete 12 years beyond 2018-19. Accordingly, the depreciation for the instant assets 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.

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

(₹ in lakh)

Particulars	Asset-1			
	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	2229.24	3206.07	3425.89	3425.89
Additional Capital expenditure	976.83	219.82	-	-
Closing Gross Block	3206.07	3425.89	3425.89	3425.89
Average Gross Block	2717.66	3315.98	3425.89	3425.89
Rate of Depreciation	4.3928%	4.4179%	4.4158%	4.4158%
Depreciable Value	2247.90	2786.39	2885.31	2885.31
Remaining Depreciable Value	2247.90	2128.52	1982.02	1830.74
Depreciation	**119.38**	**146.50**	**151.28**	**151.28**
Particulars	**Asset-2**			
	2015-16 (pro-rata)	**2016-17**	**2017-18**	**2018-19**
Opening Gross Block	2233.70	3210.53	3430.35	3430.35
Additional Capital expenditure	976.83	219.82	-	-
Closing Gross Block	3210.53	3430.35	3430.35	3430.35
Average Gross Block	2722.12	3320.44	3430.35	3430.35
Rate of Depreciation	4.3935%	4.4185%	4.4163%	4.4163%
Depreciable Value	2251.91	2790.40	2889.32	2889.32
Remaining Depreciable Value	2251.91	2160.82	2014.11	1862.61
Depreciation	**91.09**	**146.71**	**151.50**	**151.50**

<u>Operation & Maintenance Expenses (O&M Expenses)</u>

70. 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 under:-

Elements	2014-15	2015-16	2016-17	2017-18	2018-19
400 kV GIS sub-station bay (₹ lakh per bay)	51.54	53.25	55.02	56.84	58.73

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

(₹ in lakh)

<table>
<tr><th>Elements</th><th>2015-16</th><th>2016-17</th><th>2017-18</th><th>2018-19</th></tr>
<tr><td>Bay associated with 400 kV Trichy line-I at Nagapattinam Pooling Station</td><td>53.25</td><td rowspan="3">110.04</td><td rowspan="3">113.68</td><td rowspan="3">117.46</td></tr>
<tr><td>Elements</td><td>2015-16 (pro-rata)</td></tr>
<tr><td>Bay associated with 400 kV NLC TS-I expansion line at Nagapattinam Pooling Station</td><td>40.45</td></tr>
</table>

72. The petitioner has submitted that O&M Expenses for the tariff period 2014-19 had been arrived at on the basis of normalized actual O&M Expenses during the period 2008-09 to 2012-13. The petitioner has further submitted that the wage revision of the employees is due during 2014-19 and actual impact of wage hike effective from a future date has not been factored in fixation of the normative O&M rates specified for the tariff block 2014-19. The petitioner has submitted that it would approach the Commission for suitable revision in norms for O&M Expenses for claiming the impact of wage hike during 2014-19, if any.

73. The petitioner has also submitted that the claim for transmission tariff is exclusive of any incentive, late payment surcharge, FERV, any statutory taxes, levies, duties, cess, filing fees, license fee, RLDC fees and charges or any other kind of impositions etc.

74. TANGEDCO has submitted that the 2014 Tariff Regulations do not provide for revising the normative O&M expenses based on actuals. In response, the petitioner has submitted that norms for O&M Expenditure specified under Regulation 29(3) (a) of the tariff block 2014-19 have been arrived at on the basis of

normalized actual O&M Expenses during the period 2008-09 to 2012-13. The petitioner has further submitted that being a CPSU, the scheme of wage revision of employees is binding on it, which is due during 2014-19 and actual impact of wage hike effective from a future date has not been factored in fixation of the normative O&M rates specified for the tariff block 2014-19. The petitioner has submitted that accordingly, it would approach the Commission for suitable revision in norms for O&M Expenses for claiming the impact of wage hike during 2014-19, if any.

75. We have considered the submissions of TANGEDCO and the petitioner. In our view, with regard to the prayer of the petitioner at para-73, such payments are generally included in the O & M Expenses. However, the O&M Expenses have been worked out as per the norms of O&M Expenses specified in the 2014 Tariff Regulations. As regards impact of wage revision, 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

76. 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;"

77. 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 under:-

(₹ in lakh)

Particulars	**Asset-1**			
	2015-16	**2016-17**	**2017-18**	**2018-19**
Maintenance Spares	7.99	8.25	8.53	8.81
O & M expenses	4.44	4.59	4.74	4.89
Receivables	86.42	101.93	103.01	100.93
Total	**98.85**	**114.76**	**116.28**	**114.63**
Rate of Interest	13.50%	13.50%	13.50%	13.50%
Interest	**13.34**	**15.49**	**15.70**	**15.48**
Particulars	**Asset-2**			
	2015-16 (pro-rata)	**2016-17**	**2017-18**	**2018-19**
Maintenance Spares	7.97	8.25	8.53	8.81
O & M expenses	4.43	4.59	4.74	4.89
Receivables	86.75	102.51	103.59	101.50
Total	**99.15**	**115.35**	**116.86**	**115.21**
Rate of Interest	13.50%	13.50%	13.50%	13.50%
Interest	**10.19**	**15.57**	**15.78**	**15.55**

Transmission Charges

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

(₹ in lakh)

Particulars	Asset-1			
	2015-16	2016-17	2017-18	2018-19
Depreciation	119.38	146.50	151.28	151.28
Interest on Loan	172.68	199.47	192.72	178.55
Return on equity	159.88	195.08	201.55	201.55
Interest on Working Capital	13.34	15.49	15.70	15.48
O & M Expenses	53.25	55.02	56.84	58.73
Total	**518.53**	**611.56**	**618.09**	**605.58**
Particulars	**Asset-2**			
	2015-16 (pro-rata)	**2016-17**	**2017-18**	**2018-19**
Depreciation	91.09	146.71	151.50	151.50
Interest on Loan	132.75	202.40	195.64	181.44
Return on equity	121.97	195.34	201.81	201.81
Interest on Working Capital	10.19	15.57	15.78	15.55
O & M Expenses	40.45	55.02	56.84	58.73
Total	**396.46**	**615.05**	**621.55**	**609.03**

Filing Fee and the Publication Expenses

79. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses, in terms of Regulation 52 of the 2014 Tariff Regulations. 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

80. The petitioner has requested to allow the petitioner to bill and recover License fee and RLDC fees and charges, separately from the respondents. TANGEDCO has submitted that in their replies to various petitions, it has requested not to allow the claim of the petitioner for recovery of license fee and hence it should be negated. We are of the view that 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

81. The petitioner has made a prayer to be allowed to bill and recover the service tax on transmission charges separately from the respondents, if at any time service tax on transmission is withdrawn from negative list at any time in future. TANGEDCO has submitted that the Government of India has exempted transmission services from the purview of levy of service tax and hence the petitioners' claim in this regard be negated. The petitioner has further prayed that if any additional taxes are to be paid on account of demand from Government/ statutory authorities, the same shall be allowed to be recovered from the beneficiaries. We consider petitioner's prayer pre-mature and accordingly this prayer is rejected.

Deferred Tax Liability

82. The petitioner has sought recovery of deferred tax liability accrued before 1.4.2009 from the beneficiaries or long term consumers/DICs as and when materialized under Regulation 49 of the 2014 Tariff Regulations. However, Asset-1 and Asset-2 were commissioned on 1.4.2015 and 28.6.2015. Hence, the petitioner's prayer is infructuous.

Sharing of Transmission Charges

83. The petitioner, vide RoP dated 24.11.2014 was directed to submit a copy of LTA agreement and the date from which the LILO of Neyveli-Trichy line and Nagapattinam Sub-station shall be considered in the pool for sharing of transmission charges. The petitioner, in response, vide affidavit dated 20.2.2015, has submitted that as per Regulation 8(6) of (Sharing of Interstate Transmission Charges and losses), Regulations, 2010, the transmission charges for these assets shall become part of the PoC as and when the first unit of the generation station of IL&FS will be put under commercial operation. The petitioner has further submitted that the generating company has agreed to bear the transmission charges for advancing the commissioning of Nagapattinam Sub-station and LILO of one circuit of 400 kV Neyveli-Trichy D/C Line at Nagapattinam PS.

84. We have considered the submissions of TANGEDCO which have been earlier discussed at para-11 to para-12 of this order and of the petitioner. While granting AFC under Regulation 7(7) of the 2014 Tariff Regulations for the instant assets, it was observed that the transmission charges will be borne by IL&FS from the commissioning of the transmission assets till the date it becomes regional asset. The relevant portion of order dated 11.5.2015 is extracted hereunder:-

> "6..............However, the transmission charges allowed will not be included in the PoC charges at this stage. The transmission charges for the instant asset shall be borne by IL&FS from the date of commissioning till it becomes regional asset and thereafter it will be included in the PoC computation. The petitioner is directed to submit the Indemnification/Implementation Agreement, if any, with IL&FS, status of project and the date from which the transmission line would be included in the PoC computation."

85. We are of the view that the transmission charges approved in this order shall be borne by IL&FS from the date of COD of the instant assets till operationalisation of LTA of IL&FS and it shall not be included in the computation of PoC charges. Thereafter, 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.

86. This order disposes of Petition No. 416/TT/2014.

sd/-	sd/-	sd/-
(A.S. Bakshi)	**(A.K. Singhal)**	**(Gireesh B. Pradhan)**
Member	**Member**	**Chairperson**

Annexure-I

(₹ in lakh)

	CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN				
	Details of Loan	**2015-16**	**2016-17**	**2017-18**	**2018-19**
1	**SBI 2014-15**				
	Gross loan opening	**174.00**	**174.00**	**174.00**	**174.00**
	Cumulative Repayment upto DOCO/previous year	**0.00**	**0.00**	**0.00**	**0.00**
	Net Loan-Opening	174.00	174.00	174.00	174.00
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00
	Net Loan-Closing	174.00	174.00	174.00	174.00
	Average Loan	174.00	174.00	174.00	174.00
	Rate of Interest	**10.25%**	**10.25%**	**10.25%**	**10.25%**
	Interest	17.84	17.84	17.84	17.84
	Rep Schedule	22 Semi Annual Instalment from 15.06.2019			
2	**BOND XLVI**				
	Gross loan opening	**2156.00**	**2156.00**	**2156.00**	**2156.00**
	Cumulative Repayment upto DOCO/previous year	**0.00**	**0.00**	**0.00**	**0.00**
	Net Loan-Opening	2156.00	2156.00	2156.00	2156.00
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00
	Net Loan-Closing	2156.00	2156.00	2156.00	2156.00
	Average Loan	2156.00	2156.00	2156.00	2156.00
	Rate of Interest	**9.30%**	**9.30%**	**9.30%**	**9.30%**
	Interest	200.51	200.51	200.51	200.51
	Rep Schedule	3 instalments on 04.09.2019, 04.09.2024 and 04.09.2029			
	Total Loan				
	Gross loan opening	2330.00	2330.00	2330.00	2330.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00
	Net Loan-Opening	2330.00	2330.00	2330.00	2330.00
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00
	Net Loan-Closing	2330.00	2330.00	2330.00	2330.00
	Average Loan	2330.00	2330.00	2330.00	2330.00
	Rate of Interest	**9.3709%**	**9.3709%**	**9.3709%**	**9.3709%**
	Interest	**218.34**	**218.34**	**218.34**	**218.34**

Annexure-II

(₹ in lakh)

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN					
	Details of Loan	**2015-16**	**2016-17**	**2017-18**	**2018-19**
1	**SBI 2014-15**				
	Gross loan opening	**174.00**	**174.00**	**174.00**	**174.00**
	Cumulative Repayment upto DOCO/previous year	**0.00**	**0.00**	**0.00**	**0.00**
	Net Loan-Opening	174.00	174.00	174.00	174.00
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00
	Net Loan-Closing	174.00	174.00	174.00	174.00
	Average Loan	174.00	174.00	174.00	174.00
	Rate of Interest	**10.25%**	**10.25%**	**10.25%**	**10.25%**
	Interest	17.84	17.84	17.84	17.84
	Rep Schedule	22 Semi Annual Instalment from 15.06.2019			
2	**BOND XLVI**				
	Gross loan opening	**2156.00**	**2156.00**	**2156.00**	**2156.00**
	Cumulative Repayment upto DOCO/previous year	**0.00**	**0.00**	**0.00**	**0.00**
	Net Loan-Opening	2156.00	2156.00	2156.00	2156.00
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00
	Net Loan-Closing	2156.00	2156.00	2156.00	2156.00
	Average Loan	2156.00	2156.00	2156.00	2156.00
	Rate of Interest	**9.30%**	**9.30%**	**9.30%**	**9.30%**
	Interest	200.51	200.51	200.51	200.51
	Rep Schedule	3 instalments on 04.09.2019, 04.09.2024 and 04.09.2029			
	Total Loan				
	Gross loan opening	2330.00	2330.00	2330.00	2330.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00
	Net Loan-Opening	2330.00	2330.00	2330.00	2330.00
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00
	Net Loan-Closing	2330.00	2330.00	2330.00	2330.00
	Average Loan	2330.00	2330.00	2330.00	2330.00
	Rate of Interest	**9.3709%**	**9.3709%**	**9.3709%**	**9.3709%**
	Interest	**218.34**	**218.34**	**218.34**	**218.34**