

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 257/TT/2018**

**Coram:**

**Shri P.K. Pujari, Chairperson**

**Dr. M. K. Iyer, Member**

**Shri I.S. Jha, Member**

**Date of Order: 29.07.2019**

**In the matter of:**

Approval under Regulation 86 of CERC (Conduct of Business) Regulations, 1999 and CERC (Terms and Conditions of Tariff) Regulations, 2014 for determination of Transmission Tariff from COD to 31.3.2019 for Transmission asset (i) LILO of Kurnool-Thiruvalam 765 kV D/C line at Cuddapah, (ii) Cuddapah-Hindupur 400 kV (Quad) D/C line, (iii) Establishment of 765/400 kV sub-station at Cuddapah with 2x1500 MVA Transformer (GIS) along with associated bays and 2x240 MVAR Bus Reactors, (iv) 2x80 MVAR switchable line reactor and 2 nos. 400 kV line bays at Hindupur sub-station under "System Strengthening-XXIV in Southern Region".

**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 Ltd. (KPTCL),  
Kaveri Bhavan, Bangalore-560009,
2. Transmission Corporation of Andhra Pradesh Ltd.,  
(APTRANSCO), Vidyut Soudha,  
Hyderabad-500082



3. Kerala State Electricity Board (KSEB),  
Vaidyuthi Bhavanam,  
Pattom, Thiruvananthapuram-695004
4. Tamilnadu Electricity Board (TNEB),  
NPKRR Maaligai, 800, Anna Salai,  
Chennai-600002
5. Electricity Department,  
Govt. of Goa,  
Vidyuti Bhawan, Panaji,  
Goa-403001
6. Electricity Department,  
Govt. of Pondicherry,  
Pondicherry-605001
7. Eastern Power Distribution Company of Andhra Pradesh Limited,  
(APEPDCL),  
APEPDCL, P&T Colony,  
Seethmmadhara, Vishakhapatnam,  
Andhra Pradesh
8. Southern Power Distribution Company of Andhra Pradesh Limited,  
(APSPDCL),  
Srinivasasa Kalyana Mandapam Backside,  
Tiruchanoor Road, Kesavayana Gunta,  
Tirupati-517501, Chittoor District, Andhra Pradesh
9. Central Power Distribution Company of Andhra Pradesh Limited,  
(APCPDCL),  
Corporate Office, Mint Compound,  
Hyderabad-500063, Andhra Pradesh
10. Northern Power Distribution Company of Andhra Pradesh Limited,  
(APNPDCL),  
Opp. NIT Petrol Pump,  
Chaitanyapuri, Kazipet,  
Warangal-506004, Andhra Pradesh
11. Bangalore Electricity Supply Company Ltd. (BESCOM),  
Corporate Office, K.R. Circle,  
Bangalore-560001, Karnataka
12. Gulbarga Electricity Supply Company Ltd. (GESCOM),  
Station Main Road,  
Gulbarga, Karnataka



13. Hubli Electricity Supply Company Ltd. (HESCOM),  
Navanagar, PB Road,  
Hubli, Karnataka
14. MESCOM Corporate Office,  
Paradigm Plaza, AB Shetty Circle,  
Mangalore-575001, Karnataka
15. Chamundeswari Electricity Supply Corporation Ltd. (CESC),  
# 927, LJ Avenue, Ground Floor, New Kantharaj Urs Road,  
Saraswatipuram, Mysore-570009,  
Karnataka
16. Transmission Corporation of Telangana Limited,  
Vidyut Sudha, Khairatabad,  
Hyderabad-500082

.....Respondents

**Parties present:**

**For Petitioner:** Shri S. S. Raju, PGCIL,  
Shri S. K. Venkatesan, PGCIL,  
Shri Zafrul Hasan, PGCIL and  
Shri Vivek Kumar Singh, PGCIL

**For Respondent:** Shri S. Vallinayagam, Advocate, TANGEDCO

**ORDER**

The instant petition has been filed by Power Grid Corporation of India Limited (hereinafter referred to as "The Petitioner") for determination of transmission tariff from COD to 31.3.2019 for Transmission asset (i) LILO of Kurnool-Thiruvalam 765 kV D/C line at Cuddapah, (ii) Cuddapah-Hindupur 400 kV (Quad) D/C line, (iii) Establishment of 765/400 kV sub-station at Cuddapah with 2x1500 MVA Transformer (GIS) along with associated bays and 2x240 MVAR Bus Reactors, (iv) 2x80 MVAR switchable line reactor and 2 nos. 400 kV line bays at Hindupur sub-station under "System Strengthening-XXIV in Southern Region" for tariff block 2014-19 in terms of



the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as the "2014 Tariff Regulations").

2. The Petitioner has made the following prayers:-

- i. Approve the Transmission Tariff for the tariff block 2014-19 block for the assets covered under this petition.
- ii. Admit the capital cost as claimed in the petition and approve the Additional Capitalization incurred/projected to be incurred.
- iii. Approve the Additional ROE as claimed in the Petition.
- iv. Allow the Petitioner to approach the Hon'ble Commission for suitable revision in the norms for O and M expenditure for claiming the impact of wage hike, if any, during period 2014-19.
- v. Allow the Petitioner to recover the shortfall or refund the excess Annual Fixed Charges, on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission as provided under clause 25 of the Tariff regulations 2014.
- vi. Approve the reimbursement of expenditure by the beneficiaries towards petition filing fee, and expenditure on publishing of notices in newspapers in terms of Regulation 52 Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014, and other expenditure (if any) in relation to the filing of petition.
- vii. Allow the Petitioner to bill and recover Licensee fee and RLDC fees and charges, separately from the Respondents in terms of Regulation 52 Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014.
- viii. Allow the Petitioner to bill and adjust impact on Interest on Loan due to change in Interest rate on account of floating rate of interest applicable during 2014-19 period, if any, from the Respondents.
- ix. Allow the Petitioner to bill and recover GST on Transmission charges separately from the respondents, if GST on Transmission of electricity is withdrawn from the exempted (negative) list at any time in future. Further any taxes and duties including cess, etc. imposed by any Statutory/Govt. Municipal Authorities shall be allowed to be recovered from the beneficiaries



- x. Allow tariff up to 90% of the Annual Fixed Charges in accordance with clause 7 (i) of Regulation 7 Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 for purpose of inclusion in the PoC charges.
- xi. Allow the Petitioner to bill Tariff from anticipated DOCO and also the Petitioner may be allowed to submit revised Auditor Certificate and tariff Forms (as per the Relevant Regulation) based on actual DOCO. and
- xii. Pass such other relief as Hon'ble Commission deems fit and appropriate under the circumstances of the case and in the interest of justice.

3. The Investment Approval (IA) for implementation of "System Strengthening-XXIV in Southern Region" was accorded by the Board of Directors of the Petitioner on 12.1.2016 (communicated vide Memorandum no. C/CP/SRSS-XXIV dated 14.1.2016) at an estimated cost of ₹1455.47 crore including IDC (Interest during Construction) of ₹88.50 crore based on August, 2015 price level.

4. The scope of the scheme was discussed and agreed in the 37<sup>th</sup> and 38<sup>th</sup> meeting of the Standing Committee on Power System Planning of Southern Region held on 31.7.2014 and 7.3.2015. Further, the transmission scheme has also been agreed in the 26<sup>th</sup> meeting of SRPC held on 20.12.2014. The scheme was also discussed and agreed in the 33<sup>rd</sup> Empowered Committee Meeting on Transmission held on 30.09.2014 according to which the scheme was to be implemented by the Petitioner.

5. The scope of work covered under "System Strengthening-XXIV in Southern Region" is as follows:-

#### **Transmission Lines**

- a) LILO of Kurnool-Thiruvalam 765 kV D/C line at Cuddapah-**92 km**
- b) Cuddapah-Hindupur 400 kV (Quad) D/C line-**166.2 km**

#### **Sub-station**

##### **Cuddapah 765/400 kV Sub-station**

##### **765 kV**

- c) Establishment of 765/400 kV sub-station at Cuddapah with 2x1500 MVA Transformers (GIS)
  - i. 765 kV ICT bays: 2 Nos.
  - ii. 765 kV line bays: 4 Nos.
  - iii. 765 kV bus reactor bays: 2Nos.



iv. 2x240 MVAR bus reactors at Cuddapah sub-station

**400 kV**

v. 400 kV ICT bays: 2 Nos.

vi. 400 kV line bays: 2 Nos.

d) Hindupur 400 kV sub-station (S/s to be implemented by APTRANSCO)

**400 kV**

vii. 2x80 MVAR switchable line reactors

viii. 400 kV line bays: 2 Nos.

ix. 400 kV switchable line reactor bays: 2 Nos.

6. The details of the assets covered under this petition along with their current status has been submitted by the Petitioner as under:-

Name of the Assets	Anticipated DOCO (as filed in petition)	Actual/Proposed COD
<b>Asset-A:</b> (i) LILO of Kurnool-Thiruvalam 765 kV D/C line at Cuddapah, and  (iii) Establishment of 765/400 kV sub-station at Cuddapah along with 2x1500 MVA Transformer (GIS) along with associated bays and 2x240 MVAR Bus Reactors at Cuddapah GIS sub-station	1.7.2018	25.10.2018 (Actual)
<b>Asset-B:</b> (ii) (a) 400 kV D/C line from Cuddapah GIS to LILO point of NP Kunta portion of Cuddapah-Hindupur 400 kV D/C line along with bays and equipments at Cuddapah GIS	1.7.2018	4.8.2018 (Actual)
<b>Asset-C:</b> (ii) (b) 400 kV D/C line from LILO point of NP Kunta to Hindupur S/s along with 2 nos. 400 kV bays, and  (iv) 2x80 MVAR switchable line reactor & 2 nos. 400 kV line bays at Hindupur sub-station	1.7.2018	12.10.2018 (Proposed)

Note: the Petitioner has made submission that all the Assets of the instant project are covered in the instant petition.

7. The Petitioner has claimed the following transmission charges and COD for the instant assets:-



(₹ in lakh)

Name of the Assets	Actual/Proposed COD	2018-19 (pro-rata)
<b>Asset-A:</b> (i) LILO of Kurnool-Thiruvalam 765 kV D/C line at Cuddapah, and  (iii) Establishment of 765/400 kV sub-station at Cuddapah along with 2x1500 MVA Transformer (GIS) along with associated bays and 2x240 MVAR Bus Reactors at Cuddapah GIS sub-station	25.10.2018 (Actual)	5912.42
<b>Asset-B:</b> (ii) (a) 400 kV D/C line from Cuddapah GIS to LILO point of NP Kunta portion of Cuddapah-Hindupur 400 kV D/C line along with bays and equipments at Cuddapah GIS	4.8.2018 (Actual)	2222.71
<b>Asset-C:</b> (ii) (b) 400 kV D/C line from LILO point of NP Kunta to Hindupur S/s along with 2 nos. 400 kV bays, and  (iv) 2x80 MVAR switchable line reactor & 2 nos. 400 kV line bays at Hindupur sub-station	12.10.2018 (Proposed)	2048.79

Note: As per affidavit dated 18.2.2019 the Petitioner has split the assets into three groups on the basis of actual COD and terming the asset name as Asset-A, Asset-B and Asset-C as mentioned in para 18.

8. The details of the interest on working capital claimed by the Petitioner for the instant assets are as under:-

(₹ in lakh)

Particulars	Asset-A	Asset-B	Asset-C
	2018-19 (pro-rata)	2018-19 (pro-rata)	2018-19 (pro-rata)
Maintenance Spares	150.49	27.21	61.33
O and M expenses	83.61	15.12	34.07
Receivables	2262.78	562.48	725.86
<b>Total</b>	<b>2496.88</b>	<b>604.81</b>	<b>821.26</b>
Rate of Interest	12.20%	12.20%	12.20%
Interest on working capital	132.66	48.60	47.13

9. The Petitioner has served the petition to the Respondents and notice of this application has been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003 ("the Act"). No comments have been received from the public in response to the notices published by the Petitioner.



10. TANGEDCO (a successor entity of Respondent no. 4), has filed reply vide affidavit dated 4.10.2018 and raised the issue that the approval of Standing Committee is not available for the following scope of work:

- Hindupur 400 kV sub-station (S/s to be implemented by APTRANSCO)
  - i. 400 kV line bays: 2 Nos.
  - ii. 400 kV switchable line reactor bays: 2 Nos.

11. In response, the Petitioner vide affidavit dated 18.2.2019 has submitted rejoinder that the Standing Committee approved the transmission line as a whole and no separate approval is provided for bays. Bays are required for termination of the lines to charge and maintain power flow. Accordingly, Bays being integral part of the transmission system, no separate approval is required.

12. The Commission vide provisional order dated 12.3.2019 has directed the Petitioner to submit the RPC/SCM approval for 2x240 MVAR bus reactors at Cuddapah GIS sub-station and 2x80 MVAR switchable line reactors at Hindupur sub-station.

13. In response, the Petitioner vide affidavit dated 27.3.2019 has submitted that the scope of the scheme including 2x240 MVAR bus reactors at Cuddapah GIS sub-station and 2x80 MVAR switchable line reactors at Hindupur sub-station was discussed and agreed in the 37<sup>th</sup> and 38<sup>th</sup> meeting of the Standing Committee on Power System Planning of Southern Region held on 31.7.2014 and 7.3.2015 respectively. Further, the transmission scheme has also been agreed in 26<sup>th</sup> meeting of SRPC held on 20.12.2014. In addition, the scheme was also discussed and agreed in the 33<sup>rd</sup> Empowered Committee meeting on transmission held on 30.9.2014 according to which the instant scheme has to be implemented by the Petitioner through regulated tariff mechanism. Further, bays at Hindupur (APTRANSCO) sub-station for 400 kV D/C Cuddapah-Hindupur line is owned by the Petitioner as per the convention of ownership of bays along with line unless otherwise stated.

14. After carrying out preliminary prudence check of the AFC claimed by the Petitioner, the Commission had allowed Annual Transmission Charges for Asset-A





and B in terms of proviso (i) of Regulation 7(7) of the 2014 Tariff Regulations for inclusion in the computation of PoC charges vide its order dated 12.3.2019. The details of the tariff claimed by the Petitioner and tariff awarded by the Commission are as under:

- i. Annual Transmission Charges claimed and allowed are as follows:-

Asset	(₹ in lakh)	
	2018-19* (ATC Claimed)	2018-19* (ATC Allowed)
Asset-A	5912.42	5321.18
Asset-B	2222.71	2000.43
Asset-C	2048.79	--

\*pro-rata basis

15. The Commission has considered the Petitioner's petition and affidavits dated 26.6.2018, 2.8.2018, 10.8.2018, 18.2.2019, 27.3.2019, 16.4.2019 and 3.5.2019, reply filed by Respondent and the objections raised by the Respondent vide affidavit dated 4.10.2018 and the clarifications given by the Petitioner.

16. Having heard the Petitioner and perused the material on record, we proceed to decide the petition.

### **Date of Commercial Operation ("COD")**

17. Clause (3) of Regulation 4 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 or 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.”

18. The Petitioner initially claimed tariff for the asset as a whole with the anticipated COD of 1.7.2018. However, vide affidavit dated 18.2.2019, the Petitioner split the asset into three assets as follows:

- **Asset-A:** LILO of Kurnool-Thiruvalem 765 kV D/C line along with bays and equipment at 765/400 kV at Cuddapah sub-station and establishment of 765/400 kV sub-station at Cuddapah with 2x1500 MVA transformer (GIS) along with associated bays and 2x240 MVAR bus reactors at Cuddapah GIS sub-station.
- **Asset-B:** 400 kV D/C line from Cuddapah GIS to LILO point of NP Kunta portion of Cuddapah-Hindupur 400 kV D/C line along with bays and equipment at Cuddapah GIS; and
- **Asset-C:** 400 kV D/C line from LILO point of NP Kunta to Hindupur sub-station along with 2 nos. 400 kV bays and 2x80 MVAR switchable line reactor and 2 nos. 400 kV line bays at Hindupur sub-station.

19. The Petitioner submitted that Asset-A and B were put into commercial operation on 25.10.2018 and 4.8.2018 respectively. The Petitioner has sought approval of COD of Asset-C under proviso (ii) of Regulation 4(3) of the 2014 Tariff Regulations as 12.10.2018 because it has been prevented from being put to use as the associated bays at Hindupur switchyard, implemented by APTRANSCO are not ready.

20. In support of the COD of the Asset-A and Asset-B covered in the instant petition, the Petitioner has submitted CEA energisation certificate dated 23.4.2018, 22.6.2018 and 14.8.2018, RLDC charging certificate dated 13.8.2018 and 14.11.2018 and CMD certificate as required under Grid code.

### **Analysis and Decision**

21. We have considered the submissions of the Petitioner. The Petitioner has claimed the actual COD of the Asset-A and Asset-B as 25.10.2018 and 4.8.2018 respectively. In support of COD of the Asset-A and Asset-B, the Petitioner has submitted CEA energisation certificate dated 23.4.2018, 22.6.2018 and 14.8.2018,



RLDC charging certificate dated 13.8.2018 and 14.11.2018, CMD certificate as required under Grid code and Notification of DOCO dated 17.8.2018 and 15.11.2018 respectively. Accordingly, the COD of the Asset-A and Asset-B, is approved as 25.10.2018 and 4.8.2018 respectively.

22. The Petitioner has claimed the COD of the Asset-C as 12.10.2018 under proviso(ii) of Regulation 4(3) of the 2014 Tariff Regulations. The Petitioner has submitted that the associated downstream system under the scope of the APTRANSCO is not ready.

23. In support of the COD of the Asset-C, the Petitioner has submitted CEA energisation certificate dated 22.6.2018 and 3.7.2018, RLDC charging certificate dated 14.11.2018 and CMD certificate as required under Grid code.

24. Taking into consideration of the CEA energisation certificate and RLDC charging certificate, the COD of the Asset-C is approved as 12.10.2018 under provision (ii) of Regulation 4(3) of the 2014 Tariff Regulations. The Petitioner has submitted that power flow in the instant Asset-C started w.e.f. 22.1.2019 and 23.1.2019 for Circuits Hindupur-1 and 2 respectively with the commissioning of 400 kV D/C Hindupur-Uravakonda line I and II of APTRANSCO. Hence the transmission charges for the Asset-C from 12.10.2018 to 21.1.2019 shall be borne by APTRANSCO.

### **Capital Cost**

25. The Petitioner has claimed capital cost as per Clause (1) and (2) of Regulation 9 of the 2014 Tariff Regulations.

26. The Petitioner vide affidavit dated 18.2.2019 submitted the Auditor certificates along with tariff forms for Asset A and B and Management Certificate along with tariff forms for Asset-C. The details of approved apportioned cost, capital cost as on COD and estimated additional capital expenditure incurred or projected to be incurred during 2018-19, 2019-20 and 2020-21 along with estimated completion cost for the assets covered in the petition are as under:



(₹ in lakh)

Asset	Approved Cost (AppORTioned)	Cost as on COD	Proposed Expenditure for FY			Estimated completion Cost
			2018-19	2019-20	2020-21	
Asset-A	90756.85	73342.51	1404.08	5830.14	3944.04	84520.77
Asset-B	24178.89	18659.52	361.03	2045.85	1016.01	22082.41
Asset-C	30610.84	23291.25	447.74	1916.72	1257.71	26913.42
<b>Total</b>	<b>145546.58</b>	<b>115293.28</b>	<b>2212.85</b>	<b>9792.71</b>	<b>6217.76</b>	<b>133516.60</b>

27. As per the Auditor's certificates (for Asset-A and Asset-B), the expenditure from 1.4.2018 to COD has been verified based on the books of the Petitioner. Hence the Petitioner is directed to furnish, at the time of true up an updated auditor certificate based on information drawn from the Audited Statement of Accounts of the Petitioner. In respect of Asset-C the Petitioner is directed to provide Auditor certificate for the expenditure given in Management certificate.

#### **Cost Over-Run/Variation**

28. It may be seen from para 26 that estimated completion cost of all the Assets covered under this petition is less than the apportioned approved cost. Hence, there is no cost over-run.

29. The Petitioner has submitted the reasons for item wise cost variation between the approved cost (FR) and the estimated completion cost is as follows:

- i. In the bidding process, lowest possible market prices for required product/services are obtained and contracts are awarded on the basis of lowest evaluated eligible bidder. The FR cost estimate is broad indicative cost worked out generally on the basis of average unit rates of recently awarded contracts/general practice. The cost estimate of the project is on the basis of August, 2015 price level.
- ii. Due to RoW issues encountered during the construction of line, the actual line length and routing changed, which increased the no. of angle and Multi-circuit towers. Also increase in transmission line length from estimated 258 km (as per



FR) to 270 km (as per actual), resulted in increases in cost by about ₹76.27 crore.

- iii. Increase in number of tension tower due to actual line routing and line length, these resulted in increase of tower material (approx. 3270 MT), hardware fitting, conductor (approx. 69 km), insulators etc. The Civil works (excavation, concreting, revetment, benching etc) also increased due to increase in line length.
- iv. Reduction of around ₹111.56 crore on account of Overheads and IDC with respect to FR. During estimation for FR, IDC was considered based on the interest rate of 10.5% of Domestic Loans. On actual, the weighted average rate of interest of loans is around 7.75%. The actual IDC accrued up to anticipated DOCO has been considered at the time of claim of Tariff.
- v. IEDC (Overheads)-during estimation for FR, 3% and 5% of Equipment cost and Civil Works has been considered for Contingency and IEDC respectively. The actual amount of IEDC, Establishment and Contingency has been considered at the time of claim of Tariff.
- vi. There is increase of ₹9.56 crore (approx.) on account of substation Civil works. Lump-sum quantity considered while preparing FR and quantity varies on actual execution. The variation is due to the actual site condition, change in type of soil with respect to considered in FR etc.
- vii. There is reduction of around ₹74.65 crore is on account of decrease in compensation against transmission line construction for crop and tree Compensation with respect to FR. The variation is due to the actual assessment of crops/trees & RoW encountered in line corridor by concerned Govt. officials of state, quantity & value of which are much lesser than the notional estimate.
- viii. Increase of about ₹4.92 crore mainly on accounts of actual taxes & duties (Custom duty, excise duty etc) paid.



ix. There is reduction of ₹27.98 crore, as a negative variation has been incurred from the time of approval of project till award of various contracts (DPR to LOA) based on prices received as per competitive bidding.

30. In regard to variation from DPR to LOA, it is submitted that the Contracts for various packages under this project were awarded to the lowest evaluated and responsive bidder, on the basis of Competitive Bidding by the Petitioner, after publication of NITs in leading Newspapers. Thus the award prices represent the lowest prices available at the time of bidding of various packages. However, due to decrease in quantity of GIS Bus duct length during actual execution the cost of switchgear reduces to the extent.

31. TANGEDCO vide affidavit dated 4.10.2018 has submitted that the Petitioner in Form-4C submit the following details regarding the capital cost as follows:

(₹ in lakh)

Sl. No.	Name of the Asset	Approved Cost (FR)	Estimated Completion Cost
1.	Capital cost excluding IDC, IEDC, FC,FERV and Hedging cost	126915.76	125708.89
2.	IDC, FC, FERV AND Hedging cost	18630.86	7474.36
	<b>Total</b>	<b>145546.62</b>	<b>133183.25</b>

32. It is evident from the above table that the Petitioner has failed to exercise due diligence in estimating the capital investment cost. There has been a whopping reduction of ₹11157 lakh on account of IEDC and IDC from the estimated value. The Respondent has been pointing out the callous attitude of the Petitioner while preparing estimates and the Respondent requested the Hon'ble Commission to direct the Petitioner to exercise caution while preparing estimates. A comparison of the estimated and actual cost claimed for certain items reveals an exorbitant increase in the actual claim of capital cost as per Form-5 which is as follows:



(₹ in lakh)

Item	As per Estimate	Expenses claimed in tariff including liabilities	% increase
Tower Steel	19457.09	24201.06	24.38%
Conductor	19608.77	21560.91	9.95%
Hardware fittings	2270.95	3044.49	34.06%
Foundation for structures	3412.35	4056.86	18.88%

33. In response, the Petitioner vide affidavit dated 18.2.2019 submitted the asset wise cost variation and their reasons as follows:

**Asset-A**

(₹ in lakh)

Sl. No.	Particulars	As per FR	As per Estimated Completion Cost	Variation (w.r.t. FR)
				(-within, +Increase)
1.	Preliminary Investigation, Right of way, forest clearance, PTCC, general civil works etc.	6917.43	3785.72	-3131.70
2.	Towers Steel	11287.42	14131.74	2844.00
3.	Conductor	7872.04	9048.33	1176.00
4.	Erection, Stringing and Civil works including foundation	6055.85	6273.35	218.00
5.	Switchgear (CT, PT, Circuit Breaker, Isolator etc.)	18326.25	17076.74	-1249.51
6.	Overheads	6099.17	1953.00	-4146.00
7.	IDC	5518.26	3687.02	-1831.00

**Asset-B**

(₹ in lakh)

Sl. No.	Particulars	As per FR	As per Estimated Completion Cost	Variation (w.r.t. FR)
				(-within, +Increase)
1.	Preliminary Investigation, Right of way, forest clearance, PTCC, general civil works etc.	2762.73	1541.46	-1221.27
2.	Towers Steel	3188.05	3719.16	531.00
3.	Conductor	4152.47	4412.17	260.00



4.	Erection, Stringing and Civil works including foundation	2911.30	2727.75	-184.00
5.	Switchgear (CT, PT, Circuit Breaker, Isolator etc.)	3234.04	2381.69	-852.36
6.	Overheads	1624.90	474.41	-1150.00
7.	IDC	1470.14	1287.78	-182.00

### **Asset-C**

(₹ in lakh)

Sl. No.	Particulars	As per FR	As per Estimated Completion Cost	Variation (w.r.t. FR)
				(-within, +Increase)
1.	Preliminary Investigation, Right of way, forest clearance, PTCC, general civil works etc.	5787.52	2576.36	-3211.20
2.	Towers Steel	4955.58	5750.57	795.00
3.	Conductor	7610.26	8401.40	791.00
4.	Erection, Stringing and Civil works including foundation	3171.30	2864.67	-307.00
5.	Overheads	2057.15	678.30	-1378.85
6.	IDC	1861.22	1080.91	-780.00

### **34. Reasons for cost variation:**

- i. Due to RoW issues encountered during the construction of line, the actual line length and routing changed, which increased the no. of angle points and Multi-circuit towers.
- ii. Increase in angle points is due to hilly terrain, forest stretch and cross arm strengthening.
- iii. Increase in number of tension tower is due to actual line routing and hilly terrain, thus resulting in increase of tower material, hardware fitting, conductor, insulators etc. which resulted increase in cost.





- iv. Reduction of around ₹94.67 crore on account of Overheads and IDC with respect FR. During estimation for FR, IDC was considered based on the interest rate of 10.50% of domestic loan. On actual, the weighted average rate of interest of loan is around 7.83%. The actual IDC accrued up to DOCO has been considered at the time of claim of tariff.
- v. IEDC (Overheads)-during estimation for FR, 3% and 5% of equipment cost and civil works has been considered for contingency and IEDC respectively. The actual amount of IEDC, Establishment and Contingency has been considered at the time of claim of tariff.
- vi. There is variation in cost on account of sub-station civil works due to the actual site condition, change in type of soil with respect to FR.
- vii. There is reduction of around ₹75.64 crore on account of decrease in compensation against transmission line construction for crop and tree compensation with respect to FR. During preparation of FR, Corridor compensation was estimated on preliminary assessment. However, after the actual assessment of crops/trees and RoW encountered in line corridor by concerned Govt. officials of state, actual compensation paid has decreased with respect to FR estimate.
- viii. Decrease in cost of sub-station equipment on account of decrease in bus duct length as per execution.

35. The Petitioner has submitted that the overall completion cost of the asset is within the apportioned approved cost, it is humbly requested that the Hon'ble Commission may kindly approve the transmission tariff as prayed in petition.

36. The petition was heard on 23.4.2019, During the hearing the learned counsel for TANGEDCO submitted that there is huge over-estimation in the FR cost. The estimated completion cost is within the FR cost even though there is huge increase in cost of certain items. He further submitted that the reasons given for variation in cost



are standard and no proper justification for the variation is given by the Petitioner. He requested to direct the Petitioner to submit the valid reasons for variation in the cost of the assets.

37. The Commission directed the Petitioner to submit the detailed reasons for variation in cost of the assets vide RoP dated 23.4.2019.

38. The Petitioner vide affidavit dated 3.5.2019 submitted the reasons for element wise cost variation is as follows:

**Increase in Tower steel:**

- It is attributed to increase in line length from 92 km (envisaged in FR) to 97 km (actual) for Asset-A and for Asset-B and C line length increased by 3.755 km.
- Increase in comparatively heavier angle towers including Multi-circuit towers and tower extensions. For Asset-B, Multi-circuit towers had to be placed at 4 locations due to Double Decker gantry to facilitate two more circuits, which resulted in increase of angle towers.

The above said increase was necessitated based on detailed survey during implementation of the project largely owing to RoW issues including newly proposed canal (GNSS) project etc. and hilly terrain and forest area. The comparative table of tower types (actual execution v/s envisaged in FR) is as follows:

**Asset-A**

Particulars	Units	As envisaged in FR	As per Executed
Suspension tower	Nos.	199	147
Tension tower	Nos.	83	120
Conductor	Nos.	3362	3468

**Asset-B**

Particulars	Units	As envisaged in FR	As per Executed
Suspension tower	Nos.	124	83
Tension tower	Nos.	56	91
Conductor	Nos.	1425	1409



### **Asset-C**

<b>Particulars</b>	<b>Units</b>	<b>As envisaged in FR</b>	<b>As per Executed</b>
Suspension tower	Nos.	242	228
Tension tower	Nos.	63	81
Conductor	Nos.	2612	2675

### **Analysis and Decision:**

39. We have considered the submissions of the Petitioner and Respondent with respect to the cost variation. The capital cost is varied due to increase in tower steel, reduction on account of decrease in compensation, reduction on account of overheads and IDC, variation in cost on account of sub-station civil works and decrease in bus duct length. As compared with apportioned approved cost (FR), the estimated completion cost is within FR cost. Hence, there is no cost overrun.

### **Time over-run**

40. As per the investment approval dated 12.1.2016, the instant assets were scheduled to be commissioned within 30 months from the date of investment approval. Accordingly, the scheduled COD was 11.7.2018 against which, the COD of assets covered in the instant petition are 25.10.2018, 4.8.2018 and 12.10.2018. Hence, there is a delay of about 106 days, 24 days and 93 days in commissioning of the Asset-A, Asset-B and Asset-C respectively.

41. The Petitioner has submitted that the time overrun is attributable to delay in getting forest clearance, Right of way problems etc. during implementation of the project.

### **42. Reasons of delay for Asset-A**

- **Delay in forest approval:** The application for forest clearance was submitted by Petitioner on 12.1.2016 i.e. immediately after investment approval, for 47.841 ha encountered forest area, however in-spite of rigorous follow up by the Petitioner, Stage-I forest clearance could be obtained from forest authorities on 5.10.2017 and subsequently, working permission could be obtained on 11.11.2017 for a revised area of 36.7 ha (15 locations) which involves 7 locations of LILO-1 and 8 locations of LILO-2 in hilly hard terrain.



After obtaining requisite forest clearances, Petitioner commenced works immediately from 12.11.2017 by mobilizing hard rock excavation and foundation gangs. Here it may be mentioned that the said delay in forest clearance approval, pushed all subsequent works beyond December'17. However, with earnest effort by the Petitioner, the instant asset could eventually be commissioned in such hard rock area in October'18 with a comparatively minor delay of 3.5 months (approx.). The chronology of forest approval is as follows:

Sl. No.	Description	LILO of 765 kV D/C Kurnool-Tiruvellam line at Cuddapah
1.	Submission forest proposal in part-I by user agency to PCCF/Nodal officer	9.1.2016
2.	Online application in MoEF web portal	12.1.2016
3.	PCCF/Nodal officer to DFO for part-II	10.3.2016
4.	Part-II by DFO	11.7.2017
5.	Part-III by CCF	18.7.2017
6.	Part-IV by PCCF	7.8.2017
7.	Part-V by Pr. Sec (EFST)	5.9.2017
8.	Stage-I clearance	5.10.2017
9.	Working permission by DFO	11.11.2017

- In addition, the above said delay in commissioning of instant asset is also attributable to change in line route due to newly proposed canal (GNSS) project, RoW issues, delay in getting shutdown of existing Kurnool-Thiruvallam line, temporary effect of demonetization etc.

#### **43. Reasons of delay for Asset-B and C**

- In regard to Asset-B and Asset-C, it may be mentioned that DOCO for 400 kV D/C line from Cuddapah GIS to LILO point of NP Kunta portion of Cuddapah-Hindupur 400 kV D/C line along with bays and equipment at Cuddapah GIS (**Asset-B**) was declared w.e.f. 4.8.2018 with a minor time overrun of 23 days. The said asset was commissioned along with loop in portion of the said line, envisaged under transmission system associated with NP Kunta Part-B. Further, approval of DOCO w.e.f. 12.10.2018 has been prayed before Hon'ble Commission for 400 kV D/C line from LILO point of NP Kunta to Hindupur sub-



station along with 2 nos. 400 kV bays and 2x80 MVAR switchable line reactor and 2 nos. 400 kV line bays at Hindupur sub-station (**Asset-C**) with a time overrun of 3 months (approx.). The said time overrun is attributable to delay in getting forest clearance, right of way problems etc. during implementation of the project and non-readiness of Hindupur sub-station of APTRANSCO.

- **Delay in forest approval:** The application for forest clearance was submitted by the Petitioner on 17.12.2015, for 24.204 ha (15 locations) encountered forest area, however in-spite of rigorous follow up by the Petitioner, Stage-I forest clearance could be obtained from forest authorities on 17.2.2017 and subsequently, working permission could be obtained on 19.4.2017. After obtaining requisite forest clearances, Petitioner commenced works immediately by mobilizing hard rock excavation and foundation gangs. Here it may be mentioned that the stretch involved steep hilly terrain. However, with earnest effort by the Petitioner, the implementing agency made approaches, head loading of materials requiring comparatively longer time for erection/stringing activities, the instant asset was made ready by April 2018. CEA inspection was also carried out in June 2018 itself i.e. within the approved schedule. The chronology of forest approval is as follows:

Sl. No.	Description	400 kV D/C Cuddapah-Hindupur TL
1.	Submission forest proposal in part-I by user agency to PCCF/Nodal officer	16.12.2015
2.	Online application in MoEF web portal	17.12.2015
3.	PCCF/Nodal officer to DFO for part-II	19.1.2016
4.	Part-II by DFO	9.7.2016 and 11.8.2016
5.	Part-III by CCF	8.9.2016 and 15.10.2016
6.	Part-IV by PCCF	4.11.2016
7.	Part-V by Pr. Sec (EFST)	15.12.2016
8.	Stage-I clearance	17.2.2017
9.	Working permission by DFO	4.4.2017 and 17.4.2017

### **Analysis and Decision**

44. We have considered the submissions of the Petitioner and perused the documents on record. There is a time overrun of 106 days, 24 days and 93 days in



commissioning of Asset-A, Asset-B and Asset-C respectively. The instant assets scheduled to be commissioned. The Petitioner has attributed the time overrun due to delay in getting the forest clearance, RoW problems. With respect to Asset-A, it is observed that the Petitioner submitted the proposal for forest clearance on 9.1.2016. The stage-I clearance was obtained on 5.10.2017 and got working permission from DFO on 11.11.2017. It took 22 months (672 days) for the Petitioner to obtain forest clearance for Part-I, II, III and IV. The total time consumed for obtaining forest clearance is from 9.1.2016 to 11.11.2017. As regards to Asset-B and Asset-C, it is observed that the Petitioner submitted the proposal for forest clearance on 16.12.2015. The stage-I clearance was obtained on 17.2.2017 and got working permission from DFO on 17.4.2017. It took 16 months (488 days) for the Petitioner to obtain forest clearance for Part-I, II, III and IV. The total time consumed for obtaining forest clearance is from 16.12.2015 to 17.4.2017. As per the Forest (Conservation) Amendment rules, 2004 notified by MoEF dated 3.2.2004, the timeline for forest approval after submission of proposal is 210 days by the State Government and 90 days by Forest Advisory Committee of Central Government i.e. total 10 months. Therefore, we are of the view that the Petitioner should have factored these 10 months while arriving at the timeline of 30 months for the instant project. These 10 months are reduced from the total time overrun for the assets covered in the instant petition. Accordingly, as the actual time overrun of 106 days, 24 days and 93 days in commissioning of Asset-A, Asset-B and Asset-C is beyond the control of the Petitioner and the same has been condoned.

#### **Interest During Construction (IDC)**

45. The Petitioner has claimed IDC ₹3687.02 lakh, ₹1287.78 lakh and ₹1080.91 lakh on accrual basis and ₹2597.80 lakh, ₹1105.80 lakh and ₹239.68 lakh on cash basis in respect of Asset-A, Asset-B and Asset-C respectively. The Petitioner has submitted the discharge details of IDC as under:

<b>Asset-A</b>		<b>(₹ in lakh)</b>	
<b>IDC as per Auditor Certificate (on accrual Basis)</b>	<b>IDC Discharged</b>		
	<b>Up to COD</b>	<b>2018-19</b>	<b>2019-20</b>
3687.02	2597.80	772.26	316.96



<b>Asset-B</b>		<b>(₹ in lakh)</b>		
<b>IDC as per Auditor Certificate (on accrual Basis)</b>	<b>IDC Discharged</b>			
	<b>Up to COD</b>	<b>2018-19</b>	<b>2019-20</b>	
1287.78	1105.80	169.89	12.09	

<b>Asset-C</b>		<b>(₹ in lakh)</b>		
<b>IDC as per Management Certificate (on accrual Basis)</b>	<b>IDC Discharged</b>			
	<b>Up to COD</b>	<b>2018-19</b>	<b>2019-20</b>	
1080.91	239.68	807.26	33.98	

46. On scrutiny of the statement showing "Payment of Interest on Term Loan" corresponding to SBI loans, as submitted by the Petitioner, it is observed that the SBI bank certificate showing payment of interest on loan is not clear as to whether it is for working capital or term loan. As the certificate shows interest on account of short term working capital loan, the same is being disallowed.

47. The Petitioner is directed to furnish the details of SBI loan utilized for financing of the instant assets, at the time of truing up.

48. The Petitioner has also availed loans carrying floating rate of interest (like HDFC and ICICI) but it has submitted details of changes in rate of interest from 1.7.2018 to 1.8.2018 in respect of HDFC loan only. Hence, the Petitioner is directed to submit the details of change in rate of interest during the period for which IDC is claimed along with supporting documents at the time of truing up. However, IDC claimed by the Petitioner has been considered for the purpose of tariff, subject to verification of documents to be submitted at the time of true up.

49. In view of above the admissible IDC, as on COD, is ₹2887.27 lakh, ₹382.51 lakh and ₹1057.73 lakh on accrual basis and ₹1932.42 lakh, ₹206.92 lakh and ₹224.02 lakh on cash basis has been considered for the purpose of tariff in respect of Asset-A, Asset-B and Asset-C respectively. However, this shall be reviewed based on clarification and documents submitted at the time of true up.



### **Incidental Expenditure During Construction (IEDC)**

50. The Petitioner has claimed IEDC of ₹1953 lakh, ₹474.41 lakh and ₹678.30 lakh in respect of Asset-A, Asset-B and Asset-C respectively. However, as per the statement showing "Abstract of Cost" corresponding to IA, IEDC as a percentage of accorded capital cost (before IDC, IEDC and Contingencies etc.) is 5%, in line with the prevailing practice, the same has been considered as ceiling limit for working out the admissible IEDC. Further after adjusting for time over-run of 106 days, 24 days and 93 days which is condoned in the petition in respect of Asset-A, Asset-B and Asset-C, the amount of IEDC as claimed by the Petitioner has been considered for the purpose of tariff.

### **Initial spares**

51. The Petitioner vide affidavit dated 18.2.2019 and Auditor Certificates dated 25.1.2019 and 29.1.2019 for Asset-A and Asset-B and Management Certificate dated 4.1.2019 for Asset-C has claimed the Initial spares for the assets covered in the instant petition which is as follows:

(₹ in lakh)

Asset	Plant and Machinery Cost excluding IDC, IEDC and Land Exp.		Initial spares claimed		Ceiling limit (TL) as per Regulations (%)	Ceiling limit (SS) as per Regulations (%)
	T/L	S/S	T/L	S/S		
Asset-A	37736.15	41144.60	0.00	1301.55 (3.16%)	1.00%	5.00%
Asset-B	14037.56	5192.88	0.00	217.70 (4.19%)	1.00%	5.00%
Asset-C	21970.45	3183.76	0.00	0.00	1.00%	6.00%

### **Analysis and Decision**

52. We have considered the submission made by the Petitioner. The initial spares claimed by the Petitioner are within the specified limit under Regulation 13 of the 2014 Tariff Regulations and the same has been allowed for the purpose of tariff subject to true up.





### **Capital Cost allowed as on COD**

53. Based on above, the capital cost allowed as on COD under Regulation 9(2) of the 2014 Tariff Regulations is summarized as under:-

(₹ in lakh)

Assets	Capital cost as per Auditor / Management Certificate as on COD	Less: IDC Disallowed	Less: Un-discharged IDC as on COD.	Less: Excess Initial spares as on COD.	Capital cost considered as on COD
Asset-A	73342.51	799.75	954.85	--	71587.91
Asset-B	18659.52	905.27	175.59	--	17578.66
Asset-C*	23291.25	23.18	833.71	--	22434.36

\*Auditor certificate in respect of Asset-C not available. So, figures have been taken from Management Certificate.

### **Additional Capital Expenditure (ACE)**

54. The cut-off date for the instant assets shall be as follows:

Asset	COD	Cut-off date
Asset-A	25.10.2018	31.3.2021
Asset-B	4.8.2018	31.3.2021
Asset-C	12.10.2018	31.3.2021

55. The Petitioner has claimed Additional Capital Expenditure (hereinafter referred to as "ACE") as per Clause (1) of Regulation 14 of the 2014 Tariff Regulations based on Auditor Certificate dated 25.1.2019 and 29.1.2019 in respect of Asset-A and Asset-B and Management Certificate dated 4.1.2019 in respect of Asset-C. In addition, the Petitioner has also claimed the ACE towards discharge of IDC liability for 2018-19. The ACE claimed by the Petitioner for the instant assets for the period 2018-19 is within the cut-off date and is on account of balance and retention payments and accordingly it is allowed under Regulation 14(1) (i) of the 2014 Tariff Regulations. The ACE claimed by the Petitioner is summarized in the table below:



(₹ in lakh)

Asset	Year	Work/Equipment proposed to be added after COD to cut-off date/beyond cut-off date	Amount capitalized and proposed to be capitalized	Justification	Regulation under which covered
Asset-A	2018-19	Sub-station	1404.08	Balance and	14(1)(i)
			772.26	Accrual IDC	14(1)(i)
Asset-B	2018-19	Sub-station	361.03	Balance and	14(1)(i)
			169.89	Accrual IDC	14(1)(i)
Asset-C	2018-19	Sub-station	447.74	Balance and	14(1)(i)
			807.26	Accrual IDC	14(1)(i)

56. We have considered the submission made by the Petitioner. The admissibility of ACE incurred after COD is to be dealt in accordance with provision of Regulation 14(1) of the 2014 Tariff Regulations. The ACE incurred and projected to be incurred for the transmission asset claimed by the Petitioner is within the cut-off date, it is within the approved cost and it is on account of balance and retention payment and hence additional capitalization claimed by the Petitioner for period 2018-19 is allowed under Regulation 14(1) of the 2014 Tariff Regulations. However, the additional capitalization for period 2019-20 and 2020-21 is not being considered as the tariff period is ending on 31.3.2019 and same will be considered in tariff period 2019-24 in terms of prevailing regulation at that time.

57. The un-discharged IDC as on COD has been allowed as ACE during the year of discharge. Accordingly, the ACE allowed has been summarized as under, which shall be reviewed at the time of true up:-

(₹ in lakh)

Assets	Particular	2018-19	Total Add Cap allowed
Asset-A	Additional Capitalization Claimed	--	--
	<b>Add : IDC Discharged</b>	772.26	772.26
	<b>Add : Capital Liabilities Discharged</b>	1404.08	1404.08
	<b>Total Add Cap allowed</b>	<b>2176.34</b>	<b>2176.34</b>



<b>Asset-B</b>	Additional Capitalization Claimed	--	--
	<b>Add : IDC Discharged</b>	169.89	169.89
	<b>Add : Capital Liabilities Discharged</b>	361.03	361.03
	<b>Total Add Cap allowed</b>	<b>530.92</b>	<b>530.92</b>
<b>Asset-C</b>	Additional Capitalization Claimed	--	--
	<b>Add : IDC Discharged</b>	807.25	807.25
	<b>Add : Capital Liabilities Discharged</b>	447.75	447.75
	<b>Total Add Cap allowed</b>	<b>1255.00</b>	<b>1255.00</b>

### **Capital cost for the tariff period 2014-19**

58. Accordingly, the capital cost considered for the tariff period 2014-19, subject to truing up, is as under:

(₹ in lakh)

Particulars	Asset-A	Asset-B	Asset-C
	2018-19	2018-19	2018-19
Opening Capital Cost	71587.91	17578.66	22434.35
Add: ACE	2176.34	530.92	1255.00
<b>Closing Capital Cost</b>	<b>73764.25</b>	<b>18109.58</b>	<b>23689.35</b>
Average Capital Cost	72676.08	17844.12	23061.85

### **Debt-Equity Ratio**

59. The Petitioner has claimed Debt-Equity ratio of 70:30 as on the date of commercial operation.

60. The amount of loan claimed by the Petitioner for calculation of Debt Equity ratio in Form-6 and for calculation of IDC in "Statement showing IDC discharged up to DOCO" do not match with each other. The details of the same are as follows:

(₹ in lakh)

Name of Asset	Loan considered in Form-6	Loan considered for IDC calculation
Asset-A	50577.31	51339.79
Asset-B	12934.27	13061.66
Asset-C	15715.02	16303.88

61. We have considered the loan used for IDC calculation for working out Debt Equity ratio. Hence, the Debt-Equity ratio as on COD works out to 71.06:28.94, 70.69:29.31 and 72.62:27.38 in respect of Asset-A, Asset-B and Asset-C



respectively, the same is allowed. Further, for the purpose of ACE, Debt-Equity ratio of 70:30 has been considered. These computation of Debt Equity ratio are subject to truing up. The details of debt and equity considered is as under:

<b>Asset-A</b>		<b>(₹ in lakh)</b>
<b>Particular</b>	<b>Capital cost as on COD</b>	<b>Capital cost as on 31.3.2019</b>
	<b>Amount</b>	<b>Amount</b>
Debt	50866.98	52390.41
Equity	20720.93	21373.84
<b>Total</b>	<b>71587.91</b>	<b>73764.25</b>

<b>Asset-B</b>		<b>(₹ in lakh)</b>
<b>Particular</b>	<b>Capital cost as on COD</b>	<b>Capital cost as on 31.3.2019</b>
	<b>Amount</b>	<b>Amount</b>
Debt	12426.25	12797.90
Equity	5152.41	5311.68
<b>Total</b>	<b>17578.66</b>	<b>18109.58</b>

<b>Asset-C</b>		<b>(₹ in lakh)</b>
<b>Particular</b>	<b>Capital cost as on COD</b>	<b>Capital cost as on 31.3.2019</b>
	<b>Amount</b>	<b>Amount</b>
Debt	16292.51	17171.02
Equity	6141.84	6518.35
<b>Total</b>	<b>22434.35</b>	<b>23689.37</b>

### **Return on Equity**

62. This has been dealt with in line of Clause (1) and (2) of Regulation 24 and Clause (2) of Regulation 25 of the 2014 Tariff Regulations.

63. The Petitioner has submitted that it is liable to pay income tax at MAT rate, the RoE has been calculated @ 20.243% after grossing up the RoE of 16.00% with MAT rate of 20.961% as provided under Regulation 25(2)(i) of the 2014 Tariff Regulations. As per Regulation 25(3) of the 2014 Tariff Regulations, the grossed up rate of RoE at the end of the financial year shall be trued up based on actual tax paid together with



any additional tax demand including interest thereon duly adjusted for any refund of tax including interest received from the IT authorities pertaining to the 2014-19 period on actual gross income of any financial year.

64. 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. Accordingly, the 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. Accordingly, the RoE allowed is as follows:-

Particulars	(₹ in lakh)		
	Asset-A 2018-19	Asset-B 2018-19	Asset-C 2018-19
Opening Equity	20720.93	5152.41	6141.84
Addition due to Additional Capitalization	652.90	159.28	376.50
Closing Equity	21373.83	5311.68	6518.35
Average Equity	21047.38	5232.04	6330.10
Return on Equity (Base Rate)	16.000%	16.000%	16.000%
Tax Rate (MAT)	20.961%	20.961%	20.961%
Rate of Return on Equity (Pre-tax)	20.243%	20.243%	20.243%
<b>Return on Equity (Pre-tax)</b>	<b>*1844.32</b>	<b>*696.41</b>	<b>*600.33</b>

\*pro-rata basis

### **Additional Return on Equity**

65. The Petitioner initially has claimed Additional RoE at the rate of 0.5% on anticipated date of COD and submitted that the assets covered in the instant petition is anticipated to be commissioned within the time line of 40 months. Since the subject asset is anticipated to be commissioned within in CERC time line specified for claiming additional RoE of 0.5%.

66. TANGEDCO in affidavit dated 4.10.2018 has submitted that the Petitioner has claimed additional RoE, as the anticipated date of commissioning is within the time line specified in CERC 2014 Tariff Regulations. Since the actual date of commissioning is not known, the claim for additional RoE in anticipation of



commissioning of assets is against regulations. Hence the Hon'ble Commission may dismiss the claim of additional RoE in anticipation of commissioning the assets.

67. In response, the Petitioner vide affidavit dated 18.2.2019 has submitted the rejoinder to the reply of TANGEDCO that as the subject asset is commissioned with in CERC time line specified as per the provision of Regulation 24(i) of the 2014 Tariff Regulations and accordingly claimed the additional RoE of 0.5%.

**Analysis and Decision**

68. We have considered the submissions made by the Petitioner and TANGEDCO. The assets covered in the instant petition are combination of 765 kV transmission line, 400 kV transmission line and 765 kV and 400 kV bays. As per Appendix-I of the 2014 Tariff Regulations, the time line for completion of the project is 40 months for getting additional RoE at the rate of 0.5%. The assets covered in the instant petition is commissioned is as follows:

Asset	Actual Completion		Time line as per I.A. for subject asset (Months)	CERC time line for the project for additional RoE (Months)	Additional RoE Claimed
	Date	Months and Days			
Asset-A	25.10.2018 (Actual)	33 months and 14 days	30	40	Yes
Asset-B	4.8.2018 (Actual)	30 months and 23 days	30	40	Yes
Asset-C	12.10.2018 (Proposed)	33 months	30	40	Yes

69. From the above table, it is observed that the assets covered in the instant petition is commissioned within time line of 40 months as per Appendix-I of the 2014 Tariff Regulations and additional RoE at the rate of 0.5% is granted for the assets covered in the instant petition.

**Interest on loan (IOL)**

70. Interest on loan has been dealt with in line of Regulation 26 of the 2014 Tariff Regulations.



71. IOL has been worked out as under:-

- (i) Gross amount of loan, repayment of installments and rate of interest on actual average loan have been considered as per the petition;
- (ii) The yearly repayment for the tariff period 2014-19 has been considered to be equal to the depreciation allowed for that year; and
- (iii) The gross opening loan as on COD as stated at Form-9C is at variance with the amount of loan used for computing the IDC as shown at "Statement showing IDC Discharged up to DOCO". As also, the Petitioner has not furnished the applicable rate of interest for loans carrying floating rates (like HDFC and ICICI). Further, the Petitioner has included working capital loan for SBI for computing weighted average rate of interest. Due to unauthorized use of working capital loan for funding capital assets, the SBI loan has been ignored for the calculation of weighted average rate of interest. Accordingly, the weighted average rate of interest is 7.638%, 7.642% and 7.693% as against the claimed of 7.86%, 7.90% and 7.73% has been considered for Asset-A, Asset-B and Asset-C respectively. However, this will be reviewed at the time of true up based on the clarification/documents submitted by the Petitioner.

72. The Petitioner has submitted that it be allowed to bill and adjust impact on Interest on Loan due to change in interest due to floating rate of interest applicable, if any, from the Respondents. 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. Based on above, details of IOL calculated are as follows:

Particulars	(₹ in lakh)		
	Asset-A 2018-19	Asset-B 2018-19	Asset-C 2018-19
Gross Normative Loan	50866.98	12426.25	16292.51
Cumulative Repayment up to previous Year	--	--	--
Net Loan-Opening	50866.98	12426.25	16292.51
Addition due to Additional Capitalization	1523.44	371.64	878.51
Repayment during the year	1649.21	607.22	570.47



Net Loan-Closing	50741.21	12190.68	16600.55
Average Loan	50804.09	12308.46	16446.53
Weighted Average Rate of Interest on Loan	7.638%	7.642%	7.693%
<b>Interest on Loan</b>	<b>*1679.64</b>	<b>*618.51</b>	<b>*592.73</b>

\*pro-rata basis

### Depreciation

73. The depreciation has been calculated annually based on Straight Line Method at the rates specified in Appendix-II in the 2014 Tariff Regulations. Based on the above, the depreciation has been considered and allowed, subject to truing up, as under:

Particulars	(₹ in lakh)		
	Asset-A 2018-19	Asset-B 2018-19	Asset-C 2018-19
Opening Gross Block	71587.91	17578.66	22434.35
Additional Capital expenditure	2176.34	530.92	1255.01
Closing Gross Block	73764.25	18109.58	23689.36
Average Gross Block	72676.08	17844.12	23061.86
Rate of Depreciation	5.242%	5.175%	5.280%
Depreciable Value	65408.47	16059.71	20755.67
Remaining Depreciable Value	65408.47	16059.71	20755.67
<b>Depreciation</b>	<b>*1649.21</b>	<b>*607.22</b>	<b>*570.47</b>

\*pro-rata basis

### Operation and Maintenance Expenses (O and M Expenses)

74. The Petitioner has claimed the O and M Expenses for 2014-19 period, as per Regulation 29(4) (a) of the 2014 Tariff Regulations. The Petitioner has claimed following O and M Expenses in the petition:

(₹ in lakh)	
Name of the Assets	2018-19*
Asset-A	436.92
Asset-B	119.49
Asset-C	192.34

\*pro-rata basis

75. The O and M Expenses have been worked out as per the norms of specified in the 2014 Tariff Regulations. The O and M Expenses have been allowed as follows:





(₹ in lakh)	
Assets	2018-19*
Asset-A	434.30
Asset-B	119.30
Asset-C	191.55

\*pro-rata basis

**Revision in O and M expenditure for the impact of wage hike (if any), during period 2014-19**

76. The Petitioner has sought that they may be allowed to approach Commission for suitable revision in the norms for O and M expenditure for claiming the impact of wage hike, if any, during period 2014-19. The O and M expenses have been worked out as per the norms of O and 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 (IWC)**

77. As per the 2014 Tariff Regulations the components of the working capital and the interest thereon are discussed hereinafter:-

**a) Maintenance spares:**

Maintenance spares @ 15 % of Operation and Maintenance Expenses specified in Regulation 28.

**b) O and M Expenses:**

O and M expenses have been considered for one month of the O and M Expenses.

**c) Receivables:**

The receivables have been worked out on the basis of 2 months of annual fixed cost as worked out above.

**d) Rate of interest on working capital:**

As per Clause 28 (3) of the 2014 Tariff Regulations, SBI Base Rate 8.70% as on 1.4.2018 Plus 350 Bps i.e. 12.20 % have been considered



as the rate of interest on working capital for all assets covered in the petition.

78. Accordingly, the interest on working capital is summarized as under:-

(₹ in lakh)

Particulars	Asset-A	Asset-B	Asset-C
	2018-19	2018-19	2018-19
Maintenance Spares	65.15	17.89	28.73
O and M expenses	36.19	9.94	15.96
Receivables	956.08	347.88	333.54
Total	1057.42	375.72	378.23
Rate of Interest	12.20%	12.20%	12.20%
<b>Interest on working capital</b>	<b>*129.00</b>	<b>*45.84</b>	<b>*46.14</b>

\*pro-rata basis

### **Annual Transmission charges**

79. In view of the above, the annual transmission charges being allowed for the instant assets are summarized hereunder:-

(₹ in lakh)

Particulars	Asset-A	Asset-B	Asset-C
	2018-19	2018-19	2018-19
Depreciation	1649.21	607.22	570.47
Interest on Loan	1679.64	618.51	592.73
Return on Equity	1844.32	696.41	600.33
Interest on Working Capital	129.00	45.84	46.14
O and M Expenses	434.30	119.30	191.55
<b>Total</b>	<b>*5736.47</b>	<b>*2087.28</b>	<b>*2001.22</b>

\*pro-rata basis

### **Filing Fee and Publication Expenses**

80. 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 and RLDC Fees and Charges**

81. The Petitioner has requested to allow the Petitioner to bill and recover License fee and RLDC fees and charges, separately from the Respondents. 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.

### **Goods and Services Tax**

82. The Petitioner has prayed for reimbursement of tax, if any, on account of implementation of GST. GST is not levied on transmission service at present and we are of the view that the Petitioner's prayer is premature.

### **Sharing of Transmission Charges**

83. The transmission charges in respect of Asset-A and B allowed in this order shall be recovered on monthly basis in accordance with Regulation 43 of the 2014 Tariff Regulations. 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.

84. The transmission charges for the Asset-C for the period from 12.10.2018 to 21.1.2019 shall be borne by APTRANSCO. Thereafter, the transmission charges from 22.1.2019 shall be governed as per the provisions of the 2010 Sharing Regulations, as amended from time to time.

85. This order disposes of Petition No. 257/TT/2018.

**Sd/-**  
**(I.S. Jha)**  
**Member**

**Sd/-**  
**(Dr. M. K. Iyer)**  
**Member**

**Sd/-**  
**(P. K. Pujari)**  
**Chairperson**

