

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 2/TT/2022

Coram:

**Shri I.S. Jha, Member
Shri Arun Goyal, Member
Shri P.K. Singh, Member**

Date of Order: 04.09.2023

In the matter of:

Determination of tariff for (1) 400 kV Uravakonda-Veltoor I & II feeders for 2016-17 to 2018-19 for inclusion in PoC mechanism in accordance with Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014.

And in the matter of:

Transmission Corporation of Andhra Pradesh Limited,
Vidyut Soudha,
Gunadala, Vijayawada – 520004.

...Petitioner

Versus

Transmission Corporation of Telangana Limited,
6th Floor, A Block, Vidyut Soudha,
Khairathabad, Hyderabad 500082.

...Respondent

For Petitioner : Shri S. Vallinayagam, Advocate, APTRANSCO

For Respondent : None

ORDER

The instant petition has been filed by Transmission Corporation of Andhra Pradesh Limited (APTRANSCO), a State Transmission Utility (STU) and a deemed transmission licensee, for determination of transmission tariff for 400 kV Uravakonda-Veltoor I and II feeders (hereinafter referred to as the “transmission asset”) for the years 2016-17 to 2018-19, for inclusion in PoC mechanism, in accordance with 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:

“a) To determine the tariff for the 2 Nos. Assets for FY 2016-17 to 2018-19.

b) To approve the annual fixed charges for the assets covered under this petition.

c) To permit the petitioner for reimbursement of the filing fee and other expenses in accordance with the Regulation 52 of the Central Electricity Regulatory Commission (Terms and conditions of tariff) Regulations, 2014 of and;

d) To pass any other order or relief as this Hon’ble commission may deem fit and proper in the facts and circumstances of the case.”

Background

3. The facts of the case succinctly stated as follows:

a) The Petitioner being the State Transmission Utility (STU) and a deemed transmission licensee, is required to build, maintain and operate intra-State transmission system in the State of Andhra Pradesh as per Sections 39 and 40 of the Electricity Act, 2003

b) The erstwhile State of Andhra Pradesh was bifurcated into new States of Andhra Pradesh and Telangana on 2.6.2014 in terms of the Andhra Pradesh Reorganisation Act, 2014 (hereinafter referred to as “the 2014 Act”). The bifurcation also resulted in number of inter-State transmission lines divided between new States of Andhra Pradesh and Telangana and some of these lines are partly/ wholly owned by APTRANSCO

c) The Commission, vide order dated 14.3.2012 in Petition No.15/SM/2012, directed that appropriate petition for determination of tariff for inclusion in PoC transmission charges may be filed by the developers/ owners of the transmission lines or by State Transmission Utilities (STUs) in accordance with the Tariff Regulations.



- d) The Commission, vide order dated 12.5.2017 in Petition No.7/SM/2017, directed the State utilities to file tariff petitions for ISTS lines connecting two States along with certificate from the concerned RPC for 2014-19 tariff period as per the 2014 Tariff Regulations.
- e) Accordingly, APTRANSCO filed Petition No.237/TT/2016 for determination of tariff for 2016-17, in respect of 42 inter-State transmission lines connecting States of Telangana and Andhra Pradesh and owned by it. The Commission vide order dated 21.6.2018 in Petition No. 237/TT/2016 granted tariff for the financial year 2016-17 in respect of all 42 natural inter-State transmission lines except for two lines (Asset-VIII and Asset-IX i.e. Uravakonda-Veltoor-I and II Feeders) which were put under commercial operation with effect from 18.11.2016. The Petitioner was directed to file a fresh petition for these two assets alongwith the required information specified in the tariff forms as per the 2014 Tariff Regulations. The relevant portion of the order dated 21.6.2016 is as follows:

“15. The same methodology is adopted for calculating the tariff for the inter-State transmission lines owned by APTRANSCO. Assets XI, XII, XIII, XVIII, XIX, XX, XX1, XXII, XXVI, XXX, XXXIII, XXXVI, XXXVII, XXXVIII, XXXX and XXXXI have already completed twenty five years. Therefore, only „Interest on Working Capital“ and “O & M Expenses“ are allowed for the said assets. Assets VIII and IX were put into commercial operation on 17.11.2016 and 18.11.2016. APTRANSCO must be in possession of the audited capital cost of these two assets. Accordingly, in terms of the above said methodology, APTRANSCO is directed to file a fresh petition for approval of tariff for these two assets as per the provisions of the 2014 Tariff Regulations alongwith the required information specified in the Tariff Forms.”

- f) Accordingly, the Petitioner filed Petition No.10/TT/2019 for determination of tariff for 40 number of lines for the control period viz. 2014-15, 2015-16, 2017-18 and 2018-19. In addition, the Petitioner also prayed for the determination of tariff for the 2 lines (Asset-VIII and Asset-IX i.e. 400 kV Uravakonda-Veltoor D/C Quad moose line) for 2016-17, 2017-18 and 2018-19.



- g) However, the Commission vide order dated 5.2.2020 in Petition No. 10/TT/2019 allowed tariff for 40 number of lines for 2017-18 and 2018-19 only and it did not consider Asset-VIII and Asset-IX for grant of tariff and directed the Petitioner to file a fresh petition for these two number of assets alongwith required information.
- h) Subsequently, APTRANSCO filed a Review Petition No. 18/RP/2020 seeking review of the Commission's order dated 5.2.2020 in Petition No.10/TT/2019 alongwith the relevant supporting documents, wherein the Commission vide order dated 11.8.2021 in Petition No.18/RP/2020 observed as follows:

"We are also not inclined to allow the Review Petitioner's request to allow tariff for Asset-VIII and Asset-IX in the instant review petition or in Petition No. 10/TT/2019 by taking into consideration the information submitted in the instant review petition as there is no mistake or error in our directions. The Petitioner has been granted liberty to file a fresh petition (with full details so as to claim tariff) in impugned order dated 5.2.2020".

- i) Accordingly, the Petitioner has filed the present petition for the determination of transmission tariff for the following transmission lines:

Sl. No.	Asset	Asset	Voltage	Type of Conductor	COD	Length ckm	No. of bays maintained by APTRANSCO	Connecting States
1	I & II	Uravakonda – Veltoor I	400 kV	D/C ACSR Quad Moose	18.11.2016	246.71 (AP Portion)	2	AP-Telangana
2		Uravakonda – Veltoor II						

4. The Petitioner has claimed the following capital cost and additional capitalisation in respect of the transmission asset and has submitted the Auditor's Certificate in support of the same:



AppORTIONED Approved Cost	Estimated Expenditure as on COD	Estimated Expenditure			Total Estimated Completion Cost
		2016-17	2017-18	2018-19	
35173.57	43450.65	0.00	168.02	0.00	43618.67

(₹ in lakh)

5. Hearing in this matter was held on 24.11.2022 and the order was reserved in the matter. No reply has been filed by the Respondent, Transmission Corporation of Telangana Limited

6. The Commission in order dated 14.3.2012 in Petition No.15/SM/2012, taking into consideration the request of the State utilities, observed that it proposes to include the transmission lines connecting two States in the PoC charges and accordingly directed the States owning ISTS connecting two States to file appropriate petitions for determination of tariff for the 2011-14 period as per the provisions of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (2009 Tariff Regulations). Further, the Commission vide order dated 12.5.2017 in Petition No.7/SM/2017 directed the State utilities to file tariff petitions for the ISTS lines connecting two States, alongwith the certificate from the concerned RPC, for the 2014 19 tariff period as per the 2014 Tariff Regulations. The relevant portion of the order dated 12.5.2017 is extracted hereunder:

“7. Further, Statement of Reason (SOR) dated 26.10.2015 of Sharing Regulations (Third Amendment) provides as follows:-

“15.21 A question arises for consideration is whether to fix a minimum percentage figure to consider a STU line as an ISTS line or not. As per Electricity Act and Tariff Policy, all lines which are incidental to Inter-state flow of power are to be considered as ISTS. In a meshed transmission system, many intra-State transmission lines carry inter-State power and therefore become incidental to inter-State transmission system. However, as Electricity Grid is being operated in a cooperative manner, for a minor fraction of ISTS power, it is expected that STU would not insist on considering its line(s) to be inter-State as on the one hand it will receive payment for its own lines, on the other it has to pay for usage of other States’ lines. If a STU puts up a proposal for considering its line as ISTS and it is found that it is being utilized to a large extent by its own drawee nodes, then it would be merely an academic exercise as major part of tariff would be allocated to home State only. So



keeping in view the regulatory process involved in getting a line certified as carrying ISTS power, getting its tariff approved and then adjustment from STU's ARR, it is expected that this claim will be raised judiciously. An interesting situation happened during 2011 when in Eastern and Northern Regions, many lines were submitted to RPCs for approval as ISTS, Southern States realizing that they all are using each other State's line, decided that they will not put up any line for certification by RPC as ISTS. While Commission wants to consider legitimate claims but this must not result in making process too complex. The RPC may therefore uniformly decide a percentage below which (say 10%) such a line would not be considered as an ISTS. Further, it is intended that for assessment of a particular line being used for carrying inter- State power, technical knowhow and tools will be provided by Secretariat of RPCs and NLDC/ RLDCs shall provide all necessary support to States in this regard."

8. In view of the above, State utilities whose lines have been certified by respective RPCs to be considered under PoC should also file the tariff petition under the 2014 Tariff Regulations."

7. APTRANSCO had filed the Petition No. 237/TT/2016 as per the Commission's directions in orders dated 14.3.2012 and 12.5.2017, praying for the determination of tariff for 42 transmission assets.

8. Some of the State Utilities had filed similar petitions claiming tariff of inter-State transmission lines connecting two States for the 2014-19 tariff periods as per the directions of the Commission. The information submitted by the State Utilities was incomplete and inconsistent. Further, some of the lines were more than 25 years old and the States were not having the details of the capital cost etc. To overcome these difficulties, the Commission evolved a methodology for allowing transmission charges for such transmission lines connecting two States in orders dated 19.12.2017 in Petition Nos. 88/TT/2017, 173/TT/2016 and 168/TT/2016 filed by Madhya Pradesh Power Transmission Corporation Limited, Maharashtra State Electricity Regulatory Commission and Uttar Pradesh Power Transmission Corporation Limited respectively. The Commission adopted the same methodology in order dated 4.5.2018 in Petition No.112/TT/2017. The Commission derived the benchmark cost on the basis of the transmission lines owned by PGCIL. The useful life of the transmission line was



considered as 25 years and for lines more than or equal to 25 years, only O&M Expenses and Interest on Working Capital (IWC) is decided to be allowed as per the existing Tariff Regulations. For assets put into commercial operation on or after 1.4.2014, tariff to be allowed on the basis of the audited financial capital cost.

9. Out of the 42 transmission assets in the Petition No. 237/TT/2016, the Petitioner's claim for tariff for the instant transmission assets was not accompanied with the audited capital cost and accordingly, in terms of the above said methodology, APTRANSCO was directed to file a fresh petition with the audited capital cost as per the provisions of the 2014 Tariff Regulations alongwith the required information specified in the Tariff Forms.

10. Having heard the learned counsel of the Petitioner and perused the material on record, we proceed to dispose of the instant petition.

Date of Commercial Operation (“COD”)

11. The Petitioner has submitted that the 400 kV D/C Uravakonda-Veltoor line was put into commercial operation on 18.11.2016. The Petitioner has enclosed SRPC certificate dated 23.11.2016 issued in connection with natural inter-State lines between Andhra Pradesh and Telangana, indicating the commercial operation of the said line as 18.11.2016. Taking into consideration the SRPC certificate dated 23.11.2016, COD of the instant transmission asset is considered as 18.11.2016 for the purpose of tariff determination.

Capital Cost

12. Clause (1) and (2) of Regulation 9 of the 2014 Tariff Regulations provide 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.”

13. The Petitioner has submitted the administrative approval dated 15.11.2012 for evacuation of 3150 MW power from wind generators in Kadapa, Anantapur and Kurnool districts of Andhra Pradesh wherein it is mentioned that the Finance wing of APTRANSCO will be requested for funds of Phase-I works at an estimated cost of ₹177676 lakh initially out of the total estimated cost of Rs. 303369 lakh including IDC of ₹32405 lakh for comprehensive scheme. The Petitioner has submitted abstract cost estimate wherein the details of the cost of the instant transmission line is as follows:

(₹ in lakh)			
Sl. No.	Description of the line/Sub-station	Length/Capacity	Estimated Cost
1	400 kV D/C Quad Moose line from 400 kV Uravakonda Sub-station to 400 kV Veltorr Sub-station	190 km	45600.00

14. The Petitioner has submitted that APERC vide letter dated 28.10.2013 has accorded the Investment Approval (IA) for Phase-I at an expenditure of Rs. 203700 lakh



wherein the estimate cost of 400 kV D/C Quad Moose line from 400 kV Uravakonda Sub-station to 400 kV Veltorr Sub-station is about ₹45600 lakh.

15. The Petitioner has submitted the capital cost as on COD and additional capital expenditure for 2017-18 as per Auditor certificate is as follows:

(₹ in lakh)						
Sl. No.	Apportioned approved cost	Particulars	Capital cost	IDC	IEDC	Total cost
1	35173.57	Expenditure upto 18.11.2016 (Up to COD)	39500.59	3950.06	--	43450.65
2		Expenditure from COD (i.e. 19.11.2016 to 31.3.2017)	-	--	--	--
3		Expenditure from (1.4.2017 to 31.3.2018)	168.02	--	--	168.02
		Total	39668.61	3950.06	--	43618.67

Cost over-run

16. The apportioned approved cost of the transmission asset is ₹35173.57 lakh and the actual capital cost of the transmission asset is ₹43618.67, which is higher by about ₹8445.10 lakh.

17. The Petitioner has submitted Form-5 wherein the Petitioner has given details about element wise break up of transmission project. However, the Petitioner has not submitted the reasons for cost variation of the instant transmission asset. Due to non-submission of detailed justification about cost over-run, the capital cost of the asset is restricted to FR apportioned approved capital cost.

18. The Petitioner is directed to submit whether the Petitioner has obtained APERC approval for variation in the capital cost of the transmission asset covered in the instant petition. If so, the Petitioner is directed to submit the details of the same at the time of truing-up. The Petitioner is also directed to submit whether the Board of APTRANSCO



has approved revised cost of the project, if so submit the details at the time of truing-up.

19. The capital cost of the transmission considered as on COD is as follows:

(₹ in lakh)			
Asset	Apportioned approved cost	Capital cost claimed by the Petitioner as on COD	Capital cost allowed as on COD
400 kV Uravakonda to Veltoor I & II Feeders including Communication system	35173.57	39500.59	35173.57

20. The Petitioner has submitted the administrative approval dated 15.11.2012 for evacuation of 3150 MW power from Wind generators in Kadapa, Anantapur and Kurnool districts of Andhra Pradesh. The Petitioner has submitted that the scheme was scheduled to be completed in 36 months from the date of release of 1st instalment from funding Agency, REC i.e. 28.8.2014. Accordingly, the completion schedule of the transmission asset was 28.8.2017, and the transmission line was put into commercial operation on 18.11.2016. Therefore, there is no time over-run in case of the transmission asset.

Interest During Construction (“IDC”)

21. The Petitioner has claimed ₹3950.06 lakh as Interest During Construction (IDC) and has submitted Auditor’s Certificates in support of the claim. The Petitioner has submitted that the loans were availed from Rural Electrification Corporation Limited, New Delhi (Loan No.8335) and from KFW for the entire evacuation scheme. However, these 2 lines i.e. 400 kV Uravakonda-Veltoor- I & II, were executed with the loan amounts availed from Rural Electrification Corporation Limited, New Delhi through Loan No. 8335.



22. We have considered the Petitioner's claim for IDC. It is observed that the amount of loan submitted by the Petitioner in Statement of computation of IDC is not matching with the amount of loan as per Form-9C. Further, the IDC claimed in the statement is not matching with the IDC claimed in the Auditor's Certificate. Moreover, as mentioned earlier, the capital cost is being restricted to the FR apportioned approved capital cost of ₹35173.57 lakh which is excluding IDC, as submitted as per Form-5B.

23. Therefore, IDC claimed by the Petitioner is not allowed. However, the Petitioner is directed to submit Revised Cost Estimate (RCE), if any and IDC computation statement based on the apportioned loan for the asset along with supporting documents and rate of interest of each drawl of loan and repayment, if any, as on COD at the time of true-up of 2014-19 tariff.

24. Accordingly, the capital cost of the transmission asset, as on COD, considered for the purpose of tariff calculation ₹35173.57 lakh.

Additional Capital Expenditure ("ACE")

25. Regulation 14 of the 2014 Tariff Regulations provides as follows with respect to additional capitalisation in respect of the new assets:

"14. Additional Capitalisation and De-capitalisation:

(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 recognized 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 of law; 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.

(2) The capital expenditure incurred or projected to be incurred in respect of the new project on the following counts within the original scope of work after the cut-off date may be admitted by the Commission, subject to prudence check:

(i) Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law;

(ii) Change in law or compliance of any existing law.;

(iii) Deferred works relating to ash pond or ash handling system in the original scope of work; and

(iv) Any liability for works executed prior to the cut-off date, after prudence check of the details of such undischarged liability, total estimated cost of package, reasons for such withholding of payment and release of such payments etc.”

26. The Petitioner has submitted that additional amount of ₹168.02 lakh was incurred in the financial year 2017-18 towards un-discharged liabilities recognized to be payable at a future date since the expenses are against transfers and adjustments carried out during 2017-18 as against the activities executed during 2016-17 and, therefore, qualify under ACE as per Regulation 14(1)(i) of the 2014 Tariff Regulations.

27. We have considered the submissions of the Petitioner. The capital cost of the transmission asset has been restricted to apportioned approved cost. The ACE claimed by the Petitioner is not allowed at his stage. The capital cost allowed as on 31.3.2019 is as follows:

(₹ in lakh)			
Apportioned approved cost	Capital cost allowed as on COD	ACE allowed	Capital cost allowed as on 31.3.2019
35173.57	35173.57	-	35173.57

Debt-Equity ratio

28. Debt-equity ratio is allowed for the instant asset in terms of Regulation 19 of the 2014 Tariff Regulations, Regulation 19 of the 2014 Tariff Regulations provides as follows:

“19. Debt-Equity Ratio: (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.

(2) The generating company or the transmission licensee, shall submit the resolution of the Board of the company or approval of the competent authority in other cases regarding infusion of funds from internal resources in support of the utilization made or proposed to be made to meet the capital expenditure of the generating station or the transmission system including communication system, as the case may be.

(3) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2014, debt: equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2014 shall be considered.

(4) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2014, but where debt: equity ratio has not been determined by the Commission for determination of tariff for the period ending 31.3.2014, the Commission shall approve the debt: equity ratio based on actual information provided by the generating company or the transmission licensee as the case may be.

(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.”

29. The Petitioner has considered debt-equity ratio of 70:30 as on COD and for ACE for 2014-19 tariff period in accordance with Regulation 19 of the 2014 Tariff Regulations and the details of the same are as follows:

Particular	As on COD		As on 31.3.2019	
	Amount (₹ in lakh)	(in %)	Amount (₹ in lakh)	(in %)
Debt	24621.50	70.00	24621.50	70.00
Equity	10552.07	30.00	10552.07	30.00
Total	35173.57	100.00	35173.57	100.00



Depreciation

30. Regulation 27 of the 2014 Tariff Regulations provides 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 or element thereof including communication system. 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 a 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 further that in case of hydro generating stations, the salvage value shall be as provided in the agreement, if any, signed by the developers with the State Government for development of the generating station:

Provided also 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 unit or transmission system as the case may be, shall not be allowed to be recovered at a later stage during the useful life or the extended life.

Provided that the salvage value for IT equipment and software shall be considered as NIL and 100% value of the assets shall be considered depreciable

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

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

Provided that the remaining depreciable value as on 31st March of the year closing after a period of 12 years from the effective date of commercial operation of the station



shall be spread over the balance useful life of the assets.

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

(7) The generating company or the transmission licensee, as the case may be, shall submit the details of proposed capital expenditure during the fa end of the project (five years before the useful life) of the project along with justification and proposed life extension. The Commission based on prudence check of such submissions shall approve the depreciation on capital expenditure during the fag end of the project.

(8) In case of de-capitalization of assets in respect of generating station or unit thereof or transmission system or element thereof, the cumulative depreciation shall be adjusted by taking into account the depreciation recovered in tariff by the de-capitalized asset during its useful services.”

31. Depreciation has been worked out considering the admitted capital expenditure as on COD. Depreciation allowed in respect of the transmission assets is as follows:

(₹ in lakh)				
Sr. No.	Particular	2016-17 (Pro-rata for 134 days)	2017-18	2018-19
A	Opening Gross Block	35173.57	35173.57	35173.57
B	Addition during the year 2014-19 due to projected ACE	0.00	0.00	0.00
C	Closing Gross Block (A+B)	35173.57	35173.57	35173.57
D	Average Gross Block (A+C)/2	35173.57	35173.57	35173.57
E	Weighted average rate of Depreciation (WAROD) (in%)	5.28	5.28	5.28
F	Balance useful life at the beginning of the year (Year)	25	25	24
G	Elapsed Life at the beginning of the year (Year)	0	0	1
H	Depreciable Value	31656.21	31656.21	31656.21
I	Combined Depreciation during the year	681.81	1857.16	1857.16
J	Cumulative Depreciation	681.81	2538.97	4396.14
K	Remaining Depreciable Value at the end of the year (H-J)	30974.40	29117.24	27260.08

Interest on Loan (“IoL”)

32. Regulation 26 of the 2014 Tariff Regulations provides as follows:

“26. Interest on loan capital: (1) The loans arrived at in the manner indicated in Regulation 19 of these regulations 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 de-capitalization 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 de-capitalisation 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.*

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

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

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

Provided that the beneficiaries or the long term transmission customers /DICs shall not withhold any payment on account of the interest claimed by the generating company or the transmission licensee during the pendency of any dispute arising out of refinancing of loan."

33. The weighted average rate of IoL has been considered on the basis of rate prevailing as on COD. Any change in rate of interest subsequent to the date of commercial operation will be considered at the time of truing-up. The IOL is allowed considering all the loans submitted in Form-9C. The Petitioner is directed to reconcile



the total Gross Loan for the calculation of weighted average Rate of Interest and for the calculation of IDC, which would be reviewed at the time of truing-up. Therefore, IoL has been allowed in respect of the transmission asset in accordance with Regulation 26 of the 2014 Tariff Regulations and the same is as follows:

(₹ in lakh)				
	Particulars	2016-17 (Pro-rata for 134 days)	2017-18	2018-19
A	Gross Normative Loan	24621.50	24621.50	24621.50
B	Cumulative Repayments upto Previous Year	0.00	681.81	2538.97
C	Net Loan-Opening (A-B)	24621.50	23939.69	22082.53
D	Additions	0.00	0.00	0.00
E	Repayment during the year	681.81	1857.16	1857.16
F	Net Loan-Closing (C+D-E)	23939.69	22082.53	20225.36
G	Average Loan (C+F)/2	24280.59	23011.11	21153.94
H	Weighted Average Rate of Interest on Loan (in %)	10.920	9.890	9.420
I	Interest on Loan (G*H)	973.41	2275.80	1992.70

Return on Equity (“RoE”)

34. Regulation 24 and Regulation 25 of the 2014 Tariff Regulations provide 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 of these regulations.*

(2) *Return on equity shall be computed at the base rate of 15.50% for thermal generating station, transmission system including communication system and run-of-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 further 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 Annexure-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 of these regulations 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 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 on income from other business streams including deferred tax liability (i.e. income on business other than business of generation or transmission, 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:

$$\text{Rate of pre-tax return on equity} = \text{Base rate} / (1-t)$$

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.

Illustration-

(i) In case of a generating company or a transmission licensee paying Minimum Alternate Tax (MAT) @ 20.96 % including surcharge and cess:

$$\text{Rate of return on equity} = 15.50 / (1 - 0.2096) = 19.610\%$$

(ii) In case of a generating company or a transmission licensee paying normal corporate tax including surcharge and cess:

- (a) Estimated Gross Income from generation or transmission business for FY 2014-15 is Rs 1,000 crore;
- (b) Estimated Advance Tax for the year on above is Rs 240 crore;
- (c) Effective Tax Rate for the year 2019-20 = Rs 240 Crore / Rs 1000 Crore = 24%;
- (d) Rate of return on equity = $15.50 / (1 - 0.24) = 20.395\%$.

(3) The generating company or the transmission licensee, as the case may be, shall



true up the grossed up rate of return on equity at the end of every financial year 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 income tax authorities pertaining to the tariff period 2014-15 to 2018-19 on actual gross income of any financial year. However, penalty, if any, arising on account of delay in deposit or short deposit of tax amount shall not be claimed by the generating company or the transmission licensee, as the case may be. Any under-recovery or over-recovery of grossed up rate on return on equity after truing up, shall be recovered or refunded to beneficiaries or the long term customers/DICs, as the case may be, on year to year basis.”

35. The Petitioner has claimed RoE @15.50% from COD to 31.3.2019. Accordingly, the RoE approved for the transmission asset is as follows:

Particulars	(₹ in lakh)		
	2016-17 (Pro-rata for 134 days)	2017-18	2018-19
Return on Equity			
Opening Equity	10552.07	10552.07	10552.07
Additions	0.00	0.00	0.00
Closing Equity	10552.07	10552.07	10552.07
Average Equity	10552.07	10552.07	10552.07
Return on Equity (Base Rate) (in %)	15.50	15.50	15.50
Return on Equity	600.46	1635.57	1635.57

Operation & Maintenance Expenses (“O&M Expenses”)

36. The O&M Expenses claimed by the Petitioner for the transmission asset covered in the instant Petition is as follows:

O & M Expenses	(₹ in lakh)		
	2016-17 (pro-rata)	2017-18	2018-19
400 kV Uravakonda-Veltoor D/C (ACSR Quad Moose) line (COD: 18.11.2016) Length in km: 123.355	97.84	277.47	286.68

37. Regulation 29(4) of the 2014 Tariff Regulations specifies the norms for O&M Expenses for the transmission system, according to which the following normative O&M Expenses are applicable in case of the present petition:



Element	2016-17	2017-18	2018-19
Transmission Line: Double Circuit (Bundled conductor with four or more sub conductors) (in ₹ lakh per km)	1.133	1.171	1.210

38. We have considered the submissions of the Petitioner. The Petitioner has not claimed capital cost of the 2 no. of 400 kV bays at Uravakonda Sub-station. However the Petitioner has claimed O&M Expenses towards 2 no. of 400 kV bays at Uravakonda Sub-station. O&M Expenses for the transmission asset is allowed only if capital cost of the transmission asset is approved by the Commission under ISTS. In the instant case only tariff for transmission line is approved. Accordingly, O&M Expenses for transmission line is only allowed in the instant petition.

39. Accordingly, the details of O&M Expenses worked out in respect of instant transmission asset as per provisions of Regulation 29(4) of the 2014 Tariff Regulations are as follows:

O & M Expenses	(₹ in lakh)		
	2016-17 (pro-rata for 134 days)	2017-18	2018-19
400 kV Uravakonda-Veltoor DC (ACSR Quad Moose) line (COD: 18.11.2016) Length in km: 123.355	50.93	144.45	149.26

Interest on Working Capital (“IWC”)

40. Regulation 28(1)(c), Regulation 28(3), Regulation 28(4) and Regulation 3(5) of the 2014 Tariff Regulations specify as follows:

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

.....

(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:

(4) Interest on working capital shall be payable on normative basis notwithstanding that the generating company or the transmission licensee has not taken loan for working capital from any outside agency.”

“3. Definitions. - In these regulations, unless the context otherwise requires:-

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

41. As stipulated above, the components of the working capital and the interest thereon are allowed as follows:

(i) **Maintenance spares:**

Maintenance spares have been worked out based on 15% of Operation and Maintenance expenses specified in Regulation 28.

(ii) **O & M expenses:**

O&M expenses have been considered for one month of the recommended O&M expenses by Engineering Division.

(iii) **Receivables:**

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

(iv) **Rate of interest on working capital:**

SBI Base Rate Plus 350 bps as on 1.04.2016 (i.e.12.80%) has been considered as the rate of interest on working capital for the asset.

42. Accordingly, the components of the working capital and interest allowed thereon in respect of the transmission asset are as follows:

		(₹ in lakh)		
	Particulars	2016-17 (Pro-rata for 134 days)	2017-18	2018-19
A	Working Capital for O&M Expenses (one month of O&M Expenses)	11.56	12.04	12.44



	Particulars	2016-17 (Pro-rata for 134 days)	2017-18	2018-19
B	Working Capital for Maintenance Spares (Maintenance Spares @15% of O&M Expenses)	20.81	21.67	22.39
C	Working Capital for Receivables (Receivable equivalent to two months of fixed cost)	1070.68	1007.71	960.35
D	Total Working Capital (A+B+C)	1103.05	1041.42	995.17
E	Rate of Interest (in %)	12.80	12.80	12.80
F	Interest of working capital (D*E)	51.83	133.30	127.38

Annual Fixed Charges of 2014-19 Tariff Period

43. The transmission charges approved for the transmission asset for 2014-19 tariff period are as follows:

	(₹ in lakh)		
Annual Transmission Charges	2016-17 (Pro rata for 134 days)	2017-18	2018-19
Depreciation	681.81	1857.16	1857.16
Interest on Loan	973.41	2275.80	1992.70
Return on Equity	600.46	1635.57	1635.57
Interest on Working Capital	51.83	133.30	127.38
O & M Expenses	50.93	144.45	149.26
Total	2358.44	6046.28	5762.07

Filing Fee and the Publication Expenses

44. The Petitioner has sought reimbursement of fees paid by it for filing the petition other expenses in accordance with the Regulation 52 of the 2014 Tariff Regulations.

45. 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 Fees & RLDC Fees and Charges

46. The Petitioner shall be entitled for reimbursement of license fee and RLDC fees and charges in accordance with Clause (2)(b) and (2)(a), respectively of Regulation 52 of the 2014 Tariff Regulations.

Sharing of Transmission Charges

47. The billing, collection and disbursement of the transmission charges (AFC) approved in this order for the transmission asset shall be governed by the provisions of the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010, as provided in Regulation 43 of the 2014 Tariff Regulations.

48. To summarise:

- a) The Annual Fixed Charges allowed for the transmission assets for 2014-19 tariff period are as follows:

Particulars	(₹ in lakh)		
	2016-17 (Pro-rata for 134 days)	2017-18	2018-19
Annual Fixed Charges	2358.44	6046.28	5762.07

49. This order disposes of Petition No. 2/TT/2022 in terms of the above discussion and findings.

sd/-
(P. K. Singh)
Member

sd/-
(Arun Goyal)
Member

sd/-
(I.S. Jha)
Member

