

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 316/TT/2019**

**Coram:**

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

**Date of Order: 27.01.2021**

**In the matter of:**

Approval under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and for revision of transmission tariff of the 2004-09 tariff period and 2009-14 tariff period, truing up of transmission tariff of the 2014-19 tariff period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff of the 2019-24 tariff period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for 400 kV D/C Dhauliganga HEP-Bareilly (UPPCL) Transmission Line along with its associated bays at Bareilly(UPPCL) in Northern Region.

**And in the Matter of:**

Power Grid Corporation of India Ltd.,  
"Saudamini", Plot No. 2,  
Sector 29, Gurgaon-122001

**....Petitioner**

**Vs**

1. Rajasthan Rajya Vidyut Prasaran Nigam Ltd.,  
Vidyut Bhawan, Vidyut Marg, Jaipur-302 005,
2. Ajmer Vidyut Vitran Nigam Ltd.,  
132 kv, GSSRRV PNL Sub- Station Building,  
Caligiri Road, Malviya Nagar, Jaipur-302017 .
3. Jaipur Vidyut Vitran Nigam Ltd.,  
132 kv, GSSRRV PNL Sub- Station Building,  
Caligiri Road, Malviya Nagar, Jaipur-302017.
4. Jodhpur Vidyut Vitran Nigam Ltd.,  
132 kv, GSSRRV PNL Sub- Station Building,  
Caligiri Road, Malviya Nagar, Jaipur-302017.



5. Himachal Pradesh State Electricity Board,  
Vidyut Bhawan,  
Kumar House Complex Building II,  
Shimla-171 004.
6. Punjab State Electricity Board,  
The Mall, Patiala-147 001.
7. Haryana Power Purchase Centre,  
Shakti Bhawan, Sector-6,  
Panchkula-134 109.
8. Power Development Department,  
Government of Jammu & Kashmir,  
Mini Secretariat, Jammu.
9. Uttar Pradesh Power Corporation Ltd.,  
(Formerly Uttar Pradesh State Electricity Board),  
Shakti Bhawan, 14, Ashok Marg,  
Lucknow-226 001.
10. Delhi Transco Ltd.,  
Shakti Sadan, Kotla Road,  
New Delhi-110 002.
11. BSES Yamuna Power Ltd.,  
BSES Bhawan, Nehru Place,  
New Delhi.
12. BSES Rajdhani Power Ltd,  
BSES Bhawan, Nehru Place,  
New Delhi.
13. Tata Power Delhi Distribution Ltd.,  
33 kV Sub-station, Building,  
Hudson Lane,  
Kingsway Camp,  
North Delhi-110009.
14. Chandigarh Administration,  
Sector-9, Chandigarh.
15. Uttarakhand Power Corporation Ltd.,  
Urja Bhawan, Kanwali Road,  
Dehradun.



16. North Central Railway,  
Allahabad.
17. New Delhi Municipal Council  
Palika Kendra, Sansad Marg,  
New Delhi-110002.

...Respondents

**For Petitioner** : Shri S.S. Raju, PGCIL  
Shri Ved Prakash Rastogi, PGCIL

**For Respondents** : None

### **ORDER**

The instant petition has been filed by Power Grid Corporation of India Limited (hereinafter referred to as “the Petitioner”), a deemed transmission licensee, for revision of tariff from the COD (1.8.2005) to 31.3.2009; revision of tariff for 2009-14 tariff period; truing up of the tariff for the period from 1.4.2014 to 31.3.2019 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”); and for determination of the tariff from 1.4.2019 to 31.3.2024 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”) in respect of the 400 kV D/C Dhauliganga HEP–Bareilly (UPPCL) Transmission Line along with its associated bays at Bareilly(UPPCL) (hereinafter referred to as “the transmission asset”) in Northern Region.

2. The Petitioner has made the following prayers in the instant petition:

- 1) *“Approve the revised Transmission Tariff for 2004-09 block and transmission tariff for 2009-14 block for the assets covered under this petition, as per para 8 above.*
- 2) *Approve the trued-up Transmission Tariff for 2014-19 block and transmission tariff for 2019-24 block for the assets covered under this petition, as per para 9 and 10 above.*



- 3) 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 in Tariff regulations 2014 and tariff regulation'19 as per para 9.0 & 10 above for respective block.

*Further it is submitted that deferred tax liability before 01.04.2009 shall be recoverable from the beneficiaries or long-term customers /DIC as the case may be, as and when the same is materialized as per regulation 49 of 2014 and regulation 67 of 2019 tariff regulation. The petitioner may be allowed to recover the deferred tax liability materialized directly without making any application before the commission as provided in the regulation.*

- 4) Approve the reimbursement of expenditure by the beneficiaries towards petition filing fee, and expenditure on publishing of notices in newspapers in terms of Regulation 70 (1) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019, and other expenditure ( if any) in relation to the filing of petition.
- 5) Allow the petitioner to bill and recover Licensee fee and RLDC fees and charges, separately from the respondents in terms of Regulation 70 (3) and (4) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019.
- 6) 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 2019-24 period, if any, from the respondents.
- 7) Allow the petitioner to file a separate petition before Hon'ble Commission for claiming the overall security expenses and consequential IOWC on that security expenses as mentioned at para 10.5 & 10.6 above.
- 8) Allow the petitioner to claim the capital spares at the end of tariff block as per actual.
- 9) Allow the Petitioner to bill and recover GST on Transmission Charges separately from the respondents, if GST on transmission is withdrawn from negative list at any time in future. Further, any taxes including GST and duties including cess etc. imposed by any statutory/Govt./municipal authorities shall be allowed to be recovered from the beneficiaries.

*and pass such other relief as Hon'ble Commission deems fit and appropriate under the circumstances of the case and in the interest of justice”*

### **Background**

3. The brief facts of the case are as under:

- a) The Investment Approval (IA) for the transmission asset was accorded by the Ministry of Power, Government of India vide letter dated 1.1.2001 at an estimated cost of ₹15053 lakh, including Interest During Construction (IDC) of ₹590 lakh. Subsequently, the Revised Cost Estimate (RCE) was approved by



the Board of Directors of the Petitioner vide Memorandum dated 25.10.2006 at an estimated cost of ₹18207 lakh, including IDC of ₹1004 lakh.

b) The transmission tariff for the period from 1.8.2005 to 31.3.2009 was allowed by the Commission vide order dated 21.3.2007 in Petition No. 138/2006. The transmission tariff was revised due to additional capital expenditure (ACE) for the tariff period from 1.4.2006 to 31.3.2009 vide order dated 12.5.2009 in Petition No. 41/2009. The transmission tariff was further revised due to ACE for the period from 1.4.2008 to 31.3.2009 vide order dated 11.2.2010 in Petition No. 243/2009. The transmission tariff for the period from 1.4.2009 to 31.3.2014 was allowed vide order dated 10.2.2011 in Petition No. 233/2010 and transmission tariff for the period from 1.4.2009 to 31.3.2014 was trued up and the transmission tariff for the period from 1.4.2014 to 31.3.2019 was allowed vide order dated 11.12.2015 in Petition No. 364/TT/2014.

c) The transmission asset was scheduled to be put into commercial operation on 1.12.2004, while it was put into commercial operation on 1.8.2005. There was time over-run of 8 months and it was condoned by the Commission. The Petitioner has sought revision of transmission tariff approved by the Commission for the 2004-09 tariff period on account of change in Interest on Loan (IOL) and Interest on Working Capital (IWC) to the extent of revision in IOL and in Maintenance Spares in terms of the judgement of Appellate Tribunal for Electricity (APTEL) dated 22.1.2007 and 13.6.2007 in Appeal Nos. 81/2005 and 139/2006 respectively. The Petitioner has further sought consequential revision of tariff allowed for the 2009-14 tariff period, truing up of tariff of the 2014-19 tariff period and determination of tariff for the 2019-24 tariff period in respect of the transmission asset.

d) APTEL, vide judgement dated 22.1.2007 in Appeal No. 81/2005 and other related Appeals, and vide judgement dated 13.6.2007 in Appeal No. 139/2006 pertaining to generating stations of NTPC decided on mainly the following issues:

- (i) Computation of interest on loan
- (ii) Consequences of refinancing of loan



- (iii) Depreciation as deemed repayment
- (iv) Admissibility of depreciation up to 90% of the value of the assets
- (v) Consideration of maintenance of spares for working capital
- (vi) Depreciation of assets.

e) The Commission and certain other parties filed appeals against the APTEL's judgments before the Hon'ble Supreme Court in 2007. The Appeals were admitted and initially a stay was granted by the Hon'ble Supreme Court. Subsequently, on an assurance by NTPC that the issues under appeal would not be pressed for implementation during the pendency of the appeals, the stay was vacated by the Hon'ble Supreme Court.

f) The Petitioner, based on the APTEL's judgments dated 22.1.2007 and 13.6.2007, sought re-determination of tariff of its transmission assets for the 2001-04 and 2004-09 tariff periods in Petition No. 121/2007. The Commission after taking into consideration the pending appeals before the Hon'ble Supreme Court adjourned the matter *sine die* and directed to revive the same after the disposal of the Civil Appeals by the Hon'ble Supreme Court.

g) The Hon'ble Supreme Court, vide its judgement dated 10.4.2018, dismissed the said Civil Appeals filed by the Commission and others against the said judgments of APTEL.

h) Consequent to the Hon'ble Supreme Court's judgment dated 10.4.2018 in NTPC matters, the Petition No. 121/2007 was listed for hearing on 8.1.2019. The Commission, vide order dated 18.1.2019 in Petition No. 121/2007, directed the Petitioner to submit its claim separately for the assets at the time of filing trueing up petitions for the 2014-19 tariff period in respect of the concerned transmission asset. Accordingly, the Petitioner has filed the instant petition.

4. The Respondents are distribution licensees, transmission utilities and power departments, who are procuring transmission services from the Petitioner, mainly beneficiaries of the Northern Region.



5. The Petitioner has served the petition on the Respondents and public notice regarding the filing of this petition has also been published in newspapers in accordance with Section 64 of the Electricity Act, 2003. No comments or suggestions have been received from the general public in response to the notices published in the newspapers by the Petitioner. General Notice dated 14.1.2020 directing the beneficiaries/ Respondents to file reply in the matter was also posted on the Commission's website. BSES Rajdhani Power Ltd. (BRPL) i.e. the Respondent No. 12 has filed its reply vide affidavit dated 31.10.2019 and has objected to the reopening of the tariff of 2004-09 and 2009-14 periods based on the APTEL's judgements stating that the Commission has become "*functus officio*". Uttar Pradesh Power Corporation Ltd (UPPCL) i.e. the Respondent No. 9 has filed its reply vide affidavit dated 19.10.2019 and has raised the issues of interest rate considered for calculation of IoL and calculations of RoE and Depreciation. The Petitioner has filed rejoinder to the reply of UPPCL vide affidavit dated 21.8.2020 and Written Submissions to the reply of BRPL dated 31.10.2019. BRPL has objected to the reopening of the tariff of the 2004-09 and 2009-14 periods based on the APTEL's judgements contending that the Commission had become "*functus officio*" after delivery of order in the earlier petitions wherein the transmission tariff for 2004-09 and 2009-14 periods was decided. BRPL submitted that by virtue of the Tribunal becoming *functus officio*, the issues cannot be reopened. BRPL has also contended that the judgments of APTEL were in individual cases of NTPC and cannot be applied to the Petitioner. BRPL has also contended that the tariff given earlier has attained finality and cannot be reopened.



6. In response, the Petitioner submitted that it cannot be left remediless and that the liberty given by the Commission to approach it during true up for revision of tariff was under the regulatory powers of the Commission.

7. We have considered the submissions of BRPL and the Petitioner's rejoinder to it. As regards submission of BRPL contending that for revision of tariff for the earlier periods on account of judgement of APTEL and that of the Hon'ble Supreme Court, the Commission has become *functus officio*, it is observed that the Commission, by a combined order dated 6.11.2019, has already rejected the contentions of BRPL. Relevant portion of the order of the Commission dated 6.11.2019 in Petition Nos.288/TT/2019, 300/TT/2019, 301/TT/2019 and 305/TT/2019 is as under:

*"11. We have examined the above contentions of the parties. It is apparent from the record that the Central Commission and other beneficiaries filed Civil Appeal No. 5622 of 2007 and batch before the Hon'ble Supreme Court against the judgment dated 22.1.2007 in Appeal No. 81 of 2005 and other related appeals and judgment dated 13.6.2007 in Appeal No. 139 of 2006 of Appellate Tribunal for Electricity. In the meantime, the Petitioner filed a Petition No. 121 of 2007 in the year 2007 for extending the benefit of judgements dated 22.1.2007 and 13.6.2007 of the Appellate Tribunal in the case of appeals filed by NTPC, on the issue of (a) Computation of Interest on Loan, (b) Consequence of Refinancing of Loan, (c) Depreciation as Deemed Repayment, (d) Admissibility of Depreciation with specific reference to the interpretation of Tariff Regulations as propounded in Appellate Tribunal's Judgments. As the said appeals against the Appellate Tribunal's Judgments were then pending adjudication before Hon'ble Supreme Court, the Commission adjourned the proceedings sine die in Petition No. 121 of 2007 vide RoP dated 12.8.2008. The relevant portion of the ROP dated 12.8.2008 is extracted hereunder:-*

*"4. Request made by the learned counsel was allowed by the Commission. The application was adjourned sine die. The applicant may get the application revived after decision of the Hon'ble Supreme Court in the appeals pending"*

*This was done for the reason that the regulations as interpreted by Appellate Tribunal were under challenge before the Hon'ble Supreme Court. The Hon'ble Supreme Court vide order dated 10.4.2018 dismissed Civil Appeal No. 5622 of 2007 and batch filed by the Commission and other beneficiaries. Thus, the Appellate Tribunal's Judgments attained finality. As the spirit of the regulations in question has authoritatively been interpreted in the Appellate Tribunal's Judgments, the Commission is duty bound to apply the regulations uniformly to all without any discrimination. Accordingly, on dismissal of the said appeals by the Hon'ble Supreme Court, the Commission disposed of Petition No. 121 of 2007 vide order dated 18.1.2019 permitting the Petitioner to submit their claims, wherever applicable, along with true up petitions for the 2014-19 period.*



*“6.Considering the submissions of the learned counsel for the petitioner, we dispose of the present petition with the direction that the petitioner shall separately submit its claim in the light of the APTEL’s judgments dated 22.1.2007 and 13.6.2007 alongwith the truing up petitions wherever applicable to be filed for the period 2014-19 in respect of concerned transmission assets.”*

*It is well settled law that an order or judgment from which review and/or appeal is allowed but not preferred by the aggrieved party attains finality. The said principle cannot be applied to the instant petitions as during the pendency of Petition No.121 of 2007, the Petitioner was not in a position to take up other legal remedies available to it under the law. Thus, we do not agree with the contentions of learned counsel for BRPL and BSPHCL that the present petitions cannot be entertained as the final orders passed therein have attained finality. In our opinion, the present matter significantly differs with the settled law wherein uniform treatment based regulations as interpreted by higher Courts is required to be given effect to without any discrimination to meet the ends of justice. For these reasons, we reject the said contentions of BRPL and BSPHCL and hold that in the facts and circumstances of this case, the general law that an order or judgment from which review and/or appeal is allowed but not preferred by the aggrieved party attains finality is not applicable here.”*

8. In view of the above, the preliminary objection of BRPL is rejected. This order is issued after considering the submissions made by the Petitioner vide affidavits dated 12.9.2019 and 20.7.2020, reply affidavit of BRPL dated 31.10.2019, UPPCL’s reply affidavit dated 19.10.2019 and the Petitioner’s rejoinder to the reply of UPPCL dated 21.8.2020 and Written Submissions of the Petitioner to the reply of BRPL dated 31.10.2019.

9. The instant petition was heard on 24.8.2020 through video conferencing and in view of APTEL’s judgments dated 22.1.2007 and 13.6.2007 and the judgement of Hon’ble Supreme Court, tariff is being revised. Period-wise tariff is being re-worked based on the Tariff Regulations applicable for the respective tariff periods and suitable assumptions have been made at certain places and applied, which are indicated.

10. Having heard the representatives of the Petitioner and having perused the material on record, we proceed to dispose of the petition.



## **REVISION OF TRANSMISSION CHARGES ALLOWED FOR THE 2004-09 AND 2009-14 TARIFF PERIOD**

11. The Petitioner has sought revision of the computation of the interest on loan, maintenance spares for working capital and depreciation allowed for the 2004-09 period on the basis of the judgements of APTEL dated 22.1.2007 in Appeal No.81 of 2005 and 13.6.2007 in Appeal No.139/2006. APTEL while dealing with the issue of computation of interest on loan in judgement dated 22.1.2007 observed that IoL for the period from 1.4.1998 to 31.3.2001 shall be computed only on normative loan repayment as per its judgement dated 14.11.2006 in Appeal Nos. 94 and 96 of 2005. APTEL in its judgement dated 14.11.2006 set aside the Commission's methodology of computation of loan on the actual repayment basis or normative repayment, whichever is higher. The relevant portions of the judgement of APTEL dated 14.11.2006 are as follows:

*"12. We have heard the arguments of the Senior Counsel(s) of appellant and respondents. We notice that the appellant has not challenged the formula for computing the annual repayment amount as provided in Appeal No. 96 of 2005 & IA No.117 of 2006 in Appeal No. 94 of 2005 para-22 of the impugned order and has only challenged the provisions at para 23 specifying that the amount of annual repayment for calculation of interest on loan is chosen higher of the normative debt and actual debt.*

*13. As mentioned earlier the servicing of the capital (equity or debt) is financed by the recovery of interest on debt capital and through earning of return on equity capital. The actual loan repayment has been normalized to 50% of the total capital by the formula in para 22 of the impugned order given in para 11 above. Once it has been decided and agreed that the financing plan would be based on normative debt–equity ratio of 50:50 and not the actual debt-equity ratio, the same normative basis should be adopted for recovery of cost of servicing the capital.*

*14. In the instant case since the normative debt-equity ratio of 50:50 has been adopted in the financing plan, the loan repayment should be computed based on normative debt. This is to ensure that whatever normative debt has been considered, tariff should ensure the recovery of the same normative debt and interest thereon.*

*18. In its Tariff Regulation of 2004, the Central Commission perhaps recognizing the aforesaid anomaly has dispensed with the practice of adopting higher of actual or normative repayment and has corrected the method of determination of quantum of debt repayment only on the basis of the normative debt with effect from 01.04.2004"*



19. *In view of the above, the Central Commission is required to adopt normative debt repayment methodology for working out the interest on loan liability for the period 01.04.1998 to 31.03.2001.*”

12. In view of the above, the interest allowed for the 2004-09 periods is revised on the basis of the normative debt repayment methodology.

13. APTEL in its judgement dated 13.6.2007 in Appeal No.139 of 2006 and others held that ACE after the date of commercial operation should also be considered for computation of maintenance spares as under:

**“Analysis and Decision**

*We are not inclined to agree with the contention of the respondents that escalation of 6% will take care of the additional capitalization. Escalation is meant to factor inflation and is allowed as per CERC Regulations whether or not additional capitalization takes place. Question before us is that: can the historical cost be frozen with the Commissioning of the station. It is quite normal and prudent to ensure earliest operation of the plant without necessarily 100% completion of plants and works, of course not at the cost of safety of the plant. Adding some of the plants and works after the commercial operation will reduce interest during construction. If technically it is possible to delay some of the plants or works, it is only prudent to do so. For example it is common to build redundancies in the plant at a little later stage. CERC’s own regulations rightly recognized additional capitalization. It is pertinent to set out excerpts pertaining to additional capitalization from CERC (Terms & Conditions of Tariff) Regulation, 2004 Clause 18 as below:-*

*“Additional capitalization (1) The following capital expenditure within the original scope of work actually incurred after the date of commercial operation and up to the cut off date may be admitted by the Commission, subject to prudence check:*

- (i) Deferred liabilities*
- (ii) Works deferred for execution*
- (iii) Procurement of initial capital spares in the original scope of work, subject to ceiling specified in regulation 17.*
- (iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and*
- (v) On account of change in law.*

*Provided that original scope of work along with estimates of expenditure shall be submitted along with the application for provisional tariff.*

*Provided further that a list of the deferred liabilities and works deferred for execution shall be submitted along with the application for final tariff after the date of commercial operation of the generating station.”*

*It is clear from the abovementioned Clause 18 of the CERC Regulations that additional capitalization after the date of commercial operation is recognized as part of the capital expenditure Historical cost does not literally mean that the cost on the date of the commercial operation. The term historical cost is used so as to distinguish it from ‘book*



*value' or 'the replacement cost'. The cost of maintenance spares limited to 1% of the historical cost corresponds to the plant and equipment and installations which are required to be maintained. If the cost of additional equipment is not included in the historical cost, how spares for the additional equipment be procured for maintenance of the additional equipment. In this view of the matter, the CERC needs to examine afresh in the light of the aforesaid observations."*

14. In view of the above, the maintenance spares to be considered for computation of working capital for the 2004-09 period are also required to be revised taking into consideration the ACE after the date of commercial operation.

15. As regards depreciation, APTEL in its judgement dated 13.6.2007 in Appeal No.139 of 2006 observed that depreciation is an expense and it cannot be deployed for deemed repayment of loan and accordingly directed the Commission to compute the outstanding loan afresh. The relevant portion of the judgement is as under:

***"Analysis and Decision***

*In the orders of this Tribunal dated November 14, 2006 and January 24, 2007 it has been laid down that the computation of outstanding loan will be on normative basis only (instead of normative or actual whichever is higher). In view of this there is no question of any adjustment of the depreciation amount as deemed repayment of loan.*

*It is to be understood that the depreciation is an expense and not an item allowed for repayment of loan. If a corporation does not borrow, it would not mean that the corporation will not be allowed any depreciation. Depreciation is an expense it represents a decline in the value of asset because of use, wear or obsolescence. The Accounting Principles Board of USA defines depreciation as under:-*

*"The cost of a productive facility is one of the costs of the service it renders during its useful economic life. Generally accepted accounting principles require that this cost be spread over the expected useful life of the facility in such a way as to allocate it as equitably as possible to the periods during which services are obtained from the use of the facility. This procedure is known as depreciation accounting, a system of accounting which aims to distribute the cost or other basic value of tangible capital assets, less salvage (if any), over the estimated useful life of the unit (which may be a group of assets) in a systematic and rational manner. It is a process of allocation, not of valuation"*

*It is well established that the depreciation is an expense and therefore, it cannot be deployed for deemed repayment of loan. In this view of the matter the CERC shall need to make a fresh computation of outstanding loan in the light of the aforesaid observations."*



16. Accordingly, in view of the above directions, the outstanding loan allowed for the transmission asset for the 2004-09 period is revised in the instant order.

17. The revision of tariff allowed for the 2004-09 tariff period necessitates the revision of tariff allowed for the 2009-14 period, which is also being allowed in the instant order. Implementation of the directions of APTEL in case of the Petitioner was kept pending in view of the Civil Appeals filed before the Hon'ble Supreme Court. Taking into consideration the facts of the case and keeping in view the interest of the consumers, we are of the view that the beneficiaries should not be burdened with the carrying cost for the difference in the tariff allowed in earlier orders and in the instant order for the 2004-09 and 2009-14 tariff periods. Therefore, the Petitioner will neither claim nor pay any carrying cost from/ to the beneficiaries for the difference in the tariff allowed vide earlier orders and that of allowed in the instant order. Further, the said difference in tariff shall be recovered over a period of six months from the date of issue of this order.

### **2004-09 Period**

18. The Commission vide order dated 21.3.2007 in Petition No. 138/2006, vide order dated 12.5.2009 in Petition No. 41/2009 and vide order dated 11.2.2010 in Petition No. 243/2009 had approved the following transmission charges for the transmission asset for the 2004-09 period:

Particulars	(₹ in lakh)			
	2005-06 (Pro-rata)	2006-07	2007-08	2008-09
Depreciation	284.88	445.30	450.48	452.21
Interest on Loan	302.56	457.64	447.23	429.32
Return on Equity	392.05	615.58	623.71	626.53
Advance against Depreciation	0.00	0.00	0.00	0.00
Interest on Working Capital	31.94	49.67	50.98	52.10
O&M expenses	151.82	237.10	246.17	256.41



<b>Total</b>	<b>1163.25</b>	<b>1805.29</b>	<b>1818.57</b>	<b>1816.57</b>
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19. The Petitioner has claimed the following revised transmission charges for the transmission asset for the 2004-09 period in this petition:

(₹ in lakh)

Particulars	2005-06 (Pro-rata)	2006-07	2007-08	2008-09
Depreciation	284.88	445.30	450.48	452.21
Interest on Loan	305.67	471.57	467.75	453.52
Return on Equity	392.05	615.58	623.71	626.53
Advance against Depreciation	0.00	0.00	0.00	0.00
Interest on Working Capital	32.33	51.49	53.22	54.59
O&M expenses	151.82	237.10	246.17	256.41
<b>Total</b>	<b>1166.75</b>	<b>1821.04</b>	<b>1841.33</b>	<b>1843.26</b>

20. We have considered the Petitioner's claim. The tariff is allowed for the transmission asset on the basis of the following:

- a) Admitted capital cost as on 1.8.2005: ₹15761.31 lakh
- b) Weighted Average Rate of Interest on actual loan derived/adopted from the order dated 11.2.2010 in Petition No. 243/2009.
- c) Weighted average rate of depreciation, Rate of IWC and O & M Expenses data as per order dated 21.3.2007 in Petition No. 138/2006, order dated 12.5.2009 in Petition No. 41/2009 and order dated 11.2.2010 in Petition No. 243/2009.
- d) The maintenance spares component for calculating IWC is adjusted w.r.t. ACE of ₹967.56 lakh, ₹342.30 lakh and of ₹44.87 lakh during 2005-06, 2006-07 and 2007-08 respectively.

21. In view of the above, the revised transmission charges allowed for the transmission asset for the 2004-09 tariff period are as follows:

(₹ in lakh)

Particulars	2005-06 (Pro-rata)	2006-07	2007-08	2008-09
Depreciation	284.49	445.30	450.48	452.20
Return on Equity	391.51	615.58	623.71	626.53
O&M expenses	151.82	237.10	246.16	256.40



Advance against Depreciation	0.00	0.00	0.00	0.00
Interest on Loan	305.25	471.58	467.75	453.52
Interest on Working Capital	25.56	51.14	52.85	54.20
<b>Total</b>	<b>1158.64</b>	<b>1820.69</b>	<b>1840.96</b>	<b>1842.86</b>

### 2009-14 Period

22. The Commission vide order dated 10.2.2011 in Petition No.233/2010 had approved the tariff for the transmission asset for the 2009-14 period as follows:

(₹ in lakh)					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	908.67	910.89	913.10	913.10	913.10
Interest on Loan	403.62	368.09	332.25	295.43	258.82
Return on Equity	784.66	786.86	789.06	789.06	789.06
Interest on Working Capital	58.40	58.60	58.83	59.00	59.23
O&M expenses	293.81	310.65	328.45	347.19	366.96
<b>Total</b>	<b>2449.16</b>	<b>2435.08</b>	<b>2421.69</b>	<b>2403.78</b>	<b>2387.17</b>

23. The Commission vide order dated 11.12.2015 in Petition No 364/TT/2014 had trued up the tariff for the transmission asset for the 2009-14 period as follows:

(₹ in lakh)					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	908.67	908.84	909.01	909.01	909.01
Interest on Loan	403.32	367.52	332.35	295.21	258.22
Return on Equity	838.19	869.08	870.07	870.07	880.55
Interest on Working Capital	59.51	60.25	60.43	60.60	61.03
O&M expenses	293.81	310.65	328.45	347.19	366.96
<b>Total</b>	<b>2503.50</b>	<b>2516.35</b>	<b>2500.31</b>	<b>2482.08</b>	<b>2475.78</b>

24. The Petitioner has claimed the following revised transmission charges for the transmission asset for the 2009-14 period in this petition:

(₹ in lakh)					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	908.67	908.84	909.01	909.01	909.01
Interest on Loan	429.36	393.47	358.25	320.88	283.62
Return on Equity	838.19	869.08	870.07	870.07	880.55



Interest on Working Capital	60.05	60.80	60.98	61.13	61.57
O&M expenses	293.81	310.65	328.45	347.19	366.96
<b>Total</b>	<b>2530.08</b>	<b>2542.84</b>	<b>2526.75</b>	<b>2508.29</b>	<b>2501.70</b>

25. We have considered the Petitioner's claim. The tariff is allowed for the transmission asset on the basis of the following:

- Admitted capital cost as on 1.4.2009: ₹17205.45 lakh
- Weighted Average Rate of Interest on actual loan derived/adopted from order dated 11.12.2015 in Petition No. 364/TT/2014
- Weighted average rate of depreciation as per the order dated 11.12.2015 in Petition No. 364/TT/2014.

26. In view of the above, the revised transmission charges allowed for the transmission asset for the 2009-14 tariff period are as follows:

(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	908.45	908.59	908.73	908.73	908.73
Interest on Loan	429.36	393.49	358.27	320.92	283.66
Return on Equity	838.21	869.06	870.07	870.07	880.53
Interest on Working Capital	60.05	60.79	60.97	61.13	61.56
O&M expenses	293.81	310.65	328.45	347.19	366.96
<b>Total</b>	<b>2529.88</b>	<b>2542.58</b>	<b>2526.49</b>	<b>2508.04</b>	<b>2501.44</b>

### **TRUING-UP OF ANNUAL FIXED CHARGES FOR THE 2014-19 TARIFF PERIOD**

27. The Petitioner has submitted the information as required under the 2014 Tariff Regulations for truing up of annual fixed charges for 2014-19 period. The tariff for the 2014-19 period has been trued up as discussed in the subsequent paragraphs.

28. The details of the trued-up transmission charges claimed by the Petitioner are as under:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19



Depreciation	909.01	909.01	909.01	909.01	258.01
Interest on Loan	247.47	210.57	187.24	151.08	129.27
Return on Equity	881.21	885.25	884.80	884.80	887.18
Interest on Working Capital	65.39	65.26	65.34	65.16	50.41
O&M expenses	334.70	345.93	357.36	369.18	381.48
<b>Total</b>	<b>2437.78</b>	<b>2416.02</b>	<b>2403.75</b>	<b>2379.23</b>	<b>1706.35</b>

29. The details of the trued-up Interest on Working Capital (IWC) claimed by the Petitioner are as under:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O & M Expenses	27.89	28.83	29.78	30.77	31.79
Maintenance Spares	50.21	51.89	53.60	55.38	57.22
Receivables	406.30	402.67	400.63	396.54	284.39
Total	484.40	483.39	484.01	482.69	373.40
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
<b>Interest on Working Capital</b>	<b>65.39</b>	<b>65.26</b>	<b>65.34</b>	<b>65.16</b>	<b>50.41</b>

30. We have considered the submissions of the Petitioner and it is observed that the estimated completion cost of the transmission assets as on 31.3.2019 including ACE is within the apportioned approved capital cost. Therefore, there is no cost over-run.

#### **Capital Cost as on 1.4.2014**

31. The capital cost of the transmission asset has been calculated in accordance with the Regulations 9(3) of the 2014 Tariff Regulations. The Commission vide order dated 11.12.2015 in Petition No. 364/TT/2014 had approved the transmission tariff for the transmission asset for the 2014-19 period based on admitted capital cost of ₹17210.75 lakh as on 31.3.2014. The Petitioner has not claimed any ACE during the 2014-19 tariff period. Accordingly, the capital cost of ₹17210.75 lakh has been considered for the purpose of truing up of the tariff of the 2014-19 tariff period.



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

32. The Commission vide order dated 11.12.2015 in Petition No. 364/TT/2014 had approved ACE in respect of the transmission asset for the 2014-19 period as ₹115.31lakh. The Petitioner has not claimed any ACE during the 2014-19 tariff period in the instant petition.

### **Debt-Equity Ratio**

33. The debt-equity ratio has been allowed in accordance with Regulation 19(3) of 2014 Tariff Regulations. As per Regulation 19(3) of the 2014 Tariff Regulations, the debt-equity ratio allowed by the Commission for determination of tariff for the period ending on 31.3.2014 has been considered. Accordingly, the debt-equity ratio of 73.91:26.09 for the period ending on 31.3.2014, considered for the purpose of determination of tariff of the 2014-19 tariff period has been considered for the purpose of truing up of the tariff of the transmission asset for the 2014-19 tariff period. The details of the debt-equity ratio as on 1.4.2014 and 31.3.2019 of the transmission asset are as follows:

Particulars	As on 1.4.2014		As on 31.3.2019	
	Amount (₹ in lakh)	(%)	Amount (₹ in lakh)	(%)
Debt	12720.52	73.91	12720.52	73.91
Equity	4490.23	26.09	4490.23	26.09
<b>Total</b>	<b>17210.75</b>	<b>100.00</b>	<b>17210.75</b>	<b>100.00</b>

### **Interest on Loan (IoL)**

34. The Petitioner has prayed for change in interest rates prevailing as on 1.4.2019 for respective loans. The change in interest rate is due to floating rate of interest applicable for the project to be claimed/adjusted over the period of 5 years directly from the beneficiaries. We have considered the submissions of the Petitioner



and accordingly calculated IoL based on actual interest rate, in accordance with Regulation 26 of the 2014 Tariff Regulations.

35. UPPCL has submitted that the capital cost of the transmission asset is ₹17210.75 lakh and the debt-equity Ratio is 74.02:25.98. Accordingly, the equity will be ₹12739.39 lakh. Considering the cumulative repayment up to previous year of ₹6177.41 lakh, the average normative loan would be ₹6107.43 lakh. Thus, IoL is ₹225.25 lakh. However, the Petitioner has claimed IoL of ₹247.44 lakh. In response, the Petitioner vide affidavit dated 21.8.2020 has submitted that the opening loan is of ₹12720.52 lakh as allowed vide order dated 11.12.2015 in Petition No. 364/TT/2014.

36. We have considered the submissions of the Petitioner and UPPCL. IoL in respect of the transmission assets has been worked out as per the following:

- i. Gross amount of loan, repayment of instalments, rate of interest and weighted average rate of interest on actual average loan have been considered as per the petition.
- ii. The repayment for the 2014-19 tariff period has been considered to be equal to the depreciation allowed for that period.

37. The details of trued-up IoL allowed for the transmission asset are as follows:

	(₹ in lakh)				
Particular	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	12720.52	12720.52	12720.52	12720.52	12720.52
Cumulative Repayments up to Previous Year	5551.26	6460.27	7369.27	8278.28	9187.28
Net Loan-Opening	7169.26	6260.25	5351.25	4442.24	3533.24
Addition due to Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Repayment during the year	909.01	909.01	909.01	909.01	258.09
Net Loan-Closing	6260.25	5351.25	4442.24	3533.24	3275.15
Average Loan	6714.76	5805.75	4896.75	3987.74	3404.19
Weighted Average Rate of Interest on Loan (%)	3.69	3.63	3.82	3.79	3.80
<b>Interest on Loan</b>	<b>247.52</b>	<b>210.62</b>	<b>187.29</b>	<b>151.13</b>	<b>129.32</b>



38. Accordingly, IoL approved vide order dated 11.12.2015 in Petition No. 364/TT/2014, claimed by the Petitioner in the instant petition and trued up in respect of the transmission asset is shown in the table below:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 11.12.2015 in Petition No. 364/TT/2014	223.05	188.10	153.12	119.85	98.68
Claimed by the Petitioner in the instant petition	247.47	210.57	187.24	151.08	129.27
<b>Allowed after true-up in this order</b>	<b>247.52</b>	<b>210.62</b>	<b>187.29</b>	<b>151.13</b>	<b>129.32</b>

### **Return on Equity (RoE)**

39. The Petitioner has claimed Return on Equity for the transmission asset in terms of Regulations 24 and 25 of the 2014 Tariff Regulations. The Petitioner has submitted that they are liable to pay income tax at MAT rates and has claimed the following effective tax rates for the 2014-19 tariff period:

Year	Claimed effective tax (in %)	Grossed up RoE (Base Rate/1-t) (in %)
2014-15	21.018	19.625
2015-16	21.382	19.716
2016-17	21.338	19.705
2017-18	21.337	19.704
2018-19	21.549	19.758

40. UPPCL has submitted that the capital cost of the asset is ₹17210.75 lakh and the debt-equity ratio is 74.02:25.98. Accordingly, the equity will be ₹4471.35 lakh. The Petitioner has claimed additional RoE of ₹18.53 lakh by considering the equity of ₹4490.23 lakh. In response, the Petitioner vide affidavit dated 21.8.2020 has submitted that the opening equity is of ₹4490.23 lakh as allowed vide order dated 11.12.2015 in Petition No. 364/TT/2014.



41. We have considered the submissions of the Petitioner and UPPCL. The equity of ₹4490.23 lakh allowed vide order dated 11.12.2015 in Petition No. 364/TT/2014 has been considered. Further, the Commission in order dated 27.4.2020 in Petition No. 274/TT/2019 has arrived at the effective tax rate based on the notified MAT rates for the Petitioner. The relevant portion of the order dated 27.4.2020 is as under:

*“26. We are conscious that the entities covered under MAT regime are paying Income Tax as per MAT rate notified for respective financial year under IT Act, 1961, which is levied on the book profit of the entity computed as per the Section 115JB of the IT Act, 1961. The Section 115JB(2) defines book profit as net profit in the statement of Profit & Loss prepared in accordance with Schedule-III of the Companies Act, 2013, subject to some additions and deductions as mentioned in the IT Act, 1961. Since the Petitioner has been paying income tax on income computed under Section 115JB of the IT Act, 1961 as per the MAT rates of the respective financial year, the notified MAT rate for respective financial year shall be considered as effective tax rate for the purpose of grossing up of RoE for truing up of the tariff of the 2014-19 tariff period in terms of the provisions of the 2014 Tariff Regulations. Interest imposed on any additional income tax demand as per the Assessment Order of the Income Tax authorities shall be considered on actual payment. However, penalty (for default on the part of the Assessee) if any imposed shall not be taken into account for the purpose of grossing up of rate of return on equity. 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 transmission customers/ DICs as the case may be on year to year basis.*

*27. Accordingly, following effective tax rates based on notified MAT rates are considered for the purpose of grossing up of rate of return on equity:*

<b>Year</b>	<b>Notified MAT rates (inclusive of surcharge &amp; cess)</b>	<b>Effective tax (in %)</b>
2014-15	20.961	20.961
2015-16	21.342	21.342
2016-17	21.342	21.342
2017-18	21.342	21.342
2018-19	21.549	21.549

”

42. The MAT rates considered in order dated 27.4.2020 in Petition No. 274/TT/2019 are considered for the purpose of grossing up of rate of RoE for truing up of the tariff of the 2014-19 tariff period in terms of the provisions of the 2014 Tariff Regulations and the same are as under:



Year	Notified MAT rates (inclusive of surcharge & cess) (%)	Base rate of RoE (%)	Grossed up RoE (Base Rate/1-t) (%)
2014-15	20.961	15.50	19.610
2015-16	21.342	15.50	19.705
2016-17	21.342	15.50	19.705
2017-18	21.342	15.50	19.705
2018-19	21.549	15.50	19.758

43. Accordingly, the trued-up RoE allowed for the transmission asset is as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	4490.23	4490.23	4490.23	4490.23	4490.23
Addition due to Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Closing Equity	4490.23	4490.23	4490.23	4490.23	4490.23
Average Equity	4490.23	4490.23	4490.23	4490.23	4490.23
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50	15.50
Tax Rate applicable (%)	20.961	21.342	21.342	21.342	21.549
Rate of Return on Equity (Pre-tax) (%)	19.610	19.705	19.705	19.705	19.758
<b>Return on Equity (Pre-tax)</b>	<b>880.53</b>	<b>884.80</b>	<b>884.80</b>	<b>884.80</b>	<b>887.18</b>

44. Accordingly, RoE approved vide order dated 11.12.2015 in Petition No. 364/TT/2014, claimed by the Petitioner in the instant petition and trued up in respect of the transmission asset is shown in the table below:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 11.12.2015 in Petition No. 364/TT/2014	883.95	887.34	887.34	887.34	887.34
Claimed by the Petitioner in the instant petition	881.21	885.25	884.80	884.80	887.18
<b>Allowed after true-up in this order</b>	<b>880.53</b>	<b>884.80</b>	<b>884.80</b>	<b>884.80</b>	<b>887.18</b>

### Depreciation

45. The depreciation has been worked out as per the methodology provided in Regulation 27 of the 2014 Tariff Regulations. The trued-up depreciation allowed for the transmission asset is as follows:



(₹ in lakh)

Particular	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	17210.75	17210.75	17210.75	17210.75	17210.75
Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Closing Gross Block	17210.75	17210.75	17210.75	17210.75	17210.75
Average Gross Block	17210.75	17210.75	17210.75	17210.75	17210.75
Weighted average rate of Depreciation (WAROD) (%)	5.28	5.28	5.28	5.28	Spread
Balance useful life of the asset at the beginning of year	26.00	25.00	24.00	23.00	22.00
Elapsed life at the beginning of the year	8.00	9.00	10.00	11.00	12.00
Aggregated Depreciable Value	15489.68	15489.68	15489.68	15489.68	15489.68
<b>Depreciation during the year</b>	<b>909.01</b>	<b>909.01</b>	<b>909.01</b>	<b>909.01</b>	<b>258.09</b>
Aggregate Cumulative Depreciation	7084.71	7993.71	8902.72	9811.72	10069.81
Remaining Aggregate Depreciable Value at the end of the year	8404.97	7495.96	6586.96	5677.95	5419.86

46. Accordingly, the depreciation approved vide order dated 11.12.2015 in Petition No. 364/TT/2014, claimed by the Petitioner in the instant petition and trued up in respect of the transmission asset is shown in the table below:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 11.12.2015 in Petition No. 364/TT/2014	912.05	915.09	915.09	915.09	261.76
Claimed by the Petitioner in the instant petition	909.01	909.01	909.01	909.01	258.01
<b>Allowed after true-up in this order</b>	<b>909.01</b>	<b>909.01</b>	<b>909.01</b>	<b>909.01</b>	<b>258.09</b>

### **Operation & Maintenance Expenses (O&M Expenses)**

47. The details of the O&M Expenses claimed by the Petitioner for the transmission asset and allowed under Regulation 29(3) of the 2014 Tariff Regulations for the purpose of tariff are as under:



(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Sub-station Bays</b>					
Bareilly: 2 nos. line at Bareilly	2	2	2	2	2
Dhauliganga: Dhauliganga-i& ii at Dhauliganga	2	2	2	2	2
<b>Norm (₹ lakh/bay)</b>					
220 kV Sub-station Bays (AIS)	42.21	43.61	45.06	46.55	48.10
<b>Total Sub-station O&amp;M Expenses</b>	<b>168.84</b>	<b>174.44</b>	<b>180.24</b>	<b>186.20</b>	<b>192.40</b>
<b>Transmission Lines (Line length in km)</b>					
Dhauliganga-Bareilly (charge at 220 kV) at DhauligangaBareilly	234.59	234.59	234.59	234.59	234.59
<b>Norm (₹ lakh/km)</b>					
D/C Twin Conductor	0.71	0.73	0.76	0.78	0.81
<b>Total Transmission Line O&amp;M Expenses</b>	<b>165.86</b>	<b>171.49</b>	<b>177.12</b>	<b>182.98</b>	<b>189.08</b>
<b>Total O&amp;M Expenses</b>	<b>334.70</b>	<b>345.93</b>	<b>357.36</b>	<b>369.18</b>	<b>381.48</b>

48. Accordingly, the O&M Expenses approved vide order dated 11.12.2015 in Petition No. 364/TT/2014, claimed by the Petitioner in the instant petition and trued up in respect of the transmission asset is shown in the table below:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 11.12.2015 in Petition No. 364/TT/2014	334.70	345.93	357.36	369.18	381.48
Claimed by the Petitioner in the instant petition	334.70	345.93	357.36	369.18	381.48
Allowed after true-up in this order	334.70	345.93	357.36	369.18	381.48

### **Interest on Working Capital (“IWC”)**

49. The Petitioner is entitled to claim IWC as per Regulation 28(1)(c) of the 2014 Tariff Regulations as under:

**i. Maintenance spares:**

Maintenance spares have been worked out based on 15% of Operation and Maintenance Expenses.

**ii. O & M Expenses:**



O&M Expenses have been considered for one month of the allowed O&M Expenses.

**iii. Receivables:**

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

**iv. Rate of interest on working capital:**

Rate of interest on working capital is considered on normative basis in accordance with Clause (3) of Regulation 28 of the 2014 Tariff Regulations.

50. The trued up IWC allowed for the transmission asset is as under:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O & M Expenses	27.89	28.83	29.78	30.77	31.79
Maintenance Spares	50.20	51.89	53.60	55.38	57.22
Receivables	406.19	402.60	400.63	396.55	284.41
<b>Total</b>	<b>484.28</b>	<b>483.32</b>	<b>484.02</b>	<b>482.69</b>	<b>373.42</b>
Rate of Interest on working capital (%)	13.50	13.50	13.50	13.50	13.50
<b>Interest on Working Capital</b>	<b>65.38</b>	<b>65.25</b>	<b>65.34</b>	<b>65.16</b>	<b>50.41</b>

51. Accordingly, IWC approved vide order dated 11.12.2015 in Petition No. 364/TT/2014, claimed by the Petitioner in the instant petition and trued up in respect of the transmission asset is shown in the table below:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 11.12.2015 in Petition No. 364/TT/2014	64.96	64.93	64.75	64.64	49.79
Claimed by the Petitioner in the instant petition	65.39	65.26	65.34	65.16	50.41
<b>Allowed after true-up in this order</b>	<b>65.38</b>	<b>65.25</b>	<b>65.34</b>	<b>65.16</b>	<b>50.41</b>

**Approved Annual Fixed Charges for the 2014-19 Tariff Period**

52. Accordingly, the annual fixed charges allowed for the transmission asset after truing up for the 2014-19 tariff period are as under:



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	909.01	909.01	909.01	909.01	258.09
Interest on Loan	247.52	210.62	187.29	151.13	129.32
Return on Equity	880.53	884.80	884.80	884.80	887.18
Interest on Working Capital	65.38	65.25	65.34	65.16	50.41
O & M Expenses	334.70	345.93	357.36	369.18	381.48
<b>Total</b>	<b>2437.14</b>	<b>2415.60</b>	<b>2403.80</b>	<b>2379.28</b>	<b>1706.48</b>

53. The annual transmission charges approved vide order dated 11.12.2015 in Petition No. 364/TT/2014, claimed by the Petitioner in the instant petition and trued up in respect of the transmission asset is shown in the table below:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 11.12.2015 in Petition No. 364/TT/2014	2418.71	2401.39	2377.66	2356.10	1679.05
Claimed by the Petitioner in the instant petition	2437.78	2416.02	2403.75	2379.23	1706.35
<b>Allowed after true-up in this order</b>	<b>2437.14</b>	<b>2415.60</b>	<b>2403.80</b>	<b>2379.28</b>	<b>1652.92</b>

#### **DETERMINATION OF ANNUAL FIXED CHARGES FOR THE 2019-24 TARIFF PERIOD**

54. The Petitioner has claimed the following transmission charges for the transmission asset for the 2019-24 tariff period:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	258.01	258.01	258.00	258.01	258.00
Interest on Loan	109.80	100.39	90.91	81.69	72.80
Return on Equity	887.18	887.18	887.18	887.18	887.18
Interest on Working Capital	31.83	32.20	32.53	32.88	33.18
Operation and Maintenance	297.24	307.68	318.46	329.56	341.06
<b>Total</b>	<b>1584.06</b>	<b>1585.46</b>	<b>1587.08</b>	<b>1589.32</b>	<b>1592.22</b>

55. The Petitioner has claimed the following IWC for the transmission asset for the 2019-24 tariff period:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M expenses	24.77	25.64	26.54	27.46	28.42
Maintenance Spares	44.59	46.15	47.77	49.43	51.16



Receivables	194.76	195.47	195.67	195.94	195.76
<b>Total</b>	<b>264.12</b>	<b>267.26</b>	<b>269.98</b>	<b>272.83</b>	<b>275.34</b>
Rate of Interest (%)	12.05	12.05	12.05	12.05	12.05
<b>Interest on Working Capital</b>	<b>31.83</b>	<b>32.20</b>	<b>32.53</b>	<b>32.88</b>	<b>33.18</b>

### **Capital Cost as on 1.4.2019**

56. Regulation 19 of the 2019 Tariff Regulations provides as under:

**“19. Capital Cost:** (1) *The Capital cost of the generating station or the transmission system, as the case may be, as determined by the Commission after prudence check in accordance with these regulations shall form the basis for 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) *Any gain or loss on account of foreign exchange risk variation pertaining to the loan amount availed during the construction period;*

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

(e) *Capitalised initial spares subject to the ceiling rates in accordance with these regulations;*

(f) *Expenditure on account of additional capitalization and de-capitalisation determined in accordance with these regulations;*

(g) *Adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the date of commercial operation as specified under Regulation 7 of these regulations;*

(h) *Adjustment of revenue earned by the transmission licensee by using the assets before the date of commercial operation;*

(i) *Capital expenditure on account of ash disposal and utilization including handling and transportation facility;*

(j) *Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal up to the receiving end of the generating station but does not include the transportation cost and any other appurtenant cost paid to the railway;*

(k) *Capital expenditure on account of biomass handling equipment and facilities, for co-firing;*

(l) *Capital expenditure on account of emission control system necessary to meet the revised emission standards and sewage treatment plant;*

(m) *Expenditure on account of fulfilment of any conditions for obtaining environment clearance for the project;*

(n) *Expenditure on account of change in law and force majeure events; and*

(o) *Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject*



to sharing of benefits accrued under the PAT scheme with the beneficiaries.

- (3) The Capital cost of an existing project shall include the following:
- (a) Capital cost admitted by the Commission prior to 1.4.2019 duly trued up by excluding liability, if any, as on 1.4.2019;
  - (b) Additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with these regulations;
  - (c) Capital expenditure on account of renovation and modernisation as admitted by this Commission in accordance with these regulations;
  - (d) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;
  - (e) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal up to the receiving end of generating station but does not include the transportation cost and any other appurtenant cost paid to the railway; and
  - (f) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.

(4) The capital cost in case of existing or new hydro generating station shall also include:

- (a) cost of approved rehabilitation and resettlement (R&R) plan of the project in conformity with National R&R Policy and R&R package as approved; and
- (b) cost of the developer's 10% contribution towards Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) and Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) project in the affected area.

(5) The following shall be excluded from the capital cost of the existing and new projects:

- (a) The assets forming part of the project, but not in use, as declared in the tariff petition;
- (b) De-capitalised Assets after the date of commercial operation on account of replacement or removal on account of obsolescence or shifting from one project to another project:

Provided that in case replacement of transmission asset is recommended by Regional Power Committee, such asset shall be de-capitalised only after its redeployment;

Provided further that unless shifting of an asset from one project to another is of permanent nature, there shall be no de-capitalization of the concerned assets.

- (c) In case of hydro generating stations, any expenditure incurred or committed to be incurred by a project developer for getting the project site allotted by the State Government by following a transparent process;
- (d) Proportionate cost of land of the existing project which is being used for generating power from generating station based on renewable energy; and
- (e) Any grant received from the Central or State Government or any statutory body or authority for the execution of the project which does not carry any liability of repayment.”



57. The capital cost of ₹17210.75 lakh as on 31.3.2019 has been considered. The Petitioner has not claimed any ACE during the 2019-24 period. Therefore, the capital cost of ₹17210.75 lakh as on 31.3.2019 has been considered for the purpose of determination of transmission tariff for the 2019-24 period in accordance with Regulation 19 of the 2019 Tariff Regulations.

### **Debt-Equity Ratio**

58. Regulation 18 of the 2019 Tariff Regulations provides as under:-

*“18. Debt-Equity Ratio: (1) For new projects, the debt-equity ratio of 70:30 as on date of commercial operation shall be considered. 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, as the case may be, 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 1.4.2019, debt: equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2019 shall be considered:*

*Provided that in case of a generating station or a transmission system including communication system which has completed its useful life as on or after 1.4.2019, if the equity actually deployed as on 1.4.2019 is more than 30% of the capital cost, equity in excess of 30% shall not be taken into account for tariff computation;*



Provided further that in case of projects owned by Damodar Valley Corporation, the debt: equity ratio shall be governed as per sub-clause(ii) of clause (2) of Regulation 72 of these regulations.

(4) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2019, but where debt: equity ratio has not been determined by the Commission for determination of tariff for the period ending 31.3.2019, the Commission shall approve the debt: equity ratio in accordance with clause (1) of this Regulation.

(5) Any expenditure incurred or projected to be incurred on or after 1.4.2019 as may be admitted by the Commission as ACE 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.”

59. The debt-equity ratio for the 2019-24 period is allowed as per Regulation 18(3) of the 2019 Tariff Regulations. The details of the debt-equity ratio considered in respect of the transmission asset for the purpose of computation of tariff for the 2019-24 tariff period are as follows:

Particulars	Capital cost as on 1.4.2019 (₹ in lakh)	(%)	Total capital cost as on 31.3.2024 (₹ in lakh)	(%)
Debt	12720.52	73.91	12720.52	73.91
Equity	4490.23	26.09	4490.23	26.09
<b>Total</b>	<b>17210.75</b>	<b>100.00</b>	<b>17210.75</b>	<b>100.00</b>

### **Return on Equity (RoE)**

60. Regulations 30 and 31 of the 2019 Tariff Regulations provide as under:

“30. Return on Equity: (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with Regulation 18 of these regulations.

(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating station, transmission project including communication project 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 that return on equity in respect of Additional Capitalization after cut-off date beyond the original scope excluding Additional Capitalization due to Change in Law, shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission project;

Provided further that:



i. In case of a new project, the rate of return on equity shall be reduced by 1.00% for such period as may be decided by the Commission, if the generating station or transmission project is found to be declared under commercial operation without commissioning of any of the Restricted Governor Mode Operation (RGMO) or Free Governor Mode Operation (FGMO), data telemetry, communication project up to load dispatch centre or protection project based on the report submitted by the respective RLDC;

ii. in case of existing generating station, as and when any of the requirements under (i) above of this Regulation are found lacking based on the report submitted by the concerned RLDC, rate of return on equity shall be reduced by 1.00% for the period for which the deficiency continues;

iii. in case of a thermal generating station, with effect from 1.4.2020:

- a) rate of return on equity shall be reduced by 0.25% in case of failure to achieve the ramp rate of 1% per minute;
- b) an additional rate of return on equity of 0.25% shall be allowed for every incremental ramp rate of 1% per minute achieved over and above the ramp rate of 1% per minute, subject to ceiling of additional rate of return on equity of 1.00%: Provided that the detailed guidelines in this regard shall be issued by National Load Dispatch Centre by 30.6.2019.

31. Tax on Return on Equity:(1) The base rate of return on equity as allowed by the Commission under Regulation 30 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 paid on income from other businesses including deferred tax liability (i.e. income from business other than business of generation or transmission, as the case may be) shall be excluded 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) @ 21.55% including surcharge and cess:

$$\text{Rate of return on equity} = 15.50 / (1 - 0.2155) = 19.758\%$$



(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 2019-20 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 2019-24 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, as the case may be, on year to year basis.”

61. The MAT rate applicable during 2019-20 has been considered for the purpose of RoE, which shall be trued up with actual tax rate in accordance with Regulation 31(3) of the 2019 Tariff Regulations. Accordingly, RoE allowed for the transmission asset under Regulation 30 of the 2019 Tariff Regulations is as under:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Equity	4490.23	4490.23	4490.23	4490.23	4490.23
Addition due to Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Closing Equity	4490.23	4490.23	4490.23	4490.23	4490.23
Average Equity	4490.23	4490.23	4490.23	4490.23	4490.23
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50	15.50
Tax Rate applicable (%)	17.472	17.472	17.472	17.472	17.472
Rate of Return on Equity (Pre-tax) (%)	18.782	18.782	18.782	18.782	18.782
<b>Return on Equity (Pre-tax)</b>	<b>843.35</b>	<b>843.35</b>	<b>843.35</b>	<b>843.35</b>	<b>843.35</b>

The RoE allowed for the transmission asset for the 2019-24 tariff period is lesser than the Petitioner’s claim on account of difference in MAT rates claimed by the Petitioner and considered by the Commission.



## **Interest on Loan (IoL)**

62. Regulation 32 of the 2019 Tariff Regulations provides as under:

*“32. Interest on loan capital: (1) The loans arrived at in the manner indicated in Regulation 18 of these regulations shall be considered as gross normative loan for calculation of interest on loan.*

*(2) The normative loan outstanding as on 1.4.2019 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2019 from the gross normative loan.*

*(3) The repayment for each of the year of the tariff period 2019-24 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 up to 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 project, 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 changes to the terms and conditions of the loans shall be reflected from the date of such re-financing”.*

63. The weighted average rate of IoL has been considered on the basis of the rate prevailing as on 1.4.2019. The Petitioner has prayed that the change in interest rate due to floating rate of interest applicable, if any, during the 2019-24 tariff period will be adjusted. Accordingly, the floating rate of interest, if any, shall be considered at the



time of truing up. In view of above, IoL has been allowed in accordance with Regulation 32 of the 2019 Tariff Regulations and the same is as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Gross Normative Loan	12720.52	12720.52	12720.52	12720.52	12720.52
Cumulative Repayments up to Previous Year	9445.37	9703.46	9961.55	10219.64	10477.73
Net Loan-Opening	3275.15	3017.06	2758.97	2500.88	2242.79
Addition due to Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Repayment during the year	258.09	258.09	258.09	258.09	258.09
Net Loan-Closing	3017.06	2758.97	2500.88	2242.79	1984.70
Average Loan	3146.10	2888.01	2629.93	2371.84	2113.75
Weighted Average Rate of Interest on Loan (%)	3.49	3.48	3.46	3.45	3.45
<b>Interest on Loan</b>	109.84	100.43	90.95	81.72	72.83

### Depreciation

64. Regulation 33 of the 2019 Tariff Regulations provides as under:

*"33. 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:*

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



*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.*

*(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-I 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 1.4.2019 shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to 31.3.2019 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 five years before the completion of 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.*

*(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 decapitalized asset during its useful services.”*

65. The depreciation has been worked out considering the admitted capital cost of ₹17210.75 lakh as on 31.3.2019 and accumulated depreciation up to 31.3.2019. The detailed calculations for depreciation for the transmission asset are worked out and allowed as follows:



(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Gross Block	17210.75	17210.75	17210.75	17210.75	17210.75
Addition during 2019-24 due to Projected Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Closing Gross Block	17210.75	17210.75	17210.75	17210.75	17210.75
Average Gross Block	17210.75	17210.75	17210.75	17210.75	17210.75
Weighted Average Rate of Depreciation (WAROD) (%)	Spread	Spread	Spread	Spread	Spread
Balance useful life of the asset	21.00	20.00	19.00	18.00	17.00
Elapsed Life at the beginning of the year	13.00	14.00	15.00	16.00	17.00
Aggregate Depreciable Value	15489.68	15489.68	15489.68	15489.68	15489.68
<b>Depreciation during the year</b>	<b>258.09</b>	<b>258.09</b>	<b>258.09</b>	<b>258.09</b>	<b>258.09</b>
Cumulative Depreciation up to previous year	10069.81	10327.90	10585.99	10844.08	11102.17
Aggregate Cumulative Depreciation	10327.90	10585.99	10844.08	11102.17	11360.26
Remaining Depreciable Value	5161.77	4903.69	4645.60	4387.51	4129.42

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

66. Regulations 35(3) and (4) of the 2019 Tariff Regulations provide as under:

“35 (3) Transmission system: (a) The following normative operation and maintenance expenses shall be admissible for the transmission system:

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<i>Norms for sub-station Bays (₹ Lakh per bay)</i>					
765 kV	45.01	46.60	48.23	49.93	51.68
400 kV	32.15	33.28	34.45	35.66	36.91
220 kV	22.51	23.30	24.12	24.96	25.84
132 kV and below	16.08	16.64	17.23	17.83	18.46
<i>Norms for Transformers (₹ Lakh per MVA)</i>					
765 kV	0.491	0.508	0.526	0.545	0.564
400 kV	0.358	0.371	0.384	0.398	0.411
220 kV	0.245	0.254	0.263	0.272	0.282
132 kV and below	0.245	0.254	0.263	0.272	0.282
<i>Norms for AC and HVDC lines (₹ Lakh per km)</i>					
Single Circuit (Bundled Conductor with six or more sub-conductors)	0.881	0.912	0.944	0.977	1.011
Single Circuit (Bundled conductor with four sub-conductors)	0.755	0.781	0.809	0.837	0.867
Single Circuit (Twin & Triple Conductor)	0.503	0.521	0.539	0.558	0.578
Single Circuit (Single Double Circuit (Bundled conductor with four or more sub-conductors)	0.252	0.260	0.270	0.279	0.289
	1.322	1.368	1.416	1.466	1.517



Double Circuit (Twin & Triple Conductor)	0.881	0.912	0.944	0.977	1.011
Double Circuit (Single Conductor)	0.377	0.391	0.404	0.419	0.433
Multi Circuit (Bundled Conductor with four or more sub-conductor)	2.319	2.401	2.485	2.572	2.662
Multi Circuit (Twin & Triple Conductor)	1.544	1.598	1.654	1.713	1.773
Norms for HVDC stations					
HVDC Back-to-Back stations (Rs Lakh per 500 MW) (Except Gazuwaka BTB)	834	864	894	925	958
Gazuwaka HVDC Back-to-Back station (₹ Lakh per 500 MW)	1,666	1,725	1,785	1,848	1,913
500 kV Rihand-Dadri HVDC bipole scheme (Rs Lakh) (1500 MW)	2,252	2,331	2,413	2,498	2,586
±500 kV Talcher- Kolar HVDC bipole scheme (Rs Lakh) (2000 MW)	2,468	2,555	2,645	2,738	2,834
±500 kV Bhiwadi-Balia HVDC bipole scheme (Rs Lakh) (2500 MW)	1,696	1,756	1,817	1,881	1,947
±800 kV, Bishwanath-Agra HVDC bipole scheme (Rs Lakh) (3000 MW)	2,563	2,653	2,746	2,842	2,942

Provided that the O&M expenses for the GIS bays shall be allowed as worked out by multiplying 0.70 of the O&M expenses of the normative O&M expenses for bays;

Provided further that:

- i. the operation and maintenance expenses for new HVDC bi-pole schemes commissioned after 1.4.2019 for a particular year shall be allowed pro-rata on the basis of normative rate of operation and maintenance expenses of similar HVDC bi-pole scheme for the corresponding year of the tariff period;
- ii. the O&M expenses norms for HVDC bi-pole line shall be considered as Double Circuit quad AC line;
- iii. the O&M expenses of ±500 kV Mundra-Mohindergarh HVDC bipole scheme (2000 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for ±500 kV Talchar-Kolar HVDC bi-pole scheme (2000 MW);
- iv. the O&M expenses of ±800 kV Champa-Kurukshetra HVDC bi-pole scheme (3000 MW) shall be on the basis of the normative O&M expenses for ±800 kV, Bishwanath-Agra HVDC bi-pole scheme;



- v. the O&M expenses of  $\pm 800$  kV, Alipurduar-Agra HVDC bi-pole scheme (3000 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for  $\pm 800$  kV, Bishwanath-Agra HVDC bi-pole scheme; and
- vi. the O&M expenses of Static Synchronous Compensator and Static Var Compensator shall be worked at 1.5% of original project cost as on commercial operation which shall be escalated at the rate of 3.51% to work out the O&M expenses during the tariff period. The O&M expenses of Static Synchronous Compensator and Static Var Compensator, if required, may be reviewed after three years.

(b) The total allowable operation and maintenance expenses for the transmission system shall be calculated by multiplying the number of sub-station bays, transformer capacity of the transformer (in MVA) and km of line length with the applicable norms for the operation and maintenance expenses per bay, per MVA and per km respectively.

(c) The Security Expenses and Capital Spares for transmission system shall be allowed separately after prudence check:

Provided that the transmission licensee shall submit the assessment of the security requirement and estimated security expenses, the details of year-wise actual capital spares consumed at the time of truing up with appropriate justification.

(4) Communication system: The operation and maintenance expenses for the communication system shall be worked out at 2.0% of the original project cost related to such communication system. The transmission licensee shall submit the actual operation and maintenance expenses for truing up.”

67. The details of the total O&M Expenses claimed by the Petitioner are as under:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<b>Sub-station Bays</b>					
Bareilly: 2 nos. line at Bareilly	2	2	2	2	2
Dhauliganga: Dhauliganga - i&ii at Dhauliganga	2	2	2	2	2
<b>Norm (₹ lakh/bay)</b>					
220 kV Sub-station Bays (AIS)	22.51	23.30	24.12	24.96	25.84
<b>Total Sub-station O&amp;M Expenses</b>	<b>90.04</b>	<b>93.20</b>	<b>96.48</b>	<b>99.84</b>	<b>103.36</b>
<b>Transmission Lines (Line length in km)</b>					
Dhauliganga Bareilly (Charge At 220 kV) at Dhauliganga Bareilly	234.59	234.59	234.59	234.59	234.59
<b>Norm (₹ lakh/km)</b>					
D/C Twin Conductor	0.88	0.91	0.94	0.98	1.01
<b>Total Transmission Line O&amp;M Expenses</b>	<b>206.67</b>	<b>213.95</b>	<b>221.45</b>	<b>229.19</b>	<b>237.17</b>
<b>Communication System</b>					



<b>PLCC</b>					
Normative Rate of O&M as per Regulation	<b>2.00</b>	<b>2.00</b>	<b>2.00</b>	<b>2.00</b>	<b>2.00</b>
The original project cost	<b>26.50</b>	<b>26.50</b>	<b>26.50</b>	<b>26.50</b>	<b>26.50</b>
Total Communication system (PLCC) O&M Expenses	<b>0.53</b>	<b>0.53</b>	<b>0.53</b>	<b>0.53</b>	<b>0.53</b>
<b>Total O&amp;M Expenses claimed</b>	<b>297.24</b>	<b>307.68</b>	<b>318.46</b>	<b>329.56</b>	<b>341.06</b>

68. The Petitioner has claimed O&M Expenses separately for PLCC under Regulation 35(4) of the 2019 Tariff Regulations @2% of its original project cost in the instant petition. The Petitioner has made similar claim in other petitions as well. Though PLCC is a communication system, it has been considered as part of the sub-station in the 2014 Tariff Regulations and the 2019 Tariff Regulations and the norms for sub-station have been specified accordingly. Accordingly, the Commission vide order dated 24.1.2021 in Petition No.126/TT/2020 has already concluded that no separate O&M Expenses can be allowed for PLCC under Regulation 35(4) of the 2019 Tariff Regulations even though PLCC is a communication system. Therefore, the Petitioner's claim for separate O&M Expenses for PLCC @2% is not allowed. The relevant portions of the order dated 24.1.2021 in Petition No.126/TT/2020 are extracted hereunder:

*"103. Thus, although PLCC equipment is a communication system, it has been considered as a part of sub-station, as it is used both for protection and communication. Therefore, we are of the considered view that rightly, it was not considered for separate O&M Expenses while framing norms of O&M for 2019-24 tariff period. While specifying norms for bays and transformers, O&M Expenses for PLCC have been included within norms for O&M Expenses for sub-station. Norms of O&M Expenses @2% of the capital cost in terms of Regulation 35(4) of the 2019 Tariff Regulations have been specified for communication system such as PMU, RMU, OPGW etc. and not for PLCC equipment."*

*"105. In our view, granting of O&M Expenses for PLCC equipment @2% of its capital cost under Regulation 35(4) of the 2014 Tariff Regulations under the communication system head would tantamount to granting O&M Expenses twice for PLCC equipment as PLCC equipment has already been considered as part of the sub-station. Therefore, the Petitioner's prayer for grant of O&M Expenses for the PLCC equipment @2% of its capital cost under Regulation 35(4) of the 2014 Tariff Regulations is rejected."*



106. The principle adopted in this petition that PLCC is part of sub-station and accordingly no separate O&M Expenses is admissible for PLCC equipment in the 2019-24 tariff period under Regulation 35(4) of the 2019 Tariff Regulations shall be applicable in case of all petitions where similar claim is made by the Petitioner. As already mentioned, the Commission, however, on the basis of the claim made by the Petitioner has inadvertently allowed O&M Expenses for PLCC equipment @2% of its original project cost, which is applicable for other “communication system”, for 2019-24 period in 31 petitions given in Annexure-3 of this order. Therefore, the decision in this order shall also be applicable to all the petitions given in Annexure-3. Therefore, PGCIL is directed to bring this decision to the notice of all the stakeholders in the 31 petitions given in Annexure-3 and also make revised claim of O&M Expenses for PLCC as part of the sub-station at the time of truing up of the tariff allowed for 2019-24 period in respective petitions.”

69. Accordingly, the total O&M Expenses admitted in respect of the transmission asset are as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
<b>Sub-station Bays</b>					
Bareilly: 2 nos.line at Bareilly	2	2	2	2	2
Dhauliganga: Dhauliganga - i&ii at Dhauliganga	2	2	2	2	2
<b>Norm (₹ lakh/bay)</b>					
220 kV Sub-station Bays (AIS)	22.51	23.30	24.12	24.96	25.84
<b>Total Sub-station O&amp;M Expenses</b>	<b>90.04</b>	<b>93.20</b>	<b>96.48</b>	<b>99.84</b>	<b>103.36</b>
<b>Transmission Lines (Line length in km)</b>					
Dhauliganga Bareilly (Charge At 220 kV) at Dhauliganga Bareilly	234.59	234.59	234.59	234.59	234.59
<b>Norm (₹ lakh/km)</b>					
D/C Twin Conductor	0.88	0.91	0.94	0.98	1.01
<b>Total Transmission Line O&amp;M Expenses</b>	<b>206.67</b>	<b>213.95</b>	<b>221.45</b>	<b>229.19</b>	<b>237.17</b>
<b>Total O&amp;M Expenses</b>	<b>296.71</b>	<b>307.15</b>	<b>317.93</b>	<b>329.03</b>	<b>340.53</b>

### **Interest on Working Capital (IWC)**

70. Regulations 34(1)(c), 34(3), 34(4) and 3(7) of the 2019 Tariff Regulations provide as follows:

“34. Interest on Working Capital:

(1).....

(c) For Hydro Generating Station (including Pumped Storage Hydro Generating Station) and Transmission System:

(i) Receivables equivalent to 45 days of annual fixed cost;



(ii) Maintenance spares @ 15% of operation and maintenance expenses including security expenses; and

(iii) Operation and maintenance expenses, including security 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 1.4.2019 or as on 1st April of the year during the tariff period 2019-24 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:

Provided that in case of truing-up, the rate of interest on working capital shall be considered at bank rate as on 1st April of each of the financial year during the tariff period 2019-24.

(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. Definition.....**

(7) **‘Bank Rate’** means the one year marginal cost of lending rate (MCLR) of the State Bank of India issued from time to time plus 350 basis points;”

71. The Petitioner has submitted that it has computed the IWC for the 2019-24 period considering the SBI Base Rate plus 350 basis points as on 1.4.2019. The Petitioner has considered the rate of IWC as 12.05%. The IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The rate of IWC considered is 12.05% (SBI 1year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points) for 2019-20 and 11.25% (SBI 1-year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points) for 2020-24. The components of the working capital and interest allowed thereon are as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O & M Expenses	24.73	25.60	26.49	27.42	28.38
Maintenance Spares	44.51	46.07	47.69	49.36	51.08
Receivables	189.24	189.67	189.87	190.14	189.97
<b>Total</b>	<b>258.47</b>	<b>261.34</b>	<b>264.05</b>	<b>266.91</b>	<b>269.43</b>
Rate of Interest (%)	12.05	11.25	11.25	11.25	11.25
<b>Interest on working capital</b>	<b>31.15</b>	<b>29.40</b>	<b>29.71</b>	<b>30.03</b>	<b>30.31</b>



### **Annual Fixed Charges for the 2019-24 Tariff Period**

72. The various components of the annual fixed charges for the transmission asset for the 2019-24 tariff period are summarized below:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	258.09	258.09	258.09	258.09	258.09
Interest on Loan	109.84	100.43	90.95	81.72	72.83
Return on Equity	843.35	843.35	843.35	843.35	843.35
Interest on Working Capital	31.15	29.40	29.71	30.03	30.31
Operation and Maintenance	296.71	307.15	317.93	329.03	340.53
<b>Total</b>	<b>1539.15</b>	<b>1538.42</b>	<b>1540.03</b>	<b>1542.23</b>	<b>1545.12</b>

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

73. The Petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses. 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 Regulation 70(1) of the 2019 Tariff Regulations.

### **Licence Fee and RLDC Fees and Charges**

74. The Petitioner shall be entitled for reimbursement of licence fee in accordance with Regulation 70(4) of the 2019 Tariff Regulations for the 2019-24 tariff period. The Petitioner shall also be entitled for recovery of RLDC fee and charges in accordance with Regulation 70(3) of the 2019 Tariff Regulations for the 2019-24 tariff period.

### **Goods and Services Tax**

75. The Petitioner has sought to recover GST on transmission charges separately from the Respondents, if at any time GST on transmission is withdrawn from negative list in future.



76. We have considered the submission of the Petitioner. GST is not levied on transmission service at present and we are of the view that Petitioner's prayer is premature.

### **Security Expenses**

77. The Petitioner has submitted that security expenses for the instant transmission assets have not been claimed in the instant petition and it would file a separate petition for claiming the overall security expenses and the consequential IWC. The Petitioner has requested to consider the actual security expenses incurred during 2018-19 for claiming estimated security expenses for 2019-20 which shall be subject to true up at the end of the year based on the actuals. The Petitioner has submitted that similar petition for security expenses for 2020-21, 2021-22, 2022-23 and 2023-24 shall be filed on a yearly basis on the basis of the actual expenses of previous year subject to true up at the end of the year on actual expenses. The Petitioner has submitted that the difference, if any, between the estimated security expenses and actual security expenses as per the duly audited accounts may be allowed to be recovered from the beneficiaries on an early basis.

78. We have considered the submissions of the Petitioner. We are of the view that the Petitioner should claim security expenses for all the transmission assets in one petition. It is observed that the Petitioner has already filed the Petition No.260/MP/2020 claiming consolidated security expenses on projected basis for the 2019-24 tariff period on the basis of actual security expenses incurred in 2018-19. Therefore, security expenses will be dealt with in Petition No. 260/MP/2020 in accordance with the applicable provisions of the 2019 Tariff Regulations.



### **Capital Spares**

79. The Petitioner has sought reimbursement of capital spares at the end of the tariff period. The Petitioner's claim, if any, shall be dealt with in accordance with the provisions of the 2019 Tariff Regulations.

### **Sharing of Transmission Charges**

80. The billing, collection and disbursement of the transmission charges approved shall be governed by the provisions of the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010 or the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020, as applicable, as provided in Regulation 43 of the 2014 Tariff Regulations for the 2014-19 tariff period and Regulation 57 of the 2019 Tariff Regulations for the 2019-24 tariff period.

81. To summarise, the revised and trued-up Annual Fixed Charges allowed for the transmission asset in the 2004-09, 2009-14 and 2014-19 tariff period are as under:

(₹ in lakh)				
<b>Particulars</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>
Annual Fixed Charges	1158.64	1820.69	1840.96	1842.86

  

<b>Particulars</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
Annual Fixed Charges	2529.88	2542.58	2526.49	2508.04	2501.44

  

<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Annual Fixed Charges	2437.14	2415.60	2403.80	2379.28	1706.48

The Annual Fixed Charges allowed for the transmission asset for the 2019-24 tariff period in this order are as under:

(₹ in lakh)					
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Annual Fixed Charges	1539.15	1538.42	1540.03	1542.23	1545.12



82. This order disposes of Petition No.316/TT/2019.

**Sd/  
(Arun Goyal)  
Member**

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

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



## Annexure-I

Asset	2014-19	Admitted capital cost as on 1.4.2014 (₹ in lakh)	Admitted capital cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation (%)	Annual Depreciation as per Regulations				
	Capital Expenditure as on 1.4.2014				2014-15 (₹ in lakh)	2015-16 (₹ in lakh)	2016-17 (₹ in lakh)	2017-18 (₹ in lakh)	2018-19 (₹ in lakh)
Asset-I	Land	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00
	Building	0.00	0.00	3.34	0.00	0.00	0.00	0.00	0.00
	Transmission Line	16169.84	16169.84	5.28	853.77	853.77	853.77	853.77	0.00
	Sub-station	1014.41	1014.41	5.28	53.56	53.56	53.56	53.56	0.00
	PLCC	26.50	26.50	6.33	1.68	1.68	1.68	1.68	0.00
	Leasehold Land	0.00	0.00	3.34	0.00	0.00	0.00	0.00	0.00
	IT Equipment and software	0.00	0.00	5.28	0.00	0.00	0.00	0.00	0.00
	<b>TOTAL</b>		<b>17210.75</b>	<b>17210.75</b>		<b>909.01</b>	<b>909.01</b>	<b>909.01</b>	<b>909.01</b>
<b>Average Gross Block (₹ in lakh)</b>					<b>17210.75</b>	<b>17210.75</b>	<b>17210.75</b>	<b>17210.75</b>	<b>17210.75</b>
<b>Weighted Average Rate of Depreciation (%)</b>					<b>5.282</b>	<b>5.282</b>	<b>5.282</b>	<b>5.282</b>	<b>Spread</b>



**Annexure-II**

Asset	2019-24	Admitted capital cost as on 1.4.2019 (₹ in lakh)	Admitted capital cost as on 31.3.2024 (₹ in lakh)	Rate of Depreciation (%)	Annual Depreciation as per Regulations				
	Capital Expenditure as on 1.4.2019				2019-20 (₹ in lakh)	2020-21 (₹ in lakh)	2021-22 (₹ in lakh)	2022-23 (₹ in lakh)	2023-24 (₹ in lakh)
Asset	Land	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00
	Building	0.00	0.00	3.34	0.00	0.00	0.00	0.00	0.00
	Transmission Line	16169.84	16169.84	5.28	0.00	0.00	0.00	0.00	0.00
	Sub-station	1014.41	1014.41	5.28	0.00	0.00	0.00	0.00	0.00
	PLCC	26.50	26.50	6.33	0.00	0.00	0.00	0.00	0.00
	Leasehold Land	0.00	0.00	3.34	0.00	0.00	0.00	0.00	0.00
	IT Equipment and software	0.00	0.00	15	0.00	0.00	0.00	0.00	0.00
	<b>TOTAL</b>		<b>17210.75</b>	<b>17210.75</b>		<b>258.09</b>	<b>258.09</b>	<b>258.09</b>	<b>258.09</b>
<b>Average Gross Block (₹ in lakh)</b>					<b>17210.75</b>	<b>17210.75</b>	<b>17210.75</b>	<b>17210.75</b>	<b>17210.75</b>
<b>Weighted Average Rate of Depreciation (%)</b>					<b>Spread</b>	<b>Spread</b>	<b>Spread</b>	<b>Spread</b>	<b>Spread</b>

