CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

Petition No. 150/TT/2018

Coram:

Shri P. K. Pujari, Chairperson
Dr. M. K. Iyer, Member
Shri I. S. Jha, Member

Date of Order : 09.08.2019

In the matter of:

Approval of tariff for Transmission and Distribution system activities of the network in respect of Damodar Valley Corporation for the tariff period 2014-19.

And in the matter of:

Damodar Valley Corporation
DVC Towers, VIP Road,
Kolkata -700 054 **….Petitioner**

Vs

1. West Bengal State Electricity Distribution Company Limited
   (Previously West Bengal State Electricity Board)
   Vidyut Bhawan, Block `D-J'
   Sector-11, Salt Lake City,
   Kolkata-700 091

2. Jharkhand Bijlee Vitran Nigam Limited,
   Engineers' Building, Dhurwa,
   Ranchi-834 004 **….Respondents**

For Petitioner : Ms. Anushree Bardhan, Advocate, DVC
Shri Rajiv Yadav, DVC
Shri Samit Mandal, DVC

For Respondents : None

ORDER

Damodar Valley Corporation (DVC) has filed the instant petition for approval of tariff of Transmission and Distribution network (hereinafter referred to as the "T&D network") for the period 2014-19 in accordance with the provisions of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as "the 2014 Tariff Regulations").

2. The petitioner is a statutory body established by the Central Government under the Damodar Valley Corporation Act, 1948 (hereinafter referred to as the 'DVC Act') for the development of the Damodar Valley, with three participating Governments, namely, the Central Government, the Government of West Bengal and the Government of Jharkhand. The assets owned by the petitioner and their date of commercial operation are as mentioned hereunder:-

Name of the Stations/ systems	Installed Capacity (MW)	Date of Commercial operation
Bokaro TPS	805	August, 1993
Chandrapura TPS	750	March, 1979
Durgapur TPS	350	September, 1982
Mejia TPS	630	September, 1999
Maithon GPS	82.50	October, 1989
Maithon Hydro Power station	63.20	December, 1958
Panchet Hydro Power station	80	March, 1991
Tilaya Hydro Power station	4	August, 1953
Transmission system	220/132 kV lines	Existing as on 31.3.2004
Distribution system	NA	Existing as on 31.3.2004

3. The Commission, vide order dated 8.5.2013 in Petition No. 272/2010, had approved tariff for the period 2006-09 for the generating stations and transmission and distribution network of the petitioner.

4. Subsequently, the Commission, vide order dated 27.9.2013 in Petition No. 270/TT/2012, approved the tariff for composite Transmission and Distribution (T&D) activities of DVC network for the period 2009-14 by considering capital cost as on 31.3.2009 and the projected additional capitalization during 2009-14. Thereafter, the petitioner filed a Review Petition No. 10/RP/2013 against the order dated 8.5.2013 in Petition No. 272/2010 pertaining to period 2006-09. The Commission vide order dated 28.1.2014 allowed the review on account of the inter unit transfer of ₹264.08 lakh and accordingly, revised the tariff allowed in Petition No. 272/2010 vide order dated 26.2.2014.

5. Further, the Commission, vide order dated 29.9.2017 in Petition No.547/TT/2014, trued-up the tariff of the 2009-14 period of the entire T&D network. In the said order, the Commission also observed that DVC should claim tariff for existing assets and new assets separately. The relevant portion of the order is as follows:-

> "73. In the previous orders as stated above, the Commission had considered the new additions under additional capital expenditure pooled power to all consumers is supplied through its integrated and composite T&D network and specific consumer or a specific group of consumers cannot be identified with reference to any particular transmission segment, sub-station for sale of power to consumers located in two States namely the State of West Bengal and the State of Jharkhand. Therefore, the current additional capitalization for 2009-14 is approved in line with previous orders.
>
> 74. However, it is observed that the new transmission lines and substation claimed in the Transmission A to N Stage will expand the capital base of the petitioner. The capitalization claimed by the petitioner in the instant petition is based on entire company wise expenditures incurred. Transmission A to N Stage includes new transmission systems and existing transmission systems. The 2009 Tariff Regulations provides the tariff determination for project or scheme or transmission system or element. In the instant case, the petitioner has claimed the transmission tariff for all the transmission system of the Company as a whole. The determination of tariff of the new transmission element and existing transmission element is to be examined differently. The new transmission element is to be examined for admissibility of commercial operation date, capital expenditure, debt : equity ratio for that individual element.

Therefore, we are of the view that the capital cost additions due to new transmission system is to be treated separately.

75. Accordingly, the capital cost on account of the new transmission system under Transmission A to N Stage is to be treated as new capital cost and the existing transmission system is to be treated as additional capital expenditure within the meaning of the 2009 Tariff Regulations. Therefore, the admissibility of capital cost, of new transmission systems henceforth would be considered within Regulation 9 of the 2014 Tariff Regulations and allowed after prudence check. Further, the capital cost of existing transmission system would be considered as additional capitalization within the meaning of Regulation 14 of the 2014 Tariff Regulations.

76. In light of the above discussion, the petitioner, is therefore directed to file the application for the purpose of tariff determination separately for the new additions claimed in 2014-19 tariff period as under:

a) The each transmission element or system shall be distinctly identified in the investment approval along with the details of long term transmission customer or beneficiaries who has requested for the creation of the transmissions system;

b) The commissioning of each individual elements or group of elements shall be claimed separately along with trial operation certificate of RLDC and other requirements as per the 2014 Tariff Regulations;

c) The capital cost shall be admitted for the new assets after prudence check in accordance with the provisions of the 2014 Tariff Regulations. The petitioner shall have to comply with requirements by providing details of latest Audited accounts, Balance sheet, IDC, allocation of loans, IEDC and Initial Spares procured for individual/group elements. The admissibility of time overrun, cost overrun, initial spares shall be examined for individual elements or group of elements along with relevant documentary evidence;

d) The allocation of loan and infusion of equity in the different project shall be separately identified by the petitioner and the same will be examined by the Commission for individual project on case to case basis;

e) The segregation of additional capitalization of New works (Transmission A to N Stage) and existing works shall be claimed in accordance with the 2014 Tariff Regulations;

f) Once the capital cost, debt and equity is admitted for individual element or group of elements, the petitioner may combined the same with existing asset base and revised the tariff allowed by the Commission with reference to the commissioning of the assets;

g) The tariff for the 2014-19 period shall be determined taking into consideration the submissions made by the petitioner.”

6. The petitioner had also filed Petition No. 386/TT/2014 for approval of tariff for Transmission and Distribution network for the period from 1.4.2014 to 31.3.2019. However, the Commission disposed of the petition, vide order dated 10.10.2017, directing the petitioner to file a revised petition for determination of tariff for 2014-19 period separately for the existing and new transmission elements clearly identifying separate capital cost, initial spares, loan allocation and debt:equity ratio, etc. in view of the directions given by the Commission in order dated 29.9.2017 in Petition No. 547/TT/2014. The observations made by the Commission in the said order are as follows:-

> "12. Regulation 14 of the 2014 Tariff Regulations provides for the additional capital expenditure in the existing transmission system. The capital cost of the new transmission element and system is to be examined separately with reference to the specific approval, commercial operation date, capital cost as on COD etc. During pendency of this petition, the Commission has issued order dated 29.9.2017 in petition 547/TT/2014 truing up the annual fixed charges from 1.4.2009 to 31.3.2014. The Commission has observed in Para 74 of the order dated 29.9.2017 as under:-"
>
> "13. In view of the above direction, the petitioner is directed to file a revised petition for determination of tariff for 2014-19 period separately for the new transmission elements (transmission lines and substations) for individual project clearly identifying separate capital cost, initial spares, loan allocation and debt : equity ratio etc."

7. In this background, the petitioner has filed the present petition for determination of tariff for the period 2014-15 to 2018-19 in respect of Transmission and Distribution network existing as on 31.3.2014 along with year wise additional capital expenditure. The petitioner has submitted that the additional capital expenditure claimed during the years 2014-15, 2015-16 and 2016-17 are actuals as per the Audited annual accounts and the additional capital expenditure claimed during 2017-18 and 2018-19 is on projected basis.

8. Referring to the directions of the Commission in orders dated 29.9.2017 and 10.10.2017, the petitioner has submitted that the capital cost including year wise additional capital expenditure in respect of the existing T&D network and new additions will be submitted separately in compliance of directions in order dated. 29.9.2017. The petitioner has further submitted that since DVC supplies pooled power to its consumers using its own T&D network, benefit of strengthening the system either by adding sub-station/transmission line or by augmentation of the existing sub-stations are shared by all the consumers. Therefore, transmission tariff as determined by the Commission is adopted as input cost by both the State Commissions viz. WBERC and JSERC for determination of ARR in order to formulate retail tariff applicable to the consumers of DVC located in West Bengal and Jharkhand respectively. Therefore, DVC is not in a position to identify any specific consumer or group of consumers in relation to a particular transmission element or group of elements as directed under Para 76(a) of the order dated 29.9.2017. As regards the direction at para 76(d) of the order dated 29.9.2017, the petitioner submitted that DVC prepares 5 year plans for capacity augmentation of its T&D Network commensurate with expansion of generation capacity and load growth in consultation with and guidance of CEA followed by approval from DVC Board. Accordingly, DVC borrows fund from reputed financial institutions based on the cost of a group of project as envisaged in the approved 5 years plan on priority basis. The borrowing was made for a group of T&D projects and the said borrowed fund was utilized on the basis of requirement of each project.

9. The petitioner has also submitted that the relevant details of element wise capital cost required for determination of tariff in respect of the new transmission elements i.e. the elements put on commercial operation starting from 1.4.2014 will be submitted subsequently as per the directions of the Commission vide order dated 10.10.2017 in Petition No. 386/TT/2014. Capital cost of the entire T&D network of DVC will also be submitted therein indicating the following details:-

a) Capital cost of the system as was existing on 31.3.2014,

b) Yearly additional capital expenditure for the existing system,

c) New transmission elements added,

d) Additional capital expenditure in respect of the new elements added.

10. The details of annual fixed charges claimed by the petitioner for the period 2014-19 in respect of its existing Transmission and Distribution network are as under:-

(₹ in lakh)

Particulars	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Depreciation	13840.31	14157.05	14389.08	8564.02	3453.36
Interest on Loan	1041.42	312.24	34.00	0.00	63.26
Return on Equity	11447.09	11688.46	11865.29	10609.49	10830.00
Interest on working capital	1755.26	1792.92	1748.26	1607.01	1544.40
O & M Expenses	20500.07	21218.74	22059.93	22755.00	23515.81
Total	**48584.15**	**49169.41**	**50096.56**	**43535.52**	**39406.83**
Additional O&M Expenses	267.28	304.00	361.21	409.06	435.05
Common Office Expenditure	85.96	80.14	102.11	149.83	169.78
Pension and Gratuity & Impact of Pay Revision	2371.89	4956.28	4956.28	4956.28	4956.28
Total	**2725.13**	**5340.42**	**5419.60**	**5515.17**	**5561.11**
Grand TOTAL	**51309.28**	**54509.83**	**55516.16**	**49050.69**	**44967.94**

11. The details submitted by the petitioner in support of its claim for interest on working capital are as under:-

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	3115.10	3228.41	3363.17	3474.61	3592.63
O & M Expenses	1730.61	1793.56	1868.43	1930.34	1995.91
Receivables	8156.23	8258.93	8426.65	7349.07	6668.61
Total	**13001.95**	**13280.90**	**13658.25**	**12754.02**	**12257.14**
Rate of Interest	13.50%	13.50%	12.80%	12.60%	12.60%
Interest	1755.26	1792.92	1748.26	1607.01	1544.40

12. No comments or suggestions have been received from the general public in response to the notices published by the petitioner under Section 64 of the Electricity Act. The Damodar Valley Power Consumers' Association (DVPCA), to which the petitioner was directed to serve a copy of the petition and other documents vide ROP dated 31.7.2018, has filed its statement of objections. DVPCA has raised the issue of additional capitalization during previous tariff period, non-admissibility of 'minor items' under Regulation 14, inconsistencies in additional capitalization claims, contribution to Pension & Gratuity Fund, Additional O&M Expenses due to Mega Insurance & Expenses for Subsidiary Activity, Separate Accounts and Income from Trading Business. The issues/objections raised by DVPCA and the clarifications given by the petitioner are addressed in the relevant paragraphs of this order. Some of the other issues raised by DVPCA are also dealt in the following paragraphs.

13. DVPCA has submitted that DVC is a statutory body with multifarious functions and Sections 41 and 51 of the Electricity Act, 2003 mandate DVC to maintain separate account for each of its business undertaking. The mandatory requirement of maintaining separate accounts was emphasized by APTEL in Raigarh Ispat Udyog Sangh v. CSERC and Ors. Reported in (2014) ELR 791. In response, the petitioner has submitted that the petitioner is vertically integrated

utility and the physical assets besides head office/regional office building etc. and such similar facilities which are comparatively negligible and are commonly used for various purposes are entirely either generation or transmission assets. This aspect was considered by the Commission in orders dated 3.10.2006 and 6.8.2009 and by Hon'ble APTEL in judgment dated 23.11.2007. Hon'ble Supreme Court has also upheld the Judgment of APTEL dated 23.11.2007 in Bhaskar-Shrachi Alloys Ltd. v. DVC. We have considered the submissions of DVPCA and the petitioner. The Hon’ble Supreme Court vide its judgment dated 23.7.2018 in Civil Appeal No(s). 971973 of 2008-Bhaskar Shrachi Allpoys Ltd. & Ors. Vs DVC & Ors. held that the “other activities” of the petitioner are not optional but are mandatory, which is the nature of socially beneficial measures and it does not entail any revenue for the petitioner necessitating maintenance of separate accounts. The relevant portion of the said judgment is extracted hereunder:-

> “55....... Not only Sections 41 and 51 of the 2003 Act contemplate prior approval of the Appropriate Commission before a licensee can engage in any other business other than that of a licensee under the 2003 Act, what is contemplated by the aforesaid provisions of the 2003 Act is some return or earning of revenue from such business. In the instant case, the “other activities” of the Corporation are not optional as contemplated under Sections 41/51 of the 2003 Act but are mandatorily cast by the statute i.e. Act of 1948 which, being in the nature of socially beneficial measures, per se, do not entail earning of any revenue so as to require maintenance of separate accounts. The allowance of recovery of cost incurred in connection with “other activities” of the Corporation from the common fund generated by tariff chargeable from the consumers/customers of electricity as contemplated by the provisions of the Act of 1948, therefore, do not collide or is, in any manner, inconsistent with the provisions of the 2003 Act. We will, therefore, have no occasion to interfere with the findings recorded by the learned Appellate Tribunal on the above score.”

14. DVPCA has submitted that as per the directive of the Commission in order dated 3.10.2006, the petitioner is required to adjust the income from export of power outside command area in the ARR in the respective tariff petition filed before the State Commissions. However, the petitioner has not complied with the aforesaid

direction. In response, the petitioner has submitted that the present petition is for determination of transmission tariff for 'Existing Transmission and Distribution Network' for 20014-19 and income from trading business is not a part of transmission tariff to be determined by the Commission. We have considered the submissions of the parties. The petitioner is directed to submit at the time of truing up, if any income is generated from trading business and if so, how the same is treated in its books of accounts.

Date of Commercial Operation (COD)

15. The Commission in order dated 29.9.2017 in Petition No. 547/TT/2014 observed as follows:-

> "76. (f) Once the capital cost , debt and equity is admitted for individual element or group of elements, the petitioner may combined the same with existing asset base and revise the tariff allowed by the Commission with reference to the commissioning of the assets."

In view of the above, to combine the assets for tariff determination purpose, there is a need to decide the commercial operation date of existing transmission assets. The generating stations and transmission assets of DVC are quite old. DVC's T&D network is a meshed network and is linked with the associated generating stations. Over the years, since the inception of DVC, presumably, a large number of transmission assets would have completed their useful lives.

16. In this context it is relevant to note that the Commission, vide order dated 13.2.2006 in Petition No. 66/2005, while approving the tariff in respect of DVC for the period 1.4.2004 to 31.3.2009, made the following observations:-

"Capital cost for the purpose of tariff

20. DVC has claimed tariff on the capital cost which includes apportioned capital cost of the centralized offices and subsidiary activities in the field of generation, transmission and distribution of electricity. The power system maintained by DVC consists of Generating Stations with total de-rated installed capacity of 2761.50 MW which includes 2535 MW of Thermal, 144 MW of Hydro, 82.5 MW of gas. Besides, DVC has Transmission and distribution systems also. Project-wise capital cost in respect of each line and sub-station is not precisely ascertainable. The total capital investment as on 31.03.2004 under the T&D head including the share allocation of Direction and other offices and subsidiary activities has been taken as base and allocated to each project. The salient features of various power stations of DVC and transmission and distribution systems are as tabulated below:

Name of the Stations/ systems	**Installed Capacity (MW)**	**Date of Commercial operation**	**Project cost as on COD (Rs. in crore)**
Bokaro TPS	805	August, 1993	645.59
Chandrapura TPS	750	March, 1979	346.79
Durgapur TPS	350	September, 1982	206.15
Mejia TPS	630	September, 1999	1609.75
Maithon GPS	82.50	October, 1989	49.96
Maithon Hydel	63.20	December, 1958	53.49
Panchet Hydel	80	March, 1991	49.79
Tilaya Hydel	4	August, 1953	2.56
Transmission system	220/132 kV lines	Existing as on 31.3.2004	501.68
Distribution system		Existing as on 31.3.2004	74.96
Total			3540.72

Starting point for the capital cost for the purpose of tariff

24. The generating stations of DVC except Mejia TPS are quite old and, almost all of them have outlived their rated useful life or are completing their rated useful life. Therefore, it is difficult, if not impossible to trace the capital cost from the date of commercial operation of the each unit/stage/station. DVC was asked to submit the approvals of the competent authority regarding the cost, etc. It has, however, not been able to produce such approval for the old generating stations like Bokaro, Chandrapura, Durgapur etc. In view of this, I have considered it appropriate to be guided by the books of accounts, duly audited by the statutory auditors. The issue was deliberated during the hearing and the beneficiaries had no objection to this approach. I, therefore, recommend that the capital cost for the purpose of tariff should be the cost as per the books of accounts for the year 2003-04.

25. The capital cost of transmission and distribution systems is not available separately in the books of accounts. DVC has submitted that a precise separation of transmission and distribution system is not possible. However, for the purpose of tariff capital cost of transmission system and distribution system has been considered in the ratio of 87:13. For this purpose, 220/132 kV sub-stations, power transformers and associated lines have been considered as part of transmission system whereas similar

infrastructure at 33kV has been treated as part of distribution system. The Commission observed that line length in Transmission System (220 kV & 132 kV) is 4538 ckt kms against 1056 ckt kms in distribution system (33 kV). In view of around 23% line length of distribution system compared to transmission system and cost of distribution system is generally less than transmission system, the bifurcation of capital cost between transmission and distribution systems in the ratio of 87:13 ratio has been accepted by the Commission for the purpose of tariff."

17. The above observations of the Commission indicate that earlier while deciding DVC assets' tariff under regulatory regime, the Commission had recognized the transmission assets as existing as on 2003-04, albeit their exact COD was not known; and considering the then available capital cost data, transmission tariff for 2006-09 period was worked out. Further, on one hand, over the years the cumulative asset base has kept on increasing, on the other hand, their individual COD and hence their useful lives have remained unknown.

18. As it is not possible to identify and relate a particular transmission asset with a generating station on one-to-one basis for ascertaining its COD, we consider it appropriate to identify a date as the Notional COD for the existing set of transmission assets. This we consider as 1.4.2004, being beginning of the tariff block 2004-09, from which the DVC assets were brought under the jurisdiction of the Commission and tariff was allowed for 2004-09 period. We do understand that, in reality, this would give a skewed result when considered in the context of individual transmission assets' accumulated depreciation and balance useful life etc. However, we feel that for determination of tariff under the Tariff Regulations, a start date is required to be defined, which we are of the opinion should be 1.4.2004. Thus, the existing asset base as defined in order dated 8.5.2013 in Petition No. 272/2010, for tariff purpose, shall be reckoned from 1.4.2004 and tariff in the instant petition is worked out

accordingly. Additional capitalization has been considered as per the direction of the Commission in para 75 of the order dated 29.9.2017 in Petition No. 547/TT/2014.

Opening Capital Cost

19. Clauses (1) and (3) of Regulation 9 of the 2014 Tariff Regulations provide as follows:-

> "(1) The Capital cost as determined by the Commission after prudence check in accordance with this regulation shall form the basis of determination of tariff for existing and new projects.
> …
>
> (3) The Capital cost of an existing project shall include the following:
>
> (a) the capital cost admitted by the Commission prior to 1.4.2014 duly trued up by excluding liability, if any, as on 1.4.2014;
>
> (b) additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with Regulation 14; and
>
> (c) expenditure on account of renovation and modernization as admitted by this Commission in accordance with Regulation 15."

20. As per Clause 3 of Regulation 9 of the 2014 Tariff Regulations, the admitted capital cost as on 31.3.2014 is to be considered as opening capital cost. Accordingly, the closing capital cost of ₹175678.95 lakh as on 31.3.2014 has been considered as the opening capital cost of the Existing T&D system as on 1.4.2014.

Additional Capital expenditure during 2014-19

21. Clauses (1) and (3) of Regulation 14 of the 2014 Tariff Regulations provide as under:-

> "(1) The capital expenditure in respect of the new project or an existing project incurred or projected to be incurred, on the following counts within the original scope of work, after the date of commercial operation and up to the cut-off date may be admitted by the Commission, subject to prudence check:
>
> (i) Undischarged liabilities recognised to be payable at a future date;

(ii) Works deferred for execution;

(iii) Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 13;

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

(v) Change in Law or compliance of any existing law:

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

(3) The capital expenditure, in respect of existing generating station or the transmission system including communication system, incurred or projected to be incurred on the following counts after the cut-off date, may be admitted by the Commission, subject to prudence check:

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

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

(iii) Any expenses to be incurred on account of need for higher security and safety of the plan as advised or directed by appropriate Government Agencies or statutory authorities responsible for national security/internal security;

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

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

(vi) Any liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments;

(vii) Any additional capital expenditure which has become necessary for efficient operation of generating station other than coal/lignite based stations or transmission system as the case may be. The claim shall be substantiated with the technical justification duly supported by the documentary evidence like test results carried out by an independent agency in case of deterioration of assets, report of an independent agency in case of damage caused by natural calamities, obsolescence of technology, up-gradation of capacity for the technical reason such as increase in fault level;

(viii) In case of hydro generating stations, any expenditure which has become necessary on account of damage caused by natural calamities (but not due to flooding of power house attributable to the negligence of the generating company) and due to geological reasons after adjusting the proceeds from any insurance scheme, and expenditure incurred due to any additional work which has become necessary for successful and efficient plant operation;

(ix) In case of transmission system, any additional expenditure on items such as relays, control and instrumentation, computer system, power line carrier communication, DC batteries, replacement due to increase of fault level, tower strengthening, communication equipment, emergency restoration system, insulators cleaning infrastructure, replacement of porcelain insulator with polymer insulators, replacement of damages equipment not covered by insurance and any other expenditure which has become necessary for successful and efficient operation of transmission system; and

(x) Any capital expenditure found justified after prudence check necessitated on account of modifications required or done in fuel receiving system arising due to non-materialisation of coal supply corresponding to full coal linkage in respect of thermal generating station as result of circumstances not within the control of the generating station:

Provided that any expenditure on acquiring minor items or the assets including tools and tackles, furniture, air-conditioners, voltage stabilizers, refrigerators, coolers, computers, fans, washing machines, hear convectors, mattresses, carpets etc. brought after the cut-off date shall not be considered for additional capitalization for determination of tariff w.e.f. 1.4.2014:

Provided further that any capital expenditure other than that of the nature specified above in (i) to (iv) in case of coal/lignite based station shall be met out of compensation allowance:

Provided also that if any expenditure has been claimed under Renovation and Modernisation (R&M). repairs and maintenance under O&M expenses and Compensation Allowance, same expenditure cannot be claimed under this regulation.

22. The petitioner has submitted that the following replacement and refurbishment work were taken up during the tariff period 2014-19 for stable and reliable operation of the system:-

(i) Various equipment (e.g. circuit breakers, transformers, CT, PT, Isolators etc.) which are not suitable to operate at higher fault level owing to capacity addition.

(ii) Conductors of 132 kV age old transmission lines and electromechanical and static protective relays and meters which have already lived their useful life. Old transmission lines including conductors are being replaced in a phased manner by new AAA conductors and line hardwares with a view to their capacity augmentation and reliable operation. Old electro mechanical and static type protective relays and energy meters are being replaced by latest available Numerical Relays and Microprocessor based energy meters to meet the operational standards as mandated in CEA regulations and Indian Electricity Grid Code.

(iii) Work in respect of re-arrangement/modification/change in supply voltage for power supply to existing consumer(s), taken-up during this tariff-period has been considered within existing work, hence included in this petition. However, O&M Expenses of the transmission lines and bays to effect the aforesaid modification have been considered from their respective date of putting into service.

23. The petitioner has also submitted that addition of transmission capacity in the existing system is also planned in an integrated manner for every five years plan period with the guidance and approval of CEA in order to develop the DVC grid in bringing together with transmission capacity building of the National Grid.

24. The petitioner has further submitted that besides the capacity addition to the existing transmission system during the tariff period 2014-19, DVC has also implemented Geographical Information System (GIS) i.e. Digital Mapping of the whole T&D System during 2016-17. GIS Project will act as an Asset Management Software of the whole T&D system of DVC which will directly help in faster detection of line fault location when utilized with line fault locator through terrain data resulting

in less outage time and reliable and quality power supply to the consumers. Further, the information of outdated equipment along with failure history will be stored digitally which will help in averting pre-mature replacement of equipment through predictive maintenance and planned retrofitting to ensure better power quality for the consumers. The scope of work includes GPS Survey of all transmission lines from 33 kV upto 400 kV, towers, sub-stations and switch yard equipment (in short: asset mapping) along with specification and geo-referencing of DVC command area on topo-sheet of Geographical Survey of India.

25. The petitioner, vide Auditor's certificate dated 14.3.2018, has submitted the details of the actual additional capital expenditure during 2014-15, 2015-16 and 2016-17 and claimed the same under Regulation 14(3)(vii) and Regulation 14(3)(ix) of the 2014 Tariff Regulations:-

(₹ in lakh)

Sl. No.	Particulars	2014-15	2015-16	2016-17
1	**Opening Capital Cost**	**175678.96**	**184305.72**	**199623.91**
2	Additional Capital Expenditure (For Existing System)			
	-Transmission A-N Stage	6929.02	1618.71	4458.63
	-Transmission Main Division	651.02	224.20	701.27
	-Transmission CE Store	0.08	0.00	15.00
	Total Additional Capital expenditure (For Existing System)	**7580.12**	**1842.91**	**5174.90**
3	Adjustment towards disposal of assets in Main Division	0.00	101.25	121.12
4	Additional Capital Expenditure (For New Elements and Elements for which COD not done)	1046.64	13475.28	13108.48
5	Actual Additional Capital Expenditure for 2014-15 to 2016-17 as per Annual Accounts (Sl No. 2+4)	8626.76	15318.19	18283.39
6	**Closing Capital Cost (Sl. No. 1+5)**	**184305.72**	**199623.91**	**217907.30**

26. The petitioner has also claimed the projected additional capital expenditure of ₹1098.61 lakh and ₹6636.03 lakh during 2017-18 and 2018-19 respectively.

27. DVPCA has made the following submissions with respect to the additional capitalization claimed by the petitioner:-

(a) The petition has claimed an additional capitalization of ₹225 crore in 2014-19 in respect of T&D system and that the substantial part of this claim is neither supported by required justification in the form of documentary evidence nor conforms to the applicable the 2014 Tariff Regulations.

(b) As regards the Additional Capitalization during the 2009-14 tariff period, the petitioner has stated that some of the works under additional capitalization, for which orders were placed during tariff period 2009-14 could not be completed and the assets could be put to use during 2014-19 tariff period due to some uncontrollable factors and has sought allowance of such spilled over items of additional capitalization without clarifying (i) the "uncontrollable factors" that necessitated the delay in completion of the works pertaining to the previous tariff period, and (ii) the IDC and IEDC implications on account of the admitted delay in completion of the aforesaid works. As per the regulations, the onus to establish that the delay in completion was not attributable to it lies on DVC.

(c) As per Regulation 14(3)(vii) of the 2014 Tariff Regulations, the items claimed by the petitioner are not admissible under minor items or assets. The petitioner has claimed additional capitalization of about ₹47 lakh on account of chairs, tables, laptops, tool and tackles etc. and the same is not allowable under the proviso to Regulation 14(3).

(d) The petitioner has given different figures of additional capitalization expenditure at different places in the tariff petition which shows that there are inconsistencies in the additional capital expenditure. The details of Add-cap are as follows:-

(₹ in lakh)

Additional Cap Expenditure claimed by DVC	2014-15	2015-16	2016-17	2017-18	2018-19
A-N Stage	6959.02	1618.71	4458.63	621.41	5619.57
Main Division	651.02	325.45	822.39	477.20	1016.46
CE Stores	0.08	15.00			
Total	7580.12	1959.16	5281.02	1098.61	6636.03

(₹ in lakh)

Additional Cap Expenditure claimed by DVC	2014-15	2015-16	2016-17	2017-18	2018-19
As submitted in Annexure-III of petition	7580.12	1944.15	5296.02	1098.61	6636.03
As submitted in the petition	7580.12	1842.91	5174.90	1098.61	6636.03

28. In response, the petitioner in its rejoinder, vide affidavit dated 15.11.2018, has submitted as follows:-

(a) As regards the additional capitalization during period 2009-14, as per the directive of the Commission to file a separate petition for the existing and new transmission elements for the period 2014-19 vide order dated 10.10.2017, DVC has filed the present petition in respect of the existing system whose COD was before 31.3.2014. The determination of tariff for the New T&D elements has been submitted before the Commission in

Petition No. 335/TT/2018. Since the instant petition pertains to the existing transmission elements whose COD was before 31.3.2014, the issue of IDC or IEDC does not arise.

(b) The details of the additional capitalization for the 2014-19 period is submitted in terms of Regulation 14(3) of the 2014 Tariff Regulations and some of the works, for which orders were placed prior to present tariff period (for example Replacement of Transformers at Koderma and Ramgarh for which additional capital expenditure in Form-7 for 2014-15), could not be completed for want of shut-down ensuring minimum interruption to the consumers.

(c) As regards, non-admissibility of 'minor items' under Regulation 14, DVC has submitted that the additional capitalization claimed by DVC in the present petition is in terms of the books of account audited by C&AG for the period 2014-15 to 2016-17. For the period 2017-18 and 2018-19 the figures in respect of the additional capital expenditure has been furnished in the present petition on projected basis. DVC has claimed expenditure towards such items which are essential for normal functioning of the `Existing old Sub-stations' which are in operation for more than 30 years. These include assets such as Laptops, Printers, Desktop Computers including its accessories, office furniture etc. which are essential for the sub-stations in order to increase the operational efficiency of the system as a whole.

(d) As regards the alleged inconsistency in additional capitalization claims, the petitioner has submitted that DVPCA in its reply has wrongly booked ₹15 lakh for CE Store in 2015-16 as against 2016-17. The additional expenditure claimed by the petitioner is as follows:-

(₹ in lakh)

	Actual			**Projected**	
Add-Cap	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**
A-N Stage	6929.02	1618.71	4458.63	621.41	5619.57
Main Div.	651.02	325.45	822.39	477.20	1016.46
CE Store	0.08	-	15.00	-	-
*Total Add-Cap (existing system) as per Books of Account	7580.12	1842.91	5174.90	1098.61	6636.03
**Adjustment on account of Asset disposal as per Books of Account	-	101.25	121.12	-	-
*** Net Claim in Present Petition	7580.12	1944.15	5296.02	1098.61	6636.03

* Yearly add-cap as indicated above for the period 2014-17 is reconciled with the annual accounts audited by C&AG. .

** Explanation towards the treatment of 'adjustment for asset disposal' has already been furnished at page nos. 198 & 213. The same was also while replying to the ROP of hearing dated 31.7.2018.

*** Reconciliation of the additional capital expenditure (at actuals) as claimed by the petitioner in the present petition (ref. Annexure-III at page no. 235 & 236) for 2015- 16 and 2016-17 have also been shown in the above table.

29. We have considered the submissions of the petitioner and DVPCA. The petitioner has claimed additional capital expenditure during the period 2014-19 for the Existing T&D System under the heads, viz- (a) A-N stage (b) Main Division and (c) CE stores

(a) A-N stage

2014-15

The petitioner has claimed projected additional capital expenditure of ₹6929.02 lakh in 2014-15 for the instant assets under Regulation 14(3) (vii) of the 2014 Tariff

Regulations. We have gone through the submissions of the petitioner. It is observed that the petitioner has not submitted any technical report or project specific approval suggesting the replacement of the asset. However, the petitioner has submitted that the work was carried out as a part of works to be undertaken under 12th plan of T&D infrastructure of DVC which has been approved by the Board. The petitioner has further submitted the sanction order for the work. Hence, the net additional capital expenditure of ₹6929.02 lakh is allowed provisionally under Regulation 14(3)(vii) of the 2014 Tariff Regulations. The petitioner is directed to submit the project specific approval or technical report justifying the augmentation at the time of truing up.

2015-16

The petitioner has claimed projected additional capital expenditure of ₹1618.71 lakh in 2015-16 for the instant assets under Regulation 14(3)(vii) and 14(3)(ix) of the 2014 tariff Regulations. We have gone through the submissions of the petitioner. It is observed that the petitioner has not submitted any technical report or project specific approval suggesting the replacement of the asset. However, the petitioner has submitted that the work was carried out as a part of works to be undertaken under 12th plan of T&D infrastructure of DVC which has been approved by the Board. The petitioner further submitted the sanction order for the work. Hence, the net additional capital expenditure of ₹1618.71 lakh is allowed provisionally under Regulation 14(3)(vii) and 14(3)(ix) of the 2014 Tariff Regulations. The petitioner is directed to submit the project specific approval or technical report justifying the augmentation at the time of truing up.

2016-17

The petitioner has claimed projected additional capital expenditure of ₹4458.63 lakh in 2016-17 for assets under Regulation 14(3)(vii) and 14(3)(ix) of the 2014 tariff Regulations. It is observed that the petitioner has not submitted any technical report or project specific approval suggesting the replacement of the asset, however the petitioner has submitted that the work was carried out as a part of works to be undertaken under 12th plan of T&D infrastructure of DVC which has been approved by the Board. The petitioner further submitted the sanction order for the work. Hence, the net additional capital expenditure of ₹4458.63 lakh is allowed provisionally under Regulation 14(3)(vii) and 14(3)(ix) of the 2014 Tariff Regulations. The petitioner is directed to submit the project specific approval or technical report justifying the augmentation at the time of truing up.

2017-18

The petitioner has claimed projected additional capital expenditure of ₹621.41 lakh in 2017-18 for assets under Regulation 14(3)(vii) and 14(3)(ix) of the 2014 tariff Regulations. It is observed that the petitioner has not submitted any technical report or project specific approval suggesting the replacement of the asset, however the petitioner has submitted that the work was carried out as a part of works to be undertaken under 12th plan of T&D infrastructure of DVC which has been approved by the Board. The petitioner has submitted the sanction order for the work. The petitioner is directed to submit the project specific approval or technical report justifying the augmentation and the same will be considered at the time of truing up.

2018-19

The petitioner has claimed projected additional capital expenditure of ₹5619.57 lakh in 2018-19 for assets under Regulation 14(3)(vii) and 14(3)(ix) of the 2014 tariff Regulations. It is observed that the petitioner has not submitted any technical report or project specific approval suggesting the replacement of the asset. However, the petitioner has submitted that the work was carried out as a part of works to be undertaken under 12th plan of T&D infrastructure of DVC which has been approved by the Board. The petitioner further submitted the sanction order for the work. The petitioner is directed to submit the project specific approval or technical report justifying the augmentation and the same will be considered at the time of truing up.

(b) Transmission Main Division

The petitioner has claimed additional capital expenditure under Transmission Main Division stage under the replacement works.

2014-15

The petitioner has claimed projected additional capital expenditure of ₹651.02 lakh in 2014-15 for assets under Regulation 14(3)(vii) and Regulation 14(3)(ix) of the 2014 Tariff Regulations. It is observed that the petitioner has not submitted any sanction/work order for the above works, due to which additional capital expenditure for these items is not allowed at this stage. The petitioner is directed to submit the same alongwith the justification for the augmentation at the time of truing up for the consideration of the Commission.

2015-16

The petitioner has claimed projected additional capital expenditure of ₹224.20 lakh in 2015-16 for assets under Regulation 14(3)(vii) and Regulation 14(3)(ix) of the 2014 Tariff Regulations. The petitioner has not submitted any sanction/work order for the above works, due to which additional capital expenditure for these items is not allowed at this stage. The petitioner is directed to submit the same alongwith the justification for the augmentation at the time of truing up for the consideration of the Commission.

2016-17

The petitioner has claimed projected additional capital expenditure of ₹701.27 lakh in 2016-17 for assets under Regulation 14(3)(vii) and Regulation 14(3)(ix) of the 2014 Tariff Regulations. The petitioner has not submitted any sanction/work order for the above works, due to which additional capital expenditure for these items is not allowed at this stage. The petitioner is directed to submit the same alongwith the justification for the augmentation at the time of truing up for the consideration of the Commission.

2017-18

The petitioner has claimed projected additional capital expenditure of ₹477.20 lakh in 2017-18 for assets under Regulation 14(3)(vii) and Regulation 14(3)(ix) of the 2014 Tariff Regulations. It is observed that the petitioner has not submitted any sanction/work order for the above works, due to which additional capital expenditure for these items is not allowed at this stage. The petitioner is directed to submit the same alongwith the justification for the augmentation at the time of truing up for the consideration of the Commission.

2018-19

The petitioner has claimed projected additional capital expenditure of ₹1016.46 lakh in 2018-19 for assets under Regulation 14(3)(vii) and Regulation 14(3)(ix) of the 2014 Tariff Regulations. It is observed that the petitioner has not submitted any sanction/work order for the above works. As such, additional capital expenditure for these items is not allowed at this stage. The petitioner is directed to submit the same alongwith the justification for the augmentation at the time of truing up for the consideration of the Commission.

iii. CE stores

2014-15

The petitioner has claimed projected additional capital expenditure of ₹0.08 lakh in 2014-15 for assets under Regulation 14(3)(vii) and Regulation 14(3)(ix) of the 2014 Tariff Regulations. The petitioner has not submitted any sanction/work order for the above works. As such, additional capital expenditure for these items is not allowed at this stage. The petitioner is directed to submit the same alongwith the justification for the augmentation at the time of truing up for the consideration of the Commission.

2016-17

The petitioner has claimed projected additional capital expenditure of ₹15.00 lakh in 2016-17 for assets under Regulation 14(3)(vii) and Regulation 14(3)(ix) of the 2014 Tariff Regulations. The petitioner has not submitted any sanction/work order for the above works. As such, additional capital expenditure for these items is not allowed at this stage. The petitioner is directed to submit the same alongwith the justification for the augmentation at the time of truing up for the consideration of the Commission.

30. Based on the above discussions, the additional capital expenditure claimed and allowed for the period 2014-19 is as follows:-

(₹ in lakh)

Assets	Claimed					Allowed				
Existing System	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Transmission A to N Stage	6929.02	1618.71	4458.63	621.41	5619.57	6929.02	1618.71	4458.63	0.00	0.00
Transmission Main Division	651.02	224.20	701.27	477.20	1016.46	0.00	0.00	0.00	0.00	0.00
CE Stores	0.08	0.00	15.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	7580.12	1842.91	5174.90	1098.61	6636.03	6929.02	1618.71	4458.63	0.00	0.00

Since, the petitioner has claimed the additional capital expenditure for 2017-18 and 2018-19 on projection basis, the same has not been allowed at this stage. However, the petitioner is directed to submit the actual additional capital expenditure during 2017-18 and 2018-19 at the time to truing up.

De-capitalization

31. The petitioner, vide Auditor's certificate dated 14.3.2018, has submitted the gross value of the old replaced assets as ₹380.67 lakh, ₹938.05 lakh and ₹290.84 lakh during 2014-15, 2015-16 and 2016-17 respectively. The segregation of these de-capitalized values is as below:-

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
De-capitalization Value					
Gross Value of Old Assets for A-N Stage	296.68	771.92	171.22	1.68	0.00
Gross Value of Old Assets for Main Division	83.99	166.13	119.62	91.49	145.26
Total De-capitalization	**380.67**	**938.05**	**290.84**	**93.17**	**145.26**

32. Since additional capital expenditure in respect of Transmission Main Division and projected additional capital expenditure for 2017-18 and 2018-19, is not being allowed at this stage, the corresponding de-capitalization will be considered along with the actual additional capital expenditure at the time of truing up.

33. Further, the petitioner has submitted that the following 3 Nos. of 400 kV lines, which were included in the existing transmission and distribution network of DVC, have been declared as "Non-ISTS Line carrying ISTS Power" w.e.f. 2017-18 and have been removed from the existing assets:-

a. Single Circuit LILO of 400 kV D/C Durgapur (PG) - Jamshedpur (PG) at DSTPS-Twin Moose Conductor (COD — 1.2.2011).

b. Single Circuit LILO of 400 kV D/C Maithon (PG) - Ranchi (PG) at RTPS-Twin Moose Conductor (COD — 1.7.2012).

c. Double Circuit 400 kV DSTPS – RTPS - Twin Moose Conductor (COD — 1.8.2013).

34. In this regard, the petitioner has submitted a certificate dated 24.8.2017 issued by Member Secretary, Ministry of Power, Government of India; certifying these assets as "Non-ISTS Line carrying ISTS Power". Further, the petitioner has filed a separate petition, (Petition No. 334/TT/2018) for approval of tariff for these assets from 2017-18 onwards. In the instant petition, the petitioner has not clearly indicated the gross value of these assets. However, the petitioner has submitted Auditor's certificate, vide affidavit dated 10.5.2019 in Petition No. 334/TT/2018, certifying the capital cost of these 3 nos. of Non-ISTS Lines as ₹23992.10 lakh which has been

removed, by the petitioner, from the capital base of existing transmission and distribution system of the petitioner w.e.f. 1.4.2017. We, therefore, allow ₹23992.10 lakh as de-capitalization for assets taken out of use of these 3 lines from the existing base w.e.f. 2017-18.

Capital cost for the period 2014-19

35. In view of the above, the following opening capital expenditure, additional capitalization/de-capitalization and closing capital expenditure has been considered for the purpose of determination of tariff for 2014-19 tariff block:-

(₹ in lakh)

Srl. No.	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
1	Opening Capital Cost	175678.96	182311.30	183158.09	187445.50	163453.40
2	Add: Additional Capital Expenditure (For Existing System)	6929.02	1618.71	4458.63	0.00	0.00
3	Less: De-capitalization	296.68	771.92	171.22	23992.10	0.00
4	Closing Capital Cost	182311.30	183158.09	187445.50	163453.40	163453.40

Debt-Equity Ratio

36. Clauses 1, 3 and 5 of Regulation 19 and Regulation 53 of the 2014 Tariff Regulations provide as follows:-

> "(1) For a project declared under commercial operation on or after 1.4.2014, the debt-equity ratio would be considered as 70:30 as on COD. If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:
>
> Provided that:
>
> i. where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff:
>
> ii. the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:

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

Explanation.-The premium, if any, raised by the generating company or the transmission licensee, as the case may be, while issuing share capital and investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on equity, only if such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station or the transmission system."

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

(5) Any expenditure incurred or projected to be incurred on or after 1.4.2014 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation."

“53. Special Provisions relating to Damodar Valley Corporation

(1) Subject to clause (2), this regulation shall apply to determination of tariff of the projects owned by Damodar Valley Corporation (DVC).

(2) The following special provisions shall apply for determination of tariff of the projects owned by DVC:

(iii) Debt Equity Ratio: The debt equity ratio of all projects of DVC commissioned prior to 01.01.1992 shall be 50:50 and that of the projects commissioned thereafter shall be 70:30.”

37. While truing-up the tariff of the 2009-14 period, the Commission, vide order dated 29.9.2017 in Petition No. 547/TT/2014, has approved Debt-Equity Ratio at 67.39:32.61 as on 31.3.2014. The same Debt-Equity has been considered for the existing Transmission and Distribution network of the petitioner as on 1.4.2014. Further, for the additional capitalization/de-capitalization, the Debt-Equity Ratio for the 2014-19 period has been considered as 70:30. Therefore, Debt-Equity Ratio for existing Transmission and Distribution network of the petitioner considered as on 1.4.2014 and 31.3.2019 is as follows:-

(₹ in lakh)

Particular	Capital cost as on 01.04.2014		Capital cost as on 31.3.2019	
	Amount	%	Amount	%
Debt	118386.45	67.39	109828.56	67.19
Equity	57292.50	32.61	53624.83	32.81
Total	**175678.96**	**100.00**	**163453.39**	**100.00**

Return on Equity (RoE)

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

> **"24. Return on Equity:** (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 19.
> (2) Return on equity shall be computed at the base rate of 15.50% for thermal generating stations, transmission system including communication system and run of the river hydro generating station, and at the base rate of 16.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run of river generating station with pondage:
>
> Provided that:
>
> (i) in case of projects commissioned on or after 1st April, 2014, an additional return of 0.50 % shall be allowed, if such projects are completed within the timeline specified in **Appendix-I:**
> (ii) the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever:
> (iii) additional RoE of 0.50% may be allowed if any element of the transmission project is completed within the specified timeline and it is certified by the Regional Power Committee/National Power Committee that commissioning of the particular element will benefit the system operation in the regional/national grid:
> (iv) the rate of return of a new project shall be reduced by 1% for such period as may be decided by the Commission, if the generating station or transmission system is found to be declared under commercial operation without commissioning of any of the Restricted Governor Mode Operation (RGMO)/ Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system:
> (v) as and when any of the above requirements are found lacking in a generating station based on the report submitted by the respective RLDC, RoE shall be reduced by 1% for the period for which the deficiency continues:
> (vi) additional RoE shall not be admissible for transmission line having length of less than 50 kilometers.
>
> **25. Tax on Return on Equity:**
>
> (1) The base rate of return on equity as allowed by the Commission under Regulation 24 shall be grossed up with the effective tax rate of the respective financial year. For this purpose, the effective tax rate shall be considered on the basis of actual tax paid in the respect of the financial year in line with the provisions of the relevant Finance Acts by the concerned generating company or the transmission licensee, as the case may

be. The actual tax income on other income stream (i.e., income of non generation or non transmission business, as the case may be) shall not be considered for the calculation of "effective tax rate".

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

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

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

39. Regulation 24 read with Regulation 25 of the 2014 tariff Regulations provide the grossing up of return on equity with the effective tax rate for the purpose of return on equity. Since, the petitioner company was incurring losses, the Commission vide order dated 29.9.2017 in the true-up Petition No. 547/TT/2014 considered the applicable tax rate for 2013-14 as 'NIL'. The same treatment has been considered for the purpose of Return on Equity for the period 2014-19 which shall be trued up with actual tax rate in accordance with Regulation 25 (3) of the 2014 Tariff Regulations. Accordingly, the petitioner is directed to furnish the tax rate data at the time of true up. The Return on Equity allowed is as follows:-

(₹ in lakh)

Particulars	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Opening Equity	57292.50	59282.20	59536.24	60822.46	53624.83
Addition due to Additional Capitalisation	1989.70	254.04	1286.22	-7197.63	0.00
Closing Equity	59282.20	59536.24	60822.46	53624.83	53624.83
Average Equity	58287.35	59409.22	60179.35	57223.65	53624.83
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2013-14 (MAT)	0.000%	0.000%	0.000%	0.000%	0.000%
Rate of Return on Equity (Pre-tax)	15.500%	15.500%	15.500%	15.500%	15.500%
Return on Equity (Pre-tax)	**9034.54**	**9208.43**	**9327.80**	**8869.67**	**8311.85**

Interest on Loan (IoL)

40. Regulation 26 of the 2014 Tariff Regulations are provides as under:-

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

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

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

(4) Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be, the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the depreciation allowed for the year or part of the year.

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

Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered:

Provided further that if the generating station or the transmission system, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company or the transmission licensee as a whole shall be considered.

(6) The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest."

41. Accordingly, the IoL has been worked out as detailed below:-

(i) Gross amount of loan, repayment of installments and rate of interest have been considered as per Form-9C and additional information given in the petition. Accordingly, the weighted average rate of interest has been calculated on the basis of the actual loan portfolio of existing transmission and distribution system of DVC.

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

(iii) Weighted average rate of interest on actual average loan worked out as per (i) above, is applied on the notional average loan during the year to arrive at the interest on loan.

42. The Commission, vide order dated 29.9.2017 in Petition No. 547/TT/2014, has approved cumulative repayment of normative loan as ₹104300.74 lakh. This has been taken into account to arrive at the interest on loan for the period 2014-19. The petitioner has submitted the loan portfolio for period 2014-19 in Form-9C. However, the amount indicated for Loan-4 i.e. US Exim Loan is different from the amount approved vide order dated 29.9.2017 in Petition No. 547/TT/2014. Further, the petitioner has indicated DVC Bond in place of earlier PSU Bond. The net loan closing of PSU bonds and the gross loan opening of DVC bonds have been shown as the same by the petitioner, which has been considered in working out the weighted average rate of interest on loans. However, the petitioner is directed to submit the detailed clarification at the time of true-up.

43. Detailed calculation of the weighted average rate of interest has been given in Annexure to this order.

44. Based on the above, details of IoL calculated are as follows:-

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	118386.45	123029.09	123621.84	126623.03	124766.95
Cumulative Repayment upto Previous Year	104300.74	118119.16	123029.09	123621.84	124766.95
Net Loan-Opening	14085.71	4909.92	592.75	3001.19	0.00

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Addition due to Additional Capitalisation	4642.64	592.75	3001.19	-1856.08	0.00
Repayment during the year	13818.42	4909.92	592.75	1145.11	0.00
Net Loan-Closing	4909.92	592.75	3001.19	0.00	0.00
Average Loan	9497.82	2751.34	1796.97	1500.59	0.00
Weighted Average Rate of Interest on Loan	10.3247%	10.4128%	10.8694%	11.6489%	11.6504%
Interest	**980.62**	**286.49**	**195.32**	**174.80**	**0.00**

Depreciation

45. Regulation 27 read with Regulation 53 of the 2014 Tariff Regulations with regard to depreciation provide as follows:-

"27. Depreciation:

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

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

(2) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission. In case of multiple units of a generating station or multiple elements of transmission system, weighted average life for the generating station of the transmission system shall be applied. Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis.

(3) The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset:

Provided that in case of hydro generating station, the salvage value shall be as provided in the agreement signed by the developers with the State Government for development of the Plant:

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

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

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

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

Provided that the remaining depreciable value as on 31st March of the year closing after a period of 12 years from the effective date of commercial operation of the station shall be spread over the balance useful life of the assets.

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

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

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

53. Special Provisions relating to Damodar Valley Corporation

(1) Subject to clause (2), this regulation shall apply to determination of tariff of the projects owned by Damodar Valley Corporation (DVC).

(2) The following special provisions shall apply for determination of tariff of the projects owned by DVC:

(iii) Depreciation: The depreciation rate stipulated by the Comptroller and Auditor General of India in terms of section 40 of the Damodar Valley Corporation Act, 1948 shall be applied for computation of depreciation of projects of DVC.

46. As observed earlier, the existing T&D network of the petitioner is deemed to be put on commercial operation w.e.f. 1.4.2004. Accordingly it would complete its 12 years on 1.4.2016 and thus remaining depreciable value of the asset has been spread over the balance useful life of the asset from 2016-17 onwards.

47. Further, the Commission, vide order dated 29.9.2017 in Petition No. 547/TT/2014, has approved cumulative depreciation of normative gross block as ₹103976.87 lakh. This has been considered to arrive at the cumulative depreciation for 2014-19 period. The cumulative depreciation corresponding to de-cap for each year has been arrived at by considering yearly de-cap amount in the ratio of cumulative depreciation as on 31.3.2014 and capital cost as on 31.3.2014. This cumulative depreciation corresponding to de-cap has been adjusted accordingly.

48. Depreciation rate @ 7.72%, as approved vide order dated 29.9.2017 in Petition No. 547/TT/2014, has been considered in the instant petition subject to submission of the revised rate at the time of true-up, if any.

49. Details of the depreciation allowed are as under:-

(₹ in lakh)

Particulars	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Opening Gross Block	175678.96	182311.30	183158.09	187445.50	163453.40
Additional Capital expenditure	6632.34	846.79	4287.41	-23992.10	0.00
Closing Gross Block	182311.30	183158.09	187445.50	163453.40	163453.40
Average Gross Block	178995.13	182734.70	185301.80	175449.45	163453.40
Rate of Depreciation	7.7200%	7.7200%	7.7200%	7.7200%	7.7200%
Depreciable Value	161095.62	164461.23	166771.62	157904.51	147108.06
Remaining Depreciable Value	57118.75	46841.52	35501.66	25192.34	27450.69
Depreciation	**13818.42**	**14107.12**	**1543.55**	**1145.11**	**1307.18**

Operation & Maintenance Expenses (O&M Expenses)

50. Regulation 29(4)(a) and Regulation 29(4)(c) of the 2014 Tariff Regulations provides the year-wise O&M expenses norms claimed for the transmission system of the petitioner as under:-

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Transmission Lines					
Double circuit (Twin conductor) (₹ in lakh/km)	0.707	0.731	0.755	0.78	0.806
Double circuit (Single conductor) (₹ in lakh/km)	0.303	0.313	0.324	0.334	0.346
Double circuit (Bundled conductor) (₹ in lakh/km)	1.062	1.097	1.133	1.171	1.210
Single circuit (Single conductor) (₹ in lakh/km)	0.202	0.209	0.216	0.223	0.230
Bays					
132 kV Bays (₹ in lakh/km)	30.15	31.15	32.18	33.25	34.36
220 kV Bays (₹ in lakh/km)	42.21	43.61	45.06	46.55	48.10
400 kV Bays (₹ in lakh/km)	60.30	62.30	64.37	66.51	68.71

51. The petitioner has submitted that details of bays projected to be added during the tariff period 2014-19 as follows:-

COD		Date of COD	400 kV	220 kV	220 kV (GIS)	132 kV and below
New bays added during 2014-15						
1	Chandil Sub-Station	1.4.2014	0	0	0	4
	TOTAL		0	80	0	499
FY 2015-16						
Existing on 31" March 2015		**COD**	0	80	0	499
New bays added during 2015-16						
1	ACC LTD	18.5.2015	0	0	0	2
	TOTAL		**0**	**80**	**0**	**501**
2016-17						
Existing on 31" March 2016		**COD**	**0**	**80**	**0**	**501**

COD		Date of COD	400 kV	220 kV	220 kV (GIS)	132 kV and below
New bays added during 2016-17						
1	Bokaro Steel Limited	4.8.2016	0	2	0	0
2	CTPS A S/Y	4.8.2016	0	2	0	0
	TOTAL		**0**	**84**	**0**	**501**
2017-18		**COD**				
Existing on 31st March 2017			**0**	**84**	**0**	**501**
New Bays added during 2017-18						
FY 2018-19		**COD**				
Existing on 31st March 2018			**0**	**84**	**0**	**501**
New Bays added during 2018-19						
TOTAL			**0**	**84**	**0**	**501**

52. The petitioner has also submitted that details of transmission lines projected to be added during the tariff period 2014-19 as shown below:-

Particulars		Date of COD	S/C Single Conductor	D/C Single Conductor	D/C Double Conductor	D/C Four Conductor
Existing as on 31st March 2014			1275.50	2632.51	148.20	0.00
Lines added during 2014-15		-	-			
Total			1275.50	2643.22	148.20	0.00
2015-16						
Existing on 31st March 2015		COD	1275.50	2632.51	148.20	0.00
Lines added during 2015-16						
1	Diversion of 132 kV Dhanbad-Gobindpur line in order to heightening of bottom conductor in view of ongoing SHAJ-Highway	13.8.2015	0.049	0.00	0.00	0.00
2	Diversion of 220 kV D/C DTPS Parulia Line due to Airport at Andal	10.4.2015	0.02	0.00	0.00	0.00
3	ACC LTD	**18.8.2015**	0.00	11.077	0.00	0.00

Particulars		Date of COD	S/C Single Conductor	D/C Single Conductor	D/C Double Conductor	D/C Four Conductor
Total			1275.569	2643.589	148.20	0.00
2016-17						
Existing as on 31st March 2016		COD	1275.569	2643.589	148.20	0.00
Lines added during 2016-17						
1	Bokaro Steel LTD	4.8.2016		18.75		
Total			1275.569	2662.339	148.20	0.00
2017-18						
Existing on 31st March 2017		COD	1275.569	2662.339	148.20	0.00
Lines added during 2017-18						
2018-19						
Existing on 31st March 2018		COD	1275.569	2662.339	148.20	0.00
Lines added during 2018-19						
Total			1275.569	2662.339	148.20	0.00

53. Based on the above, the petitioner has claimed the following O & M Expenses with respect of existing transmission lines and sub-station:-

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Transmission Line	1160.08	1200.92	1247.48	1173.67	1214.55
Sub Station	18421.65	19068.99	19832.12	20568.45	21254.76

54. The petitioner has also claimed O&M Expenses on account of communication system in accordance to Regulation 29(3)(c) of the 2014 Tariff Regulations. The said regulation provides as follows:-

> "(c) The operation and maintenance expenses of communication system forming part of inter-state transmission system shall be derived on the basis of the actual O&M expenses for the period of 2008-09 to 2012-13 based on audited accounts excluding abnormal variations if any after prudence check by the Commission. The normalized O&M expenses after prudence check, for the years 2008-09 to 2012-13 shall be escalated at the rate of 3.02% for computing base year expenses for FY 2012-13 and 2013-14 and at the rate of 3.32% for escalation from 2014-15 onwards."

55. Accordingly, the petitioner has considered the O&M Expenses for 2014-19 tariff period in communication technology as follows:-

(₹ in lakh)

Particulars	**2008-09**	**2009-10**	**2010-11**	**2011-12**	**2012-13**	**Average upto 2012-13 (A)**
O & M Expenses (Actuals)	804.75	733.21	836.62	847.83	964.99	837.48

(₹ in lakh)

Particulars	**2012-13**	**2013-14**	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Normalized O & M	862.78	888.83	918.34	948.83	980.33	1012.88	1046.50

56. We have considered the submissions of the petitioner and accordingly considering the additional lines and bays projected during 2014-19 tariff period, Operation and Maintenance expenses approved are as shown under:-

(₹ in lakh)

Particulars	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Transmission Line	1160.08	1200.92	1247.48	1173.67	1214.55
Sub-station	18421.65	19068.99	19832 12	20568.45	21254.76
Communication	918.34	948.83	980.33	1012.88	1046.50
Total -Transmission O & M Expenses	**20500.07**	**21218.74**	**22059.93**	**22755.00**	**23515.81**

<u>Additional O&M Expenses</u>

57. The petitioner has requested for grant of additional O&M Expenses towards Mega insurance and share of subsidiary activity and has submitted that these expenses are in addition to the O&M expenses approved under the 2014 Tariff Regulation.

(₹ in lakh)

Additional O&M Expenses	2014-15	2015-16	2016-17	2017-18	2018-19
Mega Insurance	55.34	55.33	60.87	71.63	78.80
Share of subsidiary activity	211.95	248.66	300.34	337.43	356.25
Total	**267.28**	**304.00**	**361.21**	**409.06**	**435.05**

58. DVCPA has submitted that the petitioner has neither provided any justification for claiming additional O&M Expenses on account of "Mega Insurance Expenses" nor cited any extraordinary factors that necessitated additional insurance cover for its units. DVCPA has also submitted that the petitioner has claimed the return on equity, interest on loan and depreciation on the common assets namely Direction Office, Subsidiary Activities, other offices, R& D, IT Centre and Central Office for the period 2014-19 under nomenclature 'Apportionment of Common Expenditure". The additional claim for share of subsidiary activity is not admissible. DVPCA has further submitted that the Commission has rejected the petitioner's claim for Mega insurance and share of subsidiary activities in the generation tariff orders issued for 2014-19 on the ground that they have to be met through normative O & M Expenses.

59. In response, the petitioner has submitted that the Mega insurance is necessitated in view of the substantial increase in the risk profile of power plants on account of various issues (including lenders covenants), natural calamities, law and order and various other strategic safeguard measures. The petitioner has also submitted that the Commission, in order dated 13.12.2005 in Petition No. 163/2004 for approval of tariff in respect of Tanda Thermal Power station and vide order dated 9.2.2017 in Petition No. 115/GT/2015 for approval of tariff in respect of Mejia Thermal Power Station, Unit 5 & 6 has allowed expenditure on Mega insurance.

60. The petitioner has also submitted that in terms of Section 12 of the DVC Act, 1948, the petitioner undertakes various subsidiary activities and the Hon'ble APTEL vide judgment dated 23.11.2007 has affirmed that the petitioner need to be allowed the expenses in regard to the above activities as a pass through element in the tariff. This judgment is also upheld by Hon'ble Supreme Court in Civil Appeal Nos. 971-973 of 2008 vide judgment dated 23.7.2018.

61. We have considered the submissions of the petitioner and DVPCA. The petitioner has approached the Commission for grant of additional O&M Expense and has submitted that these expenses are in addition to the O&M Expenses approved under the 2014 Tariff Regulations. Considering the fact that these norms were specified under the 2014 Tariff Regulations after extensive stakeholder consultation and no details were furnished by the petitioner at the time of framing these regulations, we are not inclined to allow the relief as prayed for by the petitioner.

Interest on Working Capital (IWC)

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

> **"28. Interest on Working Capital**
>
> (1) The working capital shall cover:
> (c) Hydro generating station including pumped storage hydro electric generating station and transmission system including communication system:
>
> (i) Receivables equivalent to two months of fixed cost;
>
> (ii) Maintenance spares @ 15% of operation and maintenance expenses specified in regulation 29; and
>
> (iii) Operation and maintenance expenses for one month"

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

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

63. In terms of above, the petitioner is entitled to claim interest on working capital as per the 2014 Tariff Regulations. The components of the working capital and the petitioner's entitlement to interest thereon are discussed hereunder:-

a) Receivables

Receivables as a component of working capital will be equivalent to two months fixed cost. The petitioner has claimed the receivables on the basis of 2 months annual transmission charges. In the tariff being allowed, receivables have been worked out on the basis of 2 months transmission charges.

b) Maintenance spares

Regulation 28 of the 2014 Tariff Regulations provides for maintenance spares @ 15% per annum of the O&M expenses. The value of maintenance spares has accordingly been worked out.

c) O & M Expenses

Operation and Maintenance expenses have been considered for one month as a component of working capital. The petitioner has claimed O&M expenses for 1 month of the respective year as claimed in the petition. This has been considered in the working capital.

d) Rate of interest on working capital

As per Regulation 28(3) of the 2014 Tariff Regulations, SBI Base Rate Plus 350 bps as on 1.4.2014 (i.e.13.50%) has been considered as the rate of interest on working capital.

64. Necessary computations in support of interest on working capital are as below:-

(₹ in lakh)

Particulars	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Maintenance Spares	3075.01	3182.81	3308.99	3413.25	3527.37
O & M expenses	1708.34	1768.23	1838.33	1896.25	1959.65
Receivables	7669.12	7756.04	5766.66	5739.36	5775.89
Total	12452.47	12707.08	10913.98	11048.86	11262.91
Interest	**1681.08**	**1715.46**	**1473.39**	**1491.60**	**1520.49**

Pension & Gratuity Contribution and Pay revision

65. The petitioner has claimed pension and gratuity contribution for the period 2014-19 and has submitted that it has considered the actuarial valuation as on 31.3.2014, for liability towards pension and gratuity fund and projected P&G liability for the tariff period 2014-19 including impact of pay revision. DVCPA has submitted that the Commission has consistently held since 2009-10, that P&G contribution has to be met through normative O&M Expenses, the claim of the petitioner in this regard may be disallowed.

66. The petitioner has submitted that the Commission should allow P&G contribution claim of DVC which is a necessary, unavoidable and legitimate claim based on statutory mandate. Further, the normative O & M Expenses include only the contribution part of the Contributory Provident Fund, which cannot be equated with Pension Liability. The petitioner has also submitted that it has filed Petition No.

197/MP/2016 praying for allowing pension and gratuity contribution for the 2009-14 tariff period over and above those included in the normative O&M Expenses, and the same is pending before the Commission.

67. We have examined the matter. As stated, the Petitioner has filed Petition No. 197/MP/2016 claiming P&G expenses over and above the normative O&M expenses specified under the 2014 Tariff Regulations. Similar claim has been made by the Petitioner in this Petition. Considering the fact that the said issue needs to be decided in Petition No. 197/MP/2016, we find no reason to consider this prayer of the Petitioner in the order. However, the decision taken in Petition No. 197/MP/2016 will be applicable to this case.

Common Office Expenses

68. The petitioner has claimed the expenses pertaining to common office such as Direction office, Central Office, Other Offices, Subsidiary Activities, IT Centre and R&D caters services to all the generating stations as well as composite Transmission and Distribution Systems. The petitioner has submitted that the total cost of common assets computed based on the capital cost as on 31.3.2014 as per Audited Accounts of 2013-14 have been apportioned based on the opening capital cost of all the generating projects and T&D systems as on 1.4.2014. This methodology was adopted by the Commission in the order dated 27.9.2013 in Petition No. 270/TT/2012 for T&D system. Based on the above, the petitioner has furnished the details of projected expenditure in respect of the Common Offices for the period 2014-19 as follows:-

(₹ in lakh)

Particulars	Capital as on 1.4.2014	2014-15	2015-16	2016-17	2017-18	2018-19
Total of Generating Station	2715335.29	1327.15	1237.37	1576.58	2313.41	2621 29
T & D Network	175866.91	85.96	80.14	102.11	149.83	169.78
Total	**2891202.20**	**1413.11**	**1317.51**	**1678.69**	**2463.24**	**2791.07**

69. We have considered the submissions of the petitioner. It is observed that the Commission has allowed the Common Office expenses vide order dated 6.8.2009 in Petition No. 66/2005 and order dated 27.9.2013 in Petition No. 270/TT/2012. Moreover, the petitioner has submitted that the methodology adopted for apportioned for cost of common asset in line with the methodology adopted by the Commission in Order dated 27.9.2013 in Petition No. 270/TT/2012 for T & D network. Accordingly, we allow the common office expenses for the tariff period 2014-2019 as follows:-

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Common Office expenses apportioned to T&D network	85.96	80.14	102.11	149.83	169.78

Transmission Charges

70. Based on the above, the transmission charges being allowed for the Transmission and Distribution network are summarized hereunder:-

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	13818.42	14107.12	1543.55	1145.11	1307.18
Interest on Loan	980.62	286.49	195.32	174.80	0.00
Return on equity	9034.54	9208.43	9327.80	8869.67	8311.85
Interest on Working Capital	1681.08	1715.46	1473.39	1491.60	1520.49
O & M Expenses	20500.07	21218.74	22059.93	22755.00	23515.81
Total	**46014.74**	**46536.23**	**34599.99**	**34436.17**	**34655.33**

Filing Fee and Publication Expenses

71. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses, in terms of Regulation 52 of the 2014 Tariff Regulations. The petitioner is entitled for reimbursement of the filing fees and publication expenses in connection with the present petition, directly from the beneficiaries on pro-rata basis in accordance with clause (1) of Regulation 52 of the 2014 Tariff Regulations.

Licence Fee and RLDC Fees and Charges

72. The petitioner has requested to allow the petitioner to bill and recover License fee and RLDC fees and charges, separately from the respondents. The petitioner is entitled for reimbursement of licence fee and RLDC fees in accordance with Clause (2)(b) and (2)(a) respectively of Regulation 52 of the 2014 Tariff Regulations.

Service Tax/GST

73. The Petitioner has sought to recover Service Tax/GST on transmission charges separately from the beneficiaries/consumers. GST is not levied on transmission service at present and hence, the prayer of the petitioner is premature.

Recovery of Transmission Charges

74. The petitioner has prayed for recovery of transmission charges from consumers by considering the tariff determined by the Commission as an input cost of Aggregate Revenue Requirement (ARR) while determining the retail tariff by the respective State Electricity Regulatory Commissions of West Bengal and Jharkhand. In this regard, the petitioner was directed to submit the following:-

a) How the T&D charges determined by the Commission in Petition No.547/TT/2014 are recovered by the petitioner.

b) The methodology of apportionment of approved AFC of DVC T&D system between Jharkhand and West Bengal. Further, explain the components of input cost considered while determining ARR by the respective State Commissions.

c) The year-wise tariff granted by the Commission vis-a-vis ARR of T&D system claimed by DVC from respective State Commissions during the 2009-14 period.

75. In response, the petitioner vide affidavit dated 15.11.2018 has made the following submissions:-

(a) The petitioner has submitted that the recoverable AFC in respect of T&D System for any year is derived based on the approved AFC and availability of the system in terms of Regulation 23 of the 2009 Tariff Regulations or Regulation 33 of the 2014 Tariff Regulations notified by the Commission as may be applicable for the relevant period. Recoverable AFC for T&D System as determined by the Commission in addition to other elements of input cost viz. own generation cost, power purchase cost etc. is considered as input cost while finalizing the Common Aggregate Revenue Requirement (ARR) to be recovered from distribution consumers.

(b) The petitioner had filed petition before the WBERC for determination of distribution and retail supply tariff for the period 2009-14 considering the tariff order issued by the Commission on 27.9.2013 for DVC's T&D network in Petition No. 270/17/2012 for the period 2009-14. Accordingly, the WBERC has issued the order determining the ARR for the period 2009-14 on 24.8.2015. Thereafter, the Commission passed the true-up order on 29.9.2017 for the period 2009-14 for DVC's T&D Network in Petition No. 547/TT/2014.

(c) Similarly, JSERC also issued the true-up order for the period 2009-14 for DVC on 19.4.2017 considering the tariff order passed by the Commission for DVC's T&D network in Petition No. 270/TT/2012, as the true up order in Petition No. 547/TT/2014 was not available with DVC at that point of time.

(d) The petitioner has submitted that both the State Commissions have adopted the same methodology wherein they have apportioned the approved AFC of DVC's T&D network in the ratio of energy sale in the respective states.

(e) The petitioner has filed the year-wise tariff granted by the Commission viz-a-viz ARR of T&D system claimed by the petitioner from WBSERC and JSERC during the period 2009-14.

76. We have considered the submissions of the petitioner. As prayed by the petitioner, the transmission charges allowed in this order shall be included as an input cost in the Aggregate Revenue Requirement and recovered from the distribution consumers on approval by the WBSERC and JSERC. These charges

shall not be included in the PoC charges, as specified in the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010, as amended from time to time.

77. This order disposes of Petition No. 150/TT/2018.

sd/-	**sd/-**	**sd/-**
(I. S. Jha)	**(Dr. M. K. Iyer)**	**(P. K. Pujari)**
Member	**Member**	**Chairperson**

Annexure

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN

(₹ in lakh)

	Details of Loan	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**
1	**DVC Bond (Assumed PSU Bond)**					
	Gross loan opening	64000.00	**64000.00**	**64000.00**	**64000.00**	**64000.00**
	Cumulative Repayment upto DOCO/previous year	0.00	**0.00**	**0.00**	**64000.00**	**64000.00**
	Net Loan-Opening	64000.00	64000.00	64000.00	0.00	0.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	64000.00	0.00	0.00
	Net Loan-Closing	64000.00	64000.00	0.00	0.00	0.00
	Average Loan	64000.00	64000.00	32000.00	0.00	0.00
	Rate of Interest	8.95%	8.95%	8.95%	8.95%	8.95%
	Interest	5728.00	5728.00	2864.00	0.00	0.00
	Rep Schedule					
2	**PFC**					
	Gross loan opening	8451.00	**8451.00**	**8451.00**	**8451.00**	**8451.00**
	Cumulative Repayment upto DOCO/previous year	8300.00	**8341.32**	**8382.64**	**8415.70**	**8440.50**
	Net Loan-Opening	151.00	109.68	68.36	35.30	10.50
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	41.32	41.32	33.06	24.80	10.50
	Net Loan-Closing	109.68	68.36	35.30	10.50	0.00
	Average Loan	130.34	89.02	51.83	22.90	5.25
	Rate of Interest	6.90%	6.90%	6.90%	6.90%	6.90%
	Interest	8.99	6.14	3.58	1.58	0.36
	Rep Schedule					
3	**GOI RVP**					
	Gross loan opening	500.00	**500.00**	**500.00**	**500.00**	**500.00**
	Cumulative Repayment upto DOCO/previous year	121.00	**150.00**	**179.00**	**208.00**	**237.00**
	Net Loan-Opening	379.00	350.00	321.00	292.00	263.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	29.00	29.00	29.00	29.00	29.00
	Net Loan-Closing	350.00	321.00	292.00	263.00	234.00
	Average Loan	364.50	335.50	306.50	277.50	248.50
	Rate of Interest	9.00%	9.00%	9.00%	9.00%	9.00%
	Interest	32.81	30.20	27.59	24.98	22.37
	Rep Schedule					
4	**US EXIM $ Loan**					
	Gross loan opening	5409.77	**5409.77**	**5409.77**	**5409.77**	**5409.77**
	Cumulative Repayment upto DOCO/previous year	4538.00	**4932.00**	**5352.00**	**5409.77**	**5409.77**

	Net Loan-Opening	871.77	477.77	57.77	0.00	0.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	394.00	420.00	57.77	0.00	0.00
	Net Loan-Closing	477.77	57.77	0.00	0.00	0.00
	Average Loan	674.77	267.77	28.89	0.00	0.00
	Rate of Interest	2.00%	2.00%	2.00%	2.00%	2.00%
	Interest	13.50	5.36	0.58	0.00	0.00
	Rep Schedule					
5	**REC Loan**					
	Gross loan opening	63500.00	**76000.00**	**78997.00**	**78997.00**	**78997.00**
	Cumulative Repayment upto DOCO/previous year	0.00	**0.00**	**0.00**	**0.00**	**5266.00**
	Net Loan-Opening	63500.00	76000.00	78997.00	78997.00	73731.00
	Additions during the year	12500.00	2997.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	5266.00	5266.00
	Net Loan-Closing	76000.00	78997.00	78997.00	73731.00	68465.00
	Average Loan	69750.00	77498.50	78997.00	76364.00	71098.00
	Rate of Interest	11.68%	11.66%	11.66%	11.66%	11.66%
	Interest	8146.80	9036.33	9211.05	8904.04	8290.03
	Rep Schedule					
	Total Loan					
	Gross loan opening	141860.77	154360.77	157357.77	157357.77	157357.77
	Cumulative Repayment upto DOCO/previous year	12959.00	13423.32	13913.64	78033.47	83353.27
	Net Loan-Opening	128901.77	140937.45	143444.13	79324.30	74004.50
	Additions during the year	12500.00	2997.00	0.00	0.00	0.00
	Repayment during the year	464.32	490.32	64119.83	5319.80	5305.50
	Net Loan-Closing	140937.45	143444.13	79324.30	74004.50	68699.00
	Average Loan	134919.61	142190.79	111384.22	76664.40	71351.75
	Weighted Average Rate of Interest	**10.3247%**	**10.4128%**	**10.8694%**	**11.6489%**	**11.6504%**
	Interest	13930.09	14806.02	12106.79	8930.60	8312.75