

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 204/TT/2021

Coram:

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

Date of Order: 14.11.2023

In the matter of:

Approval under Regulation 86 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 for determination of transmission tariff of 2014-19 period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff of 2019-24 period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 in respect of **Asset-1:** Central Sector Portion for 89.148 km & Telecom Sharing of 903.892 km of Establishment of Fiber Optic Communication System; **Asset-2:** DTL Portion for 264.294 km of Establishment of Fiber Optic Communication System; **Asset-3:** UPPTCL Portion of 96.335 km of Establishment of Fiber Optic Communication System; **Asset-4:** PSTCL portion of 215.548 km of Establishment of Fiber Optic Communication System; **Asset-5:** HPSEB portion of 360.571 km of Establishment of Fiber Optic Communication System under "Establishment of Fiber Optic Communication System in Northern Region".

And in the matter of:

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

.....Petitioner

Vs.

1. Rajasthan Rajya Vidyut Prasaran Nigam Limited,
Vidyut Bhawan, Vidyut Marg,
Jaipur-302005 (Rajasthan).
2. Ajmer Vidyut Vitran Nigam Limited,
132 kV, GSS RVPNL Sub-Station Building,
Caligiri Road, Malviya Nagar, Jaipur-302017 (Rajasthan).



3. Jaipur Vidyut Vitran Nigam Limited,
132 kV, GSS RVPNL Sub-Station Building,
Caligiri Road, Malviya Nagar,
Jaipur-302017 (Rajasthan).
4. Jodhpur Vidyut Vitran Nigam Limited,
132 kV, GSS RVPNL Sub-Station Building,
Caligiri Road, Malviya Nagar,
Jaipur-302017 (Rajasthan).
5. Himachal Pradesh State Electricity Board,
Vidyut Bhawan, Kumar House Complex Building II,
Shimla-171004 (Himachal Pradesh).
6. Punjab State Electricity Board,
Thermal Shed Tia, Near 22 Phatak,
Patiala-147001 (Punjab).
7. Haryana Power Purchase Centre,
Shakti Bhawan, Sector-6,
Panchkula-134109 (Haryana).
8. Power Development Department,
Government of Jammu & Kashmir,
Mini Secretariat, Jammu.
9. Uttar Pradesh Power Corporation Limited,
(Formerly Uttar Pradesh State Electricity Board),
Shakti Bhawan, 14, Ashok Marg,
Lucknow-226001 (Uttar Pradesh).
10. Delhi Transco Limited,
Shakti Sadan, Kotla Road,
New Delhi-110002.
11. BSES Yamuna Power Limited,
B-Block, Shakti Kiran, Bldg. (Near Karkardooma Court),
Karkardooma 2nd Floor, New Delhi-110092.
12. BSES Rajdhani Power Limited,
BSES Bhawan, Nehru Place,
New Delhi-110019.
13. Tata Power Delhi Distribution Limited,
NDPL House, Hudson Lines Kingsway Camp,
Delhi-110009.



14. Chandigarh Administration,
Sector-9, Chandigarh.
15. Uttarakhand Power Corporation Limited,
Urja Bhawan, Kanwali Road,
Dehradun (Uttarakhand).
16. North Central Railway,
Allahabad (Uttar Pradesh).
17. New Delhi Municipal Council,
Palika Kendra, Sansad Marg,
New Delhi-110002.

.....Respondent(s)

For Petitioner : Shri S. S. Raju, PGCIL
Shri D. K. Biswal, PGCIL
Shri Ved Prakash Rastogi, PGCIL
Shri A. K. Verma, PGCIL

For Respondents: None

ORDER

Power Grid Corporation of India Limited (PGCIL) has filed the instant petition for determination of transmission tariff from COD to 31.3.2019 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) and 2019-24 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter to be referred to as “the 2019 Tariff Regulations”) in respect of the following assets under “Establishment of Fiber Optic Communication System” in Northern Region (hereinafter to be referred to as “the transmission project”).

Asset-I: Central Sector Portion for 89.148 km and Telecom Sharing of 903.892 km of Establishment of Fiber Optic Communication System;

Asset-II: DTL Portion for 264.294 km of Establishment of Fiber Optic Communication System;

Asset-III: UPPTCL Portion of 96.335 km of Establishment of Fiber Optic Communication System;



Asset-IV: PSTCL portion of 215.548 km of Establishment of Fiber Optic Communication System and;

Asset V: HPSEB portion of 360.571 km of Establishment of Fiber Optic Communication System (hereinafter referred as “the transmission assets”).

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

“1) Approve the Transmission Tariff for 2014-19 block and transmission tariff for 2019-24 block for the assets covered under this petition, as per para 8.5 and 9.2 above.

2) Allow tariff as 90% of the Annual Fixed Charges in accordance with clause 7 (i) of Regulation 7 Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 for the purpose of inclusion in the PoC charges.

3) Admit the capital cost as claimed in the Petition and approve the Additional Capitalisation incurred / projected to be incurred.

4) Tariff may be allowed on the estimated completion cost, since few elements of the project are yet to be completed, the completion cost for the assets covered under instant Petition are within the overall project cost.

5) Allow the petitioner to recover the shortfall or refund the excess Annual Fixed Charges, on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission as provided in Tariff Regulation 2014 and Tariff regulations 2019 as per para 9.4, 9.5 and 9.6 above for respective block.

6) Approve the reimbursement of expenditure by the beneficiaries towards petition filing fee, and expenditure on publishing of notices in newspapers in terms of Regulation 52 Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and Regulation 70 (1) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019, and other expenditure if any) in relation to the filing of petition.

7) Allow the petitioner to bill and recover Licensee fee and RLDC fees and Charges, separately from the respondents in terms of Regulation 52 Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and Regulation 70 (3) and (4) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019.

8) Allow the petitioner to bill and adjust impact on Interest on Loan due to change in Interest rate on account of floating rate of interest applicable during 2014-19 and 2019-24 period, if any, from the respondents.

9) Allow the petitioner to file a separate petition before Hon'ble Commission for claiming the overall security expenses and consequential IOWC on that security expenses as mentioned at para 9.7 above.



10) Allow the petitioner to claim the capital spares at the end of tariff block as per actual.

11) Allow the petitioner to bill and recover GST on Transmission charges separately from the respondents, if GST on Transmission of electricity is withdrawn from the exempted (negative) list at any time in future. Further any taxes and duties including cess, etc. imposed by any Statutory/Govt./Municipal Authorities shall be allowed to be recovered from the beneficiaries.

12) Condone the delay and allow IDC/IEDC as claimed in the petition as delay is on account of force majeure as per CERC Regulations'2014 Clause 12(2) "uncontrollable factors".

Background

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

(a) The Petitioner has been entrusted with the implementation of Communication System. It was decided that the Petitioner would implement the Fiber Optic network as approved in the 18th NRPC meeting held on 27.11.2010.

(b) The Investment Approval (IA) for implementation of the transmission assets under the transmission project was accorded by Board of Directors (BoD) of the Petitioner in the 270th meeting held on 26.3.2012 at an estimated cost of ₹19863 lakh including IDC of ₹1219 lakh based on 4th quarter, 2011 price level (communicated vide memorandum no. C/CP/FO-NR dated 27.3.2012).

(c) The BoD of the Petitioner company accorded approval for Revised Cost Estimate (RCE) of the transmission project in its 379th meeting held on 12.9.2020 at revised cost estimate of ₹21039 lakh including an IDC of ₹1624 lakh based on March, 2020 price level (communicated vide memorandum no. C/CP/PA2021-07-0L-RCE006 dated 15.10.2020).

(d) The broad scope of work covered under the transmission project, as per the RCE, is as follows:

(i) Installation of estimated 6159 km of OPGW fiber optic cable on the existing/ new EHV transmission lines of the Petitioner and NR



constituents.

- (ii) Installation of 191 numbers of terminal equipment for communication based upon Synchronous Digital Hierarchy (SDH) technology in the Sub-stations/ generating stations of Central Sector and NR constituents.
 - (iii) Installation of 185 numbers drop/ insert multiplexers at the new wide band nodes of Central Sector and NR constituents.
 - (iv) Network Management System (NMS) to monitor the network is also envisaged.
 - (v) 38 numbers of DC power supply have been envisaged at all the wideband locations; however, this requirement shall be optimized during detailed engineering.
 - (vi) In addition to above, approximately 904 km of the Petitioner Telecom existing links shall also be utilized for this project on cost sharing basis. Hot line speech communication (computer dialing) system for Grid operation under Northern Region.
- (e) The Petitioner has submitted that the scope of the transmission project was discussed and agreed in the 16th NRPC meeting and the MoM of 16th NRPC have been submitted vide affidavit dated 25.7.2022.
- (f) The details of petitions filed by the Petitioner under the instant transmission project is as follows:

Sl. No.	Name of the Communication System	Petition No.
1	Asset-1: Central Sector Portion for 89.148 km & Telecom Sharing of 903.892 km of Establishment of Fiber Optic Communication System	Covered in the instant petition
2	Asset-2: DTL Portion for 264.294 km of Establishment of Fiber Optic Communication System	
3	Asset-3: UPPTCL Portion of 96.335 km of Establishment of Fiber Optic Communication System	
4	Asset-4: PSTCL portion of 215.548 km of Establishment of Fiber Optic Communication System	
5	Asset-5: HPSEB portion of 360.571 km of Establishment of Fiber Optic Communication System	
6	Central Sector Portion of 1030.426 km	True up of 2014-19



7	Central Sector Portion of 2186.339 km	period and determination of 2019-24 period vide order dated 27.12.2022 in Petition No.705/TT/2020
8	BBMB Portion of 208.438 km	
9	Central Sector Portion of 1646.039 km	
10	BBMB Portion of 2.35 km	

(g) As per IA dated 26.3.2012, the transmission assets were scheduled to be put under commercial operation within 30 months from the date of IA i.e. by 26.9.2014. The details scheduled date of commercial operation (SCOD), date of commercial operation (COD) and time over-run in case of the transmission assets is as follows:

Assets	SCOD	COD	Delay (In days)	Remarks
Asset-1	26.9.2014	1.1.2019	1558	Associated link was executed on 30.3.2018. However, links pertaining to Telecom Sharing COD merged to minimize the number of assets/petitions. Therefore, effective delay in execution of this asset is 1281 days only.
Asset-2			1558	Associated links were executed from 22.1.2018 to 9.10.2018. COD merged to minimize the number of assets/petitions. Therefore, effective delay in execution of this asset is 1214 to 1474 days only.
Asset-3			1558	Associated links were executed from 11.4.2018 to 12.11.2018. COD merged to minimize the number of assets/petitions. Therefore, effective delay in execution of this asset is 1293 to 1508 days only.
Asset-4		31.3.2019	1647	Associated links were executed from 5.3.2019 to 30.3.2019. COD merged to minimize the number of assets/petitions. Therefore, effective delay in execution of this asset is 1621 to 1646 days only.
Asset-5			1647	Associated links were executed from 2.3.2019 to 30.3.2019. COD merged to minimize the number of assets/petitions. Therefore, effective delay in execution of this asset is 1618 to 1646 days only.



4. The Respondents, mainly beneficiaries of the Northern Region, are the distribution companies, electricity departments and transmission licensees, which are procuring transmission services (Communication) from the Petitioner.

5. The Petitioner has served the petition on the Respondents and notice regarding filing of this petition has also been published in newspapers in accordance with Section 64 of the Electricity Act, 2003. No suggestions or objections have been received from the general public in response to the aforesaid notices published in the newspapers by the Petitioner. None of the Respondents have filed any reply in the matter.

6. The hearing in this matter was held on 26.7.2022 through video conference and the order was reserved.

7. This order is issued considering the submissions made in the petition and affidavits dated 31.3.2022 and 25.7.2022.

8. Having heard the representatives of the Petitioner and perusing the material on record, we proceed to dispose of the petition.

9. The Petitioner has prayed for determination of tariff of the transmission assets from their respective COD to 31.3.2019 and from 1.4.2019 to 31.3.2024 in accordance with the 2014 Tariff Regulations and 2019 Tariff Regulations respectively, in the instant petition. Usually, the tariff for the 2014-19 tariff period is granted initially on the basis of the estimated capital cost and later on the tariff approved is trued up, on firming of the capital cost as on 31.3.2019 and certification by the Auditor, alongwith the determination of tariff for the 2019-24 tariff period as provided in the 2019 Tariff Regulations. In the



instant case, the transmission assets were put into commercial operation in the last quarter of 2018-19 and the capital cost of the transmission assets as on 31.3.2019 has been certified by the Auditor at the time of the filing of the petition. As the capital cost of the transmission assets as on 31.3.2019 has already been certified by the Auditor, we do not find any need for initial determination of tariff and subsequent truing up of the tariff of the 2018-19 tariff. Accordingly, the tariff for both 2018-19 and 2019-24 tariff periods has been determined in the instant order.

DETERMINATION OF ANNUAL FIXED CHARGES FOR 2014-19 TARIFF PERIOD

10. The details of transmission charges claimed by the Petitioner for the transmission assets for 2014-19 tariff period are as follows:

Particulars	(₹ in lakh)				
	Asset-1	Asset-2	Asset-3	Asset-4	Asset-5
	2018-19 (Pro-rata for 90 days)	2018-19 (Pro-rata for 90 days)	2018-19 (Pro-rata for 90 days)	2018-19 (Pro-rata for 1 day)	2018-19 (Pro-rata for 1 day)
Depreciation	12.53	14.31	7.67	0.14	0.24
Interest on Loan	10.43	11.50	6.14	0.12	0.20
Return on Equity	11.73	13.40	7.18	0.13	0.22
Interest on working capital	1.11	0.81	0.44	0.01	0.01
O&M Expenses	7.93	0.00	0.00	0.00	0.00
Total	43.73	40.02	21.43	0.40	0.67

11. The details of Interest on Working Capital (IWC) claimed by the Petitioner in respect of the transmission assets are as follows:

Particulars	(₹ in lakh)				
	Asset-1	Asset-2	Asset-3	Asset-4	Asset-5
	2018-19 (Pro-rata for 90 days)	2018-19 (Pro-rata for 90 days)	2018-19 (Pro-rata for 90 days)	2018-19 (Pro-rata for 1 day)	2018-19 (Pro-rata for 1 day)
O&M Expenses	2.68	0.00	0.00	0.00	0.00
Maintenance Spares	4.82	0.00	0.00	0.00	0.00
Receivables	29.56	27.05	14.48	24.22	40.98
Total	37.06	27.05	14.48	24.22	40.98
Rate of Interest (in %)	12.20	12.20	12.20	12.20	12.20



Particulars	Asset-1	Asset-2	Asset-3	Asset-4	Asset-5
	2018-19 (Pro-rata for 90 days)	2018-19 (Pro-rata for 90 days)	2018-19 (Pro-rata for 90 days)	2018-19 (Pro-rata for 1 day)	2018-19 (Pro-rata for 1 day)
Interest on Working Capital	1.11	11.82	9.33	9.81	8.71

Data of Commercial Operation (“COD”)

12. The Petitioner has claimed the actual COD of the transmission assets as follows:

Assets	SCOD	COD
Asset-1	26.9.2014	1.1.2019
Asset-2		
Asset-3		31.3.2019
Asset-4		
Asset-5		

13. In support of the COD, the Petitioner has submitted RLDC charging certificates dated 20.4.2018, 8.4.2019, 30.6.2018, 28.12.2018, 28.6.2018, 13.3.2019, 13.8.2019. Further, the Petitioner has submitted COD letters dated 14.6.2019 and 20.8.2019.

14. Taking into consideration the submissions of the Petitioner, we approve the COD of the transmission assets as follows:

Asset	Asset details	COD
Asset-1	Central Sector Portion for 89.148 km & Telecom Sharing of 903.892 km of Establishment of Fiber Optic Communication System	1.1.2019
Asset-2	DTL Portion for 264.294 km of Establishment of Fiber Optic Communication System	
Asset-3	UPPTCL Portion of 96.335 km of Establishment of Fiber Optic Communication System	
Asset-4	PSTCL portion of 215.548 km of Establishment of Fiber Optic Communication System	31.3.2019
Asset-5	HPSEB portion of 360.571 km of Establishment of Fiber Optic Communication System	

Capital Cost

15. Regulation 9(1) and Regulation 9(2) of the 2014 Tariff Regulations provide as follows:



“(1) The Capital cost as determined by the Commission after prudence check in accordance with this regulation shall form the basis of determination of tariff for existing and new projects”

(2) The Capital Cost of a new project shall include the following:

- (a) the expenditure incurred or projected to be incurred up to the date of commercial operation of the project;
- (b) Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed;
- (bi) Any gain or loss on account of foreign exchange risk variation pertaining to the loan amount availed during the construction period shall form part of the capital cost.
- (c) Increase in cost in contract packages as approved by the Commission;
- (d) Interest during construction and incidental expenditure during construction as computed in accordance with Regulation 11 of these regulations;
- (e) capitalised Initial spares subject to the ceiling rates specified in Regulation 13 of these regulations;
- (f) expenditure on account of additional capitalization and de-capitalisation determined in accordance with Regulation 14 of these regulations;
- (g) adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the COD as specified under Regulation 18 of these regulations; and
- (h) adjustment of any revenue earned by the transmission licensee by using the assets before COD.”

16. The Petitioner has claimed the capital cost as on COD and estimated ACE incurred or projected to be incurred in respect of the transmission assets as per the Auditor’s Certificate dated 6.12.2020, which is as follows:

(₹ in lakh)				
Assets	FR Apportioned approved cost	Expenditure upto COD	ACE 2014-19 as per Auditor’s Certificate	Total estimated cost as on 31.3.2019
			2018-19	
Asset-1	1129.88	805.27	2.12	807.39
Asset-2	1184.97	907.50	30.29	1091.99
Asset-3	627.35	498.39	0.00	498.39
Asset-4	1129.38	825.96	0.00	1075.27
Asset-5	1795.09	1385.00	0.00	1747.53
Total	5866.67	4422.12	32.41	4454.53



Telecom sharing:

17. The Petitioner has submitted that OPGW pertaining to Asset-1 was envisaged to be installed on Abdullapur-Dehradun transmission line which was under construction and there is no sharing of OPGW laid in Abdullapur-Dehradun line. The OPGW links of 903.892 km pertaining to telecom is being shared by ULDC (PGCIL) for which cost of ₹551.73 lakh has been capitalized in COD cost of Asset-1 and no IDC and IEDC has been considered w.r.t. telecom sharing in Auditor's Certificate.

18. The Petitioner, vide affidavit dated 31.3.2022, has submitted that as per IA, 1098 km of the Petitioner's telecom existing links shall be utilized to establish the OPGW connectivity for new stations, however, in actual only 903.892 km has been utilized/shared from the Petitioner's telecom existing links. In order dated 8.12.2011 in Petition No. 68/2010, it was decided that the sharing of the fibers among telecom business and for use by the Petitioner and vice-versa, if any, would be done on the depreciated cost. Accordingly, the optical fibre cost will be shared as per para 24 of the said order dated 8.12.2011, which is as follows:

"24) We have noticed that sharing of Optical Fibre cost between ULDC scheme and Telecom projects was decided by Government of India in the PIB meeting held on 12.10.2001. The relevant portion of para 11 of the Minutes of PIB Meeting is quoted as under:

"....Six(6) out of 12/24 fibres installed under this project shall be utilized for ULDC project only. The balance fibres shall be utilized by POWERGRID for telecom purpose. Accordingly, it is proposed to apportion (i) 50% of the optical fibre cost for 24 fibre cable and (ii) 25% of optical fibre cost for 12 fibre cable to the telecom venture. Apportionment as per the above methodology shall be made at the time of submission of tariff proposal to GOI/CERC."

Cost

19. The details of total apportioned approved cost against the estimated completion cost for the transmission assets are as follows:



(₹ in lakh)

Assets	Approved cost as per IA (a)	Estimated completion cost (b)	Cost variation/ Cost under-run (c=a-b)
Asset-1	1129.88	819.15	310.73
Asset-2	1184.97	1093.75	91.22
Asset-3	627.35	589.19	38.16
Asset-4	1129.38	1075.27	54.11
Asset-5	1795.09	1747.53	47.56

20. The estimated completion cost of the transmission assets are within the FR approved cost and, therefore, there is no cost over-run. The Petitioner has submitted the item wise cost variation between apportioned approved cost and estimated completion cost in Form-5.

21. The Petitioner has submitted RCE of the transmission project approved by the BoD along with the RCE apportionment in Form 5B vide affidavit dated 31.3.2022, which is as follows:

Description	FR Approved cost (4Q, 2011 PL) (A)	RCE (March, 2020 PL) (B)	Variation (B) - (A)
Cost (excl. IDC)	186.44	194.15	7.72
IDC	12.19	16.24	4.05
Total	198.63	210.39	11.77 (5.92 %)

22. The Petitioner has submitted that the cost variation of 5.92% is mainly due to price variation, variation in IDC and IEDC due to time over-run and due to changes in OPGW network, changes in length of links during execution and subsequent inclusion of additional links in the transmission project desired by the beneficiaries.

23. The details of total apportioned approved cost w.r.t. IA to the RCE for the respective transmission assets are as follows:



(₹ in lakh)

Assets	FR approved cost as per IA	RCE apportioned approved Cost
Asset-1	1129.88	807.39
Asset-2	1184.97	1091.99
Asset-3	627.35	602.71
Asset-4	1129.38	1075.27
Asset-5	1795.09	1747.53

Time Over-run

24. As per IA dated 26.3.2012, the transmission assets were scheduled to be put into commercial operation (SCOD) within 30 months from the date of IA, i.e., by 26.9.2014. The details of SCOD, COD and time over-run with respect to the transmission assets are as follows:

Assets	SCOD	COD	Time Over-run
Asset-1	26.9.2014	1.1.2019	1558 days
Asset-2		1.1.2019	1558 days
Asset-3		1.1.2019	1558 days
Asset-4		31.3.2019	1647 days
Asset-5		31.3.2019	1647 days

25. The Petitioner has submitted that there is a time over-run ranging between 1558 days to 1647 days in execution of the transmission assets and has attributed the delay in execution of the transmission assets mainly on account of inordinate and uncontrollable delay in execution of various new lines over which OPGW links were to be installed, addition/ deletion of links as per requirement of the beneficiaries, issues in getting work permits/ outages of charged lines, RoW issues and also due to collective charging of links for optimal utilization of the system.

26. To substantiate its claim regarding time over-run in respect of the transmission assets, the Petitioner vide affidavit dated 31.3.2022 has *inter alia* submitted as follows:



Asset-1 (Central Sector)

(i) Delay due to non-readiness of Abdullapur-Dehradun Transmission Line:

- (a) OPGW pertaining to Asset-1 was envisaged to be installed on Abdullapur-Dehradun transmission line which was under construction. As the associated lines were under construction, fronts were not available due to which OPGW could not be installed till the towers were erected. This led to delay in installation of OPGW in Abdullapur-Dehradun line covered under NRSS-XXIV. However, the Commission *vide* order dated 9.10.2018 in Petition No. 56/TT/2017 has already condoned the entire time over-run upto COD i.e. 31.3.2018 of the associated Abdullapur-Dehradun line.
- (b) Therefore, time over-run of 1227 days (40 months 12 days) out of total time over-run of 1558 days is mainly due to delay in execution of associated transmission line (i.e. Dehradun-Abdullapur transmission line). The Petitioner has executed the OPGW link on 30.3.2018 along with Dehradun-Abdullapur transmission line. However, the Petitioner has declared COD of Asset-1 on 1.4.2019 to combine the COD for all the remaining links associated with the transmission project in order to minimize the number of petitions. This matter was also recorded in most of the TEST sub-committee meeting of NRPC.

Asset-2 (DTL) and Asset-3 (UPPTCL)

(i) Delay due to non-availability of fronts and frequent change of network by constituents:

- (a) DTL and UPPTCL have requested to change the communication network which led to delay in supply of OPGW and communication equipment due to off-shore supply. Issue was raised in various TEST sub-committee meetings of NRPC. In some cases, optical link length was increased and amplifiers were procured at later stage/ diversion of equipment was done for execution of links. Several issues were reported in NRPC that frequent OPGW was cut in UPPTCL lines due to diversion of transmission lines by transmission line group and subsequent other OPGW links, data from which was to be communicated through above mentioned links also could not be executed. This led to manpower idling, stoppage of work



and sometimes demobilization of work force due to non-availability of links/change in scope by the beneficiaries. In Noida, links shutdown was not issued for at least one year and same issue was raised in several TEST meetings as well as NRPC forum but shutdown was not issued due to Noida area load conditions. Eventually, the design was changed and special clamp was procured to execute the links for approx. 1200 meters. Thereafter, entire Noida area connected with fiber network due to which there was delay in the whole connectivity.

(b) There was severe RoW issue in Muradnagar-Sahibabad and Muradnagar-Loni area. T&Ps of OPGW works were kept by landowners. Issue was raised in NRPC forum and UPPTCL confirmed that they will deploy their manpower to resolve the RoW issues on their lines but could not succeed. Issue was raised with District Administration on several occasions but finally Muradnagar-Loni line was deleted from the scope after several attempt by the Petitioner. Filing of petition also got delayed and the Petitioner tried to resolve the RoW issues and one petition was filed for all links.

(c) In some cases, the condition of Earth-wire was poor, especially in Ballabgarh-Bamnauli line of DTL, due to which, transmission line got tripped due to flash over on several occasions caused by failure/snapping of Earth-wire and stuck of T&Ps on line. Further, DTL denied to issue work permit initially. The same was resolved in NRPC meeting, and shutdown was issued by DTL to complete the works, which delayed the works substantially. Further, due to works in NCR area, especially in DTL lines, some of the sections were changed from overhead lines to underground cable and OPGW cable could not be laid on those spans and the Petitioner had to change BOQ from overhead OPGW to underground approach cable. Since this was an off-shore supply contract and materials were procured from abroad under the said package, frequent quantity changes, led to delay in amendment/ supply of materials.

(ii) Delay in issuance of NOC for underground cable laying works in Lucknow, UPPTCL link:

(a) Due to shifting of SLDC building from Shakti Bhawan to Gomti Nagar, additional



underground fiber cable works required to be laid in the transmission project. Matter was raised with Lucknow Nagar Nigam and Lucknow Development Authority for issuance of work permit and NOC, but, NOC was issued only in October, 2017 for laying of underground cable. Thereafter, work commenced in Gomti Nagar area which is a VIP and highly populated resident area and working in that area was very difficult.

(b) The OPGW link was executed progressively from 22.1.2018 to 12.11.2018. However, Petitioner has declared COD of all links pertaining to DTL and UPPTCL on 1.1.2019 to combine the COD for all the remaining links associated with the instant transmission project and to minimize the number of petitions. The details of trial run certificates received from NRLDC in respect of Asset-2 and Asset-3 have been filed.

Asset-4 (PSTCL) and Asset-5 (HPSEB)

(i) Delay due to non-availability of Shutdown:

(a) Shutdown is required in stretches where Earth-wire is not available or these are in poor conditions or there is breakdown of Earth-wire during installation. However, shutdown was not available immediately whenever these situations arose. Further, at several occasions, PSTCL/ HPSEB insisted on prior approval for shutdown which was not practicable/ possible in the instant case. This led to manpower idling, stoppage of work and sometimes even the work force demobilised due to uncertainty in getting the shutdown approved.

(ii) Delay due to non-availability of fronts and frequent change of network by constituents:

(a) PSTCL and HPSEB have requested to change the communication network which leads to delay in supply of OPGW and communication equipment due to offshore supply. Issue was raised in various TEST sub-committee meetings of NRPC. In some cases, optical link length was increased, and amplifiers were procured at later stage/ diversion of equipment were done for execution of links. At some location DC source was not available and, accordingly, the matter was



highlighted to PSTCL as evident from various mails.

(iii) Delay due to additional requirement of Cabinet and MDF in PSTCL:

(a) New requirement had been raised by PSTCL for the cabinet and MDF for PSTCL sites.

(iv) Delay due to non-receipt of material by PSTCL/HPSEB officials in some of the PSTCL/HPSEB Sub-stations:

(a) The procured equipment in the some of the PSTCL and HPSEB Sub-stations were not being acknowledged by the PSTCL and HPSEB officials which led to delays. Chronological details along with the copies of documents/ correspondence exchanged with PSTCL and HPSEB in this regard have been filed.

(b) OPGW link was executed progressively from 2.3.2019 to 30.3.2019. However, all links pertaining to PSTCL and HPSEB was put into commercial operation on 31.3.2019 to combine the COD for all the remaining links associated with the instant transmission project and to minimize the number of petitions. The details of trial run certificates received from NRLDC in respect of Asset-4 and Asset-5 have been filed.

27. The Petitioner has submitted that the delay in execution of the OPGW links depends upon various factors such as addition/ deletion of links as per the beneficiaries' requirements in subsequent periods even after award is placed, issues in getting work permits/ outages of charged lines, RoW issues, collective charging of links for optimal utility of the system and inordinate and uncontrollable delay in execution of various new lines over which OPGW links are to be installed. Further, the hindrance in work due to RoW issues, non-availability of work front, changes in the scope (addition/ deletion of links) etc. have taken place as late as December, 2018/ January, 2019 i.e., 6 years after IA, thus, causing substantial delay in the completion of transmission assets. Thus, the



time over-run in execution of the transmission project is not attributable to the Petitioner and has requested to consider the same and allow the entire cost and tariff as claimed.

28. The Petitioner has submitted the following asset wise activity summary in Form-12:

Asset-1 (Central Sector)

Activity	Period of activity				Time over-run	Reason (s) for delay
	Original Schedule (As per planning)		Actual Schedule (As per actual)			
	Start date	Completion date	Start date	Completion date	Months	
Investment Approval	27.3.2012	27.3.2012	27.3.2012	27.3.2012	NIL	Associated link was executed on 30.3.2018. However, links pertaining to Telecom Sharing executed on 31.12.2019. The COD merged to minimize the number of assets/petitions.
LOA	10.9.2012	10.9.2012	27.3.2012	27.3.2012	NIL	
Supplies	14.3.2013	25.7.2014	15.12.2013	15.2.2014	NIL	
Installation	13.5.2013	26.8.2014	15.2.2014	28.12.2018	52	
SAT	10.9.2013	26.9.2014	29.12.2018	29.12.2018	51	
Project Completion	27.3.2012	26.9.2014	27.3.201	1.1.2019	51	

Asset-2 (DTL)

Activity	Period of activity				Time over-run	Reason (s) for delay
	Original Schedule (As per planning)		Actual Schedule (As per actual)			
	Start date	Completion date	Start date	Completion date	Months	
Investment Approval	27.3.2012	27.3.2012	27.3.2012	27.3.2012	NIL	Associated link was executed from 22.1.2018 to 9.10.2018. However, the COD merged to minimize the number of assets/petitions.
LOA	10.9.2012	10.9.2012	27.3.2012	6.5.2015	38	
Supplies	14.3.2013	25.7.2014	15.12.2013	30.10.2016	31	
Installation	13.5.2013	26.8.2014	15.2.2014	4.10.2018	50	
SAT	10.9.2013	26.9.2014	29.12.2018	7.10.2018	49	
Project Completion	27.3.2012	26.9.2014	27.3.2012	1.1.2019	51	



Asset-3 (UPPTCL)

Activity	Period of activity				Time over-run	Reason (s) for delay
	Original Schedule (As per planning)		Actual Schedule (As per actual)			
	Start date	Completion date	Start date	Completion date	Months	
Investment Approval	27.3.2012	27.3.2012	27.3.2012	27.3.2012	NIL	Associated link was executed from 11.4.2018 to 12.11.2018. However, the COD merged to minimize the number of assets/ petitions.
LOA	10.9.2012	10.9.2012	27.3.2012	6.5.2015	38	
Supplies	14.3.2013	25.7.2014	15.12.2013	30.10.2016	27	
Installation	13.5.2013	26.8.2014	15.2.2014	5.11.2018	50	
SAT	10.9.2013	26.9.2014	29.12.2018	11.11.2018	49	
Project Completion	27.3.2012	26.9.2014	27.3.2012	1.1.2019	51	

Asset-4 (PSTCL)

Activity	Period of activity				Time over-run	Reason (s) for delay
	Original Schedule (As per planning)		Actual Schedule (As per actual)			
	Start date	Completion date	Start date	Completion date	Months	
Investment Approval	27.3.2012	27.3.2012	27.3.2012	27.3.2012	NIL	Associated link was executed from 5.3.2019 to 30.3.2019. However, the COD merged to minimize the number of assets/ petitions.
LOA	10.9.2012	10.9.2012	30.7.2015	30.7.2015	34	
Supplies	14.3.2013	25.7.2014	14.4.2016	5.7.2016	23	
Installation	13.5.2013	26.8.2014	16.8.2016	28.11.2017	39	
SAT	10.9.2013	26.9.2014	1.1.2019	25.3.2019	53	
Project Completion	26.9.2014	26.9.2014	27.3.2012	30.3.2019	54	

Asset-5 (HPSEB)

Activity	Period of activity				Time over-run	Reason (s) for delay
	Original Schedule (As per planning)		Actual Schedule (As per actual)			
	Start date	Completion date	Start date	Completion date	Months	
Investment Approval	27.3.2012	27.3.2012	27.3.2012	27.3.2012	NIL	Associated link was executed from 2.3.2019 to 30.3.2019. However, the COD merged to minimize the number of assets/ petitions.
LOA	10.9.2012	10.9.2012	30.7.2015	30.7.2015	34	
Supplies	14.3.2013	25.7.2014	14.4.2016	5.7.2016	23	
Installation	13.5.2013	26.8.2014	16.8.2016	28.11.2017	39	
SAT	10.9.2013	26.9.2014	1.1.2019	25.3.2019	53	
Project Completion	27.3.2012	26.9.2014	27.3.2012	30.3.2019	54	



29. We have considered the submissions made by the Petitioner and gone through the justification, chronology of events and supporting documents placed by the Petitioner in this regard. As per the IA dated 26.3.2012, the transmission assets were scheduled to be put into commercial operation (SCOD) by 26.9.2014, against which Asset-1, Asset-2 and Asset-3 were put under commercial operation on 1.1.2019 and Asset-4 and Asset-5 on 31.3.2019 with a time over-run of 1558 and 1647 days, respectively. The time over-run in execution of the transmission assets is being discussed on case to case basis in the following paragraphs:

Asset-1 (Central Sector)

30. The OPGW pertaining to Asset-1 was envisaged to be installed on 400 kV D/C (Quad) Abdullapur–Dehradun transmission line which was under construction due to which OPGW could not be installed till the towers were erected. The transmission line is covered under NRSS-XXIV project and was put into commercial operation on 31.3.2018 with a delay of about 40 months due to RoW issues. The Commission *vide* order dated 9.10.2018 in Petition No. 56/TT/2017 has condoned the time over-run upto COD i.e. 31.3.2018 in respect of this line. While condoning the delay, the Commission held as follows:

“31.....the Petitioner was facing continuous RoW problems from 14.6.2012 to 28.3.2018. The Petitioner took almost 69 months 14 days to resolve the ROW issues. We are of the view that delay due to ROW issue was beyond the control of the petitioner. Therefore, the total time delay of both the assets i.e. Asset-I(a) and Asset-I(b) is condoned.”

31. The Commission *vide* order dated 9.10.2018 in Petition No. 56/TT/2017 has approved the COD of the Asset-I(a):-400 kV Circuit-I, of Dehradun-Abdullapur D/C(Quad) line along with associated bays at both ends as 31.3.2018 and COD of the Asset-I(b):- 400 kV Circuit-II, of Dehradun-Abdullapur D/C (Quad) line along with associated bays at



both ends as 1.4.2018 and condoned the time over-run in case of Asset-1(a) and Asset-1(b) due to RoW problems. As per the RLDC charging certificate submitted by the Petitioner, the OPGW cable, H/W and accessories on 400 kV Abdullapur-Dehradun link, SDH and PDH equipment at 400 kV Abdullapur and Dehradun has been charged on 30.3.2018. The Petitioner has submitted that other equipment at Ballabgarh, Agra, Kanpur, Allahabad, Moga, Hisar, New Wanpoo and Wagoora are charged on 31.12.2018. The Petitioner on its own submitted that to minimize the petitions, the Petitioner merged and claimed COD of the transmission assets as 1.1.2019. We are of the view that delay in execution of the associated transmission line has direct impact on the execution of Asset-1. The Commission has already condoned the time over-run of 400 kV D/C (Quad) Abdullapur–Dehradun transmission line upto 31.3.2018. Accordingly, the time over-run in case of Asset-1, which is to be laid on the said line is also condoned.

Asset-2 (DTL) and 3 (UPPTCL)

32. The Petitioner has submitted that the time over-run of 1558 days in case of Asset-2 and Asset-3 was due to frequent change in the communication network, increase in the length of OPGW links causing additional requirement of amplifiers, diversion of material from one site to another, frequent cutting of OPGW links due to diversion of transmission lines at the behest of the beneficiaries. Further, there was a delay of about one year in issuance of shutdown of links in Noida area due to load conditions. Eventually, the design was changed and special clamps were procured for execution of about 1.2 km of OPGW link in Noida area of Delhi-NCR. Also, the work of OPGW laying was hampered due to severe RoW issues in Muradnagar-Sahibabad and Muradnagar-Loni areas. Despite the efforts made by the Petitioner and UPPTCL to resolve the RoW issues by the District Administration, the OPGW laying in Muradnagar-Loni line was deleted. Further, there



were delays due to non-issuance of permission to work in Ballabgarh-Bamnauli line of DTL, which was frequently tripping due to poor condition of earth-wire. Also, some sections of the overhead lines were changed to underground sections in the Delhi-NCR area as directed by DTL due to which the Petitioner had to change the BOQ and issue fresh amendment to the contract. Due to frequent quantity changes and delay in amendment/ supply of materials contract, it resulted in idling and demobilisation of manpower. It is observed that the Petitioner has not provided specific date-wise chronology and supporting documents to arrive at the event-wise quantum of delay caused due to above stated reasons of delay i.e., idling/demobilization of manpower, delay due to amendment/ off-shore supply of OPGW & communication equipment, RoW issues in Muradnagar-Sahibabad/ Loni lines and underground cabling in Delhi-NCR areas.

33. Further, the Petitioner has submitted that the SLDC building of UPPTCL was shifted from Shakti Bhawan to Gomati Nagar, due to which there was additional requirement of underground cabling. The Petitioner took up the matter with Lucknow Nagar Nigam and Lucknow Development Authority for issuance of work permit. The NOC was granted in October, 2017. The Petitioner has also submitted that they have declared COD of all links pertaining to DTL and UPPTCL on 1.1.2019 to combine the COD for all the remaining links associated with the instant project and minimize the number of assets/ petitions.

34. The Petitioner has attributed the time over-run in case of Asset-2 and Asset-3 to non-availability of fronts and frequent change of network by DTL and UPPTCL and delay in issuance of NOC for underground cable laying works in Lucknow, UPPTCL.



35. In case of Asset-2, the Petitioner has neither submitted any documentary evidence in support of the non-availability of fronts, frequent change of network by DTL and delay in grant of shut-down nor the details of the time period affected due to these issues. Due to non-submission of documentary evidence and exact time period affected by these activities, we are not in a position to analyze the time over-run in case of Asset-2. Accordingly, the time over-run of 1558 days in case of Asset-2, is not condoned.

36. In case of Asset-3, the Petitioner has attributed time over-run due to non-availability of fronts, frequent change of network by UPPTCL besides the delay in issue of NOC for underground cable laying works in Lucknow. It is noticed that the Petitioner obtained NOC for laying the cable in the SLDC building in Gomati Nagar in October, 2017. However, the Petitioner was able to lay the underground OFC of 220 kV Gomati Nagar Sub-station, Gomati Nagar on 12.11.2018. We are of the view that non-issuance of work permit by Lucknow Nagar Nigam and Lucknow Development Authority impacted the completion of the Asset-3 and the time period from 1.10.2017 to 12.11.2018 (407 days) is beyond the control of the Petitioner.

37. Accordingly, out of the total time over-run of 1558 days, time over-run of 407 days is condoned in the case of Asset-3.

Asset-4 (PSTCL) and 5 (HPSEB)

38. The Petitioner has submitted that the time over-run of 1647 days in completion of Asset-4 and Asset-5 has been caused due to non-availability of immediate shutdown where the Earth-wire is not available or is in poor condition or there is breakdown of Earth-wire. The beneficiaries insisted on prior approval which was not possible at many



occasions leading to idling and or demobilization of manpower. Further, delays were experienced due to frequent change in the communication network, increase in the link length causing additional requirement of OPGW and amplifiers etc. due to which the Petitioner had to change the BOQ and issue fresh amendment to the contract. Due to off-shore supply contract and frequent quantity changes led to delay in amendment/ supply of materials contract which resulted in idling and demobilization of manpower. Further, there were disruption in the work due to non-availability of DC source and space for installation of communication equipment at some of the locations. It is observed that the Petitioner has provided specific date-wise chronology and supporting documents to arrive at the event-wise quantum of time over-run caused due to above stated reasons.

39. The Petitioner has submitted copies of letters/ email dated 1.11.2017, 15.12.2017, 18.12.2017, 19.12.2017, 4.1.2018, 10.1.2018, 12.3.2018, 5.4.2018, 31.8.2018, 5.9.2018, 18.9.2018, 21.9.2018, 4.10.2018, 9.10.2018, 19.11.2018 regarding space constraints at 400 kV Rajpura Sub-station for PDH installation, DC power issues at PSTCL locations and pair splicing issues at various locations of PSTCL at Kotla, Junga and Kartarpur etc. The Petitioner *vide* email dated 3.12.2018 has intimated that space constraint issue has been resolved at Rajpura covered under Asset-4.

40. With regard to disruption of work related to OPGW and installation of communication equipment at HPSEB locations, the Petitioner provided copies of letters/email dated 24.11.2016, 29.11.2016, 30.11.2016 etc. and has submitted that the Petitioner was facing RoW issues between tower no. 55 and 56 and diversion of tower nos. 16, 17 and 47 for completion of stringing work at 132 kV Larji-Kangoo link. Further,



the Petitioner encountered space issues for installation of terminal equipment at Dehra, Bassi and Golthal covered under Asset-5, which was ultimately resolved on 3.5.2018.

41. The Petitioner has attributed the time over-run of 40 months in awards process and time over-run of 14 months is due to site conditions. The Petitioner has not explained steps taken from the date of IA up to SCOD of the transmission assets i.e. 26.9.2014. It is observed, that the Petitioner for the first time wrote a letter to PSTCL on 10.9.2016 and thereafter the Petitioner sent e-mails and letter to PSTCL about requirement of space, problem of DC source, additional requirement of cabinet and MDF related issues. We are of the view that the problems faced by the Petitioner from 10.9.2016 to upto 31.3.2019 due to space constraint at various PSTCL Sub-stations, DC power issues at PSTCL is beyond the control of the Petitioner. In view of the above, out of the total time over-run of 1647 days, time over-run of 715 days is not condoned and time over-run of 932 days is condoned.

42. As regards Asset-5, the Petitioner has submitted letters dated 24.11.2016, 29.11.2016, 30.11.2016 about tower diversion and shifting works and mail dated 3.5.2018 wherein the Petitioner has raised the issues related to installation of terminal equipment at Dehra, Bassi and Golthal etc. With regard to the space issues, the Petitioner first sent a letter to HPSEB on 24.11.2016 and thereafter an email was sent to HSPEB after a gap of 519 days. The Petitioner has not explained steps taken from the date of IA upto the SCOD of the transmission asset i.e. 26.9.2014. The Petitioner has not diligently pursued the matter. We are, therefore, of the view that the time over-run of 1647 days in case of Asset-5 is not condonable and hence, not condoned.



43. Accordingly, the details of time over-run condoned and not condoned in respect of the transmission assets covered in the instant petition is as follows:

Assets	SCOD	COD	Time over-run (days)	Time over-run condoned (days)	Time over-run not condoned (days)
Asset-1	26.9.2014	1.1.2019	1558	1282	276
Asset-2		1.1.2019	1558	-	1558
Asset-3		1.1.2019	1558	407	1151
Asset-4		31.3.2019	1647	932	715
Asset-5		31.3.2019	1647	-	1647

IDC and IEDC

44. The allowable IDC has been worked out considering the information submitted by the Petitioner for the transmission assets separately on cash basis. The loan details submitted in Form-9C for 2014-19 tariff period and IDC computation sheet have been considered for the purpose of IDC calculation on cash and accrual basis. Further, in view of non-condonation of delay in execution of the transmission assets, corresponding IDC has not been allowed. The un-discharged IDC as on COD has been considered as ACE during the year in which it has been discharged.

45. Accordingly, based on the information filed by the Petitioner, IDC considered is as follows:

(₹ in lakh)

Assets	IDC as per Auditor's Certificate	IDC Admissible	IDC disallowed due to computational difference / time over-run not condoned	IDC discharged as on COD	IDC Un-discharged as on COD	IDC discharge during	
	A	B	C=A-B	D	E=B-D	2018-19	2019-20
Asset-1	16.51	7.10	9.41	6.93	0.17	0.17	
Asset-2	21.38	0.00	21.38				
Asset-3	26.65	0.00	26.65				
Asset-4	83.23	7.52	75.71	7.52			
Asset-5	131.68	0.00	131.68				



46. The Petitioner has claimed IEDC for the transmission assets and has submitted Auditor's Certificate in support of the same. Accordingly, IEDC is allowed as claimed subject to adjustment as per condonation of time over-run. The details of IEDC claimed and allowed are as follows:

(₹ in lakh)			
Assets	IEDC claimed as per Auditor's Certificate	IEDC disallowed due to time over-run	IEDC allowed as on COD
	1	2	3= (1-2)
Asset-1	28.70	3.21	25.49
Asset-2	22.94	14.46	8.48
Asset-3	13.09	6.10	6.99
Asset-4	57.68	16.11	41.57
Asset-5	63.89	41.10	22.79

Initial Spares

47. Regulation 13 of the 2014 Tariff Regulations provides as follows:

"13. Initial Spares: Initial spares shall be capitalised as a percentage of the Plant and Machinery cost, subject to the following ceiling norms:

-
- (d) *Transmission system*
- (i) *Transmission line* - 1.00%
 - (ii) *Transmission Sub-station (Green Field)* - 4.00%
 - (iii) *Transmission Sub-station (Brown Field)* - 6.00%
 - (iii) *Series Compensation devices and HVDC Station* - 4.00%
 - (iv) *Gas Insulated Sub-station (GIS)* - 5.00%
 - (v) *Communication system* - 3.50%
-"

48. Out of the 10 individual transmission assets in the transmission project. Transmission tariff for five assets (numbered Assets-I to V) were claimed in Petition No. 705/TT/2020 and tariff for the remaining five assets, Assets-1 to 5, are claimed in the instant petition. In Petition No. 705/TT/2020, the Petitioner did not claim any Initial Spares for Asset-I, Asset-II and Asset-III. The Petitioner has claimed Initial Spares of ₹463.49 lakh and ₹15.94 lakh, respectively, for Asset-IV and Asset-V.

49. The Petitioner has claimed the following Initial Spares in respect of the transmission



assets covered in the transmission project:

(₹ in lakh)				
Assets	Plant & Machinery cost (excluding IDC and IEDC, land cost and cost of civil works) (A)	Initial Spares claimed(B)	Norm (in %) (C)	Allowable Initial Spares
Asset included in instant petition				
Asset-1	762.12	12.95	3.5	27.17
Asset-2	1047.67	22.58	3.5	37.18
Asset-3	562.97	31.71	3.5	19.27
Asset-4	891.82	17.85	3.5	31.70
Asset-5	1500.77	21.11	3.5	53.67
Balance assets of the Projects covered in Petition No. 705/TT/2020				
Asset-I	2437.39	0.00	3.5	88.40
Asset-II	5654.89	0.00	3.5	205.10
Asset-III	534.66	0.00	3.5	19.39
Asset-IV	4911.03	463.49	3.5	161.31
Asset-V	40.25	15.94	3.5	0.88
Total	18343.57	585.63	3.5	644.07

50. We have considered the submissions of the Petitioner. The Petitioner has claimed the Initial Spares of ₹585.63 lakh for the project as a whole in the instant petition against the allowable Initial Spares of ₹644.07 lakh. As stated above, the Petitioner claimed tariff for five of the transmission assets in Petition No.705/TT/2020, out of which the Petitioner has claimed Initial Spares for only two assets. The Commission allowed the Initial Spares on the basis of the cost of the individual assets vide order dated 27.12.2022 in Petition No.705/TT/2020 and accordingly the Initial Spares for Asset-IV and Asset-V was restricted to the norm of 3.5% of their cost. The Petitioner's prayer for grant of Initial Spares for the project as whole in accordance with APTEL's judgement dated 14.9.2019 in Appeal No. 74 of 2017 shall be dealt when all the transmission assets of the transmission project are combined at the time of truing of the 2019-24 tariff period.

51. Accordingly, the details of the Initial Spares allowed in respect of the transmission assets for 2019-24 tariff period are as follows:



(₹ in lakh)

Assets	Plant & Machinery cost considered as on cut-off date	Initial Spares claimed	Norms as per 2019 Tariff Regulations (in %)	Initial Spares allowable as per 2019 Tariff Regulations	Initial Spares allowed	Excess Initial Spares disallowed
		As on COD				As on COD
Asset-1	762.18	12.95	3.5	27.17	12.95	0.00
Asset-2	1047.67	22.58	3.5	37.18	22.58	0.00
Asset-3	562.97	31.71	3.5	19.27	19.27	12.44
Asset-4	891.82	17.85	3.5	31.70	17.85	0.00
Asset-5	1500.77	21.11	3.5	53.67	21.11	0.00

Capital cost as on COD

52. Accordingly, the capital cost allowed for the transmission assets as on COD is as follows:

(₹ in lakh)

Assets	Capital cost as on COD	Less: IDC as on COD due to		Less: IEDC disallowed as on COD	Excess Initial Spares disallowed as on COD	Capital cost considered as on COD
		Time over-run/Computational difference	Un-discharged as on COD			
Asset-1	805.27	9.41	0.17	3.21	0.00	792.48
Asset-2	907.50	21.38	0.00	14.46	0.00	871.66
Asset-3	498.39	26.65	0.00	6.10	12.44	453.20
Asset-4	825.96	75.71	0.00	16.11	0.00	734.14
Asset-5	1385.00	131.68	0.00	41.10	0.00	1212.22

Additional Capital Expenditure (ACE)

53. The Petitioner has claimed ACE for the transmission assets and has submitted Auditor's Certificate in support of its claim as follows:

(₹ in lakh)

Assets	ACE
	2018-19
Asset-1	2.12
Asset-2	30.29
Asset-3	-
Asset-4	-
Asset-5	-
Total	32.41



54. The Petitioner has submitted that ACE in 2014-19 has been claimed under Regulations 14(1)(i) of the 2014 Tariff Regulations and the same is within the cut-off date. ACE claimed by the Petitioner has been allowed under Regulations 14(1)(i) and 14(1)(ii) of the 2014 Tariff Regulations as it is towards balance and retention payments and works deferred for execution. The un-discharged IDC as on COD has been allowed as ACE. The details of ACE allowed are as follows:

ACE	Asset-1	Asset-2	Asset-3	Asset-4	Asset-5
	2018-19	2018-19	2018-19	2018-19	2018-19
ACE to the extent of balance and retention Payments	2.12	30.29	-	-	-
IDC Discharged	0.17	-	-	-	-
Less: Excess Initial Spares	-	-	-	-	-
Total ACE allowed	2.29	30.29	0.00	0.00	0.00

Capital Cost for 2014-19 tariff period:

55. Accordingly, the capital cost of the transmission assets considered for 2014-19 tariff period is as follows:

Particulars	RCE Approved capital Cost	Capital cost as on COD on cash basis	ACE	Total capital cost as on 31.3.2019
			2018-19	
Asset-1	807.39	792.48	2.29	794.77
Asset-2	1091.99	871.66	30.29	901.95
Asset-3	602.71	453.20	-	453.20
Asset-4	1075.27	734.14	-	734.14
Asset-5	1747.53	1212.22	-	1212.22
Total	5324.89	4063.70	32.58	4096.28

Debt-Equity Ratio

56. The Petitioner has claimed debt-equity ratio of 70:30 as on COD and for ACE post COD. Debt-equity ratio has been considered in accordance with Regulation 19 of the 2014 Tariff Regulations. The details of the debt-equity ratio as on COD and as on



31.3.2019 in respect of the transmission assets are as follows:

Asset-1	As on COD		As on 31.3.2019	
	Amount	(in %)	Amount	(in %)
	(₹ in lakh)		(₹ in lakh)	
Debt	554.74	70.00	556.34	70.00
Equity	237.74	30.00	238.43	30.00
Total	792.48	100.00	794.77	100.00
Asset-2	As on COD		As on 31.3.2019	
	Amount	(in %)	Amount	(in %)
	(₹ in lakh)		(₹ in lakh)	
Debt	610.16	70.00	631.36	70.00
Equity	261.50	30.00	270.59	30.00
Total	871.66	100.00	901.95	100.00
Asset-3	As on COD		As on 31.3.2019	
	Amount	(in %)	Amount	(in %)
	(₹ in lakh)		(₹ in lakh)	
Debt	317.24	70.00	317.24	70.00
Equity	135.96	30.00	135.96	30.00
Total	453.20	100.00	453.20	100.00
Asset-4	As on COD		As on 31.3.2019	
	Amount	(in %)	Amount	(in %)
	(₹ in lakh)		(₹ in lakh)	
Debt	513.90	70.00	513.90	70.00
Equity	220.24	30.00	220.24	30.00
Total	734.14	100.00	734.14	100.00
Asset-5	As on COD		As on 31.3.2019	
	Amount	(in %)	Amount	(in %)
	(₹ in lakh)		(₹ in lakh)	
Debt	848.55	70.00	848.55	70.00
Equity	363.67	30.00	363.67	30.00
Total	1212.22	100.00	1212.22	100.00

Depreciation

57. Regulation 27 of the 2014 Tariff Regulations provides as follows:

“27. Depreciation: (1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system 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.

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

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

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

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

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

(7) The generating company or the transmission licensee, as the case may be, shall submit the details of proposed capital expenditure during the 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 services.”

58. Depreciation has been allowed as per the methodology provided in Regulation 27 of the 2014 Tariff Regulations. Depreciation has been allowed considering the capital expenditure as on 1.4.2014 and approved ACE during the 2014-19 tariff period. The Gross Block during 2014-19 tariff period has been depreciated at weighted average rate of depreciation (WAROD). WAROD at Annexure-I to Annexure-V has been worked out considering the depreciation rates of the transmission assets as prescribed in the 2014 Tariff Regulations. Depreciation allowed for the transmission assets for 2014-19 tariff period is as follows:

		(₹ in lakh)				
	Particulars	Asset-1	Asset-2	Asset-3	Asset-4	Asset-5
		2018-19 (Pro-rata for 90 days)	2018-19 (Pro-rata for 90 days)	2018-19 (Pro-rata for 90 days)	2018-19 (Pro-rata for 1 day)	2018-19 (Pro-rata for 1 day)
A	Opening Gross Block	792.49	871.66	453.20	734.14	1212.22
B	ACE	2.29	30.29			
D	Closing Gross Block (A+B-C)	794.78	901.95	453.20	734.14	1212.22
E	Average Gross Block (A+D)/2	793.63	886.80	453.20	734.14	1212.22
F	Average Gross Block (90% depreciable assets)	793.63	886.80	453.20	734.14	1212.22
G	Average Gross Block (100% depreciable assets)					
H	Depreciable value (excluding IT equipment and software) (F*90%)	714.27	798.12	407.88	660.73	1090.99
I	Depreciable value of IT equipment and software					
J	Total Depreciable Value (H+I)	714.27	798.12	407.88	660.73	1090.99
K	Weighted Average Rate of Depreciation (WAROD) (in %)	6.330	6.330	6.330	6.330	6.330
L	Lapsed useful life at the beginning of the year (Year)	0.00	0.00	0.00	0.00	0.00
M	Balance useful life at the beginning of the year (Year)	15.00	15.00	15.00	15.00	15.00
N	Depreciation during the year (E*K)	12.39	13.84	7.07	0.13	0.21
O	Aggregate Cumulative Depreciation at the end of the year	12.39	13.84	7.07	0.13	0.21
P	Remaining Aggregate Depreciable Value at the end of the year(J-O)	701.88	784.28	400.81	660.60	1090.78



Interest on Loan (“IoL”)

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

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

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

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

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

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

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

Provided that the beneficiaries or the long term transmission customers /DICs shall not



withhold any payment on account of the interest claimed by the generating company or the transmission licensee during the pendency of any dispute arising out of re-financing of loan.”

60. The Petitioner has claimed the Weighted Average Rate of IoL based on its actual loan portfolio and rate of interest. Accordingly, IoL is calculated based on actual interest rate, in accordance with Regulation 26 of the 2014 Tariff Regulations. IoL allowed in respect of the transmission assets for 2014-19 tariff period is as follows:

		(₹ in lakh)				
Particulars		Asset-1	Asset-2	Asset-3	Asset-4	Asset-5
		2018-19 (Pro-rata for 90 days)	2018-19 (Pro-rata for 90 days)	2018-19 (Pro-rata for 90 days)	2018-19 (Pro-rata for 1 day)	2018-19 (Pro-rata for 1 day)
A	Gross Normative Loan	554.74	610.16	317.24	513.90	848.55
B	Cumulative Repayments up to Previous Year	-	-	-	-	-
C	Net Loan-Opening (A-B)	554.74	610.16	317.24	513.90	848.55
D	Addition due to ACE	1.60	21.21			
E	Repayment during the year	12.39	13.84	7.07	0.13	0.21
F	Net Loan-Closing (C+D-E)	543.96	617.52	310.17	513.77	0.00
G	Average Loan (A+F)/2	549.35	613.84	313.71	513.84	848.34
H	Weighted Average Rate of Interest on Loan (in %)	7.612	7.345	7.326	7.785	7.671
I	Interest on Loan (GxH)	10.31	11.12	5.67	0.11	0.18

Return on Equity (“RoE”)

61. Regulation 24 of the 2014 Tariff Regulations provides as follows:

“24. Return on Equity: (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 19.

(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating stations, transmission system including communication system and run of the river hydro generating station, and at the base rate of 16.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run of river generating station with pondage:

Provided that:

i. in case of projects commissioned on or after 1st April, 2014, an additional return of 0.50 % shall be allowed, if such projects are completed within the timeline specified in Appendix-I:

ii. the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever:

iii. additional RoE of 0.50% may be allowed if any element of the transmission project is



completed within the specified timeline and it is certified by the Regional Power Committee/National Power Committee that commissioning of the particular element will benefit the system operation in the regional/national grid:

iv. the rate of return of a new project shall be reduced by 1% for such period as may be decided by the Commission, if the generating station or transmission system is found to be declared under commercial operation without commissioning of any of the Restricted Governor Mode Operation (RGMO)/ Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system:

v. as and when any of the above requirements are found lacking in a generating station based on the report submitted by the respective RLDC, RoE shall be reduced by 1% for the period for which the deficiency continues:

vi. additional RoE shall not be admissible for transmission line having length of less than 50 kilometers.”

62. The Petitioner has claimed RoE for the transmission assets in terms of Regulations 25 of the 2014 Tariff Regulations. The Petitioner has submitted that it is liable to pay income tax at MAT rates and has claimed the following effective tax rates for 2014-19 tariff period:

Year	Claimed effective tax (in %)	Grossed-up RoE [(Base Rate)/(1-t)] (in %)
2014-15	21.018	19.624
2015-16	21.382	19.715
2016-17	21.338	19.704
2017-18	21.337	19.704
2018-19	21.549	19.757

63. The Commission, vide order dated 27.4.2020 in Petition No. 274/TT/2019, had arrived at the effective tax rate for the Petitioner based on the notified MAT rates and the same is given in the table as follows:

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



64. The same MAT rates are considered for the purpose of grossing up of the rate of RoE for truing up of the tariff of the 2014-19 period in terms of the provisions of the 2014 Tariff Regulations:

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

65. The Petitioner has claimed RoE for 2014-19 tariff period after grossing up the RoE @15.50% with effective tax rates (based on MAT rates) each year as per Regulation 25(3) of the 2014 Tariff Regulations. RoE is allowed on the basis of MAT rates applicable in the respective years as follows:

		(₹ in lakh)				
Particulars		Asset-1	Asset-2	Asset-3	Asset-4	Asset-5
		2018-19 (Pro-rata for 90 days)	2018-19 (Pro-rata for 90 days)	2018-19 (Pro-rata for 90 days)	2018-19 (Pro-rata for 1 day)	2018-19 (Pro-rata for 1 day)
A	Opening Equity	237.75	261.50	135.96	220.24	363.66
B	Additions	0.69	9.08			
C	Closing Equity (A-B)	238.43	270.58	135.96	220.24	363.66
D	Average Equity (A+B)/2	238.09	266.04	135.96	220.24	363.66
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	21.549	21.549	21.549	21.549	21.549
G	Rate of Return on Equity (in %)	19.758	19.758	19.758	19.758	19.758
H	Return on Equity (DxG)	11.60	12.96	6.62	0.12	0.20

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

66. The Petitioner has submitted O&M Expenses in case of Central Portion on actual basis for Asset-1. No O&M Expenses have been claimed or allowed for Asset-2 to Asset-5 being under State Sector. The Petitioner has claimed ₹7.93 lakh O&M Expenses for



Asset-1.

67. The Petitioner has submitted that O&M Expenses have been claimed for 2014-19 tariff period and has been calculated @7.5% of the capital cost in line with order dated 8.12.2011 in Petition No. 68/2010 (communication portion) with escalation of 3.32% per annum in line with Regulation 29(3) of the 2014 Tariff Regulations.

“29 Operation and Maintenance Expenses:

.....

(3) Transmission system

.....

(c) The operation and maintenance expenses of communication system forming part of interstate 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.”

68. We have considered the submissions of the Petitioner. The Petitioner vide Auditor’s certificate dated 8.12.2020 has submitted the detailed breakup of actual O&M Expenses for 2014-19 tariff period. The Petitioner’s claim of ₹7.93 lakh towards O&M Expenses for Asset-1 is as per the regulations and it is accordingly allowed. The Petitioner has claimed ₹7.93 lakh O&M Expenses for Asset-1.

Interest on Working Capital (“IWC”)

69. The Petitioner has claimed IWC as per Regulation 28(1)(c) and Regulation 3(5) of the 2014 Tariff Regulations. The components of the working capital and the Petitioner’s entitlement to interest thereon are discussed as follows:

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

(a)XXXXX

(b)XXXXX

(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;”

70. IWC allowed for the transmission assets for 2014-19 tariff period are as follows:

Particulars		(₹ in lakh)				
		Asset-1 2018-19 (Pro-rata for 90 days)	Asset-2 2018-19 (Pro-rata for 90 days)	Asset-3 2018-19 (Pro-rata for 90 days)	Asset-4 2018-19 (Pro-rata for 1 day)	Asset-5 2018-19 (Pro-rata for 1 day)
A	Working Capital for O&M Expenses (one month of O&M Expenses)	2.68	0.00	0.00	0.00	0.00
B	Working Capital for Maintenance Spares (Maintenance Spares @15% of O&M expenses)	4.82	0.00	0.00	0.00	0.00
C	Working Capital for Receivables (Receivable equivalent to two months of fixed cost)	29.29	26.16	13.36	22.11	36.35
D	Total Working Capital (A+B+C)	36.79	26.16	13.36	22.11	36.35
E	Rate of Interest (in %)	12.20	12.20	12.20	12.20	12.20
F	Interest on Working Capital (DxE)	1.11	0.79	0.40	0.01	0.01

Approved Annual Fixed Charges for 2014-19 Tariff Period

71. The Annual Fixed Charges (AFC) approved for the transmission assets for 2014-19 tariff period are as follows:

Particulars		(₹ in lakh)				
		Asset-1 2018-19 (Pro-rata for 90 days)	Asset-2 2018-19 (Pro-rata for 90 days)	Asset-3 2018-19 (Pro-rata for 90 days)	Asset-4 2018-19 (Pro-rata for 1 day)	Asset-5 2018-19 (Pro-rata for 1 day)
Depreciation		12.39	13.84	7.07	0.13	0.21
Interest on Loan		10.31	11.12	5.67	0.11	0.18



Particulars	Asset-1	Asset-2	Asset-3	Asset-4	Asset-5
	2018-19 (Pro-rata for 90 days)	2018-19 (Pro-rata for 90 days)	2018-19 (Pro-rata for 90 days)	2018-19 (Pro-rata for 1 day)	2018-19 (Pro-rata for 1 day)
Return on Equity	11.60	12.96	6.62	0.12	0.20
Interest on Working Capital	1.11	0.79	0.40	0.01	0.01
O&M Expenses	7.93				
Total	43.33	38.71	19.77	0.36	0.60

DETERMINATION OF ANNUAL FIXED CHARGES FOR 2019-24 TARIFF PERIOD

72. As per proviso (iii) of Regulation 8(1) of the 2019 Tariff Regulations, the tariff of the existing communication system forming part of the transmission project is to be determined as per the methodology followed prior to 1.4.2014. The said Regulation provides as follows:

“8. Tariff determination

(1) Tariff in respect of a generating station and emission control system, wherever applicable may be determined for the whole of the generating station or unit thereof, and tariff in respect of a transmission system may be determined for the whole of the transmission system or element thereof or associated communication system:

Provided that:

.....

(iii) Tariff of the associated communication system forming part of transmission system which has achieved commercial operation prior to 1.4.2014 shall be as per the methodology approved by the Commission prior to 1.4.2014.”

73. The Petitioner has claimed the following transmission charges in respect of the transmission assets for 2019-24 tariff period as follows:

Particulars	Asset-1				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	51.03	51.11	51.11	51.11	51.11
Interest on Loan	39.30	35.35	31.55	27.75	23.94
Return on Equity	45.42	45.49	45.49	45.49	45.49
Interest on Working Capital	2.74	2.69	2.64	2.58	2.52
O&M Expenses	16.15	16.15	16.15	16.15	16.15
Total	154.64	150.79	146.94	143.08	139.21



(₹ in lakh)

Particulars	Asset-2				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	62.49	67.53	69.12	69.12	69.12
Interest on Loan	47.51	46.86	43.12	38.03	32.93
Return on Equity	55.63	60.11	61.53	61.53	61.53
Interest on Working Capital	2.49	2.63	2.62	2.54	2.46
O&M Expenses					
Total	168.12	177.13	176.39	171.22	166.04

(₹ in lakh)

Particulars	Asset-3				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	34.10	37.60	38.15	38.15	38.15
Interest on Loan	25.90	26.16	23.82	21.01	18.19
Return on Equity	30.35	33.47	33.96	33.96	33.96
Interest on Working Capital	1.36	1.47	1.45	1.40	1.36
O&M Expenses					
Total	91.71	98.70	97.38	94.52	91.66

(₹ in lakh)

Particulars	Asset-4				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	58.18	66.49	68.06	68.06	68.06
Interest on Loan	47.82	50.10	46.38	41.23	35.84
Return on Equity	51.79	59.18	60.59	60.59	60.59
Interest on Working Capital	2.37	2.65	2.64	2.56	2.47
O&M Expenses					
Total	160.16	178.42	177.67	172.44	166.96

(₹ in lakh)

Particulars	Asset-5				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	95.94	108.32	110.62	110.62	110.62
Interest on Loan	77.73	80.41	74.31	66.18	57.52
Return on Equity	85.40	96.42	98.46	98.46	98.46
Interest on Working Capital	3.90	4.30	4.27	4.15	4.01
O&M Expenses					
Total	262.97	289.45	287.66	279.41	270.61

74. The details of the IWC claimed by the Petitioner are as follows:

(₹ in lakh)

Particulars	Asset-1				
	2019-20	2020-21	2021-22	2022-23	2023-24
O&M expenses	1.35	1.35	1.35	1.35	1.35
Maintenance Spares	2.42	2.42	2.42	2.42	2.42



Particulars	Asset-1				
	2019-20	2020-21	2021-22	2022-23	2023-24
Receivables	19.01	18.59	18.11	17.64	17.11
Total	22.78	22.36	21.88	21.41	20.88
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	2.74	2.69	2.64	2.58	2.52

(₹ in lakh)

Particulars	Asset-2				
	2019-20	2020-21	2021-22	2022-23	2023-24
O&M expenses	0.00	0.00	0.00	0.00	0.00
Maintenance Spares	0.00	0.00	0.00	0.00	0.00
Receivables	20.67	21.84	21.75	21.11	20.41
Total	20.67	21.84	21.75	21.11	20.41
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	2.49	2.63	2.62	2.54	2.46

(₹ in lakh)

Particulars	Asset-3				
	2019-20	2020-21	2021-22	2022-23	2023-24
O&M expenses	0.00	0.00	0.00	0.00	0.00
Maintenance Spares	0.00	0.00	0.00	0.00	0.00
Receivables	11.28	12.17	12.01	11.65	11.27
Total	11.28	12.17	12.01	11.65	11.27
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	1.36	1.47	1.45	1.40	1.36

(₹ in lakh)

Particulars	Asset-4				
	2019-20	2020-21	2021-22	2022-23	2023-24
O&M expenses	0.00	0.00	0.00	0.00	0.00
Maintenance Spares	0.00	0.00	0.00	0.00	0.00
Receivables	19.69	22.00	21.90	21.26	20.53
Total	19.69	22.00	21.90	21.26	20.53
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	2.37	2.65	2.64	2.56	2.47

(₹ in lakh)

Particulars	Asset-5				
	2019-20	2020-21	2021-22	2022-23	2023-24
O&M expenses	0.00	0.00	0.00	0.00	0.00
Maintenance Spares	0.00	0.00	0.00	0.00	0.00
Receivables	32.33	35.69	35.46	34.45	33.27
Total	32.33	35.69	35.46	34.45	33.27
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	3.90	4.30	4.27	4.15	4.01



Capital cost

75. Regulation 19 of the 2019 Tariff Regulations provides as follows:

“19 Capital Cost: (1) *The Capital cost of the generating station or the transmission system, as the case may be, as determined by the Commission after prudence check in accordance with these regulations shall form the basis for determination of tariff for existing and new projects.*

(2) *The Capital Cost of a new project shall include the following:*

- (a) *The expenditure incurred or projected to be incurred up to the date of commercial operation of the project;*
- (b) *Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed;*
- (c) *Any gain or loss on account of foreign exchange risk variation pertaining to the loan amount availed during the construction period;*
- (d) *Interest during construction and incidental expenditure during construction as computed in accordance with these regulations;*
- (e) *Capitalised initial spares subject to the ceiling rates in accordance with these regulations;*
- (f) *Expenditure on account of additional capitalization and de-capitalisation determined in accordance with these regulations;*
- (g) *Adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the date of commercial operation as specified under Regulation 7 of these regulations;*
- (h) *Adjustment of revenue earned by the transmission licensee by using the assets before the date of commercial operation;*
- (i) *Capital expenditure on account of ash disposal and utilization including handling and transportation facility;*
- (j) *Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of the generating station but does not include the transportation cost and any other appurtenant cost paid to the railway;*
- (k) *Capital expenditure on account of biomass handling equipment and facilities, for co-firing;*
- (l) *Capital expenditure on account of emission control system necessary to meet the revised emission standards and sewage treatment plant;*
- (m) *Expenditure on account of fulfilment of any conditions for obtaining environment clearance for the project;*
- (n) *Expenditure on account of change in law and force majeure events; and*
- (o) *Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.*

(3) *The Capital cost of an existing project shall include the following:*

- (a) *Capital cost admitted by the Commission prior to 1.4.2019 duly trued up by excluding liability, if any, as on 1.4.2019;*



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

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

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

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

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

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

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

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

76. The Petitioner has claimed the capital cost for the transmission assets for 2019-24 tariff period as follows:



(₹ in lakh)

Assets	FR AppORTIONED approved cost	RCE AppORTIONED approved cost *	Capital cost as on 31.3.2019	Actual ACE for					Total cost as on 31.3.2024
				2019-20	2020-21	2021-22	2022-23	2023-24	
Asset-1	1129.88	807.39	807.39						807.39
Asset-2	1184.97	1091.99	937.79	104.00	50.20				1091.99
Asset-3	627.35	602.71	498.39	87.00	17.32				602.71
Asset-4	1129.38	1075.27	825.96	199.45	49.86				1075.27
Asset-5	1795.09	1747.53	1385.00	290.02	72.51				1747.53
Total	5866.67	5324.89	4454.53	680.47	189.89				5324.89

*Excluding telecom sharing and earth-wire de-capitalization as per Form-5B submitted.

77. The Petitioner has claimed capital cost of ₹4454.53 lakh as on 31.3.2019 as total cost for all the transmission assets. However, the capital cost of ₹4096.28 lakh has been worked out by the Commission as on 31.3.2019 and is considered as the opening capital cost as on 1.4.2019 for determination of tariff in accordance with Regulation 19 of the 2019 Tariff Regulations.

Additional Capital Expenditure (“ACE”)

78. Regulation 24 and Regulation 25 of the 2019 Tariff Regulations provide as follows:

“24. Additional Capitalisation within the original scope and upto the cut-off date

(1) *The additional capital expenditure in respect of a 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:*

- (a) *Undischarged liabilities recognized to be payable at a future date;*
- (b) *Works deferred for execution;*
- (c) *Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 23 of these regulations;*
- (d) *Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority or order or decree of any court of law;*
- (e) *Change in law or compliance of any existing law; and*
- (f) *Force Majeure events:*

Provided that in case of any replacement of the assets, the additional capitalization shall be worked out after adjusting the gross fixed assets and cumulative depreciation of the assets replaced on account of de-capitalization.

(2) *The generating company or the transmission licensee, as the case may be shall submit*



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.”

“25. Additional Capitalisation within the original scope and after the cut-off date:

(1) The ACE incurred or projected to be incurred in respect of an existing project or a new project on the following counts within the original scope of work and after the cut off date may be admitted by the Commission, subject to prudence check:

a) Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority, or order or decree of any court of law;

b) Change in law or compliance of any existing law;

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

d) Liability for works executed prior to the cut-off date;

e) Force Majeure events;

f) Liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments; and g) Raising of ash dyke as a part of ash disposal system.

(2) In case of replacement of assets deployed under the original scope of the existing project after cut-off date, the additional capitalization may be admitted by the Commission, after making necessary adjustments in the gross fixed assets and the cumulative depreciation, subject to prudence check on the following grounds:

(a) The useful life of the assets is not commensurate with the useful life of the project and such assets have been fully depreciated in accordance with the provisions of these regulations.

(b) The replacement of the asset or equipment is necessary on account of change in law or Force Majeure conditions;

(c) The replacement of such asset or equipment is necessary on account of obsolescence of technology; and

(d) The replacement of such asset or equipment has otherwise been allowed by the Commission.”

79. The Petitioner has claimed the following ACE in respect of the transmission assets during 2019-24 in accordance with Regulation 25(1)(d) of the 2019 Tariff Regulations:



(₹ in lakh)

Assets	ACE (as per Auditor's Certificate)	
	2019-20*	2020-21
Asset-1		
Asset-2	104.00	50.20
Asset-3	87.00	17.32
Asset-4	199.45	49.86
Asset-5	290.02	72.51
Total	680.47	189.89

* ACE 2019-20 does not include IDC discharge

80. We have considered the submissions of the Petitioner. ACE claimed for 2019-20 towards balance and retention and unexecuted work is allowed under Regulation 24(1)(a), 24(1)(b) and Regulation 25(1)(d) of the 2019 Tariff Regulations which is subject to true-up. The undischarged IDC as on COD has been allowed as ACE for 2019-20. The details of ACE allowed are as follows:

(₹ in lakh)

Particulars	Asset-1	Asset-2	Asset-3	Asset-4	Asset-5
	2019-20	2019-20	2019-20	2019-20	2019-20
ACE to the extent of balance & retention payments and work deferred for execution/		104.00	87.00	199.45	290.02
ACE to the extent of unexecuted work					
Add: IDC Discharged					
Total ACE allowed		104.00	87.00	199.45	290.02

81. The ACE allowed in respect of the transmission assets under Regulation 24(1)(a), Regulation 24(1)(b) and Regulation 25(1)(d) of the 2019 Tariff Regulations is as follows:

(₹ in lakh)

Assets	Admitted ACE	
	2019-20*	2020-21
Asset-1		
Asset-2	104.00	50.20
Asset-3	87.00	17.32
Asset-4	199.45	49.86
Asset-5	290.02	72.51
Total	680.47	189.89



Capital Cost for the 2019-24 tariff period

82. Accordingly, the capital cost considered for the transmission assets for 2019-24 tariff period are as follows:

(₹ in lakh)

Assets	Capital cost (as on 1.4.2019)	ACE		Total estimated completion cost (up to 31.3.2024)
		2019-20	2020-21	
Asset-1	794.77	-	-	794.77
Asset-2	901.95	104.00	50.20	1056.15
Asset-3	453.20	87.00	17.32	557.52
Asset-4	734.14	199.45	49.86	983.45
Asset-5	1212.22	290.02	72.51	1574.75
Total	4096.28	680.47	189.89	4966.64

83. Against the RCE approved capital cost of ₹5324.89 lakh, the total estimated project cost of the transmission assets as on 31.3.2024 is ₹4966.64 lakh, which is within the apportioned approved cost as per RCE.

Debt-Equity ratio

84. Regulation 18 of the 2019 Tariff Regulations provides as follows:

“18. Debt-Equity Ratio: 1) For new projects, the debt-equity ratio of 70:30 as on date of commercial operation shall be considered. If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:

Provided that:

- i. where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff:
- ii. the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:
- iii. any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt: equity ratio.

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

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



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

(3) In case of the generating station and the transmission project including communication, project declared under commercial operation prior to 1.4.2019, debt: equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2019 shall be considered:

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

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

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

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

(6) Any expenditure incurred for the emission control system during the tariff period as may be admitted by the Commission as additional capital expenditure for determination of supplementary tariff, shall be serviced in the manner specified in clause (1) of this Regulation.”

85. Debt-equity ratio considered for the purpose of computation of tariff for 2019-24 tariff period is as follows:

Asset-1	Capital Cost (as on 1.4.2019) (₹ in lakh)	(in %)	Capital Cost (as on 31.3.2024) (₹ in lakh)	(in %)
Debt	556.34	70.00	556.34	70.00
Equity	238.43	30.00	238.43	30.00
Total	794.77	100.00	794.77	100.00

Asset-2	Capital Cost (as on 1.4.2019) (₹ in lakh)	(in %)	Capital Cost (as on 31.3.2024) (₹ in lakh)	(in %)
Debt	631.36	70.00	739.31	70.00



Equity	270.59	30.00	316.84	30.00
Total	901.95	100.00	1056.15	100.00

Asset-3	Capital Cost (as on 1.4.2019) (₹ in lakh)	(in %)	Capital Cost (as on 31.3.2024) (₹ in lakh)	(in %)
Debt	317.24	70.00	390.26	70.00
Equity	135.96	30.00	167.26	30.00
Total	453.20	100.00	557.52	100.00

Asset-4	Capital Cost (as on 1.4.2019) (₹ in lakh)	(in %)	Capital Cost (as on 31.3.2024) (₹ in lakh)	(in %)
Debt	513.90	70.00	513.90	70.00
Equity	220.24	30.00	220.24	30.00
Total	734.14	100.00	734.14	100.00

Asset-5	Capital Cost (as on 1.4.2019) (₹ in lakh)	(in %)	Capital Cost (as on 31.3.2024) (₹ in lakh)	(in %)
Debt	848.55	70.00	1102.33	70.00
Equity	363.67	30.00	472.42	30.00
Total	1212.22	100.00	1574.75	100.00

Depreciation

86. Regulation 33 of the 2019 Tariff Regulations provides as follows:

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

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

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

(3) The salvage value of the asset shall be considered as 10% and depreciation



shall be allowed up to maximum of 90% of the capital cost of the asset:

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

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

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

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

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

(5) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-I to these regulations for the Asset-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 asset”

(6) In case of the existing projects, the balance depreciable value as on 1.4.2019 shall be worked out by deducting the cumulative depreciation as admitted by the Commission upto 31.3.2019 from the gross depreciable value of the assets.

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

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

(9) Where the emission control system is implemented within the original scope of the generating station and the date of commercial operation of the generating station or unit thereof and the date of operation of the emission control system are the same, depreciation of the generating station or unit thereof including the emission control system shall be computed in accordance with Clauses (1) to (8) of this Regulation.

(10) Depreciation of the emission control system of an existing or a new generating



station or unit thereof where the date of operation of the emission control system is subsequent to the date of commercial operation of the generating station or unit thereof, shall be computed annually from the date of operation of such emission control system based on straight line method, with salvage value of 10%, over a period of –

a) twenty five years, in case the generating station or unit thereof is in operation for fifteen years or less as on the date of operation of the emission control system; or

b) balance useful life of the generating station or unit thereof plus fifteen years, in case the generating station or unit thereof is in operation for more than fifteen years as on the date of operation of the emission control system; or

c) ten years or a period mutually agreed by the generating company and the beneficiaries, whichever is higher, in case the generating station or unit thereof has completed its useful life.”

87. We have considered the submissions of the Petitioner. The IT equipment has been considered as part of the gross block and depreciated using weighted average rate of depreciation (WAROD). WAROD has been worked out and placed at Annexure-VI to Annexure-X after considering the depreciation rates as prescribed in the 2019 Tariff Regulations. Depreciation has been worked out considering the admitted capital expenditure as on 31.3.2019 and accumulated depreciation up to 31.3.2019. Depreciation allowed for the transmission assets are as follows:

(₹ in lakh)						
Asset-1						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Opening Gross Block	794.78	794.78	794.78	794.78	794.78
B	ACE	0.00	0.00	0.00	0.00	0.00
C	Closing Gross Block (A+B)	794.78	794.78	794.78	794.78	794.78
D	Average Gross Block (A+C)/2	794.78	794.78	794.78	794.78	794.78
E	Average Gross Block (90% depreciable assets)	794.78	794.78	794.78	794.78	794.78
F	Average Gross Block (100% depreciable assets)	0.00	0.00	0.00	0.00	0.00
G	Depreciable value (excluding IT equipment and software) (E*90%)	715.30	715.30	715.30	715.30	715.30
H	Depreciable value of IT equipment and software	0.00	0.00	0.00	0.00	0.00
I	Total Depreciable Value (G+H)	715.30	715.30	715.30	715.30	715.30
J	Weighted Average Rate of	6.33	6.33	6.33	6.33	6.33



Asset-1						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	Depreciation (WAROD) (in %)					
K	Lapsed useful life at the beginning of the year (Year)	0.00	1.00	2.00	3.00	4.00
L	Balance useful life at the beginning of the year (Year)	15.00	14.00	13.00	12.00	11.00
M	Depreciation during the year (D*J)	50.31	50.31	50.31	50.31	50.31
N	Aggregate Cumulative Depreciation at the end of the year	62.70	113.01	163.31	213.62	263.93
O	Remaining Aggregate Depreciable Value at the end of the year(I-N)	652.60	602.29	551.98	501.67	451.36

(₹ in lakh)

Asset-2						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Opening Gross Block	901.95	1005.95	1056.15	1056.15	1056.15
B	ACE	104.00	50.20	0.00	0.00	0.00
C	Closing Gross Block (A+B)	1005.95	1056.15	1056.15	1056.15	1056.15
D	Average Gross Block (A+C)/2	953.95	1031.05	1056.15	1056.15	1056.15
E	Average Gross Block (90% depreciable assets)	953.95	1031.05	1056.15	1056.15	1056.15
F	Average Gross Block (100% depreciable assets)	0.00	0.00	0.00	0.00	0.00
G	Depreciable value (excluding IT equipment and software) (E*90%)	858.55	927.94	950.53	950.53	950.53
H	Depreciable value of IT equipment and software	0.00	0.00	0.00	0.00	0.00
I	Total Depreciable Value (G+H)	858.55	927.94	950.53	950.53	950.53
J	Weighted Average Rate of Depreciation (WAROD) (in %)	6.33	6.33	6.33	6.33	6.33
K	Lapsed useful life at the beginning of the year (Year)	0.00	1.00	2.00	3.00	4.00
L	Balance useful life at the beginning of the year (Year)	15.00	14.00	13.00	12.00	11.00
M	Depreciation during the year (D*J)	60.38	65.27	66.85	66.85	66.85
N	Aggregate Cumulative Depreciation at the end of the year	74.23	139.49	206.35	273.20	340.05
O	Remaining Aggregate Depreciable Value at the end of	784.33	788.45	744.19	677.33	610.48



Asset-2						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	the year(I-N)					

(₹ in lakh)

Asset-3						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Opening Gross Block	453.20	540.20	557.52	557.52	557.52
B	ACE	87.00	17.32	0.00	0.00	0.00
C	Closing Gross Block (A+B)	540.20	557.52	557.52	557.52	557.52
D	Average Gross Block (A+C)/2	496.70	548.86	557.52	557.52	557.52
E	Average Gross Block (90% depreciable assets)	496.70	548.86	557.52	557.52	557.52
F	Average Gross Block (100% depreciable assets)	0.00	0.00	0.00	0.00	0.00
G	Depreciable value (excluding IT equipment and software) (E*90%)	447.03	493.97	501.77	501.77	501.77
H	Depreciable value of IT equipment and software	0.00	0.00	0.00	0.00	0.00
I	Total Depreciable Value (G+H)	447.03	493.97	501.77	501.77	501.77
J	Weighted Average Rate of Depreciation (WAROD) (in %)	6.33	6.33	6.33	6.33	6.33
K	Lapsed useful life at the beginning of the year (Year)	0.00	1.00	2.00	3.00	4.00
L	Balance useful life at the beginning of the year (Year)	15.00	14.00	13.00	12.00	11.00
M	Depreciation during the year (D*J)	31.44	34.74	35.29	35.29	35.29
N	Aggregate Cumulative Depreciation at the end of the year	38.51	73.25	108.54	143.84	179.13
O	Remaining Aggregate Depreciable Value at the end of the year(I-N)	408.52	420.72	393.22	357.93	322.64

(₹ in lakh)

Asset-4						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Opening Gross Block	734.14	933.59	983.45	983.45	983.45
B	ACE	199.45	49.86	0.00	0.00	0.00
C	Closing Gross Block (A+B)	933.59	983.45	983.45	983.45	983.45
D	Average Gross Block (A+C)/2	833.87	958.52	983.45	983.45	983.45
E	Average Gross Block (90% depreciable assets)	833.87	958.52	983.45	983.45	983.45
F	Average Gross Block (100%	0.00	0.00	0.00	0.00	0.00



Asset-4						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	depreciable assets)					
G	Depreciable value (excluding IT equipment and software) (E*90%)	750.48	862.67	885.11	885.11	885.11
H	Depreciable value of IT equipment and software	0.00	0.00	0.00	0.00	0.00
I	Total Depreciable Value (G+H)	750.48	862.67	885.11	885.11	885.11
J	Weighted Average Rate of Depreciation (WAROD) (in %)	6.33	6.33	6.33	6.33	6.33
K	Lapsed useful life at the beginning of the year (Year)	0.00	1.00	2.00	3.00	4.00
L	Balance useful life at the beginning of the year (Year)	15.00	14.00	13.00	12.00	11.00
M	Depreciation during the year (D*J)	52.78	60.67	62.25	62.25	62.25
N	Aggregate Cumulative Depreciation at the end of the year	52.91	113.59	175.84	238.09	300.34
O	Remaining Aggregate Depreciable Value at the end of the year(I-N)	697.57	749.08	709.27	647.02	584.76

(₹ in lakh)

Asset-5						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Opening Gross Block	1212.22	1502.24	1574.75	1574.75	1574.75
B	ACE	290.02	72.51	0.00	0.00	0.00
C	Closing Gross Block (A+B)	1502.24	1574.75	1574.75	1574.75	1574.75
D	Average Gross Block (A+C)/2	1357.23	1538.49	1574.75	1574.75	1574.75
E	Average Gross Block (90% depreciable assets)	1357.23	1538.49	1574.75	1574.75	1574.75
F	Average Gross Block (100% depreciable assets)	0.00	0.00	0.00	0.00	0.00
G	Depreciable value (excluding IT equipment and software) (E*90%)	1221.50	1384.64	1417.27	1417.27	1417.27
H	Depreciable value of IT equipment and software	0.00	0.00	0.00	0.00	0.00
I	Total Depreciable Value (G+H)	1221.50	1384.64	1417.27	1417.27	1417.27
J	Weighted Average Rate of Depreciation (WAROD) (in %)	6.33	6.33	6.33	6.33	6.33
K	Lapsed useful life at the beginning of the year (Year)	0.00	1.00	2.00	3.00	4.00
L	Balance useful life at the	15.00	14.00	13.00	12.00	11.00



Asset-5						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	beginning of the year (Year)					
M	Depreciation during the year (D*J)	85.91	97.39	99.68	99.68	99.68
N	Aggregate Cumulative Depreciation at the end of the year	86.12	183.51	283.19	382.87	482.55
O	Remaining Aggregate Depreciable Value at the end of the year(I-N)	1135.38	1201.13	1134.08	1034.40	934.72

Interest on Loan (“IoL”)

88. Regulation 32 of the 2019 Tariff Regulations provides as follows:

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

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

(3) *The repayment for each of the year of the tariff period 2019-24 shall be deemed to be equal to the depreciation allowed for the corresponding year/period. In case of de-capitalization of asset, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered upto the date of de-capitalisation of such asset.*

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

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

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

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

(5a) *The rate of interest on loan for installation of emission control system shall be the weighted average rate of interest of actual loan portfolio of the emission control system or in the absence of actual loan portfolio, the weighted average rate of interest of the generating company as a whole shall be considered.*



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

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

89. The weighted average rate of interest of IoL has been considered on the basis of the rates prevailing as on 1.4.2019. The Petitioner has prayed that the change in interest rate due to floating rate of interest applicable, if any, during 2019-24 tariff period will be adjusted. Accordingly, the floating rate of interest, if any, shall be considered at the time of true-up. In view of above, IoL has been worked out in accordance with Regulation 32 of the 2019 Tariff Regulations. IoL allowed for the transmission assets are as follows:

(₹ in lakh)

		Asset-1				
Particulars		2019-20	2020-21	2021-22	2022-23	2023-24
A	Gross Normative Loan	556.34	556.34	556.34	556.34	556.34
B	Cumulative Repayments upto Previous Year	12.39	62.70	113.01	163.31	213.62
C	Net Loan-Opening (A-B)	543.96	493.65	443.34	393.03	342.72
D	Additions	0.00	0.00	0.00	0.00	0.00
E	Repayment during the year	50.31	50.31	50.31	50.31	50.31
F	Net Loan-Closing (C+D-E)	493.65	443.34	393.03	342.72	292.41
G	Average Loan (A+F)/2	518.80	468.49	418.18	367.87	317.56
H	Weighted Average Rate of Interest on Loan (in %)	7.469	7.425	7.425	7.424	7.419
I	Interest on Loan (GxH)	38.75	34.79	31.05	27.31	23.56

(₹ in lakh)

		Asset-2				
Particulars		2019-20	2020-21	2021-22	2022-23	2023-24
A	Gross Normative Loan	631.37	704.17	739.31	739.31	739.31
B	Cumulative Repayments upto Previous Year	13.84	74.23	139.49	206.35	273.20
C	Net Loan-Opening (A-B)	617.52	629.94	599.82	532.96	466.11
D	Additions	72.80	35.14	0.00	0.00	0.00
E	Repayment during the year	60.38	65.27	66.85	66.85	66.85
F	Net Loan-Closing (C+D-E)	629.94	599.82	532.96	466.11	399.26
G	Average Loan (A+F)/2	623.73	614.88	566.39	499.54	432.68
H	Weighted Average Rate of Interest on Loan (in %)	7.360	7.364	7.364	7.364	7.362
I	Interest on Loan (GxH)	45.91	45.28	41.71	36.79	31.85



(₹ in lakh)

Asset-3						
Particulars		2019-20	2020-21	2021-22	2022-23	2023-24
A	Gross Normative Loan	317.24	378.14	390.26	390.26	390.26
B	Cumulative Repayments upto Previous Year	7.07	38.51	73.25	108.54	143.84
C	Net Loan-Opening (A-B)	310.17	339.63	317.01	281.72	246.43
D	Additions	60.90	12.12	0.00	0.00	0.00
E	Repayment during the year	31.44	34.74	35.29	35.29	35.29
F	Net Loan-Closing (C+D-E)	339.63	317.01	281.72	246.43	211.14
G	Average Loan (A+F)/2	324.90	328.32	299.36	264.07	228.78
H	Weighted Average Rate of Interest on Loan (in %)	7.350	7.364	7.364	7.363	7.360
I	Interest on Loan (GxH)	23.88	24.18	22.05	19.44	16.84

(₹ in lakh)

Asset-4						
Particulars		2019-20	2020-21	2021-22	2022-23	2023-24
A	Gross Normative Loan	513.90	653.52	688.42	688.42	688.42
B	Cumulative Repayments upto Previous Year	0.13	52.91	113.59	175.84	238.09
C	Net Loan-Opening (A-B)	513.77	600.61	574.83	512.58	450.33
D	Additions	139.62	34.90	0.00	0.00	0.00
E	Repayment during the year	52.78	60.67	62.25	62.25	62.25
F	Net Loan-Closing (C+D-E)	600.61	574.83	512.58	450.33	388.08
G	Average Loan (A+F)/2	557.19	587.72	543.71	481.45	419.20
H	Weighted Average Rate of Interest on Loan (in %)	7.786	7.783	7.810	7.842	7.831
I	Interest on Loan (GxH)	43.38	45.74	42.46	37.76	32.83

(₹ in lakh)

Asset-5						
Particulars		2019-20	2020-21	2021-22	2022-23	2023-24
A	Gross Normative Loan	848.55	1051.57	1102.33	1102.33	1102.33
B	Cumulative Repayments upto Previous Year	0.21	86.12	183.51	283.19	382.87
C	Net Loan-Opening (A-B)	848.34	965.45	918.82	819.14	719.46
D	Additions	203.02	50.76	0.00	0.00	0.00
E	Repayment during the year	85.91	97.39	99.68	99.68	99.68
F	Net Loan-Closing (C+D-E)	965.45	918.82	819.14	719.46	619.78
G	Average Loan (A+F)/2	906.90	942.13	868.98	769.30	669.62
H	Weighted Average Rate of Interest on Loan (in %)	7.675	7.676	7.713	7.760	7.750
I	Interest on Loan (GxH)	69.61	72.32	67.02	59.70	51.90

Return on Equity ("RoE")

90. Regulation 30 and Regulation 31 of the 2019 Tariff Regulations provide as follows:



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

(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating station, transmission system including communication system and run-of- river hydro generating station, and at the base rate of 16.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run-of-river generating station with pondage:

Provided that return on equity in respect of Additional Capitalization after cut-off date beyond the original scope excluding Additional Capitalization due to Change in Law, shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system or in the absence of actual loan portfolio of the generating station or the transmission system, the weighted average rate of interest of the generating company or the transmission licensee, as the case may be, as a whole shall be considered, subject to ceiling of 14%.

Provided further that:

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

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

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

- a) rate of return on equity shall be reduced by 0.25% in case of failure to achieve the ramp rate of 1% per minute;*
- b) an additional rate of return on equity of 0.25% shall be allowed for every incremental ramp rate of 1% per minute achieved over and above the ramp rate of 1% per minute, subject to ceiling of additional rate of return on equity of 1.00%:*

Provided that the detailed guidelines in this regard shall be issued by National Load Dispatch Centre by 30.6.2019.

(3) The return on equity in respect of additional capitalization on account of emission control system shall be computed at the base rate of one year marginal cost of lending rate (MCLR) of the State Bank of India as on 1st April of the year in which the date of operation (ODe) occurs plus 350 basis point, subject to ceiling of 14%.”



31. Tax on Return on Equity:(1) The base rate of return on equity as allowed by the Commission under Regulation 30 of these regulations shall be grossed up with the effective tax rate of the respective financial year. For this purpose, the effective tax rate shall be considered on the basis of actual tax paid in respect of the financial year in line with the provisions of the relevant Finance Acts by the concerned generating company or the transmission licensee, as the case may be. The actual tax paid on income from other businesses including deferred tax liability (i.e. income from business other than business of generation or transmission, as the case may be) shall be excluded for the calculation of effective tax rate.

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

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

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

Illustration-

(i) In case of a generating company or a transmission licensee paying Minimum Alternate Tax (MAT) @ 21.55% including surcharge and cess:

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

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

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

(3) The generating company or the transmission licensee, as the case may be, shall true up the grossed up rate of return on equity at the end of every financial year based on actual tax paid together with any additional tax demand including interest thereon, duly adjusted for any refund of tax including interest received from the income tax authorities pertaining to the tariff period 2019-24 on actual gross income of any financial year. However, penalty, if any, arising on account of delay in deposit or short deposit of tax amount shall not be claimed by the generating company or the transmission licensee, as the case may be. Any under-recovery or over-recovery of grossed up rate on return on equity after truing up, shall be recovered



or refunded to beneficiaries or the long-term customers, as the case may be, on year-to-year basis.”

91. The Petitioner has submitted that it is liable to pay income tax at MAT rate prescribed under the Taxation laws (Amendment) Ordinance, 2019. Accordingly, MAT rate applicable in 2019-20 has been considered for the purpose of RoE which shall be trued up with actual tax rate in accordance with Regulation 31(3) of the 2019 Tariff Regulations.

92. We have considered the submissions of the Petitioner. The RoE allowed for the transmission assets under Regulation 30 of the 2019 Tariff Regulations are as follows:

(₹ in lakh)

Asset-1						
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24	
A	Opening Equity	238.43	238.43	238.43	238.43	238.43
B	Additions	0.00	0.00	0.00	0.00	0.00
C	Closing Equity (A-B)	238.43	238.43	238.43	238.43	238.43
D	Average Equity (A+B)/2	238.43	238.43	238.43	238.43	238.43
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	17.472	17.472	17.472	17.472	17.472
G	Rate of Return on Equity (in %)	18.782	18.782	18.782	18.782	18.782
H	Return on Equity (DxG)	44.78	44.78	44.78	44.78	44.78

(₹ in lakh)

Asset-2						
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24	
A	Opening Equity	270.58	301.78	316.84	316.84	316.84
B	Additions	31.20	15.06	0.00	0.00	0.00
C	Closing Equity (A-B)	301.78	316.84	316.84	316.84	316.84
D	Average Equity (A+B)/2	286.18	309.31	316.84	316.84	316.84
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	17.472	17.472	17.472	17.472	17.472
G	Rate of Return on Equity (in %)	18.782	18.782	18.782	18.782	18.782
H	Return on Equity (DxG)	53.75	58.09	59.51	59.51	59.51



(₹ in lakh)

Asset-3						
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24	
A	Opening Equity	135.96	162.06	167.26	167.26	167.26
B	Additions	26.10	5.20	0.00	0.00	0.00
C	Closing Equity (A-B)	162.06	167.26	167.26	167.26	167.26
D	Average Equity (A+B)/2	149.01	164.66	167.26	167.26	167.26
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	17.472	17.472	17.472	17.472	17.472
G	Rate of Return on Equity (in %)	18.782	18.782	18.782	18.782	18.782
H	Return on Equity (DxG)	27.99	30.93	31.41	31.41	31.41

(₹ in lakh)

Asset-4						
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24	
A	Opening Equity	220.24	280.07	295.03	295.03	295.03
B	Additions	59.83	14.96	0.00	0.00	0.00
C	Closing Equity (A-B)	280.07	295.03	295.03	295.03	295.03
D	Average Equity (A+B)/2	250.16	287.55	295.03	295.03	295.03
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	17.472	17.472	17.472	17.472	17.472
G	Rate of Return on Equity (in %)	18.782	18.782	18.782	18.782	18.782
H	Return on Equity (DxG)	46.98	54.01	55.41	55.41	55.41

(₹ in lakh)

Asset-5						
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24	
A	Opening Equity	363.66	450.67	472.42	472.42	472.42
B	Additions	87.00	21.75	0.00	0.00	0.00
C	Closing Equity (A-B)	450.67	472.42	472.42	472.42	472.42
D	Average Equity (A+B)/2	407.16	461.54	472.42	472.42	472.42
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	17.472	17.472	17.472	17.472	17.472
G	Rate of Return on Equity (in %)	18.782	18.782	18.782	18.782	18.782
H	Return on Equity (DxG)	76.47	86.69	88.73	88.73	88.73



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

93. The Petitioner has submitted the claim of the O&M Expenses for Asset-1 under Central Sector Portion at 2% of the capital cost subject to the actual expenditure at the time of truing-up. The Petitioner has not claimed O&M Expenses for Asset-2 to Asset-5, which are State Sector Portion. The capital cost claimed and allowed in this order for Asset-1 is as follows:

	(₹ in lakh)				
Capital cost as on 31.3.2019	2019-20	2020-21	2021-22	2022-23	2023-24
Claimed	807.39	807.39	807.39	807.39	807.39
Allowed	807.20	807.20	807.20	807.20	807.20

94. Accordingly, the following O&M Expenses are allowed for Asset-1, which shall be subject to review at the time of truing-up:

	(₹ in lakh)				
O&M Expenses	2019-20	2020-21	2021-22	2022-23	2023-24
Claimed	16.15	16.15	16.15	16.15	16.15
Allowed	16.14	16.14	16.14	16.14	16.14

Interest on Working Capital (“IWC”)

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

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

.....

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

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

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



(iii) Operation and maintenance expenses, including security expenses for one month.”

(3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2019 or as on 1st April of the year during the tariff period 2019-24 in which the generating station or a unit thereof or the transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later:

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

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

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

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

96. The Petitioner has submitted that it has computed the IWC for 2019-24 period considering the SBI Base Rate plus 350 basis points as on 1.4.2019. The Petitioner has considered the rate of IWC as 12.05%. IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The rate of IWC considered is 12.05% (SBI 1-year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points) for 2019-20, 11.25% (SBI 1-year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points) for 2020-21, 10.50% (SBI 1 year MCLR applicable as on 1.4.2021 of 7.00% plus 350 basis points) for 2021-22 and 10.50% (SBI 1 year MCLR applicable as on 1.4.2022 of 7.00% plus 350 basis points) for 2022-24.

97. We have considered the submissions of the Petitioner. IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations and the components of the working capital and interest allowed thereon for the transmission assets for 2019-24 tariff period are as follows:



(₹ in lakh)

Asset-1						
Particulars		2019-20	2020-21	2021-22	2022-23	2023-24
A	Working Capital for O&M Expenses (Equivalent to annualized O&M Expenses for one month)	1.32	1.32	1.32	1.32	1.32
B	Working Capital for Maintenance Spares (Equivalent to 15% of O&M Expenses)	2.38	2.38	2.38	2.38	2.38
C	Working Capital for Receivables (Equivalent to 45 days of annual transmission charges)	18.74	18.28	17.79	17.32	16.81
D	Total Working Capital (A+B+C)	22.45	21.99	21.50	21.03	20.52
E	Rate of Interest (in %)	12.05	11.25	10.50	10.50	10.50
F	Interest on Working Capital (DxE)	2.71	2.47	2.26	2.21	2.15

(₹ in lakh)

Asset-2						
Particulars		2019-20	2020-21	2021-22	2022-23	2023-24
A	Working Capital for O&M Expenses (Equivalent to annualized O&M Expenses for one month)	0.00	0.00	0.00	0.00	0.00
B	Working Capital for Maintenance Spares (Equivalent to 15% of O&M Expenses)	0.00	0.00	0.00	0.00	0.00
	Working Capital for Receivables (Equivalent to 45 days of annual transmission charges)	19.97	21.08	20.99	20.38	19.71
D	Total Working Capital (A+B+C)	19.97	21.08	20.99	20.38	19.71
E	Rate of Interest (in %)	12.05	11.25	10.50	10.50	10.50
F	Interest on Working Capital (DxE)	2.41	2.37	2.20	2.14	2.07

(₹ in lakh)

Asset-3						
Particulars		2019-20	2020-21	2021-22	2022-23	2023-24
A	Working Capital for O&M Expenses (Equivalent to annualized O&M Expenses for one month)	0.00	0.00	0.00	0.00	0.00



B	Working Capital for Maintenance Spares (Equivalent to 15% of O&M Expenses)	0.00	0.00	0.00	0.00	0.00
C	Working Capital for Receivables (Equivalent to 45 days of annual transmission charges)	10.40	11.23	11.09	10.76	10.41
D	Total Working Capital (A+B+C)	10.40	11.23	11.09	10.76	10.41
E	Rate of Interest (in %)	12.05	11.25	10.50	10.50	10.50
F	Interest on Working Capital (DxE)	1.25	1.26	1.16	1.13	1.09

(₹ in lakh)

Asset-4						
Particulars		2019-20	2020-21	2021-22	2022-23	2023-24
A	Working Capital for O&M Expenses (Equivalent to annualized O&M Expenses for one month)	0.00	0.00	0.00	0.00	0.00
B	Working Capital for Maintenance Spares (Equivalent to 15% of O&M Expenses)	0.00	0.00	0.00	0.00	0.00
C	Working Capital for Receivables (Equivalent to 45 days of annual transmission charges)	17.86	20.06	20.00	19.41	18.74
D	Total Working Capital (A+B+C)	17.86	20.06	20.00	19.41	18.74
E	Rate of Interest (in %)	12.05	11.25	10.50	10.50	10.50
F	Interest on Working Capital (DxE)	2.15	2.26	2.10	2.04	1.97

(₹ in lakh)

Asset-5						
Particulars		2019-20	2020-21	2021-22	2022-23	2023-24
A	Working Capital for O&M Expenses (Equivalent to annualized O&M Expenses for one month)	0.00	0.00	0.00	0.00	0.00
B	Working Capital for Maintenance Spares (Equivalent to 15% of O&M Expenses)	0.00	0.00	0.00	0.00	0.00
C	Working Capital for Receivables (Equivalent to 45 days of annual transmission charges)	28.95	32.05	31.90	30.99	29.93



Asset-5						
Particulars		2019-20	2020-21	2021-22	2022-23	2023-24
D	Total Working Capital (A+B+C)	28.95	32.05	31.90	30.99	29.93
E	Rate of Interest (in %)	12.05	11.25	10.50	10.50	10.50
F	Interest on Working Capital (DxE)	3.49	3.61	3.35	3.25	3.14

Annual Fixed Charges for 2019-24 Tariff Period

98. Accordingly, the Annual Transmission Charges allowed for the transmission assets are as follows:

(₹ in lakh)

Asset-1	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	50.31	50.31	50.31	50.31	50.31
Interest on Loan	38.75	34.79	31.05	27.31	23.56
Return on Equity	44.78	44.78	44.78	44.78	44.78
Interest on Working Capital	2.71	2.47	2.26	2.21	2.15
O&M Expenses	15.90	15.90	15.90	15.90	15.90
Total	152.44	148.25	144.29	140.50	136.70

(₹ in lakh)

Asset-2	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	60.38	65.27	66.85	66.85	66.85
Interest on Loan	45.91	45.28	41.71	36.79	31.85
Return on Equity	53.75	58.09	59.51	59.51	59.51
Interest on Working Capital	2.41	2.37	2.20	2.14	2.07
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Total	162.45	171.01	170.28	165.29	160.28

(₹ in lakh)

Asset-3	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	31.44	34.74	35.29	35.29	35.29
Interest on Loan	23.88	24.18	22.05	19.44	16.84
Return on Equity	27.99	30.93	31.41	31.41	31.41
Interest on Working Capital	1.25	1.26	1.16	1.13	1.09
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Total	84.56	91.11	89.91	87.27	84.63

(₹ in lakh)

Asset-4	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	52.78	60.67	62.25	62.25	62.25
Interest on Loan	43.38	45.74	42.46	37.76	32.83



Asset-4	2019-20	2020-21	2021-22	2022-23	2023-24
Return on Equity	46.98	54.01	55.41	55.41	55.41
Interest on Working Capital	2.15	2.26	2.10	2.04	1.97
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Total	145.29	162.68	162.23	157.46	152.46

(₹ in lakh)

Asset-5	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	85.91	97.39	99.68	99.68	99.68
Interest on Loan	69.61	72.32	67.02	59.70	51.90
Return on Equity	76.47	86.69	88.73	88.73	88.73
Interest on Working Capital	3.49	3.61	3.35	3.25	3.14
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Total	235.48	260.00	258.78	251.36	243.45

Filing Fee and Publication Expenses

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

100. We have considered the submissions of the Petitioner. Accordingly, The Petitioner shall be entitled for reimbursement of the filing fees and publication expenses in connection with the present petition, directly from the beneficiaries on pro-rata basis in accordance with Regulation 70(1) of the 2019 Tariff Regulations.

License Fee and RLDC Fees and Charges

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

Goods and Services Tax

102. The Petitioner has submitted that if GST is levied at any rate and at any point of time in future on charges of transmission of electricity, the same will be borne and



additionally paid by the Respondent(s) to the Petitioner and the same will be charged and billed separately by the Petitioner. Further additional taxes, if any, are to be paid by the Petitioner on account of demand from Government/ Statutory Authorities, the same may be allowed to be recovered from the beneficiaries.

103. We have considered the submissions of the Petitioner. Since, GST is not levied on transmission services at present, we are of the view that Petitioner's prayer is premature.

Security Expenses

104. The Petitioner has submitted that security expenses in respect of transmission asset are not claimed in the instant petition, and it would file a separate petition for claiming the overall security expenses and the consequential IWC.

105. We have considered the above submissions of Petitioner. The Petitioner has claimed consolidated security expenses for all the transmission asset owned by it on projected basis for the 2019-24 tariff period on the basis of actual security expenses incurred in 2018-19 in Petition No. 260/MP/2020. The said petition has already been disposed of by the Commission vide order dated 3.8.2021. Therefore, the Petitioner's prayer in the instant petition for allowing it to file a separate petition for claiming the overall security expenses and consequential IWC has become infructuous.

Capital Spares

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



Sharing of Transmission Charges

107. The Annual Fixed Charges approved for Asset-1, under the Central Sector, shall be shared as per the applicable Sharing Regulations as provided under Regulation 43 of the 2014 Tariff Regulations and Regulation 57 of the 2019 Tariff Regulations for the 2018-19 and 2019-24 tariff period respectively. The Annual Fixed Charges approved for Asset-2, Asset-3, Asset-4 and Asset-5, under the State Sector, shall be borne by the respective STUs.

108. To summarise:

- a. The Annual Fixed Charges (AFC) approved for the transmission assets for the 2014-19 tariff period are as follows:

(₹ in lakh)

Particulars	Asset-1	Asset-2	Asset-3	Asset-4	Asset-5
	2018-19 (Pro-rata for 90 days)	2018-19 (Pro-rata for 90 days)	2018-19 (Pro-rata for 90 days)	2018-19 (Pro-rata for 1 day)	2018-19 (Pro-rata for 1 day)
Annual Fixed Charges	43.33	38.71	19.77	0.36	0.60

- b. AFC allowed for the transmission assets for 2019-24 tariff period in this order are as follows:

(₹ in lakh)

Particulars	Asset-1				
	2019-20	2020-21	2021-22	2022-23	2023-24
AFC	152.44	148.25	144.29	140.50	136.70

(₹ in lakh)

Particulars	Asset-2				
	2019-20	2020-21	2021-22	2022-23	2023-24
AFC	162.45	171.01	170.28	165.29	160.28



(₹ in lakh)

Particulars	Asset-3				
	2019-20	2020-21	2021-22	2022-23	2023-24
AFC	84.56	91.11	89.91	87.27	84.63

(₹ in lakh)

Particulars	Asset-4				
	2019-20	2020-21	2021-22	2022-23	2023-24
AFC	145.29	162.68	162.23	157.46	152.46

(₹ in lakh)

Particulars	Asset-5				
	2019-20	2020-21	2021-22	2022-23	2023-24
AFC	235.48	260.00	258.78	251.36	243.45

109. Annexure-I to Annexure-X given hereinafter form part of the order which provide details of annual depreciation during 2014-19 and 2019-24 tariff period.

110. This order disposes of Petition No. 204/TT/2021 in terms of the above discussions and findings.

sd/-
(P. K. Singh)
Member

sd/-
(Arun Goyal)
Member

sd/-
(I. S. Jha)
Member



Annexure-I

Asset-1	Particulars	Admitted capital cost as on COD (₹ in lakh)	ACE 2018-19 (₹ in lakh)	Admitted capital cost as on 31.3.2019 (₹ in lakh)	Rate of depreciation (in %)	Annual depreciation as per Regulations (₹ in lakh)				
						2014-15	2015-16	2016-17	2017-18	2018-19
	PLCC	792.49	2.29	794.78	6.33	0.00	0.00	0.00	0.00	50.24
	TOTAL	792.49	2.29	794.78		0.00	0.00	0.00	0.00	50.24
				Average Gross Block (₹ in lakh)		0.00	0.00	0.00	0.00	793.63
				Weighted Average Rate of Depreciation (in %)		0.00	0.00	0.00	0.00	6.33



Annexure-II

Asset-2	Particulars	Admitted capital cost as on COD (₹ in lakh)	ACE 2018-19 (₹ in lakh)	Admitted capital cost as on 31.3.2019 (₹ in lakh)	Rate of depreciation (in %)	Annual Depreciation as per Regulations (₹ in lakh)				
						2014-15	2015-16	2016-17	2017-18	2018-19
	PLCC	871.66	30.29	901.95	6.33	0.00	0.00	0.00	0.00	56.13
	TOTAL	871.66	30.29	901.95		0.00	0.00	0.00	0.00	56.13
				Average Gross Block (₹ in lakh)		0.00	0.00	0.00	0.00	886.80
				Weighted Average Rate of Depreciation (in %)		0.00	0.00	0.00	0.00	6.33



Annexure-III

Asset-3	Particulars	Admitted capital cost as on COD (₹ in lakh)	ACE 2018-19 (₹ in lakh)	Admitted capital cost as on 31.3.2019 (₹ in lakh)	Rate of depreciation (in %)	Annual Depreciation as per Regulations (₹ in lakh)				
						2014-15	2015-16	2016-17	2017-18	2018-19
	PLCC	453.20	0.00	453.20	6.33	0.00	0.00	0.00	0.00	28.69
	TOTAL	453.20	0.00	453.20		0.00	0.00	0.00	0.00	28.69
				Average Gross Block (₹ in lakh)		0.00	0.00	0.00	0.00	453.20
				Weighted Average Rate of Depreciation (in %)		0.00	0.00	0.00	0.00	6.33



Asset-4	Particulars	Admitted capital cost as on COD (₹ in lakh)	ACE 2018-19 (₹ in lakh)	Admitted capital cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations (₹ in lakh)				
						2014-15	2015-16	2016-17	2017-18	2018-19
	PLCC	734.14	0.00	734.14	6.33	0.00	0.00	0.00	0.00	46.47
	TOTAL	734.14	0.00	734.14		0.00	0.00	0.00	0.00	46.47
				Average Gross Block (₹ in lakh)		0.00	0.00	0.00	0.00	734.14
				Weighted Average Rate of Depreciation (in %)		0.00	0.00	0.00	0.00	6.33



Annexure-V

Asset-5	Particulars	Admitted capital cost as on COD (₹ in lakh)	ACE 2018-19 (₹ in lakh)	Admitted capital cost as on 31.3.2019 (₹ in lakh)	Rate of depreciation (in %)	Annual Depreciation as per Regulations (₹ in lakh)				
						2014-15	2015-16	2016-17	2017-18	2018-19
	PLCC	1212.22	0.00	1212.22	6.33	0.00	0.00	0.00	0.00	76.73
	TOTAL	1212.22	0.00	1212.22		0.00	0.00	0.00	0.00	76.73
				Average Gross Block (₹ in lakh)		0.00	0.00	0.00	0.00	1212.22
				Weighted Average Rate of Depreciation (in %)		0.00	0.00	0.00	0.00	6.33



Annexure-VI

Asset-1	Particulars	Admitted capital cost as on 1.4.2019 (₹ in lakh)	ACE 2019-24 (₹ in lakh)					Admitted capital cost as on 31.3.2024 (₹ in lakh)	Rate of depreciation (in %)	Annual Depreciation as per Regulations (₹ in lakh)				
			2019-20	2020-21	2021-22	2022-23	2023-24			2019-20	2020-21	2021-22	2022-23	2023-24
	PLCC	794.78	0.00	0.00	0.00	0.00	0.00	794.78	6.33	50.31	50.31	50.31	50.31	50.31
	TOTAL	794.78	0.00	0.00	0.00	0.00	0.00	794.78		50.31	50.31	50.31	50.31	50.31
								Average Gross Block (₹ in lakh)		794.78	794.78	794.78	794.78	794.78
								Weighted Average Rate of Depreciation (in %)		6.33	6.33	6.33	6.33	6.33



Annexure-VII

Asset -2	Particulars	Admitted capital cost as on 1.4.2019 (₹ in lakh)	ACE 2019-24 (₹ in lakh)					Admitted capital cost as on 31.3.2024 (₹ in lakh)	Rate of depreciation (in %)	Annual Depreciation as per Regulations (₹ in lakh)				
			2019-20	2020-21	2021-22	2022-23	2023-24			2019-20	2020-21	2021-22	2022-23	2023-24
	PLCC	901.95	104.00	50.20	0.00	0.00	0.00	1005.95	6.33	60.38	65.27	66.85	66.85	66.85
	TOTAL	901.95	104.00	50.20	0.00	0.00	0.00	1005.95		60.38	65.27	66.85	66.85	66.85
								Average Gross Block (₹ in lakh)		953.95	1031.05	1056.15	1056.15	1056.15
								Weighted Average Rate of Depreciation (in %)		6.33	6.33	6.33	6.33	6.33



Annexure-VIII

Asset-3	Particulars	Admitted capital cost as on 1.4.2019 (₹ in lakh)	ACE 2019-24 (₹ in lakh)					Admitted capital cost as on 31.3.2024 (₹ in lakh)	Rate of depreciation (in %)	Annual Depreciation as per Regulations (₹ in lakh)				
			2019-20	2020-21	2021-22	2022-23	2023-24			2019-20	2020-21	2021-22	2022-23	2023-24
	PLCC	453.20	87.00	17.32	0.00	0.00	0.00	557.22	6.33	31.44	34.74	35.29	35.29	35.29
	TOTAL	453.20	87.00	17.32	0.00	0.00	0.00	557.22		31.44	34.74	35.29	35.29	35.29
								Average Gross Block (₹ in lakh)		496.7	548.86	557.52	557.52	557.52
								Weighted Average Rate of Depreciation (in %)		6.33	6.33	6.33	6.33	6.33



Annexure-IX

Asset -4	Particulars	Admitted capital cost as on 1.4.2019 (₹ in lakh)	ACE 2019-24 (₹ in lakh)					Admitted capital cost as on 31.3.2024 (₹ in lakh)	Rate of depreciation (in %)	Annual Depreciation as per Regulations (₹ in lakh)				
			2019-20	2020-21	2021-22	2022-23	2023-24			2019-20	2020-21	2021-22	2022-23	2023-24
	PLCC	734.14	199.45	49.86	0.00	0.00	0.00	983.45	6.33	52.78	60.67	62.25	62.25	62.25
	TOTAL	734.14	199.45	49.86	0.00	0.00	0.00	983.45		52.78	60.67	62.25	62.25	62.25
								Average Gross Block (₹ in lakh)		833.87	958.52	983.45	983.45	983.45
								Weighted Average Rate of Depreciation (in %)		6.33	6.33	6.33	6.33	6.33



Annexure-X

Asset -5	Particulars	Admitted capital cost as on 1.4.2019 (₹ in lakh)	ACE 2019-24 (₹ in lakh)					Admitted capital cost as on 31.3.2024 (₹ in lakh)	Rate of depreciation (in %)	Annual Depreciation as per Regulations (₹ in lakh)				
			2019-20	2020-21	2021-22	2022-23	2023-24			2019-20	2020-21	2021-22	2022-23	2023-24
	PLCC	1212.22	290.02	72.51	0.00	0.00	0.00	1574.75	6.33	85.91	97.39	99.68	99.68	99.68
	TOTAL	1212.22	290.02	72.51	0.00	0.00	0.00	1574.75		85.91	97.39	99.68	99.68	99.68
								Average Gross Block (₹ in lakh)		1357.23	1538.49	1574.75	1574.75	1574.75
								Weighted Average Rate of Depreciation (in %)		6.33	6.33	6.33	6.33	6.33

