

**CENTRAL ELECTRICITY REGULATORY COMMISSION NEW DELHI**

**Petition No. 705/TT/2020**

**Coram:**

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

**Date of Order: 27.12.2022**

**In the matter of:**

Approval under Regulation 86 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and truing up of transmission tariff of the 2014-19 period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff of the 2019-24 period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 in respect of **Asset -I:** Central Sector Portion of 1030.426 km, **Asset-II:** Central sector portion of 2186.339 km, **Asset-III:** BBMB portion of 208.438 km, **Asset-IV:** Central sector portion of 1646.039 km and **Asset-V:** BBMB portion of 2.35 km under "Establishment of Fibre 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 (TPDDL),  
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**

The instant petition is filed by Power Grid Corporation of India Limited, a deemed transmission licensee, for truing-up of transmission tariff of 2014-19 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) and for determination of tariff for the period from 1.4.2019 to 31.3.2024 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”) in respect of the following assets (hereinafter referred to as “the transmission assets”) under “Establishment of Fibre Optic Communication System” in Northern Region (hereinafter referred to as “the transmission project”).

**Asset-I:** Central Sector Portion of 1030.426 km;

**Asset-II:** Central sector portion of 2186.339 km;

**Asset-III:** BBMB portion of 208.438 km;

**Asset-IV:** Central sector portion of 1646.039 km and;



**Asset V:** BBMB portion of 2.35 km.

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

*"1) Approve the actual Additional Capitalisation expenditure incurred during 2014-19 tariff block, as claimed at para 9.3 above.*

*2) 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 9.8 & 10.4 respectively.*

*3) Allow the Petitioner to recover the shortfall or refund the excess Annual Fixed Charges, on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before Hon'ble Commission as provided in Tariff Regulations, 2014 and Tariff Regulations, 2019.*

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

*5) Allow the Petitioner to bill and recover Licensee fee and RLDC fees and charges, separately from the beneficiaries in terms of Regulation 70 (3) and (4) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019.*

*6) Allow the Petitioner to bill and adjust impact on Interest on Loan due to change in Interest rate on account of floating rate of interest applicable during 2019-24 period, if any, from the beneficiaries.*

*7) Allow the Petitioner to file a separate petition before Hon'ble Commission for claiming the overall security expenses and consequential IOWC on that security expenses.*

*8) Allow the Petitioner to claim the capital spares at the end of tariff block as per actual.*

*9) Allow the Petitioner to bill and recover GST on Transmission Charges separately from the beneficiaries, if GST on transmission is withdrawn from negative list at any time in future. Further, any taxes including GST and duties including cess etc. imposed by any statutory/Govt./municipal authorities shall be allowed to be recovered from the beneficiaries.*

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



## **Background**

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

(a) The Investment Approval (IA) for implementation of the transmission project was accorded by Board of Directors of the Petitioner in 270<sup>th</sup> meeting held on 26.3.2012 for ₹19863 lakh, including IDC of ₹1219 lakh based on 4<sup>th</sup> Quarter, 2011 price level (communicated vide Memorandum No. C/CP/FO-NR dated 27.3.2012). As per the investment approval dated 26.3.2012, the transmission project was scheduled to be put into commercial operation within 30 months i.e. by 26.9.2014.

(b) The broad scope of work covered under the project is as follows:

(i) Installation of OPGW fiber optic cable on the existing EHV transmission line of POWERGRID and constituents, the estimated length of such cable is approximately 5667 km.

(ii) Installation of 134 numbers of terminal equipment for communication based upon Synchronous Digital Hierarchy (SDH) technology in the substations/generating stations of central sector and NR constituents.

(iii) Installations of 196 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) 103 numbers of DVC power supply has been envisaged at all the wideband locations. However, this requirement shall be optimised during detailed engineering.

(vi) In addition to above, 1098 km of POWERGRID telecom existing links shall also be utilised for this project on cost sharing basis.

(c) The details of petitions filed by the Petitioner under the transmission project in Northern Region is as follows:



Srl. No.	Assets	Actual COD	Remarks
1	<b>Asset-I:</b> Central Sector Portion of 1030.426 km	1.8.2014	Tariff for 2014-19 tariff period was approved in Petition No. 189/TT/2015.
2	<b>Asset-II:</b> Central sector portion of 2186.339 km	1.4.2016	Tariff for 2014-19 tariff period was approved in Petition No. 125/TT/2016.
3	<b>Asset-III:</b> BBMB portion of 208.438 km		
4	<b>Asset-IV:</b> Central sector portion of 1646.039 km	20.1.2018	Tariff for 2014-19 tariff period was in Petition No. 267/TT/2018.
5	<b>Asset-V:</b> BBMB portion of 2.35 km		
6	<b>Remaining scope</b>	Progressively from 1.1.2019 to 31.3.2019	Separate petition is being filed.

(d) The status and details of the transmission assets covered in the instant petition is as follows:

Assets	Asset details	SCOD	COD
<b>Asset-I</b>	Central Sector Portion of 1030.426 km	26.9.2014	1.8.2014
<b>Asset-II</b>	Central sector portion of 2186.339 km		1.4.2016
<b>Asset-III</b>	BBMB portion of 208.438 km		20.1.2018
<b>Asset-IV</b>	Central sector portion of 1646.039 km		
<b>Asset-V</b>	BBMB portion of 2.35 km		

(e) The tariff for Asset-I was determined vide order dated 10.8.2016 in Petition No. 189/TT/2015, for Asset-II and Asset-III vide order dated 22.9.2017 in Petition No. 125/TT/2016 and for Asset-IV and Asset-V vide order dated 22.1.2020 in Petition No. 267/TT/2018 from their respective COD to 31.3.2019.

(f) The Petitioner had conceptualised a scheme called the Unified Load Despatch and Communication Scheme (the Scheme) for all the five Regions with the objective of strengthening the load despatch infrastructure and augmenting communication system for efficient discharge of load despatch functions. The Scheme covered investment in RLDCs at the Central level and the State Load Despatch Centres (SLDCs) in the beneficiary States in the Region.



(g) The Petitioner while claiming the cost of Unified Load Despatch & Communication (ULDC) schemes during the earlier tariff control periods submitted that the tariff regulations framed by the Commission were not suitable for recovery of cost of the ULDC Scheme from beneficiaries and proposed a levelised tariff meaning thereby that a uniform amount would be recovered for a period of 15 years. Accordingly, the Commission had approved the recovery of loan and equity, corresponding to 2001-04 and 2004-09 periods and the subsequent additional capital expenditure during those periods, based on the weighted average rate of interest and Return on Equity using Capital Recovery Factor for loan and equity, respectively, for 15 years.

(h) As per the directives of Government of India, Ministry of Power vide order dated 4.7.2008, Power System Operation Corporation Limited (POSOCO), a wholly owned subsidiary of Power Grid Corporation of India Limited (PGCIL) was created and POSOCO is responsible for system operation of National Load Despatch Centre (NLDC) and Regional Load Despatch Centres (RLDCs). Pursuant to Satnam Singh Committee's report, the transmission assets pertaining to system operations have been transferred to POSOCO for which separate tariff orders had been issued by the Commission.

(i) Government of India had also constituted a Task Force to look into the financial aspects for augmentation and up-gradation of the State Load Despatch Centres and issues related to emoluments for the personnel engaged in the system operation. The Task Force made certain recommendations with regard to ownership of the transmission assets. The Petitioner constituted committees at the regional level, subsequent to the Task



Force's report, to identify the transmission assets to be transferred to POSOCO. The Petitioner was left with the transmission assets associated with the communication system under the Central portion of the Scheme and the transmission assets for SLDCs (the States portion). Based on the recommendations of the Committee the transmission assets under the ULDC Scheme were transferred to POSOCO and to the Petitioner in the following manner:

**A. Assets transferred to POSOCO:**

- (i) EMS/ SCADA system (computer system, hardware and software)
- (ii) Auxiliary power supply system comprising of uninterrupted power supply, diesel generating set etc.
- (iii) Building and civil works.

**B. Assets which remain with the Petitioner**

**i. Central Portion**

- (i) Fibre Optic Cables (overhead and underground)
- (ii) Fibre Optic Communication Equipment
- (iii) Digital Microwave Communication System (Tower, Antenna, Equipment's etc.)
- (iv) PABX
- (v) Power Line Carrier Communication System.
- (vi) Auxiliary power supply system.

**ii. State Portion:** Entire state portion which consists of the following equipment remain with the Petitioner:

- (i) EMS/SCADA system
- (ii) Fibre Optic System
- (iii) Digital Microwave Communication System (Tower, Antenna, Equipment etc.)





- (iv) PABX
- (v) Power Line Carrier Communication System
- (vi) Auxiliary power supply system (part)

(j) Thereafter, the Petitioner filed a Miscellaneous Petition No. 68/2010 under sub-Section (4) of Section 28 of Electricity Act, 2003 and Regulation 44 “Power to Relax” of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 for fixation of tariff norms for recovery of cost for the transmission assets (“Communication system” and “Sub-Load Dispatch Centre system”) to be retained/ to be installed by the Petitioner after formation of POSOCO for the 2009-14 period.

(k) The Commission in Petition No. 68/2010 vide order dated 8.12.2011, had observed as follows:

*“9.....Since the communication system and SLDC system form part of the assets of the CTU, there is a requirement to specify regulations for determination of tariff of these assets. We direct the staff of the Commission to undertake the exercise separately and include these assets of CTU in the tariff regulations applicable for the next tariff period i.e. 2014-19. As regards the tariff of these assets for the period 2009-14, we are not inclined to determine the tariff of these assets by exercising our power to relaxation under Regulation 44 of the 2009 regulations since there is no provision for determination of tariff for the assets covered under the communication system and ULDC system. We are of the view that the tariff of these assets shall be determined under our general power of determination of tariff for inter-State transmission system under section 79(1)(d) of the Act.....”*

*“.....It clearly emerges from the above judgment that the Central Commission can specify the terms and conditions of tariff even in the absence of the regulations. Since no regulation was specified for determination of tariff of the communication system and the ULDC system, the Commission determined the tariff of these assets during the period 2004-09 on levelised basis by adopting some of the parameters of 2004 tariff regulations. We have decided to continue with the levelised tariff for the existing assets in the absence of any provision in 2009 regulations regarding determination of tariff of communication system and ULDC system of the Petitioner. For the new assets, the tariff will be decided as per the regulations for communication systems to be framed. Accordingly, we direct the staff of the Commission to take necessary action to prepare draft regulations for determination of tariff for the communication system and ULDC system of the Petitioner.”*

*“21. We have considered the submission of the Petitioner and the respondents. We*



*are of the view that replacement of microwave links with fibre optic links should be implemented as agreed by the beneficiaries to ensure safe and reliable operation of the power system. Moreover, the Petitioner has submitted that surrender of the microwave frequencies would save substantial cost and the fibre optic system would be beneficial in the long run as the fibre optic communication network is required for implementation of new technologies like Wide Area Measurement System (WAMS), Special Protection Schemes (SPS) etc. in view of fast development and complexity of the power system in the country. As regards the regulatory approval, we are of the view that since the project has been agreed to be implemented by the constituents of each of the regions, regulatory approval is not considered necessary. The Petitioner is granted liberty to approach the Commission for determination of tariff for the fibre optic network being installed in lieu of microwave links for each of the region separately. As regards the submission of UPPTCL, it is clarified that if the state portion is not being implemented by it separately as proposed earlier, the same shall be implemented by the petitioner and UPPTCL would be required to share the tariff in proportion to the assets being utilised by it. It is however made clear that the timeline for replacement of the digital microwave by optical fibre should be strictly complied with.”*

(l) However, the provision for determining tariff of communication system and ULDC system of the Petitioner have now been specified in the 2014 Tariff Regulations as an element of a transmission system. Accordingly, the annual transmission charges of the optic fibre have been determined as per the provisions of the 2014 Tariff Regulations in this order.

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

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 24.9.2021 through video conference and the order was reserved.

7. This order is issued considering the main petition vide affidavit dated 29.6.2020 and additional information vide affidavit dated 23.9.2021.

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

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

9. The details of the trued-up transmission charges claimed by the Petitioner for the transmission project for 2014-19 tariff period are as follows:

(₹ in lakh)					
<b>Asset-I</b>	<b>2014-15 (Pro-rata for 243 days)</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Depreciation	70.39	124.47	127.20	127.20	125.30
Interest on Loan	70.36	115.15	105.61	92.94	79.19
Return on Equity	65.42	116.24	118.79	118.79	117.33
Interest on working capital	7.46	11.82	9.33	9.81	8.71
O&M Expenses	49.11	65.71	22.39	36.27	23.59
<b>Total</b>	<b>262.74</b>	<b>433.39</b>	<b>383.32</b>	<b>385.01</b>	<b>354.12</b>

(₹ in lakh)			
<b>Asset-II</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Depreciation	283.63	316.00	295.51
Interest on Loan	250.61	254.58	215.28
Return on Equity	264.89	295.12	276.71
Interest on working capital	21.10	24.84	23.43
O&M Expenses	70.40	114.07	119.67
<b>Total</b>	<b>890.63</b>	<b>1004.61</b>	<b>930.60</b>

(₹ in lakh)			
<b>Asset-III</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Depreciation	33.88	36.89	36.89
Interest on Loan	30.03	29.72	26.63
Return on Equity	31.64	34.45	34.54
Interest on working capital	2.08	2.20	2.14
O&M Expenses	0.00	0.00	0.00
<b>Total</b>	<b>97.63</b>	<b>103.26</b>	<b>100.20</b>



(₹ in lakh)

Asset – IV	2017-18 (Pro-rata for 71 days)	2018-19
Depreciation	49.70	265.71
Interest on Loan	45.50	230.41
Return on Equity	46.42	248.80
Interest on working capital	3.98	16.59
O&M Expenses	18.37	11.95
<b>Total</b>	<b>163.97</b>	<b>773.46</b>

(₹ in lakh)

Asset – V	2017-18 (Pro-rata for 71 days)	2018-19
Depreciation	0.50	2.64
Interest on Loan	0.39	1.98
Return on Equity	0.46	2.47
Interest on working capital	0.03	0.15
O&M Expenses	0.00	0.00
<b>Total</b>	<b>1.38</b>	<b>7.24</b>

10. The details of the trued-up IWC claimed by the Petitioner in respect of the transmission project are as follows:

(₹ in lakh)

Asset-I	2014-15 (Pro-rata for 243 days)	2015-16	2016-17	2017-18	2018-19
O&M Expenses	6.15	5.48	1.87	3.02	1.97
Maintenance Spares	11.07	9.86	3.36	5.44	3.54
Receivables	65.77	72.23	63.89	64.17	59.02
<b>Total</b>	<b>82.99</b>	<b>87.57</b>	<b>69.12</b>	<b>72.63</b>	<b>64.53</b>
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
<b>Interest on Working Capital</b>	<b>7.46</b>	<b>11.82</b>	<b>9.33</b>	<b>9.81</b>	<b>8.71</b>

(₹ in lakh)

Asset-II	2016-17	2017-18	2018-19
O&M Expenses	5.87	9.51	9.97
Maintenance Spares	10.56	17.11	17.95
Receivables	148.44	167.44	155.10
<b>Total</b>	<b>164.87</b>	<b>194.06</b>	<b>183.02</b>
Rate of Interest (in %)	12.80	12.80	12.80
<b>Interest on Working Capital</b>	<b>21.10</b>	<b>24.84</b>	<b>23.43</b>

(₹ in lakh)

Asset-III	2016-17	2017-18	2018-19
O&M Expenses	0.00	0.00	0.00
Maintenance Spares	0.00	0.00	0.00



Receivables	16.27	17.21	16.70
<b>Total</b>	<b>16.27</b>	<b>17.21</b>	<b>16.70</b>
Rate of Interest (in %)	12.80	12.80	12.80
<b>Interest on Working Capital</b>	<b>2.08</b>	<b>2.20</b>	<b>2.14</b>

(₹ in lakh)

Asset-IV	2017-18 (Pro-rata for 71 days)	2018-19
O&M Expenses	7.87	1.00
Maintenance Spares	14.17	1.79
Receivables	140.50	128.91
<b>Total</b>	<b>162.54</b>	<b>131.70</b>
Rate of Interest (in %)	12.60	12.60
<b>Interest on Working Capital</b>	<b>3.98</b>	<b>16.59</b>

(₹ in lakh)

Asset-V	2017-18 (Pro-rata for 71 days)	2018-19
O&M Expenses	0.00	0.00
Maintenance Spares	0.00	0.00
Receivables	1.18	1.21
<b>Total</b>	<b>1.18</b>	<b>1.21</b>
Rate of Interest (in %)	12.60	12.60
<b>Interest on Working Capital</b>	<b>0.03</b>	<b>0.15</b>

### Capital Cost

11. The Commission vide order dated 10.8.2016 in Petition No. 189/TT/2015 for Asset-I, vide order dated 22.9.2017 in Petition No. 125/TT/2016 for Asset-II and Asset-III and vide order dated 22.1.2020 in Petition No. 267/TT/2018 for Asset-IV and Asset-V had approved the following capital cost and ACE for the transmission assets:

Asset	FR approved apportioned capital cost	Admitted capital cost as on COD	ACE					Admitted capital cost as on 31.3.2019
			2014-15	2015-16	2016-17	2017-18	2018-19	
Asset-I	3050.7	2254.43	540.27	29.01	0.00	0.00	0.00	2823.71
Asset-II	6807.94	4194.94	0.00	0.00	468.96	451.61	0.00	5115.51
Asset-III	629.95	487.74	0.00	0.00	83.44	0.00	0.00	571.18
Asset-IV	6284.32	4273.52	0.00	0.00	0.00	(1536.87)	279.59	3016.24
Asset-V	57.98	24.14	0.00	0.00	0.00	0.00	1.89	26.03
<b>Total</b>	<b>16830.89</b>	<b>11234.77</b>	<b>540.27</b>	<b>29.01</b>	<b>552.4</b>	<b>(1085.26)</b>	<b>468.59</b>	<b>11552.67</b>



12. The Petitioner in the instant true-up petition has submitted that the apportioned cost submitted earlier was not correct due to computational error and, hence, the revised apportionment of capital cost as on COD, and estimated ACE incurred or projected to be incurred in respect of the transmission project as per Auditor's Certificates dated 25.6.2020 and 31.7.2019 are as follows:

(₹ in lakh)

Assets	Approved apportioned cost as per FR	Capital cost as on 31.3.2014	Add Cap 2014-2019 as per Auditor Certificate					Completion Cost as on 31.03.2019
			2014-15	2015-16	2016-17	2017-18	2018-19	
Asset-I	2742.85	1490.52	463.87	55.02	0.00	0.00	(59.85)	1949.56
Asset-II	5358.49	4297.39	0.00	0.00	468.96	451.61	(1099.23)	4118.73
Asset-III	609.95	499.30	0.00	0.00	83.44	0.00	0.00	582.74
Asset-IV	5239.06	4138.60	0.00	0.00	0.00	0.00	172.03	4310.63
Asset-V	45.98	41.24	0.00	0.00	0.00	0.00	1.89	43.13
<b>Total</b>	<b>13996.33</b>	<b>10467.05</b>	<b>463.87</b>	<b>55.02</b>	<b>552.40</b>	<b>451.61</b>	<b>(985.16)</b>	<b>11004.79</b>

### Telecom sharing/ De-capitalisation

13. The Petitioner has submitted that there is telecom link sharing on some of the links pertaining to Asset-I, Asset-II and Asset-IV. Therefore, it is submitted that the de-capitalization against telecom sharing has been accounted for while computing the true-up tariff for the concerned assets and respective adjustment is submitted in Auditor certificates. The details of corresponding capital cost being shared by Telecom department claimed are as follows:

(₹ in lakh)

Assets	De-capitalised cost shared by Telecom Department						Total cost sharing
	As on COD	2014-15	2015-16	2016-17	2017-18	2018-19	
Asset-I	930.18	0	0	0	0	0	<b>930.18</b>
Asset-II	945.43	0	0	0	0	1020.14	<b>1965.57</b>
Asset-IV	(1536.87)	0	0	0	0	(107.56)	<b>1644.43</b>

14. Accordingly, the Petitioner has submitted the Auditor's Certificate for the De-capitalization against telecom sharing and the same has been allowed as follows:



(₹ in lakh)

Asset	De-capitalised cost shared by Telecom						Total cost sharing
	As on COD	2014-15	2015-16	2016-17	2017-18	2018-19	
Asset-I	930.18	0	0	0	0	0	930.18
Asset-II	945.43	0	0	0	0	1020.14	1965.57
Asset-IV	(1536.87)	0	0	0	0	(107.56)	1644.43

### Scrap Value

15. The Petitioner has submitted that it was able to dispose of dismantled earth wire pertaining to some of the links of Asset-I and Asset-II during 2018-19. The Auditor's certificate of respective assets with adjusted scrap value of earth wire during the 2018-19 has been submitted. We have considered the submissions of the Petitioner. The claimed scrap value is in line with Auditor's certificate. Therefore, the same has been allowed as follows:

(₹ in lakh)

Assets	Year of scrap value adjustment	Total scrap value adjusted
Asset- I	2018-19	59.85
Asset- II	2018-19	79.09
<b>Total</b>		<b>138.94</b>

16. Further, the Petitioner has submitted that the efforts were made to dispose of the remaining replaced earth wire through bidding process. However, due to non-responsiveness of the bidders in the market, it could not be disposed of and the same shall be adjusted into the tariff as and when the earth wire is disposed.

### Cost Over-run

17. The Petitioner has claimed capital cost of ₹1490.52 lakh, ₹4297.39 lakh, ₹499.30 lakh, ₹4138.60 lakh and ₹41.24 lakh for Asset-I, Asset-II, Asset-III, Asset-IV and Asset-V respectively as on COD. The total completion cost including ACE in respect of the transmission project is ₹11004.79 lakh and the approved cost as per FR is ₹13996.33 lakh. Hence, the completion cost in respect of the transmission



project is within the approved FR cost and, therefore, there is no cost over-run with regard to the transmission project.

### **Time Over-run**

18. As per the IA dated 26.3.2012, the transmission project was scheduled to be put into commercial operation within 30 months from the date of IA i.e., by 26.9.2014. The actual date of commercial operation and the details of time over-run of the transmission assets covered under the instant petition are as follows:

<b>Particulars</b>	<b>Actual COD</b>	<b>Time Over-run</b>	<b>Condoned/ not condoned</b>
<b>Asset-I:</b> Central Sector Portion of 1030.426 km	1.8.2014	-	No delay
<b>Asset-II:</b> Central sector portion of 2186.339 km	1.4.2016	553 days	Condoned
<b>Asset-III:</b> BBMB portion of 208.438 km	1.4.2016	553 days	Condoned
<b>Asset-IV:</b> Central sector portion of 1646.039 km	20.1.2018	1212 days	Not condoned
<b>Asset-V:</b> BBMB portion of 2.35 km	20.1.2018	1212 days	Not condoned

19. The Commission vide order dated 22.9.2017 in Petition No. 125/TT/2016 condoned the time over-run in case of Asset-II and Asset-III. However, the Petitioner was directed to submit explanation regarding delay due to foggy condition at the time of true-up. Therefore, the Petitioner has submitted the following reasons for the time over-run in the instant petition:

### **Delay due to heavy foggy condition in case of Asset-II and Asset-III:**

20. During the installation of the OPGW, almost 9 months i.e., from mid-December, 2013 to mid-February, 2014, mid-December, 2014 to mid-February, 2015 and mid-December, 2015 to mid-February, 2016 were lost due to heavy foggy conditions. This is not a usual transmission project and required to do the work in





charged transmission lines. During the foggy season, it is not safe to work on the lines as chances of leakage current flowing through the tower parts increases which causes failure of T & P used in OPGW laying out work and frequent tripping of transmission lines. In view of the above, implementation was delayed considering the adverse foggy condition.

21. The Commission vide order dated 22.1.2020 in Petition No. 267/TT/2018 has dealt with the matter of time over-run and observed that it is not inclined to condone the time over-run for Asset-IV and Asset-V. However, the Petitioner was given the liberty to approach the Commission at the time of truing up along with supporting documents. The Petitioner has submitted the following for the delay explanation in the instant petition:

**Reasons for time over-run in case of Asset-IV & Asset-V**

(a) There is time over-run of 33 months to 40 months in case of Asset- IV and Asset-V respectively. Asset-IV and Asset-V comprise of 22 links and 5 links which are (total 27) as follows:

<b>Asset-IV: Central sector portion (1646.039 km)</b>			
<b>Sl. No.</b>	<b>Name of the link</b>	<b>Date of Commissioning as per RLDC Certificates</b>	<b>Time over-run (Approx.)</b>
1	URI-I to Wagoora	23.9.2017	36 months
2	LILO of Kishenpur- Wagoora at New Wanpoh	12.8.2017	34 months
3	Kishenpur-Chamera II	26.7.2017	33 months
4	Chamera-II to Chamera Pooling Station (Chamba)	15.7.2017	33 months
5	Chamera Pooling Station (Chamba) to Chamera-III	10.7.2017	33 months
6	Chamera II to Chamera I	5.7.2017	33 months
7	Nalagarh-Rampur (LILO I. URI )	27.8.2017	34 months
8	Nathpa Jhakri-Panchkula	29.8.2017	34 months
9	Panchkula-Abdullapur,	2.9.2017	35 months
10	Kaithal-Patiala	22.7.2017	33 months
11	LILO of Kanpur-Allahabad at Fatehpur	3.8.2017	34 months



12	LILO of Hisar-Bawana and LILO of Bhiwani-Bahadurgarh including Bhiwani-Bahadurgarh	8.10.2017	36 months
13	LILO of Hamirpur II-Jalandhar at Hamirpur PG	30.7.2017	33 months
14	Saharanpur-Roorkee	24.9.2017	35 months
15	Auraiya - Kanpur	21.7.2017	33 months
16	Sonepat-Kurushetra	28.9.2017	35 months
17	Ballia-Varanasi	2.7.2017	33 months
18	Sarnath- Varanasi 765	7.9.2017	35 months
19	Kanpur 400-Kanpur 765	22.7.2017	33 months
20	LILO of Meerut-Kaithal at Bhagpat	17.8.2017	34 months
21	Kishenpur-Dulhasti	19.1.2018	40 months
22	Dehradoon-Saharanpur (T Point)	17.7.2017	33 months

<b>Asset-V: BBMB (2.35 km)</b>			
<b>Sl. No.</b>	<b>Name of the link</b>	<b>Date of Commissioning as per RLDC Certificates</b>	<b>Time over-run</b>
1	Narela (DVB)-Narela (BBMB)	25.12.2017	39 months
2	Panipat (HVPNL)-Panipat (BBMB)	30.12.2017	39 months
3	Dadri (FIVPN I)-Dadri ( BBMB)	24.12.2017	39 months
4	Ballabgarh BBMB 220 kV-Gantry	15.12.2017	39 months
5	Barnala-Barnala	16.12.2017	39 months

These 27 links comprise of old as well as new transmission lines.

(b) Delay due to non-readiness of new transmission lines: OPGW was envisaged to be installed on some lines which were under construction. As the lines were under construction, fronts were not available and OPGW could not be installed till the towers were erected. This led to delay in installation of OPGW on links namely Ballia-Varanasi (1.4.2016), Sarnath-Varanasi (22.10.2016), Kanpur (400)–Kanpur (765) (10.7.2016), LILO of Meerut-Kaithal at Bhagpat (8.5.2016), Dehradun-Saharanpur (31.1.2017) and Kishenpur-Dulhasti line (23.1.2018), which was recorded in most of the Test Sub-committee meeting of NRPC. As OPGW on above lines was not completed, it impacted other intermediate OPGW links from which data was to be communicated through above



mentioned links. Further, above links were planned on under construction lines whose line lengths were varying according to terrain, forest and diversions etc. due to change in line lengths during line construction, communication equipment such as amplifiers were required to be changed as these equipment functioning is sensitive to link length. Dehradun–Saharanpur (T-point) link length reduced to 59 km against the length initially envisaged of 105 km. Similarly, Sarnath-Varanasi 765-line length changed to 107.426 km from initial length of 20 km due to aviation clearance in Varanasi. This resulted in requirement of new optical solutions which were arranged after issuance of amendments in the contract, which required time of approximately 5 to 6 months for issuance of amendment and manufacturing/dispatch and commissioning.

(c) Delay on existing transmission lines

Installation and completion of the existing links could not take place due to insurgency and law and order problem especially in Jammu & Kashmir. Agencies were not willing to go there, which seriously impacted the completion of OPGW in the existing links e.g., LILO of Kishenpur-Wagoora at New Wanpoh, Kishenpur-Chamera II, Chamera-II to Chamera Pooling Station (Chamba), Chamera Pooling Station (Chamba) to Chamera-III, Chamera II to Chamera I and Uri-Wagoora etc. Severe RoW issues were reported for Uri-Wagoora, Nalagarh-Rampur link, Saharanpur-Roorkee and Dehradun–Saharanpur links even where the transmission line work had been completed, but OPGW splicing work was delayed which impacted completion of links. On various occasions,



permit for change in relay setting from auto to non-auto mode was denied in view of perceived grid security by NRLDC. As permissions were often denied by control centres over phone, Petitioner has little or no records of the same.

22. The Petitioner has further submitted the following reasons for time over-run in installation of OPGW in existing transmission:

**1) URI-I to Wagoora:**

There were severe RoW issues in this link, two links were planned in this package namely Wagoora to Uri-II and Uri-II to Uri-I. However, due to RoW issues in both of the links, work could not be completed. Therefore, the Petitioner made alternate arrangements to complete the Wagoora to Uri-I link (route length of 96.520 km) instead of connectivity of Wagoora to URI-II, having route length of 106.035 km as per planning on existing transmission line. Other link i.e. Uri-II to Uri-I line has been deleted from the scope due to severe RoW problem. The same was done and recorded in 10<sup>th</sup> Test Sub-committee meeting of NRPC held on 22.3.2017 and subsequent NRPC meetings. Finally, this link connectivity was planned on VSAT. NHPC representative also requested to consider URI-II-Wagoora line for laying the OPGW keeping in view the RoW issue in URI-II-URI-I line. The Petitioner informed that due to similar RoW issues in some portion of URI-II-Wagoora Line, the laying of OPGW in this line was also not possible.



## **2) LILO of Kishenpur-Wagoora at New Wanpoh:**

Due to severe RoW issues in Jammu & Kashmir Region, no vendor wanted to deploy their teams. Repeated attempts were made but last link completion was delayed inordinately. Initially, link was planned through Kishenpur-New Wanpoh-Wagoora through this LILO link but due to RoW issues, link could not be completed and finally new OPGW was planned through Kishenpur-New Wanpoh line in other Project NR Expansion Scheme (Additional Requirement) where completion schedule for the link was 3.3.2018, then the Petitioner was able to complete OPGW connectivity for Kishenpur-New Wanpoh–Wagoora–Uri-I with NRLDC for Telemetry data availability.

## **3) Kishenpur-Chamera-II, Chamera-II to Chamera Pooling Station (Chamba), Chamera Pooling Station (Chamba) to Chamera-III and Chamera-II to Chamera-I:**

In Jammu & Kashmir, installation and COD of the existing links could not take place due to insurgency and law and order problem. Agencies were not willing to go there, which seriously impacted the completion of OPGW in the existing links e.g. LILO of Kishenpur-Wagoora at New Wanpoh, Kishenpur-Chamera II, Chamera-II to Chamera Pooling Station (Chamba), Chamera Pooling Station (Chamba) to Chamera-III, Chamera II to Chamera I and Uri-Wagoora etc. Further, Chamera area is having hilly terrains and carrying of OPGW drums (4-5 km in length) is difficult. Transmission line conductors were laid in parts (tower to tower–span length of only 300-400 mtrs) for tension towers especially in hilly terrains but OPGW have to be laid in complete drum length otherwise additional



joints may impact performance of the fibre. Further, due to installed Aviation Globules on transmission lines in Chamera areas, working in live line condition was not possible, these globules were installed in earthwire which were to be replaced with OPGW. Line shutdown was required on regular basis for at least 20-25 days but shutdown was not arranged by NHPC and NRLDC due to generation linked transmission lines. Therefore, a practical solution was found to complete the works, supplied drum (length 4-5 km) were diverted to other links of the package and new OPGW drums of small length (2 km to 2.5 km) were arranged for easy loading in hilly areas and OPGW fibre links could be completed with permissible limit of loss with addition joint boxes. No vendor wanted to carry out the work where shutdown was not approved on required times. Documents were also not available due to earlier OPGW related issues was not discussed in OCC meeting and generation links lines shutdown was also a big challenge, leading to wastage of almost 2-3 years due to manpower deployment / redeployment. Supply of fresh drums of small length for Chamera area (hilly terrains) was planned, engineering was carried out for these drums in view of additional requirement of losses, resulting high losses in fibre. Since, the supply was envisaged from off-shore (China) Contracts, so supply of new OPGW took almost one year after re-engineering.

**4) Nalagarh-Rampur (LILO Luhri), Nathpa Jhakri-Panchkula and Panchkula-Abdullapur:**

Nalagarh-Rampur connectivity was planned through Luhri Sub-station in



the original scheme approved by NRPC with a length of Nalagarh to Luhri-60 km and Luhri to Rampur-50 km. However, due to delay in construction of sub-station along with associated lines for Luhri Sub-station, OPGW on these links were delayed inordinately. The Petitioner has completed the works of OPGW links in Nathpa Jhakri-Panchkula on 21.10.2016 and Panchkula-Abdullapur on 30.6.2015 and Site Acceptance Test (SAT) of the same was done. Nalagarh-Rampur (other than LILO portion of Luhri Sub-station) was completed on 24.9.2016 (in parts due to non-availability of Luhri Sub-station). Luhri Hydro Electric Project (LHEP) was planned in 2008 and under Northern Region Optical fibre expansion scheme has envisaged this sub-station connectivity over OPGW. However, due to delay by Government of Himachal Pradesh, scheduled date was repeatedly postponed and later Government of Himachal Pradesh advised SJVNL to explore the possibility of executing the LHEP as multi-stage project instead of single stage on account of social and environmental concerns. Accordingly, in July/ August, 2017, three stages were planned. Further, the Petitioner is not able to utilise these links (Nalagarh-Rampur partial portions, Nathpa Jhakri-Panchkula and Panchkula-Abdullapur) due to non-availability of intermediate links of other both ends i.e., Abdullapur-Dehradun link was under construction transmission line which was delayed because of severe RoW issues and line was finally put into commercial operation on 30.3.2018. The Petitioner then re-planned this whole connectivity to complete the OPGW Project which was already delayed for years due to SJVNL/ Government



of Himachal Pradesh's decision for construction of Luhri Sub-station and associated lines by connecting Nalagarh to Rampur directly instead LILO lines of Luhri in August, 2017, subsequently Nalagarh-Rampur link (COD 27.8.2017), Nathpa Jhakri-Panchkula (COD 29.8.2017) and Panchkula-Abdullapur (COD 2.9.2017) was done.

**5) Kaithal-Patiala:**

Severe RoW issues were encountered during the implementation.

**6) LILO of Kanpur-Allahabad at Fatehpur:**

Earlier, Kanpur-Fatehpur was envisaged with line length of 80 km later link was subsequently changed to LILO of Kanpur-Allahabad at Fatehpur (35.368 km), severe RoW issues were there in the line.

**7) LILO of Hisar-Bawana and LILO of Bhiwani-Bahadurgarh including Bhiwani-Bahadurgarh:**

Severe RoW issues encountered during the implementation.

**8) LILO of Hamirpur-II to Jalandhar at Hamirpur PG:** Earlier line was envisaged Hamirpur-II (HPSEBL) to Hamirpur PG with line length 4 km later link was subsequently changed to LILO of Hamirpur-II to Jalandhar at Hamirpur PG (16.749 km), severe RoW issues.

**9) Saharanpur-Roorkee:**

Link was planned on under construction line and due to severe RoW issues, the link was delayed.





### **10) Auraiya–Kanpur:**

This scheme was entrusted with the implementation of Communication System. It was decided that the Petitioner would implement the Fibre Optic network as approved in the 18th meeting of NRPC held on 27.11.2010 where this link was not envisaged in the scheme, later this link was incorporated in 23<sup>rd</sup> meeting of TCC and 26th meeting of NRPC held on 12.7.2012 and 13.7.2012.

### **11) Sonapat-Kurukshetra:**

This scheme was entrusted with the implementation of the communication system. It was decided that the Petitioner would implement the Fibre Optic network as approved in the 18<sup>th</sup> meeting of NRPC held on 27.11.2010 where this link was not envisaged in the scheme, later this link was incorporated in 23<sup>rd</sup> meeting of TCC and 26<sup>th</sup> meeting of NRPC held on 12.7.2012 and 13.7.2012.

23. We have considered the submissions of the Petitioner. As per the IA dated 26.3.2012, the instant transmission project was scheduled to be put into commercial operation within 30 months from the date of IA i.e. by 26.9.2014. Asset-I achieved COD on 1.8.2014 and there is no time over-run in case of Asset-I.

24. The Commission vide order dated 22.9.2017 in Petition No. 125/TT/2016 had condoned the time over-run in case of Asset-II and Asset-III and the relevant extracts of the order is as follows:

*“40. The Petitioner has submitted that due to heavy foggy condition, it was difficult to execute work during the time period from December-2013 to February, 2014; December-2014 to February 2015; and December 2015 to February 2016. We are of the view that the foggy conditions are normal phenomenon during the period*



*December-February in the northern region and the petitioner should have factored the same while planning the project. It is not clear for us as to how foggy condition would affect the laying of the fibre optic cable after completion of line. The petitioner is directed to submit explanation as to how foggy condition affected the commissioning of the fibre optic links covered in the instant petition at the time of true up. A final view regarding delay due to foggy condition shall be taken at the time of true up”.*

*41. The Petitioner also submitted that COD is declared for a chunk of links including Kashipur-Roorkee and Kashipur-Bareilly links. The development of communication system is spread over the region and depends on commissioning of various lines (called as links in communication network) directly or indirectly. Therefore, it is difficult to correlate the delay of communication system with particular assets. We have observed that there is delay in the commissioning of the associated transmission system in varying degree. The petitioner has submitted for approval of trial operation of the links between 12.11.2014 to 12.3.2016 and for all the 35 links COD has been declared on 1.4.2016. In view of the above, the time delay of 18 months 4 days for the instant assets is held to be beyond the control of the petitioner subject to taking final view regarding delay due to foggy condition at the time of true up.”*

25. The Petitioner has submitted that the Petitioner has to work on charged transmission lines and during foggy season and there is possibility of leakage current flowing through the tower parts which causes failure of T&P used in OPGW laying work and frequent tripping of the line. We agree with the Petitioner that the foggy conditions delayed the OPGW laying work. Accordingly, the condonation of time over-run in case of Asset-II and Asset-III is re-affirmed.

**Asset-IV and Asset-V:**

26. The Commission vide order dated 22.1.2020 in Petition No. 267/TT/2018 held as follows:

*“37. As regards Asset-I, it is observed that out of the total 22 no of OPGW links, 16 no of links are associated with existing transmission lines involving replacement of earth wire with OPGW and 6 no of OPGW links are associated with new transmission lines. The petitioner has submitted that due to insurgency and law & order problem, the installation and commissioning of OPGW is delayed in the existing links viz. LILO of Kishenpur-Wagoora at New Wanpoh, Kishanpur-Chamera II, Chamera-II to Chamera-I and Uri-Wagoora in Jammu & Kashmir. The Petitioner has not submitted any specific documentary evidence in support of its claim. Accordingly, the time delay from SCOD to actual COD in case of existing lines where replacement of earth wire with OPGW is not beyond the control of the petitioner and therefore the delay of 1212 days is not condoned. However, the Petitioner is at liberty to approach the Commission at the time of truing up and the same will be reviewed at the time of truing*



up.”

xxx

39. ....Accordingly the OPGW link wise time over-run is analyzed in the following paragraphs:

(i) Ballia-Varanasi (OPGW):

.....Accordingly in the instant OPGW link, the time overrun from SCOD (27.9.2014) to COD of the associated transmission line (1.4.2016) is beyond the control of the petitioner and the same is condoned. Time overrun beyond 2.4.2016 till COD of the Ballia-Varanasi (OPGW) is within the control of the petitioner and therefore the time overrun from 2.4.2016 to 20.1.2018 is not condoned.

(ii) Sarnath- Varanasi 765 (OPGW)

.....Accordingly in the instant OPGW link, the time overrun from SCOD (26.9.2014) to COD of the associated transmission line (22.10.2016) is beyond the control of the petitioner and the same is been condoned. Time overrun beyond 23.10.2016 till COD of the Sarnath- Varanasi 765 (OPGW) is within the control of the petitioner and therefore the time overrun from 23.10.2016 to 20.1.2018 is not condoned.

(iii) Kanpur 400-Kanpur 765(OPGW)

The Petitioner has claimed the COD of Kanpur-Kanpur (OPGW) as 20.1.2018. The associated transmission line is commissioned on 15.10.2016(Anticipated basis). The Commission vide order dated 31.5.2016 in Petition no 274/TT/2015 has given the liberty to the Petitioner to submit the details of time over-run on the basis of actual COD. In view of this, the Petitioner is at liberty to approach the Commission at the time of truing up with respect to time over run pertaining to Kanpur 400-Kanpur 765(OPGW).

(iv) LILO of Meerut-Kaithal at Bhagpat

.....Accordingly in the instant OPGW link the time overrun from SCOD (26.9.2014) to COD of the associated transmission line (8.5.2016) is beyond the control of the petitioner and the same is condoned. Time overrun beyond 9.5.2016 to till COD of the LILO of Meerut-Kaithal at Bhagpat (OPGW) is within the control of the petitioner and therefore the time overrun from 9.5.2016 to 20.1.2018 is not condoned.

(v) Kishenpur-Dulhasti

The petitioner has claimed the COD of the Kishenpur-Dulhasti(OPGW) as 20.1.2018. The associated transmission line is covered in petition no 56/TT/2017 and the commission vide order dated 9.10.2018 had approved COD of the line as 23.1.2018 and condoned the time overrun of about 38 months 3 days. Accordingly in the instant OPGW link, the time overrun from SCOD (26.9.2014) to COD of the associated transmission line (23.1.2018) is beyond the control of the petitioner and the same is condoned.



(vi) Dehradun-Saharanpur (T Point)

*The Petitioner has claimed the COD of the Dehradun-Saharanpur (T Point) as 31.1.2017. The associated transmission is covered in petition no 55/TT/2017 and the Commission vide order dated 30.11.2017 had approved COD of the line as 31.1.2017 and condoned the time overrun of about 62 months 21 days. Accordingly in the instant OPGW link, the time overrun from SCOD (26.9.2014) to COD of the associated transmission line (31.1.2017) is beyond the control of the petitioner and the same has been condoned. With respect to time overrun beyond 1.2.2017 to till COD of the Dehradun-Saharanpur (T Point) (OPGW) is within the control of the Petitioner and therefore the time overrun from 1.2.2017 to 20.1.2018 is not condoned.”*

*“40. With respect to Asset-1, the Petitioner has not submitted link wise capital cost details due to which it is not able to deal the IDC/IEDC for the time over run condoned /not condoned in the case of new transmission assets and existing assets pertaining to central sector. Accordingly, the IDC/IEDC claimed by the petitioner in the instant asset has not been considered. The Petitioner is directed to submit the details of IDC/IEDC of the existing assets and link wise IDC / IEDC details of new assets of central sector at the time of truing up and the same will be reviewed at the time of truing up.*

*41. As regards Asset-2, it is observed that 5 number links are associated with existing transmission lines and involve replacing earth wire with OPGW under State sector (BBMB). With respect to these Assets, the petitioner has submitted that installation and commissioning of OPGW is delayed due to insurgency and law and order problem in Jammu and Kashmir. These are existing links viz. Narela (DVB)- Narela (BBMB), Panipat (HVPNL)-Dadri BBMB), Ballabgarh BBMB 220 kV gantry and Barnala-Barnala. The petitioner has not submitted any specific documentary evidence in support of delay. Accordingly, the time delay from SCOD to actual COD of the Asset in case of existing replacement of earth wire of existing transmission line with OPGW is not beyond the control of the petitioner and therefore the delay of 1212 days is not condoned. However, the Petitioner is at liberty to approach the Commission at the time of truing up and the same will be reviewed at the time of truing up.”*

27. We have considered the submissions of the Petitioner regarding the time over-run in case of Asset-IV and Asset-V.

(a) **Asset-IV:** Asset-IV consists of 22 number of OPGW links and out of the total 22 number of OPGW links, 16 number of links are associated with existing transmission lines involving replacement of earth wire with OPGW and 6 number of OPGW links are associated with new transmission lines. As regards the time over-run in case of existing transmission lines, the Petitioner has submitted that it has faced RoW problems on URI-I to Wagoora, LILO of



Kishenpur-Wagoora at New Wanpoh, Kaithal-Patiala, LILO of Kanpur-Allahabad at Fatehpur, LILO of Hisar-bawana and LILO of Bhiwani-Bahadurgarh including Bhiwani-Bahadurgarh, LILO of Hamirpur II-Jalandhar at Hamirpur PG, Saharanpur-Roorkee.

(b) The link-wise time over-run condoned/ not condoned is as follows:

(i) **Uri-I to Wagoora:**

Two links were planned namely Wagoora to Uri-II and Uri-II to Uri-I. The Petitioner made alternate arrangements to commission the Wagoora to URI-I link (96.520 km) instead of connectivity of Wagoora to Uri-II, having route length of 106.53 km as per the planning on existing transmission line. Due to severe RoW problems, the OPGW link Uri-II to Uri-I line has been deleted from the scope of works. The Petitioner also discussed the deletion of the Uri-II to Uri-I OPGW link in 10<sup>th</sup> TEST sub-committee meeting of NRPC held on 22.3.2017. The Petitioner has successfully charged the URI-I to Wagoora line on 23.9.2017. We are of the view that RoW problems faced in the implementation of URI-I to Wagoora upto 23.9.2017 is beyond the control of the Petitioner. Accordingly, the same is condoned.

(ii) **LILO of Kishenpur-Wagoora at New Wanpoh:**

Due to Row problems in Jammu & Kashmir Region, the Petitioner was not been able to start the work through Kishenpur-New Wanpoh-Wagoora through LILO and planned new OPGW through Kishenpur-New Wanpoh line in other project, i.e., NR Expansion scheme and finally charged the OPGW on 12.8.2017. We are of the view that RoW problems faced in the implementation of LILO of Kishenpur-Wagoora at New Wanpoh upto 12.8.2017 is beyond the



control of the Petitioner. Accordingly, the same is condoned.

**(iii) Kishenpur-Chamera-II, Chamera-II to Chamera Pooling Station (Chamba), Chamera Pooling Station (Chamba) to Chamera-III and Chamera-II to Chamera-I:**

The Petitioner has submitted that the installation and commissioning of OPGW links was delayed due to insurgency and law and order problems in Jammu & Kashmir, hilly areas in Chamera Area and non-approval of shutdown. We have gone through the submissions of the Petitioner. The implementation issues narrated by the Petitioner in Jammu & Kashmir Region lead to delay in commissioning of the OPGW links. In view of this, the time period from scheduled COD i.e., 26.9.2014 to the date of issue of RLDC charging certificate by RLDC was beyond the control of the Petitioner.

**(iv) Nalagarh-Rampur (LILO Luhri), Nathpa Jhakri-Panchkula and Panchkula-Abdullapur:**

The Petitioner has submitted that Luhri Hydro Electric Project was planned in 2008 due to delay in Luhri Sub-station, even though the Petitioner has completed Nalagarh-Rampur (Other than LILO portion of Luhri Sub-station) on 24.9.2016, Nathpa Jhakri-Panchkula on 21.10.2016 and Panchkula-Abdullapur on 30.6.2015 was not able to charge these OPGW links. The Petitioner has re-planned whole connectivity to complete OPGW project and connected Nalagarh to Rampur directly instead of LILO lines of Luhri in August 2017. We are of the view that due to delay in Luhri Sub-station and replanning of OPGW links, the time period from SCOD to the date of issue of RLDC charging by RLDC was beyond the control of the Petitioner.



(v) **Kaitahal-Patiala, LILO of Kanpur-Allahabad at Fatehpur, LILO of Hisar-Bawana and LILO of Bhiwani-Bahadurgarh including Bhiwani-Bahdaurgarh, LILO of Hamirpur-II-Jalandhar at Hamirpur, Saharanpur-Roorkee:**

The Petitioner has submitted that severe RoW problems issues adversely affected the commissioning of these OPGW links. However, the Petitioner has not submitted any documentary evidence in support of RoW problems. Therefore, the time over-run in commissioning of Kaithal-Patiala, LILO of Kanpur-Allahabad at Fatehpur, LILO of Hisar-Bawana and LILO of Bhiwani-Bahadurgarh including Bhiwani-Bahdaurgarh, LILO of Hamirpur-II-Jalandhar at Hamirpur and Saharanpur-Roorkee OPGW link was not beyond the control of the Petitioner and the same is not condoned.

(vi) **Auriya-Kanpur and Sonipat-Kurukshetra:** The OPGW link was not envisaged in the scheme, later these two links are incorporated as per the approval in 23<sup>rd</sup> meeting of TCC and 26<sup>th</sup> meeting of NRPC held on 12<sup>th</sup> & 13<sup>th</sup> July, 2012. The Petitioner has successfully completed trial operation on 24.9.2017 and 21. 7.2017. The Petitioner has not explained the time taken from the date of inclusion of OPGW link to trail operation of OPGW link. Due to non-justification of the delay with valid documentary evidence, we are not inclined to condone the time over-run in case of Auriya-Kanpur and Sonapat-Kurukshetra OPGW link.

In view of the above analysis, the time over-run condoned/ not condoned in respect of 16 number of links associated with existing transmission lines is as follows:



Sl. No	Name of the link	Time over-run condoned	Time over-run not condoned
1	URI-I to Wagoora	1093	119
2	LILO of Kishenpur- Wagoora at New Wanpoh	1051	161
3	Kishenpur-Chamera II	1034	178
4	Chamera-II-Chamera Pooling Station	1023	189
5	Chamera Pooling Station (Chamba)-Chamera III	1018	194
6	Chamera II - Chamera I	1013	199
7	Nalagarh-Rampur (LILO Luhri)	1066	146
8	Nathpa Jhakri-Panchkula	1068	144
9	Panchkula-Abdullapur	1072	140
10	Kaithal-Patiala	-	1212
11	LILO of Kanpur-Allahabad at Fatehpur (Loop IN)	-	1212
12	LILO of Kanpur-Allahabad at Fatehpur (Loop Out)	-	1212
13	LILO of Hisar-Bawana and LILO of Bhiwani-Bahadurgarh including Bhiwani-Bahadurgarh (Part-1)	-	1212
14	LILO of Hisar-Bawana and LILO of Bhiwani-Bahadurgarh including Bhiwani-Bahadurgarh (Part-2)	-	1212
15	LILO of Hamirpur II- Jalandhar at Hamirpur PG (Loop In)	-	1212
16	LILO of Hamirpur II- Jalandhar at Hamirpur PG (Loop Out)	-	1212

(c) As regards remaining 6 number of OPGW links, the Commission vide order dated 22.1.2020 in Petition No. 267/TT/2018 has already taken a view on their time over-run and the details of time over-run condoned/ not condoned are as follows:

Sl. No	Name of the link	Time over-run condoned	Time over-run not condoned
1	Ballia-Varanasi	604 days	608 days
2	Sarnath-Varanasi 765	757 days	455 days





3	Kanpur 400-Kanpur 765	Liberty was given to the Petitioner to submit the details.	
4	LILO of Meerut-Kaithal at Bhagpat	652 days	560 days
5	Kishenpur-Dulhasti	1212 days	-
6	Dehradun-Saharanpur (T Point)	858 days	354 days

(d) The Petitioner was given liberty to submit valid documentary evidence in respect of the 400 kV Kanpur-765 kV Kanpur OPGW link but the Petitioner has not submitted any documentary evidence in this regard. Therefore, the time over-run of 1212 days in case of 400 kV Kanpur-765 kV Kanpur OPGW link is not condoned.

**Asset-V:** Asset-V consists of 5 number links are associated with existing transmission lines and involve replacing earth wire with OPGW under State sector (BBMB). The Petitioner was given liberty to submit documentary evidence in support of the same, but the Petitioner failed to submit any documentary evidence. Therefore, the time over-run in case of Asset-V is not condoned.

### **IDC and IEDC**

28. The allowable IDC has been worked out considering the information submitted by the Petitioner for the transmission project separately on cash basis. The loan details submitted in Form-9C for the 2014-19 tariff period and IDC computation sheet have been considered for the purpose of IDC calculation on cash and accrual basis. The un-discharged IDC as on COD has been considered as ACE during the year in which it has been discharged.

29. In case of Asset-IV the Petitioner was directed to submit link wise details of



IDC and IEDC as per the order dated 22.1.2020 in Petition No. 267/TT/2018 and the same has been submitted by the Petitioner in the instant petition and they are as follows:

(₹ in lakh)			
Sl. No.	LINK	IEDC	IDC
1	URI-I - Wagoora	9.132	30.93
2	LILO of Kishenpur- Wagoora at New Wanpoh	0.405	1.372
3	Kishenpur-Chamera II	9.491	32.148
4	Chamera-II-Chamera Pooling Station	0.033	0.111
5	Chamera Pooling Station (Chamba)-Chamera III	1.356	4.592
6	Chamera II - Chamera I	3.609	12.226
7	Nalagarh-Rampur (LILO Luhri)	12.069	40.879
8	Naptha Jhakri-Panchkula	15.609	52.869
9	Panchkula-Abdullapur	5.944	20.133
10	Kaithal-Patiala	11.951	40.48
11	LILO of Kanpur-Allahabad at Fatehpur (Loop IN)	1.686	5.711
12	LILO of Kanpur-Allahabad at Fatehpur (Loop OUT)	1.66	5.622
13	LILO of Hisar-Bawana and LILO of Bhiwani-Bahadurgarh including Bhiwani-Bahadurgarh (Part-1)	2.869	9.718
14	LILO of Hisar-Bawana and LILO of Bhiwani-Bahadurgarh including Bhiwani-Bahadurgarh (Part-2)	6.172	20.905
15	LILO of Hamirpur II-Jalandhar at Hamirpur PG (Loop In)	0.875	2.963
16	LILO of Hamirpur II-Jalandhar at Hamirpur PG (Loop Out)	0.71	2.404
17	Saharanpur-Roorkee	3.374	11.427
18	Auraiya - Kanpur	6.873	23.28
19	Sonepat-Kurushetra (Part-1)	4.561	15.45
20	Sonepat-Kurushetra (Part-2)	7.015	23.76
21	Ballia-Varanasi	15.632	52.949
22	Sarnath- Varanasi 765	10.163	34.425
23	Kanpur 400-Kanpur 765	1.957	6.628
24	Kishenpur-Dulhasti	11.235	38.055
25	Meerut-Kaithal LILO at Bhagpat	5.766	19.531
26	Dehradoon-Saharanpur (T point)	5.582	18.908
27	Mandatory Spare	4.92	16.663



28	Mandatory Spare	11.603	39.301
<b>Total</b>		<b>172.252</b>	<b>583.44</b>

30. It is pertinent to mention here that as per the petition, the total IDC and IEDC for Asset-IV is ₹583.44 lakh and ₹172.252 lakh, respectively, whereas the same is ₹589.03 lakh and ₹173.89 lakh, respectively, vide Auditor Certificate dated 25.6.2020 and also in Form-4A. We have considered the Petitioner's claim as per Auditor's certificate and carried forward the tariff computation.

31. We have considered the submissions of the Petitioner. We have condoned the time over-run partially for some of the links of Asset-IV as discussed in the relevant portion of instant order. Further, in view of non-condonation of remaining OPGW links associated with Asset-IV and Asset-V, the corresponding IDC and IEDC has not been allowed. 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 Discharged as on COD	IDC Un-discharged as on COD	IDC Discharge during				
	A	B	C	D=B-C	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-I	138.65	138.65	129.69	8.96	8.96	-	-	-	-
Asset-II	251.57	248.85	149.14	99.71	-	-	99.71	-	-
Asset-III	29.02	28.72	17.46	11.26	-	-	11.26	-	-
Asset-IV	589.03	314.42	314.42	-	-	-	-	-	-
Asset-V	0.93	-	-	-	-	-	-	-	-

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



(₹ in lakh)

Asset	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-I	204.75	0.00	204.75
Asset-II	165.24	0.00	165.24
Asset-III	19.06	0.00	19.06
Asset-IV	173.89	81.06	92.83
Asset-V	1.95	1.11	0.84

### Initial Spares

33. Regulation 13(d) 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%

(iv) Series Compensation devices and HVDC Station - 4.00%

(v) Gas Insulated Sub-station (GIS) - 5.00%

(vi) Communication System - 3.5%”

34. The Petitioner has not claimed 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. The Petitioner has claimed the following Initial Spares in respect of the transmission project:

Assets	Plant & Machinery cost (excluding IDC and IEDC, land cost and cost of civil works) (₹ in lakh) (A)	Initial Spares claimed (₹ in lakh) (B)	Ceiling Limit (in %) (C)	Allowable initial spares (₹ in lakh)
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
<b>Balance assets of the transmission project not covered in this Petition and separate petition is being filed.</b>				
Asset-1 COD- 1.1.2019	2372.82	67.24	3.5	83.62
Asset-2 COD- 1.1.2019	762.18	12.95	3.5	27.17



Asset-3 COD- 1.1.2019	1047.67	22.58	3.5	37.18
Asset-4 COD- 1.1.2019	562.97	31.71	3.5	19.27
Asset-5 COD- 31.3.2019	1500.77	21.11	3.5	53.67
Asset-6 COD- 31.3.2019	891.82	17.85	3.5	31.70
<b>Total</b>	<b>20716.39</b>	<b>652.87</b>	<b>3.5</b>	<b>727.69</b>

35. The Petitioner has submitted the following year wise discharge statement for the initial spares for Asset-IV and Asset-V:

(₹ in lakh)

Particulars	Initial spares claimed	
	Upto COD	2018-19
<b>Asset- IV</b>	393.97	15.14
<b>Asset- V</b>	69.52	0.80
<b>Total</b>	<b>463.49</b>	<b>15.94</b>

36. The Petitioner has claimed initial spares of ₹652.87 lakh in the instant petition against the allowable spares of ₹727.69 lakh including balance assets of the transmission project that have been put into commercial operation progressively from 1.1.2019 to 31.3.2019. The Petitioner has also submitted that a separate petition is being filed for determination of tariff of balance assets and submitted the Auditor Certificate of balance assets. However, the initial spares claimed by the Petitioner in respect of Asset-IV and Asset-V, covered in instant petition, is beyond the norm of 3.5% under Regulation 13(d) of the 2014 Tariff Regulations. Therefore, the initial spares claimed towards Asset-IV and Asset-V is restricted to ceiling limit of 3.5%. However, the initial spares allowed in this order shall be revised when tariff is claimed for all the transmission assets covered in the transmission project, on the basis of the total project cost, in terms of APTEL's judgement dated 14.9.2019 in Appeal No. 74 of 2017. Accordingly, the details of the initial spares allowed in



respect of the transmission project for 2014-19 tariff period are as follows:

(₹ in lakh)

Assets	Plant & Machinery cost considered as on cut-off date	Initial Spares claimed		Norms as per the 2014 Tariff Regulations (in %)	Initial Spares allowable as per the 2014 Tariff Regulations	Initial Spares allowed	Excess Initial Spares disallowed	
		As on COD	2018-19				As on COD	2018-19
Asset-IV	3547.71	393.97	69.52	3.5%	111.86	111.86	282.11	69.52
Asset-V	40.25	15.14	0.80	3.5%	0.88	0.88	14.26	0.80

**Capital cost as on COD**

37. Accordingly, the capital cost allowed for the transmission project as on COD is as follows:

(₹ in lakh)

Assets	Capital cost as on 1.4.2014 or COD whichever is later	Less: De-capitalised w.r.t cost of asset shared by Telecom 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 1.4.2014
			Time over-run	Un-discharged			
Asset-I	2420.70	930.18	-	8.96	0.00	0.00	1481.56
Asset-II	5242.82	945.43	2.72	99.71	0.00	0.00	4194.96
Asset-III	499.33	-	0.3	11.26	0.00	0.00	487.74
Asset-IV	5675.47	1536.87	274.61	0.00	81.06	282.11	3500.82
Asset-V	41.24	-	0.93	0.00	1.11	14.26	24.94

**Additional Capital Expenditure (ACE)**

38. The Petitioner has claimed following ACE for the transmission project and has submitted Auditor's Certificate in support of its claim:

(₹ in lakh)

Assets	ACE				
	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-I	463.87	55.02	0.00	0.00	(59.85)
Asset-II	0.00	0.00	468.96	451.61	(1099.23)
Asset-III	0.00	0.00	83.44	0.00	0.00
Asset-IV	0.00	0.00	0.00	0.00	172.03
Asset-V	0.00	0.00	0.00	0.00	1.89
<b>Total</b>	<b>463.87</b>	<b>55.02</b>	<b>552.4</b>	<b>451.61</b>	<b>(985.16)</b>

39. 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:

(₹ in lakh)

Asset-I	ACE				
	2014-15	2015-16	2016-17	2017-18	2018-19
ACE to the extent of Balance and Retention Payments	463.87	55.02	0.00	0.00	
IDC Discharged	8.96	-	0.00	0.00	0.00
Less: Excess Initial Spares	-	-	-	-	-
Less: Earth wire scrap value recovery	-	-	-	-	(59.85)
<b>Total ACE allowed</b>	<b>472.83</b>	<b>55.02</b>	<b>0.00</b>	<b>0.00</b>	<b>(59.85)</b>

(₹ in lakh)

Asset-II	ACE		
	2016-17	2017-18	2018-19
ACE to the extent of Balance and Retention Payments	468.96	451.61	-
IDC Discharged	99.71	-	-
Less: Excess Initial Spares	-	-	-
Less: Decapitalisation w.r.t cost of asset shared by telecom	-	-	(1020.14)
Less: Earth wire scrap value recovery	-	-	(79.09)
<b>Total ACE allowed</b>	<b>568.67</b>	<b>451.61</b>	<b>(1099.23)</b>

(₹ in lakh)

Asset-III	ACE		
	2016-17	2017-18	2018-19
ACE to the extent of Balance and Retention Payments	83.44	-	-
IDC Discharged	11.26	-	-
Less: Excess Initial Spares	-	-	-
Less: De-Capitalisation	-	-	-
<b>Total ACE allowed</b>	<b>94.70</b>	-	-



(₹ in lakh)

Asset-IV	ACE	
	2017-18	2018-19
ACE to the extent of Balance and Retention Payments	-	279.59
IDC Discharged	-	-
Less: Excess Initial Spares	-	(69.52)
Less: De-capitalisation w.r.t cost of asset shared by telecom	-	(107.56)
<b>Total ACE allowed</b>	-	<b>102.51</b>

(₹ in lakh)

Asset-V	ACE	
	2017-18	2018-19
ACE to the extent of Balance and Retention Payments	-	1.89
IDC Discharged	-	-
Less: Excess Initial Spares	-	(0.80)
Less: De-capitalisation	-	-
<b>Total ACE allowed</b>	-	<b>1.09</b>

### Capital Cost for the 2014-19 tariff period

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

(₹ in lakh)

Particulars	Approved Capital Cost (FR)	Capital Cost as on COD on cash basis	ACE					Total Capital Cost as on 31.3.2019
			2014-15	2015-16	2016-17	2017-18	2018-19	
Asset-I	2742.85	1481.56	472.83	55.02	0.00	0.00	(59.85)	1949.56
Asset-II	5358.49	4194.96	0.00	0.00	568.67	451.61	(1099.23)	4116.01
Asset-III	609.95	487.74	0.00	0.00	94.70	0.00	0.00	582.44
Asset-IV	5239.06	3500.82	0.00	0.00	0.00	0.00	102.51	3603.33
Asset-V	45.98	24.94	0.00	0.00	0.00	0.00	1.09	26.03
<b>Total</b>	<b>13996.33</b>	<b>9690.02</b>	<b>472.83</b>	<b>55.02</b>	<b>663.37</b>	<b>451.61</b>	<b>(1055.48)</b>	<b>10277.37</b>

### Debt-Equity Ratio

41. 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 project are as follows:

Asset-I	As on COD		As on 31.3.2019	
	Amount	(in %)	Amount	(in %)
	(₹ in lakh)		(₹ in lakh)	
Debt	1037.10	70.00	1364.70	70.00
Equity	444.46	30.00	584.86	30.00
<b>Total</b>	<b>1481.56</b>	<b>100.00</b>	<b>1949.56</b>	<b>100.00</b>
Asset-II	As on COD		As on 31.3.2019	
	Amount	(in %)	Amount	(in %)
	(₹ in lakh)		(₹ in lakh)	
Debt	2936.47	70.00	2881.21	70.00
Equity	1258.49	30.00	1234.79	30.00
<b>Total</b>	<b>4194.96</b>	<b>100.00</b>	<b>4116.01</b>	<b>100.00</b>
Asset-III	As on COD		As on 31.3.2019	
	Amount	(in %)	Amount	(in %)
	(₹ in lakh)		(₹ in lakh)	
Debt	341.42	70.00	407.71	70.00
Equity	146.32	30.00	174.73	30.00
<b>Total</b>	<b>487.74</b>	<b>100.00</b>	<b>582.44</b>	<b>100.00</b>
Asset-IV	As on COD		As on 31.3.2019	
	Amount	(in %)	Amount	(in %)
	(₹ in lakh)		(₹ in lakh)	
Debt	2450.58	70.00	2522.34	70.00
Equity	1050.24	30.00	1080.99	30.00
<b>Total</b>	<b>3500.82</b>	<b>100.00</b>	<b>3603.33</b>	<b>100.00</b>
Asset-V	As on COD		As on 31.3.2019	
	Amount	(in %)	Amount	(in %)
	(₹ in lakh)		(₹ in lakh)	
Debt	17.46	70.00	18.22	70.00
Equity	7.48	30.00	7.81	30.00
<b>Total</b>	<b>24.94</b>	<b>100.00</b>	<b>26.03</b>	<b>100.00</b>

### Depreciation

42. The depreciation has been allowed as per the methodology provided in Regulation 27 of the 2014 Tariff Regulations. Depreciation has been allowed considering 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 is at Annexure-I to



Annexure-V has been worked out after taking into account the depreciation rates as specified in the 2014 Tariff Regulations and trued-up depreciation allowed for the transmission project for 2014-19 tariff period are as follows:

(₹ in lakh)

Asset-I						
	Particulars	2014-15 (Pro-rata for 243 days)	2015-16	2016-17	2017-18	2018-19
A	Opening Gross Block	1481.56	1954.39	2009.41	2009.41	2009.41
B	ACE	472.83	55.02	0.00	0.00	0.00
C	De-capitalisation	0.00	0.00	0.00	0.00	(59.85)
D	Closing Gross Block (A+B-C)	1954.39	2009.41	2009.41	2009.41	1949.56
E	Average Gross Block (A+D)/2	1717.97	1981.90	2009.41	2009.41	1979.49
F	Average Gross Block (90% depreciable assets)	1717.97	1981.90	2009.41	2009.41	1979.49
G	Average Gross Block (100% depreciable assets)	0.00	0.00	0.00	0.00	0.00
H	Depreciable value (excluding IT equipment and software) (F*90%)	1546.18	1783.71	1808.47	1808.47	1781.54
I	Depreciable value of IT equipment and software	0.00	0.00	0.00	0.00	0.00
J	Total Depreciable Value (H+I)	1546.18	1783.71	1808.47	1808.47	1781.54
K	Weighted Average Rate of Depreciation (WAROD) (in %)	6.33	6.33	6.33	6.33	6.33
L	Lapsed useful life at the beginning of the year (Year)	0.00	0.00	1.00	2.00	3.00
M	Balance useful life at the beginning of the year (Year)	15.00	15.00	14.00	13.00	12.00
N	<b>Depreciation during the year (E*K)</b>	<b>72.40</b>	<b>125.45</b>	<b>127.20</b>	<b>127.20</b>	<b>125.30</b>
O	Aggregate Cumulative Depreciation at the end of the year	72.40	197.85	325.05	452.24	577.55
P	Remaining Aggregate Depreciable Value at the end of the year(J-O)	1473.78	1585.86	1483.42	1356.22	1203.99

(₹ in lakh)

Asset-II				
	Particulars	2016-17	2017-18	2018-19
A	Opening Gross Block	4194.96	4763.63	5215.24
B	ACE	568.67	451.61	0.00
C	De-capitalisation	0.00	0.00	(1099.23)
D	Closing Gross Block (A+B-C)	4763.63	5215.24	4116.01



<b>Asset-II</b>				
	<b>Particulars</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
E	Average Gross Block (A+D)/2	4479.29	4989.43	4665.62
F	Average Gross Block (90% depreciable assets)	4479.29	4989.43	4665.62
G	Average Gross Block (100% depreciable assets)	0.00	0.00	0.00
H	Depreciable value (excluding IT equipment and software) (F*90%)	4031.36	4490.49	4199.06
I	Depreciable value of IT equipment and software	0.00	0.00	0.00
J	Total Depreciable Value (H+I)	4031.36	4490.49	4199.06
K	Weighted Average Rate of Depreciation (WAROD) (in %)	6.33	6.33	6.33
L	Lapsed useful life at the beginning of the year (Year)	0.00	1.00	2.00
M	Balance useful life at the beginning of the year (Year)	15.00	14.00	13.00
N	<b>Depreciation during the year (E*K)</b>	<b>283.54</b>	<b>315.83</b>	<b>295.33</b>
O	Aggregate Cumulative Depreciation at the end of the year	283.54	599.37	894.70
P	Remaining Aggregate Depreciable Value at the end of the year(J-O)	3747.82	3891.12	3304.36

(₹ in lakh)

<b>Asset-III</b>				
	<b>Particulars</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
A	Opening Gross Block	487.74	582.44	582.44
B	ACE	94.70	0.00	0.00
C	De-Capitalisation	0.00	0.00	0.00
D	Closing Gross Block (A+B-C)	582.44	582.44	582.44
E	Average Gross Block (A+D)/2	535.09	582.44	582.44
F	Average Gross Block (90% depreciable assets)	535.09	582.44	582.44
G	Average Gross Block (100% depreciable assets)	0.00	0.00	0.00
H	Depreciable value (excluding IT equipment and software) (F*90%)	481.58	524.20	524.20
I	Depreciable value of IT equipment and software	0.00	0.00	0.00
J	Total Depreciable Value (H+I)	481.58	524.20	524.20
K	Weighted Average Rate of Depreciation (WAROD) (in %)	6.33	6.33	6.33
L	Lapsed useful life at the beginning of the year (Year)	0.00	1.00	2.00
M	Balance useful life at the beginning of the year (Year)	15.00	14.00	13.00
N	<b>Depreciation during the year (E*K)</b>	<b>33.87</b>	<b>36.87</b>	<b>36.87</b>
O	Aggregate Cumulative Depreciation at the end of the year	33.87	70.74	107.61
P	Remaining Aggregate Depreciable Value at the end of the year(J-O)	447.71	453.46	416.59



(₹ in lakh)

Asset-IV			
	Particulars	2017-18 (Pro-rata for 71 days)	2018-19
A	Opening Gross Block	3500.82	3500.82
B	ACE	0.00	210.07
C	De-Capitalisation	0.00	(107.56)
D	Closing Gross Block (A+B-C)	3500.82	3603.33
E	Average Gross Block (A+D)/2	3500.82	3552.08
F	Average Gross Block (90% depreciable assets)	3500.82	3552.08
G	Average Gross Block (100% depreciable assets)	0.00	0.00
H	Depreciable value (excluding IT equipment and software) (F*90%)	3150.74	3196.87
I	Depreciable value of IT equipment and software	0.00	0.00
J	Total Depreciable Value (H+I)	3150.74	3196.87
K	Weighted Average Rate of Depreciation (WAROD) (in %)	6.33	6.33
L	Lapsed useful life at the beginning of the year (Year)	0.00	0.00
M	Balance useful life at the beginning of the year (Year)	15.00	15.00
N	<b>Depreciation during the year (E*K)</b>	<b>43.11</b>	<b>224.85</b>
O	Aggregate Cumulative Depreciation at the end of the year	43.11	267.95
P	Remaining Aggregate Depreciable Value at the end of the year(J-O)	3107.63	2928.92

(₹ in lakh)

Asset-V			
	Particulars	2017-18 (Pro-rata for 71 days)	2018-19
A	Opening Gross Block	24.94	24.94
B	ACE	0.00	1.09
C	De-capitalisation	0.00	0.00
D	Closing Gross Block (A+B-C)	24.94	26.03
E	Average Gross Block (A+D)/2	24.94	25.49
F	Average Gross Block (90% depreciable assets)	24.94	25.49
G	Average Gross Block (100% depreciable assets)	0.00	0.00
H	Depreciable value (excluding IT equipment and software) (F*90%)	22.45	22.94
I	Depreciable value of IT equipment and software	0.00	0.00
J	Total Depreciable Value (H+I)	22.45	22.94
K	Weighted Average Rate of Depreciation (WAROD) (in %)	6.33	6.33
L	Lapsed useful life at the beginning of the year (Year)	0.00	0.00
M	Balance useful life at the beginning of the year (Year)	15.00	15.00
N	<b>Depreciation during the year (E*K)</b>	<b>0.31</b>	<b>1.61</b>



O	Aggregate Cumulative Depreciation at the end of the year	0.31	1.92
P	Remaining Aggregate Depreciable Value at the end of the year(J-O)	22.14	21.02

43. Depreciation allowed for Asset-I vide order dated 10.8.2016 in Petition No. 189/TT/2015, for Asset-II and Asset-III vide order dated 22.9.2017 in Petition No. 125/TT/2016 and for Asset-IV and Asset-V vide order dated 22.1.2020 in Petition No. 267/TT/2018, claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

(₹ in lakh)

Assets	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-I	Allowed vide order dated 10.8.2016 in Petition No. 189/TT/2015	106.39	177.82	178.74	178.74	178.74
	As claimed by the Petitioner	70.39	124.47	127.20	127.20	125.30
	Approved after Truing Up	<b>72.40</b>	<b>125.45</b>	<b>127.20</b>	<b>127.20</b>	<b>125.30</b>
Asset-II	Allowed vide order dated 22.9.2017 in Petition No. 125/TT/2016	-	-	280.38	309.52	323.81
	As claimed by the Petitioner	-	-	283.63	316.00	295.51
	Approved after Truing Up	-	-	<b>283.54</b>	<b>315.83</b>	<b>295.33</b>
Asset-III	Allowed vide order dated 22.9.2017 in Petition No. 125/TT/2016	-	-	33.51	36.16	36.16
	As claimed by the Petitioner	-	-	33.88	36.89	36.89
	Approved after Truing Up	-	-	<b>33.87</b>	<b>36.87</b>	<b>36.87</b>
Asset-IV	Allowed vide order dated 22.1.2020 in Petition No. 267/TT/2018	-	-	-	43.16	182.08
	As claimed by the Petitioner	-	-	-	49.7	265.71
	Approved after Truing Up	-	-	-	<b>43.11</b>	<b>224.85</b>
Asset-V	Allowed vide order dated 22.1.2020 in Petition No. 267/TT/2018	-	-	-	0.30	1.59
	As claimed by the Petitioner	-	-	-	0.50	2.64
	Approved after Truing Up	-	-	-	<b>0.31</b>	<b>1.61</b>



### Interest on Loan (IoL)

44. 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. The trued-up IoL allowed in respect of the transmission project for 2014-19 tariff period is as follows:

Particulars		Asset-I				
		2014-15 (Pro-rata for 243 days)	2015-16	2016-17	2017-18	2018-19
A	Gross Normative Loan	1037.10	1368.09	1406.60	1406.60	1406.60
B	Cumulative Repayments up to Previous Year	0.00	72.40	197.85	325.05	452.24
C	Net Loan-Opening (A-B)	1037.10	1295.69	1208.75	1081.55	954.36
D	Addition due to Additional Capitalization	330.99	38.51	0.00	0.00	-41.90
E	Repayment during the year	72.40	125.45	127.20	127.20	125.30
F	Net Loan-Closing (C+D-E)	1295.69	1208.75	1081.55	954.36	787.15
G	Average Loan (A+F)/2	1166.39	1252.22	1145.15	1017.95	870.75
H	Weighted Average Rate of Interest on Loan (in %)	9.4019	9.3011	9.2091	9.0493	8.9982
I	<b>Interest on Loan (GxH)</b>	<b>73.01</b>	<b>116.47</b>	<b>105.46</b>	<b>92.12</b>	<b>78.35</b>

Particulars		Asset-II		
		2016-17	2017-18	2018-19
A	Gross Normative Loan	2936.47	3334.54	3650.67
B	Cumulative Repayments up to Previous Year	0.00	283.54	599.37
C	Net Loan-Opening (A-B)	2936.47	3051.01	3051.30
D	Addition due to Additional Capitalization	398.07	316.13	(769.46)
E	Repayment during the year	283.54	315.83	295.33
F	Adjustment of cumulative repayment pertaining to the de-capitalised asset	0.00	0.00	129.15
G	Net Loan-Closing (C+D-E+F)	3051.01	3051.30	2115.66
H	Average Loan (A+G)/2	2993.74	3051.15	2583.48
I	Weighted Average Rate of Interest on Loan (in %)	8.33	8.30	8.29
J	<b>Interest on Loan (HxI)</b>	<b>249.35</b>	<b>253.32</b>	<b>214.17</b>



(₹ in lakh)

Particulars		Asset-III		
		2016-17	2017-18	2018-19
A	Gross Normative Loan	341.42	407.71	407.71
B	Cumulative Repayments up to Previous Year	0.00	33.87	70.74
C	Net Loan-Opening (A-B)	341.42	373.84	336.97
D	Addition due to Additional Capitalization	66.29	0.00	0.00
E	Repayment during the year	33.87	36.87	36.87
F	Net Loan-Closing (C+D-E)	373.84	336.97	300.10
G	Average Loan (A+F)/2	357.63	355.40	318.54
H	Weighted Average Rate of Interest on Loan (in %)	8.395	8.36	8.36
I	<b>Interest on Loan (GxH)</b>	<b>30.02</b>	<b>29.71</b>	<b>26.62</b>

(₹ in lakh)

Particulars		Asset-IV	
		2017-18 (Pro-rata for 71 days)	2018-19
A	Gross Normative Loan	2450.58	2450.58
B	Cumulative Repayments upto Previous Year	0.00	43.11
C	Net Loan-Opening (A-B)	2450.58	2407.48
D	Addition due to Additional Capitalization	0.00	71.76
E	Repayment during the year	43.11	224.85
F	Adjustment of cumulative repayment pertaining to the De-Capitalised asset	0.00	1.32
G	Net Loan-Closing (C+D-E+F)	2407.48	2255.71
H	Average Loan (A+G)/2	2429.03	2331.59
I	Weighted Average Rate of Interest on Loan (in %)	8.35	8.36
J	<b>Interest on Loan (HxI)</b>	<b>39.45</b>	<b>194.93</b>

(₹ in lakh)

Particulars		Asset-V	
		2017-18 (Pro-rata for 71 days)	2018-19
A	Gross Normative Loan	17.46	17.46
B	Cumulative Repayments up to Previous Year	0.00	0.31
C	Net Loan-Opening (A-B)	17.46	17.15
D	Addition due to Additional Capitalization	0.00	0.76
E	Repayment during the year	0.31	1.61
F	Net Loan-Closing (C+D-E)	17.15	16.30
G	Average Loan (A+F)/2	17.31	16.73
H	Weighted Average Rate of Interest on Loan (in %)	7.20	7.22
I	<b>Interest on Loan (GxH)</b>	<b>0.24</b>	<b>1.21</b>

45. IoL allowed for Asset-I vide order dated 10.8.2016 in Petition No. 189/TT/2015, for Asset-II and Asset-III vide order dated 22.9.2017 in Petition No.



125/TT/2016 and for Asset-IV and Asset-V vide order dated 22.1.2020 in Petition No. 267/TT/2018, claimed by the Petitioner in the instant petition and trued-up in the instant order is as follows:

							(₹ in lakh)
Asset	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19	
<b>Asset-I</b>	Allowed vide order dated 10.8.2016 in Petition No. 189/TT/2015	107.14	166.27	150.38	133.46	116.60	
	As claimed by the Petitioner	70.36	115.15	105.61	92.94	79.19	
	Approved after Truing Up	<b>73.01</b>	<b>116.47</b>	<b>105.46</b>	<b>92.12</b>	<b>78.35</b>	
<b>Asset-II</b>	Allowed vide order dated 22.9.2017 in Petition No. 125/TT/2016	-	-	247.57	249.49	236.20	
	As claimed by the Petitioner	-	-	250.61	254.58	215.28	
	Approved after Truing Up	-	-	<b>249.35</b>	<b>253.32</b>	<b>214.17</b>	
<b>Asset-III</b>	Allowed vide order dated 22.9.2017 in Petition No. 125/TT/2016	-	-	29.86	29.38	26.32	
	As claimed by the Petitioner	-	-	30.03	29.72	26.63	
	Approved after Truing Up	-	-	<b>30.02</b>	<b>29.71</b>	<b>26.62</b>	
<b>Asset-IV</b>	Allowed vide order dated 22.1.2020 in Petition No. 267/TT/2018	-	-	-	40.01	154.26	
	As claimed by the Petitioner	-	-	-	45.5	230.41	
	Approved after Truing Up	-	-	-	<b>39.45</b>	<b>194.93</b>	
<b>Asset-V</b>	Allowed vide order dated 22.1.2020 in Petition No. 267/TT/2018	-	-	-	0.23	1.16	
	As claimed by the Petitioner	-	-	-	0.39	1.98	
	Approved after Truing Up	-	-	-	<b>0.24</b>	<b>1.21</b>	

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

46. The Petitioner has claimed RoE for the transmission project in terms of Regulation 24 and Regulation 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 the 2014-19 tariff period:





<b>Year</b>	<b>Claimed effective tax (in %)</b>	<b>Grossed-up RoE [(Base Rate)/(1-t)] (in %)</b>
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

47. 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 below.

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

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

<b>Year</b>	<b>Notified MAT rates (Inclusive of surcharge &amp; cess) (in %)</b>	<b>Base rate of RoE (in %)</b>	<b>Grossed-up RoE [(Base Rate)/(1-t)] (in %)</b>
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

49. 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 trued-up on the basis of MAT rates applicable in the respective years and is allowed for the transmission



project as follows:

(₹ in lakh)

Particulars		Asset-I				
		2014-15 (Pro-rata for 243 days)	2015-16	2016-17	2017-18	2018-19
A	Opening Equity	444.46	586.30	602.81	602.81	602.81
B	Additions	141.85	16.51	0.00	0.00	(17.95)
C	Closing Equity (A-B)	586.30	602.81	602.81	602.81	584.86
D	Average Equity (A+B)/2	515.38	594.56	602.81	602.81	593.83
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	20.961	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (in %)	19.610	19.705	19.705	19.705	19.758
H	<b>Return on Equity (DxG)</b>	<b>67.29</b>	<b>117.16</b>	<b>118.78</b>	<b>118.78</b>	<b>117.33</b>

(₹ in lakh)

Particulars		Asset-II		
		2016-17	2017-18	2018-19
A	Opening Equity	1258.48	1429.08	1564.56
B	Additions	170.60	135.48	(329.77)
C	Closing Equity (A-B)	1429.08	1564.56	1234.79
D	Average Equity (A+B)/2	1343.78	1496.82	1399.67
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	21.342	21.342	21.549
G	Rate of Return on Equity (in %)	19.705	19.705	19.758
H	<b>Return on Equity (DxG)</b>	<b>264.79</b>	<b>294.95</b>	<b>276.55</b>

(₹ in lakh)

Particulars		Asset-III		
		2016-17	2017-18	2018-19
A	Opening Equity	146.32	174.73	174.73
B	Additions	28.41	0.00	0.00
C	Closing Equity (A-B)	174.73	174.73	174.73
D	Average Equity (A+B)/2	160.53	174.73	174.73
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	21.342	21.342	21.549
G	Rate of Return on Equity (in %)	19.705	19.705	19.758
H	<b>Return on Equity (DxG)</b>	<b>31.63</b>	<b>34.43</b>	<b>34.52</b>



(₹ in lakh)

Particulars		Asset-IV	
		2017-18 (Pro-rata for 71 days)	2018-19
A	Opening Equity	1050.24	1050.24
B	Additions	0.00	30.75
C	Closing Equity (A-B)	1050.24	1080.99
D	Average Equity (A+B)/2	1050.24	1065.61
E	Return on Equity (Base Rate) (in %)	15.500	15.500
F	MAT Rate for respective year (in %)	21.342	21.549
G	Rate of Return on Equity (in %)	19.705	19.758
H	<b>Return on Equity (DxG)</b>	<b>40.26</b>	<b>210.54</b>

(₹ in lakh)

Particulars		Asset-V	
		2017-18 (Pro-rata for 71 days)	2018-19
A	Opening Equity	7.48	7.48
B	Additions	0.00	0.33
C	Closing Equity (A-B)	7.48	7.81
D	Average Equity (A+B)/2	7.48	7.65
E	Return on Equity (Base Rate) (in %)	15.500	15.500
F	MAT Rate for respective year (in %)	21.342	21.549
G	Rate of Return on Equity (in %)	19.705	19.758
H	<b>Return on Equity (DxG)</b>	<b>0.29</b>	<b>1.51</b>

50. RoE allowed for Asset-I vide order dated 10.8.2016 in Petition No. 189/TT/2015, for Asset-II and Asset-III vide order dated 22.9.2017 in Petition No. 125/TT/2016 and for Asset-IV and Asset-V vide order dated 22.1.2020 in Petition No. 267/TT/2018, claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

(₹ in lakh)

Assets	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-I	Allowed vide order dated 10.8.2016 in Petition No. 189/TT/2015	98.88	165.27	166.12	166.12	166.12
	As claimed by the Petitioner	65.42	116.24	118.79	118.79	117.33
	Approved after Truing Up	<b>67.29</b>	<b>117.16</b>	<b>118.78</b>	<b>118.78</b>	<b>117.33</b>
Asset-II	Allowed vide order dated 22.9.2017 in Petition No. 125/TT/2016	-	-	260.58	287.66	300.95



	As claimed by the Petitioner	-	-	264.89	295.12	276.71
	Approved after Truing Up	-	-	<b>264.79</b>	<b>294.95</b>	<b>276.55</b>
<b>Asset-III</b>	Allowed vide order dated 22.9.2017 in Petition No. 125/TT/2016	-	-	31.15	33.60	33.60
	As claimed by the Petitioner	-	-	31.64	34.45	34.54
	Approved after Truing Up	-	-	<b>31.63</b>	<b>34.43</b>	<b>34.52</b>
<b>Asset-IV</b>	Allowed vide order dated 22.1.2020 in Petition No. 267/TT/2018	-	-	-	40.11	169.22
	As claimed by the Petitioner	-	-	-	46.42	248.80
	Approved after Truing Up	-	-	-	<b>40.26</b>	<b>210.54</b>
<b>Asset-V</b>	Allowed vide order dated 22.1.2020 in Petition No. 267/TT/2018	-	-	-	0.28	1.48
	As claimed by the Petitioner	-	-	-	0.46	2.47
	Approved after Truing Up	-	-	-	<b>0.29</b>	<b>1.51</b>

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

51. The Commission vide order dated 10.8.2016 in Petition No. 189/TT/2015 in case of Asset-I, vide order dated 22.9.2017 in Petition No. 125/TT/2016 in case of Asset-II and vide order dated 22.1.2020 in Petition No. 267/TT/2018 in case of Asset-IV have not allowed O&M Expenses due to the absence of actual O&M Expenses details and directed to submit at the time of true-up.

52. The Petitioner has submitted O&M Expenses in case of Central Portion on actual basis for Asset-I, Asset-II and Asset-IV. No O&M Expenses have been claimed for Asset-III and Asset-V being under State Sector. The Petitioner has claimed the following O&M Expenses:

<b>Particulars</b>	<b>(₹ in lakh)</b>				
	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
<b>Asset-I</b>	49.11	65.71	22.39	36.27	23.59



<b>Asset-II</b>	-	-	70.40	114.07	119.67
<b>Asset-IV</b>	-	-	-	18.37	11.95

53. The Petitioner vide Auditor's certificate dated 24.10.2019 has submitted the detailed break-up of actual O&M Expenses for 2014-19 tariff period. The O&M Expenses allowed for the transmission project for 2014-19 period are as follows:

(₹ in lakh)					
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Asset-I	49.11	65.71	22.39	36.27	23.59
Asset-II	-	-	70.4	114.07	119.67
Asset-IV	-	-	-	18.37	11.95

54. We have considered the submissions of the Petitioner. The actual O&M Expenses claimed by the Petitioner towards Asset-I, Asset-II and Asset-IV is allowed and the same is as follows:

(₹ in lakh)						
<b>Asset</b>	<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
<b>Asset-I</b>	As claimed by the Petitioner	49.11	65.71	22.39	36.27	23.59
	Allowed in the instant true-up Petition	<b>49.11</b>	<b>65.71</b>	<b>22.39</b>	<b>36.27</b>	<b>23.59</b>
<b>Asset-II</b>	As claimed by the Petitioner	-	-	70.40	114.07	119.67
	Allowed in the instant true-up Petition	-	-	<b>70.40</b>	<b>114.07</b>	<b>119.67</b>
<b>Asset-IV</b>	As claimed by the Petitioner	-	-	-	18.37	11.95
	Allowed in the instant true-up Petition	-	-	-	<b>18.37</b>	<b>11.95</b>

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

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

#### **(i) Working Capital for Maintenance spares:**

Regulation 28 of the 2014 Tariff Regulations provides for working capital



towards maintenance spares @ 15% per annum of the O&M Expenses. The value of maintenance spares has accordingly been worked out

**(ii) Working Capital for O & M Expenses:**

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

**(iii) Working Capital for Receivables:**

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

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

As per proviso 3 of Regulation 28 of the 2014 Tariff Regulation, SBI Base rate 10.00% as on 1.4.2014 plus 350 Bps i.e., 13.50% has been considered for the asset, as the rate of interest on working capital.

56. The trued-up IWC allowed for the transmission project for 2014-19 tariff period are as follows:

Particulars		Asset-I				
		2014-15 (Pro-rata for 243 days)	2015-16	2016-17	2017-18	2018-19
A	Working Capital for O&M Expenses (one month of O&M Expenses)	6.15	5.48	1.87	3.02	1.97

(₹ in lakh)



B	Working Capital for Maintenance Spares (Maintenance Spares @15% of O&M Expenses)	11.06	9.86	3.36	5.44	3.54
C	Working Capital for Receivables (Receivable equivalent to two months of fixed cost)	67.45	72.78	63.86	64.03	58.88
D	<b>Total Working Capital (A+B+C)</b>	<b>84.66</b>	<b>88.11</b>	<b>69.08</b>	<b>72.49</b>	<b>64.38</b>
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
F	<b>Interest on Working Capital (DxE)</b>	<b>7.61</b>	<b>11.90</b>	<b>9.33</b>	<b>9.79</b>	<b>8.69</b>

(₹ in lakh)

Particulars		Asset-II		
		2016-17	2017-18	2018-19
A	Working Capital for O&M Expenses (one month of O&M Expenses)	5.87	9.51	9.97
B	Working Capital for Maintenance Spares (Maintenance Spares @15% of O&M Expenses)	10.56	17.11	17.95
C	Working Capital for Receivables (Receivable equivalent to two months of fixed cost)	148.19	167.16	154.85
D	<b>Total Working Capital (A+B+C)</b>	<b>164.62</b>	<b>193.78</b>	<b>182.78</b>
E	Rate of Interest (in %)	12.80	12.80	12.80
F	<b>Interest on Working Capital (DxE)</b>	<b>21.07</b>	<b>24.80</b>	<b>23.40</b>

(₹ in lakh)

Particulars		Asset-III		
		2016-17	2017-18	2018-19
A	Working Capital for O&M Expenses (One month of O&M Expenses)	0.00	0.00	0.00
B	Working Capital for Maintenance Spares (Maintenance Spares @15% of O&M Expenses)	0.00	0.00	0.00
C	Working Capital for Receivables (Receivable equivalent to two months of fixed cost)	16.27	17.21	16.70
D	<b>Total Working Capital (A+B+C)</b>	<b>16.27</b>	<b>17.21</b>	<b>16.70</b>
E	Rate of Interest (in %)	12.80	12.80	12.80
F	<b>Interest on Working Capital (DxE)</b>	<b>2.08</b>	<b>2.20</b>	<b>2.14</b>

(₹ in lakh)

Particulars		Asset-IV	
		2017-18 (Pro-rata for 71 days)	2018-19
A	Working Capital for O&M Expenses (one month of O&M Expenses)	7.87	1.00
B	Working Capital for Maintenance Spares (Maintenance Spares @15% of O&M Expenses)	14.17	1.79



C	Working Capital for Receivables (Receivable equivalent to two months of fixed cost)	124.03	109.40
D	<b>Total Working Capital (A+B+C)</b>	<b>146.07</b>	<b>112.19</b>
E	Rate of Interest (in %)	12.60	12.60
F	<b>Interest on Working Capital (DxE)</b>	<b>3.58</b>	<b>14.14</b>

(₹ in lakh)

Particulars		Asset-V	
		2017-18 (Pro-rata for 71 days)	2018-19
A	Working Capital for O&M Expenses (One month of O&M Expenses)	0.00	0.00
B	Working Capital for Maintenance Spares (Maintenance Spares @15% of O&M Expenses)	0.00	0.00
C	Working Capital for Receivables (Receivable equivalent to two months of fixed cost)	0.73	0.74
D	<b>Total Working Capital (A+B+C)</b>	<b>0.73</b>	<b>0.74</b>
E	Rate of Interest (in %)	12.60	12.60
F	<b>Interest on Working Capital (DxE)</b>	<b>0.02</b>	<b>0.09</b>

57. IWC allowed for Asset-I vide order dated 10.8.2016 in Petition No. 189/TT/2015, for Asset-II and Asset-III vide order dated 22.9.2017 in Petition No. 125/TT/2016 and for Asset-IV and Asset-V vide order dated 22.1.2020 in Petition No. 267/TT/2018, claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

(₹ in lakh)

Assets	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-I	Allowed vide order dated 10.8.2016 in Petition No. 189/TT/2015	7.19	11.72	11.40	11.01	10.62
	As claimed by the Petitioner	7.46	11.82	9.33	9.81	8.71
	Approved after Truing Up	<b>7.61</b>	<b>11.90</b>	<b>9.33</b>	<b>9.79</b>	<b>8.69</b>
Asset-II	Allowed vide order dated 22.9.2017 in Petition No. 125/TT/2016	-	-	17.19	18.46	18.77
	As claimed by the Petitioner	-	-	21.10	24.84	23.43
	Approved after Truing Up	-	-	<b>21.07</b>	<b>24.80</b>	<b>23.40</b>
Asset-III	Allowed vide order dated 22.9.2017 in Petition No. 125/TT/2016	-	-	2.06	2.16	2.09
	As claimed by the Petitioner	-	-	2.08	2.20	2.14





	Approved after Truing Up	-	-	<b>2.08</b>	<b>2.20</b>	<b>2.14</b>
<b>Asset-IV</b>	Allowed vide order dated 22.1.2020 in Petition No. 267/TT/2018	-	-	-	2.64	10.84
	As claimed by the Petitioner	-	-	-	3.98	16.59
	Approved after Truing Up	-	-	-	<b>3.58</b>	<b>14.14</b>
<b>Asset-V</b>	Allowed vide order dated 22.1.2020 in Petition No. 267/TT/2018	-	-	-	0.02	0.09
	As claimed by the Petitioner	-	-	-	0.03	0.15
	Approved after Truing Up	-	-	-	<b>0.02</b>	<b>0.09</b>

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

58. The trued-up Annual Fixed Charges (AFC) approved for the transmission project for 2014-19 tariff period are as follows:

(₹ in lakh)

Particulars	Asset-I				
	2014-15 (Pro-rata for 243 days)	2015-16	2016-17	2017-18	2018-19
Depreciation	72.40	125.45	127.20	127.20	125.30
Interest on Loan	73.01	116.47	105.46	92.12	78.35
Return on Equity	67.29	117.16	118.78	118.78	117.33
O & M Expenses	49.11	65.71	22.39	36.27	23.59
Interest on Working Capital	7.61	11.90	9.33	9.79	8.69
<b>Total</b>	<b>269.41</b>	<b>436.69</b>	<b>383.15</b>	<b>384.15</b>	<b>353.27</b>

(₹ in lakh)

Particulars	Asset-II		
	2016-17	2017-18	2018-19
Depreciation	283.54	315.83	295.33
Interest on Loan	249.35	253.32	214.17
Return on Equity	264.79	294.95	276.55
O & M Expenses	70.40	114.07	119.67
Interest on Working Capital	21.07	24.80	23.40
<b>Total</b>	<b>889.15</b>	<b>1002.98</b>	<b>929.11</b>

(₹ in lakh)

Particulars	Asset-III		
	2016-17	2017-18	2018-19
Depreciation	33.87	36.87	36.87
Interest on Loan	30.02	29.71	26.62
Return on Equity	31.63	34.43	34.52
O & M Expenses	0.00	0.00	0.00



Particulars	Asset-III		
	2016-17	2017-18	2018-19
Interest on Working Capital	2.08	2.20	2.14
<b>Total</b>	<b>97.61</b>	<b>103.21</b>	<b>100.14</b>

(₹ in lakh)

Particulars	Asset-IV	
	2017-18 (Pro-rata for 71 days)	2018-19
Depreciation	43.11	224.85
Interest on Loan	39.45	194.93
Return on Equity	40.26	210.54
O & M Expenses	18.37	11.95
Interest on Working Capital	3.58	14.14
<b>Total</b>	<b>144.76</b>	<b>656.40</b>

(₹ in lakh)

Particulars	Asset-V	
	2017-18 (Pro-rata for 71 days)	2018-19
Depreciation	0.31	1.61
Interest on Loan	0.24	1.21
Return on Equity	0.29	1.51
O & M Expenses	0.02	0.09
Interest on Working Capital	0.00	0.00
<b>Total</b>	<b>0.85</b>	<b>4.43</b>

59. The details of AFC allowed for the 2014-19 tariff period for Asset-I vide order dated 10.8.2016 in Petition No. 189/TT/2015, for Asset-II and Asset-III vide order dated 22.9.2017 in Petition No. 125/TT/2016 and for Asset-IV and Asset-V vide order dated 22.1.2020 in Petition No. 267/TT/2018, claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

(₹ in lakh)

Assets	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-I	Allowed vide order dated 10.8.2016 in Petition No. 189/TT/2015	319.60	512.08	506.64	489.33	472.08
	As claimed by the Petitioner	262.74	433.39	383.32	385.01	354.12
	Approved after Truing Up	<b>269.41</b>	<b>436.69</b>	<b>383.15</b>	<b>384.15</b>	<b>353.27</b>
Asset-II	Allowed vide order dated 22.9.2017 in Petition No. 125/TT/2016	-	-	805.72	865.13	879.72



Assets	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
	As claimed by the Petitioner	-	-	890.63	1004.61	930.60
	Approved after Truing Up	-	-	<b>889.15</b>	<b>1002.98</b>	<b>929.11</b>
Asset-III	Allowed vide order dated 22.9.2017 in Petition No. 125/TT/2016	-	-	96.58	101.30	98.18
	As claimed by the Petitioner	-	-	97.63	103.26	100.20
	Approved after Truing Up	-	-	<b>97.61</b>	<b>103.21</b>	<b>100.14</b>
Asset-IV	Allowed vide order dated 22.1.2020 in Petition No. 267/TT/2018	-	-		125.93	516.41
	As claimed by the Petitioner	-	-	-	163.97	773.46
	Approved after Truing Up	-	-		<b>144.76</b>	<b>656.40</b>
Asset-V	Allowed vide order dated 22.1.2020 in Petition No. 267/TT/2018	-	-	-	0.83	4.32
	As claimed by the Petitioner	-	-	-	1.38	7.24
	Approved after Truing Up	-	-	-	<b>0.85</b>	<b>4.43</b>

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

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

(₹ in lakh)

Particulars	Asset-I				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	123.41	123.41	123.41	123.41	123.41
Interest on Loan	66.04	54.82	43.68	32.57	21.41
Return on Equity	109.85	109.85	109.85	109.85	109.85
Interest on Working Capital	6.20	6.05	5.88	5.71	5.53
O&M Expenses	38.99	38.99	38.99	38.99	38.99
<b>Total</b>	<b>344.49</b>	<b>333.12</b>	<b>321.81</b>	<b>310.53</b>	<b>299.19</b>

(₹ in lakh)

Particulars	Asset-II				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	260.72	260.72	260.72	260.72	260.72
Interest on Loan	164.31	141.52	119.97	98.44	76.99
Return on Equity	232.07	232.07	232.07	232.07	232.07
Interest on Working Capital	13.47	13.16	12.83	12.51	12.16
O&M Expenses	82.37	82.37	82.37	82.37	82.37
<b>Total</b>	<b>752.94</b>	<b>729.84</b>	<b>707.96</b>	<b>686.11</b>	<b>664.31</b>

(₹ in lakh)

Particulars	Asset-III				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	36.89	36.89	36.89	36.89	36.89



Particulars	Asset-III				
	2019-20	2020-21	2021-22	2022-23	2023-24
Interest on Loan	23.53	20.42	17.35	14.27	11.18
Return on Equity	32.83	32.83	32.83	32.83	32.83
Interest on Working Capital	1.40	1.36	1.31	1.27	1.22
O&M Expenses	0.00	0.00	0.00	0.00	0.00
<b>Total</b>	<b>94.65</b>	<b>91.50</b>	<b>88.38</b>	<b>85.26</b>	<b>82.12</b>

(₹ in lakh)

Particulars	Asset-IV				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	272.86	272.86	272.86	272.86	272.86
Interest on Loan	214.72	191.07	169.25	147.44	124.02
Return on Equity	242.88	242.88	242.88	242.88	242.88
Interest on Working Capital	14.74	14.42	14.09	13.76	13.38
O&M Expenses	86.21	86.21	86.21	86.21	86.21
<b>Total</b>	<b>831.41</b>	<b>807.44</b>	<b>785.29</b>	<b>763.15</b>	<b>739.35</b>

(₹ in lakh)

Particulars	Asset-V				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	2.73	2.73	2.73	2.73	2.73
Interest on Loan	1.86	1.66	1.47	1.27	1.07
Return on Equity	2.43	2.43	2.43	2.43	2.43
Interest on Working Capital	0.11	0.10	0.10	0.10	0.09
O&M Expenses	0.00	0.00	0.00	0.00	0.00
<b>Total</b>	<b>7.13</b>	<b>6.92</b>	<b>6.73</b>	<b>6.53</b>	<b>6.32</b>

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

(₹ in lakh)

Particulars	Asset-I				
	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	3.25	3.25	3.25	3.25	3.25
Maintenance Spares	5.85	5.85	5.85	5.85	5.85
Receivables	42.36	41.07	39.68	38.28	36.79
<b>Total</b>	<b>51.46</b>	<b>50.17</b>	<b>48.78</b>	<b>47.38</b>	<b>45.89</b>
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
<b>Interest on Working Capital</b>	<b>6.20</b>	<b>6.05</b>	<b>5.88</b>	<b>5.71</b>	<b>5.53</b>



(₹ in lakh)

Particulars	Asset-II				
	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	6.86	6.86	6.86	6.86	6.86
Maintenance Spares	12.36	12.36	12.36	12.36	12.36
Receivables	92.58	89.98	87.28	84.59	81.68
<b>Total</b>	<b>111.80</b>	<b>109.20</b>	<b>106.50</b>	<b>103.81</b>	<b>100.90</b>
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
<b>Interest on Working Capital</b>	<b>13.47</b>	<b>13.16</b>	<b>12.83</b>	<b>12.51</b>	<b>12.16</b>

(₹ in lakh)

Particulars	Asset-III				
	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	11.64	11.28	10.90	10.51	10.10
<b>Total</b>	<b>11.64</b>	<b>11.28</b>	<b>10.90</b>	<b>10.51</b>	<b>10.10</b>
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
<b>Interest on Working Capital</b>	<b>1.40</b>	<b>1.36</b>	<b>1.31</b>	<b>1.27</b>	<b>1.22</b>

(₹ in lakh)

Particulars	Asset-IV				
	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	7.18	7.18	7.18	7.18	7.18
Maintenance Spares	12.93	12.93	12.93	12.93	12.93
Receivables	102.22	99.55	96.82	94.09	90.90
<b>Total</b>	<b>122.33</b>	<b>119.66</b>	<b>116.93</b>	<b>114.20</b>	<b>111.01</b>
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
<b>Interest on Working Capital</b>	<b>14.74</b>	<b>14.42</b>	<b>14.09</b>	<b>13.76</b>	<b>13.38</b>

(₹ in lakh)

Particulars	Asset-V				
	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	0.88	0.85	0.83	0.81	0.78
<b>Total</b>	<b>0.88</b>	<b>0.85</b>	<b>0.83</b>	<b>0.81</b>	<b>0.78</b>
Rate of Interest (in %)	12.10	12.10	12.10	12.10	12.10
<b>Interest on Working Capital</b>	<b>0.11</b>	<b>0.10</b>	<b>0.10</b>	<b>0.10</b>	<b>0.09</b>

### Capital cost for 2019-24 tariff period

62. 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.”

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



(₹ in lakh)

Assets	Approved apportioned cost as per FR	Capital cost as on 31.3.2019	Actual Add Cap for					Total cost as on 31.3.2024
			2019-20	2020-21	2021-22	2022-23	2023-24	
Asset-I	2742.85	1949.56	0.00	0.00	0.00	0.00	0.00	1949.56
Asset-II	5358.49	4118.73	0.00	0.00	0.00	0.00	0.00	4118.73
Asset-III	609.95	582.74	0.00	0.00	0.00	0.00	0.00	582.74
Asset-IV	5239.06	4310.63	0.00	0.00	0.00	0.00	0.00	4310.63
Asset-V	45.98	43.13	0.00	0.00	0.00	0.00	0.00	43.13
<b>Total</b>	<b>13996.33</b>	<b>11004.79</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>11004.79</b>

64. The Petitioner has claimed the total capital cost of ₹11004.79 lakh as on 31.3.2019. However, the capital cost of ₹10277.37 lakh has been worked out as on 31.3.2019 and the same is considered as the capital cost as on 1.4.2019 for determination of tariff in accordance with Regulation 19 of the 2019 Tariff Regulations.

65. The Petitioner has not claimed any additional capital expenditure during 2019-24 tariff period for the transmission assets covered under instant Petition.

#### **Capital cost for 2019-24 tariff period**

66. Accordingly, the capital cost of the transmission project considered for 2019-24 tariff period are as follows:

(₹ in lakh)

Assets	Capital cost (As on 1.4.2019)	ACE (2019-24)	Total Estimated Completion Cost (Up to 31.3.2024)
Asset-I	1949.56	0.00	1949.56
Asset-II	4116.01	0.00	4116.01
Asset-III	582.44	0.00	582.44
Asset-IV	3603.33	0.00	3603.33
Asset-V	26.03	0.00	26.03
<b>Total</b>	<b>10277.37</b>	<b>0.00</b>	<b>10277.37</b>

#### **Debt-Equity ratio**

67. 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 system including communication system declared under commercial operation prior to 1.4.2019, debt: equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2019 shall be considered:

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

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

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

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

68. The debt: equity ratio considered for the purpose of computation of tariff for 2019-24 period is as follows:

Asset-I	Capital Cost (As on 1.4.2019) (₹ in lakh)	(in %)	Capital Cost (As on 31.3.2024) (₹ in lakh)	(in %)
Debt	1364.70	70.00	1364.70	70.00
Equity	584.86	30.00	584.86	30.00
<b>Total</b>	<b>1949.56</b>	<b>100.00</b>	<b>1949.56</b>	<b>100.00</b>

Asset-II	Capital Cost (As on 1.4.2019) (₹ in lakh)	(in %)	Capital Cost (as on 31.3.2024) (₹ in lakh)	(in %)
Debt	2881.21	70.00	2881.21	70.00
Equity	1234.79	30.00	1234.79	30.00
<b>Total</b>	<b>4116.01</b>	<b>100.00</b>	<b>4116.01</b>	<b>100.00</b>

Asset-III	Capital Cost (As on 1.4.2019) (₹ in lakh)	(in %)	Capital Cost (As on 31.3.2024) (₹ in lakh)	(in %)
Debt	407.71	70.00	407.71	70.00
Equity	174.73	30.00	174.73	30.00
<b>Total</b>	<b>582.44</b>	<b>100.00</b>	<b>582.44</b>	<b>100.00</b>

Asset-IV	Capital Cost (As on 1.4.2019) (₹ in lakh)	(in %)	Capital Cost (As on 31.3.2024) (₹ in lakh)	(in %)
Debt	2522.34	70.00	2522.34	70.00
Equity	1080.99	30.00	1080.99	30.00
<b>Total</b>	<b>3603.33</b>	<b>100.00</b>	<b>3603.33</b>	<b>100.00</b>

Asset-V	Capital Cost (As on 1.4.2019) (₹ in lakh)	(in %)	Capital Cost (As on 31.3.2024) (₹ in lakh)	(in %)
Debt	18.22	70.00	18.22	70.00
Equity	7.81	30.00	7.81	30.00
<b>Total</b>	<b>26.03</b>	<b>100.00</b>	<b>26.03</b>	<b>100.00</b>

### Depreciation

69. 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 assets of the generating station and transmission system:

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



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

*(6) In case of the existing projects, the balance depreciable value as on 1.4.2019 shall be worked out by deducting the cumulative depreciation as admitted by the Commission 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.”*

70. WAROD has been worked out and after taking into account the depreciation rates as prescribed in the 2019 Tariff Regulations. The depreciation has been worked out considering the admitted capital expenditure as on 31.3.2019 and accumulated depreciation up to 31.3.2019. The depreciation allowed for the transmission project are as follows:



(₹ in lakh)

Asset-I						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Opening Gross Block	1949.56	1949.56	1949.56	1949.56	1949.56
B	ACE	0.00	0.00	0.00	0.00	0.00
C	Closing Gross Block (A+B)	1949.56	1949.56	1949.56	1949.56	1949.56
D	Average Gross Block (A+C)/2	1949.56	1949.56	1949.56	1949.56	1949.56
E	Average Gross Block (90% depreciable assets)	1949.56	1949.56	1949.56	1949.56	1949.56
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%)	1754.60	1754.60	1754.60	1754.60	1754.60
H	Depreciable value of IT equipment and software	0.00	0.00	0.00	0.00	0.00
I	Total Depreciable Value (G+H)	1754.60	1754.60	1754.60	1754.60	1754.60
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)	4.00	5.00	6.00	7.00	8.00
L	Balance useful life at the beginning of the year (Year)	11.00	10.00	9.00	8.00	7.00
M	<b>Depreciation during the year (D*J)</b>	<b>123.41</b>	<b>123.41</b>	<b>123.41</b>	<b>123.41</b>	<b>123.41</b>
N	Aggregate Cumulative Depreciation at the end of the year	700.95	824.36	947.77	1071.17	1194.58
O	Remaining Aggregate Depreciable Value at the end of the year(I-N)	1053.65	930.24	806.84	683.43	560.02

(₹ in lakh)

Asset-II						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Opening Gross Block	4116.01	4116.01	4116.01	4116.01	4116.01
B	ACE	0.00	0.00	0.00	0.00	0.00
C	Closing Gross Block (A+B)	4116.01	4116.01	4116.01	4116.01	4116.01
D	Average Gross Block (A+C)/2	4116.01	4116.01	4116.01	4116.01	4116.01
E	Average Gross Block (90% depreciable assets)	4116.01	4116.01	4116.01	4116.01	4116.01
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%)	3704.41	3704.41	3704.41	3704.41	3704.41
H	Depreciable value of IT equipment and software	0.00	0.00	0.00	0.00	0.00
I	Total Depreciable Value (G+H)	3704.41	3704.41	3704.41	3704.41	3704.41
J	Weighted Average Rate of	6.33				



Asset-II						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	Depreciation (WAROD) (in %)		6.33	6.33	6.33	6.33
K	Lapsed useful life at the beginning of the year (Year)	3.00	4.00	5.00	6.00	7.00
L	Balance useful life at the beginning of the year (Year)	12.00	11.00	10.00	9.00	8.00
M	<b>Depreciation during the year (D*J)</b>	<b>260.54</b>	<b>260.54</b>	<b>260.54</b>	<b>260.54</b>	<b>260.54</b>
N	Aggregate Cumulative Depreciation at the end of the year	1155.25	1415.79	1676.33	1936.88	2197.42
O	Remaining Aggregate Depreciable Value at the end of the year(I-N)	2549.16	2288.62	2028.07	1767.53	1506.99

(₹ in lakh)

Asset-III						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Opening Gross Block	582.44	582.44	582.44	582.44	582.44
B	ACE	0.00	0.00	0.00	0.00	0.00
C	Closing Gross Block (A+B)	582.44	582.44	582.44	582.44	582.44
D	Average Gross Block (A+C)/2	582.44	582.44	582.44	582.44	582.44
E	Average Gross Block (90% depreciable assets)	582.44	582.44	582.44	582.44	582.44
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%)	524.20	524.20	524.20	524.20	524.20
H	Depreciable value of IT equipment and software	0.00	0.00	0.00	0.00	0.00
I	Total Depreciable Value (G+H)	524.20	524.20	524.20	524.20	524.20
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)	3.00	4.00	5.00	6.00	7.00
L	Balance useful life at the beginning of the year (Year)	12.00	11.00	10.00	9.00	8.00
M	<b>Depreciation during the year (D*J)</b>	<b>36.87</b>	<b>36.87</b>	<b>36.87</b>	<b>36.87</b>	<b>36.87</b>
N	Aggregate Cumulative Depreciation at the end of the year	144.48	181.35	218.21	255.08	291.95
O	Remaining Aggregate Depreciable Value at the end of the year(I-N)	379.72	342.85	305.98	269.11	232.25



(₹ in lakh)

Asset-IV						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Opening Gross Block	3603.33	3603.33	3603.33	3603.33	3603.33
B	ACE	0.00	0.00	0.00	0.00	0.00
C	Closing Gross Block (A+B)	3603.33	3603.33	3603.33	3603.33	3603.33
D	Average Gross Block (A+C)/2	3603.33	3603.33	3603.33	3603.33	3603.33
E	Average Gross Block (90% depreciable assets)	3603.33	3603.33	3603.33	3603.33	3603.33
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%)	3243.00	3243.00	3243.00	3243.00	3243.00
H	Depreciable value of IT equipment and software	0.00	0.00	0.00	0.00	0.00
I	Total Depreciable Value (G+H)	3243.00	3243.00	3243.00	3243.00	3243.00
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)	1.00	2.00	3.00	4.00	5.00
L	Balance useful life at the beginning of the year (Year)	14.00	13.00	12.00	11.00	10.00
M	<b>Depreciation during the year (D*J)</b>	<b>228.09</b>	<b>228.09</b>	<b>228.09</b>	<b>228.09</b>	<b>228.09</b>
N	Aggregate Cumulative Depreciation at the end of the year	496.04	724.13	952.23	1180.32	1408.41
O	Remaining Aggregate Depreciable Value at the end of the year(I-N)	2746.96	2518.86	2290.77	2062.68	1834.59

(₹ in lakh)

Asset-V						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Opening Gross Block	26.03	26.03	26.03	26.03	26.03
B	ACE	0.00	0.00	0.00	0.00	0.00
C	Closing Gross Block (A+B)	26.03	26.03	26.03	26.03	26.03
D	Average Gross Block (A+C)/2	26.03	26.03	26.03	26.03	26.03
E	Average Gross Block (90% depreciable assets)	26.03	26.03	26.03	26.03	26.03
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%)	23.43	23.43	23.43	23.43	23.43
H	Depreciable value of IT equipment and software	0.00	0.00	0.00	0.00	0.00
I	Total Depreciable Value (G+H)	23.43	23.43	23.43	23.43	23.43
J	Weighted Average Rate of	6.33				



Asset-V						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	Depreciation (WAROD) (in %)		6.33	6.33	6.33	6.33
K	Lapsed useful life at the beginning of the year (Year)	1.00	2.00	3.00	4.00	5.00
L	Balance useful life at the beginning of the year (Year)	14.00	13.00	12.00	11.00	10.00
M	<b>Depreciation during the year (D*J)</b>	<b>1.65</b>	<b>1.65</b>	<b>1.65</b>	<b>1.65</b>	<b>1.65</b>
N	Aggregate Cumulative Depreciation at the end of the year	3.57	5.22	6.86	8.51	10.16
O	Remaining Aggregate Depreciable Value at the end of the year(I-N)	19.86	18.21	16.56	14.92	13.27

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

71. 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 assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered upto the date of de-capitalisation of such asset.*

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

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

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

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





(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.”

72. 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 project are as follows:

(₹ in lakh)

		<b>Asset-I</b>				
<b>Particulars</b>		<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
A	Gross Normative Loan	1364.70	1364.70	1364.70	1364.70	1364.70
B	Cumulative Repayments up to Previous Year	577.55	700.95	824.36	947.77	1071.17
C	Net Loan-Opening (A-B)	787.15	663.75	540.34	416.93	293.53
D	Additions	0.00	0.00	0.00	0.00	0.00
E	Repayment during the year	123.41	123.41	123.41	123.41	123.41
F	Net Loan-Closing (C+D-E)	663.75	540.34	416.93	293.53	170.12
G	Average Loan (A+F)/2	725.45	602.04	478.64	355.23	231.82
H	Weighted Average Rate of Interest on Loan (in %)	9.025	9.024	9.034	9.058	9.090
I	<b>Interest on Loan (GxH)</b>	<b>65.48</b>	<b>54.33</b>	<b>43.24</b>	<b>32.18</b>	<b>21.07</b>

(₹ in lakh)

		<b>Asset-II</b>				
<b>Particulars</b>		<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
A	Gross Normative Loan	2881.21	2881.21	2881.21	2881.21	2881.21
B	Cumulative Repayments up to Previous Year	894.70	1155.25	1415.79	1676.33	1936.88
C	Net Loan-Opening (A-B)	1986.51	1725.97	1465.42	1204.88	944.34
D	Additions	0.00	0.00	0.00	0.00	0.00
E	Repayment during the year	260.54	260.54	260.54	260.54	260.54



F	Net Loan-Closing (C+D-E)	1725.97	1465.42	1204.88	944.34	683.79
G	Average Loan (A+F)/2	1856.24	1595.69	1335.15	1074.61	814.06
H	Weighted Average Rate of Interest on Loan (in %)	8.245	8.188	8.178	8.167	8.154
I	<b>Interest on Loan (GxH)</b>	<b>153.05</b>	<b>130.65</b>	<b>109.19</b>	<b>87.76</b>	<b>66.38</b>

(₹ in lakh)

Asset-III						
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24	
A	Gross Normative Loan	407.71	407.71	407.71	407.71	407.71
B	Cumulative Repayments up to Previous Year	107.61	144.48	181.35	218.21	255.08
C	Net Loan-Opening (A-B)	300.10	263.23	226.36	189.50	152.63
D	Additions	0.00	0.00	0.00	0.00	0.00
E	Repayment during the year	36.87	36.87	36.87	36.87	36.87
F	Net Loan-Closing (C+D-E)	263.23	226.36	189.50	152.63	115.76
G	Average Loan (A+F)/2	281.67	244.80	207.93	171.06	134.19
H	Weighted Average Rate of Interest on Loan (in %)	8.349	8.339	8.338	8.336	8.324
I	<b>Interest on Loan (GxH)</b>	<b>23.52</b>	<b>20.41</b>	<b>17.34</b>	<b>14.26</b>	<b>11.17</b>

(₹ in lakh)

Asset-IV						
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24	
A	Gross Normative Loan	2522.34	2522.34	2522.34	2522.34	2522.34
B	Cumulative Repayments up to Previous Year	267.95	496.04	724.13	952.23	1180.32
C	Net Loan-Opening (A-B)	2254.39	2026.30	1798.21	1570.12	1342.03
D	Additions	0.00	0.00	0.00	0.00	0.00
E	Repayment during the year	228.09	228.09	228.09	228.09	228.09
F	Net Loan-Closing (C+D-E)	2026.30	1798.21	1570.12	1342.03	1113.94
G	Average Loan (A+F)/2	2140.35	1912.25	1684.16	1456.07	1227.98
H	Weighted Average Rate of Interest on Loan (in %)	9.025	9.024	9.034	9.058	9.090
I	<b>Interest on Loan (GxH)</b>	<b>179.07</b>	<b>159.28</b>	<b>141.05</b>	<b>122.84</b>	<b>103.25</b>

(₹ in lakh)

Asset-V						
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24	
A	Gross Normative Loan	18.22	18.22	18.22	18.22	18.22
B	Cumulative Repayments up to Previous Year	1.92	3.57	5.22	6.86	8.51
C	Net Loan-Opening (A-B)	16.30	14.65	13.01	11.36	9.71
D	Additions	0.00	0.00	0.00	0.00	0.00
E	Repayment during the year	1.65	1.65	1.65	1.65	1.65
F	Net Loan-Closing (C+D-E)	14.65	13.01	11.36	9.71	8.06
G	Average Loan (A+F)/2	15.48	13.83	12.18	10.53	8.89
H	Weighted Average Rate of Interest on Loan (in %)	7.250	7.250	7.250	7.250	7.249
I	<b>Interest on Loan (GxH)</b>	<b>1.12</b>	<b>1.00</b>	<b>0.88</b>	<b>0.76</b>	<b>0.64</b>



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

73. 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 on account of emission control system, 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.”*

74. The Petitioner has submitted that it is liable to pay Income Tax at MAT rate prescribed under the Taxation laws (Amendment) Ordinance, 2019. Further, RoE has been calculated @18.782% after grossing up the RoE with MAT rate of 17.472% (Base Rate 15% + Surcharge 12% + Cess 4%) based on the formula given in Regulation 31(2) of the 2019 Tariff Regulations for 2019-24 tariff period. As per Regulation 31(3) of the 2019 Tariff Regulations, the grossed-up rate of RoE at the end of every financial year shall be trued up based on actual tax paid together with any additional tax demand including interest thereon duly adjusted for any refund of tax including interest received from the IT authorities pertaining to 2019-24 tariff period on actual gross income. However, any penalty arising on account of delay in deposit or short deposit of tax amount shall not be claimed by it. Any under-recovery or over-recovery of grossed up rate on RoE after truing up shall be recovered or refunded to beneficiaries or the long-term customers on yearly basis. The Petitioner has further submitted that any adjustment due to additional tax demand including interest duly adjusted for any refund of tax including interest received from IT authorities shall be recoverable/ adjustable during the 2019-24 tariff period on yearly basis on receipt of Income Tax assessment order.

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



(₹ in lakh)

		Asset-I				
Particulars		2019-20	2020-21	2021-22	2022-23	2023-24
A	Opening Equity	584.86	584.86	584.86	584.86	584.86
B	Additions	0.00	0.00	0.00	0.00	0.00
C	Closing Equity (A-B)	584.86	584.86	584.86	584.86	584.86
D	Average Equity (A+B)/2	584.86	584.86	584.86	584.86	584.86
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	<b>Return on Equity (DxG)</b>	<b>109.85</b>	<b>109.85</b>	<b>109.85</b>	<b>109.85</b>	<b>109.85</b>

(₹ in lakh)

		Asset-II				
Particulars		2019-20	2020-21	2021-22	2022-23	2023-24
A	Opening Equity	1234.79	1234.79	1234.79	1234.79	1234.79
B	Additions	0.00	0.00	0.00	0.00	0.00
C	Closing Equity (A-B)	1234.79	1234.79	1234.79	1234.79	1234.79
D	Average Equity (A+B)/2	1234.79	1234.79	1234.79	1234.79	1234.79
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	<b>Return on Equity (DxG)</b>	<b>231.92</b>	<b>231.92</b>	<b>231.92</b>	<b>231.92</b>	<b>231.92</b>

(₹ in lakh)

		Asset-III				
Particulars		2019-20	2020-21	2021-22	2022-23	2023-24
A	Opening Equity	174.73	174.73	174.73	174.73	174.73
B	Additions	0.00	0.00	0.00	0.00	0.00
C	Closing Equity (A-B)	174.73	174.73	174.73	174.73	174.73
D	Average Equity (A+B)/2	174.73	174.73	174.73	174.73	174.73
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	<b>Return on Equity (DxG)</b>	<b>32.82</b>	<b>32.82</b>	<b>32.82</b>	<b>32.82</b>	<b>32.82</b>

(₹ in lakh)

		Asset-IV				
Particulars		2019-20	2020-21	2021-22	2022-23	2023-24
A	Opening Equity	1080.99	1080.99	1080.99	1080.99	1080.99
B	Additions	0.00	0.00	0.00	0.00	0.00
C	Closing Equity (A-B)	1080.99	1080.99	1080.99	1080.99	1080.99
D	Average Equity (A+B)/2	1080.99	1080.99	1080.99	1080.99	1080.99
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	<b>Return on Equity (DxG)</b>	<b>203.03</b>	<b>203.03</b>	<b>203.03</b>	<b>203.03</b>	<b>203.03</b>

(₹ in lakh)

		<b>Asset-V</b>				
<b>Particulars</b>		<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
A	Opening Equity	7.81	7.81	7.81	7.81	7.81
B	Additions	0.00	0.00	0.00	0.00	0.00
C	Closing Equity (A-B)	7.81	7.81	7.81	7.81	7.81
D	Average Equity (A+B)/2	7.81	7.81	7.81	7.81	7.81
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	<b>Return on Equity (DxG)</b>	<b>1.47</b>	<b>1.47</b>	<b>1.47</b>	<b>1.47</b>	<b>1.47</b>

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

76. The Petitioner has submitted the claim of the O&M Expenses for Asset-I, Asset-II and Asset-IV for Central portion as 2% of the capital cost subject to actual expenditure at the time of truing-up. The Petitioner has not claimed O&M Expenses for State Portion for Asset-III and Asset-V. The O&M Expenses claimed by the Petitioner is as follows:

		<b>(₹ in lakh)</b>				
<b>Assets</b>	<b>Original project cost</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
<b>Asset-I</b>	1949.56	38.99	38.99	38.99	38.99	38.99
<b>Asset-II</b>	4118.73	82.37	82.37	82.37	82.37	82.37
<b>Asset-IV</b>	4310.63	86.21	86.21	86.21	86.21	86.21

77. We have considered the submission of the Petitioner. The capital cost of ₹1949.56 lakh, ₹ 4116.01 lakh, ₹3603.332 lakh is considered as on 31.3.2019 for Asset-I, Asset-II and Asset-IV respectively. The O&M Expenses are calculated at the rate of 2% of project cost as on 31.3.2019. The O&M Expenses are allowed for 2019-24 tariff period subject to truing up. The Petitioner is directed to submit the actual O&M Expenses duly certified by the Auditor at the time truing up of the tariff of 2019-24



tariff. The O&M Expenses allowed are as follows:

(₹ in lakh)					
Assets	2019-20	2020-21	2021-22	2022-23	2023-24
Asset-I	38.99	38.99	38.99	38.99	38.99
Asset-II	82.32	82.32	82.32	82.32	82.32
Asset-IV	72.07	72.07	72.07	72.07	72.07

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

78. 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 1<sup>st</sup> 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. Definitions.** - *In these regulations, unless the context otherwise requires:-*

**‘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;”*

79. The Petitioner has submitted that it has computed the IWC for the 2019-24





period considering the SBI Base Rate plus 350 basis points as on 1.4.2019. The Petitioner has considered the rate of IWC as 12.05%. The IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The rate of IWC considered is 12.05% (SBI 1 year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points) for 2019-20 and 11.25% (SBI 1 year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points) for 2020-21, 10.50% (SBI 1 year MCLR applicable as on 1.4.2021 of 7.00% plus 350 basis points) for 2021-22 and 10.60% (SBI 1 year MCLR applicable as on 1.4.2022 of 7.10% plus 350 basis points) for 2022-24.

80. 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 for the transmission project for 2019-24 tariff period are as follows:

(₹ in lakh)

Asset-I						
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)	3.25	3.25	3.25	3.25	3.25
B	Working Capital for Maintenance Spares (Equivalent to 15% of O&M Expenses)	5.85	5.85	5.85	5.85	5.85
C	Working Capital for Receivables (Equivalent to 45 days of annual transmission charges)	42.28	40.96	39.53	38.15	36.66
D	<b>Total Working Capital (A+B+C)</b>	<b>51.38</b>	<b>50.06</b>	<b>48.62</b>	<b>47.25</b>	<b>45.76</b>
E	Rate of Interest (in %)	12.05	11.25	10.50	10.60	10.60
F	<b>Interest on Working Capital (DxE)</b>	<b>6.19</b>	<b>5.63</b>	<b>5.11</b>	<b>5.01</b>	<b>4.85</b>

(₹ in lakh)

Asset-II						
Particulars		2019-20	2020-21	2021-22	2022-23	2023-24
A	Working Capital for O&M Expenses (Equivalent to	6.86	6.86	6.86	6.86	6.86



	annualized O&M Expenses for one month)					
B	Working Capital for Maintenance Spares (Equivalent to 15% of O&M Expenses)	12.35	12.35	12.35	12.35	12.35
	Working Capital for Receivables (Equivalent to 45 days of annual transmission charges)	91.12	88.46	85.68	83.02	80.13
D	<b>Total Working Capital (A+B+C)</b>	<b>110.33</b>	<b>107.67</b>	<b>104.89</b>	<b>102.23</b>	<b>99.33</b>
E	Rate of Interest (in %)	12.05	11.25	10.50	10.60	10.60
F	<b>Interest on Working Capital (DxE)</b>	<b>13.29</b>	<b>12.11</b>	<b>11.01</b>	<b>10.84</b>	<b>10.53</b>

(₹ in lakh)

		<b>Asset-III</b>				
<b>Particulars</b>		<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
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)	11.63	11.26	10.87	10.49	10.07
D	<b>Total Working Capital (A+B+C)</b>	<b>11.63</b>	<b>11.26</b>	<b>10.87</b>	<b>10.49</b>	<b>10.07</b>
E	Rate of Interest (in %)	12.05	11.25	10.50	10.60	10.60
F	<b>Interest on Working Capital (DxE)</b>	<b>1.40</b>	<b>1.27</b>	<b>1.14</b>	<b>1.11</b>	<b>1.07</b>

(₹ in lakh)

		<b>Asset-IV</b>				
<b>Particulars</b>		<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
A	Working Capital for O&M Expenses (Equivalent to annualized O&M Expenses for one month)	6.01	6.01	6.01	6.01	6.01
B	Working Capital for Maintenance Spares (Equivalent to 15% of O&M Expenses)	10.81	10.81	10.81	10.81	10.81
C	Working Capital for Receivables (Equivalent to 45 days of annual transmission charges)	85.40	83.06	80.69	78.43	75.77
D	<b>Total Working Capital (A+B+C)</b>	<b>102.21</b>	<b>99.87</b>	<b>97.50</b>	<b>95.24</b>	<b>92.58</b>
E	Rate of Interest (in %)	12.05	11.25	10.50	10.60	10.60
F	<b>Interest on Working Capital (DxE)</b>	<b>12.32</b>	<b>11.24</b>	<b>10.24</b>	<b>10.10</b>	<b>9.81</b>

(₹ in lakh)

		<b>Asset -V</b>				
<b>Particulars</b>		<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
A	Working Capital for O&M Expenses (Equivalent to	0.00	0.00	0.00	0.00	0.00



	annualized O&M Expenses for one month)					
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)	0.53	0.51	0.50	0.48	0.47
D	<b>Total Working Capital (A+B+C)</b>	<b>0.53</b>	<b>0.51</b>	<b>0.50</b>	<b>0.48</b>	<b>0.47</b>
E	Rate of Interest (in %)	12.05	11.25	10.50	10.60	10.60
F	<b>Interest on Working Capital (DxE)</b>	<b>0.06</b>	<b>0.06</b>	<b>0.05</b>	<b>0.05</b>	<b>0.05</b>

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

81. Accordingly, the annual transmission charges allowed for the transmission project are as follows:

(₹ in lakh)					
<b>Asset-I</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Depreciation	123.41	123.41	123.41	123.41	123.41
Interest on Loan	65.48	54.33	43.24	32.18	21.07
Return on Equity	109.85	109.85	109.85	109.85	109.85
O&M Expenses	38.99	38.99	38.99	38.99	38.99
Interest on Working Capital	6.19	5.63	5.11	5.01	4.85
<b>Total</b>	<b>343.91</b>	<b>332.21</b>	<b>320.59</b>	<b>309.43</b>	<b>298.17</b>

(₹ in lakh)					
<b>Asset-II</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Depreciation	260.54	260.54	260.54	260.54	260.54
Interest on Loan	153.05	130.65	109.19	87.76	66.38
Return on Equity	231.92	231.92	231.92	231.92	231.92
O&M Expenses	83.32	83.32	83.32	83.32	83.32
Interest on Working Capital	13.29	12.11	11.01	10.84	10.53
<b>Total</b>	<b>741.13</b>	<b>717.55</b>	<b>694.99</b>	<b>673.38</b>	<b>651.69</b>

(₹ in lakh)					
<b>Asset-III</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Depreciation	36.87	36.87	36.87	36.87	36.87
Interest on Loan	23.52	20.41	17.34	14.26	11.17
Return on Equity	32.82	32.82	32.82	32.82	32.82
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	1.40	1.27	1.14	1.11	1.07
<b>Total</b>	<b>94.60</b>	<b>91.37</b>	<b>88.16</b>	<b>85.06</b>	<b>81.92</b>



(₹ in lakh)

<b>Asset-IV</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Depreciation	228.09	228.09	228.09	228.09	228.09
Interest on Loan	179.07	159.28	141.05	122.84	103.25
Return on Equity	203.03	203.03	203.03	203.03	203.03
O&M Expenses	72.07	72.07	72.07	72.07	72.07
Interest on Working Capital	12.32	11.24	10.24	10.10	9.81
<b>Total</b>	<b>694.57</b>	<b>673.70</b>	<b>654.48</b>	<b>636.12</b>	<b>616.25</b>

(₹ in lakh)

<b>Asset-V</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Depreciation	1.65	1.65	1.65	1.65	1.65
Interest on Loan	1.12	1.00	0.88	0.76	0.64
Return on Equity	1.47	1.47	1.47	1.47	1.47
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	0.06	0.06	0.05	0.05	0.05
<b>Total</b>	<b>4.30</b>	<b>4.18</b>	<b>4.05</b>	<b>3.93</b>	<b>3.81</b>

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

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

83. 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**

84. The Petitioner has submitted that GST, if it is levied at any rate and at any point of time in future on charges of transmission of electricity, the same shall be borne and additionally paid by the Respondent(s) to the Petitioner and the same shall 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.

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

### **Security Expenses**

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

87. We have considered the above submissions of the Petitioner. The Petitioner has claimed consolidated security expenses for all the transmission project 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**

88. 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**

89. The trued up fees and charges of 2014-19 tariff period and determined for 2019-24 tariff period for the transmission assets in this order shall be recovered on monthly basis and billing collection and disbursement of transmission charges shall be governed by the provisions of the applicable Sharing Regulations as provided in Regulation 43(2) of the 2014 Tariff Regulations and Regulation 57(2) of the 2019 Tariff Regulations respectively.

90. To summarise:

- a. The trued-up AFC approved for the transmission project for 2014-19 tariff period are as follows:

Particulars	Asset-I				
	2014-15 (Pro-rata for 243 days)	2015-16	2016-17	2017-18	2018-19
Annual Fixed Charges	269.41	436.69	383.15	384.15	353.27

(₹ in lakh)

Particulars	Asset-II		
	2016-17	2017-18	2018-19
Annual Fixed Charges	889.15	1002.98	929.11

(₹ in lakh)



(₹ in lakh)

Particulars	Asset-III		
	2016-17	2017-18	2018-19
Annual Fixed Charges	97.61	103.21	100.14

(₹ in lakh)

Particulars	Asset-IV	
	2017-18 (Pro-rata for 71 days)	2018-19
Annual Fixed Charges	144.76	656.40

(₹ in lakh)

Particulars	Asset-V	
	2017-18 (Pro-rata for 71 days)	2018-19
Annual Fixed Charges	0.85	4.43

b. The AFC allowed for the transmission project for the 2019-24 tariff period are as follows:

(₹ in lakh)

Particulars	Asset-I				
	2019-20	2020-21	2021-22	2022-23	2023-24
Annual Fixed Charges	343.91	332.21	320.59	309.43	298.17

(₹ in lakh)

Particulars	Asset-II				
	2019-20	2020-21	2021-22	2022-23	2023-24
Annual Fixed Charges	741.13	717.55	694.99	673.38	651.69

(₹ in lakh)

Particulars	Asset-III				
	2019-20	2020-21	2021-22	2022-23	2023-24
Annual Fixed Charges	94.60	91.37	88.16	85.06	81.92

(₹ in lakh)

Particulars	Asset-IV				
	2019-20	2020-21	2021-22	2022-23	2023-24
Annual Fixed Charges	694.57	673.70	654.48	636.12	616.25

(₹ in lakh)

Particulars	Asset-V				
	2019-20	2020-21	2021-22	2022-23	2023-24
Annual Fixed Charges	4.30	4.18	4.05	3.93	3.81



91. Annexure-I to Annexure-X given hereinafter form part of the order.
92. This order disposes of Petition No. 705/TT/2020 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 -I	Particulars	Admitted Capital Cost as on COD (₹ in lakh)	ACE 2014-19 (₹ 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			2014-15	2015-16	2016-17	2017-18	2018-19
	PLCC	1481.56	472.83	55.02	0.00	0.00	(59.85)	1949.56	6.33	108.748	125.45	127.20	127.20	125.30
	<b>TOTAL</b>	<b>1481.56</b>	<b>472.83</b>	<b>55.02</b>	<b>0.00</b>	<b>0.00</b>	<b>(59.85)</b>	<b>1949.56</b>		<b>108.748</b>	<b>125.45</b>	<b>127.20</b>	<b>127.20</b>	<b>125.30</b>
								<b>Average Gross Block (₹ in lakh)</b>		1717.97	1981.90	2009.41	2009.41	1979.49
								<b>Weighted Average Rate of Depreciation (in %)</b>		6.33	6.33	6.33	6.33	6.33



## Annexure-II

Asset-II	Particulars	Admitted Capital Cost as on COD (₹ in lakh)	ACE 2014-19 (₹ in lakh)			Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations (₹ in lakh)				
			2016-17	2017-18	2018-19			2014-15	2015-16	2016-17	2017-18	2018-19
	PLCC	4194.96	568.67	451.61	(1099.23)	4116.01	6.33	-	-	283.54	315.83	295.33
	<b>TOTAL</b>	<b>4194.9</b>	<b>568.67</b>	<b>451.61</b>	<b>(1099.23)</b>	<b>4116.01</b>		-	-	<b>283.54</b>	<b>315.83</b>	<b>295.33</b>
						<b>Average Gross Block (₹ in lakh)</b>		-	-	4479.29	4989.43	4665.62
						<b>Weighted Average Rate of Depreciation (in %)</b>		-	-	6.33	6.33	6.33



## Annexure-III

Asset -III	Particu lars	Admitted Capital Cost as on COD (₹ in lakh)	ACE 2014-19 (₹ in lakh)			Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreci ation (in %)	Annual Depreciation as per Regulations (₹ in lakh)				
			2016- 17	2017- 18	2018-19			2014-15	2015-16	2016-17	2017-18	2018-19
	PLCC	487.74	94.7	0.00	0.00	582.44	6.33	-	-	33.87	36.87	36.87
	<b>TOTAL</b>	<b>487.74</b>	<b>94.7</b>	<b>0.00</b>	<b>0.00</b>	<b>582.44</b>		-	-	<b>33.87</b>	<b>36.87</b>	<b>36.87</b>
						<b>Average Gross Block (₹ in lakh)</b>		-	-	535.09	582.44	582.44
						<b>Weighted Average Rate of Depreciation (in %)</b>		-	-	6.33	6.33	6.33



Asset -IV	Particulars	Admitted Capital Cost as on COD (₹ in lakh)	ACE 2014-19 (₹ in lakh)		Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations (₹ in lakh)				
			2017-18	2018-19			2014-15	2015-16	2016-17	2017-18	2018-19
	PLCC	3500.82	0.00	102.51	3603.33	6.33	-	-	-	221.602	224.85
	<b>TOTAL</b>	<b>3500.82</b>	<b>0.00</b>	<b>102.51</b>	<b>3603.33</b>		-	-	-	<b>221.602</b>	<b>224.85</b>
					<b>Average Gross Block (₹ in lakh)</b>		-	-	-	3500.82	3552.08
					<b>Weighted Average Rate of Depreciation (in %)</b>		-	-	-	6.33	6.33



Asset -V	Particulars	Admitted Capital Cost as on COD (₹ in lakh)	ACE 2014-19 (₹ in lakh)		Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreci- ation (in %)	Annual Depreciation as per Regulations (₹ in lakh)				
			2017-18	2018-19			2014-15	2015-16	2016-17	2017-18	2018-19
	PLCC	24.94	0.00	1.09	26.03	6.33	-	-	-	1.58	1.61
	<b>TOTAL</b>	<b>24.94</b>	<b>0.00</b>	<b>1.09</b>	<b>26.03</b>		-	-	-	<b>1.58</b>	<b>1.61</b>
					<b>Average Gross Block (₹ in lakh)</b>		-	-	-	24.94	25.49
					<b>Weighted Average Rate of Depreciation (in %)</b>		-	-	-	6.33	6.33



Asset -I	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 Depreci ation (in %)	Annual Depreciation as per Regulations (₹ in lakh)				
						2019-20	2020-21	2021-22	2022-23	2023-24
	PLCC	1949.56	0.00	1949.56	6.33	123.41	123.41	123.41	123.41	123.41
	<b>TOTAL</b>	<b>1949.56</b>	<b>0.00</b>	<b>1949.56</b>		<b>123.41</b>	<b>123.41</b>	<b>123.41</b>	<b>123.41</b>	<b>123.41</b>
				<b>Average Gross Block (₹ in lakh)</b>		1949.56	1949.56	1949.56	1949.56	1949.56
				<b>Weighted Average Rate of Depreciation (in %)</b>		6.33	6.33	6.33	6.33	6.33



## Annexure-VII

Asset -II	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 Depreci ation (in %)	Annual Depreciation as per Regulations (₹ in lakh)				
						2019-20	2020-21	2021-22	2022-23	2023-24
	PLCC	4116.01	0.00	4116.01	6.33	260.54	260.54	260.54	260.54	260.54
	<b>TOTAL</b>	<b>4116.01</b>	<b>0.00</b>	<b>4116.01</b>		<b>260.54</b>	<b>260.54</b>	<b>260.54</b>	<b>260.54</b>	<b>260.54</b>
				<b>Average Gross Block (₹ in lakh)</b>		4116.01	4116.01	4116.01	4116.01	4116.01
				<b>Weighted Average Rate of Depreciation (in %)</b>		6.33	6.33	6.33	6.33	6.33



## Annexure-VIII

Asset -III	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 Depreci ation (in %)	Annual Depreciation as per Regulations (₹ in lakh)				
						2019-20	2020-21	2021-22	2022-23	2023-24
	PLCC	582.44	0.00	582.44	6.33	36.87	36.87	36.87	36.87	36.87
	<b>TOTAL</b>	<b>582.44</b>	<b>0.00</b>	<b>582.44</b>		<b>36.87</b>	<b>36.87</b>	<b>36.87</b>	<b>36.87</b>	<b>36.87</b>
				<b>Average Gross Block (₹ in lakh)</b>		582.44	582.44	582.44	582.44	582.44
				<b>Weighted Average Rate of Depreciation (in %)</b>		6.33	6.33	6.33	6.33	6.33





## Annexure-IX

Asset -IV	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 Depreci ation (in %)	Annual Depreciation as per Regulations (₹ in lakh)				
						2019-20	2020-21	2021-22	2022-23	2023-24
	PLCC	3603.33	0.00	3603.33	6.33	228.09	228.09	228.09	228.09	228.09
	<b>TOTAL</b>	<b>3603.33</b>	<b>0.00</b>	<b>3603.33</b>		228.09	228.09	228.09	228.09	228.09
				<b>Average Gross Block (₹ in lakh)</b>		3603.33	3603.33	3603.33	3603.33	3603.33
				<b>Weighted Average Rate of Depreciation (in %)</b>		6.33	6.33	6.33	6.33	6.33



## Annexure-X

Asset -V	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 Depreci ation (in %)	Annual Depreciation as per Regulations (₹ in lakh)				
						2019-20	2020-21	2021-22	2022-23	2023-24
	PLCC	26.03	0.00	26.03	6.33	1.65	1.65	1.65	1.65	1.65
	<b>TOTAL</b>	<b>26.03</b>	<b>0.00</b>	<b>26.03</b>		<b>1.65</b>	<b>1.65</b>	<b>1.65</b>	<b>1.65</b>	<b>1.65</b>
				<b>Average Gross Block (₹ in lakh)</b>		26.03	26.03	26.03	26.03	26.03
				<b>Weighted Average Rate of Depreciation (in %)</b>		6.33	6.33	6.33	6.33	6.33

