

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 12/TT/2023**

**Coram:**

**Shri Jishnu Barua, Chairperson  
Shri Arun Goyal, Member  
Shri P. K. Singh, Member**

**Date of Order: 19.05.2024**

**In the matter of:**

Approval of tariff for New T&D Element namely (1) 80 MVA 132/34.5 kV transformer at ASP Sub-station, (2) 160 MVA, 220 kV/ 132 kV/ 6.9 kV ATS-IV at DTPS with refurbishment of 132 kV and 220 kV bays, (3) 132 kV Jamuria sub-Station to Ramkanali sub-Station line (L 61 and 90), (4) 132 kV D/C line from Dhanbad sub-Station to JSEB Govindpur line (21.729\*2 Ckm) in respect of Damodar Valley Corporation for the tariff period 2019-24 and approval under Sections 62(1)(b) and 79(1)(d) of the Electricity Act, 2003 and Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and Regulations 9(2), 10(1) of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for 'New Element' of Damodar Valley Corporation for the tariff period 2019-24.

**And in the matter of:**

Damodar Valley Corporation  
DVC Towers, VIP Road,  
Kolkata-700054.

**... Petitioner**

**Vs.**

1. West Bengal State Electricity Distribution Company Limited,  
Vidyut Bhawan, Block 'DJ', Sector-11, Salt Lake City,  
Kolkata-700091.
2. Jharkhand Bijlee Vitran Nigam Limited,  
Engineers' Building, Dhurwa,  
Ranchi-834004.

**... Respondent(s)**

**For Petitioner** : Ms. Swapna Seshadri, Advocate, DVC  
Ms. Ritu Apurva, Advocate, DVC  
Shri M. Karthikeyan, Advocate, DVC  
Ms. Neelam Singh, Advocate, DVC

**For Respondents** : None



## ORDER

The instant petition has been filed by Damodar Valley Corporation for the determination of tariff for New T&D Element for Asset-1: 80 MVA 132/34.5 kV Transformer at ASP sub-station, Asset-2: 160 MVA, 220 kV/ 132 kV/ 6.9 kV ATS-IV at DTPS with refurbishment of 132 kV and 220 kV bays, Asset-3: 132 kV Jamuria Sub-station to Ramkanali Sub-station line (L 61 and 90) and Asset-4: 132 kV D/C line from Dhanbad Sub-station to JSEB Govindpur line (21.729\*2 Ckm) (hereinafter referred to as the “transmission assets”) for the 2019-24 tariff period and approval under Regulations 9(2) and 10(1) of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”).

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

- a) *Allow the Capital Cost as claimed;*
- b) *Determine the tariff for the New Transmission & Distribution elements of DVC network for the period 01.04.2019 to 31.03.2024 considering projected capital expenditure as furnished in the instant petition under Section 62(1) (a) of the Electricity Act, 2003 read with Regulation 9(2) of the CERC (Terms & Conditions of Tariff) Regulations, 2019 issued on 07.03.2019;*
- c) *Allow claim Additional expenses, if any, as and when arising in future on actual basis for any financial year of the 2019-24 tariff period;*
- d) *Allow DVC to Claim IDC & IEDC and any other applicable charges, if any;*
- e) *Allow additional capital expenditure on account of acquiring the minor items or the assets including tools and tackles at the time of truing up of tariff;*
- f) *Allow DVC to recover shortfall or refund the levies, tariff filing fees, taxes, duties, cess, charges, fees etc., if any, excess Annual Fixed Charges, on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax rate as per Income Tax Act. 1961 (as amended from time to time) of the respective financial year directly without the need to make any further application before the Hon'ble Commission as provided under clause 31 of the CERC (Terms & Conditions of Tariff) Regulations, 2019;*
- g) *Allow DVC to include/add the AFC allowed for above four new T&D elements against this petition with the AFC as determined for 'Existing T&D Elements as on 31.03.2019' and AFC with further new elements to be added in future in the expanding T&D system of DVC. Hon'ble Commission may kindly give direction that sum total of AFC so determined for New T&D Elements, Existing T&D System, New T&D Elements for 2014-19 period for 2019-24 period to determine as an input cost in the Aggregate Revenue Requirement (ARR) while determining the retail tariff by the respective State Electricity Regulatory Commissions of West Bengal and Jharkhand and to be recovered from the distribution consumers on approval by the respective State Regulatory Commission namely WBERC and JSERC;*



- h) *Pass such further order or orders as this Hon'ble Commission may deem just and proper in the facts and circumstances of the case."*

3. The details of the petitions filed by the Petitioner with respect to its T&D network is as follows:

Particulars	Petition No.
<b>Existing T&amp;D network of DVC</b>	
AFC approved for 2014-19 tariff period	Petition No. 150/TT/2018 (order dated 9.8.2019)
True-up of AFC approved for 2014-19 period and tariff for 2019-24 period.	Petition No. 482/TT/2020 (order dated 10.6.2022)
<b>New T&amp;D elements added from 1.4.2014 (including ACE upto 31.3.2019)</b>	
AFC approved for 2014-19 tariff period.	Petition No. 335/TT/2018 (order dated 5.2.2020)
AFC trued up for 2014-19 period and tariff determined for 2019-24 period.	Petition No. 713/TT/2020 (order dated 2.3.2022)
<b>4 Number of non-ISTS 400 kV transmission lines of DVC carrying ISTS power (including ACE up to 31.3.2019)</b>	
AFC approved for 2014-19 tariff period	Petition No. 334/TT/2018 (order dated 5.2.2020)
AFC trued up for 2014-19 period and tariff determined for 2019-24 period.	Petition No. 466/TT/2020 (order dated 28.2.2022)

4. The Petitioner has served the petition on the Respondents, and notice regarding the filing of this petition has been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003. No comments or suggestions have been received from the general public in response to the aforesaid notice published in the newspapers by the Petitioner.

5. The final hearing in this matter was held on 6.2.2024, and the order was reserved. Having heard the Petitioner and perused the material on record, we proceed to dispose of the Petition.



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

6. The Petitioner has claimed the following transmission charges in respect of the transmission assets:

(₹ in lakh)

Particulars	Asset-1				
	2019-20 (Pro-rata for 248 days)	2020-21	2021-22	2022-23	2023-24
Depreciation	41.62	61.67	61.76	61.85	61.85
Interest on loan	36.78	49.28	34.89	28.70	23.96
Return on equity	31.82	47.16	47.22	47.29	47.29
Interest on working capital	1.81	3.27	3.09	3.03	2.98
O&M Expenses	13.28	20.32	21.04	21.76	22.56
<b>Total AFC</b>	<b>125.31</b>	<b>181.70</b>	<b>168.00</b>	<b>162.62</b>	<b>158.65</b>

(₹ in lakh)

Particulars	Asset-2			
	2020-21 (Pro-rata for 35 days)	2021-22	2022-23	2023-24
Depreciation	5.09	84.18	109.02	109.02
Interest on loan	4.65	58.73	66.56	58.32
Return on equity	3.89	64.36	83.36	83.36
Interest on working capital	1.17	4.96	5.80	5.74
O&M Expenses	3.90	42.08	43.52	45.12
<b>Total AFC</b>	<b>18.70</b>	<b>254.31</b>	<b>308.26</b>	<b>301.56</b>

(₹ in lakh)

Particulars	Asset-3			
	2020-21 (Pro-rata for 19 days)	2021-22	2022-23	2023-24
Depreciation	10.45	203.55	206.40	206.40
Interest on loan	9.57	142.16	122.44	106.82
Return on equity	7.99	155.63	157.81	157.81
Interest on working capital	0.70	8.65	8.47	8.25
O&M Expenses	1.26	24.96	25.89	26.75
<b>Total AFC</b>	<b>29.96</b>	<b>534.96</b>	<b>521.01</b>	<b>506.03</b>

(₹ in lakh)

Particulars	Asset-4				
	2019-20 (Pro-rata for 249 days)	2020-21	2021-22	2022-23	2023-24
Depreciation	130.63	200.95	204.06	205.00	205.91
Interest on loan	115.44	161.06	116.07	96.03	80.96
Return on equity	99.88	153.65	156.03	156.75	157.44
Interest on working capital	3.81	8.15	7.56	7.30	7.09
O&M Expenses	5.57	8.50	8.78	9.10	9.41
<b>Total AFC</b>	<b>355.32</b>	<b>532.30</b>	<b>492.51</b>	<b>474.19</b>	<b>460.81</b>



7. The Petitioner has claimed the following Interest on Working Capital (IWC) in respect of the transmission assets:

(₹ in lakh)

Particulars	Asset-1				
	2019-20 (Pro-rata for 248 days)	2020-21	2021-22	2022-23	2023-24
O&M Expenses	1.63	1.69	1.75	1.81	1.88
Maintenance Spares	2.94	3.05	3.16	3.26	3.38
Receivables	10.44	22.40	20.71	20.05	19.51
Total Working Capital	<b>15.01</b>	<b>27.14</b>	<b>25.62</b>	<b>25.13</b>	<b>24.77</b>
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
<b>Interest on Working Capital</b>	1.81	3.27	3.09	3.03	2.98

(₹ in lakh)

Particulars	Asset-2			
	2020-21 (Pro-rata for 35 days)	2021-22	2022-23	2023-24
O&M Expenses	3.39	3.51	3.63	3.76
Maintenance Spares	6.10	6.31	6.53	6.77
Receivables	0.22	31.35	38.00	37.08
Total Working Capital	<b>9.70</b>	<b>41.17</b>	<b>48.16</b>	<b>47.60</b>
Rate of Interest (in %)	12.05	12.05	12.05	12.05
<b>Interest on Working Capital</b>	1.17	4.96	5.80	5.74

(₹ in lakh)

Particulars	Asset-3			
	2020-21 (Pro-rata for 19 days)	2021-22	2022-23	2023-24
O&M Expenses	2.01	2.08	2.16	2.23
Maintenance Spares	3.62	3.74	3.88	4.01
Receivables	0.19	65.95	64.23	62.22
Total Working Capital	<b>5.83</b>	<b>71.78</b>	<b>70.27</b>	<b>68.46</b>
Rate of Interest (in %)	12.05	12.05	12.05	12.05
<b>Interest on Working Capital</b>	0.70	8.65	8.47	8.25

(₹ in lakh)

Particulars	Asset-4				
	2019-20 (Pro-rata for 249 days)	2020-21	2021-22	2022-23	2023-24
O&M Expenses	0.68	0.71	0.73	0.76	0.78
Maintenance Spares	1.23	1.27	1.32	1.37	1.41
Receivables	29.72	65.63	60.72	58.46	56.66
Total Working Capital	<b>31.63</b>	<b>67.61</b>	<b>62.77</b>	<b>60.59</b>	<b>58.85</b>
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05



Particulars	Asset-4				
	2019-20 (Pro-rata for 249 days)	2020-21	2021-22	2022-23	2023-24
Interest on Working Capital	3.81	8.15	7.56	7.30	7.09

8. The Commission vide RoP dated 6.4.2023 directed the Petitioner to submit the following:

- (a) Investment approval accorded by the competent authority,
- (b) SCM/ RPC approval for the assets covered in the instant petition, and
- (c) The purpose of construction of the transmission assets covered in the instant petition.

9. In response, the Petitioner vide affidavit dated 4.5.2023 has submitted as follows:

- (a) The 'Investment approval' in the form of a 'Sanction Order' has been filed along with the petition.
- (b) DVC is the State Transmission Utility (STU). As it is a vertically integrated utility like a SEB having its own generation, transmission and distribution, its network is treated similarly to SEB under Cl.1.3 (ii) of the Indian Electricity Grid Code (IEGC) 2010. Accordingly, its Central Load Despatch at Maithon shall perform the functions of SLDC. Therefore, DVC is not required to approach the SCM/ RPC for the upgradation of the Existing System. Unlike PGCIL, the recovery of the tariff of the transmission system of DVC determined by the Commission is not recovered through the PoC mechanism from different beneficiaries. The tariff determined by the Commission for the T&D system of DVC is one of the input parameters along with the generation tariff for the determination of distribution tariff of DVC by JERC for the consumers in Jharkhand and by WBERC for the consumers in West Bengal. However, DVC approaches SCM/ RPC for the major addition of any 220 kV/ 400 kV transmission lines/ sub-stations, which is of regional importance with



respect to the Grid stability, and load flow through the Grid network of the Eastern Region and is to be constructed in tandem with integrated system planning for Eastern Region. The approval of SCM/ ERPC for such type of work is submitted in the concerned tariff petition. Therefore, DVC requested the Commission to allow capital expenditures as claimed on a projection basis for the 2019-24 period.

(c) The purpose of construction of the transmission assets.

#### Asset-1

ASP Sub-station is situated in the industrial zone of the Durgapur Region and has 132/34.5 kV transformation capacity 2X50 MVA was running with 56.05 MVA consumer load in January 2016. Four new consumers (namely Haldia Steel I & II with a contract demand of 11 MVA with a final demand of 23 MVA, Adhunik Cerp with a contract demand of 16 MVA, Adhunik Ind with a contract demand of 5.5 MVA, CMERI with a contract demand of 4 MVA) approached DVC for getting a combined total load of 47.5 MVA power supply from the ASP Sub-station in 2016. Therefore, it was felt prudent to enhance the transformation capacity of the sub-station by replacing one of the 50 MVA transformers with a new 80 MVA transformer to meet the additional demand of the new consumers.

#### Asset-2

The 132 kV Bus at DTPS Switchyard was fed directly from Durgapur TPS Unit 3 in addition to power fed from three numbers of 220/132 kV ATR. The 132 kV DTPS Bus used to meet the power demand of Jamuria, Kalipahari, ASP, Burdwan, and Belmuri Sub-stations, which are connected via the 132 DVC Grid Network fed from DTPS. Further, consumers fed from DTPS are also dependent on available power from the 132 kV Bus of DTPS. DTPS Switchyard and the



Jamuria Sub-station are situated in the industrial zone and have potential load-growth. After the retirement of Unit 3 of Durgapur TPS, the only source of power feeding at 132 kV Bus of DTPS Switchyard is from 220 kV Bus of DTPS via three numbers of ATR (3X160 MVA). In 2018, a Load flow study was carried out, wherein it was observed that the three numbers of ATR at DTPS were running almost within their rated capacity. The loading of the connected sub-stations (total 387 MVA) fed from DTPS at 132 kV Voltage level were as follows:

Jamuria	: 95	MVA
Kalipahari	: 75	MVA
ASP	: 42	MVA
DTPS	: 40	MVA
Burdwan	: 135	MVA
<b>Total</b>	<b>: 387</b>	<b>MVA</b>

In addition to the existing load, there were applications for power by the prospective consumers who are to be fed from the 132 kV Bus of DTPS. Therefore, a meeting with prospective consumers demanding power supply was held at DVC HQ on 20.11.2018, and the following future demand was envisaged:

Sl. No.	Prospective Consumers	Voltage	Contract applied for	Demand
1	Shyam Steel Ind. Ltd.	132kV	22 MVA	
2	Shree Cement Ltd.	132kV	14 MVA	
3	Bravo Sponge Pvt. Ltd.	132kV	25 MVA	
4	Shyam Ferro Alloy Ltd.	132kV	51 MVA	
5	Adhunik Corporation	33kV	16 MVA	
6	Adhunik Ind. Ltd.	132kV	50 MVA	
	Total consumer demand		178 MVA	

Hence, immediate installation of the 4th ATR (220/132 kV) of capacity 160 MVA at DTPS Switchyard was felt essential to meet the upcoming demand based on the applications from prospective consumers as well as to meet the N-1 contingency. Accordingly, the following main and associated works were taken up for installation of the 4th ATR at DTPS:





- (i) Conversion of 220 kV B/C 1 Bay into 4<sup>th</sup> ATR HV Bay (220 kV Side).
- (ii) Conversion of 132 kV Line 52 Bay (DTPS-ASP Line Bay) into 4<sup>th</sup> ATR Bay (132 kV Side).
- (iii) Utilization of 132 kV GT 2 Bay as L 52 Bay
- (iv) Diversion of one number 160 MVA ATR for which order had already been placed for proposed installation at Dhanbad Sub-station.

The above re-arrangement at the DTPS switchyard was necessary to accommodate additional bay requirements by conversion of existing bays towards the installation of the 4th ATR. Further, post retirement of the DTPS Units , the Switchyard has already been transferred to T&D System.

### Asset-3

The 132/ 33 kV Jamuria Sub-station was put into commercial operation in 2009 with a 2 x 50 MVA transformer for supplying power to the adjoining industrial area. The sub-station was fed through a Single Circuit Loop-In-Loop-Out (LILO) of one of the 132 kV lines between Chandrapura TPS and Durgapur TPS. After the construction of the 1st LILLO circuit, the total power that could be fed from the Jamuria Sub-station was approximately 80 MVA. The 132/33 kV Jamuria Sub-station had around 70 MVA of existing connected load along with a number of applications pending for connection at both the 33 kV level (58 MVA approximately) as well at the 132 kV level (65 MVA approximately). Total applications for demand were 123 MVA (approximately). The applied demand could not be materialized until further connectivity arrangements at the Jamuria Sub-station. To meet the increasing demand of load of Jamuria Sub-station as well as to increase reliability, it was felt necessary to construct a 2nd Ckt LILLO Line to Jamuria Sub-Station from the other 132 kV Chandrapura TPS-Durgapur TPS Line (L 61). After the completion of the 2nd circuit LILLO line to the Jamuria Sub-station, the load growth demand of the consumers is being fulfilled gradually.



The present load demand of the Jamuria Sub-station is now 140 MVA, and a further 20 MVA of power can be supplied to the prospective consumers by the 2nd LILO arrangement.

Asset-4:

JBVNL's Govindpur Sub-station was being fed from DVC Patherdih Sub-station at 33 kV Level. Due to the retirement of units of Chandrapur TPS (Units 1, 2, and 3), there was a scarcity of power at the 132 kV bus at CTPS, and it resulted in the overloading of 220/132 kV ATR at CTPS. Moreover, the load demand of the Patherdih Sub-station also increased. It resulted in the overloading of associated 132 kV transmission lines, namely, 132 kV D/C CTPS-Putki transmission lines and 132 kV D/C Putki-Patherdih lines as well as overloading of the other 132 kV Grid lines like MHS-Patherdih and MHS-Kalyaneswari line. On the retirement of units from CTPS, overloading of ATRs at Kalyaneswari Sub-station and CTPS was also observed. Therefore, DVC planned to construct another 132 kV D/C Dhanbad-Govindpur line extended to Patherdih Sub-station to establish a 132 kV link between the Dhanbad Sub-station and Patherdih Sub-station to reduce the load on the ATRs of Kalyaneswari Sub-station and CTPS beside strengthening of system flexibility and reliability. Therefore, it was felt prudent to cater to the load of JBVNL, Govindpur from 220/132/33 kV Dhanbad Sub-station, which is connected to 220 kV DVC Grid and not suffering from scarcity of power. To obviate this situation, a 132 kV D/C transmission line (charged at 33 kV) from Dhanbad Sub-station to JBVNL Govindpur Sub-station was planned to be constructed to deliver power to JBVNL, Govindpur on a sustainable and reliable basis. After the construction of the Dhanbad-Govindpur line, the beneficiaries of JBVNL Govindpur are drawing reliable power from the



DVC Dhanbad Sub-station with minimal power interruption and better voltage profile, resulting in the benefit to both DVC and JBVNL.

10. As regards the SCM/ RPC approval, the Petitioner has submitted that SCM/ RPC approval is not required for the upgradation of the existing system of DVC as provided under the Grid Code and DVC approaches the SCM/ RPC for large additions of 220 kV/400 kV transmission lines/ sub-stations that are regionally important for grid stability.

11. The gist of the reasons submitted by the Petitioner are as follows:

<b>Assets</b>	<b>Purpose of construction of transmission system</b>
<b>Asset-1</b>	The augmentation of transformation capacity at ASP Sub-station by replacing the old 50 MVA transformer with a new 80 MVA transformer 80 MVA, 132/33 kV Power Transformer is based on the consumers applications and projected load growth.
<b>Asset-2</b>	The 4 <sup>th</sup> 160 MVA, 220/132 kV Power Transformer at DTPS is proposed at DTPS Sub-station based on the consumers application and projected load growth.
<b>Asset-3</b>	The Petitioner has commissioned 132 kV S/C LILO at Jamuria Sub-station with 2X50 MVA transformer for Power supply to the industrial area. The sub-station is fed through S/C LILO of the 132 kV CTPC & DTPS line (L#60). In order to meet the increasing demand of load of Jamuria Sub-station as well as to increase reliability, the Petitioner has constructed the 2 <sup>nd</sup> LILO line to Jamuria Sub-station from the other 132 kV CTPS-DTPS line (L 61).
<b>Asset-4</b>	The new 132 kV D/C line from Dhanbad Sub-station to JSEB Govindpur is proposed to meet the load requirement of existing and new consumers. The consumer load has exceeded the rated capacity of the existing system serving the nearby consumers and installation of a new line was needed to meet the requirement of new consumer load.

12. We have considered the submissions of the Petitioner regarding the regarding the reasons for constructing the transmission assets. We are of the view that the Petitioner should consult the Central Electricity Authority (CEA) in case of any additions and changes to its existing T&D network for proper planning and coordination of the overall transmission systems. Accordingly, as observed by the Commission in the RoP of the hearing dated 6.6.2023, the Petitioner is directed to consult CEA and thereafter add or make changes to its T&D network based on the recommendation of CEA. As these assets are constructed to meet the existing and projected demand, we allow tariffs for the transmission assets. However, the Petitioner is directed to consult CEA in all future cases of construction of new transmission assets while making changes to its existing T&D network as stated above.



13. The Commission, in an order dated 10.6.2022 in Petition No. 482/TT/2020, trued up the tariff of the 2014-19 period and determined the tariff for the 2019-24 tariff period of the “Existing Transmission and Distribution (T&D) System Network” of the Petitioner based on its capital cost of T&D network as on 31.3.2019 on an actual basis and projected additional capitalization during 2019-24 period respectively. Further, the Petitioner approached WBERC for approval of the tariff for the 2017-18 to 2022-23 period. WBERC vide order dated 20.5.2021 observed that the *“Commission has no scope to issue tariff orders without the investment approval.”* In view of the above, without segregation of transmission and distribution assets by DVC, it cannot be ascertained whether the tariff of the T&D network approved by the Commission is inclusive or exclusive of the transmission assets for which the tariff petition was filed before WBERC.

14. Therefore, the Petitioner is directed to submit the following at the time of truing-up:

- a) Segregate the existing Transmission and Distribution (T&D) into transmission assets existing as on 31.3.2019 and distribution system existing as on 31.3.2019 and actual capital cost as on 31.3.2019 of the transmission assets and distribution assets.
- b) The projected Additional Capital Expenditure for the 2019-24 tariff period for transmission assets and distribution system.
- c) The total Gross fixed asset (GFA) of T&D as on 31.3.2019 and 31.3.2024 and the GFA of transmission assets as on 31.3.2019 and 31.3.2024 and GFA of distribution assets as on 31.3.2019 and 31.3.2024.

#### **Date of Commercial Operation (COD)**

15. The Petitioner has claimed the COD of Asset-1, Asset-2, Asset-3 and Asset-4 as 28.7.2019, 25.2.2021, 13.3.2021 and 27.7.2019. In support of its claim of COD of Asset-1, Asset-2, Asset-3, and Asset-4, the Petitioner has submitted CEA Energisation Certificates,



Charging Certificate issued by SLDC of DVC, and CMD Certificate as required under Grid Code. Taking into consideration the CEA Energisation certificate, Charging Certificate issued by SLDC, and self-declaration certificate, the COD of the transmission assets covered in the instant petition is approved as follows:

<b>Assets</b>	<b>SCOD</b>	<b>COD</b>
Asset-1	28.5.2019	28.7.2019
Asset-2	10.2.2020	25.2.2021
Asset-3	3.12.2016	13.3.2021
Asset-4	7.2.2018	27.7.2019

16. The Petitioner has submitted that it has charged the 132 kV D/C line from Dhanbad Sub-station to the JSEB Govindpur line at 33 kV level. The Petitioner has not submitted any approval for charging the line at 33 kV. Therefore, The Petitioner is directed to submit the approval of CEA and RLDC for charging 132 kV line as 33 kV at the time of truing-up.

### **Capital Cost**

17. The Petitioner vide affidavit dated 4.5.2023 has revised Form-5 in support of the capital cost claimed as on COD. Based on the above, the following capital cost as on COD has been considered for tariff purposes:

<b>Assets</b>	<b>Hard Cost</b>	<b>Notional IDC</b>	<b>IEDC</b>	<b>(₹ in lakh)</b>
				<b>Total capital cost as on COD</b>
Asset-1	451.60	43.03	294.41	<b>789.04</b>
Asset-2	351.94	38.48	214.38	<b>604.80</b>
Asset-3	1324.70	464.24	800.07	<b>2589.01</b>
Asset-4	1425.64	192.73	800.58	<b>2418.95</b>

18. The capital cost as on COD and ACE during the 2019-24 tariff period is as follows:

<b>Assets</b>	<b>Capital cost as on COD</b>	<b>ACE</b>				<b>Total cost as on 31.3.2024</b>
		<b>(₹ in lakh)</b>				
		<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	
Asset-1	789.04	6.55	-	2.24	-	797.83
Asset-2	604.80	-	160.57	641.01	-	1406.37
Asset-3	2589.01	-	-	73.48	-	2662.49
Asset-4	2418.95	151.28	79.55	0.78	23.43	2656.20



19. The Petitioner has submitted the sanction order details, and the same is as follows:

<b>Assets</b>	<b>Details</b>
Asset-1	The Committee of Members approved an estimated expenditure of ₹5655.72 lakh for 13 numbers of transformers including Asset-1, vide sanction order dated 8.4.2016. Subsequently, vide sanctioned order dated 25.7.2020, the estimated capital cost of Asset-1 is revised to ₹788.40 lakh.
Asset-2	The Committee of Members approved an estimated expenditure of ₹1315.469 lakh (without considering IDC), vide sanction order dated 15.1.2019. As per the revised sanctioned order dated 18.1.2022, the estimated capital cost of Asset-2 is revised to ₹1425.00 lakh.
Asset-3	The Committee of Members approved revised estimated expenditure of ₹2662.48 lakh vide revised sanction order dated 1.6.2022.
Asset-4	Approval of the Committee of Members towards expenditure sanction of ₹647 lakhs for construction of 132 kV D/C line from Dhanbad Sub-station to JSEB Govindpur (to be charged at 33 kV & associated works by enhancement of earlier expenditure sanction of ₹260 lakh. Further, a revised sanctioned order dated 1.6.2022 mentioning an expenditure sanction of ₹2697.73 lakh including IDC.

20. We have considered the submissions of the Petitioner. We have perused the investment approval (IA) submitted by the Petitioner in the form of a "Sanction Order". As it does not contain the project cost, funding details, and commissioning schedule, the Petitioner is directed to submit them at the time of truing up. Further, the Petitioner is directed to incorporate such details in the IA / sanction order that is approved by its Board of Directors or Competent Authority in all future cases.

21. The Petitioner has submitted the following reasons for cost over-run, vide affidavit dated 4.5.2023:

**Asset-1**

There is no cost over-run as the estimated completion cost is within the sanctioned cost.

**Asset-2**

The booked expenditure amount is within the revised sanction cost. There has been a nominal increase in cost over the initial sanction amount due to a delay in execution



hampered by Covid-19 and non-availability of shutdown of the existing switchyard to ensure minimum inconvenience to the existing consumers.

**Asset-3**

(a) The estimation of the work was done in 2014. During the bidding process, it was observed that the price offered by the L-1 bidder was approximately 20% high, although competitive bidding was used to award LoA.

(b) Enhancement of route length by 0.6 km requiring the installation of an additional 2 multi ckt. towers for diversion of the line due to severe RoW problems, which led to higher material cost and civil/ erection costs.

(c) Shifting of positions of towers due to RoW problems involves a change in the type of tower and foundation at 6 locations. The type of towers was altered to higher classification, which resulted in higher expenditures on materials and civil/ erection costs.

(d) Change in type/ design of foundation due to debauched site conditions at 4 locations resulted in higher expenditures against civil work.

(e) Lumpsum cost was considered against the RoW problem while preparing the estimates in 2014, as there were no clear guidelines. However, guidelines regarding compensation packages for the tower base and line corridor were issued in October 2015. The compensation was paid in 2017-19, @85% of the market value of land for the tower base and @15% of the land for the line corridor as per the guidelines of MoP published on 15.10.2015.

(f) Increase in overhead cost due to time over-run on account out of severe RoW issues at multiple locations.



#### **Asset-4**

- a) The initial sanctioned cost was ₹1525.24 lakh, and it was revised to ₹2697.73 lakh. There is a cost over-run of ₹1172.49 lakh, which is 73.74% higher.
- b) The estimation of the work was done in 2014. The price offered by the L-1 bidder is approximately 10% high, although competitive bidding was used to award LoA.
- c) Enhancement of route length by 1 km, requiring the installation of 10 additional rail pole locations in excess. Installation of 10 additional rail pole location contributed to higher material cost and civil/ erection costs.
- d) Due to severe RoW issues encountered at location No: 3/1, Amaghata, the line was required to divert, and the said location was abandoned involving the installation of a new tower.
- e) Incorporation of 'Reduced Depth Foundation' at Location 21/0 due to the presence of rocks involving enhancement of raft size and overall concrete volume, and consequently, overall civil works increased in many folds when compared to normal foundation works
- f) Change in foundation type/ design due to debauched site conditions at 3 locations resulted in higher expenditures against civil work.
- g) The estimate of the said line was prepared in 2014, and the lumpsum cost was considered against the RoW problem as there were no clear guidelines. However, guidelines regarding compensation packages for the tower base and line corridor were issued in October 2015. The compensation was paid in 2017-19 @85% of the market value of land for the tower base and @15% of the land for the line corridor as per the guidelines of MoP published on 15.10.2015.
- h) Increase in over-head cost due to delay in completion arising out of severe RoW issues at multiple locations.





22. We have considered the Petitioner's submission regarding the cost. The Petitioner has submitted that there is no variation in the cost of Asset-1. However, it is observed that the estimated completion of Asset-1 is higher by ₹9.43 lakh. As the Petitioner has not submitted the reasons for this variation in cost, the capital cost claimed of Asset-1 is restricted to the sanctioned cost of ₹788.40 lakh. The Petitioner may submit the reasons for the cost variation of ₹9.43 lakh at the time of truing-up for review.

23. The estimated completion cost of Asset-2 is ₹1406.37 lakh, and it is lesser than the revised sanctioned capital cost of ₹1425 lakh. Therefore, the capital cost claimed by the Petitioner is allowed.

24. There is an increase in the estimated capital cost of Asset-3, and the main reason for cost variation is due to an increase in line length, shifting positions of towers due to row problems, change in type/ design of foundation, and compensation paid towards transmission line. The revised capital cost of Asset-3 is ₹2662.48 lakh, and it is marginally lower than the estimated completion cost of ₹2662.49 lakh. As the estimated completion cost of Asset-3 is within the revised sanctioned capital cost, the capital cost claimed by the Petitioner is allowed.

25. There is an increase in the estimated completion cost of Asset-4; the main reason for cost variation is due to high award cost, increase of line length, change in type/design of foundation, and compensation paid towards transmission line. The estimated capital cost of Asset-4 is ₹2656.20 lakh and it is lower than the revised capital cost approved vide the revised sanctioned order dated 1.6.2022 of ₹2697.73 lakh, including IDC. Therefore, the capital cost claimed by the Petitioner is allowed.

### **Time Over-run**

26. The Petitioner has claimed the following SCOD and COD of the transmission assets:

<b>Assets</b>	<b>Scheduled COD</b>	<b>Actual COD</b>	<b>Remarks</b>
Asset-1	28.5.2019	28.7.2019	(a) LOA for erection and commissioning of 80 MVA Transformer at ASP was placed on 24.11.2018 with a



			<p>timeline of 180 days from the date of handing over the site. Site was handed over to agency on 30.11.2018.</p> <p>(b) Hence, scheduled COD may be construed as 28.5.2019 (i.e. 180 days from 30.11.2018).</p>
Asset-2	10.2.2020	25.2.2021	<p>(a) LOA for erection and commissioning of 160 MVA 4<sup>th</sup> ATR at DTSP was placed on 11.6.2019 with a timeline of 8 months from LOA.</p> <p>(b) Hence, scheduled COD may be construed as 10.2.2020 (i.e., 8 months from 11.6.2019).</p>
Asset-3	3.12.2016	13.3.2021	<p>(a) LOA for erection and commissioning of 2<sup>nd</sup> Ckt LILO of 132 kV DTSP to CTPS/Ramkanali Sub-station line (L 61 &amp; 90) at Jamuria Sub-station was placed on 4.12.2015 with a timeline of 12 months from LOA.</p> <p>(b) Hence, scheduled COD may be construed as 3.12.2016 (i.e., 12 months from 4.12.2015).</p>
Asset-4	7.2.2018	27.7.2019	<p>(a) LOA for erection and commissioning of 132 kV D/C line from Dhanbad substation to JSEB Govindpur line (21.729*2 Ckm) was placed on 4.12.2015 with a timeline of 2 months from LOA.</p> <p>(b) Hence, scheduled COD may be construed as 7.2.2018 (i.e. 12 months from 8.2.2017).</p>

27. The Petitioner has submitted the following reasons for time over-run and requested for condonation of the time over-run.

**Asset-1:**

There was a nominal delay of three months for which existing consumers did not suffer.

**Asset-2:**

There was a time over-run of more than one year mainly due to:

- a) A delay of 125 days was observed due non-availability of shut down of 220 kV Bus Coupler 1 Bay, Main Bus, Transfer Bus, Image Bus, and ATRs in the existing 132 kV and 220 kV of DTSP Switchyard
- b) Spread of Covid-19 pandemic and imposition of lockdown from 24.3.2020 to 11.5.2020. There were many complications in re-mobilisation of working people due to restrictions imposed in order to obey the protocol followed during the post-lockdown period. This resulted in a delay in the deputation of OEM personnel in



respect to the Transformer (IMP) and Control & Relay Panels (HITACHI - ABB).

There was time over-run of 142 days due to this.

### **Asset-3**

The timeline of Asset-3 was 12 months from the date of LoA and the date of LoA was 4.12.2015. Hence, the SCOD was 3.12.2016, against which the transmission asset was put on load on 11.3.2021 and declared COD on 13.3.2021. Thus, there is time over-run of 4 years and three months and it is due to RoW problems in various location and non-availability of bay at the Jamuria Sub-station.

a) RoW problem at Location No.–1 (from May 2016 to March 2019): The land owner of location No. 1 (AP-1/0) situated at Searsole Mouza did not allow installation of the tower and refused to receive the compensation as per the Ministry's guidelines.

The problem started in the month of May 2016. Accordingly, a brief chronology of events for resolving the RoW problem is as follows:

Sl. No.	Description of Item	Date
1.	Letter was written to the Mayor, Asansol Municipal Corporation requesting him to resolve the dispute of RoW problem at Loc-1	1.6.2016
2.	Letter was written to the Additional District Magistrate requesting him to resolve the dispute of RoW problem at Loc-1	1.6.2016
3.	The land owner filed a writ petition at Hon'ble Calcutta High Court for stopping construction by DVC	22.9.2016
4.	Hon'ble Calcutta High Court passed an interim order dated 17.11.2016 stating that both parties may approach for acceptance of the compensation offered by DVC.	17.11.2016
5.	In spite of positive approach from DVC, the land owner refused to accept the compensation package offered by DVC. Then the Hon'ble High Court gave the following directions " <b>There is no subsisting interim order on this writ petition and the corporation shall be entitled to proceed in accordance with law</b> "	16.12.2016
6.	Appeal was made before SDO, Asansol to resolve the RoW issue	30.12.2016
7.	Appeal made to District Magistrate, Paschim Bardhaman for resolving the RoW problem	3.5.2017
8.	Appeal made before Commissioner of Police, Asansol for resolving the RoW problem	2.6.2018
9.	Meeting held between DVC & land owner in presence of SDM, Asansol for resolving the RoW problem. However, the problem was not resolved	3.7.2018
10.	Appeal made SDLRO, Asansol for resolving the RoW problem	7.8.2017



11.	Appeal made to Commissioner of Police, Asansol for providing police support for execution of the work	20.8.2018
12	Appeal made to District Magistrate, Paschim Bardhaman for resolving the RoW problem and providing administrative support	22.12.2018
13	After persuasion, meeting was held with the land owner in presence of SDM, Asansol and the land owner accepted DVC's compensation and work starts form 8.3.2019	7.3.2019

Hence, the time over-run from May, 2016 to March, 2019 is not attributable to DVC.

- b) RoW problem at Location No.–34 (From August 2017 to October 2019): The corridor between Location No. 34 & 35 (AP–26/0 & AP–27/0) falls inside the factory premises of CALSTER Sponge Limited. CLASTER raised an objection against passing the line through their land. The problem started in the month of August 2017. Accordingly, a brief chronology of events for resolving the RoW problem is as follows:

Sl. No.	Description of Item	Date
1.	Letter was written to the Chief Executive Officer, ADDA for intervention for resolving RoW problem	3.8.2017
2.	Hearing held between DVC and CALSTER Sponge in presence of AEO, ADDA.	16.10.2017
3.	A meeting held between DVC and CALSTER Sponge in presence of SDM, Asansol	9.2.2018
4.	A joint site visit was carried out by Officer in Charge. JM & Electricity, Paschim Bardhaman on 15.2.20218 and the inspection report was forwarded on 3.4.2018	.3.4.2018
5.	Appeal made to Commissioner of Police, Asansol for providing police support for execution of the work. Foundation work commenced on 13.6.2018 with the help of police protection	2.6.2018
6.	Hindrance was again encountered during stringing work in between Loc 33 & 34 and SDM, Asansol was requested to resolve the problem	4.9.2019
7.	The Chief Executive Officer, ADDA was again requested to resolve the RoW problem.	26.9.2019

The stringing work was executed with help of Police protection on 10.10.2019. Hence, the time over-run from August, 2017 to October, 2019 was not attributable to DVC.

- c) RoW problem at Location No.14 and 15 (From June, 2016: Severe RoW problem was encountered at Loc. No.14 and 15. The land owners of these locations did not allow DVC for carrying out foundation work. The problem started in the June, 2016 and was finally resolved in April 2017. Accordingly, a brief chronology of events for resolving the RoW problems is as follows:



Sl. No.	Description of Item	Date
1.	Letter was written to the Officer-in-charge, Jamuria PS for resolving the problem	17.6.2016
2.	SDM, Asansol was requested to resolve the problem vide letter dated 30.12.2016	30.12.2016
3.	The SDM, Asansol during his site on visit advised DVC for exploring possibility for diverting the line to overcome the Ro.W problem. SDM, Asansol was intimated that necessary action is being taken by DVC for diversion of portion of the line containing Loc – 14 and 15	7.2.2017
4.		14.2.2017
6.	Route profile was prepared for the diverted portion.	1.3.2017

The foundation work was executed in April, 2017 as per the diverted route. Hence, the time over-run from June, 2016 to April, 2017 is not attributable to DVC.

- d) Non-availability of Railway way leave permission at location no. AP-16/0 & AP-17/0 (from April 2016 to July 2017): The 2nd 132 kV LILO line to Jamuria Sub-station was crossing an electrified Railway track in between Location 16/0 to 17/0. The initial application was submitted on 13.4.2016. Accordingly, a brief chronology of events for resolving the RoW problem are as follows:

Sl. No.	Description of Item	Date
1.	Application submitted to Eastern Railway Asansol for obtaining way leave permission.	13. 4.2016
2.	Supplementary documents submitted to Eastern Railway, Asansol as per requirement	29. 9.2016
3.	Supplementary documents submitted to Eastern Railway, Asansol as per requirement	14.12.2016
4.	Way leave permission received from Eastern Railway, Asansol	28. 7.2017

Hence, the time over-run from April 2016 to July 2017 is neither attributable to DVC nor to the agency.

- e) Non-availability terminal bay at Jamuria Sub-station (From November 2019 to February 2021): The 2<sup>nd</sup> 132 kV LILO line to Jamuria was completed in November 2019, and the line was charged as an anti-theft measure. However, power flow in the line could not be achieved due to the non-availability of the terminal bay. After



the availability of the terminal bay in March 2021, the line was put under COD on 10.3.2021.

**Asset-4**

The timeline for Asset-4 was 12 months from the date of LoA and the date of LoA, which was 8.2.2017. Hence, the SCOD was 7.2.2018, against which the subject asset was put on load on 25.7.2019 and declared under COD on 27.7.2019. Thus, there is a time over-run of 18 months. The time over-run was mainly due to severe RoW problems encountered at various locations and patches during the construction of the line.

a) Loc-1/0 to Loc-3/1 (18 months delay from February 2018 to April 2019) – The land owners of Loc – 1/0 to Loc – 3/0 did not allow the installation of the tower on his land and refused to receive compensation as per the Ministry’s guidelines. The problem started in February 2018 and was finally resolved in May 2019. Accordingly, a brief chronology of events for resolving the RoW problem is as follows:

Sl. No.	Description of Item	Date
1.	Letter was written to the Officer-in-charge, Govindpur PS requesting him to resolve the RoW problem	12.2.2018
2.	Letter written to Deputy Commissioner, Dhanbad requesting him to intervene and resolve the RoW problem	10.5.2018
3.	The Deputy Commissioner, Dhanbad was requested to provide administrative support for execution of the work	23.7.2018
4.	A meeting was called by the Sub-Divisional Officer, Dhanbad for resolving the RoW problem	14.9.2018
5.	The Sub-Divisional Officer Dhanbad was requested to provide administrative support for execution of the work	22.9.2018
6.	Magistrate was deputed in the site and part of the problem for span Loc – 1/0 to Loc 3/0 was resolved	25.9.2018
8	Letter was written to the Officer–in–charge, Govindpur PS requesting him to resolve the RoW problem at Loc-1A /0	19.1.2019
7.	Letter was written to the Sub-Divisional Officer Dhanbad requesting him to intervene to resolve the RoW problem at Loc–1A /0	19.1.2019



8.	Magistrate was deputed by the Sub-Divisional Officer, Dhanbad on 11.2.2019 & 12.2.2019 for resolving RoW problem at Loc – 1A/0, but the problem was not resolved	4.2.2019
9.	Letter was written to the Sub-Divisional Officer Dhanbad requesting him to intervene to resolve the RoW problem at Loc–1A /0	11.2.2019
10.	Letter was written to the Sub-Divisional Officer Dhanbad requesting him to intervene to resolve the RoW problem at Loc – 1A /0	18.3.2019
11.	The Deputy Commissioner, Dhanbad was requested to provide administrative support for execution of the work	23.3.2019
12.	Magistrate was again deputed by the Sub-Divisional Officer, Dhanbad on 1.4.2019 for resolving RoW problem at Loc – 1A/0, and the finally the problem was resolved	29.3.2019
13.	Letter was written to the officer – in –charge, Govindpur PS requesting him to resolve the R.W problem at Loc 1/1 and for providing police support for execution of the work	30.4.2019
14.	The RoW problem was resolved on 2.5.2019	2.5.2019

The RoW problem was resolved in 2.5.2019. Hence, the time over-run from

February, 2018 to April, 2019 is not attributable to DVC.

- b) RoW problem at Location No.–32/0 to Loc – 33/1 (From August, 2017 to October, 2019): Severe RoW problem encountered from Location No.–32/0 to Loc – 33/1. Problem started in February, 2018 and finally resolved in June, 2019. Accordingly, brief chronology of events for resolving the RoW problem are as follows:

Sl. No.	Description of Item	Date
1.	Letter written to Deputy Commissioner Dhanbad requesting to resolve the RoW problem	24.2.2018
2.	The Sub-Divisional Officer Dhanbad was requested to provide administrative support for execution of the work	27.2.2018
3.	The Deputy Commissioner, Dhanbad was requested to intervene for resolving RoW problem	2.4.2018
4.	Magistrate was deputed by the Deputy Commissioner, Dhanbad on 4.4.2018 for resolving RoW problem but the RoW problem was not resolved	4.4.2018
5.	Letter written to Deputy Commissioner Dhanbad requesting to intervene resolve the RoW problem	17.4.2018
6.	Letter written to Deputy Commissioner Dhanbad requesting to intervene resolve the RoW problem	10.5.2018
7.	The Deputy Commissioner, Dhanbad was requested to provide administrative support for execution of the work	23.7.2018
8.	As per advice of the District Administration various meetings were held in the presence of the Officer –in – charge of the local police station and accordingly RoW problems were resolved for foundation works were taken up. But RoW problem at Loc–32/1 was not fully resolved	September, 2018 to February, 2019
9.	The Sub-Divisional Officer, Dhanbad was requested to provide administrative support for execution of the work	13.3.2019



10	The Deputy Commissioner, Dhanbad was requested to provide administrative support for execution of the work	23.3.2019
11.	Magistrate was again deputed by the Sub-Divisional Officer, Dhanbad on 1.4.2019 for resolving RoW problem at Loc – 32/1, but the problem was partly resolved and erection work started	29.3.2019
12.	Letter was written to the Sub-Divisional Officer Dhanbad requesting him to intervene to resolve the ROW problem at Loc – 32/1 for pending stringing work	6.4.2019
13	Letter was written to the Sub-Divisional Officer Dhanbad requesting him to intervene to resolve the RoW problem at Loc – 32/1 for pending stringing work	1.6.2019
14.	Letter was written to the Sub-Divisional Officer Dhanbad requesting him to intervene to resolve the RoW problem at Loc – 32/1 for pending stringing work	2.6.2019
15.	Magistrate was again deputed by the Sub-Divisional Officer, Dhanbad on 25.6.2019 and 26.6.2019 for resolving RoW problem at Loc-32/1 and the problem was resolved	24.6.2019

Hence, the time over-run from February 2018 to June 2019 is not attributable to DVC.

- c) RoW problem at Location No.–14A/0 to 16/0 (From June 2016: Severe RoW problem was encountered at Loc –14A & 15/0 at village–Nero & Jiramur, near KK Polytechnic. The problem started in May 2018, and finally, the problem was resolved in April 2019. Accordingly, a brief chronology of events for resolving the RoW problem is as follows:

Sl. No.	Description of Item	Date
1.	Letter written to Deputy Commissioner Dhanbad requesting to intervene resolve the RoW problem	10.5.2018
2.	The Deputy Commissioner, Dhanbad was requested to provide administrative support for execution of the work	23.7.2018
3.	Letter written to Deputy Commissioner Dhanbad requesting to intervene resolve the RoW problem	1.8.2018
4.	Letter was written to the Sub-Divisional Officer Dhanbad requesting to intervene to resolve the RoW problem	27.11.2018
5.	Magistrate was deputed 12.12.2018, but the problem was not resolved. Sub-Divisional Officer Dhanbad was again requested to intervene for resolving the RoW problem	14.12.2018
6.	Letter was written to the Sub-Divisional Officer Dhanbad requesting to intervene to resolve the RoW problem	19.2.2019
7.	Sub-Divisional Officer was requested to provide administrative support of resolve the RoW problem	7.3.2019
8.	The Deputy Commissioner, Dhanbad was requested to provide administrative support for execution of the work	23.3.2019





9.	Sub-Divisional Officer was requested to provide administrative support of resolve the RoW problem	28.3.2019
10	Magistrate was again deputed by the Sub-Divisional Officer, Dhanbad on 2.4.2019 for resolving R.W problem at Loc – 15/0, 15/A & 15B, but the problem was partly resolved and erection work started	29.3.2019
11.	The problem could not be resolved and ultimately the line was diverted as per instruction of District Authority	14.4.2019

Hence, the delay from May 2018 to April 2019 is not attributable to DVC.

- d) Non-availability of Railway way leave permission at location no. AP-16/0 & AP-17/0 (From April, 2016 to July, 2017): There was delay in obtaining PTCC clearance for the said line. The application was submitted to PTCC online on 30.11.2017 and the approval was received on 22.9.2018.

Hence, the time over-run from December 2017 to September 2018 is not attributable to DVC.

### **Analysis and decision**

28. We have considered the submissions of the Petitioner. The Petitioner has submitted that there is no scheduled completion date in the IA. The supply portion (i.e., transformer and other major materials like a tower, conductor, insulators, etc.) was procured separately through a competitive bidding process followed by placement of purchase order based on the sanction order. Separate orders were placed for the erection and commissioning of the individual assets through a competitive bidding process. Hence, DVC prayed that the 'Scheduled Completion Date' stipulated in LoA for 'Erection & Commissioning' against individual assets as the scheduled timeline for execution of the individual assets.

29. The Petitioner does not have an IA and only a "Sanction Order" in the case of the transmission assets. After the issue of the "Sanction Order," the Petitioner has issued LoA. Therefore, the time schedule mentioned in the LoA is considered as SCOD of the transmission assets in the absence of any IA in the instant case as a special case. However, as stated earlier in this order, the Petitioner is directed to obtain an IA approval for a



transmission system from its competent authority consisting of the timeline, cost (including IDC and IEDC), and the scope of the transmission scheme in case of all transmission systems or projects in future.

### **Asset-1**

30. The timeline for execution of Asset-1 was 180 days (6 months) from the date of handing over of the site. The site was handed over to the agency on 30.11.2018. Hence, the SCOD was 28.5.2019, against which the Asset-1 was put into commercial on 28.7.2019. Thus, there is a time over-run of 61 days in the case of Asset-1. The Petitioner has not submitted any specific reasons for the time over-run of 61 days. Therefore, the time over-run of 61 days in the case of Asset-1 is not condoned.

### **Asset-2**

31. The timeline for execution of Asset-2 was 8 months from the date of LoA. The date of LoA was 11.6.2019. Hence, the SCOD was 10.2.2020, against which the Asset-2 was put into commercial on 25.2.2021. Thus, there is a time over-run of 381 days. The Petitioner has submitted that the time over-run of about 125 days was due to the non-availability of the shutdown of the existing 132 kV and 220 kV of DTPS switch yard and about 142 days was on account of the Covid-19 pandemic leading to delay in remobilisation and deployment of OEM personal in respect of transformer and control and relay panels.

32. The Petitioner had not submitted when the application for the shutdown was made and when the shutdown of the DTPS switch yard was granted. Therefore, the time over-run of 125 days on account of the alleged delay in the grant of the shutdown is not condoned. The Petitioner has also not submitted any documents to show that the execution of Asset-2 was affected by the Covid-19 pandemic. Further, the relief given by the Ministry of Power (MoP) vide letter dated 27.7.2020 is not applicable in the present case. Therefore, the time over-run of 142 attributed by the Petitioner to the COVID-19 pandemic is also not condoned. Further, the Petitioner has not given any reasons for the remaining period of time over-run of 114 days



in the case of Asset-2. Therefore, the total time over-run of 381 days in the case of Asset-3 is not condoned.

**Asset-3:**

33. The timeline for execution of Asset-3 was 12 months from the date of LoA. The date of LoA was 4.12.2015. Hence, the SCOD was 3.12.2016, against which the Asset-3 was put into commercial on 13.3.2021. Thus, there is a time over-run of 1561 days. The Petitioner has submitted that the period from 1.6.2016 to 7.3.2019 was affected on account of RoW problem at location No.1, the period from 3.8.2017 to 26.9.2019 was affected on account of RoW problem at location No. 34, the period from 17.6.2016 to 1.3.2017 was affected on account of RoW problem at location No.14 and 15. The Petitioner has furnished the details of correspondences exchanged with various authorities along with supporting documents. From the submissions of the Petitioner, it is apparent that RoW issues from 1.6.2016 to 29.9.2019 (1,212 days) at various locations affected the execution of transmission assets. We are of the view that the time over-run of 1212 days on account of RoW problems was beyond the control of the Petitioner, and the same is condoned.

34. The time over-run from 13.4.2016 to 28.7.2017 claimed on account of the non-availability of Railway way leave permission is subsumed in the time over-run already condoned to RoW problems.

35. The Petitioner has submitted that the time period from November 2019 to February 2021 is affected due to the non-availability of the terminal bay at the Jamuria Sub-station. The Petitioner completed the 2<sup>nd</sup> 132 kV LILLO line to Jamuria in the month of November 2019, and anti-theft charged the line. It is observed that the implementation of the terminal bay is within the scope of DVC, and the Petitioner has not submitted the reasons for the non-implementation of the terminal bay at Jamuria Sub-station, which is also owned by DVC. The Petitioner should have planned to implement both the line and terminal bay in a matching time frame to avoid a mismatch in their commissioning. Therefore, the time over-run on



account of the non-availability of the terminal bay at Jamuria Sub-station is also not condoned.

#### **Asset-4**

36. The timeline for execution of Asset-4 was 12 months from the date of LoA. The date of LoA was 8.2.2017. Hence, the SCOD was 7.2.2018, against which Asset-4 was put into commercial on 27.7.2019. Thus, there is a time over-run of 535 days. The Petitioner has submitted that the period from 12.2.2018 to 2.5.2019 was affected on account of RoW problem at location No.1/o to location No.3/0, the period from 24.2.2018 to 24.6.2019 was affected on account of RoW problem at location No.32/0 to location No.33/1, the period from 10.5.2018 to 14. 4.2019 was affected on account of the RoW problem at location No.14A/0 &16/0. We have gone through the submissions of the Petitioner. The Petitioner has furnished details of correspondences exchanged with various authorities along with supporting documents. From the submissions of the Petitioner, it is apparent that RoW issues from 12.2.2018 to 24.6.2019 (497 days) at various locations affected the execution of transmission assets. Therefore, the time over-run of 497 days on account of RoW problems was beyond the control of the Petitioner and the same is condoned. The time over-run attributed to the delay in the grant of PTCC from 30.11.2017 to 22.9.2018 is subsumed in the time over-run already condoned due to RoW problems. Accordingly, the time over of 497 days in the case of Asset-4 is condoned, and the time over-run of 38 days is not condoned.

37. As per the above analysis, the time over-run condoned / not condoned in the case of the transmission assets is as follows:

<b>Assets</b>	<b>SCOD of the Asset</b>	<b>Time over-run</b>	<b>Time over-run condoned</b>	<b>Time over-run not condoned</b>
Asset-1	25.8.2019	61 days	-	61 days
Asset-2	10.2.2020	381 days	-	381 days
Asset-3	13.3.2021	1561 days	1212 days	349 days
Asset-4	27.7.2019	535 days	497 days	38 days



**Interest During Construction (IDC) and Incidental Expenditure During Construction (IEDC)**

**Notional IDC**

38. The Petitioner has claimed Notional IDC of ₹43.03 lakh, ₹38.48 lakh, ₹464.24 lakh and ₹192.73 lakh in respect of Assets-1, Asset-2, Asset-3 and Asset-4 respectively. However, the claim of notional IDC is not supported by the Auditor's Certificate. The Petitioner has submitted that Notional IDC is claimed under Regulation 19(2)(b) of the 2019 Tariff Regulations.

39. The Petitioner further submitted that the Notional IDC has been claimed by applying the WAROI (Weighted Average Interest on Loan) of the Project as a whole. The Petitioner has indicated month-wise fund deployment.

40. We have considered the submission of the Petitioner. We have worked out the Notional IDC by applying the SBI Base Rate of the period of deployment of funds on 70% of the funds deployed. As the Petitioner has not provided the date of infusion of funds, we have considered the date as mid of the month (i.e., 15<sup>th</sup> day of the month of deployment) for the deployment of funds. The Commission has already applied a similar approach of applying SBI Base Rate for calculating notional IDC in an order dated 26.10.2023 in Petition No. 574/GT/2020 pertaining to DVC.

41. Accordingly, the IDC claimed disallowed on account of time over-run not condoned and computational difference due to the rate of interest applied and IDC allowed for the transmission assets are as follows:

(₹ in lakh)

Assets	Notional IDC Claimed as per Form-5	Notional IDC disallowed due to time over-run not condoned & computational difference due to rate of interest applied	Notional IDC allowed
Asset-1	43.03	20.75	22.28
Asset-2	38.48	38.48	0.00



Asset-3	464.24	263.43	200.81
Asset-4	192.73	97.93	94.80

### **Incidental Expenditure During Construction (IEDC)**

42. The overhead expenses up to COD have been considered as IEDC and presumed to be discharged as on COD. The IEDC claimed and allowed are as follows:

(₹ in lakh)

Assets	IEDC Claimed as per form-5	IEDC disallowed due to time over-run not condoned	IEDC allowed
Asset-1	294.41	14.89	279.52
Asset-2	214.38	105.80	108.85
Asset-3	800.07	155.12	644.95
Asset-4	800.58	19.83	780.75

### **Capital cost allowed as on COD**

43. Accordingly, the capital cost allowed as on COD under Regulation 72 of the 2019 Tariff Regulation is as follows:

(₹ in lakh)

Assets	Sanction order cost	Capital cost claimed as on COD in Form-5	Notional IDC disallowed due to time over-run not condoned & computational difference due to Rate of Interest applied	IEDC Disallowed X due to time overrun not condoned	Capital cost allowed as on COD
Asset-1	788.40	789.04	20.75	14.89	<b>753.40</b>
Asset-2	1425.00	604.80	38.48	105.80	<b>460.52</b>
Asset-3	2662.48	2589.01	263.43	155.12	<b>2170.46</b>
Asset-4	2697.73	2418.95	97.93	19.83	<b>2301.19</b>

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

44. Regulation 24 of the 2019 Tariff Regulations provides as follows:

#### **“24. Additional Capitalization**

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

- Un discharged liabilities recognized to be payable at a future date;
- Works deferred for execution;
- Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 23 of these regulations;
- Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority or order or decree of any court of law; and
- Change in law or compliance of any existing law: and



f. *Force Majeure events:*

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

*(2) The generating company or the transmission licensee, as the case may be shall submit the details of works asset wise/work wise included in the original scope of work along with estimates of expenditure, liabilities recognized to be payable at a future date and the works deferred for execution.*

45. The Petitioner has submitted the following projected ACE for the 2019-24 tariff period, and the same is as follows:

(₹ in lakh)						
Sl. No	Elements	2019-20	2020-21	2021-22	2022-23	2023-24
1	Asset-1	6.55	-	2.24	-	-
2	<b>Asset-2</b>	-	160.57	641.01	-	-
3	Asset-3	-	-	73.48	-	-
4	Asset-4	151.28	79.55	0.78	23.43	-

46. The Petitioner was directed vide RoP of the hearing dated 6.4.2023 to submit the justification for claiming ACE. In response, the Petitioner vide affidavit dated 4.5.2023 has submitted that the additional capital expenditure claimed is towards the payments made for full and final settlement with the contract awarded, and it is claimed under Regulation 24(1)(a) of the 2019 Tariff Regulations.

47. We have considered the submissions of the Petitioner. The ACE claimed by the Petitioner towards Asset-1, Asset-2, Asset-3, and Asset-4 is towards balance payments and is allowed under Regulation 24(1)(a) of the 2019 Tariff Regulations subject to true-up on an actual basis. The ACE allowed for the 2019-24 tariff period is as follows:

						(₹ in lakh)
Sl. No.	Elements	2019-20	2020-21	2021-22	2022-23	Total ACE allowed
1	Asset-1	6.55	-	2.24	-	8.79-
2	Asset-2	-	160.57	641.01	-	801.58
3	Asset-3	-	-	73.48	-	73.48
4	Asset-4	151.28	79.55	0.78	23.43	255.04

48. The Petitioner has replaced the 50 MVA transformer with an 80 MVA transformer at ASP Sub-station. The Commission, in an order dated 10.6.2022 in Petition No. 482/TT/2020,



approved the true up tariff for the 2014-19 tariff period and tariff for the 2019-24 for “Existing Transmission and Distribution (T&D) System Network”. The Petitioner is directed to de-capitalize the 50 MVA transformer from the books of the gross block of 50 MVA ICT.

49. The Petitioner filed Petition No. 482/TT/2020 for truing up of the transmission tariff of the 2014-19 period and determination of the transmission tariff of the 2019-24 period towards the Existing Transmission and Distribution (T&D) System Network” of the Damodar Valley Corporation in the Eastern Region. The Commission vide order dated 10.6.2022 in Petition No. 482/TT/2020 directed the Petitioner to segregate the capital cost of the transmission assets and distribution assets separately for claiming tariff for the 2019-24 tariff period. The transmission assets covered in the instant tariff petition are part of the transmission system. Therefore, the Petitioner is directed to claim the true-up of the 2019-24 tariff of the transmission assets along with the transmission system under Petition No. 482/TT/2020. The Petitioner is also directed to decapitalize the 50 MVA transformer at ASP Sub-station included in the Asset-1 at the time of truing-up.

50. Accordingly, the capital cost allowed in respect of the transmission asset for the period 2019-24 is summarized as follows:

							(₹ in lakh)
Assets	Capital cost allowed as on COD	2019-20	2020-21	2021-22	2022-23	2023-24	Total Capital cost allowed as on 31.3.2024
Asset-1	753.40	6.55	-	2.24	-	-	762.19
Asset-2	460.52	-	160.57	641.01	-	-	1262.10
Asset-3	2170.46	-	-	73.48	-	-	2243.94
Asset-4	2301.19	151.28	79.55	0.78	23.43	-	2556.23

### **Debt Equity Ratio**

51. The Petitioner has claimed a debt-equity ratio of 70:30, and the same has been considered in accordance with Regulation 72(2)(ii) of the 2019 Tariff Regulations. The details of the debt-equity allowed as on COD and 31.3.2024 is as follows:





<b>Asset-1</b>				
<b>Particulars</b>	<b>Capital cost as on COD (₹ in lakh)</b>	<b>(in %)</b>	<b>Capital cost as on 31.3.2024 (₹ in lakh)</b>	<b>(in %)</b>
Debt	527.38	70.00	533.53	70.00
Equity	226.02	30.00	228.66	30.00
<b>Total</b>	<b>753.40</b>	<b>100.00</b>	<b>762.19</b>	<b>100.00</b>
<b>Asset-2</b>				
<b>Particulars</b>	<b>Capital cost as on COD (₹ in lakh)</b>	<b>(in %)</b>	<b>Capital cost as on 31.3.2024 (₹ in lakh)</b>	<b>(in %)</b>
Debt	322.36	70.00	883.47	70.00
Equity	138.16	30.00	378.63	30.00
<b>Total</b>	<b>460.52</b>	<b>100.00</b>	<b>1262.10</b>	<b>100.00</b>
<b>Asset-3</b>				
<b>Particulars</b>	<b>Capital cost as on COD (₹ in lakh)</b>	<b>(in %)</b>	<b>Capital cost as on 31.3.2024 (₹ in lakh)</b>	<b>(in %)</b>
Debt	1519.32	70.00	1570.76	70.00
Equity	651.14	30.00	673.18	30.00
<b>Total</b>	<b>2170.46</b>	<b>100.00</b>	<b>2243.94</b>	<b>100.00</b>
<b>Asset-4</b>				
<b>Particulars</b>	<b>Capital cost as on COD (₹ in lakh)</b>	<b>(in %)</b>	<b>Capital cost as on 31.3.2024 (₹ in lakh)</b>	<b>(in %)</b>
Debt	1610.83	70.00	1789.36	70.00
Equity	690.36	30.00	766.87	30.00
<b>Total</b>	<b>2301.19</b>	<b>100.00</b>	<b>2556.23</b>	<b>100.00</b>

### **Depreciation**

52. Depreciation has been worked out as per Regulation 72(2)(ii) of the 2019 Tariff Regulations. The Regulation stipulates that the depreciation rate stipulated by the Comptroller and Auditor General of India in terms of Section 40 of the Damodar Valley Corporation Act, 1948 shall be applied for the computation of depreciation of projects of DVC.

53. The Petitioner has claimed depreciation @ 7.752% for the 2019-24 tariff period. We have considered the depreciation rate of 7.752% provided for 2018-19 for the 2019-24 tariff period, and it is subject to true-up.

54. Depreciation allowed for the transmission assets for the 2019-24 tariff period is as follows:



(₹ in lakh)

	Particulars	Asset-1				
		2019-20 (Pro-rata for 248 days)	2020-21	2021-22	2022-23	2023-24
A	Opening Gross Block	753.40	759.95	759.95	762.19	762.19
B	Addition during the year 2019-24 due to projected ACE	6.55	0.00	2.24	0.00	0.00
C	Closing Gross Block (A+B)	759.95	759.95	762.19	762.19	762.19
D	Average Gross Block (A+C)/2	756.68	759.95	761.07	762.19	762.19
E	Average Gross Block (90% depreciable assets)	747.55	750.83	751.95	753.07	753.07
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%)	672.80	675.74	676.75	677.76	677.76
H	Depreciable value of IT equipment and software	0.00	0.00	0.00	0.00	0.00
I	Total Depreciable Value (G+H)	672.80	675.74	676.75	677.76	677.76
J	Weighted average rate of Depreciation (WAROD) (in %)	7.7520	7.7520	7.7520	7.7520	7.7520
K	Lapsed useful life at the beginning of the year (Year)	0	0	1	2	3
L	Balance useful life at the beginning of the year (Year)	25	25	24	23	22
M	<b>Depreciation during the year (D*J)</b>	<b>39.75</b>	<b>58.91</b>	<b>59.00</b>	<b>59.09</b>	<b>59.09</b>
N	Cumulative Depreciation at the end of the year	39.75	98.66	157.66	216.74	275.83
O	Remaining Aggregate Depreciable Value at the end of the year	633.05	577.09	519.10	461.02	401.93

(₹ in lakh)

	Particulars	Asset-2			
		2020-21 (Pro-rata for 35 days)	2021-22	2022-23	2023-24
A	Opening Gross Block	460.52	621.09	1262.10	1262.10
B	Addition during the year 2019-24 due to projected ACE	160.57	641.01	0.00	0.00
C	Closing Gross Block (A+B)	621.09	1262.10	1262.10	1262.10
D	Average Gross Block (A+C)/2	540.80	941.59	1262.10	1262.10
E	Average Gross Block (90% depreciable assets)	508.76	909.55	1230.05	1230.05
F	Average Gross Block (100% depreciable assets)	0.00	0.00	0.00	0.00
G	Depreciable value (excluding IT equipment and software) (E*90%)	457.88	818.59	1107.05	1107.05
H	Depreciable value of IT equipment and software	0.00	0.00	0.00	0.00
I	Total Depreciable Value (G+H)	457.88	818.59	1107.05	1107.05



	Particulars	Asset-2			
		2020-21 (Pro-rata for 35 days)	2021-22	2022-23	2023-24
J	Weighted average rate of Depreciation (WAROD) (in %)	7.7520	7.7520	7.7520	7.7520
K	Lapsed useful life at the beginning of the year (Year)	0	0	1	2
L	Balance useful life at the beginning of the year (Year)	25	25	24	23
<b>M</b>	<b>Depreciation during the year (D*J)</b>	<b>4.02</b>	<b>72.99</b>	<b>97.84</b>	<b>97.84</b>
N	Cumulative Depreciation at the end of the year	4.02	77.01	174.85	272.69
O	Remaining Aggregate Depreciable Value at the end of the year	453.86	741.58	932.20	834.36

(₹ in lakh)

	Particulars	Asset-3			
		2020-21 (Pro-rata for 19 days)	2021-22	2022-23	2023-24
A	Opening Gross Block	2170.46	2170.46	2243.94	2243.94
B	Addition during the year 2019-24 due to projected ACE	0.00	73.48	0.00	0.00
C	Closing Gross Block (A+B)	2170.46	2243.94	2243.94	2243.94
D	Average Gross Block (A+C)/2	2170.46	2207.20	2243.94	2243.94
E	Average Gross Block (90% depreciable assets)	2170.46	2207.20	2243.94	2243.94
F	Average Gross Block (100% depreciable assets)	0.00	0.00	0.00	0.00
G	Depreciable value (excluding IT equipment and software) (E*90%)	1953.41	1986.48	2019.54	2019.54
H	Depreciable value of IT equipment and software	0.00	0.00	0.00	0.00
I	Total Depreciable Value (G+H)	1953.41	1986.48	2019.54	2019.54
J	Weighted average rate of Depreciation (WAROD) (in %)	7.7520	7.7520	7.7520	7.7520
K	Lapsed useful life at the beginning of the year (Year)	0	0	1	2
L	Balance useful life at the beginning of the year (Year)	35	35	34	33
<b>M</b>	<b>Depreciation during the year (D*J)</b>	<b>8.76</b>	<b>171.10</b>	<b>173.95</b>	<b>173.95</b>
N	Cumulative Depreciation at the end of the year	8.76	179.86	353.81	527.76
O	Remaining Aggregate Depreciable Value at the end of the year	1944.65	1806.62	1665.73	1491.78



(₹ in lakh)

	Particulars	Asset-4				
		2019-20 (Pro-rata for 249 days)	2020-21	2021-22	2022-23	2023-24
A	Opening Gross Block	2301.19	2452.47	2532.02	2532.80	2556.23
B	Addition during the year 2019-24 due to projected ACE	151.28	79.55	0.78	23.43	0.00
C	Closing Gross Block (A+B)	2452.47	2532.02	2532.80	2556.23	2556.23
D	Average Gross Block (A+C)/2	2376.83	2492.24	2532.41	2544.51	2556.23
E	Average Gross Block (90% depreciable assets)	2376.83	2492.24	2532.41	2544.51	2556.23
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%)	2139.15	2243.02	2279.17	2290.06	2300.61
H	Depreciable value of IT equipment and software	0.00	0.00	0.00	0.00	0.00
I	Total Depreciable Value (G+H)	2139.15	2243.02	2279.17	2290.06	2300.61
J	Weighted average rate of Depreciation (WAROD) (in %)	7.7520	7.7520	7.7520	7.7520	7.7520
K	Lapsed useful life at the beginning of the year (Year)	0	0	1	2	3
L	Balance useful life at the beginning of the year (Year)	35	35	34	33	32
M	<b>Depreciation during the year (D*J)</b>	<b>125.35</b>	<b>193.20</b>	<b>196.31</b>	<b>197.25</b>	<b>198.16</b>
N	Cumulative Depreciation at the end of the year	125.35	318.55	514.86	712.11	910.27
O	Remaining Aggregate Depreciable Value at the end of the year	2013.80	1924.47	1764.31	1577.95	1390.33

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

55. The Petitioner has submitted Form-9C incorporating consolidated actual loans for the entire project. In the absence of separate Form-9C for the individual assets, the weighted average rate of interest claimed by the Petitioner in consolidated tariff Form-9C has been considered in the tariff calculations, and it is subject to review at the time of true-up. The Petitioner is directed to submit separate Form-9C for individual assets at the time of true-up.

56. IoL has been worked out in accordance with Regulation 32 of the 2019 Tariff Regulations. IoL allowed for the transmission assets for the 2019-24 tariff period as follows:



(₹ in lakh)

	Particulars	Asset-1				
		2019-20 (Pro-rata for 248 days)	2020-21	2021-22	2022-23	2023-24
A	Gross Normative Loan	527.38	531.97	531.97	533.53	533.53
B	Cumulative Repayments up to Previous Year	0.00	39.75	98.66	157.66	216.74
C	Net Loan-Opening (A-B)	527.38	492.22	433.31	375.88	316.79
D	Addition due to ACE	4.59	0.00	1.57	0.00	0.00
E	Repayment during the year	39.75	58.91	59.00	59.09	59.09
F	Net Loan-Closing (C+D-E)	492.22	433.31	375.88	316.79	257.71
G	Average Loan (A+F)/2	509.80	462.76	404.59	346.34	287.25
H	Weighted Average Rate of Interest on Loan (in %)	10.17	10.17	8.24	7.92	7.97
I	<b>Interest on Loan (G*H)</b>	<b>35.13</b>	<b>47.07</b>	<b>33.34</b>	<b>27.42</b>	<b>22.90</b>

(₹ in lakh)

	Particulars	Asset-2			
		2020-21 (Pro-rata for 35 days)	2021-22	2022-23	2023-24
A	Gross Normative Loan	322.36	434.76	883.47	883.47
B	Cumulative Repayments up to Previous Year	0.00	4.02	77.01	174.85
C	Net Loan-Opening (A-B)	322.36	430.74	806.46	708.62
D	Addition due to ACE	112.40	448.71	0.00	0.00
E	Repayment during the year	4.02	72.99	97.84	97.84
F	Net Loan-Closing (C+D-E)	430.74	806.46	708.62	610.78
G	Average Loan (A+F)/2	376.55	618.60	757.54	659.70
H	Weighted Average Rate of Interest on Loan (in %)	10.17	8.24	7.92	7.97
I	<b>Interest on Loan (G*H)</b>	<b>3.67</b>	<b>50.97</b>	<b>59.98</b>	<b>52.58</b>

(₹ in lakh)

	Particulars	Asset-3			
		2020-21 (Pro-rata for 19 days)	2021-22	2022-23	2023-24
A	Gross Normative Loan	1519.32	1519.32	1570.76	1570.76
B	Cumulative Repayments up to Previous Year	0.00	8.76	179.86	353.81
C	Net Loan-Opening (A-B)	1519.32	1510.56	1390.90	1216.95
D	Addition due to ACE	0.00	51.44	0.00	0.00
E	Repayment during the year	8.76	171.10	173.95	173.95
F	Net Loan-Closing (C+D-E)	1510.56	1390.90	1216.95	1043.00
G	Average Loan (A+F)/2	1514.94	1450.73	1303.92	1129.97
H	Weighted Average Rate of Interest on Loan (in %)	10.17	8.24	7.92	7.97
I	<b>Interest on Loan (G*H)</b>	<b>8.02</b>	<b>119.54</b>	<b>103.23</b>	<b>90.07</b>



(₹ in lakh)

	Particulars	Asset-4				
		2019-20 (Pro-rata for 249 days)	2020-21	2021-22	2022-23	2023-24
A	Gross Normative Loan	1610.83	1716.73	1772.41	1772.96	1789.36
B	Cumulative Repayments up to Previous Year	0.00	125.35	318.55	514.86	712.11
C	Net Loan-Opening (A-B)	1610.83	1591.38	1453.86	1258.10	1077.25
D	Addition due to ACE	105.90	55.69	0.55	16.40	0.00
E	Repayment during the year	125.35	193.20	196.31	197.25	198.16
F	Net Loan-Closing (C+D-E)	1591.38	1453.86	1258.10	1077.25	879.09
G	Average Loan (A+F)/2	1601.10	1522.62	1355.98	1167.67	978.17
H	Weighted Average Rate of Interest on Loan (in %)	10.17	10.17	8.24	7.92	7.97
I	<b>Interest on Loan (G*H)</b>	<b>110.78</b>	<b>154.87</b>	<b>111.73</b>	<b>92.45</b>	<b>77.97</b>

**Return on Equity (RoE)**

57. The Petitioner has submitted that no tax has been assessed since 2019-20 and requested that the tax that may arise be allowed in the future for the 2019-24 tariff period.

58. Therefore, no tax has been considered for the 2019-24 tariff period for the purpose of calculation of RoE, and the same shall be trued up with the actual tax rate, if any, in accordance with Regulation 31(3) of the 2019 Tariff Regulations.

59. The RoE allowed for the transmission assets for the 2019-24 tariff period is as follows:

(₹ in lakh)

	Particulars	Asset-1				
		2019-20 (Pro-rata for 248 days)	2020-21	2021-22	2022-23	2023-24
A	Opening Equity	226.02	227.99	227.99	228.66	228.66
B	Addition due to ACE	1.97	0.00	0.67	0.00	0.00
C	Closing Equity (A+B)	227.99	227.99	228.66	228.66	228.66
D	Average Equity (A+B)/2	227.00	227.99	228.32	228.66	228.66
E	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50	15.50
F	Tax Rate applicable (in %)	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
G	Rate of Return on Equity (Pre- tax) (in %)	15.50	15.50	15.50	15.50	15.50
H	<b>Return on Equity (Pre-tax) (D*G)</b>	<b>23.84</b>	<b>35.34</b>	<b>35.39</b>	<b>35.44</b>	<b>35.44</b>



(₹ in lakh)

	Particulars	Asset-2			
		2020-21 (Pro-rata for 35 days)	2021-22	2022-23	2023-24
A	Opening Equity	138.16	186.33	378.63	378.63
B	Addition due to ACE	48.17	192.30	0.00	0.00
C	Closing Equity (A+B)	186.33	378.63	378.63	378.63
D	Average Equity (A+B)/2	162.24	282.48	378.63	378.63
E	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50
F	Tax Rate applicable (in %)	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
G	Rate of Return on Equity (Pre-tax) (in %)	15.50	15.50	15.50	15.50
H	<b>Return on Equity (Pre-tax) (D*G)</b>	<b>2.41</b>	<b>43.78</b>	<b>58.69</b>	<b>58.69</b>

(₹ in lakh)

	Particulars	Asset-3			
		2020-21 (Pro-rata for 19 days)	2021-22	2022-23	2023-24
A	Opening Equity	651.14	651.14	673.18	673.18
B	Addition due to ACE	0.00	22.04	0.00	0.00
C	Closing Equity (A+B)	651.14	673.18	673.18	673.18
D	Average Equity (A+B)/2	651.14	662.16	673.18	673.18
E	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50
F	Tax Rate applicable (in %)	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
G	Rate of Return on Equity (Pre-tax) (in %)	15.50	15.50	15.50	15.50
H	<b>Return on Equity (Pre-tax) (D*G)</b>	<b>5.25</b>	<b>102.63</b>	<b>104.34</b>	<b>104.34</b>

(₹ in lakh)

	Particulars	Asset-4				
		2019-20 (Pro-rata for 249 days)	2020-21	2021-22	2022-23	2023-24
A	Opening Equity	690.36	735.74	759.61	759.84	766.87
B	Addition due to ACE	45.38	23.87	0.23	7.03	0.00
C	Closing Equity (A+B)	735.74	759.61	759.84	766.87	766.87
D	Average Equity (A+B)/2	713.05	747.67	759.72	763.35	766.87
E	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50	15.50
F	Tax Rate applicable (in %)	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
G	Rate of Return on Equity (Pre-tax) (in %)	15.50	15.50	15.50	15.50	15.50
H	<b>Return on Equity (Pre-tax) (D*G)</b>	<b>75.19</b>	<b>115.89</b>	<b>117.76</b>	<b>118.32</b>	<b>118.86</b>

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

60. The O&M Expenses claimed by the Petitioner are as follows:

(₹ in lakh)

Assets	2019-20	2020-21	2021-22	2022-23	2023-24
Asset-1	13.28	20.32	21.04	21.76	22.56
Asset-2	-	3.90	42.08	43.52	45.12



Assets	2019-20	2020-21	2021-22	2022-23	2023-24
Asset-3	-	1.26	24.96	25.89	26.75
Asset-4	5.57	8.50	8.78	9.10	9.41

61. Regulation 35(3)(a) of the 2019 Tariff Regulations provide as follows:

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

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<b>Norms for sub-station Bays (₹ Lakh per bay)</b>					
765 kV	45.01	46.60	48.23	49.93	51.68
400 kV	32.15	33.28	34.45	35.66	36.91
220 kV	22.51	23.30	24.12	24.96	25.84
132 kV and below	16.08	16.64	17.23	17.83	18.46
<b>Norms for Transformers (₹ Lakh per MVA)</b>					
765 kV	0.491	0.508	0.526	0.545	0.564
400 kV	0.358	0.371	0.384	0.398	0.411
220 kV	0.245	0.254	0.263	0.272	0.282
132 kV and below	0.245	0.254	0.263	0.272	0.282
<b>Norms for AC and HVDC lines (₹ Lakh per km)</b>					
Single Circuit (Bundled Conductor with six or more sub-conductors)	0.881	0.912	0.944	0.977	1.011
Single Circuit (Bundled conductor with four sub-conductors)	0.755	0.781	0.809	0.837	0.867
Single Circuit (Twin & Triple Conductor)	0.503	0.521	0.539	0.558	0.578
Single Circuit (Single Conductor)	0.252	0.26	0.27	0.279	0.289
Double Circuit (Bundled conductor with four or more sub-conductors)	1.322	1.368	1.416	1.466	1.517
Double Circuit (Twin & Triple Conductor)	0.881	0.912	0.944	0.977	1.011
Double Circuit (Single Conductor)	0.377	0.391	0.404	0.419	0.433
Multi Circuit (Bundled Conductor with four or more sub-conductor)	2.319	2.401	2.485	2.572	2.662
Multi Circuit (Twin & Triple Conductor)	1.544	1.598	1.654	1.713	1.773
<b>Norms for HVDC stations</b>					
HVDC Back-to-Back stations (Rs Lakh per 500 MW) (Except Gazuwaka BTB)	834	864	894	925	958
Gazuwaka HVDC Back-to-Back station (₹ Lakh per 500 MW)	1,666	1,725	1,785	1,848	1,913
500 kV Rihand-Dadri HVDC bipole scheme (Rs Lakh) (1500 MW)	2,252	2,331	2,413	2,498	2,586
±500 kV Talcher- Kolar HVDC bipole scheme (Rs Lakh) (2000 MW)	2,468	2,555	2,645	2,738	2,834
±500 kV Bhiwadi-Balia HVDC bipole scheme (Rs Lakh) (2500 MW)	1,696	1,756	1,817	1,881	1,947





<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
<i>±800 kV, Bishwanath-Agra HVDC bipole scheme (Rs Lakh) (3000 MW)</i>	2,563	2,653	2,746	2,842	2,942

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

*Provided further that:*

- i. the operation and maintenance expenses for new HVDC bi-pole schemes commissioned after 1.4.2019 for a particular year shall be allowed pro-rata on the basis of normative rate of operation and maintenance expenses of similar HVDC bi-pole scheme for the corresponding year of the tariff period;*
- ii. the O&M expenses norms for HVDC bi-pole line shall be considered as Double Circuit quad AC line;*
- iii. the O&M expenses of ±500 kV Mundra-Mohindergarh HVDC bipole scheme (2000 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for ±500 kV Talchar-Kolar HVDC bi-pole scheme (2000 MW);*
- iv. the O&M expenses of ±800 kV Champa-Kurukshetra HVDC bi-pole scheme (3000 MW) shall be on the basis of the normative O&M expenses for ±800 kV, Bishwanath-Agra HVDC bi-pole scheme;*
- v. the O&M expenses of ±800 kV, Alipurduar-Agra HVDC bi-pole scheme (3000 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for ±800 kV, Bishwanath-Agra HVDC bi-pole scheme; and*
- vi. the O&M expenses of Static Synchronous Compensator and Static Var Compensator shall be worked at 1.5% of original project cost as on commercial operation which shall be escalated at the rate of 3.51% to work out the O&M expenses during the tariff period. The O&M expenses of Static Synchronous Compensator and Static Var Compensator, if required, may be reviewed after three years*

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

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

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

62. We have considered the Petitioner’s claim. The O&M Expenses have been worked out as per the norms specified in Regulation 35(3)(a) of the 2019 Tariff Regulations. In the case of Asset-3, the total length of the D/C line from Jamuria to Ramakanali (L # 61 & 90) is 53 KM, the newly constructed portion, i.e., (2<sup>nd</sup> LILO to Jamuria Substation) is 8.779 KM, and the total length of the line is 61.779 KM (53 KM+ 8.779 KM). The Petitioner has claimed COD of the newly constructed portion of 132 kV Jamuria Sub-station to Ramkanali Sub-station line (L # 61 & 90), and the length of the newly constructed portions is 8.779 KM. It is observed



that in all the tariff forms pertaining to Asset-3, the Petitioner has mentioned the length of the line is 8.779 KM. It is further observed that CEA vide letter dated 19.9.2019 approved the energization of 132 kV Jamuria LILO line-2 considering its length as 8.775 km. Therefore, taking into consideration of CEA Energization Certificate, the O&M Expenses are allowed for Asset-3 considering its line length as 8.775 km. The Petitioner is directed to submit the correct length of Asset-3 at the time of truing up. Accordingly, the O&M Expenses allowed for the transmission assets for the 2019-24 tariff period is as follows:

(₹ in lakh)					
Assets	2019-20	2020-21	2021-22	2022-23	2023-24
Asset-1	13.26	20.32	21.04	21.76	22.56
Asset-2	-	4.01	42.08	43.52	45.12
Asset-3	-	0.17	3.55	3.68	3.80
Asset-4	5.57	8.50	8.78	9.10	9.41

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

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

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

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

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

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

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

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

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

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

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



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

64. Accordingly, the rate of IWC considered is 12.05% (SBI 1 year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points) for 2019-20, 11.25% (SBI 1 year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points) for 2020-21 and 10.50% (SBI 1 year MCLR applicable as on 1.4.2021 of 7.00% plus 350 basis points) for 2021-22 and 2022-23 and 12.00% (SBI 1 year MCLR applicable as on 1.4.2023 of 8.50% plus 350 basis points) for 2023-24.

65. The components of the working capital and interest allowed for the transmission assets for the 2019-24 tariff period are as follows:

(₹ in lakh)

Particulars	Asset-1				
	2019-20 (Pro-rata for 248 days)	2020-21	2021-22	2022-23	2023-24
Working Capital for O&M Expenses (O&M Expenses for one month)	1.63	1.69	1.75	1.81	1.88
Working Capital for Maintenance Spares (15% of O&M Expenses)	2.94	3.05	3.16	3.26	3.38
Working Capital for Receivables (Equivalent to 45 days of annual fixed cost /annual transmission charges)	20.69	20.27	18.65	18.02	17.60
Total Working Capital	25.26	25.02	23.56	23.09	22.86
Rate of Interest for working capital (in %)	12.05	11.25	10.50	10.50	12.00
<b>Interest on working capital</b>	<b>2.06</b>	<b>2.81</b>	<b>2.47</b>	<b>2.42</b>	<b>2.74</b>

(₹ in lakh)

Particulars	Asset-2			
	2020-21 (Pro-rata for 35 days)	2021-22	2022-23	2023-24
Working Capital for O&M Expenses (O&M Expenses for one month)	3.48	3.51	3.63	3.76
Working Capital for Maintenance Spares (15% of O&M Expenses)	6.27	6.31	6.53	6.77
Working Capital for Receivables (Equivalent to 45 days of annual fixed cost /annual transmission charges)	18.54	26.34	32.61	31.88
Total Working Capital	28.30	36.16	42.77	42.41
Rate of Interest for working capital (in %)	11.25	10.50	10.50	12.00
<b>Interest on working capital</b>	<b>0.31</b>	<b>3.80</b>	<b>4.49</b>	<b>5.09</b>



(₹ in lakh)

Particulars	Asset-3			
	2020-21 (Pro-rata for 19 days)	2021-22	2022-23	2023-24
Working Capital for O&M Expenses (O&M Expenses for one month)	0.27	0.30	0.31	0.32
Working Capital for Maintenance Spares (15% of O&M Expenses)	0.49	0.53	0.55	0.57
Working Capital for Receivables (Equivalent to 45 days of annual fixed cost /annual transmission charges)	53.34	49.58	48.13	46.46
Total Working Capital	54.10	50.40	48.98	47.34
Rate of Interest for working capital (in %)	11.25	10.50	10.50	12.00
<b>Interest on working capital</b>	<b>0.32</b>	<b>5.29</b>	<b>5.14</b>	<b>5.68</b>

(₹ in lakh)

Particulars	Asset-4				
	2019-20 (Pro-rata for 249 days)	2020-21	2021-22	2022-23	2023-24
Working Capital for O&M Expenses (O&M Expenses for one month)	0.68	0.71	0.73	0.76	0.78
Working Capital for Maintenance Spares (15% of O&M Expenses)	1.23	1.28	1.32	1.37	1.41
Working Capital for Receivables (Equivalent to 45 days of annual fixed cost /annual transmission charges)	58.16	59.10	54.31	52.13	50.64
Total Working Capital	60.07	61.08	56.36	54.25	52.83
Rate of Interest for working capital (in %)	12.05	11.25	10.50	10.50	12.00
<b>Interest on working capital</b>	<b>4.92</b>	<b>6.87</b>	<b>5.92</b>	<b>5.70</b>	<b>6.34</b>

### Annual Fixed Charges for 2022-24 period

66. The transmission charges approved for the transmission assets from their COD to 31.3.2024 are as follows:

(₹ in lakh)

Particulars	Asset-1				
	2019-20 (Pro-rata for 248 days)	2020-21	2021-22	2022-23	2023-24
Depreciation	39.75	58.91	59.00	59.09	59.09
Interest on Loan	35.13	47.07	33.34	27.42	22.90
Return on Equity	23.84	35.34	35.39	35.44	35.44
O&M Expenses	13.26	20.32	21.04	21.76	22.56
Interest on Working Capital	2.06	2.81	2.47	2.42	2.74
<b>Total</b>	<b>114.04</b>	<b>164.45</b>	<b>151.24</b>	<b>146.13</b>	<b>142.73</b>



(₹ in lakh)

Particulars	Asset-2			
	2020-21 (Pro-rata for 35 days)	2021-22	2022-23	2023-24
Depreciation	4.02	72.99	97.84	97.84
Interest on Loan	3.67	50.97	59.98	52.58
Return on Equity	2.41	43.78	58.69	58.69
O&M Expenses	4.01	42.08	43.52	45.12
Interest on Working Capital	0.31	3.80	4.49	5.09
<b>Total</b>	<b>14.42</b>	<b>213.63</b>	<b>264.51</b>	<b>259.32</b>

(₹ in lakh)

Particulars	Asset-3			
	2020-21 (Pro-rata for 19 days)	2021-22	2022-23	2023-24
Depreciation	8.76	171.10	173.95	173.95
Interest on Loan	8.02	119.54	103.23	90.07
Return on Equity	5.25	102.63	104.34	104.34
O&M Expenses	0.17	3.55	3.68	3.80
Interest on Working Capital	0.32	5.29	5.14	5.68
<b>Total</b>	<b>22.52</b>	<b>402.12</b>	<b>390.35</b>	<b>377.84</b>

(₹ in lakh)

Particulars	Asset-4				
	2019-20 (Pro-rata for 249 days)	2020-21	2021-22	2022-23	2023-24
Depreciation	125.35	193.20	196.31	197.25	198.16
Interest on Loan	110.78	154.87	111.73	92.45	77.97
Return on Equity	75.19	115.89	117.76	118.32	118.86
O&M Expenses	5.57	8.50	8.78	9.10	9.41
Interest on Working Capital	4.92	6.87	5.92	5.70	6.34
<b>Total</b>	<b>321.81</b>	<b>479.33</b>	<b>440.50</b>	<b>422.81</b>	<b>410.74</b>

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

67. The Petitioner has sought reimbursement of the fee paid by it for filing the petition and publication expenses. The Petitioner shall be entitled to reimbursement of the filing fees and publication expenses in connection with the present petition directly from the beneficiaries on a pro-rata basis in accordance with Regulation 70(1) of the 2019 Tariff Regulations.

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

68. The Petitioner is entitled to reimbursement of the license fee in accordance with Regulation 70(4) of the 2019 Tariff Regulations for the 2019-24 tariff period. The Petitioner is



also be entitled to recovery of RLDC fees and charges in accordance with Regulations 70(3) of the 2019 Tariff Regulations for the 2019-24 tariff period.

### **Sharing of Transmission Charges**

69. The transmission charges approved in this order for the transmission assets for the 2019-24 tariff period shall be included as an input cost in the ARR and recovered from the distribution consumers upon approval by WBSERC and JSERC.

70. To summarize, AFC allowed for the transmission assets for the 2019-24 tariff period are as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Asset-1	114.04	164.45	151.24	146.13	142.73
Asset-2	-	14.42	213.63	264.51	259.32
Asset-3	-	22.52	402.12	390.35	377.84
Asset-4	321.81	479.33	440.50	422.81	410.74

71. This order disposes of Petition No. 12/TT/2023 in terms of the above findings and discussions.

**sd/-**  
**(P.K. Singh)**  
**Member**

**sd/-**  
**(Arun Goyal)**  
**Member**

**sd/-**  
**(Jishnu Barua)**  
**Chairperson**

