

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 686/TT/2020**

**Coram:**

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

**Date of Order: 1.1.2022**

**In the matter of:**

Approval under Regulation 86 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and determination of transmission tariff of the 2019-24 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for 500 MVA Single Phase Unit of 765/400 kV ICT (cold spare) stationed at Ranchi (new) under Eastern Region Strengthening Scheme-IX in Eastern Region.

**And in the matter of:**

Power Grid Corporation of India Limited,  
'SAUDAMINI', Plot No-2, Sector-29,  
Gurgaon-122001 (Haryana).

**.....Petitioner**

**Versus**

1. Bihar State Power (Holding) Company Limited,  
(Formerly Bihar State Electricity Board-BSEB),  
Vidyut Bhavan, Bailey Road,  
Patna-800001.
2. West Bengal State Electricity Distribution Company Limited,  
Bidyut Bhawan, Bidhan Nagar, Block DJ, Sector-II, Salt Lake City,  
Calcutta-700091.
3. Grid Corporation of Orissa Limited,  
Shahid Nagar,  
Bhubaneswar-751007.
4. Jharkhand State Electricity Board,  
In front of Main Secretariat, Doranda,  
Ranchi-834002.
5. Damodar Valley Corporation,  
DVC Tower, Maniktala, Civic Centre, VIP Road,



Calcutta-700054.

6. Power Department,  
Government of Sikkim,  
Gangtok-737101.

.....Respondent(s)

**For Petitioner** : Shri S. S. Raju, PGCIL  
Shri D. K Biswal, PGCIL  
Shri A. K. Verma, PGCIL  
Shri V. P. Rastogi, PGCIL

**For Respondent** : Ms. Rohini Prasad, Advocate, BSPHCL

### **ORDER**

The Petitioner, Power Grid Corporation of India Limited, a deemed transmission licensee, has filed the instant petition for determination of transmission tariff period for the period from COD 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 500 MVA Single Phase Unit of 765/400 kV ICT (cold spare) stationed at Ranchi (new) (hereinafter referred to as “the transmission asset”) under Eastern Region Strengthening Scheme-IX in Eastern Region (hereinafter referred to as “the transmission scheme”).

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

- “1) Admit the capital cost as claimed in the Petition and approve the Additional Capitalisation incurred / projected to be incurred.
- 2) Approve the Transmission Tariff for the tariff block 2019-24 block for the asset covered under this petition, as per para –8.4 above.
- 3) Allow the petitioner to recover the shortfall or refund the excess Annual Fixed Charges, on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission as provided in Tariff Regulation 2019 as per para 8 above for respective block.



- 4) *Approve the reimbursement of expenditure by the beneficiaries towards petition filing fee, and expenditure on publishing of notices in newspapers in terms of Regulation 70 (1) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019, and other expenditure (if any) in relation to the filing of petition.*
- 5) *Allow the petitioner to bill and recover Licensee fee and RLDC fees and charges, separately from the respondents in terms of Regulation 70 (3) and (4) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019.*
- 6) *Allow the petitioner to bill and adjust impact on Interest on Loan due to change in Interest rate on account of floating rate of interest applicable during 2019-24 period, if any, from the 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 as mentioned at para 8.8 above.*
- 8) *Allow the petitioner to claim the capital spares at the end of tariff block as per actual.*
- 9) *Allow the Petitioner to bill and recover GST on Transmission Charges separately from the respondents, if GST on transmission is levied at any rate 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.*
- 10) *Allow interim tariff in accordance with Regulation 10 (3) of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for purpose of inclusion in the PoC charges.*

*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.”*

### 3. **Backdrop of the case**

a) The requirement of the transmission scheme was discussed and agreed in Standing Committee Meeting on Power System Planning in Eastern Region held on 24<sup>th</sup> TCC and 24<sup>th</sup> ERPC meeting held on 5.1.2013, 26.4.2013 and 27.4.2013 respectively.

b) The Petitioner was entrusted with the implementation of the transmission scheme and its Investment Approval (I.A.) was accorded by the Board of Directors (BOD) of the Petitioner's company (in its 299<sup>th</sup> meeting held on 26.2.2014) vide Memorandum Ref. No. C/CP/ERSS-IX dated 3.3.2014 at an estimated cost of ₹19658.00 lakh, including IDC of ₹1065.00 lakh (based on December 2013 Price Level) with detailed scope of work (as nomenclatured in the said Memorandum) as follows:



**i. Addition/ Replacement of Bus Reactors at 400 kV sub-stations:**

- Installation of 1X125 MVAR Bus Reactor at Gazuwaka 400 kV (East) bus;
- Installation of 2X125 MVAR Bus Reactor at Rengali;
- Installation of 1X125 MVAR Bus Reactor at Maithon;
- Installation of 1X125 MVAR Bus Reactor in parallel with existing 50 MVAR (3X16.67) Bus Reactor at Biharshariff, using existing Reactor bay;
- Installation of 2X125 MVAR Bus Reactor in parallel with existing 2X50 MVAR Bus Reactor at Jamshedpur;
- Installation of 1X125 MVAR Bus Reactor in parallel with existing 1X150 MVAR Bus Reactors at Rourkela; and
- Installation of 2X125 MVAR Bus Reactor at Durgapur (Parulia). Out of 2X125 MVAR Bus Reactor, 1X125 MVAR Bus Reactor would be in parallel with existing 1X50 MVAR Bus Reactor, using existing Reactor bay.

**Note:**

*As there is space constraint for parallel operation of reactors at Jamshedpur and Rourkela, the existing 50 MVAR Bus Reactor is being replaced by 125 MVAR Bus Reactor and the 50 MVAR Reactors will be utilized as regional spares.*

*In case of space constraint for parallel operation of reactors at Biharsharif and Durgapur, the existing 50 MVAR Bus Reactor would similarly be replaced by 125 MVAR Bus Reactor and the 50 MVAR Reactors would be utilized as regional spares.*

**ii. Augmentation of Transformation Capacity at Maithon, Muzzaffarpur and Ara Sub-stations of PowerGrid:**

- Addition of 1X500 MVA, 400/220 kV ICT along with associated bays at Muzaffarpur 400/220 kV Sub-station;
  - Addition of 1X160 MVA, 220/132 kV ICT along with associated bays at Ara 220/132 kV Sub-station; and
  - Replacement of 2X315 MVA, 400/220 kV ICTs with 2X500 MVA, 400/220 kV ICTs at Maithon<sup>#</sup>.
- <sup>#</sup> 2X315, 400/220 kV ICTs, thus released from Maithon, would be utilized as Regional Spare.

**iii. Spare 500 MVA Single Phase Unit of 765/400 kV ICT for Eastern Region:**

Procurement of one 500 MVA, Single Phase unit of 765/400 kV ICT for Eastern Region to be stationed at Gaya Sub-station.

**iv. Converting 2X80 MVAR Line Reactors at Gorakhpur to Switchable Reactors:**



Converting 2X80 MVAR Line Reactors at Gorakhpur end of Barh-II-Gorakhpur 400 kV Quad D/c line to 2X80 MVAR (Switchable) Line Reactors.

c) The Revised Cost Estimate (RCE) of the transmission scheme was accorded approval by BOD of the Petitioner's company (in its 338<sup>th</sup> meeting held on 10.3.2017) vide Memorandum Ref. No. C/CP/PA1617-03-0AB-RCE016 dated 30.3.2017 for ₹22528.00 lakh, including IDC of ₹925.00 lakh (based on June 2016 Price Level) with detailed scope of work (as nomenclatured in the said Memorandum) as follows:

**i. Addition/ Replacement of Bus Reactors at 400 kV sub-stations:**

- Installation of 1X125 MVAR Bus Reactor at Gazuwaka 400 kV (East) Bus;
- Installation of 2X125 MVAR Bus Reactor at Rengali;
- Installation of 1X125 MVAR Bus Reactor at Maithon;
- Installation of 1X125 MVAR Bus Reactor in parallel with existing 50 MVAR (3X16.67) Bus Reactor at Biharshariff, using existing Reactor bay;
- Installation of 2X125 MVAR Bus Reactor at Jamshedpur.  
*(Out of 2X125 MVAR Bus Reactor, 1X125 MVAR Bus Reactor is installed in parallel with existing 1X50 MVAR (3x16.67 MVAR) Bus Reactor using existing Reactor bay and second 125 MVAR Bus Reactor is installed by replacing the existing 50 MVAR Bus reactor which shall be used a regional spare).*
- Installation of 1X125 MVAR Bus Reactor at Rourkela by replacing the existing 1X150 MVAR Bus Reactor which shall be used as a regional spare; and
- Installation of 2X125 MVAR Bus Reactor at Durgapur (Parulia). One reactor in parallel with existing 1X50 MVAR (3X16.67 MVAR) Bus Reactor using existing Reactor bay.

**ii. Augmentation of Transformation Capacity at Maithon, Muzaffarpur and Ara Substations of POWERGRID:**

- Addition of 1X500 MVA, 400/220 kV ICT along with associated bays at Muzaffarpur 400/220 kV sub-station;
- Addition of 1X160 MVA, 220/132 kV ICT along with associated bays at Ara 220/132 kV sub-station; and
- Replacement of 2X315 MVA, 400/220 kV ICTs with 2X500 MVA, 400/220 kV ICTs at Maithon<sup>#</sup>.  
<sup>#</sup> 2X315, 400/220 kV ICTs released from Maithon, would be utilized as Regional Spare.



**iii. Spare 500 MVA Single Phase Unit of 765/400 kV ICT for Eastern Region:**

Procurement of one 500 MVA, Single Phase unit of 765/400 kV ICT for Eastern Region to be stationed at Gaya Sub-station.

**iv. Converting 2X80 MVAR Line Reactors at Gorakhpur to switchable:**

Converting 2X80 MVAR Line Reactors at Gorakhpur end of Barh-II-Gorakhpur 400 kV Quad D/c line to 2X80 MVAR (Switchable) Line Reactors.

d) Initially, the spare ICT was approved for Gaya sub-station but as there was already a spare ICT at Gaya sub-station, the same was diverted to Ranchi sub-station as approved in 35<sup>th</sup> Commercial Sub-committee Meeting of ERPC, 37<sup>th</sup> TCC Meeting and ERPC Meeting held on 17.8.2017, 16.3.2018 and 17.3.2018 respectively.

e) The entire scope of work under the transmission scheme is complete but the same is not covered in this petition. The details pertaining to other assets under the transmission scheme are as follows:

Asset	Actual COD	Petition No.
<b>Asset I:</b> Addition of 1X160 MVA, 220/132 kV ICT along with associated bays at Ara 220/132 kV sub-station	2.1.2016	250/TT/2020
<b>Asset II:</b> Addition of 1X500 MVA, 400/220 kV ICT along with associated bays at Muzaffarpur 400/220 kV Sub-station	6.1.2016	
<b>Asset III:</b> 1 Number of 1x125 MVAR Bus Reactor and associated bay at 400 KV Maithon Sub-station	18.9.2016	
<b>Asset IV:</b> Replacement of 1 Number of 1x315 MVA, 400/220 kV ICT with 1x500 MVA, 400/220 kV ICT (1st) at 400 kV Maithon Sub-station	1.10.2016	
<b>Asset V:</b> 1 Number of 1x125 MVAR Bus Reactor (1st) and associated bay equipment at 400 kV Durgapur Sub-station	23.10.2016	
<b>Asset VI:</b> 1 Number of 1x125 MVAR Bus Reactor (2nd) and associated bay equipment at 400 kV Durgapur Sub-station	30.12.2016	
<b>Asset-VII:</b> 2 Numbers of 125 MVAR Bus Reactor I and II at Rengali Sub-station	3.8.2017	
<b>Asset-VIII:</b> Installation of 1x125 MVAR Bus Reactor by replacing existing 1x50 MVAR Bus Reactor at 400 kV Rourkela Sub-station	7.1.2018	
<b>Asset-IX:</b> Installation of 01x125 MVAR Bus Reactor in Parallel with existing 50 (3X16.67) MVAR Bus Reactor at Biharsharif Sub-station	13.10.2017	
<b>Asset X:</b> Installation of 1x125 MVAR Bus Reactor-II after replacing the existing 1X50 MVAR Bus Reactor at Jamsedpur Sub-station	17.11.2017	
<b>Asset XI:</b> Installation of 1x125 MVAR Bus Reactor-I in Parallel with existing 1X50 MVAR Bus Reactor at Jamsedpur Sub-station	3.12.2017	
<b>Asset XII:</b> Installation of 1X125 MVAR Bus Reactor at 400 kV Gazuwaka Sub-station	27.9.2017	
<b>Asset XIII:</b> Replacement of 1 Number of 1x315 MVA, 400/220 kV ICT with 1x500 MVA, 400/220 kV ICT (2 <sup>nd</sup> ) at 400 kV Maithon Sub-station	25.10.2017	

f) As per I.A., the transmission asset was scheduled to be commissioned within 24 months from the date of approval of BOD (26.2.2014) i.e. by 26.2.2016 against which the date of commercial operation (COD) is 29.6.2019 (as claimed



by the Petitioner in this petition). Therefore, there is a time over-run of 40 months and 2 days in the commissioning which has been dealt in the relevant portion of this order.

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

5. The Petitioner has served the petition on the Respondents and notice regarding 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 notices published in the newspapers. Bihar State Power (Holding) Company Limited (BSPHCL), Respondent No. 1, has filed its reply vide affidavit dated 2.11.2021 and has raised the issues of time over-run, cost escalation, IDC, IEDC, Initial Spares, Additional Capital Expenditure (ACE) during the 2019-24 tariff period, Return on Equity (RoE), capital cost, recovery of statutory charges, Interest on Loan (IoL), O&M Expenses, security expenses, filing fees and expenses and sharing of transmission charges. The issues raised by BSPHCL and the clarifications given by the Petitioner are considered in the relevant portions of this order.

6. This order is issued considering the submissions made by the Petitioner in the petition vide affidavit dated 16.9.2020, the Petitioner's affidavit dated 20.9.2021 filed in response to technical validation letter, BSPHCL's reply filed vide affidavit dated 2.11.2021 and the Petitioner's rejoinder filed vide affidavit dated 11.11.2021.

7. The hearing in this matter was held on 29.10.2021 through video conference and the order was reserved. Having heard the learned counsel for BSPHCL and





representatives of the Petitioner and after perusal of the materials on record, we proceed to dispose of the petition.

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

8. The details of the transmission charges as claimed by the Petitioner for the transmission asset for the 2019-24 tariff period are as follows:

Particulars	(₹ in lakh)				
	2019-20 (Pro-rata 277 days)	2020-21	2021-22	2022-23	2023-24
Depreciation	40.97	64.35	76.63	84.01	86.46
Interest on Loan	41.99	61.83	69.51	71.30	67.04
Return on Equity	43.72	68.67	81.78	89.64	92.27
O&M Expenses	185.80	254.00	263.00	272.50	282.00
Interest on Working Capital	10.01	14.02	14.91	15.58	15.99
<b>Total</b>	<b>322.49</b>	<b>462.87</b>	<b>505.83</b>	<b>533.03</b>	<b>543.76</b>

9. The details of Interest on Working Capital (IWC) as claimed by the Petitioner for the transmission asset for the 2019-24 tariff period are as follows:

Particulars	(₹ in lakh)				
	2019-20 (Pro-rata 277 days)	2020-21	2021-22	2022-23	2023-24
O&M Expenses	20.46	21.17	21.92	22.71	23.50
Maintenance Spares	36.83	38.10	39.45	40.88	42.30
Receivables	52.39	57.07	62.36	65.72	66.86
Total Working Capital	109.68	116.34	123.73	129.31	132.66
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
<b>Interest on Working Capital</b>	<b>10.01</b>	<b>14.02</b>	<b>14.91</b>	<b>15.58</b>	<b>15.99</b>

**Data of Commercial Operation**

10. The Petitioner has claimed the actual COD of the transmission asset as 29.6.2019.

11. Regulation 5 of the 2019 Tariff Regulations provides as follows:

**“5. Date of Commercial Operation:** (1) *The date of commercial operation of a generating station or unit thereof or a transmission system or element thereof and associated communication system shall be determined in accordance with the provisions of the Grid Code.*

(2) *In case the transmission system or element thereof executed by a transmission licensee is ready for commercial operation but the interconnected generating station or the transmission system of other transmission licensee as per the agreed project implementation schedule is not ready for commercial operation, the transmission*





*licensee may file petition before the Commission for approval of the date of commercial operation of such transmission system or element thereof:*

*Provided that the transmission licensee seeking the approval of the date of commercial operation under this clause shall give prior notice of at least one month, to the generating company or the other transmission licensee and the long term customers of its transmission system, as the case may be, regarding the date of commercial operation:*

*Provided further that the transmission licensee seeking the approval of the date of commercial operation of the transmission system under this clause shall be required to submit the following documents along with the petition:*

- (a) Energisation certificate issued by the Regional Electrical Inspector under Central Electricity Authority;*
- (b) Trial operation certificate issued by the concerned RLDC for charging element with or without electrical load;*
- (c) Implementation Agreement, if any, executed by the parties;*
- (d) Minutes of the coordination meetings or related correspondences regarding the monitoring of the progress of the generating station and transmission systems;*
- (e) Notice issued by the transmission licensee as per the first proviso under this clause and the response;*
- (f) Certificate of the CEO or MD of the company regarding the completion of the transmission system including associated communication system in all respects.”*

12. The Petitioner has submitted COD Certificate (dated 3.10.2019) and CMD Certificate as required under the 2019 Tariff Regulations and the Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2010 (hereinafter referred to as “the Grid Code”). Further, the Petitioner has submitted that RLDC and CEA Certificate are not applicable in this case because the transmission asset is a cold spare.

13. The Petitioner vide affidavit dated 20.9.2021 has submitted as follows:

- a) As per the provisions of the CEA Safety Regulations, the Certificate from Electrical Inspector is required before commencement of supply or recommencement of supply after shutdown of six months and above.
- b) As per the Grid Code, the Trial Operation Certificate from RLDC means successful charging of the transmission system or an element thereof for 24 hours at continuous flow of power, and communication signal from the sending end to the receiving end and with requisite metering system, telemetry and protection system in service.



- c) In case of Cold spares, the equipment is kept idle without energizing and, therefore, RLDC and CEA certificates are not applicable.

14. We have considered the submissions of the Petitioner and after taking into consideration the minutes of Standing Committee Meeting on Power System Planning in Eastern Region, 24<sup>th</sup> TCC meeting, 24<sup>th</sup> ERPC meeting, 35<sup>th</sup> Commercial Sub Committee Meeting of ERPC, 37<sup>th</sup> TCC and 37<sup>th</sup> ERPC held on 5.1.2013, 26.4.2013, 27.4.2013, 2.8.2017, 16.3.2018 and 17.3.2018 respectively and CMD Certificate as provided under the Grid Code, COD of the transmission asset is approved as 29.6.2019.

### **Capital Cost**

15. 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.”

16. The details of the FR approved cost, RCE approved cost, cost as on COD, projected ACE during the 2019-24 period and estimated completion cost as on 31.3.2024 as submitted by the Petitioner are as follows:

(₹ in lakh)

FR Approved Cost	RCE Approved Cost	Capital Cost (up to COD as per Auditor's Certificate)	Incurred/ Projected ACE				Capital Cost (as on 31.3.2024)
			2019-20	2020-21	2021-22	2022-23	
1623.51	1676.67	977.58	101.51	279.23	186.15	93.08	1637.55

18. The Petitioner has submitted that capital cost incurred up to COD and projected ACE incurred/ to be incurred during 2019-20, 2020-21, 2021-22 and 2022-23 has been duly certified by the Auditor's Certificate (dated 16.6.2020) as submitted in this petition.

19. Referring to the provisions of Regulation 20 of the 2019 Tariff Regulations, the Petitioner vide affidavit dated 20.9.2021 has submitted as follows:

- a) There is no benchmark cost specified by the Commission for the similar type of transmission line in the 2019 Tariff Regulations.
- b) The econometric analysis for determination of prudent costs would require database spanning across multiple variables that influence capital costs.
- c) The capital cost in the context of transmission asset depends upon multiple variables as follows:
  - i. Project specific conditions such as terrain, project location, Right of Way Constraints (including urbanization, river/ highway/ railway line crossings,



crossing of other transmission lines, forest area) and weather conditions may lead to different capital costs of similar transmission assets.

- ii. Market forces driven by demand supply balance viz. availability of competition among vendors, purchase quantum (one time order vs repeat orders), input cost variations, economic environment etc.
  - iii. Technology adopted for implementation of the sub-stations and requirement of reactive compensation etc.
- d) Keeping track of all such factors that influence discovery of prudent costs, whether project specific or market forces driven, is practically challenging. To substantiate, the below table illustrates the variation in cost per kilometer of transmission lines falling under same wind zones, soil conditions and topography:

Asset Name	Region	DOCO	Line length in km	Completion cost (Rs. Lakhs)	Cost per km (Rs. Lakhs)
<b>765 kV S/C Transmission Lines under same wind zone/Soil condition/Plain area</b>					
Bareilly-Lucknow S/C	NR-III	01.04.2014	251	41704.85	166.15
Gaya-Varanasi S/C	NR-III	21.04.2015	273	57546.81	210.79
Jaipur-Bhiwani S/C	NR-I	07.10.2016	276	49343.72	178.78
<b>765 kV D/C Transmission lines under different wind zone/Soil condition/ plain area</b>					
Champa-Raipur D/C	WR-I	24.05.2014	149	67005.6	449.70
Angul-Srikakulam D/C	SR-I/ ER-II	01.02.2017	276.49	139487.89	504.50
Chittorgarh -Ajmer D/C	NR-I	31.12.2017	211	101482.97	480.96
<b>400 kV Transmission Lines under same wind zone/Soil condition/plain area</b>					
Barh-Gorakhpur D/C	NR-III	07.06.2015	349.17	97166.05	278.28
Sikar-Jaipur D/C	NR-I	16.02.2017	169.00	22820.21	135.03
Lucknow-Kanpur D/C	NR-III	01.06.2017	159.61	25221.01	158.02
<b>400 kV D/C Transmission lines under different wind zone/Soil condition/ plain area</b>					
Ranchi-Chandwa-Gaya D/C	ER-I	12.07.2016	190.00	55996.46	294.72
Betul-Khandwa D/C	WR-I	24.08.2017	168.64	40241.28	238.62
<b>400 kV D/C Transmission lines under different wind zone/Soil condition/ Hilly area</b>					
Balipara -Bongaigaon D/C	NER	07.11.2014	309.00	107030.77	346.38
Silcher-PK Bari D/C	NER	01.08.2015	128.76	40879.20	317.48
Kishenpur - New Wanpoh D/C	NR-II	31.07.2017	135.00	54324.00	402.40

- e) As can be observed from the table, the cost for a 765 kV line varies from ₹166.15 lakh per kilometer to ₹210.79 lakh per kilometer within similar regions. Also, the variation in cost per kilometer of transmission lines falling under different wind zones, soil conditions and topography has been demonstrated in the table.
- f) Results of any benchmarking may significantly vary from actual costs and would result in severe losses for the transmission licensee, if benchmarks are set low or for the consumers, if the benchmarks are set too high.



20. BSPHCL has submitted that the capital cost of the transmission asset should be determined in accordance with Regulation 19 and subject to prudence check as contemplated by Regulation 20 of the 2019 Tariff Regulations.

21. We have considered the submissions of the Petitioner and BSPHCL regarding capital cost and have given our findings on the same in the relevant portions of this order.

### **Cost Over-run**

22. The Petitioner has submitted that based on the Auditor's Certificate, the estimated completion cost of the transmission asset works out to ₹1637.55 lakh which is within the approved apportioned cost. Further, the reasons for item-wise cost variation between approved costs (FR) and estimated completion cost are explained in Form 5 submitted in this petition.

23. The details of cost variation with respect to FR as submitted by the Petitioner are as follows:

- a) Packages covered under the scope of work in this petition comprise of a large number of items and the same are awarded through open competitive bidding. In the said bidding process, bids are received from multiple parties quoting different rates for various BOQ items under the said package. Further, lowest bidder can be arrived at/ evaluated on overall basis only.
- b) Item-wise unit prices in contracts and its variation over unit rate considered in FR estimates are beyond the control of the Petitioner. Being a Government enterprise, the Petitioner has been following a well laid down procurement policy which ensures both transparency and competitiveness in the bidding process. Through this process, lowest possible market prices for required product/ services are obtained and contracts are awarded on the basis of lowest evaluated eligible bidder.
- c) The best competitive bid price against tenders may vary as compared to the cost estimate depending upon prevailing market forces, bidder's perception and





site requirements. Whereas, the estimates, are prepared by the Petitioner as per well-defined procedures. The FR cost estimate is broad indicative cost worked out generally on the basis of average unit rates of recently awarded contracts/ general practice.

24. We have considered the submissions of the Petitioner and observe that against the total approved cost as per RCE of ₹1676.67 lakh, the estimated completion cost (including projected ACE during the 2019-24 period) as submitted by the Petitioner is ₹1637.55 lakh. Therefore, there is no cost over-run in this case.

### **Time over-run**

25. As per I.A., the transmission asset was scheduled to be commissioned within 24 months from the date of approval of BOD (26.2.2014) i.e. by 26.2.2016 against which the date of commercial operation (COD) is 29.6.2019 (as claimed by the Petitioner in this petition). Therefore, there is a time over-run of 40 months and 2 days in the commissioning of the transmission asset.

26. The Petitioner has submitted the details of the delay caused due to supply of ICT as follows:

- a) The original destination of the related transformer was Gaya sub-station and, accordingly, the coordinates of spare ICT at Gaya sub-station were found out for approval of the foundation drawing. Due to system requirement, the Petitioner instructed the contractor (M/s Alstom) to supply 500 MVA 765 kV ICT at Pusauli Sub-station with changed technical specifications.
- b) Due to change in percentage impedance, the said contractor mentioned that there would be financial implication. Based on revised technical specifications, a proposal was submitted by the said contractor in the month of May 2016 and after the evaluation of the commercial offer received from the said contractor, it was decided that the same was not techno-commercially viable and M/s GE T&D Limited was requested to go ahead with the supply of spare 500 MVA 765 kV ICT.





- c) Thereafter, as per requirement of regional spare and after approval by RPC, the said ICT was diverted from Gaya sub-station to Ranchi (New) sub-station. Accordingly, the whole process regarding finalization of foundation drawing was started afresh.

27. In view of the above, the Petitioner has submitted that the supply of ICT was inordinately delayed by M/s GE T&D Limited and has further prayed to allow capitalizing IDC and IEDC for the delay period.

28. Referring to the provisions of Regulation 22 of the 2019 Tariff Regulations, BSPHCL has submitted that reasons for delay stated by the Petitioner are controllable factors and, therefore, the delay should not be condoned. Further, no chronological list of dates/ reasons or supporting documents have been attached to justify the delay and the reasons given pertain to lack of Petitioner's preparedness/ efficiency, particularly, regarding foundation drawing, grant of contracts, lack of coordination with its contractor and delay by its contractors. Besides the Petitioner has not even averred in the petition that these reasons were beyond its control.

29. In response, the Petitioner has submitted that the reasons for delay have already been submitted in this petition, which may be considered.

30. We have considered the submissions of the Petitioner and BSPHCL. Regulation 22(1)(b) of the 2019 Tariff Regulations provides as follows:

***"22. Controllable and Uncontrollable factors: The following shall be considered as controllable and uncontrollable factors for deciding time over-run, cost escalation, IDC and IEDC of the project:***

*(1) The "controllable factors" shall include but shall not be limited to the following:*

*a. Efficiency in the implementation of the project not involving approved change in scope of such project, change in statutory levies or change in law or force majeure events; and*

*b. Delay in execution of the project on account of contractor or supplier or agency of the generating company or transmission licensee."*



31. We note that in terms of the provisions of Regulation 22 of the 2019 Tariff Regulations, delay in execution of a project on account of contractor or supplier or agency of the generating company or transmission licensee is a controllable factor and the same shall not be considered for condoning delay and in this case the delay in achieving COD is on account of the Petitioner's contractor and, therefore, we are of the view that the reasons submitted by the Petitioner for the time over-run in the commissioning of the transmission asset were not beyond its control and the said reasons come under the purview of controllable factors as specified above in Regulation 22(1)(b) of the 2019 Tariff Regulations. Accordingly, the time over-run of 40 months and 2 days in the commissioning of the transmission asset is not condoned.

**Interest During Construction (IDC)**

32. The Petitioner has submitted that tariff of the transmission asset for the 2019-24 tariff period has been calculated considering accrued IDC as ACE. Further, out of the total IDC of ₹26.25 lakh, ₹20.08 lakh has been discharged up to COD and the balance IDC of ₹6.16 lakh is discharged in 2019-20 and ₹0.02 lakh is to be discharged in 2020-21. Further, expenditure other than the accrued IDC has been considered on cash basis in the Auditor's Certificate.

33. The Petitioner vide affidavit dated 20.9.2021 has submitted that IDC as per computation matches with total IDC claimed as per Auditor's Certificate i.e. ₹26.25 lakh. Therefore, reconciliation is not applicable. Further, soft copy of cash IDC statement has been submitted.



34. The Petitioner has submitted the Auditor's Certificate dated 16.6.2020 and IDC discharge statement in this petition and details of IDC as per Auditor's Certificate, IDC discharged upto COD, during 2019-20 and 2020-21 are as follows:

(₹ in lakh)			
IDC (as per Auditor's Certificate)	IDC Discharged (up to COD)	IDC Discharged (during 2019-20)	IDC Discharged (during 2020-21)
26.25	20.08	6.16	0.02

35. BSPHCL has submitted that the Petitioner's IDC claim may be considered only as contemplated under Regulation 21 of the 2019 Tariff Regulations, especially, when the delay in achieving scheduled COD is not condoned.

36. We have considered the submissions of the Petitioner and BSPHCL. The time over-run in the commissioning of the transmission asset has not been condoned and, accordingly, IDC on cash basis up to COD has been worked out on the basis of the loan details given in the statement showing discharge of IDC and Form-9C for the transmission asset. IDC claimed and considered as on COD and summary of discharge of IDC liability up to COD and thereafter for the purpose of tariff determination subject to revision at the time of truing up is as follows:

(₹ in lakh)		
IDC (as per Auditor's Certificate)	IDC Disallowed (due to time over-run not condoned)	IDC Allowed
26.25	26.25	0.00

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

37. The Petitioner has claimed IEDC with respect to the transmission asset as per the Auditor's Certificate and has submitted that the entire amount of IEDC mentioned in the Auditor's Certificate is on cash basis and is paid up to COD. The details of IEDC claimed, IEDC as on COD and IEDC discharged up to COD are as follows:



(₹ in lakh)

IEDC claimed (as per Auditor's Certificate)	IEDC considered (as on COD)	IEDC discharged (up to COD)
144.08	144.08	144.08

38. BSPHCL has submitted that the Petitioner's IEDC claim may be considered only as contemplated under Regulation 21 of the 2019 Tariff Regulations, especially, when the delay in achieving scheduled COD is not condoned.

39. We have considered the submissions of the Petitioner and BSPHCL. IEDC claimed and considered as on COD for the purpose of tariff determination is as follows:

(₹ in lakh)

IEDC (as per Auditor's certificate)	IEDC disallowed (due to time over-run not condoned)	IEDC allowed
144.08	90.11	53.97

### Initial Spares

40. Regulation 23 of the 2019 Tariff Regulations provides as follows:

**“23. 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%

- Brown Field - 6.00%

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

(iv) Gas Insulated Sub-station (GIS)

- Green Field - 5.00%

- Brown Field - 7.00%

(v) Communication system - 3.50%

(vi) Static Synchronous Compensator - 6.00%

.....”

41. The Petitioner has submitted that the Initial Spares claimed with respect to the transmission asset are within the specified limit under Regulation 23 of the 2019 Tariff Regulations. The Initial Spares claimed by the Petitioner are as follows:



(₹ in lakh)

Particulars	Plant and machinery cost as on cut-off date	Initial Spares Capitalised as per Books of Account up to cut-off Date	Ceiling limit (in %)	Allowable Initial Spares	Excess Initial Spares
	<b>A</b>	<b>B</b>	<b>C</b>	<b>D=(A-B)*C/(100-C)</b>	<b>E=B-D</b>
Sub-station (Brown Field)	1447.22	75.00	6.00%	87.59	0.00

42. The details of Initial Spares discharge as per Form-13 as submitted by the Petitioner are as follows:

(₹ in lakh)

Particulars	Initial Spares Claimed	Initial Spares Discharge			
		As on COD	2019-20	2020-21	Total
Sub-station (Brown Field)	75.00	54.50	0.00	20.50	75.00

43. BSPHCL has submitted that the Petitioner's claim of Initial Spares may be considered only as contemplated under Regulation 23 of the 2019 Tariff Regulations.

44. We have considered the submissions of the Petitioner and BSPCHL. Based on the information available on record, the Initial Spares in respect of the transmission asset are allowed as per respective percentage of the Plant and Machinery Cost as on the cut-off date on individual basis as follows:

Particulars	Plant and Machinery cost (excluding IDC/IEDC, Land cost and Cost of Civil Works) (₹ in lakh)	Initial Spares claimed (₹ in lakh)	Norms as per 2019 Tariff Regulations (in %)	Initial Spares allowable (₹ in lakh)	Initial Spares disallowed (₹ in lakh)	Initial Spares allowed (₹ in lakh)
	<b>A</b>	<b>B</b>	<b>C</b>	<b>D=(A-B)*C/(100-C)</b>	<b>E=B-D</b>	
Sub-station (Brown Field)	1447.22	75.00	6.00	87.59	0.00	75.00



## Capital Cost as on COD

45. In view of the above, the capital cost in respect of the transmission asset allowed (as on COD) is summarized as follows:

(₹ in lakh)			
Capital Cost claimed (as on COD as per Auditor's Certificate) (A)	IDC disallowed (due to time over-run not condoned) (B)	IEDC disallowed (due to time over-run not condoned) (C)	Estimated Completion Capital Cost (D=A-B-C)
977.58	26.25	90.11	861.22

## Additional Capital Expenditure

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

### ***"24. Additional Capitalisation within the original scope and upto the cut-off date***

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

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

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

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

### ***"25. Additional Capitalisation within the original scope and after the cut-off date:***

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

- (a) Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority, or order or decree of any court of law;*
- (b) Change in law or compliance of any existing law;*
- (c) Deferred works relating to ash pond or ash handling system in the original scope of work;*



- (d) *Liability for works executed prior to the cut-off date;*
- (e) *Force Majeure events;*
- (f) *Liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments; and*
- (g) *Raising of ash dyke as a part of ash disposal system.*

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

- (a) *The useful life of the assets is not commensurate with the useful life of the project and such assets have been fully depreciated in accordance with the provisions of these regulations;*
- (b) *The replacement of the asset or equipment is necessary on account of change in law or Force Majeure conditions;*
- (c) *The replacement of such asset or equipment is necessary on account of obsolescence of technology; and*
- (d) *The replacement of such asset or equipment has otherwise been allowed by the Commission."*

47. The details of capital cost as on COD, incurred/ projected ACE during the 2019-24 period (including IDC discharged in respective years) and capital cost as on 31.3.2024 as submitted by the Petitioner are as follows:

Capital Cost (as on COD as per Auditor's Certificate)	Incurred/ Projected ACE				Capital Cost (as on 31.3.2024)
	2019-20	2020-21	2021-22	2022-23	
977.58	107.67*	279.25*	186.15	93.08	1637.55

\* Including accrual IDC discharged

48. The Petitioner has submitted that ACE incurred/ projected to be incurred in respect of the transmission asset is mainly on account of Balance and Retention Payments which may be allowed by the Commission.

49. The Petitioner vide affidavit dated 20.9.2021 has submitted Liability Flow Statement containing the following package-wise and vendor-wise ACE claimed in the 2019-24 period. Further, there is no ACE expected beyond 2023-24 on account of un-discharged liability/ balance retention payments beyond the claimed amount:





(₹ in lakh)

Party	Package	Description	2019-20	2020-21	2021-22	2022-23
GE T&D India Limited	Sub-station	Discharge of liability	101.51	253.98	186.15	93.08
		Additional liability recognised	0.00	25.25	0.00	0.00
		<b>Total</b>	<b>101.51</b>	<b>279.23</b>	<b>186.15</b>	<b>93.08</b>

50. BSPHCL has submitted that ACE may be considered only in accordance with and under the heads provided in Regulation 24 of the 2019 Tariff Regulations. Additionally, the Petitioner should submit the details as contemplated under Regulation 24(2) of the 2019 Tariff Regulations. The definition of cut-off date in Regulation 3(14) may also be taken into account.

51. We have considered the submissions of the Petitioner and BSPHCL. ACE claimed on account of balance and retention payments for works already executed is allowed under Regulation 24(1)(a) of the 2019 Tariff Regulations and ACE claimed beyond the cut-off date on account of balance and retention payments for works executed within the cut-off date is allowed under Regulation 25(1)(d) of the 2019 Tariff Regulations. As IDC has been disallowed, there is no scope for accrual IDC discharge as part of ACE. Accordingly, ACE allowed in respect of the transmission asset for the 2019-24 period is as follows:

(₹ in lakh)

ACE allowed			
2019-20	2020-21	2021-22	2022-23
101.51	279.23	186.15	93.08

#### **Capital Cost for the 2019-24 tariff period**

52. In view of the above, the capital cost considered in respect of the transmission asset for the 2019-24 tariff period is as follows:



(₹ in lakh)

Capital Cost (as on COD)	ACE 2019-24				Capital Cost (as on 31.3.2024)
	2019-20	2020-21	2021-22	2022-23	
861.22	101.51	279.23	186.15	93.08	1521.19

### **Debt-Equity Ratio**

53. 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.”

54. The debt-equity considered (after accounting ACE during the 2019-24 period)

for the purpose of computation of tariff for the 2019-24 tariff period is as follows:

Funding	Capital Cost (as on COD) (₹ in lakh)	(in %)	ACE during 2019-24 (₹ in lakh)	(in %)	Capital Cost (as on 31.3.2024) (₹ in lakh)	(in %)
Debt	602.85	70.00	461.98	70.00	1064.83	70.00
Equity	258.36	30.00	197.99	30.00	456.36	30.00
<b>Total</b>	<b>861.22</b>	<b>100.00</b>	<b>659.97</b>	<b>100.00</b>	<b>1521.19</b>	<b>100.00</b>

### Depreciation

55. 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.”*

56. The Gross Block in respect of the transmission asset during the 2019-24 tariff period has been depreciated at Weighted Average Rate of Depreciation (WAROD). WAROD at Annexure has been worked after considering the depreciation rates of assets as specified in the 2019 Tariff Regulations. The depreciation has been worked out considering the admitted capital expenditure as on COD. The depreciation allowed for the transmission asset for the 2019-24 tariff period is as follows:



(₹ in lakh)

Particulars	2019-20 (Pro-rata 277 days)	2020-21	2021-22	2022-23	2023-24
Opening Gross Block	861.22	962.73	1241.96	1428.11	1521.19
Projected ACE	101.51	279.23	186.15	93.08	0.00
Closing Gross Block	962.73	1241.96	1428.11	1521.19	1521.19
Average Gross Block	911.97	1102.34	1335.03	1474.65	1521.19
Freehold Land	0.00	0.00	0.00	0.00	0.00
Weighted Average Rate of Depreciation (WAROD) (in %)	5.28	5.28	5.28	5.28	5.28
Balance useful life at the beginning of the year (Year)	25	25	24	23	22
Lapsed Life of the asset (Year)	0	0	1	2	3
Depreciable Value	820.77	992.11	1201.53	1327.18	1369.07
<b>Depreciation during the year</b>	<b>36.44</b>	<b>58.20</b>	<b>70.49</b>	<b>77.86</b>	<b>80.32</b>
Cumulative Depreciation at the end of the year	36.44	94.65	165.14	243.00	323.32
Remaining Depreciable Value at the end of the year	784.33	897.46	1036.39	1084.18	1045.75

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

57. 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.*

*(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.”*

58. The Petitioner has submitted that in the tariff calculation for the 2019-24 period, IoL has been calculated on the basis of rate prevailing as on COD/ 1.4.2019 for respective loans and has further prayed that the change in interest rate due to floating rate of interest applicable, if any, needs to be claimed/ adjusted over the tariff period of 5 years directly from/ with the beneficiaries.

59. The Petitioner vide affidavit dated has submitted that IDC is calculated for the loan with floating rate of interest by multiplying the loan amount with prevailing interest rate for a particular time period. Changed rate of interest is applied for the next particular time period for which rate of interest is changed. Such calculation is done from the date of drawl of the loan to COD.

60. BSPHCL has submitted that IoL may be calculated as contemplated under Regulation 32 of the 2019 Tariff Regulations only and nothing in the said Regulations permit the change in interest rate due to floating rate of interest applicable, if any, to be adjusted/ claimed over the tariff period of 5 years directly from/ with the beneficiaries. In response, the Petitioner has reiterated its submissions made in this petition regarding IoL.

61. We have considered the submissions of the Petitioner and BSPHCL. The Weighted Average Rate of Interest on loan has been considered on the basis of rate prevailing as on 1.4.2019. As the Petitioner has prayed that the change in interest rate





due to floating rate of interest applicable, if any, during the 2019-24 tariff period be adjusted. Accordingly, the floating rate of interest, if any, will be considered at the time of true up. Therefore, IoL has been allowed in accordance with Regulation 32 of the 2019 Tariff Regulations. IoL allowed in for the transmission asset for the 2019-24 tariff period is as follows:

Particulars	(₹ in lakh)				
	2019-20 (Pro-rata 277 days)	2020-21	2021-22	2022-23	2023-24
Gross Normative Loan	602.85	673.91	869.37	999.67	1064.83
Cumulative Repayments up to Previous Year	0.00	36.44	94.65	165.14	243.00
Net Loan-Opening	602.85	637.46	774.72	834.54	821.83
Additions	71.06	195.46	130.31	65.16	0.00
Repayment during the year	36.44	58.20	70.49	77.86	80.32
Net Loan-Closing	637.46	774.72	834.54	821.83	741.51
Average Loan	620.16	706.09	804.63	828.18	781.67
Weighted Average Rate of Interest on Loan (in %)	7.9579	7.9271	7.9678	8.0135	8.0090
<b>Interest on Loan</b>	<b>37.35</b>	<b>55.97</b>	<b>64.11</b>	<b>66.37</b>	<b>62.60</b>

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

62. Regulations 30 and 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 shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system*

*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.”

**“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:

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

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

**Illustration-**

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

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."*

63. The Petitioner has submitted that it is liable to pay Income Tax at MAT rate specified under the Taxation Laws (Amendment) Ordinance 2019. Further, RoE has been calculated @18.782% after grossing up 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, if any penalty arising on account of delay in deposit or short deposit of tax amount shall not be claimed by the Petitioner. Any under-recovery or over-recovery of grossed-up rate on RoE after truing up shall be recovered or refunded to 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 2019-24 tariff period on yearly basis on receipt of Income Tax assessment order.



64. BSPHCL has submitted that RoE and Tax on RoE as contemplated under Regulations 30 and 31 of the 2019 Tariff Regulations can only be taken into consideration. In response, the Petitioner has re-iterated its submissions made in this petition regarding RoE.

65. We have considered the submissions of the Petitioner and BSPHCL. MAT rate applicable in 2019-20 has been considered for the purpose of RoE, which shall be trued-up with actual tax rate in accordance with Regulation 31(3) of the 2019 Tariff Regulations. RoE allowed for the transmission asset for the 2019-24 tariff period is as follows:

Particulars	(₹ in lakh)				
	2019-20 (Pro-rata 277 days)	2020-21	2021-22	2022-23	2023-24
Opening Equity	258.36	288.82	372.59	428.43	456.36
Additions	30.45	83.77	55.85	27.92	0.00
Closing Equity	288.82	372.59	428.43	456.36	456.36
Average Equity	273.59	330.70	400.51	442.39	456.36
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (in %)	17.472	17.472	17.472	17.472	17.472
Rate of Return on Equity (in %)	18.782	18.782	18.782	18.782	18.782
<b>Return on Equity</b>	<b>38.89</b>	<b>62.11</b>	<b>75.22</b>	<b>83.09</b>	<b>85.71</b>

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

66. Regulation 35(3)(a) of the 2019 Tariff Regulations provides as follows:

***“35. Operation and Maintenance Expenses:***

...

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

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<i>Norms for sub-station Bays (₹ Lakh per bay)</i>					
765 kV	45.01	46.60	48.23	49.93	51.68
400 kV	32.15	33.28	34.45	35.66	36.91
220 kV	22.51	23.30	24.12	24.96	25.84
132 kV and below	16.08	16.64	17.23	17.83	18.46



<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
<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	0.260	0.270	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
±800 kV, Bishwanath-Agra HVDC bipole scheme (Rs Lakh) (3000 MW)	2,563	2,653	2,746	2,842	2,942

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

Provided further that:

- i. the operation and maintenance expenses for new HVDC bi-pole schemes commissioned after 1.4.2019 for a particular year shall be allowed pro-rata on the



basis of normative rate of operation and maintenance expenses of similar HVDC bi-pole scheme for the corresponding year of the tariff period;

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

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

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

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

67. The O&M expenses claimed by the Petitioner in respect of the transmission asset for the 2019-24 period are as follows:

Particulars	(₹ in lakh)				
	2019-20 (Pro-rata 277 days)	2020-21	2021-22	2022-23	2023-24
1 Number 765 kV 500 MVA ICT at Ranchi	185.80	254.00	263.00	272.50	282.00
<b>Total O&amp;M Expenses</b>	<b>185.80</b>	<b>254.00</b>	<b>263.00</b>	<b>272.50</b>	<b>282.00</b>

68. The Petitioner has submitted that the transmission charges submitted in this petition is inclusive of O&M Expenses derived for the transmission asset based on the norms for O&M expenditure for Transmission System as specified under Regulation



35(3)(a) of the 2019 Tariff Regulations but excludes security expenses and capital spares as provided in the said Tariff Regulations.

69. BSPHCL has submitted that O&M Expenses may not be granted as the transmission asset is a cold spare. In response, the Petitioner has submitted that O&M Expenses may be allowed as claimed in this petition.

70. We have considered the submissions of the Petitioner and BSPHCL. The norms for O&M Expenses are specified in the 2019 Tariff Regulations for various types of transmission elements taking into consideration the mandatory annual maintenance and annual expenditure required for upkeep and maintenance of the various transmission elements. These norms are arrived at on the basis of the historical data submitted by the transmission licensees, including the Petitioner, at the time of framing of the 2019 Tariff Regulations. The said norms are for the whole year and, hence, they are applicable for the transmission elements which are put to regular use throughout the year. We are of the considered view that these norms cannot be extended to the spares which are not put to use throughout the year and are put into use only when there is failure of the existing transmission elements and in case of any exigency.

71. In the instant case, ICT at Ranchi (New) sub-station is a spare transformer which is to be used only in case of any exigency. Hence, we are of the view that the norms specified in Regulation 35(3) of the 2019 Tariff Regulations for regular transformers cannot be made applicable to the instant spare transformer. Moreover, we are of the consistent view that no O&M Expenses can be allowed for spare transmission elements based on the norms for regular transmission elements.





72. Further, the said norms are for transmission elements that are in regular use and not for spares which are used only in case of any eventualities. The Commission vide order dated 24.1.2021 in Petition No. 136/TT/2020 dealt with tariff for assets in use as spares. The relevant extract of the said order is as follows:

*“24. To ensure that beneficiaries are not unnecessarily burdened on account of tariff, the ‘assets in use’ and ‘assets in use as spares’ have been accorded different treatment as regards O&M Expenses. The regular ‘assets in use’ have been granted all the five components of tariff i.e. Return on Equity, Depreciation, Interest on Loan, Interest on Working Capital and O&M Expenses. On the other hand, the ‘assets in use as spares’ have been granted all the components of tariff except the O&M Expenses. Neither the Petitioner claimed nor the Commission allowed O&M Expenses for spare ICTs, transformers, reactors, etc. as by nature they are “spares” and not used throughout the year and are used only in case of any exigency. This is evident from the order dated 6.1.2015 in Petition No. 113/TT/2012 wherein the Petitioner had itself not claimed any O&M Expenses for the transmission assets for the period from the date of commercial operation to 31.3.2014. Similarly, the Petitioner had not claimed any O&M Expenses for the transmission assets for the 2014-19 period wherein tariff was allowed vide order dated 26.2.2016 in Petition No. 191/TT/2015.”*

73. In view of the above, the ‘asset in use as spares’ are being granted tariff only on the basis of consent and approval of the concerned Regional Power Committee (RPC) and as the transmission asset is not in regular use, O&M Expenses are not granted. Accordingly, O&M Expenses are not allowed for the transmission asset for the 2019-24 tariff period. We also note that disallowance of O&M Expenses for the transmission asset does not mean that they do not need any maintenance and the consequent expenditure. The transmission asset requires maintenance and the expenditure involved in maintaining it would be miniscule compared to the O&M Expenses in respect of transformers put to regular use. We are also of the view that the Petitioner should meet this expenditure from the O&M Expenses allowed for the regular ICTs installed as part of Eastern Region Strengthening Scheme-IX. In case, the expenses are unusually high and cannot be met from the O&M Expenses allowed for the regular ICTs, the Petitioner may approach the Commission with certification of O&M Expenses from RPC at the time of true-up.





## **Interest on Working Capital**

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

*“34. Interest on Working Capital: (1) 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 ...*

*(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;”*

75. The Petitioner has submitted that it has computed 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%. IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The Rate of Interest considered is 12.05% (SBI 1 year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points) for 2019-20, for 2020-21 has been considered as 11.25% (SBI 1 year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points) whereas 2021-22 onwards has been considered as 10.50% (SBI 1 year MCLR applicable as on 1.4.2021 of



7.00% plus 350 basis points). The components of the working capital and interest allowed thereon for the transmission asset are as follows:

Particulars	(₹ in lakh)				
	2019-20 (Pro-rata 277 days)	2020-21	2021-22	2022-23	2023-24
Working Capital for O&M Expenses (O&M Expenses for 1 month)	0.00	0.00	0.00	0.00	0.00
Working Capital for Maintenance Spares (15% of O&M Expenses)	0.00	0.00	0.00	0.00	0.00
Working Capital for Receivables (Equivalent to 45 days of annual transmission charges)	18.58	22.04	26.21	28.39	28.48
<b>Total Working Capital</b>	<b>18.58</b>	<b>22.04</b>	<b>26.21</b>	<b>28.39</b>	<b>28.48</b>
Rate of Interest (in %)	12.05	11.25	10.50	10.50	10.50
<b>Interest on Working Capital</b>	<b>1.69</b>	<b>2.48</b>	<b>2.75</b>	<b>2.98</b>	<b>2.99</b>

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

76. The transmission charges allowed in respect of the transmission asset for the 2019-24 tariff period are as follows:

Particulars	(₹ in lakh)				
	2019-20 (Pro-rata 277 days)	2020-21	2021-22	2022-23	2023-24
Depreciation	36.44	58.20	70.49	77.86	80.32
Interest on Loan	37.35	55.97	64.11	66.37	62.60
Return on Equity	38.89	62.11	75.22	83.09	85.71
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	1.69	2.48	2.75	2.98	2.99
<b>Total</b>	<b>114.38</b>	<b>178.77</b>	<b>212.58</b>	<b>230.30</b>	<b>231.63</b>

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

77. The Petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses.

78. BSPHCL has submitted that grant of filing fee and expenses incurred is the discretion of the Commission and need not necessarily be allowed in all cases and further nothing beyond as contemplated under the 2019 Tariff Regulations may be



granted. In response, the Petitioner has submitted that it has requested for reimbursement of expenditure towards petition filing fee and publication expense in terms of Regulation 70(1) of the 2019 Tariff Regulations. Further, the Commission vide order dated 28.3.2016 in Petition No. 137/TT/2015 allowed the recovery of petition filing fee and publication of notices from the beneficiaries on pro rata basis.

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

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

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

#### **Goods and Services Tax**

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

82. Referring the provision of Regulation 56 of the 2019 Tariff Regulations, BSPHCL vide affidavit dated 31.3.2021 has submitted that the said Regulation



contemplates recovery of statutory charges by generating company and not by transmission licensee and, hence, the said claim is liable to be rejected as the same is premature also. In response, the Petitioner has re-iterated its submissions as made in this petition regarding GST.

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

### **Security Expenses and Capital Spares**

84. The Petitioner has submitted that security expenses for the transmission asset are not claimed in the instant petition and it would file a separate petition for claiming the overall security expenses and consequential IWC. Further, the capital spares shall be claimed by the Petitioner at the end of tariff period as per actual and accordingly, these expenses are not claimed in this petition through the relevant Tariff Form and shall be claimed separately in a separate petition along with all other assets.

85. Referring the provision of Regulation 35(3)(c) of the 2019 Tariff Regulations, BSPHCL has submitted that this claim may not be considered as the transmission asset in the present case being a cold spare and also in terms of the view taken by the Commission vide order dated 9.2.2021 in Petition No. 54/TT/2020 - that the Petitioner should claim security expenses for all the transmission assets in one petition. Further, if at all, this claim may only be made as per Regulation 35 (3)(c) of the 2019 Tariff Regulations and the claims to the contrary made by the Petitioner may not be considered as the same are also unsubstantiated and premature.



86. In response, the Petitioner has submitted that as per Regulation 35(3)(c) of 2019 Tariff Regulations, the Security Expenses and Capital Spares for transmission system shall be allowed separately after prudence check. A separate Petition No. 260/MP/2020 was filed before the Commission for claiming the overall Security Expenses and consequential IWC on the same wherein it was proposed to consider actual security expenses incurred by the Petitioner for 2018-19 after escalating the same at 3.51% per annum and estimated additional security expenses for new substations to be commissioned in future, for arriving at the estimated security expenses for the year 2019-20, 2020-21, 2021-22, 2022-23 and 2023-24. The Commission vide order dated 3.8.2021 allowed the Petitioner to recover the estimated security expenses from beneficiaries as per provisions of the 2020 Sharing Regulations. The difference, if any, between the estimated security expenses and actual security expenses calculated as per audited accounts, on year to year basis may be allowed to recover/ refund from beneficiaries.

87. We have considered the submissions of the Petitioner and BSPHCL. The Petitioner has claimed consolidated security expenses 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 Commission vide order dated 3.8.2021 in Petition No. 260/MP/2020 approved security expenses from 1.4.2019 to 31.3.2024. Therefore, security expenses will be shared in terms of the order dated 3.8.2021 in Petition No. 260/MP/2020. Accordingly, 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. Also, the Petitioner's claim pertaining to capital spares,



if any, shall be dealt with in accordance with the provisions of the 2019 Tariff Regulations.

### **Sharing of Transmission Charges**

88. With effect from 1.11.2020 (after repeal of the 2010 Sharing Regulations), sharing of transmission charges is governed by the 2020 Sharing Regulations. Accordingly, the liabilities of DICs for arrears of transmission charges determined through this order shall be computed DIC-wise in accordance with the provisions of 2019 Tariff Regulations and the 2020 Sharing Regulations and shall be recovered from the concerned DICs through Bills under Regulation 15(2)(b) of the 2020 Sharing Regulations. Billing, collection and disbursement of the transmission charges for subsequent period shall be recovered in terms of provisions of the 2020 Sharing Regulations as provided in Regulation 57 of the 2019 Tariff Regulations.

89. To summarise:

- a) The Annual Fixed Charges for the transmission asset for the 2019-24 tariff period in this order are as follows:

(₹ in lakh)				
2019-20 (Pro-rata 277 days)	2020-21	2021-22	2022-23	2023-24
114.38	178.77	212.58	230.30	231.63

90. Annexure given hereinafter shall form part of the order.

91. This order disposes of Petition No. 686/TT/2020 in terms of the above discussions and findings.

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

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

sd/-  
**(I. S. Jha)**  
Member

sd/-  
**(P. K. Pujari)**  
Chairperson



**ANNEXURE**

2019-24  Capital Expenditure	Admitted Capital Cost as on 1.4.2019/COD (₹ in lakh)	Projected ACE (₹ in lakh)					Admitted Capital Cost as on 31.3.2024 (₹ in lakh)	Rate of Depreciation as per the 2019 Tariff Regulations (in %)	Annual Depreciation as per the 2019 Tariff Regulations (₹ in lakh)				
		2019-20	2020-21	2021-22	2022-23	Total			2019-20	2020-21	2021-22	2022-23	2023-24
Land – Freehold	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00	0.00	0.00	0.00
Land – Leasehold	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34	0.00	0.00	0.00	0.00	0.00
Building Civil Works & Colony	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34	0.00	0.00	0.00	0.00	0.00
Transmission Line	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.28	0.00	0.00	0.00	0.00	0.00
Sub Station	861.22	101.51	279.23	186.15	93.08	659.97	1521.19	5.28	48.15	58.20	70.49	77.86	80.32
PLCC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.33	0.00	0.00	0.00	0.00	0.00
IT Equipment (Incl. Software)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.00	0.00	0.00	0.00	0.00	0.00
<b>Total</b>	<b>861.22</b>	<b>101.51</b>	<b>279.23</b>	<b>186.15</b>	<b>93.08</b>	<b>659.97</b>	<b>1521.19</b>		<b>48.15</b>	<b>58.20</b>	<b>70.49</b>	<b>77.86</b>	<b>80.32</b>
								<b>Average Gross Block (₹ in lakh)</b>	<b>911.97</b>	<b>1102.34</b>	<b>1335.03</b>	<b>1474.65</b>	<b>1521.19</b>
								<b>Weighted Average Rate of Depreciation (in %)</b>	<b>5.28</b>	<b>5.28</b>	<b>5.28</b>	<b>5.28</b>	<b>5.28</b>

