CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

Petition No. 26/TT/2021

Coram:

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

Date of Order: 18.04.2022

In the matter of:

Approval under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations 1999 and determination of transmission tariff for 2019-24 period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 in respect of **Asset-I:** Replacement of existing 1 no. 220/132 kV, 50 MVA, ICT(existing) by 160 MVA, 220/132 kV ICT-I at Balipara (PG) Sub-station along with replacement of 132 kV equipment and **Asset-II:** 2nd 400/220 kV, 315 MVA ICT, new 220 kV Bus arrangement (GIS) with 4 nos. of 220 kV Bays at Bongaigaon Sub-station of POWERGRID along with stringing of 2nd Circuit of 220 kV D/C Bongaigaon-Salakati Transmission Line and 1 no. of 220 kV line bay at Salakati Sub-station (for 220 kV D/C Bongaigaon-Salakati Transmission Line) under "North Eastern Region Strengthening Scheme-III" in the North-Eastern Region.

And in the matter of:

Power Grid Corporation of India Limited,
SAUDAMINI, Plot No-2, Sector-29,
Gurgaon-122 001 (Haryana). **.....Petitioner**

Versus

1. Assam Electricity Grid Corporation Limited,
   (Formerly Assam State Electricity Board)
   Bijulee Bhawan, Paltan Bazar,
   Guwahati-781001, Assam.

2. Meghalaya Energy Corporation Limited,
   (Formerly Meghalaya State Electricity Board)
   Short Round Road, "Lumjingshai"
   Shillong-793001, Meghalaya.

3. Government of Arunachal Pradesh,
   Itanagar, Arunachal Pradesh.

4. Power and Electricity Department,

Government of Mizoram,
Aizawl, Mizoram.

5. Manipur State Power Distribution Corporation Limited,
(Formerly Electricity Department, Government of Manipur)
Keishampat, Imphal.

6. Department of Power,
Government of Nagaland,
Kohima, Nagaland.

7. Tripura State Electricity Corporation Limited,
Vidyut Bhawan, North Banamalipur,
Agartala, Tripura (W), Tripura-799001. **…..Respondent(s)**

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

For Respondent: None

ORDER

The instant petition has been filed by Power Grid Corporation of India Limited (hereinafter referred to as "the Petitioner"), a deemed transmission licensee, for determination of tariff under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as "the 2019 Tariff Regulations") of the period from COD to 31.3.2024 in respect **Asset-I:** Replacement of existing 1 number 220/132 kV, 50 MVA, ICT (existing) by 160 MVA, 220/132 kV ICT-I at Balipara (PG) Sub-station along with replacement of 132 kV equipment; and **Asset-II:** 2nd 400/220 kV, 315 MVA ICT, new 220 kV Bus arrangement (GIS) with 4 numbers of 220 kV Bays at Bongaigaon Sub-station of POWERGRID along with stringing of 2nd Circuit of 220 kV D/C Bongaigaon-Salakati Transmission Line and 1 number of 220 kV line bay at Salakati Sub-station (for 220 kV D/C Bongaigaon-Salakati Transmission Line) (hereinafter referred to as the "transmission

assets") under "North Eastern Region Strengthening Scheme-III" in the North-Eastern Region (hereinafter referred to as the "transmission project").

2. The Petitioner has made the following prayers in the instant 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 8.5 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 8.9 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.

11) Allow Final tariff in accordance with Regulation 10 (5) 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. "

Background

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

a. The Investment Approval (IA) of the project was accorded by the Board of Directors of the Petitioner's Company vide Memorandum No. C/CP/NERSS-III dated 24.9.2015, at an estimated cost of ₹13371.00 lakh including an IDC of ₹746.00 lakh based on December 2015 price level. Subsequently, Revised Cost Estimate (RCE) of the project was accorded by Board of Directors of the Petitioner's Company vide the Memorandum No. C/CP/PA1718-10-0F-RCE006 dated 29.1.2018 with an estimated cost of ₹16731.00 lakh including IDC of ₹810.00 lakh based on April 2017 price level.

b. The scope of the scheme was agreed in the joint meeting of the Standing Committee of Power System Planning of North Eastern Region held on 3.1.2014. The transmission system was later discussed and agreed for implementation in the 15th TCC and 15th NERPC meeting held on 20.8.2015 and 21.8.2015, respectively.

c. The scope of work covered under for North Eastern Region Strengthening Scheme (NERSS III) as per the IA broadly includes:

i. Installation of 2nd 400/220 kV, 315 MVA ICT at Bongaigaon Sub-station of POWERGRID along with following associated works:

a) New 220 kV bus arrangement (GIS) at Bongaigaon
b) 4 number of 220 kV bays at Bongaigaon
c) 1 number of 220 kV line bays at Salakati (for 220 kV D/C Bongaigaon-Salakati line)

ii. Replacement of existing 60 MVA, 220/132 kV ICT by 1X160 MVA 220/132 kV ICT at Kopili HEP along with following associated works:

a) Up-gradation of complete 132 kV Single AIS Bus scheme to 132 kV Double GIS Bus
b) Replacement of bay equipment's of 60MVA Transformer
c) Incorporation of Bus bar and LBB scheme at 220 kV and 132 kV System.

iii. Replacement of existing 2X50 MVA, 220/132 kV ICTs by 2X160 MVA, 220/132 kV ICTs at Balipara Sub-station of POWERGRID along with replacement of 132 kV equipment.

d. The Petitioner has submitted that as per IA, 4 numbers 220 kV GIS Line bays were envisaged at Bongaigaon Sub-station under the subject project. However, during 6th Standing Committee Meeting of NER held at Imphal on 3.10.2016, Assam Electricity Grid Corporation Limited (AEGCL) informed that it would be difficult to construct the Bongaigaon-Agamoni 220 kV D/C line and it was suggested to the Petitioner to explore the possibility of dropping the construction of 2 number of 220 kV bays at their Bongaigaon Sub-station. Accordingly, as decided in the said meeting and in the special meeting regarding issues related to Assam held at CEA on 4.11.2016, AEGCL would be utilizing only 2 number 220 kV GIS Line bays at Bongaigaon Sub-station for termination of existing 220 kV D/C line from Salakati, and 2 number 220 kV GIS line bays have been deleted from the scope of the subject project. Thus, the revised project scope as per RCE approved by the Board of Directors of the Petitioner in 348th meeting held on 6.1.2018 (communicated vide Memorandum No. C/CP/PA1718-10-0F-RCE006 dated 29.1.2018) for "NERSS-III" is as follows:

i. Installation of 2nd 400/220 kV, 315 MVA ICT at Bongaigaon Sub-station of POWERGRID along with following associated works:

a) 1 number of 400 kV bay for 2nd 400/220 kV, 315 MVA ICT at Bongaigaon.
b) New 220 kV bus arrangement (GIS) at Bongaigaon.
c) 1 number of 220 kV GIS bay for new 315 MVA ICT at Bongaigaon.
d) 1 number of 220 kV GIS bay for existing new 3*105 MVA ICT at Bongaigaon.
e) 2 number of 220 kV GIS Line bays at Bongaigaon.*
f) 1 number of 220 kV line bays at Salakati (for 220kV D/C Bongaigaon-Salakati line).

ii. Replacement of existing 60 MVA, 220/132 kV ICT by 1X160 MVA 220/132 kV ICT at Kopili HEP along with following associated works:

g) Up-gradation of complete 132 kV Single AIS Bus scheme to 132 kV Double GIS Bus.
h) Replacement of bay equipment of 60MVA Transformer.
i) Incorporation of Bus bar and LBB scheme at 220 kV and 132 kV System.

iii. Replacement of existing 2X50MVA, 220/132 kV ICTs by 2X160 MVA, 220/132 kV ICTs at Balipara sub-station of POWERGRID along with replacement of 132 kV equipment.

**As per the IA, 4 no's 220 kV GIS Line Bays were envisaged at Bongaigaon Sub-station under the instant project. However as decided in 6th meeting of standing committee on power system planning of NER held on 3.10.2016 and special meeting regarding issues related to Assam held at CEA on 4.11.2016, AEGCL would be utilizing only 2 no's 220 kV GIS Line bays at Bongaigaon Sub-station for termination of existing 220 kV D/C line from Salakati. Accordingly, 2 no's 220 kV GIS line bays have been deleted from scope of the subject project.*

e. The status of the scope of the transmission project is as follows:

Sl. No	Asset	Actual COD	Petition
1	Replacement of existing 1 number 50 MVA, 220/132kV ICTs by 160 MVA, 220/132 kV ICT at Balipara Sub-station along with replacement of 132kV equipment	1.10.2017	295/TT/2018
2	**Asset-I-** Replacement of existing 1 number 220/132 kV, 50 MVA, ICT (existing) by 160 MVA, 220/132kV ICT-I at Balipara (PG) Sub-station along with replacement of 132 kV equipment	2.4.2020	**Covered in instant petition**
3	**Asset-II-** 2nd 400/220 kV, 315 MVA ICT, new 220 kV Bus arrangement (GIS) with 4 numbers of 220 kV Bays at Bongaigaon Sub-	11.4.2019	

	station of POWERGRID along with stringing of 2nd Circuit of 220 kV D/C Bongaigaon-Salakati transmission line and 1 no. of 220 kV line bay at Salakati Sub-station (for 220 kV D/C Bongaigaon-Salakati transmission line)		
4	Replacement of existing 60 MVA, 220/132 kV ICT by 1X160 MVA 220/132 kV ICT and necessary bay equipment, and upgradation of complete 132 kV bus scheme on GIS at Kopili Sub-station	Yet to be commissioned	

f. The date of commercial operation (COD) along with the detail of time over-run in case of the transmission assets is as follows:

Asset	SCOD	COD	Time over-run
Asset-I	15.12.2017	2.4.2020	839 Days
Asset-II		11.4.2019	482 Days

4. The Respondents are distribution licensees and Power Departments, which are procuring transmission service from the Petitioner, mainly beneficiaries of the North Eastern Region.

5. The Petitioner has served the petition on the Respondents and notice of this petition has been published in the newspaper in accordance with Section 64 of the Electricity Act 2003. No comments/objections have been received from the general public.

6. This order is issued considering the submissions made by the Petitioner vide affidavits dated 24.9.2020 and 21.9.2021.

7. The hearing in this matter was held on 29.10.2021 through video conference and the order was reserved.

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

DETERMINATION OF ANNUAL FIXED CHARGES FOR 2019-24 TARIFF PERIOD

9. The Petitioner has claimed the following transmission charges for the transmission assets for the 2019-24 tariff period:

Asset-I

(₹ in lakh)

Particulars	2020-21 (Pro-rata 364 days)	2021-22	2022-23	2023-24
Depreciation	62.95	70.62	72.52	72.52
Interest on Loan	60.01	62.62	59.15	53.72
Return on Equity	67.18	75.36	77.39	77.39
O&M Expenses	40.53	42.08	43.52	45.12
Interest on Working Capital	4.33	4.65	4.71	4.69
Total	**235.00**	**255.33**	**257.29**	**253.44**

Asset-II

(₹ in lakh)

Particulars	2019-20 (Pro-rata 356 days)	2020-21	2021-22	2022-23	2023-24
Depreciation	426.48	461.80	481.11	490.50	490.50
Interest on Loan	423.21	425.24	408.22	379.39	340.20
Return on Equity	450.33	488.90	509.88	519.93	519.93
O&M Expenses	224.66	239.24	247.64	256.46	265.19
Interest on Working Capital	29.35	31.19	31.90	32.15	31.87
Total	**1554.03**	**1646.37**	**1678.75**	**1678.43**	**1647.69**

10. The Petitioner has claimed the following IWC for the transmission assets for the 2019-24 tariff period:

Asset-I

(₹ in lakh)

Particulars	2020-21 (Pro-rata 364 days)	2021-22	2022-23	2023-24
WC for O&M Expenses	3.39	3.51	3.63	3.76
WC for Maintenance Spares	6.10	6.31	6.53	6.77
WC for Receivables	29.05	31.48	31.72	31.16
Total Working Capital	**38.54**	**41.30**	**41.88**	**41.69**
Rate of Interest (%)	11.25	11.25	11.25	11.25
Interest on Working Capital	**4.33**	**4.65**	**4.71**	**4.69**

Asset-II

(₹ in lakh)

Particulars	2019-20 (Pro-rata 356 days)	2020-21	2021-22	2022-23	2023-24
WC for O&M Expenses	19.25	19.94	20.64	21.37	22.10
WC for Maintenance Spares	34.65	35.89	37.15	38.47	39.78
WC for Receivables	196.44	202.98	206.97	206.93	202.58
Total Working Capital	**250.34**	**258.81**	**264.76**	**266.77**	**264.46**
Rate of Interest (%)	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	**29.35**	**31.19**	**31.90**	**32.15**	**31.87**

Date of Commercial Operation (COD)

11. The Petitioner has claimed the actual COD of Asset-I as 2.4.2020 and of Asset-II as 11.4.2019.

12. 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."

13. In support of the COD of the Asset-I, the Petitioner has submitted CEA Energisation Certificate dated 24.3.2020 under Regulation 43 of CEA (measures relating to Safety and Electric Supply) Regulations, 2010; RLDC Charging Certificate dated 6.4.2020, self-declaration COD letters dated 7.4.2020 and CMD certificate as required under Grid Code.

14. In support of the COD of the Asset-II, the Petitioner has submitted CEA Energisation Certificate dated 27.3.2019, 16.8.2019 and 23.3.2019 under Regulation 43 of CEA (measures relating to Safety and Electric Supply) Regulations, 2010; RLDC Charging Certificate dated 29.5.2019, 27.6.2019, 28.6.2019 and 2.7.2019, self-declaration COD letter dated 4.7.2019 and CMD certificate as required under Grid Code.

15. Taking into consideration the submissions of the Petitioner, CEA energization Certificate, RLDC charging Certificate, CMD Certificate as required under Grid code, the COD of the Asset-I and Asset-II have been approved as 2.4.2020 and 11.4.2019, respectively.

Capital Cost

16. 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."

17. The Petitioner has claimed the following capital cost as on COD and ACE projected to be incurred in respect of the transmission assets and has submitted the Auditor's Certificates in support of the same:

(₹ in lakh)

Assets	Apportioned FR Cost	Approved Cost RCE	Expenditure up to COD	Proposed ACE				Capital cost as on 31.3.2024
				2019-20	2020-21	2021-22	2022-23	
Asset-I	937.83	1386.58	1107.49	0.00	194.08	71.88	0.00	1373.45
Asset-II	7420.30	9778.33	8071.16	411.56	388.03	356.64	0.00	9227.39

Cost over-run

18. The Petitioner has submitted that against the apportioned approved cost as per RCE of ₹1386.58 lakh for Asset-I, the estimated completion cost is ₹1373.45 lakh and

against the total apportioned approved cost as per RCE of ₹9778.33 lakh for Asset-II, the estimated completion cost is ₹9227.39 lakh. The Petitioner has submitted the following in respect of cost variation.

Asset 1

a. The break-up of cost variation under various heads is as under:

Sr. No.	Description	Cost as per FR (₹in lakh)	Estimated Capital Cost (₹ in lakh)	Variation (₹ in lakh)
		a	b	c = (b – a)
1	Sub-stations equipment, Civil works, spares etc.	751.99	924.00	172.01
2	Taxes & Duties	26.49	126.91	100.42
3	Over heads	107.04	158.34	51.30
4	Interest During Construction (IDC)	52.32	164.21	111.89
5	**Grand Total**	**937.83**	**1373.45**	**435.62**

b. Being a Government enterprise, the Petitioner has the obligation for indigenous development of manufacturer as well as to adhere to Government of India guidelines in vogue. Accordingly, the Petitioner has been following a well laid down procurement policy which ensures both transparency and competitiveness in the bidding process. Route of International Competitive Bidding (ICB) as well as Domestic Competitive Bidding (DCB) process have been followed to award this special mega project. Through this process, lowest possible market prices for required product/services/as per detailed designing is obtained and contracts are awarded on the basis of lowest evaluated eligible bidder. The best competitive bid prices against tenders may vary as compared to the cost estimate depending upon prevailing market conditions, design and site requirements. The estimates are prepared by the Petitioner as per well-defined procedures for cost estimate. The FR cost estimate is broad indicative cost worked out generally on the basis of average unit rates of recently awarded contracts/general practice. The Petitioner submitted that the cost estimate of the

project is on the basis of April 2017 price level, where the contract date is June 2015 price level.

c. Major reasons of cost variation with respect to FR are detailed below:

i. The cost variation (increase) of ₹172.01 lakh w.r.t FR is on account of difference between FR rates and actual award rates for major equipment and civil works etc. Difference for some major equipment is as follows:

Sr. No.	Item description	Rate as per FR (₹ in lakh)	Awarded rate (₹ in lakh)
1	132 kV Isolator, 3-ph	3.90	17.77
2	132 kV Current Transformer 1Ph	2.88	7.61
3	132 kV Surge Arrestor 1Ph	0.52	2.17
4	160 MVA, 220/132 kV, 3PH Auto Transformer (Nos.)	592.40	664.81

ii. The cost variation is due to the rate received through competitive biddings also effects the actual variation of the item with respect to estimate. The contracts for various packages under this project were awarded to the lowest evaluated and responsive bidder, on the basis of Open International/ Domestic Competitive Bidding. The award prices represent the lowest prices available at the time of bidding of various packages, thus capturing the price level at the bidding stage. In addition, the actual site condition encountered during execution like soil conditions, shutdown issues, layout modifications etc. also resulted in change in the actual cost of execution. Further, the quantities for civil works in the FR have been indicated as Lump Sum (LS), it is not possible to ascertain the variation in quantity and cost between FR and actual executed quantities. However, all civil works have been executed in line with approved drawings and within the scope of the project as per actual.

iii. The FR costs of individual items/ materials are exclusive of taxes and duties which have been indicated under a separate head while the cost of items as per the actual expenditure is inclusive of taxes and duties. Increase of about ₹100.42 lakh is mainly on accounts of actual taxes & duties, custom duty, excise duty, GST etc. paid based on the prevailing rate and charges raised by respective district, state and statutory authorities at the time of execution of project.

iv. IDC for the Asset-I as per FR cost was estimated at ₹52.32 lakh and the IDC claimed is ₹164.21 lakh. There is an increase of ₹111.89 lakh with respect to FR in IDC in case of Asset-I. The main reason for the increase in IDC is attributable to time over-run of the asset and, increase in overall capital cost with respect to FR which was affected by severe bandhs, unprecedented rains and flash floods in Assam.

v. IEDC including contingencies, establishment and other overheads for the asset in approved FR was estimated at ₹107.04 lakh, whereas, based on the actual expenditure incurred, IEDC works out to ₹158.34 lakh. Thus, IEDC under the project has increased by ₹51.30 lakh with respect to FR in case of Asset-I. During estimation for FR, 3% and 5% of equipment cost and Civil Works has been considered for contingency and IEDC respectively. The actual amount of IEDC, Establishment and Contingency has been considered in the tariff claimed. On account of the time over-run of almost 27 months, the IEDC should be considered proportionately against 8% stated in FR, considering the actual completion period of 54 months.

Asset 2

a. The break-up of cost variation under various heads is as under:

Sr. No.	Description	Cost as per FR (₹ in lakh)	Estimated Capital Cost (₹ in lakh)	Variation (₹ in lakh)
		a	b	c = (b – a)
1	Preliminary works and Land and Civil works	402.02	1274.11	872.09
2	Transmission Line Material, Sub-stations equipment, Spares, etc.	5169.53	5769.29	599.76
3	Taxes & Duties	645.30	885.41	240.11
4	Over heads	789.49	607.41	-182.08
5	Interest During Construction (IDC)	413.96	691.17	277.21
	Grand Total	**7420.30**	**9227.39**	**1807.09**

b. The reasons of cost variation with respect to FR are detailed below:

i. The cost variation (increase) of ₹872.09 lakh with respect to FR is on account of difference between FR rates and actual award rates for Preliminary works and Civil works. The cost variation is due to the rate received through competitive biddings also effects the actual variation of the item with respect to estimate. The contracts for various packages under this project were awarded to the lowest evaluated and responsive bidder, on the basis of Open International/ Domestic Competitive Bidding. The award prices represent the lowest prices available at the time of bidding of various packages, thus capturing the price level at the bidding stage. In addition, the actual site condition encountered during execution like soil conditions, shutdown issues, layout modifications etc. also resulted in change in the actual cost of execution. Further, the quantities for Civil works in the FR has been indicated as Lump Sum. It is not possible to ascertain the variation in quantity and cost between FR and actual executed quantities. However, all civil works have been executed in line with approved drawings and within the scope of the project as per actual.

ii. The cost variation (increase) of ₹ 599.76 lakh with respect to FR is on account of difference between FR rates and Actual award rates for Major Equipment and material cost. Difference for some major equipment is as follows:

Sl. No.	Item description	Rate as per FR (₹ in lakh)	Awarded rate (₹ in lakh)	Variation (%)
1	315 MVA, 400/220/33 kV, 3PH Auto Transformer (Nos.) (incl. accessories)	966.07	1009.63	4.5
2	220 kV, 2000A, SF6 GIS ICT feeder bay module	123.12	173.86	41.2
3	220 kV, 2000A, 40 KA, 3-ph SF6 GIS Line feeder bay module	143.83	177.52	23.4
4	220 kV, 3 single phase SF6 GIS metal enclosed 3000A bus bars	89.10	108.75	22.1
5	220 kV, 3000A, SF6 GIS bus coupler bay module	100.07	166.34	66.2
6	220 kV SF6 to Air Bushing	5.26	6.01	14.2
7	220 kV Bus Duct	0.54	0.88	63.2
8	Testing & maintenance equipment for GIS			
8.a	EOT Crane	29.47	35.69	21.1
8.b	SF6 Gas Processing unit	55.99	131.51	134.9
8.c	Partial discharge monitoring system	60.63	73.70	21.6
8.d	Dew point meter	15.64	10.19	-27.6
8.e	SF6 gas leak Detector	7.06	0.64	-90.9
9	216 kV Surge Arrestor, 1-Ph	0.32	1.92	507.2
10	72.5 kV Circuit breaker, 3-Ph	5.02	5.93	17.9
11	72.5 kV Isolator, 3-ph	2.56	4.41	72.1
12	72.5 kV Current Transformer, 1-Ph	1.21	1.78	47.6
13	72.5 kV Potential Transformer, 1-Ph	0.84	1.65	96.6
14	Control & Relay Panels (220 kV)			
15	CB relay panels with A/R	4.14	11.87	187.1
16	CB Relay panel without A/R	3.54	11.38	221.0
17	Line Protection Panel	18.23	21.93	20.3
18	Bus bar protection panel new	12.19	50.47	314.0

iii. The cost variation is due to the rate received through competitive biddings also effects the actual variation of the item with respect to estimate. The contracts for various packages under this project were awarded to the lowest evaluated and responsive bidder, on the basis of Open International/ Domestic Competitive Bidding. The award prices represent the lowest prices available at the time of bidding of various packages, thus capturing the price level at the bidding stage. In addition, the actual site condition encountered during execution like soil conditions, shutdown issues, layout modifications etc. also resulted in change in the actual cost of execution. The Petitioner being a Government enterprise has the obligation for indigenous development of manufacturer as well as to adhere to Government of India guidelines in vogue. Accordingly, the Petitioner has been following a well laid down procurement policy which ensures both transparency and competitiveness in the bidding process. Route of International Competitive Bidding (ICB) as well as Domestic Competitive Bidding (DCB) process have been followed to award this special mega project. Through this process, lowest possible market prices for required product/services/as per detailed designing is obtained and contracts are awarded on the basis of lowest evaluated eligible bidder. The best competitive bid prices against tenders may vary as compared to the cost estimate depending upon prevailing market conditions, design and site requirements. The estimates are prepared by the Petitioner as per well-defined procedures for cost estimate. The FR cost estimate is broad indicative cost worked out generally on the basis of average unit rates of recently awarded contracts/general practice. The cost estimate of the project is on the basis of April 2017 price level, where the contract date is June 2015 price level.

iv. The FR costs of individual items/materials are exclusive of taxes and duties which have been indicated under a separate head while the cost of items as per the actual expenditure is inclusive of taxes and duties. Increase of about ₹240.11 lakh is mainly on accounts of actual taxes & duties, custom duty, excise duty, GST etc. paid based on the prevailing rate and charges raised by respective district, state and statutory authorities at the time of execution of project.

v. IDC for the asset as per FR cost was estimated at ₹413.96 lakh, whereas the claim for IDC for is ₹691.17 lakh. Thus, there is an increase of ₹277.21 lakh with respect to FR in IDC in case of Asset-II. The main reason for the increase in IDC is attributable to time over-run of the asset and, increase in overall capital cost with respect to FR, which was affected by severe bandhs, unprecedented rains and flash floods in Assam. The actual IDC accrued up to DOCO has been considered in the Auditor Certificate.

vi. The IEDC including contingencies, establishment and other overheads for the asset in approved FR was estimated at ₹789.49 lakh, whereas, based on the actual expenditure incurred, IEDC claimed is ₹607.41 lakh. Thus, IEDC has decreased by ₹182.08 lakh with respect to FR in case of Asset-II. The Petitioner has submitted that during estimation for FR, 3% and 5% of equipment cost and Civil Works has been considered for Contingency and IEDC respectively. The actual amount of IEDC, Establishment and Contingency has been considered in the tariff claimed. On account of the time over-run of almost 15 months, IEDC should be considered proportionately as against 8% as per FR considering the actual completion period of 42 months in case of Asset-2. The actual IEDC claimed is ₹607.41 lakh for Asset-II which comes out to 7.66% of the hard cost and thus within the limit of 8% as per FR.

19. The Petitioner has submitted that it follows a robust and time-tested system of preparing cost estimates before obtaining IA and thereafter once IA is approved, the award letters are placed on the executing agencies on the basis of a tendering process as per best industry practices and due diligence including justification of bid prices vis-à-vis estimated cost before placing the awards. Further, the award for execution of the transmission assets was placed after following a transparent process of tendering, bid evaluation and award of work to lowest technical and commercially responsive bid. The Petitioner has submitted that the actual cost incurred during Project execution was compiled and the proposal for RCE was put up before the Board of Directors of the Petitioner. Before submission to Board of Directors, the proposal was routed through various departments for Management approval and thereafter, submitted for approval of Committee of Directors on Investment of Projects (COIP). Hence, item-wise unit prices in contracts and its variation over unit rate considered in FR estimates are beyond the control of the Petitioner.

20. We have considered the submissions of the Petitioner. The Petitioner has submitted that against the RCE apportioned approved cost of ₹1386.58 lakh, the estimated completion cost of Asset-I is ₹1373.45 lakh, and against the RCE apportioned approved cost of ₹9778.33 lakh for Asset-ll, the estimated completion cost of Asset-II is ₹9227.39 lakh. FR cost of Asset-I is ₹937.83 lakh and that of Asset-II is ₹7420.30 lakh. Thus, there is a variation in cost of Asset-I and Asset-II by about ₹435.62 lakh and ₹1807.09 lakh against their FR cost respectively. As per Form-5 submitted by the petitioner, the cost variation of Asset-I is due to variation in cost of civil works and sub-station equipment, and in case of Asset-II, cost variation is due to variation in preliminary works, Land & Civil works, transmission line material, sub-station equipment. As per the estimated completion cost of Asset-I and Asset-II, the

Petitioner has submitted RCE duly approved by the Board of Directors. It is observed that the cost variation is due to various reasons like variation in preliminary works, Land & Civil works, transmission line material, sub-station equipment, variation in the IDC and IEDC due to time over-run and they cannot be attributed to the Petitioner. Accordingly, the cost variation in case of the instant transmission assets is allowed.

Time over-run:

21. As per the IA dated 15.9.2015, the scheduled COD of the transmission project was within 27 months from the date of IA i.e. by 15.12.2017. However, Asset-I and Asset-II were put into commercial operation on 2.4.2019 and 11.4.2019 respectively. Thus, there is time over-run of 839 days and 482 days in case of Asset-I and Asset-II respectively. The Petitioner has submitted the following details and reasons for time over-run and to substantiate its claim for condoning the said time over-run.

Asset-I

22. The Petitioner has submitted that the time over-run in case of Asset-I is due to delay in supply of 160 MVA ICT, bandhs, unprecedented rains and flash floods in Assam during year 2017-18, site hindrances and working space constraints as detailed below.

a) Delay in supply of 160 MVA ICT (28 months)

The Petitioner has submitted that as per the approved schedule, the ICT was to be dispatched by 25.10.2016 and had to reach site by 22.12.2016. However, the Alstom make 160 MVA ICT meant for Balipara was diverted to Daltonganj, Eastern Region. Thereafter, due to technical complication encountered during factory acceptance and testing of the new ICT for Balipara, the same could not be dispatched in time. To meet site requirement, GE (erstwhile Alstom) requested to consider

acceptance of CGL make transformer in lieu of Alstom make on 2.2.2018. CC Engineering approved the supply of CGL make Transformer on 9.2.2018 which was expected to be ready for inspection in July 2018. The ICT was finally dispatched from factory on 14.8.2018. However, the Transformer was damaged during Transit in Durgabari area, West Bengal in an accident on 5.10.2018 causing extensive damage to the ICT. For repairing of the ICT, it had to be transported back to Mumbai (manufacturer's works). The photographs have been submitted by the Petitioner along with the petition. Further, on its way back, the trailer was denied entry into West Bengal at the State Entry check post in Barobisa in view of Government of West Bengal Notification vide Memo No. 4532-WT/3M-128/97 Pt. IIID dated 7.9.2018. The notification states that there shall not be any movement of goods vehicle having 20 wheels or more across the state of West Bengal except for the cases where specific permission is granted by the State Government or its authorized representatives. The matter was then taken up at various levels of administration for resolution and in the meantime, GE T&D brought the ICT back to Balipara site for temporary storage till the matter was resolved. The correspondences for movement of vehicle have been submitted by the Petitioner along with the petition. The Petitioner has submitted that the matter was finally resolved in May 2019 and the ICT was transported back to Manufacturer's works at Mumbai from Balipara on 25.5.2019. The repaired ICT was finally delivered at Balipara on 3.11.2019.

b) Delay due to protests (19 days):

The erection activities of the ICT were completed in December 2019. However, balance activities such as Oil Filtration, Testing & Commissioning, etc. were adversely affected due to the protests in the entire North-East India, especially in Assam against the Citizen Amendment Act, 2019. Violent protests started in Assam on 4.12.2019 and

continued almost till the end of December 2019. Curfews were imposed in various regions of Assam and several Assam bandhs were called during the above period to protest this Act. The movement of men and materials had stopped completely, and the impact of this clampdown was felt in Sonitpur Area where there were reports of severe local disturbance. Further, there were incidents where protestors entered the premises of Balipara Sub-station and stopped all activities.

c) Delay due to waterlogged site, bandhs, etc. (3 months):

There was unprecendented heavy rainfall and monsoon during the course of execution of the project leading to waterlogged site and delay. The Petitioner has further submitted that there was a delay due to strikes, bandhs etc. and has submitted supporting documents for the same.

23. We have considered the submissions of the Petitioner. The Petitioner has attributed the time over-run in case of Asset-I to delay in supply of 160 MVA ICT, bandhs, unprecedented rains and flash floods. The Petitioner has submitted that as per the schedule, the ICT should have reached the site on 22.12.2016 but the Petitioner had diverted the ICT meant for Balipara to Daltonganj Sub-station. Further, despatch of the new ICT envisaged for Balipara got delayed due to technical complications faced towards factory acceptance and testing. The Petitioner has further submitted that the transformer damaged during transit in Durgabari area, West Bengal due to accident on 5.10.2018 thereby causing extensive damage to the ICT.

24. Regulation 22 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."

25. As per Regulation 22(1)(b) of the 2019 Tariff Regulations, the delay in supply of the transformer falls under the controllable factor. Accordingly, the time delay up to 3.11.2019 is not beyond the control of the Petitioner and the same is therefore not condoned.

26. The Petitioner has submitted that the execution of works was affected by violent protests in Assam against the Citizenship Amendment Act, 2019 for 19 days during 4.12.2019 to the end of December, 2019 and has submitted supporting documents to show that there were protests. We observe that these protests impacted the timely execution of the project and the reasons being beyond the control of the Petitioner, so the time delay of 19 days due to violent protests in Assam against the Citizenship Amendment Act, 2019 are condoned.

27. The Petitioner has submitted that due to bandhs the Petitioner was not able to do any work. However, the Petitioner has submitted only random photographs and paper clipping and based on the same, we are not able to take a view for the delay due to bandhs. The Petitioner has also submitted random paper clippings as documentary evidence to show that there was heavy rainfall in Assam and leading to water logging on site and time over-run. As regards heavy rainfall in Assam in 2017 leading to time over-run, the Commission in a similar case in order dated 2.3.2022 in Petition No. 68/TT/2021 observed that the Petitioner should have planned better to address the issues arising because of rains. The relevant portion of the order dated 2.3.2022 is as follows:

"The Petitioner has submitted documentary evidence for delay due to rainfall. The Commission observes that as per the trend of average rainfall over the past few years, the rainfall received in Assam in 2017 was not abnormally high. The Petitioner should have planned better to address issues arising because of rains. In our view, delay on this count was not beyond the control of the Petitioner."

28. We do not find reason to deviate from our decision in order dated 2.3.2022. Accordingly, the delay of 3 months due to heavy rainfall is not condoned.

29. In view of the above discussions, out of total time over-run of 839 days in case of Asset-I, the time over-run of 19 (nineteen) days due to protests in Assam against the Citizenship Amendment Act, 2019 are condoned.

Asset-II

30. The Petitioner has submitted that the time over-run in case of Asset-II is due to bandhs, unprecedented rains and flash floods in Assam during 2017-18, site hindrances and working space constraints as detailed below.

a) Water logging due to unprecedented rains during monsoon:

The area where GIS hall had to be constructed is a low-lying area where the water table till date is 500mm below FGL. This led to excessive natural water accumulation in the excavated foundation area. Due to water logging and rise in water table during monsoon, foundation work beyond 1.00m depth could not be carried out since 1.6.2017. The foundation work could only be started from 27.10.2017 causing time over-run of 5 months in case of Asset-II.

b) Strikes, bandhs, law & order situations:

The work was also affected due to strikes, bandhs, law & order situations, etc. The chronology justifying the delay in commissioning of Asset-II is furnished below:

Sr. No.	From	To	Period of Hindrance (days)	Over lapping period (days)	Net hindrance (days)	Activity	Cause of Hindrance
1	05.08.16	10.08.16	6	0	6	All activities	14 killed as militants attack market in Kokrajhar
2	29.08.16	29.08.16	1	0	1	All activities	24 hour Assam bandh called by AKRSU
3	15.09.16	15.09.16	1	0	1	All activities	12 hour Assam bandh called by People's Democratic Movement for Bodoland
4	24.10.16	24.10.16	1	0	1	All activities	24 hour Rail bandh called by several Bodo organisations in Assam
4A	01.06.17	27.10.17	149	0	149	GIS Hall/ Civil work	Site was completely waterlogged. Photographs enclosed
5	04.07.17	04.07.17	1	1	0	All activities	12 hour bandh called by Soi Janagosthiya Aikya Mancha (SJAM) in protest against the Centre's delay in granting Scheduled Tribe (ST) status to the state's six OBC communities
6	25.02.17	25.02.17	1	1	0	All activities	12 hour bandh called by the All BTC Bengali Youth Students Federation
7	24.04.17	24.04.17	1	1	0	All activities	24 hour "Chaka Bandh" called by Assam motor transport unions
8	12.06.17	13.06.17	2	2	0	All activities	36-hour statewide strike called by the All Koch Rajbongshi Students' Union (AKRSU)
9	17.06.17	17.06.17	1	1	0	All activities	24 hour Assam Bandh called by AKRSU
10	21.06.17	21.06.17	1	1	0	All activities	24 hour Assam Bandh called by The Coordination Committee of the Tribal Organisations of Assam (CCTOA)
11	02.08.17	02.08.17	1	1	0	All activities	Bandh called after killing of ABMSU president Lafikul Islam Ahmed
12	05.08.17	05.08.17	1	1	0	All activities	12-hour Assam bandh on 5 August 2017 called demanding stringent punishment for the murderers of ABMSU's

							late president Lafiqul Islam
13	06.09.17	07.09.17	2	2	0	All activities	48 hour Assam Bandh called by AKRSU in support of granting Scheduled Tribe (ST) status to the Koch Rajbongshis
14	11.09.17	11.09.17	1	1	0	All activities	12 hr Assam bandh called by Bodo groups demanding the creation of a separate Bodoland state
15	16.09.17	16.09.17	1	1	0	All activities	12 hr Assam bandh called by Adivasi National Convention Committee
16	14.10.17	14.10.17	1	1	0	All activities	12 hr BTAD bandh called by All BTC Minority Students Union (ABMSU) seeking justice to the Lafikul Islam Ahmed
17	18.10.17	18.10.17	1	1	0	All activities	24 hr Assam bandh called by AKRSU
18	19.10.17	20.10.17	2	1	1	All activities	36 hr Assam bandh called by organizations representing six ethnic groups
19	29.11.17	29.11.17	1	0	1	All activities	12 hour Assam bandh by Coordination Committee of Tribal Organizations in Assam (CCTOA) to protest eviction drive in Amchang WL area
20	09.07.18	09.07.18	1	0	1	All activities	Vehicles attacked during bandh called by AKRASU in Assam
21	03.11.18	03.11.18	1	0	1	All activities	12-hr bandh affects normal life in some Assam districts
22	20.11.18	21.11.18	2	0	2	All activities	48-hour state-wide bandh called by All Koch Rajbongshi Students' Union (Akrsu), All Assam Koch Rajbongshi Sanmilani (AAKRS) and several non-Bodo organizations hit normal life in many parts across lower Assam

23	11.01.19	11.01.19	1	0	1	All activities	Protesters Block Roads, Burn Tyres in 12-hour Shutdown Called by Tribal Organisations
24	14.02.19	14.02.19	1	0	1	All activities	12-hour Assam bandh called by Koch Rajbanshi Jatiya Sanmilani to demand ST categorization of the six communities

31. The Petitioner has submitted the supporting documentary evidence for justification of the delay along with the petition.

32. We have considered the submissions of the Petitioner. The Petitioner has attributed the time over-run due to bandhs, unprecedented rains and flash floods. The Petitioner has submitted random paper clippings as documentary evidence in support of delay due to waterlogging at the site due to unprecedented rains. The Commission has already taken a view not to condone the time over-run in case of Asset-I due to waterlogging. Accordingly, the time over-run delay of 5 months attributed by the Petitioner due to waterlogging in case of Asset-II is not condoned.

33. The Petitioner has submitted that the execution of works was affected by strikes, bandhs and law & order situations during 5.8.2016 to 14.12.2019. The Petitioner has submitted random paper clippings as documentary evidence. It is observed that there were strikes, bandhs and law & order situations on 17 days during the above said period which may have impacted the timely execution by project. As it may not be attributable to the Petitioner, the time over-run of 17 days due to strikes, bandhs and law & order situations by various organisations is condoned.

34. In view of the above discussions, out of total time over-run of 482 days in case of Asset-II, the time over-run of 17 (seventeen) days due to strikes, bandhs and law & order situations by various organizations are condoned.

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

35. The Petitioner has submitted the statement showing IDC claim, discharge of IDC liability as on the date of commercial operation and thereafter, which is as follows:

(₹ in lakh)

Assets	IDC as per Auditor Certificate	IDC Discharged up to COD	IDC discharged during 2019-20	IDC discharged during 2019-20
Asset-I	164.21	146.00	0.00	18.21
Asset-II	691.17	570.72	120.45	0.00

36. In response to the Commission's query on the methodology adopted and applicable rate of interest used for computation of IDC in case of loans obtained with 'floating rate', the Petitioner *vide* affidavit dated 21.9.2021 has submitted that the IDC is calculated for the loan with floating rate of interest by multiplying the outstanding balance of loan amount with prevailing interest rate for that particular time period. The 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 date.

37. As discussed above in this order, the time over-run of 19 days and 17 days have been condoned in Asset-I and Asset-II respectively. Accordingly, the IDC on cash basis up to the 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 assets. The 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 is as follows:

(₹ in lakh)

Assets	IDC as per Auditor Certificate	IDC Disallowed due to time over-run not condoned	IDC Allowed	IDC Discharged up to COD
Asset-I	164.21	119.50	44.71	44.71
Asset-II	691.17	464.84	226.33	226.33

38. The Petitioner has claimed IEDC for the transmission asset as per the Auditor Certificate. The Petitioner has submitted that the entire IEDC mentioned in the Auditor Certificate is on cash basis and was paid up to the date of commercial operation. As the time over-run for Asset-I and Asset-II has not been completely condoned, there is dis-allowance of IEDC. Accordingly, details of IEDC allowed are as follows:

(₹ in lakh)

Assets	IEDC claimed as per Auditor Certificate (A)	IEDC disallowed due to time over-run not condoned (B)	IEDC Allowed (A-B)
Asset-I	158.34	78.17	80.17
Asset-II	607.41	216.60	390.81

Initial Spares

39. Regulation 23(d) of the 2019 Tariff Regulations provides that Initial Spares shall be capitalised as a percentage of plant and machinery cost up to cut-off date, 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%"

40. The Initial Spares as 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	Norm as per Regulations	Allowable Initial Spare as per Regulations	Excess Initial Spares
	A	B	C	D=[(A-B)*C/(100-C)]	E=(B-D)
Asset-I					
Sub-station Brown Field	1050.90	27.73	6.00	65.31	NIL
Asset-II					
Sub-station Brown Field	4419.64	159.68	6.00	271.91	NIL
Sub-station GIS Brown Field	3036.13	190.15	7.00	214.21	- NIL

41. The Petitioner has submitted the discharge statement for Initial Spares (Form-13). The Initial Spares discharge is as follows:

Particulars	Initial Spares claimed	Initial Spares Discharge			
		As on COD	2019-20	2020-21	2021-22
Asset-I					
Sub-station Brown Field	27.73	21.46	0.00	6.27	0.00
Asset-II					
Sub-station Brown Field	159.68	135.55	24.13	0.00	0.00
Sub-station GIS Brown Field	190.15	172.48	41.80	0.00	0.00

42. We have considered the submissions of Petitioner. The Initial Spares claimed by the Petitioner is within the norms under Regulation 23(d) of the 2019 Tariff Regulations. The Initial Spares allowed for the transmission assets are as follows:

Particulars	Plant and Machinery cost up to cut off date (excluding IDC and IEDC, land cost & Cost of Civil Works) (₹ in lakh)	Initial Spares claimed (₹ in lakh)	Norms as per 2019 Tariff Regulations (%)	Initial Spares allowable (₹ in lakh)	Excess Initial Spares (₹ in lakh)	Initial Spares allowed (₹ in lakh)
	A	B	C	D=[(A-B)*C/(100-C)]	E=(B-D)	
Asset-I						
Sub-station Brown Field	1050.90	27.73	6.00	65.31	NIL	27.73
Asset-II						
Sub-station Brown Field	4419.64	159.68	6.00	271.91	NIL	159.68
Sub-station GIS Brown Field	3036.13	190.15	7.00	214.21	NIL	190.15

43. The capital cost allowed as on COD is as follows:

(₹ in lakh)

Assets	Capital Cost claimed as on COD (Auditor Certificate) (A)	IDC Disallowed (B)	IEDC Disallowed I	Capital Cost allowed as on COD (D)=(A-B-C)
Asset-I	1107.49	119.50	78.17	909.82
Asset-II	8071.16	464.84	216.6	7389.72

Additional Capital Expenditure (ACE)

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

> ***"24. Additional Capitalisation within the original scope and upto the cut-off date***
>
> *(1) The additional capital expenditure in respect of a new project or an existing project incurred or projected to be incurred, on the following counts within the original scope of work, after the date of commercial operation and up to the cut-off date may be admitted by the Commission, subject to prudence check:*
>
> *(a) Undischarged liabilities recognized to be payable at a future date;*
> *(b) Works deferred for execution;*
> *(c) Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 23of 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 additional capital expenditure 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;
(g) Raising of ash dyke as a part of ash disposal system."

45. The Petitioner has submitted that the ACE incurred/ projected to be incurred for the transmission assets is mainly on account of Balance/ Retention Payments and is claimed under Regulation 24(1)(a) and time over-run 24(1)(b) of the 2019 Tariff Regulations. The Petitioner has claimed the following ACE:

(₹ in lakh)

Projected ACE			
2019-20 (Including Un-discharged IDC)	**2020-21 (Including Un-discharged IDC)**	**2021-22**	**2022-23**
0.00	212.29	71.88	0.00
532.01	388.03	356.64	0.00

46. We have considered the submissions made by the Petitioner. The ACE claimed by the Petitioner for the transmission assets has been allowed under Regulation 24(1)(a) and time over-run 21(1)(b) of the 2019 Tariff Regulations. Accordingly, the ACE allowed for the 2019-24 period is as follows:

(₹ in lakh)

Assets	ACE 2019-24			
	2019-20	2020-21	2021-22	2022-23
Asset-I	0.00	194.08	71.88	0.00
Asset-II	411.56	388.03	356.64	0.00

47. The capital cost considered for the transmission assets for the 2019-24 tariff period is as follows:

(₹ in lakh)

Assets	Capital Cost as on COD	ACE 2019-24				Capital Cost as on 31.3.2024
		2019-20	2020-21	2021-22	2022-23	
Asset-I	909.82	0.00	194.08	71.88	0.00	1175.78
Asset-II	7389.72	411.56	388.03	356.64	0.00	8545.95

Debt-Equity ratio

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

> ***"18. Debt-Equity Ratio:*** *(1) For new projects, the debt: equity ratio of 70:30 as on date of commercial operation shall be considered. If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:*
>
> *Provided that:*
> - *i. where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff:*
> - *ii. the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:*
> - *iii. any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt: equity ratio.*
>
> ***Explanation-*** *The premium, if any, raised by the generating company or the transmission licensee, as the case may be, while issuing share capital and investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on equity, only if such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station or the transmission system.*
>
> *(2) The generating company or the transmission licensee, as the case may be, shall submit the resolution of the Board of the company or approval of the competent authority in other cases regarding infusion of funds from internal resources in support of the utilization made or proposed to be made to meet the capital expenditure of the generating station or the transmission system including communication system, as the case may be.*
>
> *(3) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2019, debt: equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2019 shall be considered:*

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

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

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

(5) Any expenditure incurred or projected to be incurred on or after 1.4.2019 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this Regulation

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

49. The debt-equity considered for the purpose of computation of tariff for 2019-24 tariff period for the transmission assets is as follows:

Asset-I

Particulars	Capital Cost as on COD (₹ in lakh)	%	Capital Cost as on 31.3.2024 (₹ in lakh)	%
Debt	636.87	70.00	823.04	70.00
Equity	272.95	30.00	352.73	30.00
Total	**909.82**	**100.00**	**1175.78**	**100.00**

Asset-II

Particulars	Capital Cost as on COD (₹ in lakh)	%	Capital Cost as on 31.3.2024 (₹ in lakh)	%
Debt	5172.80	70.00	5982.16	70.00
Equity	2216.92	30.00	2563.78	30.00
Total	**7389.72**	**100.00**	**8545.95**	**100.00**

Depreciation

50. 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 31st March of the year closing after a period of 12 years from the effective date of commercial operation of the station shall be spread over the balance useful life of the assets.

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

(7) The generating company or the transmission licensee, as the case may be, shall submit the details of proposed capital expenditure five years before the

completion of useful life of the project along with justification and proposed life extension. The Commission based on prudence check of such submissions shall approve the depreciation on capital expenditure.

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

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

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

a) twenty five years, in case the generating station or unit thereof is in operation for fifteen years or less as on the date of operation of the emission control system; or
b) balance useful life of the generating station or unit thereof plus fifteen years, in case the generating station or unit thereof is in operation for more than fifteen years as on the date of operation of the emission control system; or
c) ten years or a period mutually agreed by the generating company and the beneficiaries, whichever is higher, in case the generating station or unit thereof has completed its useful life."

51. The depreciation has been worked out considering the admitted capital expenditure as on 31.3.2019 and accumulated depreciation up to 31.3.2019. The weighted average rate of depreciation (WAROD) has been worked (Annexure-I for Asset-I and Annexure-II for Asset-II) as per the rates of depreciation prescribed in the 2019 Tariff Regulations. The depreciation allowed for the transmission assets is as follows:

Asset-I

(₹ in lakh)

Particular	2020-21 (Pro-rata 364 days)	2021-22	2022-23	2023-24
Opening Gross Block (A)	909.82	1103.90	1175.78	1175.78
Projected ACE (B)	194.08	71.88	0.00	0.00
Closing Gross Block	1103.90	1175.78	1175.78	1175.78

(C) = (A+B)				
Average Gross Block (D) = [(A+C)/2]	1006.86	1139.84	1175.78	1175.78
Weighted Average Rate of Depreciation (WAROD) (%)	5.28	5.28	5.28	5.28
Balance useful life at the beginning of the year	25	25	24	23
Elapsed Life of the asset	0	0	1	2
Depreciable Value	906.17	1025.85	1058.20	1058.20
Depreciation during the year	**53.02**	**60.18**	**62.08**	**62.08**
Cumulative Depreciation at the end of the year	53.02	113.20	175.28	237.36
Remaining Depreciable Value at the end of the year	853.16	912.65	882.92	820.84

Asset-II

(₹ in lakh)

Particular	2019-20 (Pro-rata 356 days)	2020-21	2021-22	2022-23	2023-24
Opening Gross Block (A)	7389.72	7801.28	8189.31	8545.95	8545.95
Projected ACE (B)	411.56	388.03	356.64	0.00	0.00
Closing Gross Block (C) = (A+B)	7801.28	8189.31	8545.95	8545.95	8545.95
Average Gross Block (D) = [(A+C)/2]	7595.50	7995.29	8367.63	8545.95	8545.95
Weighted Average Rate of Depreciation (WAROD) (%)	5.34	5.32	5.31	5.31	5.31
Balance useful life at the beginning of the year	25	25	24	23	22
Elapsed Life of the asset	0	0	1	2	3
Depreciable Value	6847.62	7207.67	7543.18	7703.87	7703.87
Depreciation during the year	**394.18**	**425.37**	**444.68**	**454.07**	**454.07**
Cumulative Depreciation at the end of the year	394.18	819.56	1264.24	1718.31	2172.38
Remaining Depreciable Value at the end of the year	6453.44	6388.12	6278.94	5985.56	5531.49

Interest on Loan (IoL)

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

> ***"32. Interest on loan capital:*** *(1) The loans arrived at in the manner indicated in Regulation 18 of these regulations shall be considered as gross normative loan for calculation of interest on loan.*
>
> *(2) The normative loan outstanding as on 1.4.2019 shall be worked out by*

deducting the cumulative repayment as admitted by the Commission up to 31.3.2019 from the gross normative loan.

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

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

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

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

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

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

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

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

53. The Weighted Average Rate of IoL (WAROI) has been considered on the basis of rate prevailing as on 1.4.2019. The Petitioner has prayed that the change in interest rate due to floating rate of interest applicable, if any, during the 2019-24 tariff period will be adjusted. Accordingly, the floating rate of interest, if any, shall be considered at the time of true up. Therefore, the IoL has been allowed in accordance with Regulation 32 of the 2019 Tariff Regulations. The IoL approved for the transmission assets from their COD to 31.3.2024 are as follows:

Asset-I

(₹ in lakh)

Particulars	2020-21 (Pro-rata 364 days)	2021-22	2022-23	2023-24
Gross Normative Loan	636.87	772.73	823.04	823.04
Cumulative Repayments up to Previous Year	0.00	53.02	113.20	175.28
Net Loan-Opening	636.87	719.71	709.84	647.76
Additions	135.86	50.32	0.00	0.00
Repayment during the year	53.02	60.18	62.08	62.08
Net Loan-Closing	719.71	709.84	647.76	585.68
Average Loan	678.29	714.78	678.80	616.72
Weighted Average Rate of Interest on Loan (%)	7.4710	7.4720	7.4729	7.4710
Interest on Loan	**50.54**	**53.41**	**50.73**	**46.08**

Asset-II

(₹ in lakh)

Particulars	2019-20 (Pro-rata 356 days)	2020-21	2021-22	2022-23	2023-24
Gross Normative Loan	5172.80	5460.89	5732.52	5982.16	5982.16
Cumulative Repayments up to Previous Year	0.00	394.18	819.56	1264.24	1718.31
Net Loan-Opening	5172.80	5066.71	4912.96	4717.93	4263.85
Additions	288.09	271.62	249.65	0.00	0.00
Repayment during the year	394.18	425.37	444.68	454.07	454.07
Net Loan-Closing	5066.71	4912.96	4717.93	4263.85	3809.78
Average Loan	5119.76	4989.84	4815.44	4490.89	4036.82
Weighted Average Rate of Interest on Loan (%)	7.8559	7.8511	7.8420	7.8314	7.8135
Interest on Loan	**391.21**	**391.76**	**377.63**	**351.70**	**315.42**

Return on Equity (RoE)

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

> ***"30. Return on Equity****: (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with Regulation 18 of these regulations.*
>
> *(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating station, transmission system including communication system and run-of-river hydro generating station, and at the base rate of 16.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run-of-river generating station with pondage:*

Provided that return on equity in respect of additional capitalization after cutoff date beyond the original scope, excluding additional capitalization on 7 account of emission control system, shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system or in the absence of actual loan portfolio of the generating station or the transmission system, the weighted average rate of interest of the generating company or the transmission licensee, as the case may be, as a whole shall be considered, subject to ceiling of 14%.

Provided further that:

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

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

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

a) rate of return on equity shall be reduced by 0.25% in case of failure to achieve the ramp rate of 1% per minute;

b) an additional rate of return on equity of 0.25% shall be allowed for every incremental ramp rate of 1% per minute achieved over and above the ramp rate of 1% per minute, subject to ceiling of additional rate of return on equity of 1.00%:

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

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

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

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

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."

55. The Petitioner has submitted that MAT rate is applicable to the Petitioner's company. Accordingly, the 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. The RoE allowed for the transmission assets are as follows:

Asset-I

(₹ in lakh)

Particulars	2020-21 (Pro-rata 364 days)	2021-22	2022-23	2023-24
Opening Equity (A)	272.95	331.17	352.73	352.73
Additions (B)	58.22	21.56	0.00	0.00
Closing Equity (c) = (A+B)	331.17	352.73	352.73	352.73
Average Equity (D) = [(A+C)/2]	302.06	341.95	352.73	352.73
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500
MAT Rate for respective year (%)	17.472	17.472	17.472	17.472
Rate of Return on Equity (%)	18.782	18.782	18.782	18.782
Return on Equity	**56.58**	**64.23**	**66.25**	**66.25**

Asset-II

(₹ in lakh)

Particulars	2019-20 (Pro-rata 356 days)	2020-21	2021-22	2022-23	2023-24
Opening Equity (A)	2216.92	2340.38	2456.79	2563.78	2563.78
Additions (B)	123.47	116.41	106.99	0.00	0.00
Closing Equity (C) = (A+B)	2340.38	2456.79	2563.78	2563.78	2563.78
Average Equity (D) = [(A+C)/2]	2278.65	2398.59	2510.29	2563.78	2563.78
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (%)	17.472	17.472	17.472	17.472	17.472
Rate of Return on Equity (%)	18.782	18.782	18.782	18.782	18.782
Return on Equity	**416.28**	**450.50**	**471.48**	**481.53**	**481.53**

Operation & Maintenance Expenses (O&M Expenses)

56. The O&M Expenses claimed by the Petitioner for the transmission assets for the 2019-24 period are as follows:

Asset-I

(₹ in lakh)

Particulars	2020-21 (Pro-rata 364 days)	2021-22	2022-23	2023-24
1 No. 220 kV 160 MVA ICT (Kameng/ Balpara)	40.53	42.08	43.52	45.12
Total O&M Expenses	**40.53**	**42.08**	**43.52**	**45.12**

Asset-II

(₹ in lakh)

Particulars	2019-20 (Pro-rata 356 days)	2020-21	2021-22	2022-23	2023-24
0.6 km Double Circuit (twin conductors) (220 kV Bongaigaon-Salalkati line)	0.51	0.55	0.57	0.59	0.61

1 Number of 400 kV bay (Bongaigaon ICT II Bay)	31.27	33.28	34.45	35.66	36.91
4 Number of 220 kV GIS bays (Bongaigaon ICT I and II Bay) (Salakati I and II Bay)	61.30	65.24	67.54	69.88	72.36
1 Number of 220 kV line Bay (Salakati-Bongaigaon II Bay)	21.89	23.30	24.12	24.96	25.84
1 Number 400 kV 315 MVA ICT (Bongaigaon ICT II)	109.69	116.87	120.96	125.37	129.47
Total O&M Expenses	**224.66**	**239.24**	**247.64**	**256.46**	**265.19**

57. The O&M norms specified under Regulation 35(3)(a) of the 2019 Tariff Regulations are 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***
Norms for sub-station Bays (Rs Lakh per bay)					
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*
Norms for Transformers (Rs Lakh per MVA)					
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*
Norms for AC and HVDC lines (Rs Lakh per km)					
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*
Norms for HVDC stations					
HVDC Back-to-Back stations	*834*	*864*	*894*	*925*	*958*

(Rs Lakh per 500 MW) (Except Gazuwaka BTB)					
Gazuwaka HVDC Back-to-Back station (Rs. 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 ±500 kV Mundra-Mohindergarh HVDC bipole scheme (2500 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.

(4) Communication system: *The operation and maintenance expenses for the communication system shall be worked out at 2.0% of the original project cost related to such communication system. The transmission licensee shall submit the actual operation and maintenance expenses for truing up."*

58. The O&M Expenses allowed out for the transmission elements covered in the instant petition are as follows:

Asset-I

(₹ in lakh)

	2020-21 (Pro-rata 364 days)	**2021-22**	**2022-23**	**2023-24**
O&M Expenses				
1 Number of 220 kV 160MVA ICT (Kameng/ Balpara)				
Norms (₹ lakh/MVA)	0.254	0.263	0.272	0.282
Total	160	160	160	160
Total O&M expense allowed (₹ in lakh)	**40.53**	**42.08**	**43.52**	**45.12**

Asset-II

(₹ in lakh)

	2019-20 (Pro-rata 356 days)	**2020-21**	**2021-22**	**2022-23**	**2023-24**
O&M Expenses					
0.6 km Double Circuit (twin conductors) (220 kV Bongaigaon-Salalkati line)					
Norms (₹ lakh/km)	0.881	0.912	0.944	0.977	1.011
Total	0.53	0.55	0.57	0.59	0.61
1 Number of 400 kV bay (Bongaigaon ICT II Bay)					
Norms (₹ lakh/Bay)	32.15	33.28	34.45	35.66	36.91
Total	32.15	33.28	34.45	35.66	36.91
1 Number of 220 kV bay (Salakati-Bongaigaon II Bay)					
Norms (₹ lakh/Bay)	22.51	23.3	24.12	24.96	25.84
Total	22.51	23.30	24.12	24.96	25.84
4 Number of 220 kV GIS bay (Bongaigaon ICT I and II Bay) (Salakati I and II Bay)					
Norms (₹ lakh/Bay)	15.757	16.31	16.884	17.472	18.088
Total	63.03	65.24	67.54	69.89	72.35
1 Number of 400 kV 315 MVA ICT (Bongaigaon ICT II)					
Norms (₹ lakh/MVA)	0.358	0.371	0.384	0.398	0.411
Total	112.77	116.87	120.96	125.37	129.47
Total O&M Expense allowed (₹ in lakh)	**224.68**	**239.23**	**247.63**	**256.46**	**265.17**

Interest on Working Capital (IWC)

59. Regulation 34(1)I, 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:*
>
> ***(a) For Coal-based/lignite-fired thermal generating stations:***
> *(i) Cost of coal or lignite and limestone towards stock, if applicable, for 10 days for pit-head generating stations and 20 days for non-pit-head generating stations for generation corresponding to the normative annual plant availability factor or the maximum coal/lignite stock storage capacity whichever is lower;*
> *(ii) Advance payment for 30 days towards cost of coal or lignite and limestone for generation corresponding to the normative annual plant availability factor;*
> *(iii) Cost of secondary fuel oil for two months for generation corresponding to the normative annual plant availability factor, and in case of use of more than one secondary fuel oil, cost of fuel oil stock for the main secondary fuel oil;*
> *(iv) Maintenance spares @ 20% of operation and maintenance expenses including water charges and security expenses;*
> *(v) Receivables equivalent to 45 days of capacity charge and energy charge for sale of electricity calculated on the normative annual plant availability factor; and*
> *(vi) Operation and maintenance expenses, including water charges and security expenses, for one month.*
>
> ***(aa) For emission control system of coal or lignite based thermal generating stations:***
> ***(****i) Cost of limestone or reagent towards stock for 20 days corresponding to the normative annual plant availability factor;*
> *(ii) Advance payment for 30 days towards cost of reagent for generation corresponding to the normative annual plant availability factor;*
> *(iii) Receivables equivalent to 45 days of supplementary capacity charge and supplementary energy charge for sale of electricity calculated on the normative annual plant availability factor;*
> *(iv) Operation and maintenance expenses in respect of emission control system for one month;*
> *(v) Maintenance spares @20% of operation and maintenance expenses in respect of emission control system.*
>
> ***(b) For Open-cycle Gas Turbine/Combined Cycle thermal generating stations:***
> *(i) Fuel cost for 30 days corresponding to the normative annual plant availability factor, duly taking into account mode of operation of the generating station on gas fuel and liquid fuel;*
> *(ii) Liquid fuel stock for 15 days corresponding to the normative annual plant availability factor, and in case of use of more than one liquid fuel, cost of main liquid fuel duly taking into account mode of operation of the generating stations of gas fuel and liquid fuel;*
> *(iii) Maintenance spares @ 30% of operation and maintenance expenses including water charges and security expenses;*

(iv) Receivables equivalent to 45 days of capacity charge and energy charge for sale of electricity calculated on normative plant availability factor, duly taking into account mode of operation of the generating station on gas fuel and liquid fuel; and

(v) Operation and maintenance expenses, including water charges and security expenses, for one month.

(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.

(2) The cost of fuel in cases covered under sub-clauses (a) and (b) of clause (1) of this Regulation shall be based on the landed fuel cost (taking into account normative transit and handling losses in terms of Regulation 39 of these regulations) by the generating station and gross calorific value of the fuel as per actual weighted average for the third quarter of preceding financial year in case of each financial year for which tariff is to be determined:

(3) Provided that in case of new generating station, the cost of fuel for the first financial year shall be considered based on landed fuel cost (taking into account normative transit and handling losses in terms of Regulation 39 of these regulations) and gross calorific value of the fuel as per actual weighted average for three months, as used for infirm power, preceding date of commercial operation for which tariff is to be determined) 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:

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

***"3. Definition–. -** In these regulations, unless the context otherwise requires:-*

*'**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;"*

60. The IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The Rate of Interest (RoI) considered is 12.05% (SBI 1-year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points) for 2019-20, RoI 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, RoI for 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 are as follows:

Asset-I

(₹ in lakh)

Particulars	2020-21 (Pro-rata 364 days)	2021-22	2022-23	2023-24
WC for O&M Expenses (O&M Expenses for 1 month)	3.39	3.51	3.63	3.76
WC for Maintenance Spares (15% of O&M Expenses)	6.10	6.31	6.53	6.77
WC for Receivables (Equivalent to 45 days of annual transmission charges)	25.29	27.59	27.93	27.48
Total Working Capital	**34.77**	**37.41**	**38.09**	**38.01**
Rate of Interest (%)	11.25	10.50	10.50	10.50
Interest on Working Capital	**3.90**	**3.93**	**4.00**	**3.99**

Asset-II

(₹ in lakh)

Particulars	2019-20 (Pro-rata 356 days)	2020-21	2021-22	2022-23	2023-24
WC for O&M Expenses (O&M Expenses for 1 month)	19.25	19.94	20.64	21.37	22.10
WC for Maintenance Spares (15% of O&M Expenses)	34.65	35.88	37.14	38.47	39.78
WC for Receivables (Equivalent to 45 days of annual transmission charges)	183.82	189.18	193.29	193.61	189.66
Total Working Capital	**237.72**	**245.00**	**251.07**	**253.45**	**251.54**
Rate of Interest (%)	12.05	11.25	10.50	10.50	10.50
Interest on Working Capital	**27.86**	**27.56**	**26.36**	**26.61**	**26.41**

Annual Fixed Charges for the 2019-24 Tariff Period

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

Asset-I

(₹ in lakh)

Particulars	2020-21 (Pro-rata 364 days)	2021-22	2022-23	2023-24
Depreciation	53.02	60.18	62.08	62.08
Interest on Loan	50.54	53.41	50.73	46.08
Return on Equity	56.58	64.23	66.25	66.25

O & M Expenses	40.53	42.08	43.52	45.12
Interest on Working Capital	3.90	3.93	4.00	3.99
Total	**204.56**	**223.83**	**226.58**	**223.52**

Asset-II

(₹ in lakh)

Particulars	2019-20 (Pro-rata 356 days)	2020-21	2021-22	2022-23	2023-24
Depreciation	394.18	425.37	444.68	454.07	454.07
Interest on Loan	391.21	391.76	377.63	351.70	315.42
Return on Equity	416.28	450.50	471.48	481.53	481.53
O & M Expenses	224.68	239.23	247.63	256.46	265.17
Interest on Working Capital	27.86	27.56	26.36	26.61	26.41
Total	**1454.22**	**1534.43**	**1567.79**	**1570.38**	**1542.61**

Filing Fee and the Publication Expenses

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

63. 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 Regulations 70 (3) of the 2019 Tariff Regulations for 2019-24 tariff period.

Goods and Services Tax

64. 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

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

Sharing of Transmission Charges

66. With effect from 1.11.2020, sharing of transmission charges is governed by the Central Electricity Regulatory Commission (Sharing of Transmission Charges and Losses) Regulations, 2020 (in short, "the 2020 Sharing Regulations"). Accordingly, the liabilities of the DICs for arrears of transmission charges determined through this order shall be computed DIC-wise in accordance with the provisions of respective Tariff Regulations and shall be recovered from the concerned DICs through Bill 2 under Regulation 15(2)(b) of the 2020 Sharing Regulations. For subsequent period, the billing, collection and disbursement of the transmission charges approved in this order shall be governed by the provisions of the 2020 Sharing Regulations as provided in Regulation 57 of the 2019 Tariff Regulations.

67. To summarise, the AFC allowed for the transmission assets for the 2019-24 tariff period in this order are as follows:

Asset-I

(₹ in lakh)

Particulars	2020-21 (Pro-rata 364 days)	2021-22	2022-23	2023-24
AFC	204.56	223.83	226.58	223.52

Asset-II

(₹ in lakh)

Particulars	2019-20 (Pro-rata 356 days)	2020-21	2021-22	2022-23	2023-24
AFC	1454.22	1534.43	1567.79	1570.38	1542.61

68. The Annexure(s) to this order form part of the order.

69. This order disposes of Petition No. 26/TT/2021 in terms of above findings and discussion.

sd/-	**sd/-**	**sd/-**	**sd/-**
(P.K. Singh)	**(Arun Goyal)**	**(I.S. Jha)**	**(P.K. Pujari)**
Member	**Member**	**Member**	**Chairperson**

ANNEXURE-I

2019-24	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 Regulations	Annual Depreciation as per Regulations (₹ in lakh)			
Capital Expenditure		2020-21	2021-22	Total			2020-21	2021-22	2022-23	2023-24
Sub-Station	909.82	194.08	71.88	265.96	1175.78	5.28%	53.16	60.18	62.08	62.08
Total	**909.82**	**194.08**	**71.88**	**265.96**	**1175.78**		**53.16**	**60.18**	**62.08**	**62.08**
					Average Gross Block (₹ in lakh)		**1006.86**	**1139.84**	**1175.78**	**1175.78**
					Weighted Average Rate of Depreciation		**5.28%**	**5.28%**	**5.28%**	**5.28%**

ANNEXURE-II

2019-24	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 Regulations (%)	Annual Depreciation as per Regulations (₹ in lakh)				
Capital Expenditure		**2019-20**	**2020-21**	**2021-22**	**Total**			**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Building Civil Works & Colony	331.84	71.50	54.16	22.77	148.43	480.27	3.34	12.28	14.38	15.66	16.04	25.52
Transmission Line	18.93	1.36	0.69	0.69	2.74	21.67	5.28	1.04	1.09	1.13	1.14	1.15
Sub Station	6922.61	337.99	329.13	329.13	996.25	7918.86	5.28	374.44	392.05	409.43	418.12	420.75
IT Equipment (Including Software)	116.33	0.71	4.05	4.05	8.81	125.14	15.00	17.50	17.86	18.47	18.77	18.77
Total	**7389.72**	**411.56**	**388.03**	**356.64**	**1156.23**	**8545.95**		**405.25**	**425.37**	**444.68**	**454.07**	**454.07**
						Average Gross Block (₹ in lakh)		**7595.50**	**7995.29**	**8367.63**	**8545.95**	**8545.95**
						Weighted Average Rate of Depreciation		**5.34%**	**5.32%**	**5.31%**	**5.31%**	**5.31%**