

BEFORE
THE CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

Petition No. ___/TT/ ___

IN THE MATTER OF: -

Petition for truing up of transmission tariff for 2019-24 and determination of transmission tariff for 2024-29 tariff block for assets under "**System Strengthening Scheme in Roorkee in Northern Region**" under Section 62 read with Section 79 (1) (d) of the Electricity Act, 2003 and under the Regulation 15 (1) (a) and Regulation 23 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 2023 read with Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 and Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2024.

Power Grid Corporation of India Ltd.

--- PETITIONER

Registered office: B-9, Qutab Institutional Area,
Katwaria Sarai, New Delhi. 110 016.
Corporate Centre: 'SAUDAMINI', Plot No-2,
Sector-29, Gurgaon-122 001 (Haryana).

--- RESPONDENT(S)

Uttar Pradesh Power Corporation Ltd.
Shakti Bhawan, 14, Ashok Marg
Lucknow - 226 001
Represented by its Chairman
And others

FILED BY
POWER GRID CORPORATION OF INDIA LTD.

GURGAON

REPRESENTED BY

DATED: 25.07.2024

(V.C. Sekhar)
Sr. General Manager (Regulatory Cell)



**BEFORE
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NEW DELHI**

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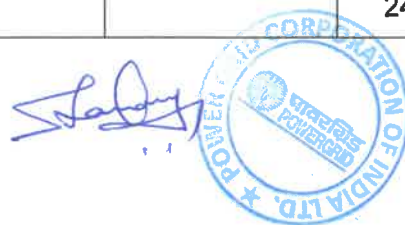
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**FILED BY
POWER GRID CORPORATION OF INDIA LTD.**

GURGAON

DATED: 25.07.2024

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(V.C. Sekhar)
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Shakti Bhawan, 14, Ashok Marg

Lucknow - 226 001

Represented by Its Chairman

And others

----- RESPONDENT(S)

To
The Secretary
Central Electricity Regulatory Commission
New Delhi 110001
Sir,



The present tariff Petition is filed under Section 62 read with Section 79 (1) (d) of the Electricity Act, 2003 and under the Regulation 15 (1) (a) and Regulation 23 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 2023 read with Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 and Central Electricity Regulatory Commission (Terms and Conditions of Tariff)

Regulations, 2024 and same may please be registered and taken on record by the Hon'ble Commission.

GURGAON

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DATED:- 25.07.2024

POWER GRID CORPORATION OF INDIA LTD.

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(V.C. Sekhar)

Sr. General Manager (Regulatory Cell)



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Uttar Pradesh Power Corporation Ltd.

----- RESPONDENT(S)

Shakti Bhawan, 14, Ashok Marg

Lucknow - 226 001

Represented by Its Chairman

And others

MEMO OF PARTIES

Power Grid Corporation of India Ltd.

VERSUS

--- PETITIONER

Northern Region

--- RESPONDENT

1. UTTAR PRADESH POWER CORPORATION LTD.
SHAKTI BHAWAN, 14, ASHOK MARG
LUCKNOW - 226 001
REPRESENTED BY ITS CHAIRMAN
2. AJMER VIDYUT VITRAN NIGAM LTD
CORPORATE OFFICE, VIDYUT BHAWAN,
PANCHSHEEL NAGAR, MAKARWALI ROAD
AJMER-305004 (RAJASTHAN)
REPRESENTED BY ITS MANAGING DIRECTOR

⁶




3. JAIPUR VIDYUT VITRAN NIGAM LTD
132 KV, GSS RVPNL SUB- STATION BUILDING,
CALIGIRI ROAD, MALVIYA NAGAR, JAIPUR-302017
(RAJASTHAN)
REPRESENTED BY ITS MANAGING DIRECTOR
4. JODHPUR VIDYUT VITRAN NIGAM LTD
NEW POWER HOUSE, INDUSTRIAL AREA ,
JODHPUR – 342 003(RAJASTHAN)
REPRESENTED BY ITS MANAGING DIRECTOR
5. HIMACHAL PRADESH STATE ELECTRICITY BOARD LTD
VIDYUT BHAWAN
KUMAR HOUSE COMPLEX BUILDING II
SHIMLA-171 004
REPRESENTED BY ITS CHAIRMAN
6. PUNJAB STATE POWER CORPORATION LIMITED
THE MALL, PSEB HEAD OFFICE, PATIALA - 147 001
REPRESENTED BY ITS CHAIRMAN AND MANAGING
DIRECTOR
7. HARYANA POWER PURCHASE CENTRE
SHAKTI BHAWAN, SECTOR-6
PANCHKULA (HARYANA) 134 109
REPRESENTED BY ITS S.E. / C & R-1
8. JAMMU KASHMIR POWER CORPORATION LIMITED
220/66/33 KV GLADNI SS SLDC BULIDING
NARWAL, JAMMU
REPRESENTED BY ITS CHAIRMAN
9. BSES YAMUNA POWER Ltd,
B-BLOCK, SHAKTI KIRAN, BLDG.
(NEAR KARKADOOMA COURT),
KARKADOOMA 2ND FLOOR,
NEW DELHI-110092
REPRESENTED BY ITS CEO
10. BSES RAJDHANI POWER Ltd,
BSES BHAWAN, NEHRU PLACE,
NEW DELHI
REPRESENTED BY ITS CEO



11. TATA POWER DELHI DISTRIBUTION LTD.
33 KV SUBSTATION, BUILDING
HUDSON LANE, KINGSWAY CAMP
NORTH DELHI - 110009
REPRESENTED BY ITS CEO
12. CHANDIGARH ELECTRICITY DEPTT.
CHANDIGARH ADMINISTRATION
SECTOR -9, CHANDIGARH.
REPRESENTED BY ITS CHIEF ENGINEER
13. UTTARAKHAND POWER CORPORATION LTD.
URJA BHAWAN
KANWALI ROAD
DEHRADUN.
REPRESENTED BY ITS MANAGING DIRECTOR
14. NORTH CENTRAL RAILWAY
ALLAHABAD.
REPRESENTED BY CHIEF ELECTRICAL
DISTRIBUTIONENGINEER
15. NEW DELHI MUNICIPAL COUNCIL
PALIKA KENDRA, SANSAD MARG,
NEW DELHI-110002
REPRESENTED BY CHAIRMAN

GURGAON

DATED: 25.07.2024

PETITIONER
POWER GRID CORPORATION OF INDIA LTD.
REPRESENTED BY


(V.C. Sekhar)
Sr. General Manager (Regulatory Cell)



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Uttar Pradesh Power Corporation Ltd.

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Lucknow - 226 001

Represented by Its Chairman

And others

--- RESPONDENT(S)

MEMO OF APPEARANCE

POWER GRID CORPORATION OF INDIA LTD.

-- PETITIONER

1. Shri Dilip Nagesh Rozekar, ED (Commercial & RC), POWERGRID
2. Shri Mohd. Mohsin, Chief GM (Comml- Petition), POWERGRID
3. **V.C. Sekhar, Sr. GM (Commercial-RC), POWERGRID**
4. Shri Zafrul Hasan, GM (Comml- Petition), POWERGRID



I, V.C. Sekhar, the Petitioner above named do hereby nominate to act, plead and appear on my behalf in the aforesaid matter.

IN WITNESS WHEREOF I have set and subscribed my hands to this writing on this --- day of July 2024.

PETITIONER
POWER GRID CORPORATION OF INDIA LTD.



(V.C. Sekhar)

GURGAON

DATED:- 25.07.2024

Sr. General Manager (Regulatory Cell)



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----- RESPONDENT(S)

Shakti Bhawan, 14, Ashok Marg

Lucknow - 226 001

Represented by Its Chairman

And others

A. Executive Summary of the Petition:

(i) Brief Background of the Petitioner

1. The Petitioner herein, Power Grid Corporation of India Ltd. (Hereinafter referred to as “**POWERGRID/Petitioner**”) is a Government Company within the meaning of the Companies Act, 2013. POWERGRID is deemed transmission licensee in terms of Section 14 of the Electricity Act, 2003. POWERGRID by virtue of a transmission licensee is required to inter-alia build, own, operate and maintain an efficient, coordinated and economical inter-state transmission system (“**ISTS**”). POWERGRID operates and functions within the regulatory control of this Hon’ble Central Electricity Regulatory Commission (hereinafter referred to as “**Hon’ble Commission**”). Tariff for



the transmission system established by POWERGRID is required to be determined by this Hon'ble Commission in accordance with the Tariff Regulations as notified by this Hon'ble Commission in exercise of its powers under Section 178 of the Electricity Act, 2003.

(ii) Brief background of the Respondent(s):

POWERGRID has impleaded distribution licensees and Government departments of the respective states which are engaged in distribution of electricity in Northern Region of India. The respondents are also 'Designated Inter State Transmission Customer' (hereinafter referred to as 'DICs') from Northern region in terms of the 2020 Sharing Regulations.

(iii) Background of Transmission Assets:

2. POWERGRID has filed the present petition for truing up of transmission tariff for 2019-24 and determination of transmission tariff for 2024-29 tariff block for below asset under "**System Strengthening Scheme in Roorkee in Northern Region**":

Asset No	Asset Name	DOCO	Remarks
Combined Asset	Asset-I: LILO of 400 kV Rishikesh Muzaffarnagar Transmission line at Roorkee along with associated bays at Roorkee Sub-station, Asset-II: 315 MVA 400/220 kV ICT-I along with associated bays at Roorkee Sub-station, Asset-III: 315 MVA 400/220 kV ICT-II along with associated bays at Roorkee Sub-station	01.04.2009 01.04.2009 & 01.04.2010	Effective COD: 17.08.2009

(iv) Summary of Claims:

3. A. POWERGRID is seeking truing up of transmission tariff for 2019-24 and determination of transmission tariff for 2024-29 tariff block for aforesaid transmission asset on capital cost comprising of expenditure incurred/Admitted upto 31.03.2019/DOCO and additional capital expenditure during 2019-24 & 2024-29 in accordance with provisions of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 ("**Tariff Regulations, 2019**") and Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2024 ("**Tariff Regulations, 2024**").



4. The details of FR/RCE apportioned approved cost vis-a-vis claimed capital cost as on 31.03.2019 and additional capital expenditure during 2019-24 and 2024-29 tariff block are as under:

Rs in lakhs

Asset No.	Apportioned Approved Cost as per FR	Expenditure Up to DOCO /31.03.2019	Expenditure during 2019-24 tariff block	Actual Cost as on 31.03.2024
Combined Asset	10995.17	9449.56	No add cap	9449.56

Rs in lakhs

Asset No.	Apportioned Approved Cost as per FR	Expenditure Up to 31.03.2024	Expenditure during 2024-29 tariff block	Actual Cost as on 31.03.2029
Combined Asset	10995.17	9449.56	No add cap	9449.56

5. Details of tariff claimed are as under:

True up annual transmission tariff for 2019-24 tariff block:

Rs in Lakhs

Name of the asset	Particular	2019-20	2020-21	2021-22	2022-23	2023-24
Combined Asset	AFC approved	1508.57	1473.66	1441.08	1138.03	1132.46
	Revised AFC based on truing up	1743.93	1716.91	1690.32	1396.69	1404.24

Tariff claimed for 2024-29 tariff block:

Rs in Lakhs

Name of the asset	2024-25	2025-26	2026-27	2027-28	2028-29
Combined Asset	1226.86	1233.90	1240.98	1249.20	1259.34

6. It is prayed to hon'ble commission to reimburse expenditure of petition filing fee, license fee, newspaper publication expenses and RLDC fee & charges etc.

B. Detailed Petition:

MOST RESPECTFULLY SHOWETH:

13



Issue wise submission(s):

7. The Petitioner herein, Power Grid Corporation of India Ltd/ POWERGRID. is a Government Company within the meaning of the Companies Act, 1956. POWERGRID is a deemed transmission licensee under Section 14 of the Electricity Act 2003.
8. POWERGRID being transmission licensee is required to inter-alia build, own, operate and maintain an efficient, coordinated and economical inter-state transmission system (ISTS). The tariff for the said transmission systems shall be determined by the Hon'ble Commission in accordance with the provisions of Tariff Regulations, 2019 and 2024.
9. That the subject project/petition covers approval of transmission tariff for following Asset:

Asset No	Asset Name	DOCO	Remarks
Combined Asset	Asset-I: LILO of 400 kV Rishikesh Muzaffarnagar Transmission line at Roorkee along with associated bays at Roorkee Sub-station, Asset-II: 315 MVA 400/220 kV ICT-I along with associated bays at Roorkee Sub-station, Asset-III: 315 MVA 400/220 kV ICT-II along with associated bays at Roorkee Sub-station	01.04.2009 01.04.2009 & 01.04.2010 Effective COD: 17.08.2009	Earlier covered under petition no. 153/TT/2020 now covered under instant petition

10. Cost details:

The capital cost of Rs. 9449.56 Lakhs for subject Asset has been admitted by Hon'ble commission vide order dated 02.02.2021 in petition no. 153/TT/2020. Copy of order is enclosed as **Encl-1**. In the current petition, no additional capital expenditure was incurred during the 2019-24 tariff block, and no additional capital expenditures are proposed during the 2024-29 tariff block.

11. Transmission tariff:



The truing up exercise for the period 2019-2024 is to be done at the time of filing tariff petition for next block, i.e. 2024-29 period as per Regulation 13 of Tariff Regulation, 2019.

Regulation 13 of Tariff Regulation, 2019:

Quote

“The Commission shall carry out truing up exercise for the period 2019-24 along with the tariff petition filed for the next tariff period, for the following:

-----”

Unquote

That the Petitioner is required to adjust the yearly impact of MAT as per Regulation 31 (3) of the Tariff Regulations, 2019 dated 07.03.2019 in the truing up petition for 2019-24 tariff block.

Regulation 31 (3) of the tariff Regulation, 2019:

Quote

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.

Unquote

It is submitted that the Income Tax assessment of the Petitioner has been completed and Assessment Orders have been issued by the Income Tax Department for FY 2019-20 and 2020-21; and that the Income Tax returns have been filed with the Income Tax Department for FY 2021-22 & 2022-23. Further, it is submitted that the Income Tax Return for 2023-24 will be filed in due course.



As such, basis of year wise effective tax rate and Grossed up ROE to be trued up accordingly for the block period 2019-24 is summarized as under:-

Financial Year	Basis considered	Total Tax & Interest paid (Rs)	Assessed MAT Income under Sec 115 JB (Rs)	Effective Tax percentage	Grossed up ROE (Base rate/(1-t))
2019-20	Assessment Order	24,52,62,76,991	1,40,37,47,53,855	17.472%	18.782%
2020-21	Assessment Order	26,08,93,59,008	1,49,32,09,65,036	17.472%	18.782%
2021-22	Actual Tax paid	31,81,46,40,406	1,82,08,92,88,030	17.472%	18.782%
2022-23	Actual Tax paid	30,42,88,20,993	1,74,15,76,29,306	17.472%	18.782%
2023-24	Applicable Rate #		#	17.472%	18.782%

Based on the applicable rate of MAT @ 15 %, Surcharge @ 12% & Cess @ 4%

The above Effective Tax percentage shall be applied by the petitioner in arriving out the Grossed up ROE rate in all cases of truing up petitions to be filed for the period 2019-24. It is submitted that effective rate of tax considered for FY 2019-20 and 2020-21 are based on Assessment Order issued by Income-Tax authorities, for the purpose of grossing up of ROE rate and that the effective rate of tax considered for F/Y 2021-22 and F/Y 2022-23 are based on the Income-tax returns filed, for the purpose of grossing up of ROE rate of respective years. Further, for F/Y 2023-24, pending filing of ITR, effective tax rate is calculated based the applicable MAT rate (i.e. MAT 15% + Surcharge 12.00% + Cess 4%), for the purpose of grossing up of ROE rate.

The Hon'ble Commission is requested to allow the petitioner to claim the differential tariff on account of the trued up ROE based on effective tax rate calculated on completion of Income-tax assessment/re-assessment for the F/Y 2019-20, 2020-21, 2021-22, 2022-23 and 2023-24 on receipt of the respective assessment orders, directly from the beneficiaries, on year to year basis as provided in the regulation.



In line with the above Regulation, the tariff for each year of the tariff period 2019-24 block has been trued up considering the above Effective Tax percentage to arrive at Grossed up ROE rate.

While filing Tariff petition for 2019-24 period, the petitioner had prayed for allowing the floating rate of Interest on loan adjustments. As per Hon'ble Commission order dated 18.04.2022 in petition no. 26/TT/2021, it has been stated that the weighted average rate of IoL has been considered on the basis of rate prevailing as on 1.4.2019 and accordingly, the floating rate of interest on actual, applicable from time to time, if any, during 2019-24 tariff shall be considered at the time of true up or next revision of tariff.

Accordingly in the present petition, truing up of transmission tariff for the tariff block 2019-24 is being carried out based on of actual additional capitalization during 2019-24 tariff block, change in MAT rate as well as actual floating rate of interest during 2019-24.

12. The trued up annual transmission tariff for the tariff period 2019-24 is summarized as below:

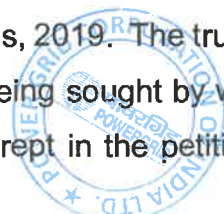
Rs in Lakh

Project		2019-20	2020-21	2021-22	2022-23	2023-24
Combined Asset	AFC approved	1508.57	1473.66	1441.08	1138.03	1132.46
	Revised AFC based on truing up	1743.93	1716.91	1690.32	1396.69	1404.24

Tariff filing forms along with the other relevant information and supporting documents are attached hereto as **Encl-2**.

It is to be submitted that under the subject project 2 No. of 315 MVA, 400/220 kV ICTs were involved at Roorkee Sub-Station. POWERGRID while filing the petition for Truing up tariff of 2014-19 and Tariff of 2019-24 (Petition no: 153/TT/2020) inadvertently missed out in claiming the O&M expenses of ICTs based of MVA Capacity even though the same was permitted by way of the substantive Regulations i.e. Tariff Regulation, 2019.

The inadvertent error has occurred only for the reason that there was no separate norm in the Tariff Regulations, 2014 for claiming the O&M of ICT based of MVA capacity but the same has been introduced in the Tariff Regulations, 2019. The truing up for the period 2014-19 and tariff for the period 2019-24 was being sought by way of a common petition and therefore, this inadvertent error was crept in the petition.



Since the O&M expenses of ICT based of MVA capacity is being incurred by POWERGRID and the same is also statutorily recognised in Regulation 35(3)(a) of the Tariff Regulations, 2019. O&M of these ICTs is being claimed under subject petition. The above inadvertent error that has occurred should not prejudice the claim of POWERGRID to pray for allowing this expenditure in the instant petition.

Further, POWERGRID has also filed Interlocutory Application no: 25/IA/2023 in Petition no: 153/TT/2020 for allowing O&M expenses of ICT based of MVA Capacity at the time of Truing up of 2019-24 and determination of Tariff 2024-29. The same is at hearing stage.

That in the subject petition, details are provided in various Tariff Forms with respect to Capital Cost as per books / Gross Block amount as per Books. It is submitted that the petitioner has opted for deemed cost exemption as per Para D7 AA of Ind AS 101 'First-time Adoption of Indian Accounting Standards'. Accordingly Carrying value i.e. Gross Block less Accumulated Depreciation is considered as deemed cost as on the date of transition i.e. 1st April 2015. As such, in case of assets commissioned before 01.04.2015, the accumulated depreciation as on 1st April 2015 is added back to the deemed Capital Cost as per books / Gross Block amount as per Books for arriving at the figures to be provided in various Tariff Forms.

13. The tariff worked out for 2024-29 tariff block is summarized below:

Rs in Lakh

Project		2024-25	2025-26	2026-27	2027-28	2028-29
Combined Asset	AFC	1226.86	1233.90	1240.98	1249.20	1259.34

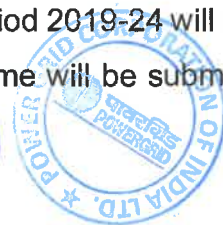
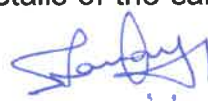
Tariff filing forms along with the other relevant information and supporting documents are attached hereto as **Encl-3**.

14. The asset has completed 12 Yrs of life in 2021-22, and thus the remaining depreciable amount at end of 12 yrs have been spread over the balance useful life of the asset as per clause 33 (5) of the CERC Tariff Regulations, 2024. The details have been computed and are provided in Form- 10 A.
15. That, it is submitted that the petitioner is currently liable to pay income tax at MAT rate specified in Income-tax Act,1961. Therefore, ROE has been calculated @ 18.782% after grossing up the ROE with MAT rate of 17.472% (Base Rate 15% + Surcharge 12% + Cess 4%) based on the formula given at regulation 31 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2024 for 2024-

29 period. That as per clause 31 (3) of the above regulation, the grossed up rate of ROE at the end of every financial year shall be trued up based on actual tax paid together with any additional tax demand including interest thereon duly adjusted for any refund of tax including interest received from the IT authorities pertaining to the tariff period 2024-29 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 ROE 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. It is further submitted that adjustment due to any additional tax demand including interest duly adjusted for any refund of tax including interest received from IT authorities shall be recoverable /adjustable during the tariff period 2024-29 on year to year basis on receipt of Income Tax assessment order.

16. Under CGST Act, 2017 implemented w.e.f. 01.07.2017, the Govt. of India has exempted the charges of transmission of electricity vide notification no. 12/2017 – Central Tax (Rate) dated 28.06.2017 at serial no. 25 under the heading 9969 “Transmission or distribution of electricity by an electric transmission or distribution utility” by giving applicable GST rate as NIL. Hence, the Transmission Charges as indicated at para 12 and para-13 above is exclusive of GST. Further, 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 & billed separately by the petitioner. Further additional taxes, if any, are to be paid by the petitioner on account of demand from Govt. / Statutory authorities, the same may be allowed to be recovered from the beneficiaries.
17. In the tariff calculations for 2019-24 period, Interest on Loan has been calculated on the basis of actual rate of interest of various loans deployed for each year. In the tariff calculations for 2024-29 period, Interest on Loan has been calculated on the basis of interest rates prevailing as on 01.04.2024 for respective loans. The change in Interest rate due to floating rate of interest applicable, if any, for the project needs to be claimed / adjusted over the tariff block of 05 years directly from / with the beneficiaries.

For the purpose of the supporting documents for rate of interest, a compendium of floating rate of interest of various loans during the tariff period 2019-24 will be submitted shortly with a Truing-up petition and the details of the same will be submitted through



an affidavit once submitted. These documents/details will also be made available on our website www.powergrid.in.

18. The transmission charges at para-12 & 13 above is inclusive of O&M expenses derived for the subject asset based on the norms for O&M expenditure for Transmission System as specified under regulation 36 (3) (a) of the Tariff Regulations for block 2024-29.
19. That as per Regulation 36(3)(d) of CERC Tariff Regulations, 2024, the Security Expenses, Insurance and Capital Spares more than Rs. 10 Lakh for transmission system shall be allowed separately after prudence check.

Security Expenses:

In this regard, it is submitted that a separate petition shall be filed for truing up of security expenses from 01.04.2019 to 31.03.2024 under the Regulation 35 (3) (C) of Central Electricity Regulatory Commission (Terms and Condition of Tariff) Regulations, 2019 and recovery of security expenses from 01.04.2024 to 31.03.2029 under the Regulation 36 (3) (d) of Central Electricity Regulatory Commission (Terms and Condition of Tariff) Regulations, 2024.

Insurance:

In this regard, it is submitted that a separate petition shall be filed before Hon'ble Commission for claiming the overall Insurance Expenses and consequential Interest on Working Capital (IOWC) on the same considering actual Insurance Expense incurred by the Petitioner for the F/Y 2023-24 after escalating the same at 5.25% per annum for arriving at the Estimated Insurance Expense for the year 2024-25, 2025-26, 2026-27, 2027-28 and 2028-29.

Capital Spare:

With regard to Capital Spares, the Petitioner has filed a separate Petition bearing No 45/MP/2024 for claiming the capital spares under Tariff Regulation, 2019 for 2019-24 period. Further, as per Tariff Regulations, 2024, Capital spares consumed and consequential Interest on Working Capital (IOWC) on the same shall be claimed by the Petitioner for 2024-29 period as per actual through a separate petition.

Accordingly, these expenses are not claimed in the subject petition through the relevant Tariff Forms and shall be claimed separately.



20. That as per Regulation 99 of CERC Tariff Regulations, 2024, the fees and charges of Central Transmission Utility of India Limited ('CTUIL') shall be allowed separately by the Commission through a separate regulation. Further, it provides that until such regulation is issued by the Commission, the expenses of CTUIL shall be borne by POWERGRID which shall be recovered by POWERGRID as additional O&M expenses through a separate petition.

Accordingly, the expenses of CTUIL borne by POWERGRID shall be claimed through a separate petition.

21. The application filing fee, expenses incurred on publication of Notices in Newspapers and License fee may be allowed to be recovered separately from the respondents in terms of Regulation 94(1) and Regulation 94(4) of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2024. The fees and charges to be paid by the petitioner as ISTS licensee (deemed ISTS licensee) under CERC (Fees and Charges of RLDC and other matters) Regulations, 2023 as amended from time to time shall also be recoverable from the DICs as provided under clause 94(3) of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2024.
22. The Transmission Charges and other related Charges indicated at para 12 & 13 above, is exclusive of incentive, late payment surcharge, FERV, any statutory taxes, levies, duties, cess, filing fees, license fee, RLDC fees and charges or any other kind of imposition (s) and/ or other surcharges etc. whatsoever imposed / charged by any Government (Central/State) and / or any other local bodies/authorities/regulatory authorities in relation to transmission of electricity, environmental protection, and/or in respect of any of its installation associated with the Transmission System and the same shall be borne and additionally paid by the respondent(s) to the petitioner and the same shall be charged, billed separately by the petitioner on the respondents.
23. **Sharing of Transmission Charges**

Tariff for Transmission of Electricity (Annual Fixed Cost) for 2019-24 as per para 12 above shall be recovered on monthly basis in accordance with Regulation 57 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 and shall be shared by the beneficiaries and long-term transmission customers in terms



of Central Electricity Regulatory Commission (Sharing of Inter State Transmission Charges and Losses) Regulations, 2010 and/or Central Electricity Regulatory Commission (Sharing of Inter State Transmission Charges and Losses) Regulations, 2020, as amended from time to time for the applicable periods.

Tariff for Transmission of Electricity (Annual Fixed Cost) for 2024-29 as per para 13 above shall be recovered on monthly basis in accordance with Regulation 78 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2024 and shall be shared by the beneficiaries and long-term transmission customers in terms of Central Electricity Regulatory Commission (Sharing of Inter State Transmission Charges and Losses) Regulations, 2020, as amended from time to time.

24. In the circumstances mentioned above, it will be just and proper that the transmission tariff for the asset covered under this petition be allowed to be charged from the beneficiaries on the basis set out above. **The Petitioner submits that Encl.-1 to Encl.-3 may please be treated as integral part of this petition.**

A. PRAYER

It is respectfully prayed that the Hon'ble Commission may be pleased to:

- a) Approve the trued-up Transmission Tariff for 2019-24 block and transmission tariff for 2024-29 block for the asset covered under this petition, as per para 12 and 13 above.
- b) 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 Regulations, 2019 and Tariff Regulations, 2024 as per para 12 and 13 above for respective block.
- c) Approve the reimbursement of expenditure by the beneficiaries towards petition filing fee, and expenditure on publishing of notices in newspapers in terms of Regulation 94 (1) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2024, and other expenditure (if any) in relation to the filing of petition.
- d) Allow the petitioner to bill and recover RLDC fees & charges and Licensee fee, separately from the respondents in terms of Regulation 94 (3) and (4) Central



Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2024.

- e) 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 2024-29 period, if any, from the respondents.
- f) 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 19 above.
- g) Allow the petitioner to file a separate petition before Hon'ble Commission for claiming the overall insurance expenses and consequential IOWC on that insurance expenses as mentioned at para 19 above.
- h) Allow the petitioner to file a separate petition before Hon'ble Commission for claiming the overall capital spares at the end of tariff block as per actual as mentioned at Para 19 above.
- i) Allow the petitioner to claim expenses of CTUIL borne by POWERGRID through a separate petition as mentioned at para 20 above.
- j) 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.

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

GURGAON

POWER GRID CORPORATION OF INDIA LTD.

DATED:- 25.07.2024

FILED BY

REPRESENTED BY


(V.C. Sekhar)
Sr. General Manager (Regulatory Cell)

Sr. General Manager (Regulatory Cell)

**BEFORE
THE CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

PETITION NO.:

IN THE MATTER OF: Petition for truing up of transmission tariff for 2019-24 and determination of transmission tariff for 2024-29 tariff block for assets under "**System Strengthening Scheme in Roorkee in Northern Region**" under Section 62 read with Section 79 (1) (d) of the Electricity Act, 2003 and under the Regulation 15 (1) (a) and Regulation 23 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 2023 read with Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 and Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2024.

Power Grid Corporation of India Ltd.

Registered office: B-9, Qutab Institutional Area,
Katwaria Sarai, New Delhi. 110 016.

Corporate Centre : 'SAUDAMINI', Plot No-2,
Sector-29, Gurgaon-122 001 (Haryana).

--- PETITIONER

Uttar Pradesh Power Corporation Ltd.

Shakti Bhawan, 14, Ashok Marg
Lucknow - 226 001

Represented by Its Chairman

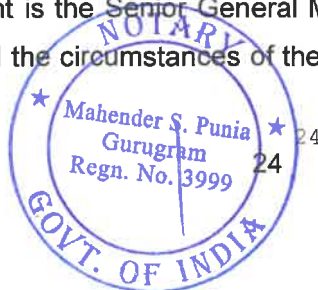
And others

----- RESPONDENT(S)

AFFIDAVIT VERIFYING THE PETITION

I, V.C. Sekhar, S/O Late Sh. V. Devaiah, working as Senior General Manager (Regulatory Cell) in the Power Grid Corporation of India Ltd., having its registered Office at B-9, Qutab Institutional Area, Katwaria Sarai, New Delhi-110 016, do hereby solemnly affirm and state as under: -

1. That the deponent is the Senior General Manager of Petitioner and is well conversant with the facts and the circumstances of the case and therefore competent to swear this affidavit.



A handwritten signature in blue ink, appearing to read "V.C. Sekhar".



2. That the accompanying Petition under Section 62 of the Electricity Act, 2003, has been filed by my authorized representative/nominated counsel under my instruction and the contents of the same are true and correct to the best of my knowledge and belief.
3. That the contents of Para 01 to 24 of the facts as mentioned in the Petition are true and correct based on my personal knowledge, belief and records maintained in the office and the contents of Para 01 to 24 of the Petition are believed to be true on the basis of the legal advice received.
4. That the annexures annexed to the Petition are correct and true copies of the respective originals.
5. That the Deponent has not filed any other Petition or Appeal before any other forum or court of law with respect to the subject matter of the dispute


(DEPONENT)

VERIFICATION

Solemnly affirmed at Gurgaon on this 25th day of July' 2024 that the contents of the above affidavit are true to my knowledge and belief and no part of it is false and nothing material has been concealed there from.


(DEPONENT)



25²⁵

ATTTESTED

25/07/2024
MAHENDER SINGH PUNIA
Advocate & Notary
Distt. Gurugram, Haryana, India

पावर ग्रिड कॉर्पोरेशन ऑफ इंडिया लिमिटेड
केन्द्रीय वाणिज्यिक विभाग

Ref: CC/Commercial/2022

Date:-13.12.2022

LETTER OF AUTHORIZATION

Pursuant to the POWER OF ATTORNEY dated 08.12.2022 and in supersession of the letters of authorization dated 19.07.2022, I hereby authorize the following Executives to sign on Vakalatnama, Affidavits and to appear and conduct case proceedings on behalf of the company before CERC, SERC, APTEL, High Courts and Supreme Court.

1. Sh. Zafrul Hasan, Sr. DGM (Commercial)
2. Sh. V.C Sekhar, GM (Regulatory Cell)
3. Sh. Bipin Bihari Rath, Sr.GM (Commercial)
4. Sh. Mohd Mohsin, Sr. GM (Commercial)
5. Sh. V. Srinivas, CGM (Commercial - BCD)
6. Sh. S.S Raju, CGM (Commercial)

Mukesh Khanna
13/12/22

Mukesh Khanna
ED (Commercial &RC)



**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 153/TT/2020

Coram:

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

Date of Order: 02.02.2021

In the matter of:

Approval under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and truing up of transmission tariff of the 2014-19 period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff of the 2019-24 period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 of Combined Asset of **Asset-I:** LILO of 400 kV Rishikesh-Muzaffarnagar Transmission line at Roorkee along with associated bays at Roorkee Sub-station, **Asset-II:** 315 MVA 400/220 kV ICT-I along with associated bays at Roorkee Sub-station, **Asset-III:** 315 MVA 400/220 kV ICT-II along with associated bays at Roorkee Sub-station associated with System Strengthening Scheme in Roorkee in Northern Region.

And in the matter of:


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

....Petitioner

Vs

1. Rajasthan Rajya Vidyut Prasaran Nigam Ltd.,
Vidyut Bhawan, Vidyut Marg,
Jaipur-302005.
2. Ajmer Vidyut Vitran Nigam Ltd.,
132 KV, GSS RVPNL Sub-Station Building,
Caligiri Road, Malviya Nagar,
Jaipur-302017.
3. Jaipur Vidyut Vitran Nigam Ltd.,
132 KV, GSS RVPNL Sub-Station Building,
Caligiri Road, Malviya Nagar,
Jaipur-302017.

ATTESTED TRUE COPY
Page 27 to 68
Authorised Signatory
Power Grid Corporation of India Ltd.
Plot No. 2, Sector 29, Gurgaon-122001




4. Jodhpur Vidyut Vitran Nigam Ltd.,
132 KV, GSS RVPNL Sub-Station Building,
Caligiri Road, Malviya Nagar,
Jaipur-302017.
5. Himachal Pradesh State Electricity Board,
Vidyut Bhawan, Kumar House Complex Building II,
Shimla-171004.
6. Punjab State Electricity Board,
Thermal Shed Tia, Near 22 Phatak,
Patiala-147001.
7. Haryana Power Purchase Centre,
Shakti Bhawan, Sector-6,
Panchkula- 134109.
8. Power Development Department,
Government of Jammu & Kashmir,
Mini Secretariat,
9. Uttar Pradesh Power Corporation Ltd.,
(Formerly Uttar Pradesh State Electricity Board)
Shakti Bhawan, 14, Ashok Marg,
Lucknow-226001.
10. Delhi Transco Ltd.,
Shakti Sadan, Kotla Road,
New Delhi-110002.
11. BSES Yamuna Power Ltd.,
B-Block, Shakti Kiran, Bldg.,
(Near Karkadooma Courte)
Karkadooma, 2nd Floor,
New Delhi-110092.
12. BSES Rajdhani Power Ltd.,
BSES Bhawan, Nehru Place,
New Delhi-110019.
13. Tata Power Delhi Distribution Ltd.,
NDPL House, Hudson Lines Kingsway Camp,
New Delhi-110 009.
14. Chief Engineer,
Chandigarh Electricity Department ,
UT-Chandigarh, Div-11, Opposite, Transport Nagar,
Industrial Area Phase- I,
Sector -9, Chandigarh.



15. Uttarakhand Power Corporation Ltd.,
Urja Bhawan,
Kanwali Road, Dehradun,
16. North Central Railway,
Allahabad.
17. New Delhi Municipal Council,
Palika Kendra, Sansad Marg,
New Delhi-110002.

...Respondents

For Petitioner : Shri A. K. Verma, PGCIL
Shri B. Dash, PGCIL
Shri V. P. Rastogi, PGCIL

For Respondents : Shri R. B. Sharma, Advocate, BRPL
Shri M. Mudgal, Advocate, BYPL

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 truing up of the tariff of the 1.4.2014 to 31.3.2019 period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as "the 2014 Tariff Regulations") and for determination of tariff for 1.4.2019 to 31.3.2024 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as "the 2019 Tariff Regulations") in respect of the following assets (hereinafter collectively referred to as "the transmission assets/ Combined Asset") associated with System Strengthening Scheme in Roorkee in Northern Region (hereinafter referred to as "the transmission scheme"):

Asset-I: LILO of 400 kV Rishikesh-Muzaffarnagar Transmission line at Roorkee along with associated bays at Roorkee Sub-station;

Asset-II: 315 MVA 400/220 kV ICT-I along with associated bays at Roorkee Sub-station; and



Asset-III: 315 MVA 400/220 kV ICT-II along with associated bays at Roorkee Sub-station.

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

"1) Approve the trued up Transmission Tariff for 2014-19 block and transmission tariff for 2019-24 block for the assets covered under this petition, as per para 8 and 9 above.

2) Allow the petitioner to recover the shortfall or refund the excess Annual Fixed Charges, on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission as provided in Tariff Regulation 2014 and Tariff regulations 2019 as per para 8 and 9 above for respective block.

3) 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.

4) 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.

5) 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 respondents.

6) Allow the petitioner to file a separate petition before Hon'ble Commission for claiming the overall security expenses and consequential IOWC on that security expenses as mentioned at para 9.6 above.

7) 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.

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 under:

(a) The Investment Approval (IA) and expenditure sanction for the transmission project was accorded by the Board of Directors of the Petitioner vide Memorandum dated 26.12.2005 with an estimated cost of ₹10995 lakh, including IDC of ₹460 lakh based on 3rd Quarter, 2005 price level. The scope of the project "System Strengthening Scheme in Roorkee in Northern Region" is as under:



- (i) Asset-I: LILO of 400 kV Rishikesh-Muzaffarnagar Transmission Line at Roorkee along with associated bays at Roorkee Sub-station,
- (ii) Asset-II: 315 MVA 400/220 kV ICT-I along with associated bays at Roorkee Sub-station, and
- (iii) Asset-III: 315 MVA 400/220 kV ICT-II along with associated bays at Roorkee Sub-station.

(b) The dates of commercial operation of the transmission assets covered in the instant petition are as follows:

Assets	COD
Asset-I	1.4.2009
Asset-II	1.4.2009
Asset-III	1.4.2010

(c) The transmission tariff of the Assets-I and II from their respective COD to 31.3.2014 was determined vide order dated 1.12.2010 in Petition No. 79/2010 and transmission tariff of Asset-III (315 MVA 400/220 kV ICT-II) from COD to 31.3.2014 was determined vide order in 6.9.2011 in Petition No. 269/2010. Petition No. 79/2010 was filed for determination of tariff for 2009-14 period wherein the descriptions of Asset-I is 315 MVA 400/220 kV ICT-I along with associated bays at Roorkee Sub-station and that of Asset-II is LILO of 400 kV Rishikesh-Muzaffarnagar Transmission Line at Roorkee along with associated bays at Roorkee.

(d) The Commission in order dated 1.12.2010 in Petition No. 79/2010 observed that the tariff in respect of Asset-I (315 MVA 400/220 kV ICT-I) was being allowed for 2009-14 period subject to adjustment in Petition No. 269/2010. Petition No. 269/2010 was filed for Combined Asset (i) 315 MVA 400/220 kV ICT-I along with associated bays at Roorkee Sub-station and (ii) 315 MVA 400/220 kV ICT-II along with associated bays at Roorkee Sub-station for 2009-14 tariff period.

(e) The Commission vide order dated 16.9.2011 in Petition No. 269/2010 observed that the transmission charges determined in respect of Asset-I (315 MVA 400/220 kV ICT-I) shall prevail over the transmission charges as



determined vide order dated 1.12.2010 in Petition No. 79/2010 for 1.4.2009 to 31.3.2014 period.

(f) There was no time over-run in case of Assets-I and II. However, there was time over-run of 12 months in case of Asst-III and the same was condoned by the Commission vide order dated 16.9.2011 in Petition No. 269/2010.

(g) The transmission charges of the 2009-14 tariff period of the transmission assets covered in the instant petition were trued up and tariff for the 2014-19 tariff period was determined for Combined Asset vide order dated 29.2.2016 in Petition No. 546/TT/2014.

(h) The AFC approved by the Commission vide order dated 29.2.2016 in Petition No. 546/TT/2014 and the trued up tariff claimed by the Petitioner in respect of the transmission assets for the 2014-19 period are as under:

(₹ in lakh)					
Combined Assets					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Annual Fixed Charges (AFC) approved vide order dated 29.2.2016 in Petition No. 546/TT/2014	1933.97	1936.72	1914.62	1893.06	1872.12
Claimed based on truing up in the instant petition	1963.95	1965.88	1940.89	1916.43	1894.11

4. The Respondents are distribution licensees and transmission licensees, who are procuring transmission services from the Petitioner, mainly beneficiaries of the Northern Region.

5. The Petitioner has served the petition on the Respondents and notice of this application has also been published in the newspapers in accordance with Section 64 of the Electricity Act 2003. No comments or suggestions have been received from the general public in response to the aforesaid notices published in the newspapers by the Petitioner. Uttar Pradesh Power Corporation Ltd. (UPPCL) i.e. Respondent No. 9 has filed its reply vide affidavit dated 13.3.2020 and has raised issues like cumulative depreciation, cumulative repayment of normative loan, grossing up of RoE with



regard to 2014-19 period. With regard to 2019-24 period, UPPCL has raised issues like cumulative depreciation, cumulative repayment of normative loan and grossing up of RoE. BSES Rajdhani Power Limited (BRPL) i.e. Respondent No. 12 has also filed its reply vide affidavit dated 13.3.2020 and has raised issues like, deferred tax liability, grossing up of RoE, effects of GST, security expenses and capital spares, filing fees and expenses incurred for publication of notice. The Petitioner vide affidavits dated 5.6.2020 has filed its rejoinder to the replies filed by UPPCL and BRPL.

6. The hearing in this matter was held on 9.6.2020 through video conference and the order was reserved.

7. Having heard the representatives of the Petitioner and perused the material on record, we proceed to dispose of the petition. This order is issued considering the submissions made by the Petitioner vide affidavits dated 15.1.2020, 11.3.2020 and 23.6.2020, reply filed by UPPCL and BRPL vide their affidavits dated 13.3.2020 and Petitioner's rejoinder affidavits dated 5.6.2020.

Truing up of Annual Fixed Charges for 2014-19 Tariff Period

8. The Petitioner has submitted that the transmission assets were put into commercial operation prior to 1.4.2014 and, therefore, the tariff is claimed by combining all the assets in the instant petition. The tariff for 2014-19 period has been trued up as discussed in the subsequent paragraphs.

9. The details of the trued up transmission charges claimed by the Petitioner in respect of the Combined Asset is as under:

(₹ in lakh)					
Combined Asset					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	448.13	455.27	455.27	455.27	455.27
Interest on Loan	412.14	379.26	337.26	295.25	253.24



Return on Equity	547.93	558.58	558.58	558.58	560.05
Interest on working capital	59.81	60.37	60.35	60.35	60.42
O & M Expenses	495.94	512.40	529.43	546.98	565.13
Total	1963.95	1965.88	1940.89	1916.43	1894.11

10. The details of the trued up Interest on Working Capital (IWC) claimed by the Petitioner in respect of the Combined Asset is as under:

(₹ in lakh)

Combined Asset					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O&M expenses	41.33	42.70	44.12	45.58	47.09
Maintenance Spares	74.39	76.86	79.41	82.05	84.77
Receivables	327.33	327.65	323.48	319.41	315.69
Total	443.05	447.21	447.01	447.04	447.55
Rate of Interest	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	59.81	60.37	60.35	60.35	60.42

Effective Date of Commercial Operation (E-COD)

11. The Petitioner has claimed E-COD of the Combined Asset as 1.9.2009. Based on the trued up admitted capital cost and actual COD of all the assets, E-COD has been worked out as follows:

Assets	Trued-up Capital Cost as on 31.3.2019 (₹ in lakh)	COD	No. of days from COD of Asset from COD of Project	Weight of the cost	Weighted Days
Asset-I	2360.39	1.4.2009	365.00	25.71%	93.86
Asset-II	3334.55	1.4.2009	365.00	36.33%	132.60
Asset-III	3484.19	1.4.2010	0.00	37.96%	0.00
Total	9179.13			100.00%	226.45
Effective COD - 17.8.2009					

12. E-COD has been used to determine the lapsed life of the project as a whole, which works out as four (4) years as on 1.4.2014 (i.e. the number of completed years as on 1.4.2014 from E-COD).

Weighted Average Life (WAL)

13. The life as defined in Regulation 27 of the 2014 Tariff Regulations has been considered for determination of WAL.



14. The Combined Asset may have multiple elements such as land, building, transmission line, sub-station and PLCC and each element may have different span of life. Therefore, the concept of WAL has been used as the useful life of the project as a whole.

15. WAL has been determined based on the admitted capital cost of individual elements as on 31.3.2014 and their respective life as stipulated in the 2014 Tariff Regulations. The element-wise life as defined in the 2009 Tariff Regulations prevailing at the time of actual COD of individual assets has been ignored for this purpose. The life as defined in the 2014 Tariff Regulations has been considered for determination of WAL. Accordingly, WAL of the Combined Asset has been worked out as 25 years as shown below:

(₹ in lakh)

Admitted Capital Cost as on 31.3.2014				
Particulars	Combined Cost (₹ in lakh) (A)	Life as per 2014 Regulation (Years) (B)	Weight (A) x (B) (C)	Weighted Avg. Life of Asset (in years) D=C/A
Leasehold Land	0.00	25.00	0.00	25.49 years, rounded to 25 years
Building & Other Civil Works	1013.15	25.00	25328.75	
Transmission Line	523.14	35.00	18309.90	
Sub-Station Equipment	6450.53	25.00	161263.25	
PLCC	119.56	15.00	1793.40	
Total	8106.38		206695.30	

16. WAL of 25 years as on 1.4.2014 as determined above is applicable prospectively (i.e. for 2014-19 tariff period onwards) and no retrospective adjustment of depreciation in the previous tariff period is required to be done. As discussed in paragraph 1 and paragraph 12 above, the Effective COD of the assets is 17.8.2009 and the lapsed life of the project as a whole, works out as four (4) years as on 1.4.2014 (i.e. the number of completed years as on 1.4.2014 from Effective COD).



Accordingly, WAL has been used to determine the remaining useful life as on 31.3.2014 to be 21 (25 minus 4) years.

Capital Cost

17. The Commission vide order dated 29.2.2016 in Petition No. 546/TT/2014 admitted the capital cost as on 31.3.2014 of ₹9179.13 lakh for Combined Asset for determination of tariff for the 2014-19 period.

18. The Petitioner vide Auditor's Certificates dated 29.7.2019 has claimed the capital cost upto 31.3.2014 and ACE upto 31.3.2019 in respect of Assets-I, II and III. The details of approved apportioned capital cost, capital cost as on 31.3.2014, ACE incurred upto 31.3.2019 as claimed by the Petitioner for transmission assets are as under:

(₹ in lakh)

Asset	FR Apportioned Approved Capital Cost	Capital cost as on 31.3.2014	Additional capital expenditure	Total Capital Cost as on 31.3.2019
			2014-15	
Combined Asset	10995.17	9179.13	270.43	9449.56
Total	10995.17	9179.13	270.43	9449.56

19. The Petitioner has claimed capital cost of ₹9179.13 lakh for the Combined Asset as on 31.3.2014.

20. The completion cost including ACE of the Combined Asset is within the FR approved capital cost as mentioned above. Therefore, there is no cost over-run in respect of the Combined Asset.



21. The Petitioner has not claimed any IDC for the transmission assets covered in the instant Petition.

22. The Petitioner has not claimed any IEDC for the transmission assets covered in the instant Petition.

23. The Petitioner has not claimed any Initial Spares for the transmission assets covered in the instant Petition.

Additional Capital Expenditure (ACE)

24. The Petitioner has claimed ACE of ₹270.43 during 2014-15 for the Combined Asset and submitted the Auditor's Certificates in support of the same.

25. The Petitioner has submitted that ACE incurred for the Combined Asset is on account of undischarged liability towards final payment/ withheld payment due to contractual exigencies for works executed within the cut-off date. The ACE for 2014-15 for Combined Asset has been claimed under Regulation 14(3)(v) of the 2014 Tariff Regulations in respect of the liabilities after the cut-off date. The details of payments incurred after the cut-off date are as under:

Assets	Party Name	Particulars (Transmission line/ Sub-station)	Original Liability as on COD	Discharge
				2014-15
I	Emco Ltd.	Sub-station	0.09	0.09
II	Emco Ltd.	Sub-station	5.34	5.34
	BHEL	Sub-station	149.24	149.24
III	Emco Ltd.	Sub-station	5.34	5.34
	BHEL	Sub-station	110.43	110.43

26. It is observed that total estimated completion cost including ACE during 2014-15 for the Combined Asset is within the FR approved capital cost.

27. The cut-off date for the assets is 31.3.2012. The actual audited ACE claimed by the Petitioner for 2014-15 period is beyond the cut-off date. Based on the



submissions made by the Petitioner, the same has been considered for computation of total capital cost as on 31.3.2019. ACE claimed for 2014-19 tariff period is allowed under Regulation 14(3)(v) of the 2014 Tariff Regulations.

28. The capital cost allowed as on 31.3.2019 including ACE in respect of the Combined Asset is as under:

(₹ in lakh)

Combined Asset	Capital cost as on 31.3.2014	Additional Capital Expenditure	Total capital cost including ACE as on 31.3.2019
		2014-15	
Allowed earlier in order dated 29.2.2016 in Petition No. 546/TT/2014	9179.14	278.92	9458.06
Claimed by the Petitioner in the instant petition	9179.13	270.43	9449.56
Allowed after true-up in this order	9179.13	270.43	9449.56

Debt-Equity Ratio

29. The Petitioner has claimed debt-equity ratio of 70:30 as on 31.3.2014 and for ACE post 31.3.2014. The debt-equity ratio of 70:30 has been considered for capital cost as on 31.3.2014 and ACE during the 2014-19 tariff period as provided under Regulation 19 of the 2014 Tariff Regulations. The same has been summarised as under:

Particulars	Amount as on 31.3.2014 (₹ in lakh)	(%)	Amount as on 31.3.2019 (₹ in lakh)	(%)
Debt	6425.69	70.00	6614.99	70.00
Equity	2753.44	30.00	2834.57	30.00
Total	9179.13	100.00	9449.56	100.00

Interest on Loan (IoL)

30. The Petitioner has claimed IoL based on actual interest rates for each year during the 2014-19 period. The Petitioner has prayed for change in interest rates prevailing as on 1.4.2019 for respective loans. UPPCL has submitted that the



Petitioner has claimed ₹1877.42 lakh as cumulative repayment upto previous years. In response, the Petitioner vide affidavit dated 5.6.2020 has submitted that revised tariff forms after making necessary corrections have been submitted vide affidavit dated 11.3.2020.

31. We have considered the submissions of the Petitioner and UPPCL. IoL has been calculated based on the actual interest rate, in accordance with Regulation 26 of the 2014 Tariff Regulations. IoL has been worked out as detailed below:-

(i) Gross amount of loan, repayment of instalments and rate of interest and weighted average rate of interest on actual average loan have been considered as per the petition.

(ii) The repayment for the tariff period 2014-19 has been considered to be equal to the depreciation allowed for that period.

32. The details of trued-up IoL allowed for the Combined Asset is as follows:

(₹ in lakh)					
Combined Asset					
Particular	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	6425.69	6614.99	6614.99	6614.99	6614.99
Cumulative Repayments upto Previous Year	1813.95	2230.71	2654.60	3078.50	3502.39
Net Loan-Opening	4611.74	4384.29	3960.39	3536.49	3112.60
Addition due to Additional Capitalization	189.30	0.00	0.00	0.00	0.00
Repayment during the year	416.76	423.90	423.90	423.90	423.90
Net Loan-Closing	4384.29	3960.39	3536.49	3112.60	2688.70
Average Loan	4498.01	4172.34	3748.44	3324.55	2900.65
Weighted Average Rate of Interest on Loan (%)	9.19	9.19	9.19	9.18	9.18
Interest on Loan	413.58	383.58	344.46	305.34	266.20

33. The details of IoL approved vide order dated 29.2.2016 in Petition No. 546/TT/2014, trued up IoL claimed by the Petitioner in the instant petition and trued up IoL allowed in the instant order is shown in the table below:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 29.2.2016 in Petition No. 546/TT/2014	413.76	383.91	344.74	305.56	266.36
Claimed by the Petitioner in the instant petition	412.14	379.26	337.26	295.25	253.24
Allowed after true-up in the instant order	413.58	383.58	344.46	305.34	266.20

Return on Equity (RoE)

34. The Petitioner is entitled to RoE for the Combined Asset in terms of Regulations 24 and 25 of the 2014 Tariff Regulations. The Petitioner has submitted that they are liable to pay income tax at MAT rates and has claimed following effective tax rates for the 2014-19 tariff period:

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

35. UPPCL has submitted that the Petitioner has claimed effective tax rate for the period from 2016-17 to 2018-19 and the same is not based on MAT rates. In response, the Petitioner vide affidavit dated 5.6.2020 has submitted that for 2016-17, it has claimed effective tax rate on the basis of Assessment Order issued by the Income Tax Authorities while for 2017-18 and 2018-19, it has claimed the same on the basis of Income tax return filed.

36. BRPL has submitted that the Petitioner has claimed effective tax rate based on the consolidated income of the company, whereas the income from other business activities of the Petitioner like consulting, communication, planning and design of projects etc. are required to be excluded from the computation of effective rate. BRPL has further submitted that the deferred tax liability (DTL) relevant to the aforesaid

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other business should not be considered in the computation of effective tax rate. In response, the Petitioner vide affidavit dated 5.6.2020 has submitted that it has claimed deferred tax liability materialized during the period 2009-14 only for the deferred tax liability upto 31.3.2009. Further, DTL amount billed/ materialised is not considered while grossing up RoE.

37. We have considered the submissions of the Petitioner, UPPCL and BRPL. The Commission in order dated 27.4.2020 in Petition No. 274/TT/2019 has arrived at the effective tax rate for the Petitioner based on the notified MAT rates. The relevant portion of the order dated 27.4.2020 is as under:-

"26. We are conscious that the entities covered under MAT regime are paying Income Tax as per MAT rate notified for respective financial year under IT Act, 1961, which is levied on the book profit of the entity computed as per the Section 115JB of the IT Act, 1961. The Section 115JB(2) defines book profit as net profit in the statement of Profit & Loss prepared in accordance with Schedule-III of the Companies Act, 2013, subject to some additions and deductions as mentioned in the IT Act, 1961. Since the Petitioner has been paying income tax on income computed under Section 115JB of the IT Act, 1961 as per the MAT rates of the respective financial year, the notified MAT rate for respective financial year shall be considered as effective tax rate for the purpose of grossing up of RoE for truing up of the tariff of the 2014-19 tariff period in terms of the provisions of the 2014 Tariff Regulations. Interest imposed on any additional income tax demand as per the Assessment Order of the Income Tax authorities shall be considered on actual payment. However, penalty (for default on the part of the Assessee) if any imposed shall not be taken into account for the purpose of grossing up of rate of return on equity. 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 transmission customers/ DICs as the case may be on year to year basis.

27. Accordingly, following effective tax rates based on notified MAT rates are considered for the purpose of grossing up of rate of return on equity:

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

”



38. The MAT rates considered in order dated 27.4.2020 in Petition No. 274/TT/2019 are considered for the purpose of grossing up of rate of RoE for trueing up of the tariff of the 2014-19 tariff period in terms of the provisions of the 2014 Tariff Regulations. Accordingly, the grossed up RoE rate is as follows:

Year	Notified MAT rates (inclusive of surcharge & cess) (in %)	Base rate of RoE (in %)	Grossed up RoE (Base Rate/1-t) (in %)
2014-15	20.9605	15.50	19.610
2015-16	21.3416	15.50	19.705
2016-17	21.3416	15.50	19.705
2017-18	21.3416	15.50	19.705
2018-19	21.5488	15.50	19.758

39. Accordingly, trueed-up RoE allowed for the Combined Asset is as follows:

(₹ in lakh)

Combined Asset					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	2753.44	2834.57	2834.57	2834.57	2834.57
Addition due to Additional Capitalization	81.13	0.00	0.00	0.00	0.00
Closing Equity	2834.57	2834.57	2834.57	2834.57	2834.57
Average Equity	2794.00	2834.57	2834.57	2834.57	2834.57
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
Tax Rate applicable (%)	20.961	21.342	21.342	21.342	21.549
Rate of Return on Equity (Pre-tax)	19.610	19.705	19.705	19.705	19.758
Return on Equity (Pre-tax)	547.90	558.55	558.55	558.55	560.05

40. The details of RoE approved vide order dated 29.2.2016 in Petition No. 546/TT/2014, trueed up RoE claimed by the Petitioner in the instant petition and trueed up RoE allowed in the instant order is shown in the table below:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 29.2.2016 in Petition No. 546/TT/2014	548.15	556.36	556.36	556.36	556.36
Claimed by the Petitioner in the instant petition	547.93	558.58	558.58	558.58	560.05
Allowed after true-up in the instant order	547.90	558.55	558.55	558.55	560.05



Depreciation

41. The Petitioner's claim towards depreciation in this petition was found to be higher than the depreciation allowed for the Combined Asset in order dated 29.2.2016 in Petition No. 546/TT/2014. The Petitioner has neither given any justification for claiming higher depreciation than that allowed earlier in order dated 29.2.2016 nor made any specific prayer for allowing higher depreciation in this petition. The transmission assets were put into commercial operation during the 2009-14 period and the tariff from the respective COD to 31.3.2014 for Assets-I and II was determined vide order dated 1.12.2010 in Petition No. 79/2010. Further, transmission tariff of Combined Assets-II and III from 1.4.2010 to 31.3.2014 was determined in Petition No. 269/2010 vide order dated 16.9.2011. The tariff of the 2009-14 period was trued up and tariff for the 2014-19 period was determined and allowed vide order dated 29.2.2016 in Petition No. 546/TT/2014. The Petitioner did not claim any capital expenditure towards "IT Equipment" in the above said petition where tariff for the transmission assets for 2014-19 period was allowed even though there was a clear provision in the 2014 Tariff Regulations providing depreciation @15% for IT Equipment. Having failed to make a claim as per the 2014 Tariff Regulations, the Petitioner has now, at the time of truing up of the tariff claimed for 2014-19 period has apportioned a part of the capital expenditure as "IT Equipment". Similar issue had come up in Petition No. 19/TT/2020 wherein the Commission vide order dated 9.5.2020 decided as under:

"31. We have considered the submissions of the Petitioner. The instant assets were put into commercial operation during the 2009-14 period and the tariff from the respective CODs to 31.3.2014 was allowed vide orders dated 30.8.2012 and 9.5.2013 in Petition No.343/2010 and Petition No. 147/TT/2011 respectively. Further, the tariff of the 2009-14 period was trued up and tariff for the 2014-19 period was allowed vide order dated 25.2.2016 in Petition No.10/TT/2015. The Petitioner did not claim any capital expenditure towards "IT Equipment" in the above said three petitions where tariff for the instant assets for the 2009-14 period was allowed, tariff of the 2009-14 period was trued up and tariff for 2014-19 period was allowed even though there was a clear provision in



the 2009 Tariff Regulations and 2014 Tariff Regulations providing depreciation @15% for IT Equipment. Having failed to make a claim as per the 2009 Tariff Regulations(the period during which COD of assets was achieved), the Petitioner has now, at the time of truing up of the tariff allowed for the 2014-19 period has apportioned a part of the capital expenditure to "IT Equipment". The Petitioner has adopted similar methodology not only in this but in some of the other petitions listed along with the instant petition on 26.2.2020. It is observed that the Petitioner has for the first time apportioned a part of the capital expenditure towards IT Equipment and has claimed depreciation under the head "IT Equipment" @15% at the time of truing up of the tariff of 2014-19 period. Regulation 8(1) of the 2014 Tariff Regulations provides for truing up of the capital expenditure including the additional capital expenditure, incurred up to 31.3.2019, admitted by the Commission after prudence check. We are of the view that scope of truing up exercise is restricted to truing up of the capital expenditure already admitted and apportionment or reapportionment of the capital expenditure cannot be allowed at the time of truing up. Therefore, we are not inclined to consider the Petitioner's prayer for apportionment of capital expenditure towards IT Equipment and allowing depreciation @ 15% from 1.4.2014 onwards. Accordingly, the depreciation @ 5.28% has been considered for IT Equipment as part of the sub-station up to 31.3.2019 while truing up the capital expenditure for the 2014-19 period. During the 2019-24 tariff period, the IT Equipment has been considered separately and depreciation has been allowed @ 15% for the balance depreciable value of IT Equipment in accordance with Regulation 33 read with Sr. No. (p) of the Appendix-I (Depreciation Schedule) of the 2019 Tariff Regulations."

42. In line with the above order dated 9.5.2020 in Petition No. 19/TT/2020, the Gross Block during the tariff period 2014-19 has been depreciated at weighted average rate of depreciation (WAROD) and working of WAROD is given in Annexure-1. The weighted average rate of depreciation (WAROD) has been worked out after taking into account the depreciation rates of assets as specified in the 2014 Tariff Regulations. Trued up depreciation allowed for the Combined Asset for the 2014-19 tariff period is as follows:

(₹ in lakh)

		Combined Asset				
Particulars		2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross Block		9179.13	9449.56	9449.56	9449.56	9449.56
Additional Capitalisation		270.43	0.00	0.00	0.00	0.00
Closing Gross Block		9449.56	9449.56	9449.56	9449.56	9449.56
Average Gross Block		9314.35	9449.56	9449.56	9449.56	9449.56
Weighted average rate of Depreciation (WAROD) (%)		4.47	4.49	4.49	4.49	4.49
Balance useful life of the asset at the beginning of the year		21.00	20.00	19.00	18.00	17.00
Aggregated	Depreciable Value	7417.44	7539.13	7539.13	7539.13	7539.13
Remaining	Depreciable	5186.73	4884.53	4460.63	4036.74	3612.84



value at the end of the year					
Combined depreciation during the year	416.76	423.90	423.90	423.90	423.90

43. The details of depreciation approved vide order dated 29.2.2016 in Petition No. 546/TT/2014, trued up depreciation claimed by the Petitioner in the instant petition and trued up depreciation allowed in the instant order is shown in the table below:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 29.2.2016 in Petition No. 546/TT/2014	416.98	424.34	424.34	424.34	424.34
Claimed by the Petitioner in the instant petition	448.13	455.27	455.27	455.27	455.27
Allowed after true-up in the instant order	416.76	423.90	423.90	423.90	423.90

Operation & Maintenance Expenses (O&M Expenses)

44. The details of the O&M Expenses claimed by the Petitioner for Combined Asset and allowed under Regulation 29(4)(a) of the 2014 Tariff Regulations for purpose of tariff are as under:

Particulars	Combined Asset				
	2014-15	2015-16	2016-17	2017-18	2018-19
Sub-station Bays					
400 kV Bays (AIS) -Nos	4	4	4	4	4
220 kV Bays (AIS) -Nos	6	6	6	6	6
Norm (₹ lakh/bay)					
400 kV Sub-station Bays (AIS)	60.30	62.30	64.37	66.51	68.71
220 kV Sub-station Bays (AIS)	42.21	43.61	45.06	46.55	48.10
Total Sub-station O&M	494.46	510.86	527.84	545.34	563.44
AC & HVDC Lines					
400kV D/C Twin conductor (km)	2.10	2.10	2.10	2.10	2.10
Norm (₹ lakh/km)					
400 kV D/C Twin Conductor	0.707	0.731	0.755	0.780	0.806
Total Transmission Line	1.48	1.54	1.59	1.64	1.69
Total O&M Expenses	495.94	512.40	529.43	546.98	565.13

45. The details of the O&M Expenses approved vide order dated 29.2.2016 in Petition No. 546/TT/2014, O&M Expenses claimed by the Petitioner in the instant



petition and trued up O&M Expenses allowed in the instant order is shown in the table below:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 29.2.2016 in Petition No. 546/TT/2014	495.94	512.40	529.43	546.98	565.13
Claimed by the Petitioner in the instant petition	495.94	512.40	529.43	546.98	565.13
Allowed after true-up in the instant order	495.94	512.40	529.43	546.98	565.13

Interest on Working Capital (IWC)

46. The Petitioner is entitled to claim IWC as per Regulation 28(1)(c) of the 2014 Tariff Regulations as under:-

i. Maintenance spares:

Maintenance spares have been worked out based on 15% of Operation and Maintenance Expenses.

ii. O & M Expenses:

O&M Expenses have been considered for one month of the allowed O&M Expenses.

iii. Receivables:

The receivables have been worked out on the basis of 2 months of annual transmission charges as worked out above.

iv. Rate of interest on working capital:

Rate of interest on working capital is considered on normative basis in accordance with Clause (3) of Regulation 28 of the 2014 Tariff Regulations.

47. The trued up IWC allowed for the Combined Asset for the 2014-19 tariff period is as under:

(₹ in lakh)

Combined Asset					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O & M Expenses	41.33	42.70	44.12	45.58	47.09
Maintenance Spares	74.39	76.86	79.41	82.05	84.77
Receivables	322.22	323.03	319.35	315.77	312.55



Total	437.94	442.59	442.89	443.40	444.41
Rate of Interest on working capital(%)	13.50	13.50	13.50	13.50	13.50
Interest of working Capital	59.12	59.75	59.79	59.86	60.00

48. IWC approved vide order dated 29.2.2016 in Petition No. 546/TT/2014, trued up IWC claimed by the Petitioner and trued up IWC allowed in the instant order is shown in the table below:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 29.2.2016 in Petition No. 546/TT/2014	59.14	59.72	59.76	59.82	59.92
Claimed by the Petitioner in the instant petition	59.81	60.37	60.35	60.35	60.42
Allowed after true-up in this order	59.12	59.75	59.79	59.86	60.00

Approved Annual Fixed Charges for 2014-19 Tariff Period

49. The trued-up annual fixed charges allowed for the Combined Asset for the 2014-19 tariff period are as under:

(₹ in lakh)					
Combined Asset					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	416.76	423.90	423.90	423.90	423.90
Interest on Loan	413.58	383.58	344.46	305.34	266.20
Return on Equity	547.90	558.55	558.55	558.55	560.05
Int. on Working Capital	59.12	59.75	59.79	59.86	60.00
Op. and Maintenance	495.94	512.40	529.43	546.98	565.13
Total	1933.31	1938.18	1916.13	1894.62	1875.28

50. Annual Transmission Charges approved vide order dated 29.2.2016 in Petition No. 546/TT/2014, trued up AFC claimed by the Petitioner in the instant petition and trued up AFC allowed in the instant order is shown in the table below:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 29.2.2016 in Petition No. 546/TT/2014	1933.97	1936.72	1914.62	1893.06	1872.12



Claimed by the Petitioner in the instant petition	1963.95	1965.88	1940.89	1916.43	1894.11
Allowed after true-up in the instant order	1933.31	1938.18	1916.13	1894.62	1875.28

Determination of Annual Fixed Charges for 2019-24 Tariff Period

51. The Petitioner has submitted the tariff forms for Combined Asset. Accordingly, as per proviso (i) of Regulation 8(1) of 2019 Tariff Regulations, single tariff for the Combined Asset has been worked out for the 2019-24 tariff period.

52. The Petitioner has claimed the following transmission charges for the Combined Asset for 2019-24 tariff period:

Particulars	(₹ in lakh)				
	2019-20	2020-21	201-22	2022-23	2023-24
Depreciation	409.35	406.85	190.86	190.86	190.87
Interest on Loan	213.31	175.58	147.82	130.00	112.50
Return on Equity	532.39	532.39	532.39	532.39	532.39
Interest on Working Capital	29.05	28.90	25.65	25.82	25.96
Operation and Maintenance	267.90	277.23	286.89	296.84	307.19
Total	1452.00	1420.95	1183.61	1175.91	1168.91

53. The Petitioner has claimed the following Interest on Working Capital for the Combined Asset for the 2019-24 tariff period:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
O&M expenses	22.33	23.10	23.91	24.74	25.60
Maintenance Spares	40.19	41.58	43.03	44.53	46.08
Receivables	178.52	175.19	145.92	144.98	143.72
Total	241.04	239.87	212.86	214.25	215.40
Rate of Interest	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	29.05	28.90	25.65	25.82	25.96

Capital Cost

54. Regulation 19 of the 2019 Tariff Regulations provide as under:

“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 tried 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 ash disposal and utilization including handling and transportation facility;
- (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 up to 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 decapitalised 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.”*

55. The Petitioner has claimed the capital cost of Combined Asset as ₹9449.56 lakh as on 31.3.2019.

56. The Petitioner has not claimed any ACE during the 2019-24 period for the Combined Asset.

Debt-Equity Ratio

57. Regulation 18 of the 2019 Tariff Regulations provides as under:-

“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.”

58. The details of the debt-equity considered for the purpose of computation of tariff for the 2019-24 tariff period for the Combined Asset is as under:



Particulars	Capital Cost as on 1.4.2019 (₹ in lakh)	(%)	Total Capital Cost as on 31.3.2024 (₹ in lakh)	(%)
Debt	6614.99	70.00	6614.99	70.00
Equity	2834.57	30.00	2834.57	30.00
Total	9449.56	100.00	9449.56	100.00

Return on Equity (RoE)

59. Regulation 30 and Regulation 31 of the 2019 Tariff Regulations provide as under:

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

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

Provided that return on equity in respect of Additional Capitalization after cut-off date beyond the original scope excluding Additional Capitalization due to Change in Law, shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system;

Provided further that:

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

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

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

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

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



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

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

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

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

(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.”

60. UPPCL has submitted that the gross rate of RoE submitted by the Petitioner is not authentic because it is based on presumptive value of MAT rate not approved by the Income Tax Authorities. In response, the Petitioner vide affidavit dated 5.6.2020 has submitted that the gross rate of RoE has been calculated with revised MAT rate as per the Taxation Laws (Amendment) Ordinance, 2019 published in the Gazette dated 20.9.2019.

61. We have considered the submissions of UPPCL and the Petitioner. The Petitioner has submitted that MAT rate is applicable to the Petitioner's Company.



Accordingly, the MAT rate applicable during the year 2019-20 has been considered for the purpose of RoE, which shall be trued up with actual tax rate in accordance with Clause (3) of Regulation 31 of the 2019 Tariff Regulations. The RoE allowed for the Combined Asset for the 2019-24 tariff period is as follows:

(₹ in lakh)

Particulars	Combined Asset				
	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Equity	2834.57	2834.57	2834.57	2834.57	2834.57
Addition due to Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Closing Equity	2834.57	2834.57	2834.57	2834.57	2834.57
Average Equity	2834.57	2834.57	2834.57	2834.57	2834.57
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
Tax Rate applicable (%)	17.472	17.472	17.472	17.472	17.472
Rate of Return on Equity (Pre-tax)	18.782	18.782	18.782	18.782	18.782
Return on Equity (Pre-tax)	532.39	532.39	532.39	532.39	532.39

Interest on Loan (IoL)

62. Regulation 32 of the 2019 Tariff Regulations provides as under:-

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

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

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

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

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

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



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

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

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

63. UPPCL has submitted that the cumulative repayment of normative loan upto previous year claimed by the Petitioner has to be revised on the basis of cumulative depreciation. UPPCL has further submitted that the Petitioner has negotiated loan portfolios having fixed rate of yearly interest. Therefore, adjustment of loL due to floating rate of interest applicable during 2019- 24 is premature.

64. In response, the Petitioner vide affidavit dated 5.6.2020 has submitted that the cumulative repayment of the loan has been revised and revised tariff forms have been submitted vide affidavit dated 11.3.2020. Further, the Petitioner has prayed to be allowed to bill and adjust the impact of loL due to change in interest rate on account of floating rate of interest applicable during 2019-24 period.

65. We have considered the submissions of UPPCL and the Petitioner. The weighted average rate of loL 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 2019-24 tariff period will be adjusted. The floating rate of interest, if any, shall be considered at the time of true up. In view of above, loL has been worked out in accordance with Regulation 32 of the 2019 Tariff Regulations. loL allowed is follows:

(₹ in lakh)

Particular	Combined Asset				
	2019-20	2020-21	2021-22	2022-23	2023-24
Gross Normative Loan	6614.99	6614.99	6614.99	6614.99	6614.99

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Cumulative Repayments upto Previous Year	3926.29	4381.56	4836.84	5292.11	5467.44
Net Loan-Opening	2688.70	2233.43	1778.16	1322.88	1147.55
Addition due to Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Repayment during the year	455.27	455.27	455.27	175.33	175.33
Net Loan-Closing	2233.43	1778.16	1322.88	1147.55	972.22
Average Loan	2461.07	2005.79	1550.52	1235.22	1059.89
Weighted Average Rate of Interest on Loan (%)	9.166	9.149	9.124	9.095	9.084
Interest on Loan	225.59	183.51	141.46	112.34	96.28

Depreciation

66. Regulations 33(1), (2) and (5) of the 2019 Tariff Regulations provide as under:-

“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.”

“(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.”

67. UPPCL has submitted that the cumulative depreciation at the beginning of the period claimed by the Petitioner should be revised. In response, the Petitioner vide affidavit dated 5.6.2020 has submitted that revised tariff forms after making necessary corrections have been submitted vide affidavit dated 11.3.2020.



68. We have considered the submissions of the Petitioner and UPPCL. The IT equipments have been considered as part of the Gross Block and depreciated using weighted average rate of depreciation (WAROD). The WAROD has been worked out (refer Annexure-2) after taking into account the depreciation rates of IT and non-IT assets as prescribed in the 2019 Tariff Regulations. The salvage value of IT equipments has been considered nil, i.e. IT asset has been considered as 100 percent depreciable. The depreciation has been worked out considering the admitted capital expenditure as on 31.3.2019 and accumulated depreciation up to 31.3.2019. The depreciation allowed for the Combined Asset is as follows:

(₹ in lakh)

Combined Asset					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Gross Block	9449.56	9449.56	9449.56	9449.56	9449.56
Addition during the year 2019-24 due to projected Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Closing Gross Block	9449.56	9449.56	9449.56	9449.56	9449.56
Average Gross Block	9449.56	9449.56	9449.56	9449.56	9449.56
Weighted average rate of Depreciation (WAROD) (%)	4.82	4.82	4.82	Spreading	Spreading
Balance useful life at the beginning	16.00	15.00	14.00	13.00	12.00
Aggregated Depreciable Value	7571.41	7571.41	7571.41	7571.41	7571.41
Remaining Aggregate Depreciable Value at the end of the year	3189.85	2734.57	2279.30	2103.97	1928.64
Combined Depreciation during the year	455.27	455.27	455.27	175.33	175.33
Aggregate Cumulative Depreciation	4381.56	4836.84	5292.11	5467.44	5642.77

Operation & Maintenance Expenses (O&M Expenses)

69. Regulation 35(3)(a) of the 2019 Tariff Regulations provides as under:

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

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<i>Norms for sub-station Bays (₹ Lakh per bay)</i>					



765 kV	45.01	46.60	48.23	49.93	51.68
400 kV	32.15	33.28	34.45	35.66	36.91
220 kV	22.51	23.30	24.12	24.96	25.84
132 kV and below	16.08	16.64	17.23	17.83	18.46
Norms for Transformers (₹ 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 (₹ 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 (Rs Lakh per 500 MW) (Except Gazuwaka BTB)	834	864	894	925	958
Gazuwaka HVDC Back-to-Back station (₹ Lakh per 500 MW)	1,666	1,725	1,785	1,848	1,913
500 kV Rihand-Dadri HVDC bipole scheme (Rs Lakh) (1500 MW)	2,252	2,331	2,413	2,498	2,586
±500 kV Talcher- Kolar HVDC bipole scheme (Rs Lakh) (2000 MW)	2,468	2,555	2,645	2,738	2,834
±500 kV Bhiwadi-Balia HVDC bipole scheme (Rs Lakh) (2500 MW)	1,696	1,756	1,817	1,881	1,947
±800 kV, Bishwanath-Agra HVDC bipole scheme (Rs Lakh) (3000 MW)	2,563	2,653	2,746	2,842	2,942

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

Provided further that:

- i. the operation and maintenance expenses for new HVDC bi-pole schemes commissioned after 1.4.2019 for a particular year shall be allowed pro-rata on the basis of normative rate of operation and maintenance expenses of similar HVDC bi-pole scheme for the corresponding year of the tariff period;*
- ii. the O&M expenses norms for HVDC bi-pole line shall be considered as Double Circuit quad AC line;*



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

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

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

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

(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."*

70. The Petitioner has claimed O&M Expenses separately for the PLCC under Regulation 35(4) of the 2019 Tariff Regulations @2% of its original project cost in the instant petition. The Petitioner has made similar claim in other petitions as well. Though PLCC is a communication system, it has been considered as part of the sub-station in the 2014 Tariff Regulations and the 2019 Tariff Regulations and the norms for sub-station have been specified accordingly. Accordingly, the Commission vide order dated 24.1.2021 in Petition No.126/TT/2020 has already concluded that no separate O&M Expenses can be allowed for PLCC under Regulation 35(4) of the 2019 Tariff Regulations even though PLCC is a communication system. Therefore,



the Petitioner's claim for separate O&M Expenses for PLCC @2% is not allowed. The relevant portions of the order dated 24.1.2021 in Petition No.126/TT/2020 are extracted hereunder.

"103. Thus, although PLCC equipment is a communication system, it has been considered as a part of sub-station, as it is used both for protection and communication. Therefore, we are of the considered view that rightly, it was not considered for separate O&M Expenses while framing norms of O&M for 2019-24 tariff period. While specifying norms for bays and transformers, O&M Expenses for PLCC have been included within norms for O&M Expenses for sub-station. Norms of O&M Expenses @2% of the capital cost in terms of Regulation 35(4) of the 2019 Tariff Regulations have been specified for communication system such as PMU, RMU, OPGW etc. and not for PLCC equipment.

*-----
105. In our view, granting of O&M Expenses for PLCC equipment @2% of its capital cost under Regulation 35(4) of the 2014 Tariff Regulations under the communication system head would tantamount to granting O&M Expenses twice for PLCC equipment as PLCC equipment has already been considered as part of the sub-station. Therefore, the Petitioner's prayer for grant of O&M Expenses for the PLCC equipment @2% of its capital cost under Regulation 35(4) of the 2014 Tariff Regulations is rejected.*

106. The principle adopted in this petition that PLCC is part of sub-station and accordingly no separate O&M Expenses is admissible for PLCC equipment in the 2019-24 tariff period under Regulation 35(4) of the 2019 Tariff Regulations shall be applicable in case of all petitions where similar claim is made by the Petitioner. As already mentioned, the Commission, however, on the basis of the claim made by the Petitioner has inadvertently allowed O&M Expenses for PLCC equipment @2% of its original project cost, which is applicable for other "communication system", for 2019-24 period in 31 petitions given in Annexure-3 of this order. Therefore, the decision in this order shall also be applicable to all the petitions given in Annexure-3. Therefore, PGCIL is directed to bring this decision to the notice of all the stakeholders in the 31 petitions given in Annexure-3 and also make revised claim of O&M Expenses for PLCC as part of the sub-station at the time of truing up of the tariff allowed for 2019-24 period in respective petitions."

Therefore, the Petitioner's claim for separate O&M Expenses for PLCC @2% is not allowed.

71. The O&M Expenses as claimed by the Petitioner for the Combined Asset are as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Sub-station Bays					
400 kV Bays (AIS) -No.s	4	4	4	4	4
220 kV Bays (AIS) -No.s	6	6	6	6	6
Norm (₹ lakh/bay)					



400 kV Sub-station Bays (AIS)	32.15	33.28	34.45	35.66	36.91
220 kV Sub-station Bays (AIS)	22.51	23.30	24.12	24.96	25.84
Total Sub-station Bays	263.66	272.92	282.52	292.40	302.68
AC & HVDC Lines					
400kV D/C Twin conductor (km)	2.10	2.10	2.10	2.10	2.10
Norm (₹ lakh/km)					
400kV D/C Twin conductor	0.881	0.912	0.944	0.977	1.011
Total Transmission Line	1.85	1.92	1.98	2.05	2.12
Total O&M Expenses	265.51	274.84	284.50	294.45	304.80

72. The O&M Expenses claimed by the Petitioner are in accordance with Regulation 35(3) of the 2019 Tariff Regulations. Hence, they are allowed as claimed.

Interest on Working Capital (IWC)

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

"34. Interest on Working Capital

(1)...

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

- i. Receivables equivalent to 45 days of fixed cost;*
- ii. Maintenance spares @ 15% of operation and maintenance expenses including security expenses; and*
- iii. Operation and maintenance expenses, including security expenses for one month"*

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

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

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

"3. Definitions ...

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



74. The Petitioner has submitted that it has computed IWC for 2019-24 period considering the SBI Base Rate plus 350 basis points as on 1.4.2019. The Petitioner has considered the rate of IWC as 12.05%. IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The rate of IWC considered is 12.05% (SBI 1 year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points) for 2019-20 and 11.25% (SBI 1 year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points) for 2020-24. The components of the working capital and interest allowed thereon is as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O & M Expenses	22.13	22.90	23.71	24.54	25.40
Maintenance Spares	39.83	41.23	42.68	44.17	45.72
Receivables	185.48	181.68	177.67	140.30	139.24
Total	247.43	245.81	244.05	209.01	210.36
Rate of Interest (%)	12.05	11.25	11.25	11.25	11.25
Interest of working capital	29.82	27.65	27.46	23.51	23.67

Annual Fixed Charges for the 2019-24 Tariff Period

75. The transmission charges allowed for the Combined Asset for the 2019-24 tariff period are summarised as under:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	455.27	455.27	455.27	175.33	175.33
Interest on Loan	225.59	183.51	141.46	112.34	96.28
Return on Equity	532.39	532.39	532.39	532.39	532.39
Interest on Working Capital	29.82	27.65	27.46	23.51	23.67
Operation and Maintenance	265.51	274.84	284.50	294.45	304.80
Total	1508.57	1473.66	1441.08	1138.03	1132.46

Filing Fee and Publication Expenses

76. BRPL has submitted that though the Commission can allow filing fee and publication expenses at its discretion under Regulation 70(1) of the 2019 Tariff Regulations, but the exercise of such discretionary power is judicial in nature. BRPL



has further submitted that no justification has been filed by the Petitioner for claiming the filing fee, hence it cannot be allowed. BRPL has cited Commission's order dated 11.9.2008 in Petition No. 129 of 2005 wherein it disallowed the claim of Central Power Sector undertakings for allowing the reimbursement of the application filing fee. In response, the Petitioner has submitted that it has requested for the reimbursement of expenditure by the beneficiaries towards petition filing fee and publication expense, in terms of Regulation 70(1) of the 2019 Tariff Regulations. Further, the Petitioner has referred to the Commission's order dated 28.3.2016 in Petition No. 137/TT/2015 where it allowed the recovery of petition filing fee and expenditure for publication of notices from beneficiaries on pro-rata basis.

77. We have considered the submissions of the BRPL and the Petitioner. The Petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses. After the issue of order dated 11.9.2008 in Petition No. 129 of 2005, the Commission has made suitable provision in the 2014 Tariff Regulations and the 2019 Tariff Regulations for reimbursement of the filing fees and the publication expenses. Therefore, the order dated 11.9.2008 quoted by BRPL is not applicable for the 2014-19 and 2019-24 tariff periods. Accordingly, the Petitioner shall be entitled for reimbursement of the filing fees and publication expenses in connection with the present petition, directly from the beneficiaries on pro-rata basis as provided under Regulation 70(1) of the 2019 Tariff Regulations.

Licence Fee and RLDC Fees and Charges

78. 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 the 2019-24 tariff period.

Goods and Services Tax

79. The Petitioner has sought to recover GST on transmission charges separately from the Respondents, if at any time GST on transmission is withdrawn from negative list in future.

80. BRPL has submitted that the request of the Petitioner is premature and need not be considered at this juncture. In response, the Petitioner submitted that currently transmission of electricity by an electric transmission utility is exempted from GST. Hence, the transmission charges currently charged are exclusive of GST. Further, if GST is levied at any rate and at any point of time in future, the same shall be borne and additionally paid by the Respondent(s) to the Petitioner and the same shall be charged and billed separately.

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

Security Expenses

82. The Petitioner has submitted that security expenses for the transmission assets are not claimed in the instant petition and it would file a separate petition for claiming the overall security expenses and the consequential Interest on Working Capital. The Petitioner has requested to consider the actual security expenses incurred during 2018-19 for claiming estimated security expenses for 2019-20 which shall be subject to true up at the end of the year based on the actuals. The Petitioner has submitted that similar petition for security expenses for 2020-21, 2021-22, 2022-



23 and 2023-24 shall be filed on yearly basis on the basis of the actual expenses of previous year subject to true up at the end of the year on actual expenses. The Petitioner has submitted that the difference, if any, between the estimated security expenses and actual security expenses as per the audited accounts may be allowed to be recovered from the beneficiaries on yearly basis.

83. BRPL has submitted that the approach adopted by the Petitioner towards claim of security expenses does not warrant the need for interest on working capital as the same is claimed in advance. The Petitioner, in response has submitted that the expenses are not claimed in the instant petition and shall be claimed separately in a separate petition along with other assets.

84. We have considered the submissions of the Petitioner. We are of the view that the Petitioner should claim security expenses for all the transmission assets in one petition. It is observed that the Petitioner has already filed the Petition No. 260/MP/2020 claiming consolidated security expenses on projected basis for the 2019-24 tariff period on the basis of actual security expenses incurred in 2018-19. Therefore, security expenses will be dealt with in Petition No. 260/MP/2020 in accordance with the applicable provisions of the 2019 Tariff Regulations.

Capital Spares

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

Sharing of Transmission Charges

86. The billing, collection and disbursement of the transmission charges approved shall be governed by the provisions of the Central Electricity Regulatory Commission



(Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010 or the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020, as applicable, as provided in Regulation 43 of the 2014 Tariff Regulations for the 2014-19 tariff period and Regulation 57 of the 2019 Tariff Regulations for the 2019-24 tariff period.

87. To summarise, the trued-up Annual Fixed Charges allowed for the Combined Asset for the 2014-19 tariff period are as under:

(₹ in lakh)					
Combined Asset	2014-15	2015-16	2016-17	2017-18	2018-19
Annual Fixed Charges	1933.31	1938.18	1916.13	1894.62	1875.28

88. The Annual Fixed Charges allowed for the Combined Asset for the 2019-24 tariff period are as under:

(₹ in lakh)					
Combined Asset	2019-20	2020-21	2021-22	2022-23	2023-24
Annual Fixed Charges	1508.57	1473.66	1441.08	1138.03	1132.46

89. This order disposes of Petition No. 153/TT/2020.

**Sd/
(Arun Goyal)
Member**

**Sd/
(I. S. Jha)
Member**

**Sd/
(P. K. Pujari)
Chairperson**



Annexure - 1

Asset	2014-19 Capital Expenditure as on 1.4.2014	Combined admitted Capital Cost as on 1.4.2014 (₹ in lakh)	Additional Capital Expenditure (₹ in lakh)	Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation	Annual Depreciation as per Regulations				
						2014-15 (₹ in lakh)	2015-16 (₹ in lakh)	2016-17 (₹ in lakh)	2017-18 (₹ in lakh)	2018-19 (₹ in lakh)
	Freehold Land	1072.75	0.00	1072.75	0.00%	0.00	0.00	0.00	0.00	0.00
	Building	1013.15	0.00	1013.15	3.34%	33.84	33.84	33.84	33.84	33.84
	Transmission Line	523.14	0.00	523.14	5.28%	27.62	27.62	27.62	27.62	27.62
	Sub Station	6127.72	270.43	6398.15	5.28%	330.68	337.82	337.82	337.82	337.82
	PLCC	119.56	0.00	119.56	6.33%	7.57	7.57	7.57	7.57	7.57
	IT Equipment and software	322.81	0.00	322.81	5.28%	17.04	17.04	17.04	17.04	17.04
	TOTAL	9179.13	270.43	9449.56		416.76	423.90	423.90	423.90	423.90
				Average Gross Block (₹ in lakh)		9314.35	9449.56	9449.56	9449.56	9449.56
				Weighted Average Rate of Depreciation (₹ in lakh)		4.47%	4.49%	4.49%	4.49%	4.49%



Annexure - 2

Asset	2019-24 Capital Expenditure as on 1.4.2019	Combined admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation	Annual Depreciation as per Regulations				
					2019-20 (₹ in lakh)	2020-21 (₹ in lakh)	2021-22 (₹ in lakh)	2022-23 (₹ in lakh)	2023-24 (₹ in lakh)
Combine d Asset	Freehold Land	1072.75	1072.75	0.00%	0.00	0.00	0.00	0.00	0.00
	Building	1013.15	1013.15	3.34%	33.84	33.84	33.84	50.58	50.58
	Transmission Line	523.14	523.14	5.28%	27.62	27.62	27.62	13.94	13.94
	Sub Station	6398.15	6398.15	5.28%	337.82	337.82	337.82	170.45	170.45
	PLCC	119.56	119.56	6.33%	7.57	7.57	7.57	1.68	1.68
	IT Equipment and software	322.81	322.81	15.00%	48.42	48.42	48.42	1.42	1.42
TOTAL	9179.13	9179.13	9449.56		455.27	455.27	455.27	175.33	175.33
Average Gross Block (₹ in lakh)					9449.56	9449.56	9449.56	9449.56	9449.56
Weighted Average Rate of Depreciation (₹ in lakh)					4.82%	4.82%	4.82%	4.82%	Spreading

ATTESTED TRUE COPY
From page 27 to 68
 Authorised Signatory
 Power Grid Corporation of India Ltd
 Plot No. 2, Sector-29, Gurgaon-122001 (HARYANA)



Summary of Tariff

Form No. - 1

Encl-2

Name of the Transmission Licensee:	Power Grid Corporation of India Limited		
Project	SYSTEM STRENGTHNING SCHEME ROORKEE		
Element Description	Combined Asset LILO Rishikesh-Muzzaffarnagar , ICT-I & ICT-II at Roorkee		
Region	Northern Region	DOCOC Date	Aug 17, 2009

(Amount in Rs. Lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Year Days	366.00	365.00	365.00	365.00	366.00
Tariff Days	366.00	365.00	365.00	365.00	366.00
Depreciation-Form No. 10A	455.27	455.27	455.27	175.33	175.33
Interest on Loan-Form No. 9E	225.58	183.51	141.46	112.34	96.28
Return on Equity-Form No. 8	532.39	532.39	532.39	532.39	532.39
Int. on Working capital-Form No.11	39.64	37.16	34.78	31.44	36.50
Op. and maintenance-Form No.2	491.05	508.58	526.42	545.19	563.74
Total AFC	1,743.93	1,716.91	1,690.32	1,396.69	1,404.24

(Petitioner)



Name of the Transmission Licensee	Power Grid Corporation of India Limited	
Project	SYSTEM STRENGTHNING SCHEME ROORKEE	
Element Description	Combined Asset LILO Rishikesh-Muzaffarnagar , ICT-I & ICT-II at Roorkee	
Region	Northern Region	DOC Date Aug 17, 2009

1. Transmission Lines

(Amount in Rs. Lakh)

Name of Line	Type of Line AC/HVDC	S/C or D/C	No of Sub-Conductors	Voltage Level KV	Line Bays	Line Reactor (Including Switchable Reactor)	Line Length Km	Date of Commercial operation	Covered in the present petition	
									Yes/No	If No, Petition No.
LILO OF RISHIKESH - MUZAFFARNAGAR AT ROORKEE	AC	DC	2	400 KV	0.000	0.000	2.100	Aug 17, 2009	Y	

Summary:

O&M Expenses For the Transmission Lines Covered in the instant petition	2019-20	2020-21	2021-22	2022-23	2023-24
DOUBLE CIRCUIT (TWIN CONDUCTOR)					
Normative Rate of O&M as per Regulation	0.881	0.912	0.944	0.977	1.011
No. of Units - (Length in KM)	2.10	2.10	2.10	2.10	2.10
O&M Claimed	1.85	1.92	1.98	2.05	2.12



2. Sub Station

Name of Sub-station	Type of Substation	Voltage Level KV	No. of Transfomers/ Reactor/ SVC etc. (with capacity)	No. of Bays				MVA/MVAR Capacity				Date of Comm. operation	Covered in the present petition
				765 KV	400 KV	220 KV	132 KV	765 KV	400 KV	220 KV	132 KV		
Muzaffarnagar / Roorkee:RISHIKESH BAY		400 KV		1.000								Aug 17, 2009	Y
Muzaffarnagar / Roorkee:MUZZAFARNAGAR BAY		400 KV		1.000								Aug 17, 2009	Y
Muzaffarnagar / Roorkee:315 MVA ICT-I	Conventional	400 KV		1.000								Aug 17, 2009	Y
Muzaffarnagar / Roorkee:1 X 315 MVA ICT AT ROORKEE		220 KV			1.000							Aug 17, 2009	Y
Muzaffarnagar / Roorkee:ROORKEE-RAMNAGAR BAY		220 KV			1.000							Aug 17, 2009	Y
Muzaffarnagar / Roorkee:ROORKEE-HARIDWAR BAY		220 KV			1.000							Aug 17, 2009	Y
Muzaffarnagar / Roorkee:315 MVA ICT-II AT ROORKEE	Conventional	400 KV		1.000								Aug 17, 2009	Y
Muzaffarnagar / Roorkee:315 MVA ICT-II	Conventional	220 KV			1.000							Aug 17, 2009	Y
Muzaffarnagar / Roorkee:LINE BAY-III	Conventional	220 KV			1.000							Aug 17, 2009	Y



Muzaffarnagar / Roorkee:LINE BAY-IV	Conventional	220 KV						1.000						Aug 17, 2009	Y
Muzaffarnagar / Roorkee:ICT-I	Conventional	400 KV	1.000							315.00				Aug 17, 2009	Y
Muzaffarnagar / Roorkee:ICT-II	Conventional	400 KV	1.000							315.00				Aug 17, 2009	Y

Summary:

O&M Expenses For Substations Covered in the instant petition		2019-20	2020-21	2021-22	2022-23	2023-24
400KV SUB-STATION						
Normative Rate of O&M as per Regulation		32.15	33.28	34.45	35.66	36.91
No. of Units		4.00	4.00	4.00	4.00	4.00
O&M Claimed		128.60	133.12	137.80	142.64	147.64
220KV SUB-STATION						
Normative Rate of O&M as per Regulation		22.51	23.30	24.12	24.96	25.84
No. of Units		6.00	6.00	6.00	6.00	6.00
O&M Claimed		135.06	139.80	144.72	149.76	155.04
400KV SUB-STATION ICT						
Normative Rate of O&M as per Regulation		0.358	0.371	0.384	0.398	0.411
No. of Units		2.00	2.00	2.00	2.00	2.00
O&M Claimed		225.54	233.74	241.92	250.74	258.94



3. Communication System

Summary:



Summary of O&M Expenses claim

(Amount in Rs. Lakh)

Particular	2019-20	2020-21	2021-22	2022-23	2023-24
A) Normative O&M					
Transmission Line	1.85	1.92	1.98	2.05	2.12
Substation	489.20	506.66	524.44	543.14	561.62
Communication System	0.00	0.00	0.00	0.00	0.00
Total Normative O&M	491.05	508.58	526.42	545.19	563.74
B) O&M Claimed under Regulation 35 (3)(C) (* The same is not being claimed and will be claimed through separate Petition)					
*Security Expenses	0.00	0.00	0.00	0.00	0.00
*Actual Capital Spare consumed	0.00	0.00	0.00	0.00	0.00
*Insurance Premium Paid	0.00	0.00	0.00	0.00	0.00
Total O&M	491.05	508.58	526.42	545.19	563.74

(Petitioner)



Normative parameters considered for tariff computations

Form No. - 3

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	SYSTEM STRENGTHNING SCHEME ROORKEE		
Element Description	Combined Asset LILO Rishikesh-Muzzaffarnagar , ICT-I & ICT-II at Roorkee		
Region	Northern Region	DOCO Date	Aug 17, 2009

(Amount in Rs. Lakh)

Particulars	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Base Rate of Return of Equity (in %)						
Tax Rate (in %)	21.55	17.472	17.472	17.472	17.472	17.472
Effective tax rate (in %)						
Grossed up Rate of ROE (in %)	19.758	18.782	18.782	18.782	18.782	18.782
Target availability - AC System (in %)	98.00	98.00	98.00	98.00	98.00	98.00
Target availability - HVDC System (in %)	96.00	96.00	96.00	96.00	96.00	96.00
Norms for sub-station Bays (Rs Lakh per bay)						
765 kV	96.20	45.01	46.60	48.23	49.93	51.68
400 kV	68.71	32.15	33.28	34.45	35.66	36.91
220 kV	48.10	22.51	23.30	24.12	24.96	25.84
132 kV and below	34.36	16.08	16.64	17.23	17.83	18.46
Norms for Transformers (Rs Lakh per MVA)						
765 kV	0.00	0.491	0.508	0.526	0.545	0.564
400 kV	0.00	0.358	0.371	0.384	0.398	0.411
220 kV	0.00	0.245	0.254	0.263	0.272	0.282
132 kV and below	0.00	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)	0.806	0.881	0.912	0.944	0.977	1.011
Single Circuit (Bundled conductor with four sub-conductors)	0.691	0.755	0.781	0.809	0.837	0.867
Single Circuit (Twin & Triple Conductor)	0.461	0.503	0.521	0.539	0.558	0.578



Single Circuit (Single Conductor)	0.23	0.252	0.26	0.27	0.279	0.289
Double Circuit (Bundled conductor with four or more sub-conductors)	1.21	1.322	1.368	1.416	1.466	1.517
Double Circuit (Twin & Triple Conductor)	0.806	0.881	0.912	0.944	0.977	1.011
Double Circuit (Single Conductor)	0.346	0.377	0.391	0.404	0.419	0.433
Multi Circuit (Bundled Conductor with four or more sub-conductor)	2.123	2.319	2.401	2.485	2.572	2.662
Multi Circuit (Twin & Triple Conductor)	1.413	1.544	1.598	1.654	1.713	1.773
Norms for HVDC stations						
HVDC Back-to-Back stations (Rs Lakh per 500 MW) (Except Gazuwaka BTB)	0.00	834.00	864.00	894.00	925.00	958.00
Gazuwaka HVDC Back-to-Back station (Rs. Lakh per 500 MW)	0.00	1,666.00	1,725.00	1,785.00	1,848.00	1,913.00
500 kV Rihand-Dadri HVDC bipole scheme (Rs Lakh) (1500 MW)	0.00	2,252.00	2,331.00	2,413.00	2,498.00	2,586.00
±500 kV Talcher- Kolar HVDC bipole scheme (Rs Lakh) (2000 MW)	0.00	2,468.00	2,555.00	2,645.00	2,738.00	2,834.00
±500 kV Bhiwadi-Balia HVDC bipole scheme (Rs Lakh) (2500 MW)	0.00	1,696.00	1,756.00	1,817.00	1,881.00	1,947.00
±800 kV, Bishwanath-Agra HVDC bipole scheme (Rs Lakh) (3000 MW)	0.00	2,563.00	2,653.00	2,746.00	2,842.00	2,942.00

(Petitioner)



Calculation of ROE

Form No. - 8

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	SYSTEM STRENGTHNING SCHEME ROORKEE		
Element Description	Combined Asset LILO Rishikesh-Muzzaffarnagar , ICT-I & ICT-II at Roorkee		
Region	Northern Region	DOCO Date	Aug 17, 2009

(Amount in Rs. Lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
No. of Days in the year	366.00	365.00	365.00	365.00	366.00
No. of days for which tariff claimed	366.00	365.00	365.00	365.00	366.00
Opening Normative Equity	2,834.57	2,834.57	2,834.57	2,834.57	2,834.57
Less: Adjustment in Equity*	0.00	0.00	0.00	0.00	0.00
Adjustment during the year	0.00	0.00	0.00	0.00	0.00
Net opening equity (Normal)	2,834.57	2,834.57	2,834.57	2,834.57	2,834.57
Add: Increase in Equity due to addition during the year / period	0.00	0.00	0.00	0.00	0.00
Less: Decrease due to de-capitalisation during the year / period	0.00	0.00	0.00	0.00	0.00
Add: Increase due to discharge during the year / period	0.00	0.00	0.00	0.00	0.00
Closing Normative Equity	2,834.57	2,834.57	2,834.57	2,834.57	2,834.57
Average Normative Equity	2,834.57	2,834.57	2,834.57	2,834.57	2,834.57
Rate of return on Equity (%)	18.782	18.782	18.782	18.782	18.782
Reduced rate of 1% decided by commission under Regulation 30(2) (if any)	0.00	0.00	0.00	0.00	0.00
Effective rate of ROE	15.50	15.50	15.50	15.50	15.50
MAT/Corporate Rate	17.472	17.472	17.472	17.472	17.472
Grossed up rate of ROE	18.782	18.782	18.782	18.782	18.782
Return on Equity	532.39	532.39	532.39	532.39	532.39
Pro rata return on Equity	532.39	532.39	532.39	532.39	532.39



Calculation of WAR of interest on actual loan

Form No. - 9C

Name of the Transmission Licensee	Power Grid Corporation of India Limited				
Project	SYSTEM STRENGTHNING SCHEME ROORKEE				
Element Description	Combined Asset LILO Rishikesh-Muzzaffarnagar , ICT-I & ICT-II at Roorkee				
Region	Northern Region	DOCOC Date	Aug 17, 2009		

(Amount in Rs. Lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
BOND XXIV -DOCOC					
Gross Loan- Opening	644.00	644.00	644.00	644.00	644.00
Cumulative repayments of Loans upto previous year	483.00	536.67	590.33	644.00	644.00
Net loan-Opening	161.00	107.33	53.67	0.00	0.00
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	53.67	53.67	53.67	0.00	0.00
Net Loan-Closing	107.33	53.66	0.00	0.00	0.00
Average Net Loan	134.17	80.50	26.84	0.00	0.00
Rate of Interest on Loan on Annual Basis	9.95	9.95	9.95	9.95	9.95
Interest on loan	13.3499	8.0098	2.6706	0.00	0.00

BOND XXVII -DOCOC					
Gross Loan- Opening	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00
Cumulative repayments of Loans upto previous year	666.67	750.00	833.33	916.67	1,000.00
Net loan-Opening	333.33	250.00	166.67	83.33	0.00
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	83.33	83.33	83.33	83.33	0.00
Net Loan-Closing	250.00	166.67	83.34	0.00	0.00



Average Net Loan	291.67	208.34	125.01	41.67	0.00
Rate of Interest on Loan on Annual Basis	9.47	9.47	9.47	9.47	9.47
Interest on loan	27.6211	19.7298	11.8384	3.9461	0.00

BOND XXVIII -DOCO					
Gross Loan- Opening	1,342.00	1,342.00	1,342.00	1,342.00	1,342.00
Cumulative repayments of Loans upto previous year	782.83	894.67	1,006.50	1,118.33	1,230.17
Net loan-Opening	559.17	447.33	335.50	223.67	111.83
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	111.83	111.83	111.83	111.83	111.83
Net Loan-Closing	447.34	335.50	223.67	111.84	0.00
Average Net Loan	503.26	391.42	279.59	167.76	55.92
Rate of Interest on Loan on Annual Basis	9.33	9.33	9.33	9.33	9.33
Interest on loan	46.9542	36.5195	26.0857	15.652	5.2173

BOND XXIX -DOCO					
Gross Loan- Opening	1,426.00	1,426.00	1,426.00	1,426.00	1,426.00
Cumulative repayments of Loans upto previous year	831.83	950.67	1,069.50	1,188.33	1,307.17
Net loan-Opening	594.17	475.33	356.50	237.67	118.83
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	118.83	118.83	118.83	118.83	118.83
Net Loan-Closing	475.34	356.50	237.67	118.84	0.00
Average Net Loan	534.76	415.92	297.09	178.26	59.42
Rate of Interest on Loan on Annual Basis	9.20	9.20	9.20	9.20	9.20
Interest on loan	49.1979	38.2646	27.3323	16.3999	5.4666



BOND XXX -DOCO					
Gross Loan- Opening	1,467.00	1,467.00	1,467.00	1,467.00	1,467.00
Cumulative repayments of Loans upto previous year	733.50	855.75	978.00	1,100.25	1,222.50
Net loan-Opening	733.50	611.25	489.00	366.75	244.50
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	122.25	122.25	122.25	122.25	122.25
Net Loan-Closing	611.25	489.00	366.75	244.50	122.25
Average Net Loan	672.38	550.13	427.88	305.63	183.38
Rate of Interest on Loan on Annual Basis	8.80	8.80	8.80	8.80	8.80
Interest on loan	59.1694	48.4114	37.6534	26.8954	16.1374

BOND XXXIII -DOCO					
Gross Loan- Opening	322.00	322.00	322.00	322.00	322.00
Cumulative repayments of Loans upto previous year	134.17	161.00	187.83	214.67	241.50
Net loan-Opening	187.83	161.00	134.17	107.33	80.50
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	26.83	26.83	26.83	26.83	26.83
Net Loan-Closing	161.00	134.17	107.34	80.50	53.67
Average Net Loan	174.42	147.59	120.76	93.92	67.09
Rate of Interest on Loan on Annual Basis	8.64	8.64	8.64	8.64	8.64
Interest on loan	15.0699	12.7518	10.4337	8.1147	5.7966

BOND XXXVIII -DOCO					
Gross Loan- Opening	162.01	162.01	162.01	162.01	162.01
Cumulative repayments of Loans upto previous year	0.00	0.00	0.00	0.00	0.00
Net loan-Opening	162.01	162.01	162.01	162.01	162.01



Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	0.00	0.00	0.00	0.00	0.00
Net Loan-Closing	162.01	162.01	162.01	162.01	162.01
Average Net Loan	162.01	162.01	162.01	162.01	162.01
Rate of Interest on Loan on Annual Basis	9.25	9.25	9.25	9.25	9.25
Interest on loan	14.9859	14.9859	14.9859	14.9859	14.9859

BOND XL -DOC0					
Gross Loan- Opening	52.00	52.00	52.00	52.00	52.00
Cumulative repayments of Loans upto previous year	13.00	17.33	21.67	26.00	30.33
Net loan-Opening	39.00	34.67	30.33	26.00	21.67
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	4.33	4.33	4.33	4.33	4.33
Net Loan-Closing	34.67	30.34	26.00	21.67	17.34
Average Net Loan	36.84	32.51	28.17	23.84	19.51
Rate of Interest on Loan on Annual Basis	9.30	9.30	9.30	9.30	9.30
Interest on loan	3.4261	3.0234	2.6198	2.2171	1.8144

BOND - XLV -DOC0					
Gross Loan- Opening	11.00	11.00	11.00	11.00	11.00
Cumulative repayments of Loans upto previous year	1.83	2.75	3.67	4.58	5.50
Net loan-Opening	9.17	8.25	7.33	6.42	5.50
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	0.92	0.92	0.92	0.92	0.92
Net Loan-Closing	8.25	7.33	6.41	5.50	4.58
Average Net Loan	8.71	7.79	6.87	5.96	5.04



Rate of Interest on Loan on Annual Basis	9.65	9.65	9.65	9.65	9.65
Interest on loan	0.8405	0.7517	0.663	0.5751	0.4864

SBI (2014-15) -ADDCAP					
Gross Loan- Opening	0.24	0.24	0.24	0.24	0.24
Cumulative repayments of Loans upto previous year	0.00	0.02	0.05	0.07	0.10
Net loan-Opening	0.24	0.22	0.19	0.17	0.14
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	0.02	0.02	0.02	0.02	0.02
Net Loan-Closing	0.22	0.20	0.17	0.15	0.12
Average Net Loan	0.23	0.21	0.18	0.16	0.13
Rate of Interest on Loan on Annual Basis	7.993319	6.894349	6.65	7.243625	8.135644
Interest on loan	0.0184	0.0145	0.012	0.0116	0.0106

BOND XLVI -ADDCAP					
Gross Loan- Opening	189.06	189.06	189.06	189.06	189.06
Cumulative repayments of Loans upto previous year	0.00	63.02	63.02	63.02	63.02
Net loan-Opening	189.06	126.04	126.04	126.04	126.04
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	63.02	0.00	0.00	0.00	0.00
Net Loan-Closing	126.04	126.04	126.04	126.04	126.04
Average Net Loan	157.55	126.04	126.04	126.04	126.04
Rate of Interest on Loan on Annual Basis	9.30	9.30	9.30	9.30	9.30
Interest on loan	14.6522	11.7217	11.7217	11.7217	11.7217

Summary



Gross Loan- Opening	6,615.31	6,615.31	6,615.31	6,615.31	6,615.31
Cumulative repayments of Loans upto previous year	3,646.83	4,231.88	4,753.90	5,275.92	5,744.29
Net loan-Opening	2,968.48	2,383.43	1,861.41	1,339.39	871.02
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	585.03	522.01	522.01	468.34	385.01
Net Loan-Closing	2,383.45	1,861.42	1,339.40	871.05	486.01
Average Net Loan	2,676.00	2,122.46	1,600.44	1,105.25	678.54
Rate of Interest on Loan on Annual Basis	9.1661	9.149	9.1235	9.0947	9.0838
Interest on loan	245.2855	194.1841	146.0165	100.5195	61.6369

(Petitioner)



Calculation of interest on Normative loan

Form No. - 9E

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	SYSTEM STRENGTHNING SCHEME ROORKEE		
Element Description	Combined Asset LILO Rishikesh-Muzzaffarnagar , ICT-I & ICT-II at Roorkee		
Region	Northern Region	DOCO Date	Aug 17, 2009

(Amount in Rs. Lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
No. of Days in the Year	366.00	365.00	365.00	365.00	366.00
No. of days for which Tariff claimed	366.00	365.00	365.00	365.00	366.00
Gross normative loan-Opening	6,614.99	6,614.99	6,614.99	6,614.99	6,614.99
Cumulative repayments of Normative loan upto previous year	3,926.29	4,381.56	4,836.83	5,292.10	5,467.43
Net normative loan-Opening	2,688.70	2,233.43	1,778.16	1,322.89	1,147.56
Addition in normative loan towards the ACE	0.00	0.00	0.00	0.00	0.00
Adjustment of normative gross loan pertaining to the decapitalised asset	0.00	0.00	0.00	0.00	0.00
Normative repayments of normative loan during the year	455.27	455.27	455.27	175.33	175.33
Adjustment of cumulative repayment pertaining to the decapitalised asset	0.00	0.00	0.00	0.00	0.00
Net normative loan - closing	2,233.43	1,778.16	1,322.89	1,147.56	972.23
Average normative loan	2,461.07	2,005.80	1,550.53	1,235.23	1,059.90
Weighted Average Rate of interest on actual loan	9.1661	9.149	9.1235	9.0947	9.0838
Interest on normative loan	225.58	183.51	141.46	112.34	96.28
Pro rata interest on normative loan	225.58	183.51	141.46	112.34	96.28

(Petitioner)



Calculation of Depreciation Rate on Original Project Cost

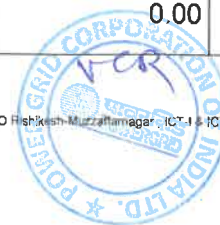
Form No. - 10

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	SYSTEM STRENGTHNING SCHEME ROORKEE		
Element Description	Combined Asset LILO Rishikesh-Muzzaffarnagar , ICT-I & ICT-II at Roorkee		
Region	Northern Region	DOC Date	Aug 17, 2009

(Amount in Rs. Lakh)

Name of Assets	Gross block at the beginning of the year	Add Cap during the year	Gross block at the end of the year	Average Gross Block	Depreciation Rate as per CERC's Depreciation Rate Schedule	Depreciation Amount for each year upto 31.03.2024
2019-20						
Land(Freehold)	1,072.75	0.00	1,072.75	1,072.75	0.00	0.00
Civil & Building	1,013.15	0.00	1,013.15	1,013.15	3.34	33.84
Transmission Line	523.14	0.00	523.14	523.14	5.28	27.62
Sub Station	6,398.15	0.00	6,398.15	6,398.15	5.28	337.82
Comm. Sys. excluding Fiber Optic	119.56	0.00	119.56	119.56	6.33	7.57
Leasehold Land	0.00	0.00	0.00	0.00	3.34	0.00
IT/Software/UNMS/URTDSM/SCADA,etc	322.81	0.00	322.81	322.81	15.00	48.42
Batteries	0.00	0.00	0.00	0.00	5.28	0.00
Fiber Optic/OPGW	0.00	0.00	0.00	0.00	6.33	0.00
TOTAL	9,449.56	0.00	9,449.56	9,449.56	0.00	455.27
Weighted Average Rate of Depreciation(%)					4.817896	

2020-21						
Land(Freehold)	1,072.75	0.00	1,072.75	1,072.75	0.00	0.00



Civil & Building	1,013.15	0.00	1,013.15	1,013.15	3.34	33.84
Transmission Line	523.14	0.00	523.14	523.14	5.28	27.62
Sub Station	6,398.15	0.00	6,398.15	6,398.15	5.28	337.82
Comm. Sys. excluding Fiber Optic	119.56	0.00	119.56	119.56	6.33	7.57
Leasehold Land	0.00	0.00	0.00	0.00	3.34	0.00
IT/Software/UNMS/URTDSM/SCADA,etc	322.81	0.00	322.81	322.81	15.00	48.42
Batteries	0.00	0.00	0.00	0.00	5.28	0.00
Fiber Optic/OPGW	0.00	0.00	0.00	0.00	6.33	0.00
TOTAL	9,449.56	0.00	9,449.56	9,449.56	0.00	455.27
Weighted Average Rate of Depreciation(%)					4.817896	

2021-22						
Land(Freehold)	1,072.75	0.00	1,072.75	1,072.75	0.00	0.00
Civil & Building	1,013.15	0.00	1,013.15	1,013.15	3.34	33.84
Transmission Line	523.14	0.00	523.14	523.14	5.28	27.62
Sub Station	6,398.15	0.00	6,398.15	6,398.15	5.28	337.82
Comm. Sys. excluding Fiber Optic	119.56	0.00	119.56	119.56	6.33	7.57
Leasehold Land	0.00	0.00	0.00	0.00	3.34	0.00
IT/Software/UNMS/URTDSM/SCADA,etc	322.81	0.00	322.81	322.81	15.00	48.42
Batteries	0.00	0.00	0.00	0.00	5.28	0.00
Fiber Optic/OPGW	0.00	0.00	0.00	0.00	6.33	0.00
TOTAL	9,449.56	0.00	9,449.56	9,449.56	0.00	455.27
Weighted Average Rate of Depreciation(%)					4.817896	



2022-23						
Land(Freehold)	1,072.75	0.00	1,072.75	1,072.75	0.00	0.00
Civil & Building	1,013.15	0.00	1,013.15	1,013.15	3.34	25.88
Transmission Line	523.14	0.00	523.14	523.14	5.28	11.02
Sub Station	6,398.15	0.00	6,398.15	6,398.15	5.28	134.78
Comm. Sys. excluding Fiber Optic	119.56	0.00	119.56	119.56	6.33	2.23
Leasehold Land	0.00	0.00	0.00	0.00	3.34	0.00
IT/Software/UNMS/URTDSM/SCADA,etc	322.81	0.00	322.81	322.81	15.00	1.42
Batteries	0.00	0.00	0.00	0.00	5.28	0.00
Fiber Optic/OPGW	0.00	0.00	0.00	0.00	6.33	0.00
TOTAL	9,449.56	0.00	9,449.56	9,449.56	0.00	175.33
Weighted Average Rate of Depreciation(%)					1.85543	

2023-24						
Land(Freehold)	1,072.75	0.00	1,072.75	1,072.75	0.00	0.00
Civil & Building	1,013.15	0.00	1,013.15	1,013.15	3.34	25.88
Transmission Line	523.14	0.00	523.14	523.14	5.28	11.02
Sub Station	6,398.15	0.00	6,398.15	6,398.15	5.28	134.78
Comm. Sys. excluding Fiber Optic	119.56	0.00	119.56	119.56	6.33	2.23
Leasehold Land	0.00	0.00	0.00	0.00	3.34	0.00
IT/Software/UNMS/URTDSM/SCADA,etc	322.81	0.00	322.81	322.81	15.00	1.42
Batteries	0.00	0.00	0.00	0.00	5.28	0.00
Fiber Optic/OPGW	0.00	0.00	0.00	0.00	6.33	0.00
TOTAL	9,449.56	0.00	9,449.56	9,449.56	0.00	175.33



Weighted Average Rate of Depreciation(%)					1.85543	
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(Petitioner)



Statement of Depreciation

Form No. - 10A

Name of the Transmission Licensee	Power Grid Corporation of India Limited				
Project	SYSTEM STRENGTHNING SCHEME ROORKEE				
Element Description	Combined Asset LILO Rishikesh-Muzzaffarnagar , ICT-I & ICT-II at Roorkee				
Region	Northern Region	DOC Date	Aug 17, 2009		

(Amount in Rs. Lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
No of Days in the year	366.00	365.00	365.00	365.00	366.00
No of days for which tariff claimed	366.00	365.00	365.00	365.00	366.00
Life at the beginning of the year					
1.1 Weighted Average useful life of the Asset/ Project	25.00	25.00	25.00	25.00	25.00
1.2 Lapsed Weighted Average useful life of the Asset/Project(in completed no. of year)	9.00	10.00	11.00	12.00	13.00
1.3 Balance Weighted Average useful life of the Asset/Project(in completed no. of year)	16.00	15.00	14.00	13.00	12.00
Capital Base					
1.4 Opening capital cost	9,449.56	9,449.56	9,449.56	9,449.56	9,449.56
1.5 Additional Capital Expenditure dr. the year	0.00	0.00	0.00	0.00	0.00
1.6 De-Capitalisation During the year	0.00	0.00	0.00	0.00	0.00
1.7 Closing capital cost	9,449.56	9,449.56	9,449.56	9,449.56	9,449.56
1.8 Average capital cost	9,449.56	9,449.56	9,449.56	9,449.56	9,449.56
1.9 Freehold land included in 1.8	1,072.75	1,072.75	1,072.75	1,072.75	1,072.75
1.10 Asset having NIL salvage value included in 1.8	322.81	322.81	322.81	322.81	322.81
1.11 Asset having 10% salvage value included in 1.8	8,054.00	8,054.00	8,054.00	8,054.00	8,054.00
1.12 Depreciable Value(1.10+90% of 1.11)	7,571.42	7,571.42	7,571.42	7,571.42	7,571.42
Depreciation for the period and Cum. Depreciation					
1.13 Weighted Average Rate of depreciation	4.817896	4.817896	4.817896	1.85543	1.85543



1.14 Depreciation(for the period)	455.27	455.27	455.27	175.33	175.33
1.15 Depreciation(Annualised)	455.27	455.27	455.27	175.33	175.33
Unrecovered Depreciation for DECAP	0.00	0.00	0.00	0.00	0.00
1.16 Cumulative depreciation at the beginning of the period	3,926.28	4,381.55	4,836.82	5,292.09	5,467.42
1.17 Less:Adj of Cum. Dep pertaining to decapitalised Asset	0.00	0.00	0.00	0.00	0.00
1.18 Cumulative depreciation at the end of the period	4,381.55	4,836.82	5,292.09	5,467.42	5,642.75

(Petitioner)



Calculation of interest on working Capital

Form No. - 11

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	SYSTEM STRENGTHNING SCHEME ROORKEE		
Element Description	Combined Asset LILO Rishikesh-Muzzaffarnagar , ICT-I & ICT-II at Roorkee		
Region	Northern Region	DOCOC Date	Aug 17, 2009

(Amount in Rs. Lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
No of Days in the year	366.00	365.00	365.00	365.00	366.00
No of days for which tariff claimed	366.00	365.00	365.00	365.00	366.00
O&M Expenses-one month	40.92	42.38	43.87	45.43	46.98
Maintenance spares 15% of O&M Expenses	73.66	76.29	78.96	81.78	84.56
Receivables equivalent to 45 days of AFC	214.42	211.67	208.40	172.19	172.65
Total Working capital	329.00	330.34	331.23	299.40	304.19
Bank Rate as on 01.04.2019 or as on 01st April of the COD year, whichever is later.	12.05	11.25	10.50	10.50	12.00
Interest on working capital	39.64	37.16	34.78	31.44	36.50
Pro rata interest on working capital	39.64	37.16	34.78	31.44	36.50

(Petitioner)



Summary of Tariff

Form No. - 1

Encl-3

Name of the Transmission Licensee:	Power Grid Corporation of India Limited		
Project	SYSTEM STRENGTHNING SCHEME ROORKEE		
Element Description	Combined Asset LILO Rishikesh-Muzzaffarnagar , ICT-I & ICT-II at Roorkee		
Region	Northern Region	DOC Date	Aug 17, 2009

(Amount in Rs. Lakh)

Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
Year Days	365.00	365.00	365.00	366.00	365.00
Tariff Days	365.00	365.00	365.00	366.00	365.00
Depreciation-Form No. 10A	175.33	175.34	175.33	175.34	175.33
Interest on Loan-Form No. 9E	80.77	65.51	49.54	33.37	17.04
Return on Equity-Form No. 8	532.39	532.39	532.39	532.39	532.39
Int. on Working capital-Form No.11	29.36	30.06	30.78	31.51	32.42
Op. and maintenance-Form No.2	409.01	430.60	452.94	476.59	502.16
Total AFC	1,226.86	1,233.90	1,240.98	1,249.20	1,259.34

(Petitioner)



Details of Transmission Lines and Substations, Communication System covered in the project scope and O&M for instant asset Form No. - 2

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	SYSTEM STRENGTHNING SCHEME ROORKEE		
Element Description	Combined Asset LILO Rishikesh-Muzzaffarnagar , ICT-I & ICT-II at Roorkee		
Region	Northern Region	DOCO Date	Aug 17, 2009

1. Transmission Lines

(Amount in Rs. Lakh)

Name of Line	Type of Line AC/ HVDC	S/C or D/C	No of Sub-Conductors	Voltage Level KV	Line Bays	Line Reactor (Including Switchable Reactor)	Line Length Km	Date of Commercial operation	Covered in the present petition	
									Yes/No	If No, Petition No.
LILO OF RISHIKESH - MUZAFFARNAGAR AT ROORKEE	AC	DC	2	400 KV	0.000	0.000	2.100	Aug 17, 2009	Y	

Summary:

O&M Expenses For the Transmission Lines Covered in the instant petition	2024-25	2025-26	2026-27	2027-28	2028-29
DOUBLE CIRCUIT (TWIN CONDUCTOR)					
Normative Rate of O&M as per Regulation	0.861	0.906	0.953	1.003	1.056
No. of Units - (Length in KM)	2.10	2.10	2.10	2.10	2.10
O&M Claimed	1.81	1.90	2.00	2.11	2.22



2. Sub Station

Name of Sub-station	Type of Substation	Voltage Level KV	No. of Transfomers/ Reactor/ SVC etc. (with capacity)	No. of Bays				MVA/MVAR Capacity				Date of Comm. operation	Covered in the present petition
				765 KV	400 KV	220 KV	132 KV	765 KV	400 KV	220 KV	132 KV		
Muzaffarnagar / Roorkee:RISHIKESH BAY		400 KV		1.000								Aug 17, 2009	Y
Muzaffarnagar / Roorkee:MUZZAFARNAGAR BAY		400 KV		1.000								Aug 17, 2009	Y
Muzaffarnagar / Roorkee:315 MVA ICT-I	Conventional	400 KV		1.000								Aug 17, 2009	Y
Muzaffarnagar / Roorkee:1 X 315 MVA ICT AT ROORKEE		220 KV			1.000							Aug 17, 2009	Y
Muzaffarnagar / Roorkee:ROORKEE-RAMNAGAR BAY		220 KV			1.000							Aug 17, 2009	Y
Muzaffarnagar / Roorkee:ROORKEE-HARIDWAR BAY		220 KV			1.000							Aug 17, 2009	Y
Muzaffarnagar / Roorkee:315 MVA ICT-II AT ROORKEE	Conventional	400 KV		1.000								Aug 17, 2009	Y
Muzaffarnagar / Roorkee:315 MVA ICT-II	Conventional	220 KV			1.000							Aug 17, 2009	Y
Muzaffarnagar / Roorkee:LINE BAY-III	Conventional	220 KV			1.000							Aug 17, 2009	Y



Muzaffarnagar / Roorkee:LINE BAY-IV	Conventional	220 KV						1.000						Aug 17, 2009	Y
Muzaffarnagar / Roorkee:ICT-I	Conventional	400 KV	1.000						315.00					Aug 17, 2009	Y
Muzaffarnagar / Roorkee:ICT-II	Conventional	400 KV	1.000						315.00					Aug 17, 2009	Y

Summary:

O&M Expenses For Substations Covered in the instant petition		2024-25	2025-26	2026-27	2027-28	2028-29
400KV SUB-STATION						
Normative Rate of O&M as per Regulation		29.53	31.08	32.71	34.43	36.23
No. of Units		4.00	4.00	4.00	4.00	4.00
O&M Claimed		118.12	124.32	130.84	137.72	144.92
220KV SUB-STATION						
Normative Rate of O&M as per Regulation		20.67	21.75	22.90	24.10	25.36
No. of Units		6.00	6.00	6.00	6.00	6.00
O&M Claimed		124.02	130.50	137.40	144.60	152.16
400KV SUB-STATION ICT						
Normative Rate of O&M as per Regulation		0.262	0.276	0.29	0.305	0.322
No. of Units		2.00	2.00	2.00	2.00	2.00
O&M Claimed		165.06	173.88	182.70	192.16	202.86



3. Communication System

Summary:



Summary of O&M Expenses claim

(Amount in Rs. Lakh)

Particular	2024-25	2025-26	2026-27	2027-28	2028-29
A) Normative O&M					
Transmission Line	1.81	1.90	2.00	2.11	2.22
Substation	407.20	428.70	450.94	474.48	499.94
Communication System	0.00	0.00	0.00	0.00	0.00
Total Normative O&M	409.01	430.60	452.94	476.59	502.16
B) O&M Claimed under Regulation 35 (3)(C) (* The same is not being claimed and will be claimed through separate Petition)					
*Security Expenses	0.00	0.00	0.00	0.00	0.00
*Actual Capital Spare consumed	0.00	0.00	0.00	0.00	0.00
*Insurance Premium Paid	0.00	0.00	0.00	0.00	0.00
Total O&M	409.01	430.60	452.94	476.59	502.16

(Petitioner)



Normative parameters considered for tariff computations

Form No. - 3

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	SYSTEM STRENGTHNING SCHEME ROORKEE		
Element Description	Combined Asset LILO Rishikesh-Muzzaffarnagar , ICT-I & ICT-II at Roorkee		
Region	Northern Region	DOC Date	Aug 17, 2009

(Amount in Rs. Lakh)

Particulars	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29
Base Rate of Return of Equity (in %)						
Tax Rate (in %)	17.472	17.472	17.472	17.472	17.472	17.472
Effective tax rate (in %)						
Grossed up Rate for ROE of 15.5% (in %)	18.782	18.782	18.782	18.782	18.782	18.782
Grossed up Rate for ROE of 15.0% (in %)	18.176	18.176	18.176	18.176	18.176	18.176
Target availability - AC System (in %)	98.00	98.00	98.00	98.00	98.00	98.00
Target availability - HVDC System (in %)	96.00	96.00	96.00	96.00	96.00	96.00
Norms for sub-station Bays (Rs Lakh per bay)						
765 kV	51.68	41.34	43.51	45.79	48.20	50.73
400 kV	36.91	29.53	31.08	32.71	34.43	36.23
220 kV	25.84	20.67	21.75	22.90	24.10	25.36
132 kV and below	18.46	15.78	16.61	17.48	18.40	19.35
Norms for Transformers (Rs Lakh per MVA)						
765 kV	0.564	0.262	0.276	0.29	0.305	0.322
400 kV	0.411	0.262	0.276	0.29	0.305	0.322
220 kV	0.282	0.262	0.276	0.29	0.305	0.322
132 kV and below	0.282	0.262	0.276	0.29	0.305	0.322
Norms for Reactor (Rs Lakh per MVAR)						
765 kV	0.00	0.262	0.276	0.29	0.305	0.322
400 kV	0.00	0.262	0.276	0.29	0.305	0.322



220 kV	0.00	0.262	0.276	0.29	0.305	0.322
132 kV and below	0.00	0.262	0.276	0.29	0.305	0.322
Norms for AC and HVDC lines (Rs Lakh per km)						
Single Circuit (Bundled Conductor with six or more sub-conductors)	1.011	0.861	0.906	0.953	1.003	1.056
Single Circuit (Bundled conductor with four sub-conductors)	0.867	0.738	0.776	0.817	0.86	0.905
Single Circuit (Twin & Triple Conductor)	0.578	0.492	0.518	0.545	0.573	0.603
Single Circuit (Single Conductor)	0.289	0.246	0.259	0.272	0.287	0.302
Double Circuit (Bundled conductor with four or more sub-conductors)	1.517	1.291	1.359	1.43	1.506	1.585
Double Circuit (Twin & Triple Conductor)	1.011	0.861	0.906	0.953	1.003	1.056
Double Circuit (Single Conductor)	0.433	0.369	0.388	0.409	0.43	0.453
Multi Circuit (Bundled Conductor with four or more sub-conductor)	2.662	2.266	2.385	2.51	2.642	2.781
Multi Circuit (Twin & Triple Conductor)	1.773	1.509	1.588	1.671	1.759	1.851
Norms for HVDC stations (Rs Lakh/MW)						
HVDC Back-to-Back stations (Rs Lakh/MW) (Except Gazuwaka BTB)	0.00	2.07	2.18	2.30	2.42	2.55
Gazuwaka HVDC Back-to-Back station (Rs Lakh/MW)	0.00	1.83	1.92	2.03	2.13	2.24
HVDC bipole scheme (Rs Lakh/MW)	0.00	1.04	1.10	1.16	1.22	1.28

(Petitioner)



Calculation of ROE

Form No. - 8

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	SYSTEM STRENGTHNING SCHEME ROORKEE		
Element Description	Combined Asset LILO Rishikesh-Muzzaffarnagar , ICT-I & ICT-II at Roorkee		
Region	Northern Region	DOCO Date	Aug 17, 2009

(Amount in Rs. Lakh)

Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
No. of Days in the year	365.00	365.00	365.00	366.00	365.00
No. of days for which tariff claimed	365.00	365.00	365.00	366.00	365.00
Opening Normative Equity	2,834.57	2,834.57	2,834.57	2,834.57	2,834.57
Less: Adjustment in Equity*	0.00	0.00	0.00	0.00	0.00
Adjustment during the year	0.00	0.00	0.00	0.00	0.00
Net opening equity (Normal)	2,834.57	2,834.57	2,834.57	2,834.57	2,834.57
Add: Increase in Equity due to addition during the year / period	0.00	0.00	0.00	0.00	0.00
Less: Decrease due to de-capitalisation during the year / period	0.00	0.00	0.00	0.00	0.00
Add: Increase due to discharge during the year / period	0.00	0.00	0.00	0.00	0.00
Closing Normative Equity	2,834.57	2,834.57	2,834.57	2,834.57	2,834.57
Average Normative Equity	2,834.57	2,834.57	2,834.57	2,834.57	2,834.57
Rate of return on Equity (%)	18.782	18.782	18.782	18.782	18.782
Reduced rate of 1% decided by commission under Regulation 30(2) (if any)	0.00	0.00	0.00	0.00	0.00
Effective rate of ROE	15.50	15.50	15.50	15.50	15.50
MAT/Corporate Rate	17.472	17.472	17.472	17.472	17.472
Grossed up rate of ROE	18.782	18.782	18.782	18.782	18.782
Return on Equity	532.39	532.39	532.39	532.39	532.39
Pro rata return on Equity	532.39	532.39	532.39	532.39	532.39



Calculation of WAR of interest on actual loan

Form No. - 9C

Name of the Transmission Licensee	Power Grid Corporation of India Limited				
Project	SYSTEM STRENGTHNING SCHEME ROORKEE				
Element Description	Combined Asset LILO Rishikesh-Muzzaffarnagar , ICT-I & ICT-II at Roorkee				
Region	Northern Region	DOC Date	Aug 17, 2009		

(Amount in Rs. Lakh)

Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
BOND XXIV -DOCO					
Gross Loan- Opening	644.00	644.00	644.00	644.00	644.00
Cumulative repayments of Loans upto previous year	644.00	644.00	644.00	644.00	644.00
Net loan-Opening	0.00	0.00	0.00	0.00	0.00
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	0.00	0.00	0.00	0.00	0.00
Net Loan-Closing	0.00	0.00	0.00	0.00	0.00
Average Net Loan	0.00	0.00	0.00	0.00	0.00
Rate of Interest on Loan on Annual Basis	9.95	9.95	9.95	9.95	9.95
Interest on loan	0.00	0.00	0.00	0.00	0.00

BOND XXVII -DOCO					
Gross Loan- Opening	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00
Cumulative repayments of Loans upto previous year	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00
Net loan-Opening	0.00	0.00	0.00	0.00	0.00
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	0.00	0.00	0.00	0.00	0.00
Net Loan-Closing	0.00	0.00	0.00	0.00	0.00



Average Net Loan	0.00	0.00	0.00	0.00	0.00
Rate of Interest on Loan on Annual Basis	9.47	9.47	9.47	9.47	9.47
Interest on loan	0.00	0.00	0.00	0.00	0.00

BOND XXVIII -DOCO

Gross Loan- Opening	1,342.00	1,342.00	1,342.00	1,342.00	1,342.00
Cumulative repayments of Loans upto previous year	1,342.00	1,342.00	1,342.00	1,342.00	1,342.00
Net loan-Opening	0.00	0.00	0.00	0.00	0.00
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	0.00	0.00	0.00	0.00	0.00
Net Loan-Closing	0.00	0.00	0.00	0.00	0.00
Average Net Loan	0.00	0.00	0.00	0.00	0.00
Rate of Interest on Loan on Annual Basis	9.33	9.33	9.33	9.33	9.33
Interest on loan	0.00	0.00	0.00	0.00	0.00

BOND XXIX -DOCO

Gross Loan- Opening	1,426.00	1,426.00	1,426.00	1,426.00	1,426.00
Cumulative repayments of Loans upto previous year	1,426.00	1,426.00	1,426.00	1,426.00	1,426.00
Net loan-Opening	0.00	0.00	0.00	0.00	0.00
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	0.00	0.00	0.00	0.00	0.00
Net Loan-Closing	0.00	0.00	0.00	0.00	0.00
Average Net Loan	0.00	0.00	0.00	0.00	0.00
Rate of Interest on Loan on Annual Basis	9.20	9.20	9.20	9.20	9.20
Interest on loan	0.00	0.00	0.00	0.00	0.00



BOND XXX -DOCO					
Gross Loan- Opening	1,467.00	1,467.00	1,467.00	1,467.00	1,467.00
Cumulative repayments of Loans upto previous year	1,344.75	1,467.00	1,467.00	1,467.00	1,467.00
Net loan-Opening	122.25	0.00	0.00	0.00	0.00
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	122.25	0.00	0.00	0.00	0.00
Net Loan-Closing	0.00	0.00	0.00	0.00	0.00
Average Net Loan	61.13	0.00	0.00	0.00	0.00
Rate of Interest on Loan on Annual Basis	8.80	8.80	8.80	8.80	8.80
Interest on loan	5.3794	0.00	0.00	0.00	0.00

BOND XXXIII -DOCO					
Gross Loan- Opening	322.00	322.00	322.00	322.00	322.00
Cumulative repayments of Loans upto previous year	268.33	295.17	322.00	322.00	322.00
Net loan-Opening	53.67	26.83	0.00	0.00	0.00
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	26.83	26.83	0.00	0.00	0.00
Net Loan-Closing	26.84	0.00	0.00	0.00	0.00
Average Net Loan	40.26	13.42	0.00	0.00	0.00
Rate of Interest on Loan on Annual Basis	8.64	8.64	8.64	8.64	8.64
Interest on loan	3.4785	1.1595	0.00	0.00	0.00

BOND XXXVIII -DOCO					
Gross Loan- Opening	162.01	162.01	162.01	162.01	162.01
Cumulative repayments of Loans upto previous year	0.00	0.00	0.00	162.01	162.01
Net loan-Opening	162.01	162.01	162.01	0.00	0.00



Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	0.00	0.00	162.01	0.00	0.00
Net Loan-Closing	162.01	162.01	0.00	0.00	0.00
Average Net Loan	162.01	162.01	81.01	0.00	0.00
Rate of Interest on Loan on Annual Basis	9.25	9.25	9.25	9.25	9.25
Interest on loan	14.9859	14.9859	7.4934	0.00	0.00

BOND XL -DOCO					
Gross Loan- Opening	52.00	52.00	52.00	52.00	52.00
Cumulative repayments of Loans upto previous year	34.67	39.00	43.33	47.67	52.00
Net loan-Opening	17.33	13.00	8.67	4.33	0.00
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	4.33	4.33	4.33	4.33	0.00
Net Loan-Closing	13.00	8.67	4.34	0.00	0.00
Average Net Loan	15.17	10.84	6.51	2.17	0.00
Rate of Interest on Loan on Annual Basis	9.30	9.30	9.30	9.30	9.30
Interest on loan	1.4108	1.0081	0.6054	0.2018	0.00

BOND - XLV -DOCO					
Gross Loan- Opening	11.00	11.00	11.00	11.00	11.00
Cumulative repayments of Loans upto previous year	6.42	7.33	8.25	9.17	10.08
Net loan-Opening	4.58	3.67	2.75	1.83	0.92
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	0.92	0.92	0.92	0.92	0.92
Net Loan-Closing	3.66	2.75	1.83	0.91	0.00
Average Net Loan	4.12	3.21	2.29	1.37	0.46



Rate of Interest on Loan on Annual Basis	9.65	9.65	9.65	9.65	9.65
Interest on loan	0.3976	0.3098	0.221	0.1322	0.0444

SBI (2014-15) -ADDCAP					
Gross Loan- Opening	0.24	0.24	0.24	0.24	0.24
Cumulative repayments of Loans upto previous year	0.12	0.14	0.17	0.19	0.22
Net loan-Opening	0.12	0.10	0.07	0.05	0.02
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	0.02	0.02	0.02	0.02	0.02
Net Loan-Closing	0.10	0.08	0.05	0.03	0.00
Average Net Loan	0.11	0.09	0.06	0.04	0.01
Rate of Interest on Loan on Annual Basis	8.20	8.20	8.20	8.20	8.20
Interest on loan	0.009	0.0074	0.0049	0.0033	0.0008

BOND XLVI -ADDCAP					
Gross Loan- Opening	189.06	189.06	189.06	189.06	189.06
Cumulative repayments of Loans upto previous year	63.02	126.04	126.04	126.04	126.04
Net loan-Opening	126.04	63.02	63.02	63.02	63.02
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	63.02	0.00	0.00	0.00	0.00
Net Loan-Closing	63.02	63.02	63.02	63.02	63.02
Average Net Loan	94.53	63.02	63.02	63.02	63.02
Rate of Interest on Loan on Annual Basis	9.30	9.30	9.30	9.30	9.30
Interest on loan	8.7913	5.8609	5.8609	5.8609	5.8609

Summary



Gross Loan- Opening	6,615.31	6,615.31	6,615.31	6,615.31	6,615.31
Cumulative repayments of Loans upto previous year	6,129.31	6,346.68	6,378.79	6,546.08	6,551.35
Net loan-Opening	486.00	268.63	236.52	69.23	63.96
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	217.37	32.10	167.28	5.27	0.94
Net Loan-Closing	268.63	236.53	69.24	63.96	63.02
Average Net Loan	377.33	252.59	152.89	66.60	63.49
Rate of Interest on Loan on Annual Basis	9.1306	9.2369	9.2783	9.3066	9.3024
Interest on loan	34.4525	23.3316	14.1856	6.1982	5.9061

(Petitioner)



Calculation of interest on Normative loan

Form No. - 9E

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	SYSTEM STRENGTHNING SCHEME ROORKEE		
Element Description	Combined Asset LILO Rishikesh-Muzzaffarnagar , ICT-I & ICT-II at Roorkee		
Region	Northern Region	DOC Date	Aug 17, 2009

(Amount in Rs. Lakh)

Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
No. of Days in the Year	365.00	365.00	365.00	366.00	365.00
No. of days for which Tariff claimed	365.00	365.00	365.00	366.00	365.00
Gross normative loan-Opening	6,614.99	6,614.99	6,614.99	6,614.99	6,614.99
Cumulative repayments of Normative loan upto previous year	5,642.76	5,818.09	5,993.43	6,168.76	6,344.10
Net normative loan-Opening	972.23	796.90	621.56	446.23	270.89
Addition in normative loan towards the ACE	0.00	0.00	0.00	0.00	0.00
Adjustment of normative gross loan pertaining to the decapitalised asset	0.00	0.00	0.00	0.00	0.00
Normative repayments of normative loan during the year	175.33	175.34	175.33	175.34	175.33
Adjustment of cumulative repayment pertaining to the decapitalised asset	0.00	0.00	0.00	0.00	0.00
Net normative loan - closing	796.90	621.56	446.23	270.89	95.56
Average normative loan	884.57	709.23	533.90	358.56	183.23
Weighted Average Rate of interest on actual loan	9.1306	9.2369	9.2783	9.3066	9.3024
Interest on normative loan	80.77	65.51	49.54	33.37	17.04
Pro rata interest on normative loan	80.77	65.51	49.54	33.37	17.04

(Petitioner)



Calculation of Depreciation Rate on Original Project Cost

Form No. - 10

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	SYSTEM STRENGTHNING SCHEME ROORKEE		
Element Description	Combined Asset LILO Rishikesh-Muzzaffarnagar , ICT-I & ICT-II at Roorkee		
Region	Northern Region	DOCOCO Date	Aug 17, 2009

(Amount in Rs. Lakh)

Name of Assets	Gross block at the beginning of the year	Add Cap during the year	Gross block at the end of the year	Average Gross Block	Depreciation Rate as per CERC's Depreciation Rate Schedule	Depreciation Amount for each year upto 31.03.2029
2024-25						
Land(Freehold)	1,072.75	0.00	1,072.75	1,072.75	0.00	0.00
Civil & Building	1,013.15	0.00	1,013.15	1,013.15	3.34	25.88
Transmission Line	523.14	0.00	523.14	523.14	5.28	11.02
Sub Station	6,398.15	0.00	6,398.15	6,398.15	5.28	134.78
Comm. Sys. excluding Fiber Optic	119.56	0.00	119.56	119.56	15.00	2.23
Leasehold Land	0.00	0.00	0.00	0.00	3.34	0.00
IT/Software/UNMS/URTDMS/SCADA,etc	322.81	0.00	322.81	322.81	15.00	1.42
Batteries	0.00	0.00	0.00	0.00	9.50	0.00
Fiber Optic/OPGW	0.00	0.00	0.00	0.00	6.33	0.00
TOTAL	9,449.56	0.00	9,449.56	9,449.56	0.00	175.33
Weighted Average Rate of Depreciation(%)					1.85543	

2025-26						
Land(Freehold)	1,072.75	0.00	1,072.75	1,072.75	0.00	0.00



Civil & Building	1,013.15	0.00	1,013.15	1,013.15	3.34	25.88
Transmission Line	523.14	0.00	523.14	523.14	5.28	11.02
Sub Station	6,398.15	0.00	6,398.15	6,398.15	5.28	134.79
Comm. Sys. excluding Fiber Optic	119.56	0.00	119.56	119.56	15.00	2.23
Leasehold Land	0.00	0.00	0.00	0.00	3.34	0.00
IT/Software/UNMS/URTDSM/SCADA,etc	322.81	0.00	322.81	322.81	15.00	1.42
Batteries	0.00	0.00	0.00	0.00	9.50	0.00
Fiber Optic/OPGW	0.00	0.00	0.00	0.00	6.33	0.00
TOTAL	9,449.56	0.00	9,449.56	9,449.56	0.00	175.34
Weighted Average Rate of Depreciation(%)					1.855536	

2026-27						
Land(Freehold)	1,072.75	0.00	1,072.75	1,072.75	0.00	0.00
Civil & Building	1,013.15	0.00	1,013.15	1,013.15	3.34	25.88
Transmission Line	523.14	0.00	523.14	523.14	5.28	11.02
Sub Station	6,398.15	0.00	6,398.15	6,398.15	5.28	134.78
Comm. Sys. excluding Fiber Optic	119.56	0.00	119.56	119.56	15.00	2.23
Leasehold Land	0.00	0.00	0.00	0.00	3.34	0.00
IT/Software/UNMS/URTDSM/SCADA,etc	322.81	0.00	322.81	322.81	15.00	1.42
Batteries	0.00	0.00	0.00	0.00	9.50	0.00
Fiber Optic/OPGW	0.00	0.00	0.00	0.00	6.33	0.00
TOTAL	9,449.56	0.00	9,449.56	9,449.56	0.00	175.33
Weighted Average Rate of Depreciation(%)					1.85543	



2027-28						
Land(Freehold)	1,072.75	0.00	1,072.75	1,072.75	0.00	0.00
Civil & Building	1,013.15	0.00	1,013.15	1,013.15	3.34	25.88
Transmission Line	523.14	0.00	523.14	523.14	5.28	11.02
Sub Station	6,398.15	0.00	6,398.15	6,398.15	5.28	134.79
Comm. Sys. excluding Fiber Optic	119.56	0.00	119.56	119.56	15.00	2.23
Leasehold Land	0.00	0.00	0.00	0.00	3.34	0.00
IT/Software/UNMS/URTDSM/SCADA,etc	322.81	0.00	322.81	322.81	15.00	1.42
Batteries	0.00	0.00	0.00	0.00	9.50	0.00
Fiber Optic/OPGW	0.00	0.00	0.00	0.00	6.33	0.00
TOTAL	9,449.56	0.00	9,449.56	9,449.56	0.00	175.34
Weighted Average Rate of Depreciation(%)					1.855536	

2028-29						
Land(Freehold)	1,072.75	0.00	1,072.75	1,072.75	0.00	0.00
Civil & Building	1,013.15	0.00	1,013.15	1,013.15	3.34	25.88
Transmission Line	523.14	0.00	523.14	523.14	5.28	11.02
Sub Station	6,398.15	0.00	6,398.15	6,398.15	5.28	134.78
Comm. Sys. excluding Fiber Optic	119.56	0.00	119.56	119.56	15.00	2.23
Leasehold Land	0.00	0.00	0.00	0.00	3.34	0.00
IT/Software/UNMS/URTDSM/SCADA,etc	322.81	0.00	322.81	322.81	15.00	1.42
Batteries	0.00	0.00	0.00	0.00	9.50	0.00
Fiber Optic/OPGW	0.00	0.00	0.00	0.00	6.33	0.00
TOTAL	9,449.56	0.00	9,449.56	9,449.56	0.00	175.33



Weighted Average Rate of Depreciation(%)					1.85543	
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(Petitioner)



Statement of Depreciation

Form No. - 10A

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	SYSTEM STRENGTHNING SCHEME ROORKEE		
Element Description	Combined Asset LILO Rishikesh-Muzzaffarnagar , ICT-I & ICT-II at Roorkee		
Region	Northern Region	DOCO Date	Aug 17, 2009

(Amount in Rs. Lakh)

Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
No of Days in the year	365.00	365.00	365.00	366.00	365.00
No of days for which tariff claimed	365.00	365.00	365.00	366.00	365.00
Life at the beginning of the year					
1.1 Weighted Average useful life of the Asset/ Project	25.00	25.00	25.00	25.00	25.00
1.2 Lapsed Weighted Average useful life of the Asset/Project(in completed no. of year)	14.00	15.00	16.00	17.00	18.00
1.3 Balance Weighted Average useful life of the Asset/Project(in completed no. of year)	11.00	10.00	9.00	8.00	7.00
Capital Base					
1.4 Opening capital cost	9,449.56	9,449.56	9,449.56	9,449.56	9,449.56
1.5 Additional Capital Expenditure dr. the year	0.00	0.00	0.00	0.00	0.00
1.6 De-Capitalisation During the year	0.00	0.00	0.00	0.00	0.00
1.7 Closing capital cost	9,449.56	9,449.56	9,449.56	9,449.56	9,449.56
1.8 Average capital cost	9,449.56	9,449.56	9,449.56	9,449.56	9,449.56
1.9 Freehold land included in 1.8	1,072.75	1,072.75	1,072.75	1,072.75	1,072.75
1.10 Asset having NIL salvage value included in 1.8	322.81	322.81	322.81	322.81	322.81
1.11 Asset having 10% salvage value included in 1.8	8,054.00	8,054.00	8,054.00	8,054.00	8,054.00
1.12 Depreciable Value(1.10+90% of 1.11)	7,571.42	7,571.42	7,571.42	7,571.42	7,571.42
Depreciation for the period and Cum. Depreciation					
1.13 Weighted Average Rate of depreciation	1.85543	1.855536	1.85543	1.855536	1.85543



1.14 Depreciation(for the period)	175.33	175.34	175.33	175.34	175.33
1.15 Depreciation(Annualised)	175.33	175.34	175.33	175.34	175.33
Unrecovered Depreciation for DECAP	0.00	0.00	0.00	0.00	0.00
1.16 Cumulative depreciation at the beginning of the period	5,642.75	5,818.08	5,993.42	6,168.75	6,344.09
1.17 Less:Adj of Cum. Dep pertaining to decapitalised Asset	0.00	0.00	0.00	0.00	0.00
1.18 Cumulative depreciation at the end of the period	5,818.08	5,993.42	6,168.75	6,344.09	6,519.42

(Petitioner)



Calculation of interest on working Capital

Form No. - 11

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	SYSTEM STRENGTHNING SCHEME ROORKEE		
Element Description	Combined Asset LILO Rishikesh-Muzzaffarnagar , ICT-I & ICT-II at Roorkee		
Region	Northern Region	DOCO Date	Aug 17, 2009

(Amount in Rs. Lakh)

Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
No of Days in the year	365.00	365.00	365.00	366.00	365.00
No of days for which tariff claimed	365.00	365.00	365.00	366.00	365.00
O&M Expenses-one month	34.08	35.88	37.75	39.72	41.85
Maintenance spares 15% of O&M Expenses	61.35	64.59	67.94	71.49	75.32
Receivables equivalent to 45 days of AFC	151.26	152.12	153.00	153.59	155.26
Total Working capital	246.69	252.59	258.69	264.80	272.43
Bank Rate as on 01.04.2019 or as on 01st April of the COD year, whichever is later.	11.90	11.90	11.90	11.90	11.90
Interest on working capital	29.36	30.06	30.78	31.51	32.42
Pro rata interest on working capital	29.36	30.06	30.78	31.51	32.42

(Petitioner)



Summary of issue involved in the petition

**PART-III
FORM- 15**

1. Name of the Petitioner	Powergrid Corporation of India Ltd
2. Petition Category	Transmission
3. Tariff Period	2024-29
4. Name of the Project	System Strengthening Scheme in Roorkee in Northern Region
5. Investment Approval date	
6. SCOD of the Project	
7. Actual COD of the project	17.08.2009
8. Whether entire scope is covered in the present petition.	Yes
9. No. of Assets covered in instant petition	1
10. No. of Assets having time over run	
11. Estimated Project Cost as per IA	
12. Is there any REC? if so, provide the date	
13. Revised Estimated Project Cost (if any)	
14. Completion cost for all the assets covered in the instant petition.	94.50 Crore
15. No. of Assets covered in instant petition and having cost overrun.	NIL
16	Prayer in brief
17	Key details and any Specific issue involved: 1) There is No add-cap in 2019-24 and 2024-29
18	Respondents
	Name of Respondents
1	AJMER VIDYUT VITRAN NIGAM LTD
2	JAIPUR VIDYUT VITRAN NIGAM LTD
3	JODHPUR VIDYUT VITRAN NIGAM LTD
4	HIMACHAL PRADESH STATE ELECTRICITY BOARD
5	PUNJAB STATE POWER CORPORATION LIMITED
6	HARYANA POWER PURCHASE CENTRE
7	POWER DEVELOPMENT DEPTT
8	UTTAR PRADESH POWER CORPORATION LTD.
9	BSES YAMUNA POWER Ltd
10	BSES RAJDHANI POWER Ltd
11	TATA POWER DELHI DISTRIBUTION LTD
12	CHANDIGARH ADMINISTRATION
13	UTTARAKHAND POWER CORPORATION LTD
14	NORTH CENTRAL RAILWAY
15	NEW DELHI MUNICIPAL COUNCIL

(Petitioner)



PART-III

Summary of Capital Cost & Annual Fixed Cost (AFC) Claimed for ALL the assets covered in the present petition.	
Name of the Petitioner	Powergrid Corporation of India Ltd
Tariff Period	2024-29
Name of the Transmission Project	System Strengthening Scheme in Roorkee in Northern Region
COD of the Project (if entire scope of project is completed)	17.08.2009

Rupees in lakh

A) Summary of Capital Cost as on COD and Additional Capital Expenditure claimed for all the assets Covered in the instant petition.

S. No.	Asset No.	COD	Cut-off Date	i) Appropriated Approved Cost			ii) Summary of Actual / Projected Capital Cost								
				As per Investment approval	As per RCE	As on COD	2024-25	2025-26	2026-27	2027-28	2028-29	Capital Cost as on 31.03.2029	Capital Cost as on cutoff date		
														3	4
1	Combined Asset	17.08.2009	31.03.2012			9449.56	-	-	-	-	-	-	-	9449.56	9449.56
Total Capital Cost Claimed						9449.56								9449.56	9449.56

B) Summary of Annual Fixed Cost (AFC) claimed for all the assets covered in the instant petition.

S. No.	Asset No.	Asset Name and its location	2024-25	2025-26	2026-27	2027-28	2028-29	2028-29	Capital Cost as on 31.03.2029	Capital Cost as on cutoff date
1	Combined Asset	Asset-I: LILO of 400 kV Rishikesh-Muzaffarnagar Transmission line at Roorkee along with associated bays at Roorkee Sub-station, Asset-II: 315 MVA 400/220 kV ICT-I along with associated bays at Roorkee Sub-station, Asset-III: 315 MVA 400/220 kV ICT-II along with associated bays at Roorkee Sub-station	1226.86	1233.9	1240.98	1249.2	1259.34	1249.2	1249.2	1259.34
Total AFC for all the Assets			1226.86	1233.9	1240.98	1249.2	1259.34	1249.2	1249.2	1259.34

Note: 1) The purpose of this form is to summarise the Capital cost & AFC claimed for all the assets covered in the instant petition.

(Petitioner)



INDEX
Checklist of Forms and other information/ documents for tariff filing for
Transmission System & Communication System

PART-III

Form No.	Title of Tariff Filing Forms (Transmission & Communication System)	Tick
FORM- 1	Summary of Tariff	✓
FORM- 1A	Summary of Asset level cost	NA
FORM-2	Details of Transmission Lines and Substations and Communication System covered in the project scope and O&M for instant asset	✓
FORM-3	Normative parameters considered for tariff computations	✓
FORM- 4	Abstract of existing transmission assets/ elements under project, Determination of Effective COD and Weighted Average Life for single AFC for the project as whole.	NA
FORM- 4A	Statement of Capital cost	✓
FORM- 4B	Statement of Capital Works in Progress	NA
FORM- 4C	Abstract of Capital Cost Estimates and Schedule of Commissioning for the New Project/ Element	NA
FORM-5	Element wise Break-up of Project/ Asset/ Element Cost for Transmission System or Communication System	NA
FORM-5A	Break-up of Construction/Supply/Service packages	NA
FORM-5B	Details of all the assets covered in the project	NA
FORM- 6	Actual Cash Expenditure and Financial Package up to COD	NA
FORM- 7	Statement of Additional Capitalisation after COD	NA
FORM- 7A	Financing of Additional Capitalisation	NA
FORM- 7B	Statement of Additional Capitalisation during five year before the end of the useful life of the project.	NA
FORM- 8	Calculation of Return on Equity	✓
FORM-8A	Details of Foreign Equity	NA
FORM-9	Details of Allocation of corporate loans to various transmission elements	NA
FORM-9A	Details of Project Specific Loans	NA
FORM-9B	Details of Foreign loans	NA
FORM-9C	Calculation of Weighted Average Rate of Interest on Actual Loans	✓
FORM-9D	Loans in Foreign Currency	NA
FORM-9E	Calculation of Interest on Normative Loan	✓
FORM- 10	Calculation of Depreciation Rate on original project cost	✓
FORM- 10A	Statement of Depreciation	✓
FORM- 10B	Statement of De-capitalisation	NA
FORM- 11	Calculation of Interest on Working Capital	✓
FORM- 12	Details of time over run	NA
FORM- 12A	Incidental Expenditure during Construction	NA
FORM- 12B	Calculation of IDC & Financing Charges	NA
FORM- 13	Details of Initial spares	NA
FORM- 14	Non-Tariff Income	NA
FORM- 15	Summary of issue involved in the petition	✓
FORM A	Summary of Capital Cost & Annual Fixed Cost (AFC) Claimed for ALL	✓
Other Information/ Documents		



S. No.	Information/Document	Tick
1	Certificate of incorporation, Certificate for Commencement of Business, Memorandum of Association, & Articles of Association (For New Project(s) setup by a company making tariff application for the first time to CERC)	NA
2	Region wise and Corporate audited Balance Sheet and Profit & Loss Accounts with all the Schedules & Annexure for the new Transmission System & Communication System for the relevant years.	NA
3	Copies of relevant loan Agreements	NA
4	Copies of the approval of Competent Authority for the Capital Cost and Financial package.	Yes
5	Copies of the Equity participation agreements and necessary approval for the foreign equity.	NA
6	Copies of the BPTA/TSA/PPA with the beneficiaries, if any	NA
7	Detailed note giving reasons of cost and time over run, if applicable. List of supporting documents to be submitted: a. Detailed Project Report b. CPM Analysis c. PERT Chart and Bar Chart d. Justification for cost and time Overrun	Yes
8	Transmission Licensee shall submit copy of Cost Audit Report along with cost accounting records, cost details, statements, schedules etc. for the transmission system as submitted to the Govt. of India for first two years i.e. 2019-20 and 2020-21 at the time of mid-term true-up in 2021-22 and for balance period of tariff period 2019-24 at the time of final true-up in 2024-25. In case of initial tariff filing the latest available Cost Audit Report should be furnished.	NA
9.	BBMB is maintaining the records as per the relevant applicable Acts. Formats specified herein may not be suitable to the available information with BBMB. BBMB may modify formats suitably as per available information to them for submission of required information for tariff purpose.	NA
10.	Any other relevant information, (Please specify)	NA
<p>Note 1: Electronic copy of the petition (in words format) and detailed calculation as per these formats (in excel format) and any other information submitted has to be uploaded in the e-filing website and shall also be furnished in pen drive/flash drive.</p>		

