

**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 Combined Asset consisting of Asset-I:400 kV D/C Chamera Pooling Station-Jalandhar Transmission Line along with bays and Line Reactor at Jalandhar, Asset-II: 220 kV D/C Transmission Line from GIS Pooling Station Chamba-Chamera-III HEP under "**Transmission System associated with Chamera-III HEP**" 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)**



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**GURGAON**

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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 to be registered and taken on record by the Hon'ble Commission.


**GURGAON**

**FILED BY**

**DATED:- 25.07.2024**

**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.

**----- 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
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.**

**GURGAON**

**DATED:- 25.07.2024**

  
**(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**

**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,

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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 in Northern Region:

Asset No	Asset Name	DOCO	Remarks
Combined Asset	Asset-I:400 kV D/C Chamera Pooling Station-Jalandhar Transmission Line along with bays and Line Reactor at Jalandhar, Asset-II: 220 kV D/C Transmission Line from GIS Pooling Station Chamba-Chamera-III HEP	01.04.2013 & 01.11.2011	Effective COD: 07.02.2013

**(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	38632.00	38105.66	No add cap	38105.66

**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	38632.00	38105.66	No add cap	38105.66

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	5728.05	5550.99	5380.37	5211.99	5042.78
	Revised AFC based on truing up	5728.04	5550.95	5374.76	5205.82	5048.06

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	4809.11	3139.47	3114.06	3087.91	3062.62

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:**

**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:400 kV D/C Chamera Pooling Station-Jalandhar Transmission Line along with bays and Line Reactor at Jalandhar, Asset-II: 220 kV D/C Transmission Line from GIS Pooling Station Chamba-Chamera-III HEP	01.04.2013 & 01.11.2011	Earlier covered under petition no. 168/TT/2020 now covered under instant petition

**10. Cost details:**

The capital cost of Rs. 38105.66 Lakhs for subject Asset has been admitted by Hon'ble commission vide order dated 03.02.2021 in petition no. 168/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.



*[Handwritten signature]*

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
Asset-1	AFC approved	5728.05	5550.99	5380.37	5211.29	5042.78
	Revised AFC based on truing up	5728.04	5550.95	5374.76	5205.82	5048.06

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

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
Asset-1	AFC	4809.11	3139.47	3114.06	3087.91	3062.62

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 2024-25, 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](http://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.

Further it is submitted that deferred tax liability before 01.04.2009 shall be recoverable from the beneficiaries or long term customers / DIC as the case may be, as and when the same is materialized as per Regulation 67 of Tariff regulations, 2019 and Regulation 89 of Tariff regulations, 2024 . The petitioner may be allowed to recover the deferred tax liability materialized directly without making any application before the Hon'ble Commission as provided in the regulations.

- 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**

**DATED:- 25.07.2024**

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

**REPRESENTED BY**

  
**(V.C. Sekhar)**

**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 Combined Asset consisting of Asset-I:400 kV D/C Chamera Pooling Station-Jalandhar Transmission Line along with bays and Line Reactor at Jalandhar, Asset-II: 220 kV D/C Transmission Line from GIS Pooling Station Chamba-Chamera-III HEP under "**Transmission System associated with Chamera-III HEP**" 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.
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

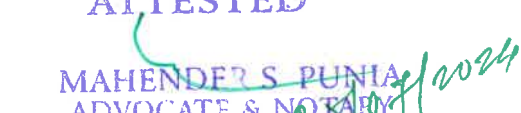
Solemnly affirmed at Gurgaon on this 25<sup>th</sup> day of July' 2024 that the contents of the above affidavit are true to my knowledge and belief and no part of it is false and nothing material has been concealed there from.

  
(DEPONENT)



25

ATTESTED

  
MAHENDER S. PUNIA  
ADVOCATE & NOTARY  
Distt. Gurugram (Haryana) India

पावर ग्रिड कॉर्पोरेशन ऑफ इंडिया लिमिटेड  
केन्द्रीय वाणिज्यिक विभाग

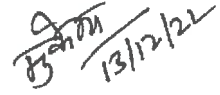
Ref: CC/Commercial/2022

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)

  
13/12/22

Mukesh Khanna

ED (Commercial &RC)



**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 168/TT/2020**

**Coram:**

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

**Date of Order: 03.02.2021**

**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 the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff of the 2019-24 period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 of **Asset-I: 400 kV D/C Chamera Pooling Station-Jalandhar Transmission Line along with bays and Line Reactor at Jalandhar, Asset-II: 220 kV D/C Transmission Line from GIS Pooling Station Chamba-Chamera-III HEP** under "Transmission System associated with Chamera-III HEP" in Northern Region.

**And in the matter of:**

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

....Petitioner

**Vs**

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

**ATTESTED TRUE COPY**  
*from page 27 to 82*  
Authorised Signatory  
Power Grid Corporation of India Ltd.  
Plot No. 2, Sector-29, Gurgaon-122001 (HARYANA)

*[Signature]*





4. Jodhpur Vidyut Vitran Nigam Ltd.,  
132 kV, GSS RVPNL Sub-Station Building,  
Caligiri Road, Malviya Nagar,  
Jaipur - 302017 (Rajasthan).
5. Himachal Pradesh State Electricity Board,  
Vidyut Bhawan, Kumar House Complex Building II,  
Shimla - 171004 (Himachal Pradesh).
6. Punjab State Electricity Board,  
Thermal Shed Tia, Near 22 Phatak,  
Patiala - 147001 (Punjab).
7. Haryana Power Purchase Centre,  
Shakti Bhawan, Sector-6,  
Panchkula - 134 109 (Haryana)
8. Power Development Department,  
Government of Jammu & Kashmir,  
Mini Secretariat, Jammu.
9. Uttar Pradesh Power Corporation Ltd.,  
(Formerly Uttar Pradesh State Electricity Board),  
Shakti Bhawan, 14, Ashok Marg,  
Lucknow - 226 001 (Uttar Pradesh).
10. Delhi Transco Ltd.,  
Shakti Sadan, Kotla Road,  
New Delhi - 110002.
11. BSES Yamuna Power Ltd.,  
B-Block, Shakti Kiran, Bldg. (Near Karkadooma Court),  
Karkadooma 2<sup>nd</sup> Floor,  
New Delhi - 110092.
12. BSES Rajdhani Power Ltd,  
BSES Bhawan, Nehru Place,  
New Delhi - 110019.
13. Tata Power Delhi Distribution Limited (TPDDL),  
NDPL House, Hudson Lines Kingsway Camp  
Delhi - 110009.
14. Chandigarh Administration,  
Sector -9, Chandigarh
15. Uttarakhand Power Corporation Ltd.,  
Urja Bhawan, Kanwali Road,  
Dehradun (Uttarakhand).





16. North Central Railway,  
Allahabad (Uttar Pradesh).
17. New Delhi Municipal Council,  
Palika Kendra, Sansad Marg,  
New Delhi - 110002.

...Respondents

**For Petitioner** : Shri J. Mazumdar, PGCIL  
Shri S.S. Raju, PGCIL  
Shri Akshay Kumar Verma, PGCIL  
Smt. Manju Gupta, PGCIL  
Shri V. Srinivas, PGCIL  
Shri Amit Bhargava, PGCIL

**For Respondents** : None

### ORDER

The instant petition has been filed by Power Grid Corporation of India Ltd. (hereinafter referred to as "the Petitioner"), a deemed transmission licensee, for truing-up of the transmission tariff for the 2014-19 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as "the 2014 Tariff Regulations") and determination of tariff of the 2019-24 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 referred to as 'the transmission assets/ Combined Asset') under "Transmission System associated with Chamera-III HEP" in Northern Region (hereinafter referred to as "the transmission project"):

**Asset-I:** 400 kV D/C Chamera Pooling Station-Jalandhar Transmission Line along with bays and Line Reactor at Jalandhar; and

**Asset-II:** 220 kV D/C Transmission Line from GIS Pooling Station Chamba-Chamera-III HEP.

2. The Petitioner has made the following prayers in this 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 5 and 6 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 Hon'ble Commission as provided in Tariff Regulation 2014 and Tariff regulations 2019 as per para 5 and 6 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 beneficiaries 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 beneficiaries.

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 6.6 above.

7) Allow the petitioner to claim the capital spares at the end of tariff block as per actual.

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

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

### **Background**

3. The Investment Approval (IA) for the transmission project was accorded by the Board of Directors of the Petitioner vide Memorandum No. C/CP/Chamera-III HEP T.S. dated 28.4.2008 with an estimated cost of ₹29737 lakh including IDC of ₹2323 lakh, based on 1<sup>st</sup> quarter, 2008 price level. The Petitioner, vide its Memorandum dated 6.6.2012, has submitted the Revised Cost Estimates (RCE) of the project at an



estimated cost of ₹38632 lakh including IDC of ₹6221 lakh. The scope of the transmission project under “Transmission System associated with Chamera-III HEP” in Northern Region” is as under:

**I. Transmission Lines:**

- i) Chamera-III HEP-Pooling Station near Chamera-II HEP 220 kV D/C line (Line would be with twin moose conductor adopting tower design of 400 kV D/C Line),
- ii) Pooling Station near Chamera-II HEP-Jalandhar 400 kV D/C line.

**II. Sub-Station: Extension of Jalandhar Sub-station.**

4. The transmission project was scheduled to be put into commercial operation on or before 1.8.2011 as per the Investment Approval. The Asset-I and Asset-II were put into commercial operation on 1.4.2013 and 1.11.2011 respectively.

5. The transmission tariff in respect of Asset-I from COD to 31.3.2014 was determined vide order dated 7.7.2015 in Petition No. 290/TT/2013 under Regulation 5(4) of the 2009 Tariff Regulations. The tariff allowed vide order dated 7.7.2015 in Petition No. 290/TT/2013 of Asset-I for 2009-14 tariff period was trued-up and tariff for the 2014-19 tariff period was determined vide order dated 23.8.2016 in Petition No. 24/TT/2016.

6. The transmission tariff in respect of Asset-II from COD to 31.3.2014 was determined vide order dated 16.11.2012 in Petition No. 92/TT/2011 under Regulation 5(4) of the 2009 Tariff Regulations. The tariff allowed vide order dated 16.11.2012 in Petition No. 92/TT/2011 for Asset-II for 2009-14 tariff period was trued-up and tariff for the 2014-19 period was determined vide order dated 23.2.2016 in Petition No. 18/TT/2015.



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

8. The Petitioner has served the petition on the Respondents and notice 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. General Notice dated 12.3.2020 directing the beneficiaries/Respondents to file reply in the matter was also posted on the Commission's website. BSES Rajdhani Power Ltd. (BRPL), Respondent No. 12 has filed its reply dated 5.6.2020 and has raised the issues of re-calculation of initial spares, adoption of Indian Accounting Standard, effective rate considered for the calculation of RoE and effect of GST. Hard copy of the reply alongwith affidavit dated 24.9.2020 was filed by BRPL after lifting of the lock down due to Covid-19.

9. During the hearing on 9.6.2020, the Petitioner sought time to file rejoinder to the reply of BRPL but no rejoinder was filed by the Petitioner. The issues raised by BRPL have been dealt in the respective paragraphs of this order.

10. Having heard the representatives of the Petitioner and learned counsel for the BRPL and perused the material on record, we proceed to dispose of the petition.

11. Before proceeding further, we consider it appropriate to deal with a primary objection of BRPL related to Indian Accounting Standard (Ind-AS). BRPL has submitted that the Petitioner has adopted the Indian Accounting Standard due to



which tariff for the transmission assets has increased. BRPL has submitted that Indian Accounting Standard is for the purposes of the Companies Act, 2013 and it is not for the purposes of tariff determination. The present case is governed by the 2014 Tariff Regulations and 2019 Tariff Regulations. BRPL has submitted that tariff in respect of Asset-II has increased in the truing up stage without any change in the capital cost of the asset or in the additional capitalization. BRPL has contended that submissions of the Petitioner are against the established practice of the 2014 Tariff Regulations and are liable to be rejected.

12. We have considered the submissions of BRPL and have also gone through the record. The principal contention of BRPL is that on account of adoption of Indian Accounting Standards by the Petitioner, the tariff of the transmission assets has increased. For determination of tariff, the Commission invariably follows the Tariff Regulations notified by it and allows the claims on the basis of the Tariff Regulations and not on the basis of the Indian Accounting Standards. Therefore, there is no merit in the contention of BRPL that introduction of Indian Accounting Standards by the Petitioner would lead to increase in tariff. Accordingly, we reject the submissions of BRPL on this count.

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

13. The details of the trued up transmission charges claimed by the Petitioner for the transmission assets for the 2014-19 tariff period are as under:

(₹ in lakh)					
Asset-I					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	1796.19	1800.99	1800.99	1800.99	1800.99
Interest on Loan	1893.77	1739.75	1579.50	1419.07	1258.59



Asset-I					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Return on Equity	2009.85	2024.45	2023.42	2023.42	2028.86
Interest on Working Capital	150.85	148.41	145.37	142.37	139.52
O & M Expenses	355.73	367.61	379.78	392.39	405.40
<b>Total</b>	<b>6206.39</b>	<b>6081.21</b>	<b>5929.06</b>	<b>5778.24</b>	<b>5633.36</b>

(₹ in lakh)

Asset-II					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	204.71	204.71	204.71	204.71	204.71
Interest on Loan	195.59	177.35	159.08	140.74	122.36
Return on Equity	223.26	224.29	224.17	224.17	224.78
Interest on Working Capital	14.94	14.56	14.16	13.76	13.37
O & M Expenses	10.59	10.95	11.31	11.68	12.07
<b>Total</b>	<b>649.09</b>	<b>631.86</b>	<b>613.43</b>	<b>595.06</b>	<b>577.29</b>

14. The details of the trued up Interest on Working Capital (IWC) claimed by the Petitioner for the transmission assets for the 2014-19 tariff period are as under:

(₹ in lakh)

Asset-I					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O & M Expenses	29.64	30.63	31.65	32.70	33.78
Maintenance Spares	53.36	55.14	56.97	58.86	60.81
Receivables	1034.40	1013.54	988.18	963.04	938.89
<b>Total Working Capital</b>	<b>1117.40</b>	<b>1099.31</b>	<b>1076.80</b>	<b>1054.60</b>	<b>1033.48</b>
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
<b>Interest on Working Capital</b>	<b>150.85</b>	<b>148.41</b>	<b>145.37</b>	<b>142.37</b>	<b>139.52</b>

(₹ in lakh)

Asset-II					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O & M Expenses	0.88	0.91	0.94	0.97	1.01
Maintenance Spares	1.59	1.64	1.70	1.75	1.81
Receivables	108.18	105.31	102.24	99.18	96.22
<b>Total Working Capital</b>	<b>110.65</b>	<b>107.86</b>	<b>104.88</b>	<b>101.90</b>	<b>99.04</b>
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
<b>Interest on Working Capital</b>	<b>14.94</b>	<b>14.56</b>	<b>14.16</b>	<b>13.76</b>	<b>13.37</b>





## Capital Cost

15. The details of the apportioned approved capital cost, capital cost as on 31.3.2014, and Additional Capital Expenditure (ACE) incurred upto 31.3.2019 as claimed by the Petitioner for Assets-I and II are as under:

(₹ in lakh)

Asset	Approved Capital Cost as per FR	Capital cost as on 31.3.2014	Additional Capital Expenditure					Total completion capital cost as on 31.3.2019
			2014-15	2015-16	2016-17	2017-18	2018-19	
Asset-I	34754.88	34046.65	181.89	0.00	0.00	0.00	0.00	34228.54
Asset-II	3877.12	3877.12	NIL					3877.12

16. The Commission vide order dated 23.8.2016 in Petition No. 24/TT/2016 allowed the capital cost of ₹34023.95 lakh for Asset-I as opening capital cost as on 1.4.2014 and vide order dated 23.2.2016 in Petition No. 18/TT/2015 allowed capital cost of ₹3877.12 lakh for Asset-II as opening capital cost as on 1.4.2014.

17. The Petitioner vide Auditor's Certificate dated 30.7.2019 has submitted the capital cost incurred upto 31.3.2014 and ACE incurred upto 31.3.2019. The Petitioner has claimed capital cost of ₹34046.65 lakh for Asset-I as on 31.3.2014 after adding the amount of initial spares of ₹22.70 lakh to the capital cost of ₹34023.95 lakh as on 31.3.2014, as allowed by the Commission vide order dated 23.8.2016 in Petition No. 24/TT/2016. The Initial Spares have now been claimed as a percentage of the total project cost as per the judgment of the Appellate Tribunal for Electricity (APTEL) dated 14.9.2019 in Appeal No. 74 of 2017. The Petitioner has claimed the capital cost of ₹3877.12 lakh for Asset-II as on 31.3.2014 as approved by the Commission vide order dated 23.2.2016 in Petition No. 18/TT/2015.



### Initial spares

18. The Petitioner has submitted that Asset-I consists of transmission line and sub-station. Initial Spares in case of transmission portion of Asset-I was restricted by ₹57.21 lakh in order dated 23.8.2016 in Petition No. 24/TT/2016 as the claim made was more than the norms specified. However, initial spares claimed under sub-station head was within the permissible limit and hence it was allowed in order dated 23.8.2016. The Petitioner has submitted that in case of Asset-II which is a transmission line, the initial spares claimed is lower than the norms specified and requested to revise the Initial Spares allowed earlier considering the total cost of the transmission line portion of Assets-I and II as per the judgement of Appellate Tribunal for Electricity (APTEL) dated 14.9.2019 in Appeal No.74 of 2017. The revised Initial Spares claimed by the Petitioner based on the total project cost are as under:

Particulars	Asset-I		Asset-II
	T/L	S/S+PLCC	T/L
Total Project cost (A)	31470.42	2792.63	3933.89
Proportionate disallowed IDC & IEDC (B)	0.00	0.00	56.77
Total capital after IDC/IEDC deduction (C) = A – B	31470.42	2792.63	3877.12
Spares claimed (D)	291.42	56.80	8.05
Proportionate Spares claimed (E) = D*C/A	291.42	56.80	7.93
Ceiling Limits as per clause 8 the 2009 Tariff Regulations (F)	0.75%	2.50%	0.75%
Spares worked out (G) = $\frac{\{(C)-(E)\}*(F)}{\{(100\%)-(F)\}}$	235.61	70.15	29.24
Excess claimed (H) = E-G	55.81	-13.35	-21.30
<b>Excess spare deducted from capital cost</b>	<b>34.51</b>	<b>0.00</b>	<b>0.00</b>

19. BRPL has submitted that the Petitioner has claimed re-calculation of the 'Initial Spares' of the instant assets for the 2009-14 tariff period in accordance with the judgment of APTEL dated 14.9.2019 in Appeal No. 74 of 2017. However, the instant





petition is for true up of the tariff of the 2014-19 tariff period and Regulation 8(1) of the 2014 Tariff Regulations does not allow the re-calculation of the 'Initial Spares' based on the capital cost of the 2009-14 tariff period. BRPL has further submitted that the judgement dated 14.9.2019 in Appeal No. 74 of 2017 in Petition No. 53/TT/2015 is for truing of transmission tariff of the 2009-14 tariff period and determination of transmission tariff for 2014-19 tariff period for Transmission System associated with Kudankulam Atomic Power Project in Southern Region. The said judgement is for truing up of the tariff of the 2009-14 tariff period and is clearly distinguishable from the instant case as APTEL had not rendered any finding on the issue of true up for the 2014-19. BRPL has also submitted that on a question of law if a decision of a court is reversed or modified by a superior court in any other case, shall not be a ground for review of such judgment.

20. We have considered the submissions of the Petitioner and BRPL. The basic contention of BRPL is that the judgement of APTEL dated 14.9.2019 is not applicable to the instant case. We note that this judgement was passed against the Commission's order dated 21.4.2016 in Petition No.53/TT/2015 wherein the Commission trued up the tariff of the 2009-14 tariff period as per the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as "the 2009 Tariff Regulations") and determined the tariff for the 2014-19 tariff period as per the 2014 Tariff Regulations for the assets, which were put into commercial operation during the 2004-09 and 2009-14 tariff periods, under the Transmission System associated with Kudankulam Atomic Power Project in Southern Region. In the instant case, the assets were put into commercial operation during the 2009-14 period and the instant petition is for truing up the tariff of the 2014-



19 period and determination of tariff for the 2019-24 period. The Commission observes that the principles involving initial spares in the instant case are similar to that of Petition No.53/TT/2015 and are applicable in the instant case.

21. The Commission vide order dated 21.4.2016 in Petition No.53/TT/2015 (against which appeal was filed in APTEL), restricted the Initial Spares to the capital cost of the individual assets, which were put into commercial operation during the 2004-09 and 2009-14 tariff periods, at the time of truing up of tariff of the 2009-14 tariff period. Against this order, the Petitioner filed Appeal No. 74 of 2017 wherein the Tribunal vide judgement dated 14.9.2019 has held as under:

*“8.12 In view of these facts, it is relevant to note that the transmission projects due to their inherent nature are segregated into different assets or elements which are executed and commissioned progressively in stages. Keeping this in view, developer / licensee while planning estimates finalises, the requirement of spares on the basis of complete project which requires flexibility in deciding quantum of spares for different type of elements of a project along with commissioning of the particular asset so as to have better performance with high degree of reliability. The requirement of spares as such, may not be exactly in proportion to the cost of individual assets. In other words, a licensee might require large number of spares with a particular asset or assets Commissioned first based on technical requirement and lesser number of spares or nil spares in subsequent assets/ elements of similar nature. Admittedly, the break-up of initial spares for various assets may be percentage wise different subject to the overall initial spares requirement of the project within the overall limits / percentage provided in the Regulations.*

*8.13.....We do not agree with this methodology of restricting initial spares asset/element wise as adopted by the Central Commission. The Central Commission to have a prudence check on the initial spares, being restricted based on the individual asset wise cost initially, but subsequently ought to have allowed as per the ceiling limits on the overall project cost basis during the true-up.”*

22. APTEL was conscious of the fact that some of the assets in Transmission System associated with Kudankulam Atomic Power Project were put into commercial operation in the 2004-09 and 2009-14 tariff periods and still allowed revision of Initial Spares for the assets put into commercial operation in the 2004-09 and 2009-14 at the time of truing up of the tariff of the 2009-14 tariff period. Moreover, we are of the



view that the generic principle laid down by the APTEL in judgement dated 14.9.2019 is that the Commission for the purpose of prudence check may initially restrict the Initial Spares based on individual ceiling limits, but subsequently allow Initial Spares as per the ceiling limits on the overall project cost basis at the time of truing up and it cannot be restricted to any particular tariff period. Therefore, we are not able to agree with the BRPL's contention that the Initial Spares allowed for the instant assets for the 2009-14 tariff period cannot be revised at the stage of truing up of the tariff of the 2014-19 tariff period.

23. As per APTEL's judgement dated 14.9.2019 in Appeal No. 74 of 2017, the Initial Spares are to be allowed as per the ceiling on the overall project cost. The instant assets were put into commercial operation during the 2009-14 tariff period. Therefore, the 2009 Tariff Regulations are applicable in the instant case wherein Regulation 3(29) of the 2009 Tariff Regulations defines "project cost" as under:

*"(29) 'original project cost' means the capital expenditure incurred by the generating company or the transmission licensee, as the case may be, within the original scope of the project up to the cut-off date as admitted by the Commission;"*

24. However, in the present case, though the instant assets were put into commercial operation during the 2009-14 tariff period, the overall project cost of the assets is arrived at only when all the instant assets are combined while claiming the tariff for the 2019-24 tariff period. Therefore, the initial spares are allowed on the basis of the overall project cost in the 2019-24 period when the instant assets are combined and the overall project cost is arrived at.



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

25. The time over-run of 20 months in case of Asset-I was condoned by the Commission vide order dated 7.7.2014 in Petition No. 290/TT/2013. Accordingly, IDC and IEDC with respect to Asset-I were considered in orders dated 7.7.2014 and 23.8.2016 in Petition No. 290/TT/2013 and 24/TT/2016 respectively. The time over-run of 3 months in case of Asset-II was not condoned by the Commission in order dated 16.11.2012 in Petition No. 92/TT/2011. Thus, the allowable IDC and IEDC has already been determined by the Commission in orders dated 16.11.2012 and 23.2.2016 in Petition Nos. 92/TT/2011 and 18/TT/2015 respectively.

**Additional Capital Expenditure (ACE)**

26. The Petitioner has not claimed any ACE for the transmission Asset-II. The Petitioner has claimed the following ACE for Asset-I and has submitted the Auditor's Certificate in support of the same:

(₹ in lakh)

Asset	Additional Capital Expenditure				
	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-I	181.89	0.00	0.00	0.00	0.00

27. The Petitioner vide affidavit dated 6.1.2020 has submitted that ACE in case of Asset-I is on account of balance and retention payment and works deferred for execution pertaining to the works executed within the cut-off date. The additional capitalization for the year 2014-15 in respect of Asset-I has been claimed under Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations. The Petitioner has also submitted that ACE upto 31.3.2019 has been considered in the



Auditor's certificate as per actuals. The contract-wise details of balance and retention payments are as detailed below:

(₹ in lakh)

Asset	Party	Package	Financial Year
			2014-15
Asset-I	KEC	Transmission Line Work	122.55
	BHEL	Sub-station Work	0.06
<b>Total</b>			<b>122.61</b>

28. Further, the contract-wise details of unexecuted works deferred for execution related to works executed prior to the cut-off date are as under:

(₹ in lakh)

Asset	Party	Package	Financial Year
			2014-15
Asset-I	KEC	Transmission Line Work	59.28
<b>Total</b>			<b>59.28</b>

29. The cut-off dates in case of Asset-I and Asset-II are 31.3.2016 and 31.3.2014 respectively.

30. We have considered the submissions of the Petitioner. It is observed that the actual audited ACE claimed by the Petitioner for Asset-I is on account of balance and retention payment and works deferred for execution pertaining to works executed within the cut-off date. ACE claimed by the Petitioner for 2014-15 period for Asset-I is within the cut-off date and the same has been considered for computation of capital cost as on 31.3.2019. The additional capitalization claimed for the period 2014-15 to 2018-19 is allowed under Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations.



31. The details of ACE allowed are as follows:

(₹ in lakh)

Asset-I	Capital cost as on 31.3.2014	Additional Capital Expenditure		Total capital cost including ACE as on 31.3.2019
		2014-15	2015-16	
Approved vide order dated 23.8.2016 in Petition No. 24/TT/2016	34023.95	100.00	93.36	34217.31
Claimed by the Petitioner in the instant petition	34046.65	181.89	0.00	34228.54
Allowed after true-up in this order	34023.95	181.89	0.00	34205.84

(₹ in lakh)

Asset-II	Capital cost as on 31.3.2014	Additional Capital Expenditure		Total capital cost including ACE as on 31.3.2019
		2014-19		
Approved earlier vide order dated 23.2.2016 in Petition No. 18/TT/2015	3877.12	0.00		3877.12
Claimed by the Petitioner in the instant petition	3877.12	0.00		3877.12
Allowed after true-up in this order	3877.12	0.00		3877.12

### Debt-Equity Ratio

32. The Petitioner has considered debt-equity ratio as 70:30 as on 31.3.2014 and for ACE during 2014-19 period for Asset-I. The debt-equity ratio of 70:30 has been considered for the capital cost as on 31.3.2014 and ACE during 2014-19 tariff period as provided under Regulation 19 of the 2014 Tariff Regulations. The Petitioner has considered the debt-equity ratio of 70.66:29.34 as on 31.3.2014 for Asset-II as determined by the Commission vide order dated 23.2.2016 in Petition No. 18/TT/2015. The debt-equity ratio of 70.66:29.34 has been considered for capital cost



as on 31.3.2014 as provided under Regulation 19 of the 2014 Tariff Regulations. The same has been summarised as under:

Asset-I	As on 31.3.2014		As on 31.3.2019	
	Amount (₹ in lakh)	(%)	Amount (₹ in lakh)	(%)
Debt	23816.77	70.00	23944.09	70.00
Equity	10207.18	30.00	10261.75	30.00
<b>Total</b>	<b>34023.95</b>	<b>100.00</b>	<b>34205.84</b>	<b>100.00</b>

Asset-II	As on 31.3.2014		As on 31.3.2019	
	Amount (₹ in lakh)	(%)	Amount (₹ in lakh)	(%)
Debt	2739.47	70.66	2739.47	70.66
Equity	1137.65	29.34	1137.65	29.34
<b>Total</b>	<b>3877.12</b>	<b>100.00</b>	<b>3877.12</b>	<b>100.00</b>

### Interest on Loan (IoL)

33. IoL has been worked out in accordance with Regulation 26 of the 2014 Tariff Regulations. The Petitioner has claimed IoL based on actual interest rates for each year during the 2014-19 period. The Petitioner has considered the weighted average rate of IoL on the basis of prevailing rates as on 1.4.2014 for respective loans. The Petitioner has submitted that the weighted average rate of IoL has been considered on the basis of rates prevailing as on 1.4.2014 and has prayed to consider floating rate of interest applicable during 2014-19 period, if any, during the truing-up of tariff.

34. We have considered the submissions made by the Petitioner. It is observed that the SBI loan with respect to transmission assets in the instant petition have been deployed with floating rates of interest. Accordingly, factoring in the impact of floating rate of interest, IoL has been worked out based on actual interest rate, in accordance with Regulation 26 of the 2014 Tariff Regulations.





35. IoL has been worked out as detailed below:

(i) Gross amount of loan, repayment of instalments 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.

36. The details of IoL allowed for the transmission asset are as follows:

(₹ in lakh)

Asset-I					
Particular	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	23816.77	23944.09	23944.09	23944.09	23944.09
Cumulative Repayments upto Previous Year	1752.11	3547.10	5346.89	7146.68	8946.47
Net Loan-Opening	22064.66	20396.99	18597.20	16797.41	14997.62
Additions due to Additional Capitalization	127.32	0.00	0.00	0.00	0.00
Repayment during the year	1794.99	1799.79	1799.79	1799.79	1799.79
Net Loan-Closing	20396.99	18597.20	16797.41	14997.62	13197.83
Average Loan	21230.83	19497.10	17697.31	15897.52	14097.73
Weighted Average Rate of Interest on Loan (%)	8.91	8.92	8.92	8.92	8.92
<b>Interest on Loan</b>	<b>1892.40</b>	<b>1738.49</b>	<b>1578.35</b>	<b>1418.03</b>	<b>1257.66</b>

(₹ in lakh)

Asset-II					
Particular	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	2739.47	2739.47	2739.47	2739.47	2739.47
Cumulative Repayments upto Previous Year	457.49	662.20	866.91	1071.63	1276.34
Net Loan-Opening	2281.98	2077.27	1872.56	1667.84	1463.13
Additions due to Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Repayment during the year	204.71	204.71	204.71	204.71	204.71
Net Loan-Closing	2077.27	1872.56	1667.84	1463.13	1258.42
Average Loan	2179.62	1974.91	1770.20	1565.49	1360.78
Weighted Average Rate of Interest on Loan (%)	8.97	8.98	8.99	8.99	8.99
<b>Interest on Loan</b>	<b>195.59</b>	<b>177.35</b>	<b>159.08</b>	<b>140.73</b>	<b>122.36</b>

37. Accordingly, IoL approved in the earlier orders (order dated 23.8.2016 in Petition No. 24/TT/2016 for Asset-I and order dated 23.2.2016 in Petition No. 18/TT/2015 for





Asset-II), claimed by the Petitioner in the instant petition and trued-up IoL allowed vide this order is shown in the table below:

(₹ in lakh)					
Asset-I	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 23.8.2016 in Petition No. 24/TT/2016	1888.69	1736.08	1578.92	1418.59	1258.18
Claimed by the Petitioner in the instant petition	1893.77	1739.75	1579.50	1419.07	1258.59
Allowed after truing-up in the instant petition	1892.40	1738.49	1578.35	1418.03	1257.66

(₹ in lakh)					
Asset-II	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 23.2.2016 in Petition No. 18/TT/2015	195.59	177.35	159.08	140.73	122.36
As claimed by the Petitioner in the instant petition	195.59	177.35	159.08	140.74	122.36
Allowed after truing-up in the instant petition	195.59	177.35	159.08	140.73	122.36

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

38. The Petitioner has claimed RoE for the transmission assets in terms of Regulations 24 and 25 of the 2014 Tariff Regulations. The Petitioner has submitted that it is 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

39. BRPL has submitted that the Petitioner has claimed effective tax rate based on the consolidated income of the Company. However, the income from other business



activities of the Petitioner like consulting, communication, planning and design of projects etc. need to be excluded from the computation of effective rate. BRPL has further submitted that the deferred tax liability (DTL) relevant to the aforesaid other business shall also not be considered in the computation of effective tax rate.

40. We have considered the above submissions of the Petitioner and BRPL. The Commission vide order dated 27.4.2020 in Petition No. 274/TT/2019 has arrived at the effective tax rate based on the notified MAT rates for the Petitioner. 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:*

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

41. The MAT rates considered in order dated 27.4.2020 in Petition No. 274/TT/2019 is considered for the purpose of grossing up of rate of RoE for truing-up of the tariff of



the 2014-19 tariff period in terms of the provisions of the 2014 Tariff Regulations. the same are as under:

Year	Notified MAT rates (inclusive of surcharge & cess) (in %)	Base rate of RoE (in %)	Grossed up RoE (Base Rate/1-t) (in %)
2014-15	20.961	15.50	19.610
2015-16	21.342	15.50	19.705
2016-17	21.342	15.50	19.705
2017-18	21.342	15.50	19.705
2018-19	21.549	15.50	19.758

42. Accordingly, RoE allowed for the transmission assets is as follows:

(₹ in lakh)

Particulars	Asset-I				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	10207.18	10261.75	10261.75	10261.75	10261.75
Addition due to Additional Capitalization	54.57	0.00	0.00	0.00	0.00
Closing Equity	10261.75	10261.75	10261.75	10261.75	10261.75
Average Equity	10234.46	10261.75	10261.75	10261.75	10261.75
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50	15.50
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
<b>Return on Equity (Pre-tax)</b>	<b>2006.98</b>	<b>2022.08</b>	<b>2022.08</b>	<b>2022.08</b>	<b>2027.52</b>

(₹ in lakh)

Particulars	Asset-II				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	1137.65	1137.65	1137.65	1137.65	1137.65
Addition due to Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Closing Equity	1137.65	1137.65	1137.65	1137.65	1137.65
Average Equity	1137.65	1137.65	1137.65	1137.65	1137.65
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50	15.50
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
<b>Return on Equity (Pre-tax)</b>	<b>223.09</b>	<b>224.17</b>	<b>224.17</b>	<b>224.17</b>	<b>224.78</b>



43. Accordingly, the details of the RoE approved in the earlier orders (order dated 23.8.2016 in Petition No. 24/TT/2016 for Asset-I and order dated 23.2.2016 in Petition No. 18/TT/2015 for Asset-II), claimed by the Petitioner in the instant petition and trued-up RoE allowed in this order is shown in the table below:

Asset-I	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 23.8.2016 in Petition No. 24/TT/2016	2004.57	2010.26	2013.00	2013.00	2013.00
Claimed by the Petitioner in the instant petition	2009.85	2024.45	2023.42	2023.42	2028.86
Allowed after truing-up in the instant petition	2006.98	2022.08	2022.08	2022.08	2027.52

Asset-II	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 23.2.2016 in Petition No. 18/TT/2015	223.10	223.10	223.10	223.10	223.10
As claimed by the Petitioner in the instant petition	223.26	224.29	224.17	224.17	224.78
Allowed after truing-up in the instant petition	223.09	224.17	224.17	224.17	224.78

### Depreciation

44. The Petitioner has claimed depreciation considering gross block of ₹34046.65 lakh as on 31.3.2014 and additional capitalization of ₹181.89 lakh for Asset-I during 2014-19 tariff period. Further, the Petitioner has claimed depreciation considering gross block of ₹3877.12 lakh as on 31.3.2014 and no additional capitalization for Asset-II during 2014-19 period.

45. We have considered the submissions of the Petitioner. Depreciation has been computed considering capital expenditure as on 31.3.2014 and ACE approved for 2014-19 tariff period. The weighted average useful life of the assets has been



considered as 34 years for Asset-I and 35 years for Asset-II in accordance with the Regulation 27 of the 2014 Tariff Regulations. The gross block during the tariff period 2014-19 has been depreciated at weighted average rate of depreciation (WAROD) and working of WAROD is at Annexure-I. WAROD has been worked out after taking into account the depreciation rates of the assets as provided in the 2014 Tariff Regulations and depreciation allowed during 2014-19 tariff period is as under:

(₹ in lakh)

Asset-I					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	34023.95	34205.84	34205.84	34205.84	34205.84
Additional Capitalisation	181.89	0.00	0.00	0.00	0.00
Closing Gross Block	34205.84	34205.84	34205.84	34205.84	34205.84
Average Gross Block	34114.90	34205.84	34205.84	34205.84	34205.84
Weighted Average Rate of Depreciation (WAROD) (%)	5.26	5.26	5.26	5.26	5.26
Balance useful life of the asset at the beginning of the year	33	32	31	30	29
Aggregated Depreciable Value	30703.41	30785.26	30785.26	30785.26	30785.26
Remaining Aggregate Depreciable Value at the end of the year	27156.31	25438.37	23638.58	21838.78	20038.99
<b>Combined Depreciation during the year</b>	<b>1794.99</b>	<b>1799.79</b>	<b>1799.79</b>	<b>1799.79</b>	<b>1799.79</b>

(₹ in lakh)

Asset-II					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	3877.12	3877.12	3877.12	3877.12	3877.12
Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Closing Gross Block	3877.12	3877.12	3877.12	3877.12	3877.12
Average Gross Block	3877.12	3877.12	3877.12	3877.12	3877.12
Weighted average rate of Depreciation (WAROD) (%)	5.28	5.28	5.28	5.28	5.28
Balance useful life of the asset at the beginning of the year	33.00	32.00	31.00	30.00	29.00
Aggregated Depreciable Value	3489.41	3489.41	3489.41	3489.41	3489.41
Remaining Aggregated Depreciable Value at the end of the year	2827.21	2622.49	2417.78	2213.07	2008.36
<b>Combined Depreciation during the year</b>	<b>204.71</b>	<b>204.71</b>	<b>204.71</b>	<b>204.71</b>	<b>204.71</b>





46. The details of the depreciation approved vide order dated 23.8.2016 in Petition No. 24/TT/2016 for Asset-I and order dated 23.2.2016 in Petition No. 18/TT/2015 for Asset-II, claimed by the Petitioner in the instant petition and true-up depreciation allowed in this order is shown in the table below:

(₹ in lakh)					
Asset-I	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 23.8.2016 in Petition No. 24/TT/2016	1792.83	1797.93	1800.40	1800.40	1800.40
Claimed by the Petitioner in the instant petition	1796.19	1800.99	1800.99	1800.99	1800.99
Allowed after true-up in the instant petition	1794.99	1799.79	1799.79	1799.79	1799.79

(₹ in lakh)					
Asset-II	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 23.2.2016 in Petition No. 18/TT/2015	204.71	204.71	204.71	204.71	204.71
Claimed by the Petitioner in the instant petition	204.71	204.71	204.71	204.71	204.71
Allowed after true-up in the instant petition	204.71	204.71	204.71	204.71	204.71

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

47. The Petitioner has claimed O&M Expense as per Regulation 29(4)(a) of the 2014 Tariff Regulations for Assets-I and II.

48. The O&M Expenses claimed by the Petitioner for Asset-I are as follows:

(₹ in lakh)					
Sub-Station Bays	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Particulars</b>					
<b>O&amp;M for Sub-station bays (as per norms)</b>					
4 No. of 400 kV bays at Chamera-III Sub-station	241.20	249.20	257.48	266.04	274.84
<b>Total O&amp;M Expenses</b>	<b>241.20</b>	<b>249.20</b>	<b>257.48</b>	<b>266.04</b>	<b>274.84</b>

(₹ in lakh)					
HV and DC Lines	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Particulars</b>					
<b>O&amp;M for HV and DC Lines</b>					



<b>(as per norms)</b>					
400 kV D/C Twin Conductor Chamera Pooling Station (Chamba)-Jalandhar Transmission Line – 161.99 km.	114.53	118.41	122.30	126.35	130.56
<b>Total O&amp;M Expenses</b>	<b>114.53</b>	<b>118.41</b>	<b>122.30</b>	<b>126.35</b>	<b>130.56</b>

(₹ in lakh)

<b>Asset-I</b>					
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
<b>Total O&amp;M Expenses Claimed</b>	<b>355.73</b>	<b>367.61</b>	<b>379.78</b>	<b>392.39</b>	<b>405.40</b>

49. It is observed that the claim of the Petitioner is within the norms specified under Regulation 29(4)(a) of the 2014 Tariff Regulations and the same is allowed for the 2014-19 period. The norms specified under Regulation 29(4)(a) of the 2014 Tariff Regulations with respect to Asset-I and the O&M Expenses allowed are as under:

**Sub-Station Bays** (₹ in lakh)

<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
<b>Norm (₹ lakh/bay)</b>					
400 kV Bay	60.30	62.30	64.37	66.51	68.71
<b>Number of bays</b>					
400 kV Bay at Chamera-III Sub-station	4	4	4	4	4
O&M Expenses for 400 kV Bay at Chamera-III Sub-station	241.20	249.20	257.48	266.04	274.84
<b>Total O&amp;M Expenses</b>	<b>241.20</b>	<b>249.20</b>	<b>257.48</b>	<b>266.04</b>	<b>274.84</b>

**AC and HVDC Lines** (₹ in lakh)

<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
<b>Norm (₹ lakh/km)</b>					
D/C Twin/Triple Conductor	0.707	0.731	0.755	0.780	0.806
<b>Line Length in km.</b>					
D/C Twin/Triple Conductor	161.99	161.99	161.99	161.99	161.99
O&M Expenses for 400 kV D/C Twin Conductor Chamera Pooling Station	114.53	118.41	122.30	126.35	130.56



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
(Chamba) - Jalandhar Transmission Line					
<b>Total O&amp;M Expenses</b>	<b>114.53</b>	<b>118.41</b>	<b>122.30</b>	<b>126.35</b>	<b>130.56</b>

(₹ in lakh)

Asset-I					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Total O&amp;M Expenses Allowed</b>	<b>355.73</b>	<b>367.61</b>	<b>379.78</b>	<b>392.39</b>	<b>405.40</b>

50. For Asset-I, there is no variation in the O&M Expenses allowed in order dated 23.8.2016 in Petition No. 24/TT/2016, claim made by the Petitioner in the instant petition and that trued-up in the instant order.

51. The O&M Expenses claimed by the Petitioner for Asset-II are as follows:

HV and DC Lines					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>O&amp;M for HV and DC Lines (as per norms)</b>					
220 kV D/C Twin Conductor GIS Pooling Station Chamba-Chamera-III HEP Transmission Line – 14.98 km.	10.59	10.95	11.31	11.68	12.07
<b>Total O&amp;M Expenses</b>	<b>10.59</b>	<b>10.95</b>	<b>11.31</b>	<b>11.68</b>	<b>12.07</b>

(₹ in lakh)

Asset-II					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Total O&amp;M Expenses Claimed</b>	<b>10.59</b>	<b>10.95</b>	<b>11.31</b>	<b>11.68</b>	<b>12.07</b>

52. The norms specified under Regulation 29(4)(a) of the 2014 Tariff Regulations with respect to the Asset-II and the O&M Expenses allowed are as under:

AC and HVDC Lines					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Norm (₹ lakh/km)</b>					
D/C Twin/Triple Conductor	0.707	0.731	0.755	0.780	0.806
<b>Line Length in km.</b>					
D/C Twin/Triple Conductor	14.98	14.98	14.98	14.98	14.98





Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses for 220 kV D/C Twin Conductor GIS Pooling Station Chamba-Chamera-III HEP Transmission Line	10.59	10.95	11.31	11.68	12.07
<b>Total O&amp;M Expenses</b>	<b>10.59</b>	<b>10.95</b>	<b>11.31</b>	<b>11.68</b>	<b>12.07</b>

(₹ in lakh)

Asset-II					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Total O&amp;M Expenses Allowed</b>	<b>10.59</b>	<b>10.95</b>	<b>11.31</b>	<b>11.68</b>	<b>12.07</b>

53. For Asset-II, there is no variation in the O&M Expenses approved in the order dated 23.2.2016 in Petition No. 18/TT/2015, claim made by the Petitioner in the instant petition and that trued-up in the instant order.

#### Interest on Working Capital (“IWC”)

54. The Petitioner is entitled to claim IWC as per Regulation 28(1)(c) of the 2014 Tariff Regulations. The components of the working capital and the Petitioner’s entitlement to interest thereon are discussed as follows:

##### (i) Maintenance Spares:

Maintenance spares have been worked out based on 15% of Operation and Maintenance Expenses specified in Regulation 28.

##### (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.

55. IWC allowed for Asset-I is as under:

(₹ in lakh)

Asset-I					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O & M Expenses	29.64	30.63	31.65	32.70	33.78
Maintenance Spares	53.36	55.14	56.97	58.86	60.81
Receivables	1033.47	1012.71	987.55	962.43	938.30
<b>Total</b>	<b>1116.47</b>	<b>1098.49</b>	<b>1076.16</b>	<b>1053.99</b>	<b>1032.90</b>
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
<b>Interest on Working Capital</b>	<b>150.72</b>	<b>148.30</b>	<b>145.28</b>	<b>142.29</b>	<b>139.44</b>

56. IWC allowed for Asset-II is as under:

(₹ in lakh)

Asset-II					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O & M Expenses	0.88	0.91	0.94	0.97	1.01
Maintenance Spares	1.59	1.64	1.70	1.75	1.81
Receivables	108.15	105.29	102.24	99.18	96.21
<b>Total</b>	<b>110.62</b>	<b>107.85</b>	<b>104.88</b>	<b>101.90</b>	<b>99.03</b>
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
<b>Interest on Working Capital</b>	<b>14.93</b>	<b>14.56</b>	<b>14.16</b>	<b>13.76</b>	<b>13.37</b>

57. The details of the IWC approved in earlier orders (order dated 23.8.2016 in Petition No. 24/TT/2016 for Asset-I and order dated 23.2.2016 in Petition No. 18/TT/2015 for Asset-II), as claimed by the Petitioner in the instant petition and trued-up IWC allowed is shown in the table below:

(₹ in lakh)

Asset-I	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 23.8.2016 in Petition No.24/TT/2016	150.56	147.93	145.10	142.11	139.13
Claimed by the Petitioner in the instant petition	150.85	148.41	145.37	142.37	139.52



(₹ in lakh)

Asset-I	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed after truing-up in this order	150.72	148.30	145.28	142.29	139.44

(₹ in lakh)

Asset-II	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 23.2.2016 in Petition No. 18/TT/2015	14.93	14.53	14.13	13.73	13.33
Claimed by the Petitioner in the instant petition	14.94	14.56	14.16	13.76	13.37
Allowed after truing-up in this order	14.93	14.56	14.16	13.76	13.37

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

58. Accordingly, the trued up annual fixed charges allowed for the transmission assets for the 2014-19 tariff period are as under:

(₹ in lakh)

Asset-I					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	1794.99	1799.79	1799.79	1799.79	1799.79
Interest on Loan	1892.40	1738.49	1578.35	1418.03	1257.66
Return on Equity	2006.98	2022.08	2022.08	2022.08	2027.52
Int. on Working Capital	150.72	148.30	145.28	142.29	139.44
Op. and Maintenance	355.73	367.61	379.78	392.39	405.40
<b>Total</b>	<b>6200.82</b>	<b>6076.27</b>	<b>5925.28</b>	<b>5774.58</b>	<b>5629.81</b>

(₹ in lakh)

Asset-II					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	204.71	204.71	204.71	204.71	204.71
Interest on Loan	195.59	177.35	159.08	140.73	122.36
Return on Equity	223.09	224.17	224.17	224.17	224.78
Int. on Working Capital	14.93	14.56	14.16	13.76	13.37
Op. and Maintenance	10.59	10.95	11.31	11.68	12.07
<b>Total</b>	<b>648.92</b>	<b>631.75</b>	<b>613.43</b>	<b>595.06</b>	<b>577.29</b>

59. Accordingly, the Annual Fixed Charges approved in earlier orders (order dated 23.8.2016 in Petition No. 24/TT/2016 for Asset-I and order dated 23.2.2016 in Petition No. 18/TT/2015 for Asset-II), claimed by the Petitioner in the instant petition and approved in this order after truing-up is shown in the table below:



(₹ in lakh)

Asset-I	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 23.8.2016 in Petition No. 24/TT/2016	6192.38	6059.81	5917.20	5766.49	5616.11
Claimed by the Petitioner in the instant petition	6206.39	6081.21	5929.06	5778.24	5633.36
Allowed after true-up in this order	6200.82	6076.27	5925.28	5774.58	5629.81

(₹ in lakh)

Asset-II	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 23.2.2016 in Petition No. 18/TT/2015	648.92	630.64	612.33	593.95	575.57
Claimed by the Petitioner in the instant petition	649.09	631.86	613.43	595.06	577.29
Allowed after true-up in this order	648.92	631.75	613.43	595.06	577.29

**Determination of Annual Fixed Charges for the 2019-24 tariff period**

60. The Petitioner has combined Assets-I and II into Combined Asset and the transmission tariff claimed by the Petitioner for the 2019-24 tariff period are as follows:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	2005.70	2005.70	2005.70	2005.70	2005.70
Interest on Loan	1202.12	1023.20	844.34	666.64	489.35
Return on Equity	2142.31	2142.31	2142.31	2142.31	2142.31
Interest on Working Capital	92.87	90.84	88.60	86.38	83.98
Operation and Maintenance	284.78	294.78	305.13	315.81	326.82
<b>Total</b>	<b>5727.78</b>	<b>5556.83</b>	<b>5386.08</b>	<b>5216.84</b>	<b>5048.16</b>

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

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M expenses	23.73	24.57	25.43	26.32	27.24
Maintenance Spares	42.72	44.22	45.77	47.37	49.02
Receivables	704.24	685.09	664.04	643.17	620.68
<b>Total</b>	<b>770.69</b>	<b>753.88</b>	<b>735.24</b>	<b>716.86</b>	<b>696.94</b>



Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
O&M expenses	23.73	24.57	25.43	26.32	27.24
Rate of Interest (%)	12.05	12.05	12.05	12.05	12.05
<b>Interest on Working Capital</b>	<b>92.87</b>	<b>90.84</b>	<b>88.60</b>	<b>86.38</b>	<b>83.98</b>

### Effective Date of Commercial Operation (E-COD)

62. The Petitioner has claimed E-COD of the Combined Asset as 7.2.2013. Based on the trued-up admitted capital cost and actual COD of all the assets, the E-COD has been worked out as follows:

Computation of Effective COD						
Asset	Actual COD	Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Weight of the cost (%)	No. of Days from last COD	Weighted Days	Effective COD (Latest COD – Total weighted Days)
Asset-I	1.4.2013	34205.84	89.82	0.00	0.00	7.2.2013
Asset-II	1.11.2011	3877.12	10.18	517.00	52.63	
<b>Total</b>		<b>38082.96</b>	<b>100.00</b>		<b>52.63</b>	

63. E-COD is used to determine the lapsed life of the Project as a whole, which works out as 6 (six) years as on 1.4.2019 (i.e. the number of completed years as on 1.4.2019 from E-COD).

### Weighted Average Life (WAL)

64. The life as defined under Regulation 33 of the 2019 Tariff Regulations has been considered for determination of Weighted Average Life (WAL).

65. The Combined Asset consists of elements such as building, transmission line, sub-station equipment and each element has different span of life. Therefore, the concept of WAL has been used as the useful life of the Project as a whole.



66. WAL has been determined based on the admitted capital cost of individual elements as on 31.3.2019 and their respective life as stipulated in the 2019 Tariff Regulations. The element-wise life as provided in the 2014 Tariff Regulations prevailing at the time of actual COD of individual assets has been ignored for this purpose. The life as provided in the 2019 Tariff Regulations has been considered for determination of WAL. Accordingly, WAL of the Combined Asset has been worked out as 34 years as shown below:

Particulars	Life as per 2019 Tariff Regulation (Years) (a)	Combined Capital Cost (₹ in lakh) (b)	Weighted capital cost (₹ in lakh) (c)=(a) x (b)	Weighted Avg. Life of Asset (in years) (d)=(c)/(b)
Building & Other Civil Works	25	330.80	8270.00	
Transmission Line	35	35290.33	1235161.55	
Sub-Station Equipment	25	2448.49	61212.25	
PLCC	15	13.34	200.10	
<b>Total</b>		<b>38082.96</b>	<b>1304843.90</b>	<b>34.26 years (rounded off to 34 years)</b>

67. WAL as on 1.4.2019 as determined above is applicable prospectively (i.e. 2019-24 tariff period onwards) and no retrospective adjustment of depreciation in previous tariff period is required to be done. As discussed above, the Effective COD of the instant assets is 7.2.2013 and the lapsed life of the Project as a whole, works out as 6 (six) years as on 1.4.2019 (i.e. the number of completed years as on 1.4.2019 from Effective COD). Accordingly, WAL has been used to determine the remaining useful life of the Combined Asset as on 1.4.2019 is 28 years.

### **Capital Cost**

68. Regulation 19 of the 2019 Tariff Regulations provides 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 up to the receiving end of the generating station but does not include the transportation cost and any other appurtenant cost paid to the railway;
- (k) Capital expenditure on account of biomass handling equipment and facilities, for co-firing;
- (l) Capital expenditure on account of emission control system necessary to meet the revised emission standards and sewage treatment plant;
- (m) Expenditure on account of fulfilment of any conditions for obtaining environment clearance for the project;
- (n) Expenditure on account of change in law and force majeure events; and
- (o) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.

(3) The Capital cost of an existing project shall include the following:

- (a) Capital cost admitted by the Commission prior to 1.4.2019 duly trued up by excluding liability, if any, as on 1.4.2019;
- (b) Additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with these regulations;
- (c) Capital expenditure on account of renovation and modernisation as admitted by this Commission in accordance with these regulations;
- (d) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;





(e) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal 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 de-capitalised only after its redeployment;

Provided further that unless shifting of an asset from one project to another is of permanent nature, there shall be no de-capitalization of the concerned assets.

(c) In case of hydro generating stations, any expenditure incurred or committed to be incurred by a project developer for getting the project site allotted by the State Government by following a transparent process;

(d) Proportionate cost of land of the existing project which is being used for generating power from generating station based on renewable energy; and

(e) Any grant received from the Central or State Government or any statutory body or authority for the execution of the project which does not carry any liability of repayment."

69. The Petitioner has claimed the capital cost of Combined Asset as ₹38105.66 lakh as on 31.3.2019.

70. The admitted trued-up capital cost of ₹34205.84 lakh for Asset-I and ₹3877.12 lakh for Asset-II as on 31.3.2019 has been considered as the opening capital cost as



on 1.4.2019 for determination of tariff of the 2019-24 tariff period in accordance with Regulation 19 of the 2019 Tariff Regulations. The element-wise capital cost (i.e. land, building, transmission line, sub-station and PLCC) as admitted by the Commission as on 31.3.2019 for the transmission assets are clubbed together and the combined capital cost has been considered as capital cost for Combined Asset as per following details:

(₹ in lakh)			
Element	Asset-I (A)	Asset-II (B)	Capital Cost for Combined Asset as on 31.3.2019 C = (A+B)
Freehold Land	0.00	0.00	0.00
Building & Other Civil Works	330.80	0.00	330.80
Transmission Line	31413.21	3877.12	35290.33
Sub-Station Equipment	2448.49	0.00	2448.49
PLCC	13.34	0.00	13.34
Leasehold Land	0.00	0.00	0.00
IT Equipment & Software	0.00	0.00	0.00
<b>Total</b>	<b>34205.84</b>	<b>3877.12</b>	<b>38082.96</b>

### **Initial Spares**

71. As stated in paragraphs 22 and 23 above of this order, since the assets covered in the transmission project were put into commercial operation during the 2009-14 tariff period and are combined and the overall project cost is arrived at in the 2019-24 tariff period. Therefore, the 2009 Tariff Regulations are applicable in the instant case and the revised initial spares are allowed during the 2019-24 tariff period on the basis of the overall project cost as per the APTEL's judgement dated 14.9.2019 in Appeal No.74 of 2017.

72. Taking into consideration the observations of APTEL in judgement dated 14.9.2019, the project cost as on the cut-off date as defined in the 2009 Tariff Regulations is considered for computation of the Initial Spares. Based on the



submissions of the Petitioner regarding the cost details of Assets-I and II for computation of allowable Initial Spares, the Commission has reworked the allowable initial spares as follows:

Asset	Element	Total project cost upto cut-off date (₹ in lakh)	Initial Spares claimed (₹ in lakh)	Norms as per 2009 Tariff Regulations (in %)	Initial Spares allowable as per norms and APTEL judgement dated 14.9.2019 (₹ in lakh)	Admissible and allowed in instant petition	Initial Spares already allowed (₹ in lakh)	Additional spares now allowed
Asset-I	Sub-station	2792.63	56.80	2.50	70.15	56.80	56.80	0
Asset-I		31470.42	291.42					
Asset-II	Transmission Line	3877.12	7.93	0.75	264.85	264.85	242.15	22.70
<b>Total</b>		<b>35347.54</b>	<b>299.35</b>					
<b>Grand Total</b>			<b>356.15</b>		<b>335.00</b>	<b>321.65</b>	<b>298.95</b>	<b>22.70</b>

73. Accordingly, additional Initial Spares of ₹22.70 for Transmission Line element of combined asset are being allowed as part of the combined capital cost as on 1.4.2019 in line with APTEL's judgement dated 14.9.2019 in Appeal No. 74 of 2017.

74. Capital cost as on 1.4.2019 is worked out as under:

Capital Cost for Combined Asset as on 31.3.2019	Additional Initial Spares allowed as per APTEL judgement dated 14.9.2019	Capital Cost for Combined Asset as on 1.4.2019
38082.96	22.70	38105.66

75. Accordingly, additional Initial Spares of ₹22.70 lakh are being allowed as part of the combined capital cost as on 1.4.2019 in line with APTEL's judgement dated 14.9.2019 in Appeal No. 74 of 2017.

76. Capital cost as on 1.4.2019 is worked out as under:

Capital Cost for Combined Asset as on 31.3.2019	Additional Initial Spares allowed as per APTEL judgement dated 14.9.2019	Capital Cost for Combined Asset as on 1.4.2019
38082.96	22.70	38105.66



77. The trued-up capital cost of ₹38105.66 lakh for Combined Asset has been considered as admitted capital cost as on 1.4.2019 for working out tariff of the 2019-24 tariff period.

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

78. The Petitioner has not claimed any Additional Capital Expenditure during the 2019-24 tariff period for the instant Combined Asset.

### **Debt-Equity Ratio**

79. Regulation 18 of the 2019 Tariff Regulations provide 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 ACE 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.”*

80. The details of the debt-equity considered in respect of the Combined Asset for the purpose of computation of tariff of the 2019-24 tariff period is as follows:

Combined Asset	Capital Cost as on 1.4.2019 (in ₹ lakh)	(%)	Total Cost as on 31.3.2024 (in ₹ lakh)	(%)
Debt	26699.45	70.07	26699.45	70.07
Equity	11406.21	29.93	11406.21	29.93
<b>Total</b>	<b>38105.66</b>	<b>100.00</b>	<b>38105.66</b>	<b>100.00</b>

### Return on Equity (RoE)

81. Regulation 30 of the 2019 Tariff Regulations provides 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.

#### **Illustration-**

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



$$\text{Rate of return on equity} = 15.50/(1-0.2155) = 19.758\%$$

(ii) In case of a generating company or a transmission licensee paying normal corporate tax including surcharge and cess:

(a) Estimated Gross Income from generation or transmission business for FY 2019-20 is Rs 1,000 crore;

(b) Estimated Advance Tax for the year on above is Rs 240 crore;

(c) Effective Tax Rate for the year 2019-20 = Rs 240 Crore/Rs 1000 Crore = 24%;

(d) Rate of return on equity =  $15.50 / (1-0.24) = 20.395\%$ .

(3) The generating company or the transmission licensee, as the case may be, shall true up the grossed up rate of return on equity at the end of every financial year based on actual tax paid together with any additional tax demand including interest thereon, duly adjusted for any refund of tax including interest received from the income tax authorities pertaining to the tariff period 2019-24 on actual gross income of any financial year. However, penalty, if any, arising on account of delay in deposit or short deposit of tax amount shall not be claimed by the generating company or the transmission licensee, as the case may be. Any under-recovery or over-recovery of grossed up rate on return on equity after truing up, shall be recovered or refunded to beneficiaries or the long-term customers, as the case may be, on year to year basis."

82. The Petitioner has submitted that MAT rate is applicable to the Petitioner's Company. Accordingly, the MAT rate applicable during the 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. RoE allowed for the Combined Asset is as follows:

(₹ in lakh)

Combined Asset					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Equity	11406.21	11406.21	11406.21	11406.21	11406.21
Addition due to Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Closing Equity	11406.21	11406.21	11406.21	11406.21	11406.21
Average Equity	11406.21	11406.21	11406.21	11406.21	11406.21
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50	15.50
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
<b>Return on Equity (Pre-tax)</b>	<b>2142.31</b>	<b>2142.31</b>	<b>2142.31</b>	<b>2142.31</b>	<b>2142.31</b>

### Interest on Loan (IoL)





83. 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".*

84. The weighted average rate of IoL 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. Accordingly, the floating rate of interest, if any, shall be considered at the time of true-up or next revision of tariff. In view of the above, IoL has been worked out in accordance with Regulation 32 of the 2019 Tariff Regulations. The details of the IoL allowed are as follows:



(₹ in lakh)

Combined Asset					
Particular	2019-20	2020-21	2021-22	2022-23	2023-24
Gross Normative Loan	26699.45	26699.45	26699.45	26699.45	26699.45
Cumulative Repayments upto Previous Year	12227.31	14233.01	16238.72	18244.42	20250.12
Net Loan-Opening	14472.14	12466.44	10460.74	8455.04	6449.34
Additions due to Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Repayment during the year	2005.70	2005.70	2005.70	2005.70	2005.70
Net Loan-Closing	12466.44	10460.74	8455.04	6449.34	4443.63
Average Loan	13469.29	11463.59	9457.89	7452.19	5446.48
Weighted Average Rate of Interest on Loan (%)	8.929	8.930	8.933	8.953	8.995
<b>Interest on Loan</b>	<b>1202.66</b>	<b>1023.74</b>	<b>844.87</b>	<b>667.17</b>	<b>489.89</b>

### Depreciation

85. C Regulation 33 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.*

*(3) The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset:*

*Provided that the salvage value for IT equipment and software shall be considered as NIL and 100% value of the assets shall be considered depreciable;*

*Provided further that in case of hydro generating stations, the salvage value shall be as provided in the agreement, if any, signed by the developers with the State Government for development of the generating station:*



*Provided also that the capital cost of the assets of the hydro generating station for the purpose of computation of depreciated value shall correspond to the percentage of sale of electricity under long-term power purchase agreement at regulated tariff:*

*Provided also that any depreciation disallowed on account of lower availability of the generating station or unit or transmission system as the case may be, shall not be allowed to be recovered at a later stage during the useful life or the extended life.*

*(4) Land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.*

*(5) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-I to these regulations for the assets of the generating station and transmission system:*

*Provided that the remaining depreciable value as on 31st March of the year closing after a period of 12 years from the effective date of commercial operation of the station shall be spread over the balance useful life of the assets.*

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

*(7) The generating company or the transmission licensee, as the case may be, shall submit the details of proposed capital expenditure five years before the completion of useful life of the project along with justification and proposed life extension. The Commission based on prudence check of such submissions shall approve the depreciation on capital expenditure.*

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

86. Depreciation for the Combined Asset has been worked out considering the admitted capital expenditure as on 31.3.2019 and accumulated depreciation up to 31.3.2019. The weighted average of rate of depreciation (WAROD) has been worked out (Annexure-II) after taking into account the depreciation rates of assets as prescribed in the 2019 Tariff Regulations. The depreciation allowed for the Combined Asset is as follows:

(₹ in lakh)



<b>Combined Asset</b>					
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Opening Gross Block	38105.66	38105.66	38105.66	38105.66	38105.66
Addition during the year 2019-24 due to projected Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Closing Gross Block	38105.66	38105.66	38105.66	38105.66	38105.66
Average Gross Block	38105.66	38105.66	38105.66	38105.66	38105.66
Weighted average rate of Depreciation (WAROD) (%)	5.26	5.26	5.26	5.26	5.26
Balance useful life at the beginning	28.00	27.00	26.00	25.00	24.00
Aggregated Depreciable Value	34295.09	34295.09	34295.09	34295.09	34295.09
Remaining Aggregate Depreciable Value	20062.08	18056.38	16050.68	14044.98	12039.27
<b>Combined Depreciation during the year</b>	<b>2005.70</b>	<b>2005.70</b>	<b>2005.70</b>	<b>2005.70</b>	<b>2005.70</b>
Aggregate Cumulative Depreciation	14233.01	16238.72	18244.42	20250.12	22255.82

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

87. Regulation 35(3) and (4) 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:*

<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
<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
<i>Norms for Transformers (₹ Lakh per MVA)</i>					
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
<i>Norms for AC and HVDC lines (₹ Lakh per km)</i>					
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





<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Double Circuit (Twin & Triple Conductor)	0.881	0.912	0.944	0.977	1.011
Double Circuit (Single Conductor)	0.377	0.391	0.404	0.419	0.433
Multi Circuit (Bundled Conductor with four or more sub-conductor)	2.319	2.401	2.485	2.572	2.662
Multi Circuit (Twin & Triple Conductor)	1.544	1.598	1.654	1.713	1.773
<b>Norms for HVDC stations</b>					
HVDC Back-to-Back stations (Rs Lakh per 500 MW) (Except Gazuwaka BTB)	834	864	894	925	958
Gazuwaka HVDC Back-to-Back station (₹ Lakh per 500 MW)	1,666	1,725	1,785	1,848	1,913
500 kV Rihand-Dadri HVDC bipole scheme (Rs Lakh) (1500 MW)	2,252	2,331	2,413	2,498	2,586
±500 kV Talcher- Kolar HVDC bipole scheme (Rs Lakh) (2000 MW)	2,468	2,555	2,645	2,738	2,834
±500 kV Bhiwadi-Balia HVDC bipole scheme (Rs Lakh) (2500 MW)	1,696	1,756	1,817	1,881	1,947
±800 kV, Bishwanath-Agra HVDC bipole scheme (Rs Lakh) (3000 MW)	2,563	2,653	2,746	2,842	2,942

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

*Provided further that:*

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

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

<b>Sub-Station Bays</b>		(₹ in lakh)			
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<b>O&amp;M for Sub-station bays (as per norms)</b>					
4 No. of 400 kV bays at Chamera-III Sub-station	128.60	133.12	137.80	142.64	147.64
<b>Total O&amp;M Expenses</b>	<b>128.60</b>	<b>133.12</b>	<b>137.80</b>	<b>142.64</b>	<b>147.64</b>

<b>HV and DC Lines</b>		(₹ in lakh)			
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<b>O&amp;M for HV and DC Lines (as per norms)</b>					
i. 400 kV D/C Twin Conductor Chamera Pooling Station (Chamba) - Jalandhar Transmission Line – 161.99 km.	155.91	161.40	167.06	172.90	178.92
ii. 220 kV D/C Twin Conductor GIS Pooling Station Chamba-Chamera-III HEP Transmission Line – 14.98 km.					
<b>Total O&amp;M Expenses</b>	<b>155.91</b>	<b>161.40</b>	<b>167.06</b>	<b>172.90</b>	<b>178.92</b>

<b>PLCC</b>		(₹ in lakh)			
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24



<b>O&amp;M for PLCC (as per norms)</b>					
PLCC	0.27	0.27	0.27	0.27	0.27
<b>Total O&amp;M Expenses</b>	<b>0.27</b>	<b>0.27</b>	<b>0.27</b>	<b>0.27</b>	<b>0.27</b>

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
<b>Total O&amp;M Expenses Claimed</b>	<b>284.78</b>	<b>294.78</b>	<b>305.13</b>	<b>315.81</b>	<b>326.82</b>

89. 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 and 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 has 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.

90. It is observed that the claim made by the Petitioner is within the norms specified under Regulation 35(3) and (4) of the 2019 Tariff Regulations and the same is allowed for the 2019-24 tariff period. The norms specified under Regulation 35(3) and (4) of the 2019 Tariff Regulations with respect to the Combined Asset and the O&M Expenses allowed are given hereunder:

<b>Sub-Station Bays</b>					(₹ in lakh)
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<b>Norm (₹ lakh/bay)</b>					
400 kV Bay	32.15	33.28	34.45	35.66	36.91
<b>Number of bays</b>					
400 kV Bay	4	4	4	4	4
O&M Expense for 400 kV bays at Chamera-III Sub-station	128.60	133.12	137.80	142.64	147.64
<b>Total O&amp;M Expenses</b>	<b>128.60</b>	<b>133.12</b>	<b>137.80</b>	<b>142.64</b>	<b>147.64</b>

<b>AC and HVDC Lines</b>					(₹ in lakh)
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<b>Norm (₹ lakh/km)</b>					
D/C Twin/Triple Conductor	0.881	0.912	0.944	0.977	1.011
<b>Line length in km.</b>					



Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
400 kV D/C Twin Conductor Chamera Pooling Station (Chamba) - Jalandhar Transmission Line	161.99	161.99	161.99	161.99	161.99
220 kV D/C Twin Conductor GIS Pooling Station Chamba-Chamera-III HEP Transmission Line	14.98	14.98	14.98	14.98	14.98
Total line length in km.	176.97	176.97	176.97	176.97	176.97
O&M Expenses for TL	155.91	161.40	167.06	172.90	178.92
<b>Total O&amp;M Expenses</b>	<b>155.91</b>	<b>161.40</b>	<b>167.06</b>	<b>172.90</b>	<b>178.92</b>

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<b>Total O&amp;M Expenses Allowed</b>	<b>284.51</b>	<b>294.52</b>	<b>304.86</b>	<b>315.54</b>	<b>326.56</b>

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

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

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

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

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

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

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

"(3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2019 or as on 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 triung-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. **Definition** - In these regulations, unless the context otherwise requires:-

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

92. The Petitioner has submitted that it has computed IWC for the 2019-24 period considering the bank rate as on 1.4.2019. The rate of IWC considered is 12.05%.

93. IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The Rate of Interest (ROI) on working capital considered is 12.05% (SBI 1 year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points) for 2019-20, whereas, ROI for 2020-21 onwards has been considered as 11.25% (SBI 1 year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points). The components of the working capital and interest allowed thereon for the Combined Asset is as under:

(₹ in lakh)

Combined Asset					
Particulars	2019-20	2020-21	201-22	2022-23	2023-24
O & M Expenses	23.71	24.54	25.40	26.29	27.21
Maintenance Spares	42.68	44.18	45.73	47.33	48.98
Receivables	704.27	684.37	663.33	642.49	620.01
<b>Total</b>	<b>770.65</b>	<b>753.09</b>	<b>734.47</b>	<b>716.11</b>	<b>696.21</b>
Rate of Interest (%)	12.05	11.25	11.25	11.25	11.25
<b>Interest on Working Capital</b>	<b>92.86</b>	<b>84.72</b>	<b>82.63</b>	<b>80.56</b>	<b>78.32</b>

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

94. The transmission charges allowed for the Combined Asset for the 2019-24 tariff period are summarised below:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
-------------	---------	---------	---------	---------	---------



Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	2005.70	2005.70	2005.70	2005.70	2005.70
Interest on Loan	1202.66	1023.74	844.87	667.17	489.89
Return on Equity	2142.31	2142.31	2142.31	2142.31	2142.31
Interest on Working Capital	92.86	84.72	82.63	80.56	78.32
Operation and Maintenance	284.51	294.52	304.86	315.54	326.56
<b>Total</b>	<b>5728.05</b>	<b>5550.99</b>	<b>5380.37</b>	<b>5211.29</b>	<b>5042.78</b>

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

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

96. BRPL in its reply 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 discretion is a judicial discretion in the adjudication of tariff for which no justification has been given by the Petitioner. BRPL has placed reliance to the Commission's order dated 11.9.2008 in Petition No. 129 of 2005 wherein it declined the claim of Central Power Sector undertakings for allowing the reimbursement of the application filing fee.

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

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



98. The Petitioner has requested to allow the Petitioner to bill and recover License fee and RLDC fees and charges, separately from the Respondents. The Petitioner shall be entitled for reimbursement of licence fee and RLDC fees and charges in accordance with Clause (4) and (3) respectively of Regulation 70 of the 2019 Tariff Regulations.

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

99. 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. BRPL in its reply has raised the issue of GST recovery and submitted that the demand of the Petitioner is premature and need not be considered at this juncture. 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**

100. The Petitioner has submitted that security expenses for the instant 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 a 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 a yearly basis. 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.

101. We have considered the Petitioner's prayer and submissions of BRPL. 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 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**

102. 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**

103. The billing, collection and disbursement of the transmission charges approved in this order shall be governed by the provisions of 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 2014 Tariff Regulations for the 2014-19 tariff period and Regulation 57 of the 2019 Tariff Regulations for the 2019-24 tariff period.

104. To summarise, the trued-up Annual Fixed Charges allowed for the transmission asset for the 2014-19 tariff period are as under:

		(₹ in lakh)				
Particulars	Asset	2014-15	2015-16	2016-17	2017-18	2018-19
Annual Fixed Charges	Asset-I	6200.82	6076.27	5925.28	5774.58	5629.81
	Asset-II	648.92	631.75	613.43	595.06	577.29

105. The Annual Fixed Charges allowed for the Combined Asset for the 2019-24 tariff period in this order are as follows:

		(₹ in lakh)				
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24	
Annual Fixed Charges	5728.05	5550.99	5380.37	5211.29	5042.78	

105. This order disposes of Petition No. 168/TT/2020.

**Sd/  
(Arun Goyal)  
Member**

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

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





**Annexure-I**

Asset-I	2014-19 Capital Expenditure as on 1.4.2014	Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	Additional Capital Expenditure (₹ in lakh) 2014-15	Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations	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)
Building		330.80	0.00	330.80	3.34%	11.05	11.05	11.05	11.05	11.05
Transmission Line		31231.38	181.83	31413.21	5.28%	1653.82	1658.62	1658.62	1658.62	1658.62
Sub Station		2448.43	0.06	2448.49	5.28%	129.28	129.28	129.28	129.28	129.28
PLCC		13.34	0.00	13.34	6.33%	0.84	0.84	0.84	0.84	0.84
<b>TOTAL</b>		<b>34023.95</b>	<b>181.89</b>	<b>34205.84</b>		<b>1794.99</b>	<b>1799.79</b>	<b>1799.79</b>	<b>1799.79</b>	<b>1799.79</b>
				<b>Average Gross Block (₹ in lakh)</b>		<b>34114.90</b>	<b>34205.84</b>	<b>34205.84</b>	<b>34205.84</b>	<b>34205.84</b>
				<b>Weighted Average Rate of Depreciation (₹ in lakh)</b>		<b>5.26%</b>	<b>5.26%</b>	<b>5.26%</b>	<b>5.26%</b>	<b>5.26%</b>



**Annexure-I**

Asset-II	2014-19		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 as per Regulations	Annual Depreciation as per Regulations					
	Capital Expenditure as on 1.4.2014	2014-19					2014-15 (₹ in lakh)	2015-16 (₹ in lakh)	2016-17 (₹ in lakh)	2017-18 (₹ in lakh)	2018-19 (₹ in lakh)	
Building		0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00	0.00
Transmission Line		3877.12	0.00	0.00	3877.12	5.28%	204.71	204.71	204.71	204.71	204.71	204.71
Sub Station		0.00	0.00	0.00	0.00	5.28%	0.00	0.00	0.00	0.00	0.00	0.00
PLCC		0.00	0.00	0.00	0.00	6.33%	0.00	0.00	0.00	0.00	0.00	0.00
<b>TOTAL</b>		<b>3877.12</b>	<b>0.00</b>	<b>0.00</b>	<b>3877.12</b>		<b>204.71</b>	<b>204.71</b>	<b>204.71</b>	<b>204.71</b>	<b>204.71</b>	<b>204.71</b>
					<b>Average Gross Block (₹ in lakh)</b>		<b>3877.12</b>	<b>3877.12</b>	<b>3877.12</b>	<b>3877.12</b>	<b>3877.12</b>	<b>3877.12</b>
					<b>Weighted Average Rate of Depreciation (₹ in lakh)</b>		<b>5.28%</b>	<b>5.28%</b>	<b>5.28%</b>	<b>5.28%</b>	<b>5.28%</b>	<b>5.28%</b>



**Annexure-II**

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 31.3.2024 (₹ in lakh)	Rate of Depreciation as per Regulations	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)
Building	330.80	330.80	3.34%	11.05	11.05	11.05	11.05	11.05
Transmission Line	35313.03	35313.03	5.28%	1864.53	1864.53	1864.53	1864.53	1864.53
Sub Station	2448.49	2448.49	5.28%	129.28	129.28	129.28	129.28	129.28
PLCC	13.34	13.34	6.33%	0.84	0.84	0.84	0.84	0.84
<b>TOTAL</b>	<b>38105.66</b>	<b>38105.66</b>		<b>2005.70</b>	<b>2005.70</b>	<b>2005.70</b>	<b>2005.70</b>	<b>2005.70</b>
		<b>Average Gross Block</b> (₹ in lakh)		<b>38105.66</b>	<b>38105.66</b>	<b>38105.66</b>	<b>38105.66</b>	<b>38105.66</b>
		<b>Weighted Average Rate</b> of Depreciation (₹ in lakh)		<b>5.26%</b>	<b>5.26%</b>	<b>5.26%</b>	<b>5.26%</b>	<b>5.26%</b>

**ATTESTED TRUE COPY**  
*Authorised Signatory*  
*Power Grid Corporation of India Ltd.*  
*Plot No. 2, Sector-29, Gurgaon*  
*page 27 of 83*



## Summary of Tariff

Form No. - 1

Encl-2

Name of the Transmission Licensee:	Power Grid Corporation of India Limited		
Project	Transmission System associated with Chamera III		
Element Description	Combined Asset under Transmission System for Power evacuation from Chamera-III HEP		
Region	Northern Region	DOC Date	Feb 7, 2013

(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	2,005.70	2,005.70	2,005.70	2,005.70	2,005.70
Interest on Loan-Form No. 9E	1,202.66	1,023.71	844.84	667.15	489.88
Return on Equity-Form No. 8	2,142.31	2,142.31	2,142.31	2,142.31	2,142.31
Int. on Working capital-Form No.11	92.86	84.72	77.05	75.12	83.62
Op. and maintenance-Form No.2	284.51	294.51	304.86	315.54	326.55
<b>Total AFC</b>	<b>5,728.04</b>	<b>5,550.95</b>	<b>5,374.76</b>	<b>5,205.82</b>	<b>5,048.06</b>

(Petitioner)



Name of the Transmission Licensee	Power Grid Corporation of India Limited	
Project	Transmission System associated with Chamera III	
Element Description	Combined Asset under Transmission System for Power evacuation from Chamera-III HEP	
Region	Northern Region	DOC Date Feb 7, 2013

**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.
Chamera Pooling Station (Chamba)-Chamera III	AC	DC	2	220 KV	0.000	0.000	14.980	Feb 7, 2013	Y	
CHAMERA POLLING STN (CHAMBA) - JALLANDHAR	AC	DC	2	400 KV	0.000	0.000	161.990	Feb 7, 2013	Y	

**Summary:**

O&M Expenses For the Transmission Lines Covered in the instant petition	2019-20	2020-21	2021-22	2022-23	2023-24
<b>DOUBLE CIRCUIT (TWIN CONDUCTOR)</b>					
Normative Rate of O&M as per Regulation	0.881	0.912	0.944	0.977	1.011
No. of Units - ( Length in KM )	176.97	176.97	176.97	176.97	176.97



O&M Claimed	155.91	161.39	167.06	172.90	178.91
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2. Sub Station

Name of Sub-station	Type of Substation	Voltage Level KV	No. of Transfor ms/ Reactor/ SVC etc. (with capacity)	No. of Bays				MVA/MVAR Capacity				Date of Comm. operation	Covered in the present petition Ye s/ No n No.
				765 KV	400 KV	220 KV	132 KV	765 KV	400 KV	220 KV	132 KV		
CHAMERA:CHAMERA III		400 KV		4.000								Feb 7, 2013	Y

Summary:

O&M Expenses For Substations Covered in the instant petition	2019-20	2020-21	2021-22	2022-23	2023-24
<b>400KV SUB-STATION</b>					
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



### 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
<b>A) Normative O&amp;M</b>					
Transmission Line	155.91	161.39	167.06	172.90	178.91
Substation	128.60	133.12	137.80	142.64	147.64
Communication System	0.00	0.00	0.00	0.00	0.00
<b>Total Normative O&amp;M</b>	<b>284.51</b>	<b>294.51</b>	<b>304.86</b>	<b>315.54</b>	<b>326.55</b>
<b>B) O&amp;M Claimed under Regulation 35 (3)(C) (* The same is not being claimed and will be claimed through separate Petition )</b>					
*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
<b>Total O&amp;M</b>	<b>284.51</b>	<b>294.51</b>	<b>304.86</b>	<b>315.54</b>	<b>326.55</b>

(Petitioner)



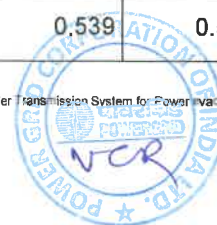
**Normative parameters considered for tariff computations**

Form No. - 3

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	Transmission System associated with Chamera III		
Element Description	Combined Asset under Transmission System for Power evacuation from Chamera-III HEP		
Region	Northern Region	DOCOCO Date	Feb 7, 2013

(Amount in Rs. Lakh)

Particulars	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
<b>Base Rate of Return of Equity (in %)</b>						
Tax Rate (in %)	21.55	17.472	17.472	17.472	17.472	17.472
<b>Effective tax rate (in %)</b>						
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
<b>Norms for sub-station Bays (Rs Lakh per bay)</b>						
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
<b>Norms for Transformers (Rs Lakh per MVA)</b>						
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
<b>Norms for AC and HVDC lines (Rs Lakh per km)</b>						
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
<b>Norms for HVDC stations</b>						
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)



Name of the Transmission Licensee	Power Grid Corporation of India Limited	
Project	Transmission System associated with Chamera III	
Element Description	Combined Asset under Transmission System for Power evacuation from Chamera-III HEP	
Region	Northern Region	DOC Date   Feb 7, 2013

**A) Details of All the Asset Covered under the Scope of the Project**

Asset Name	Actual COD of the asset	COD considered for tariff purpose	Effective COD for the project as whole ( Refer C)	Weighted Average useful life of the project (Refer D)	Lapsed useful Life of the project as on 01.04.2019 (Refer E)	Balance useful Life of the project as on 01.04.2019 ( Refer E)
220 KV D/C Transmission line from GIS pooling Station Chamba-Chamera-III HEP	Nov 1, 2011	Nov 1, 2011				
400 KV D/C GIS POOLING STN CHAMERA HEP III - JALANDHAR T/L along with bays and Line reactor at Jalandhar	Apr 1, 2013	Apr 1, 2013				
Summary			Feb 7, 2013	34	6	28

**B) Details as on 01.04.2019 for determination of Single Tariff for the Project Commissioned prior to 01.04.2019**

Asset Name	Capital Cost as on 31.03.2019	Cumulative Dep. as on 31.03.2019	Debt Equity Ratio as on 31.03.2019	Gross Equity for normative ROE as on 31.03.2019	Gross Loan as on 31.03.2019	Cumulative Re-payment of Loan as on 31.03.2019
400 KV D/C GIS POOLING STN CHAMERA HEP III - JALANDHAR T/L along with bays and Line reactor at Jalandhar	34,228.54	10,752.26	70:30	10,268.56	23,959.98	10,752.26





Total	38,105.66	12,233.30	70:30	11,406.21	26,699.45	12,233.30
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**C) Computation of Effective COD for determining lapsed useful life of the project as whole**

Asset Name	Actual COD of the asset	COD considered for tariff purpose	No of days between the COD of the asset considered for tariff and the COD of the Project	True Up Capital Cost as on 31.03.2019	Weight of the Cost of an asset (in %)	Weighted Days
220 KV D/C Transmission line from GIS pooling Station Chamba-Chamera-III HEP	Nov 1, 2011	Nov 1, 2011	517	3,877.12	10.1746565	52.6029741
400 KV D/C GIS POOLING STN CHAMERA HEP III - JALANDHAR T/L along with bays and Line reactor at Jalandhar	Apr 1, 2013	Apr 1, 2013	0	34,228.54	89.8253435	0
Total			517	38,105.66	100	52.6029741
<b>Effective COD</b>	<b>Feb 7, 2013</b>					

**D) Weighted Average useful Life of the Project as whole**

Asset Name	Freehold Land	Building & Other Civil Works	Transmission Lines	Sub-Station Equipments	PLCC	Leasehold Land	IT Equipment & S/w	Total Cost
220 KV D/C Transmission line from GIS pooling Station Chamba-Chamera-III HEP	0.00	0.00	3,877.12	0.00	0.00	0.00	0.00	3,877.12
400 KV D/C GIS POOLING STN CHAMERA HEP III - JALANDHAR T/L along with bays and Line reactor at Jalandhar	0.00	330.80	31,435.91	2,448.49	13.34	0.00	0.00	34,228.54
Combined Cost	0.00	330.80	35,313.03	2,448.49	13.34	0.00	0.00	38,105.66
Useful life / Extended life	0.00	25.00	35.00	25.00	25.00	25.00	7.00	0.00
Weighted Cost	0.00	8,270.00	1,235,956.05	61,212.25	333.50	0.00	0.00	1,305,771.80



**Weighted Average Life**

**E) Lapsed Weighted average useful life of the project & Balance weighted average Useful life**  
 This refers to the No. of completed years from the effective COD till the last day of the previous tariff period ( i.e. 31.03.2019 )

1) Effective COD	Feb 7, 2013							0.00	34.00
2) Last date of the previous tariff control period	Mar 31, 2019								
3) No. of Completed years lapsed as on 01.04.2019 (2) - (1)	6								
4) Remaining useful life ( in year ) (WAL-lapsed year)	28								

(Petitioner)



**Calculation of ROE**

Form No. - 8

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	Transmission System associated with Chamera III		
Element Description	Combined Asset under Transmission System for Power evacuation from Chamera-III HEP		
Region	Northern Region	DOC Date	Feb 7, 2013

(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	11,406.21	11,406.21	11,406.21	11,406.21	11,406.21
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)	11,406.21	11,406.21	11,406.21	11,406.21	11,406.21
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	11,406.21	11,406.21	11,406.21	11,406.21	11,406.21
Average Normative Equity	11,406.21	11,406.21	11,406.21	11,406.21	11,406.21
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	2,142.31	2,142.31	2,142.31	2,142.31	2,142.31
Pro rata return on Equity	2,142.31	2,142.31	2,142.31	2,142.31	2,142.31



(Petitioner)

**Calculation of WAR of interest on actual loan**

Form No. - 9C

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	Transmission System associated with Chamera III		
Element Description	Combined Asset under Transmission System for Power evacuation from Chamera-III HEP		
Region	Northern Region	DOC Date	Feb 7, 2013

(Amount in Rs. Lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<b>BOND XXVIII -DOC O DRAWL ON 01-APR</b>					
Gross Loan- Opening	1,385.00	1,385.00	1,385.00	1,385.00	1,385.00
Cumulative repayments of Loans upto previous year	807.92	923.33	1,038.75	1,154.17	1,269.58
Net loan-Opening	577.08	461.67	346.25	230.83	115.42
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	115.42	115.42	115.42	115.42	115.42
Net Loan-Closing	461.66	346.25	230.83	115.41	0.00
Average Net Loan	519.37	403.96	288.54	173.12	57.71
Rate of Interest on Loan on Annual Basis	9.33	9.33	9.33	9.33	9.33
Interest on loan	48.4572	37.6895	26.9208	16.1521	5.3843

**BOND XXVIII -DOC O DRAWL ON 01-NOV**

Gross Loan- Opening	140.00	140.00	140.00	140.00	140.00
Cumulative repayments of Loans upto previous year	81.67	93.33	105.00	116.67	128.33
Net loan-Opening	58.33	46.67	35.00	23.33	11.67
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	11.67	11.67	11.67	11.67	11.67
Net Loan-Closing	46.66	35.00	23.33	11.66	0.00



Average Net Loan	52.50	40.84	29.17	17.50	5.84
Rate of Interest on Loan on Annual Basis	9.33	9.33	9.33	9.33	9.33
Interest on loan	4.8983	3.8104	2.7216	1.6328	0.5449

**BOND XXIX -DOCO DRAWL ON 01-APR**

Gross Loan- Opening	1,875.00	1,875.00	1,875.00	1,875.00	1,875.00
Cumulative repayments of Loans upto previous year	1,093.75	1,250.00	1,406.25	1,562.50	1,718.75
Net loan-Opening	781.25	625.00	468.75	312.50	156.25
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	156.25	156.25	156.25	156.25	156.25
Net Loan-Closing	625.00	468.75	312.50	156.25	0.00
Average Net Loan	703.13	546.88	390.63	234.38	78.13
Rate of Interest on Loan on Annual Basis	9.20	9.20	9.20	9.20	9.20
Interest on loan	64.688	50.313	35.938	21.563	7.188

**BOND XXIX -DOCO DRAWL ON 01-NOV**

Gross Loan- Opening	200.00	200.00	200.00	200.00	200.00
Cumulative repayments of Loans upto previous year	116.67	133.33	150.00	166.67	183.33
Net loan-Opening	83.33	66.67	50.00	33.33	16.67
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	16.67	16.67	16.67	16.67	16.67
Net Loan-Closing	66.66	50.00	33.33	16.66	0.00
Average Net Loan	75.00	58.34	41.67	25.00	8.34
Rate of Interest on Loan on Annual Basis	9.20	9.20	9.20	9.20	9.20
Interest on loan	6.90	5.3673	3.8336	2.30	0.7673



<b>BOND XXX -DOCO DRAWL ON 01-APR</b>					
Gross Loan- Opening	5,247.00	5,247.00	5,247.00	5,247.00	5,247.00
Cumulative repayments of Loans upto previous year	2,623.50	3,060.75	3,498.00	3,935.25	4,372.50
Net loan-Opening	2,623.50	2,186.25	1,749.00	1,311.75	874.50
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	437.25	437.25	437.25	437.25	437.25
Net Loan-Closing	2,186.25	1,749.00	1,311.75	874.50	437.25
Average Net Loan	2,404.88	1,967.63	1,530.38	1,093.13	655.88
Rate of Interest on Loan on Annual Basis	8.80	8.80	8.80	8.80	8.80
Interest on loan	211.6294	173.1514	134.6734	96.1954	57.7174

<b>BOND XXX -DOCO DRAWL ON 01-NOV</b>					
Gross Loan- Opening	550.00	550.00	550.00	550.00	550.00
Cumulative repayments of Loans upto previous year	275.00	320.83	366.67	412.50	458.33
Net loan-Opening	275.00	229.17	183.33	137.50	91.67
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	45.83	45.83	45.83	45.83	45.83
Net Loan-Closing	229.17	183.34	137.50	91.67	45.84
Average Net Loan	252.09	206.26	160.42	114.59	68.76
Rate of Interest on Loan on Annual Basis	8.80	8.80	8.80	8.80	8.80
Interest on loan	22.1839	18.1509	14.117	10.0839	6.0509

<b>BOND XXXI -DOCO DRAWL ON 01-APR</b>					
Gross Loan- Opening	3,240.00	3,240.00	3,240.00	3,240.00	3,240.00
Cumulative repayments of Loans upto previous year	1,620.00	1,890.00	2,160.00	2,430.00	2,700.00
Net loan-Opening	1,620.00	1,350.00	1,080.00	810.00	540.00





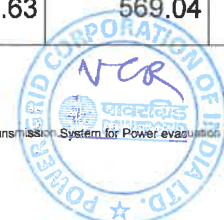
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	270.00	270.00	270.00	270.00	270.00
Net Loan-Closing	1,350.00	1,080.00	810.00	540.00	270.00
Average Net Loan	1,485.00	1,215.00	945.00	675.00	405.00
Rate of Interest on Loan on Annual Basis	8.90	8.90	8.90	8.90	8.90
Interest on loan	132.165	108.135	84.105	60.075	36.045

#### BOND XXXI -DOCO DRAWL ON 01-NOV

Gross Loan- Opening	330.00	330.00	330.00	330.00	330.00
Cumulative repayments of Loans upto previous year	165.00	192.50	220.00	247.50	275.00
Net loan-Opening	165.00	137.50	110.00	82.50	55.00
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	27.50	27.50	27.50	27.50	27.50
Net Loan-Closing	137.50	110.00	82.50	55.00	27.50
Average Net Loan	151.25	123.75	96.25	68.75	41.25
Rate of Interest on Loan on Annual Basis	8.90	8.90	8.90	8.90	8.90
Interest on loan	13.4613	11.0138	8.5663	6.1188	3.6713

#### BOND XXXIII -DOCO DRAWL ON 01-APR

Gross Loan- Opening	1,951.00	1,951.00	1,951.00	1,951.00	1,951.00
Cumulative repayments of Loans upto previous year	812.92	975.50	1,138.08	1,300.67	1,463.25
Net loan-Opening	1,138.08	975.50	812.92	650.33	487.75
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	162.58	162.58	162.58	162.58	162.58
Net Loan-Closing	975.50	812.92	650.34	487.75	325.17
Average Net Loan	1,056.79	894.21	731.63	569.04	406.46



Rate of Interest on Loan on Annual Basis	8.64	8.64	8.64	8.64	8.64
Interest on loan	91.3067	77.2597	63.2128	49.1651	35.1181

<b>BOND XXXIII -DOCO DRAWL ON 01-NOV</b>					
Gross Loan- Opening	200.00	200.00	200.00	200.00	200.00
Cumulative repayments of Loans upto previous year	83.33	100.00	116.67	133.33	150.00
Net loan-Opening	116.67	100.00	83.33	66.67	50.00
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	16.67	16.67	16.67	16.67	16.67
Net Loan-Closing	100.00	83.33	66.66	50.00	33.33
Average Net Loan	108.34	91.67	75.00	58.34	41.67
Rate of Interest on Loan on Annual Basis	8.64	8.64	8.64	8.64	8.64
Interest on loan	9.3606	7.9203	6.48	5.0406	3.6003

<b>BOND-XXXIV -DOCO DRAWL ON 01-APR</b>					
Gross Loan- Opening	5,797.00	5,797.00	5,797.00	5,797.00	5,797.00
Cumulative repayments of Loans upto previous year	2,415.42	2,898.50	3,381.58	3,864.67	4,347.75
Net loan-Opening	3,381.58	2,898.50	2,415.42	1,932.33	1,449.25
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	483.08	483.08	483.08	483.08	483.08
Net Loan-Closing	2,898.50	2,415.42	1,932.34	1,449.25	966.17
Average Net Loan	3,140.04	2,656.96	2,173.88	1,690.79	1,207.71
Rate of Interest on Loan on Annual Basis	8.84	8.84	8.84	8.84	8.84
Interest on loan	277.5795	234.8753	192.171	149.4658	106.7616

<b>BOND-XXXIV -DOCO DRAWL ON 01-NOV</b>					
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Gross Loan- Opening	603.00	603.00	603.00	603.00	603.00
Cumulative repayments of Loans upto previous year	251.25	301.50	351.75	402.00	452.25
Net loan-Opening	351.75	301.50	251.25	201.00	150.75
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	50.25	50.25	50.25	50.25	50.25
Net Loan-Closing	301.50	251.25	201.00	150.75	100.50
Average Net Loan	326.63	276.38	226.13	175.88	125.63
Rate of Interest on Loan on Annual Basis	8.84	8.84	8.84	8.84	8.84
Interest on loan	28.8741	24.432	19.9899	15.5478	11.1057

#### BOND XXXVI -ADDCAP FOR 2011-2012

Gross Loan- Opening	67.30	67.30	67.30	67.30	67.30
Cumulative repayments of Loans upto previous year	13.46	17.95	22.43	26.92	31.41
Net loan-Opening	53.84	49.35	44.87	40.38	35.89
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	4.49	4.49	4.49	4.49	4.49
Net Loan-Closing	49.35	44.86	40.38	35.89	31.40
Average Net Loan	51.60	47.11	42.63	38.14	33.65
Rate of Interest on Loan on Annual Basis	9.35	9.35	9.35	9.35	9.35
Interest on loan	4.8246	4.4048	3.9859	3.5661	3.1463

#### BOND XXXVI -DOCO

Gross Loan- Opening	196.00	196.00	196.00	196.00	196.00
Cumulative repayments of Loans upto previous year	39.20	52.27	65.33	78.40	91.47
Net loan-Opening	156.80	143.73	130.67	117.60	104.53
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00



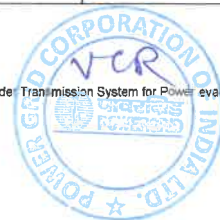
Less: Repayment(s) of loan during the year	13.07	13.07	13.07	13.07	13.07
Net Loan-Closing	143.73	130.66	117.60	104.53	91.46
Average Net Loan	150.27	137.20	124.14	111.07	98.00
Rate of Interest on Loan on Annual Basis	9.35	9.35	9.35	9.35	9.35
Interest on loan	14.0502	12.8282	11.6071	10.385	9.163

#### BOND XXXVI -DOCO DRAWL ON 01-APR

Gross Loan- Opening	36.70	36.70	36.70	36.70	36.70
Cumulative repayments of Loans upto previous year	7.34	9.79	12.23	14.68	17.13
Net loan-Opening	29.36	26.91	24.47	22.02	19.57
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	2.45	2.45	2.45	2.45	2.45
Net Loan-Closing	26.91	24.46	22.02	19.57	17.12
Average Net Loan	28.14	25.69	23.25	20.80	18.35
Rate of Interest on Loan on Annual Basis	9.35	9.35	9.35	9.35	9.35
Interest on loan	2.6311	2.402	2.1739	1.9448	1.7157

#### BOND XXXVIII -DOCO DRAWL ON 01-APR

Gross Loan- Opening	1,100.00	1,100.00	1,100.00	1,100.00	1,100.00
Cumulative repayments of Loans upto previous year	0.00	0.00	0.00	0.00	0.00
Net loan-Opening	1,100.00	1,100.00	1,100.00	1,100.00	1,100.00
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	1,100.00	1,100.00	1,100.00	1,100.00	1,100.00
Average Net Loan	1,100.00	1,100.00	1,100.00	1,100.00	1,100.00
Rate of Interest on Loan on Annual Basis	9.25	9.25	9.25	9.25	9.25



Interest on loan	101.75	101.75	101.75	101.75	101.75
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<b>BOND XL -DOCO DRAWL ON 01-APR</b>					
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Gross Loan- Opening	568.00	568.00	568.00	568.00	568.00
Cumulative repayments of Loans upto previous year	142.00	189.33	236.67	284.00	331.33
Net loan-Opening	426.00	378.67	331.33	284.00	236.67
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	47.33	47.33	47.33	47.33	47.33
Net Loan-Closing	378.67	331.34	284.00	236.67	189.34
Average Net Loan	402.34	355.01	307.67	260.34	213.01
Rate of Interest on Loan on Annual Basis	9.30	9.30	9.30	9.30	9.30
Interest on loan	37.4176	33.0159	28.6133	24.2116	19.8099

<b>BOND - XLI -DOCO DRAWL ON 01-APR</b>					
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Gross Loan- Opening	318.00	318.00	318.00	318.00	318.00
Cumulative repayments of Loans upto previous year	79.50	106.00	132.50	159.00	185.50
Net loan-Opening	238.50	212.00	185.50	159.00	132.50
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	26.50	26.50	26.50	26.50	26.50
Net Loan-Closing	212.00	185.50	159.00	132.50	106.00
Average Net Loan	225.25	198.75	172.25	145.75	119.25
Rate of Interest on Loan on Annual Basis	8.85	8.85	8.85	8.85	8.85
Interest on loan	19.9346	17.5894	15.2441	12.8989	10.5536

<b>BOND - XLII -ADDCAP FOR 2012-2013</b>					
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Gross Loan- Opening	135.90	135.90	135.90	135.90	135.90
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Cumulative repayments of Loans upto previous year	0.00	0.00	0.00	0.00	135.90
Net loan-Opening	135.90	135.90	135.90	135.90	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	135.90	0.00
Net Loan-Closing	135.90	135.90	135.90	0.00	0.00
Average Net Loan	135.90	135.90	135.90	67.95	0.00
Rate of Interest on Loan on Annual Basis	8.80	8.80	8.80	8.80	8.80
Interest on loan	11.9592	11.9592	11.9592	5.9796	0.00

<b>BOND - XLII -ADDCAP FOR 2013-2014</b>					
Gross Loan- Opening	394.97	394.97	394.97	394.97	394.97
Cumulative repayments of Loans upto previous year	0.00	0.00	0.00	0.00	394.97
Net loan-Opening	394.97	394.97	394.97	394.97	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	394.97	0.00
Net Loan-Closing	394.97	394.97	394.97	0.00	0.00
Average Net Loan	394.97	394.97	394.97	197.49	0.00
Rate of Interest on Loan on Annual Basis	8.80	8.80	8.80	8.80	8.80
Interest on loan	34.7574	34.7574	34.7574	17.3791	0.00

<b>BOND - XLII -DOCO DRAWL ON 01-APR</b>					
Gross Loan- Opening	1,324.98	1,324.98	1,324.98	1,324.98	1,324.98
Cumulative repayments of Loans upto previous year	0.00	0.00	0.00	0.00	1,324.98
Net loan-Opening	1,324.98	1,324.98	1,324.98	1,324.98	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	1,324.98	0.00





Net Loan-Closing	1,324.98	1,324.98	1,324.98	0.00	0.00
Average Net Loan	1,324.98	1,324.98	1,324.98	662.49	0.00
Rate of Interest on Loan on Annual Basis	8.80	8.80	8.80	8.80	8.80
Interest on loan	116.5982	116.5982	116.5982	58.2991	0.00

#### BOND - XLIII -ADDCAP FOR 2013-2014

Gross Loan- Opening	150.00	150.00	150.00	150.00	150.00
Cumulative repayments of Loans upto previous year	25.00	37.50	50.00	62.50	75.00
Net loan-Opening	125.00	112.50	100.00	87.50	75.00
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	12.50	12.50	12.50	12.50	12.50
Net Loan-Closing	112.50	100.00	87.50	75.00	62.50
Average Net Loan	118.75	106.25	93.75	81.25	68.75
Rate of Interest on Loan on Annual Basis	7.93	7.93	7.93	7.93	7.93
Interest on loan	9.4169	8.4256	7.4344	6.4431	5.4519

#### BOND - XLV -ADDCAP FOR 2013-2014

Gross Loan- Opening	140.83	140.83	140.83	140.83	140.83
Cumulative repayments of Loans upto previous year	23.47	35.21	46.94	58.68	70.42
Net loan-Opening	117.36	105.62	93.89	82.15	70.41
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	11.74	11.74	11.74	11.74	11.74
Net Loan-Closing	105.62	93.88	82.15	70.41	58.67
Average Net Loan	111.49	99.75	88.02	76.28	64.54
Rate of Interest on Loan on Annual Basis	9.65	9.65	9.65	9.65	9.65
Interest on loan	10.7588	9.6259	8.4939	7.361	6.2281



**BOND - XLV -ADDCAP FOR 2013-2014**

Gross Loan- Opening	445.01	445.01	445.01	445.01	445.01
Cumulative repayments of Loans upto previous year	74.17	111.25	148.34	185.42	222.51
Net loan-Opening	370.84	333.76	296.67	259.59	222.50
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	37.08	37.08	37.08	37.08	37.08
Net Loan-Closing	333.76	296.68	259.59	222.51	185.42
Average Net Loan	352.30	315.22	278.13	241.05	203.96
Rate of Interest on Loan on Annual Basis	9.65	9.65	9.65	9.65	9.65
Interest on loan	33.997	30.4187	26.8395	23.2613	19.6821

**SBI (2014-15) -ADDCAP**

Gross Loan- Opening	3.10	3.10	3.10	3.10	3.10
Cumulative repayments of Loans upto previous year	0.00	0.31	0.62	0.93	1.24
Net loan-Opening	3.10	2.79	2.48	2.17	1.86
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	0.31	0.31	0.31	0.31	0.31
Net Loan-Closing	2.79	2.48	2.17	1.86	1.55
Average Net Loan	2.95	2.64	2.33	2.02	1.71
Rate of Interest on Loan on Annual Basis	7.993319	6.894349	6.65	7.243625	8.135644
Interest on loan	0.2358	0.182	0.1549	0.1463	0.1391

**BOND XLVI -ADDCAP**

Gross Loan- Opening	124.22	124.22	124.22	124.22	124.22
Cumulative repayments of Loans upto previous year	0.00	41.41	41.41	41.41	41.41



Net loan-Opening	124.22	82.81	82.81	82.81	82.81
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	41.41	0.00	0.00	0.00	0.00
Net Loan-Closing	82.81	82.81	82.81	82.81	82.81
Average Net Loan	103.52	82.81	82.81	82.81	82.81
Rate of Interest on Loan on Annual Basis	9.30	9.30	9.30	9.30	9.30
Interest on loan	9.6274	7.7013	7.7013	7.7013	7.7013

### Summary

Gross Loan- Opening	26,523.01	26,523.01	26,523.01	26,523.01	26,523.01
Cumulative repayments of Loans upto previous year	10,750.57	12,740.59	14,689.22	16,637.87	20,442.34
Net loan-Opening	15,772.44	13,782.42	11,833.79	9,885.14	6,080.67
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	1,990.05	1,948.64	1,948.64	3,804.49	1,948.64
Net Loan-Closing	13,782.39	11,833.78	9,885.15	6,080.65	4,132.03
Average Net Loan	14,777.48	12,808.16	10,859.53	7,982.96	5,106.41
Rate of Interest on Loan on Annual Basis	8.9289	8.9301	8.9326	8.9524	8.9945
Interest on loan	1,319.4628	1,143.7772	970.0425	714.6675	459.2958

(Petitioner)



**Calculation of interest on Normative loan**

Form No. - 9E

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	Transmission System associated with Chamera III		
Element Description	Combined Asset under Transmission System for Power evacuation from Chamera-III HEP		
Region	Northern Region	DOC Date	Feb 7, 2013

(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	26,699.45	26,699.45	26,699.45	26,699.45	26,699.45
Cumulative repayments of Normative loan upto previous year	12,227.31	14,233.01	16,238.71	18,244.41	20,250.11
Net normative loan-Opening	14,472.14	12,466.44	10,460.74	8,455.04	6,449.34
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	2,005.70	2,005.70	2,005.70	2,005.70	2,005.70
Adjustment of cumulative repayment pertaining to the decapitalised asset	0.00	0.00	0.00	0.00	0.00
Net normative loan - closing	12,466.44	10,460.74	8,455.04	6,449.34	4,443.64
Average normative loan	13,469.29	11,463.59	9,457.89	7,452.19	5,446.49
Weighted Average Rate of interest on actual loan	8.9289	8.9301	8.9326	8.9524	8.9945
Interest on normative loan	1,202.66	1,023.71	844.84	667.15	489.88
Pro rata interest on normative loan	1,202.66	1,023.71	844.84	667.15	489.88

(Petitioner)



**Calculation of Depreciation Rate on Original Project Cost**

Form No. - 10

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	Transmission System associated with Chamera III		
Element Description	Combined Asset under Transmission System for Power evacuation from Chamera-III HEP		
Region	Northern Region	DOCO Date	Feb 7, 2013

(Amount in Rs. Lakh)

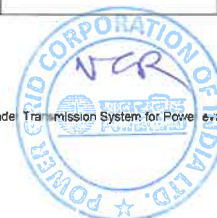
Name of Assets	Gross block at the beginning of the year	Add Cap during the year	Gross block at the end of the year	Average Gross Block	Depreciation Rate as per CERC's Depreciation Rate Schedule	Depreciation Amount for each year upto 31.03.2024
<b>2019-20</b>						
Land(Freehold)	0.00	0.00	0.00	0.00	0.00	0.00
Civil & Building	330.80	0.00	330.80	330.80	3.34	11.05
Transmission Line	35,313.03	0.00	35,313.03	35,313.03	5.28	1,864.53
Sub Station	2,448.49	0.00	2,448.49	2,448.49	5.28	129.28
Comm. Sys. excluding Fiber Optic	13.34	0.00	13.34	13.34	6.33	0.84
Leasehold Land	0.00	0.00	0.00	0.00	3.34	0.00
IT/Software/UNMS/URTDMS/SCADA,etc	0.00	0.00	0.00	0.00	15.00	0.00
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
<b>TOTAL</b>	<b>38,105.66</b>	<b>0.00</b>	<b>38,105.66</b>	<b>38,105.66</b>	<b>0.00</b>	<b>2,005.70</b>
<b>Weighted Average Rate of Depreciation(%)</b>					<b>5.263523</b>	

<b>2020-21</b>						
Land(Freehold)	0.00	0.00	0.00	0.00	0.00	0.00



Civil & Building	330.80	0.00	330.80	330.80	3.34	11.05
Transmission Line	35,313.03	0.00	35,313.03	35,313.03	5.28	1,864.53
Sub Station	2,448.49	0.00	2,448.49	2,448.49	5.28	129.28
Comm. Sys. excluding Fiber Optic	13.34	0.00	13.34	13.34	6.33	0.84
Leasehold Land	0.00	0.00	0.00	0.00	3.34	0.00
IT/Software/UNMS/URTDISM/SCADA,etc	0.00	0.00	0.00	0.00	15.00	0.00
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
<b>TOTAL</b>	<b>38,105.66</b>	<b>0.00</b>	<b>38,105.66</b>	<b>38,105.66</b>	<b>0.00</b>	<b>2,005.70</b>
<b>Weighted Average Rate of Depreciation(%)</b>					<b>5.263523</b>	

<b>2021-22</b>						
Land(Freehold)	0.00	0.00	0.00	0.00	0.00	0.00
Civil & Building	330.80	0.00	330.80	330.80	3.34	11.05
Transmission Line	35,313.03	0.00	35,313.03	35,313.03	5.28	1,864.53
Sub Station	2,448.49	0.00	2,448.49	2,448.49	5.28	129.28
Comm. Sys. excluding Fiber Optic	13.34	0.00	13.34	13.34	6.33	0.84
Leasehold Land	0.00	0.00	0.00	0.00	3.34	0.00
IT/Software/UNMS/URTDISM/SCADA,etc	0.00	0.00	0.00	0.00	15.00	0.00
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
<b>TOTAL</b>	<b>38,105.66</b>	<b>0.00</b>	<b>38,105.66</b>	<b>38,105.66</b>	<b>0.00</b>	<b>2,005.70</b>
<b>Weighted Average Rate of Depreciation(%)</b>					<b>5.263523</b>	





2022-23						
Land(Freehold)	0.00	0.00	0.00	0.00	0.00	0.00
Civil & Building	330.80	0.00	330.80	330.80	3.34	11.05
Transmission Line	35,313.03	0.00	35,313.03	35,313.03	5.28	1,864.53
Sub Station	2,448.49	0.00	2,448.49	2,448.49	5.28	129.28
Comm. Sys. excluding Fiber Optic	13.34	0.00	13.34	13.34	6.33	0.84
Leasehold Land	0.00	0.00	0.00	0.00	3.34	0.00
IT/Software/UNMS/URTDSM/SCADA,etc	0.00	0.00	0.00	0.00	15.00	0.00
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
<b>TOTAL</b>	<b>38,105.66</b>	<b>0.00</b>	<b>38,105.66</b>	<b>38,105.66</b>	<b>0.00</b>	<b>2,005.70</b>
<b>Weighted Average Rate of Depreciation(%)</b>					<b>5.263523</b>	

2023-24						
Land(Freehold)	0.00	0.00	0.00	0.00	0.00	0.00
Civil & Building	330.80	0.00	330.80	330.80	3.34	11.05
Transmission Line	35,313.03	0.00	35,313.03	35,313.03	5.28	1,864.53
Sub Station	2,448.49	0.00	2,448.49	2,448.49	5.28	129.28
Comm. Sys. excluding Fiber Optic	13.34	0.00	13.34	13.34	6.33	0.84
Leasehold Land	0.00	0.00	0.00	0.00	3.34	0.00
IT/Software/UNMS/URTDSM/SCADA,etc	0.00	0.00	0.00	0.00	15.00	0.00
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
<b>TOTAL</b>	<b>38,105.66</b>	<b>0.00</b>	<b>38,105.66</b>	<b>38,105.66</b>	<b>0.00</b>	<b>2,005.70</b>



<b>Weighted Average Rate of Depreciation(%)</b>					5.263523	
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(Petitioner)



## Statement of Depreciation

Form No. - 10A

Name of the Transmission Licensee	Power Grid Corporation of India Limited				
Project	Transmission System associated with Chamera III				
Element Description	Combined Asset under Transmission System for Power evacuation from Chamera-III HEP				
Region	Northern Region	DOCO Date	Feb 7, 2013		

(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
<b>Life at the beginning of the year</b>					
1.1 Weighted Average useful life of the Asset/ Project	34.00	34.00	34.00	34.00	34.00
1.2 Lapsed Weighted Average useful life of the Asset/Project(in completed no. of year)	6.00	7.00	8.00	9.00	10.00
1.3 Balance Weighted Average useful life of the Asset/Project(in completed no. of year)	28.00	27.00	26.00	25.00	24.00
<b>Capital Base</b>					
1.4 Opening capital cost	38,105.66	38,105.66	38,105.66	38,105.66	38,105.66
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	38,105.66	38,105.66	38,105.66	38,105.66	38,105.66
1.8 Average capital cost	38,105.66	38,105.66	38,105.66	38,105.66	38,105.66
1.9 Freehold land included in 1.8	0.00	0.00	0.00	0.00	0.00
1.10 Asset having NIL salvage value included in 1.8	0.00	0.00	0.00	0.00	0.00
1.11 Asset having 10% salvage value included in 1.8	38,105.66	38,105.66	38,105.66	38,105.66	38,105.66
1.12 Depreciable Value(1.10+90% of 1.11)	34,295.10	34,295.10	34,295.10	34,295.10	34,295.10
<b>Depreciation for the period and Cum. Depreciation</b>					
1.13 Weighted Average Rate of depreciation	5.263523	5.263523	5.263523	5.263523	5.263523



1.14 Depreciation(for the period)	2,005.70	2,005.70	2,005.70	2,005.70	2,005.70
1.15 Depreciation(Annualised)	2,005.70	2,005.70	2,005.70	2,005.70	2,005.70
Unrecovered Depreciation for DECAP	0.00	0.00	0.00	0.00	0.00
1.16 Cumulative depreciation at the beginning of the period	12,227.31	14,233.01	16,238.71	18,244.41	20,250.11
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	14,233.01	16,238.71	18,244.41	20,250.11	22,255.81

(Petitioner)



**Calculation of interest on working Capital**

Form No. - 11

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	Transmission System associated with Chamera III		
Element Description	Combined Asset under Transmission System for Power evacuation from Chamera-III HEP		
Region	Northern Region	DOCO Date	Feb 7, 2013

(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	23.71	24.54	25.41	26.30	27.21
Maintenance spares 15% of O&M Expenses	42.68	44.18	45.73	47.33	48.98
Receivables equivalent to 45 days of AFC	704.27	684.36	662.64	641.81	620.66
Total Working capital	770.66	753.08	733.78	715.44	696.85
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	92.86	84.72	77.05	75.12	83.62
Pro rata interest on working capital	92.86	84.72	77.05	75.12	83.62

(Petitioner)



**Summary of Tariff**

Form No. - 1      Encl-3

Name of the Transmission Licensee:		Power Grid Corporation of India Limited			
Project	Transmission System associated with Chamera III				
Element Description	Combined Asset under Transmission System for Power evacuation from Chamera-III HEP				
Region	Northern Region	DOC Date	Feb 7, 2013		

(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	2,006.86	456.02	456.02	456.02	456.02
Interest on Loan-Form No. 9E	311.38	202.53	162.23	120.43	78.34
Return on Equity-Form No. 8	2,142.31	2,142.31	2,142.31	2,142.31	2,142.31
Int. on Working capital-Form No.11	78.07	53.96	54.00	53.93	54.15
Op. and maintenance-Form No.2	270.49	284.65	299.50	315.22	331.80
Total AFC	4,809.11	3,139.47	3,114.06	3,087.91	3,062.62

(Petitioner)





Name of the Transmission Licensee	Power Grid Corporation of India Limited	
Project	Transmission System associated with Chamera III	
Element Description	Combined Asset under Transmission System for Power evacuation from Chamera-III HEP	
Region	Northern Region	DOC Date   Feb 7, 2013

**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.
CHAMERA POOLING STATION (CHAMBA)-CHAMERA III	AC	DC	2	220 KV	0.000	0.000	14.980	Feb 7, 2013	Y	
CHAMERA POLLING STN (CHAMBA) - JALLANDHAR	AC	DC	2	400 KV	0.000	0.000	161.990	Feb 7, 2013	Y	

**Summary:**

O&M Expenses For the Transmission Lines Covered in the instant petition	2024-25	2025-26	2026-27	2027-28	2028-29
<b>DOUBLE CIRCUIT (TWIN CONDUCTOR)</b>					
Normative Rate of O&M as per Regulation	0.861	0.906	0.953	1.003	1.056
No. of Units - ( Length in KM )	176.97	176.97	176.97	176.97	176.97



O&M Claimed	152.37	160.33	168.66	177.50	186.88
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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		
CHAMERA:CHAMERA III		400 KV		4.000								Feb 7, 2013	Y

Summary:

O&M Expenses For Substations Covered in the instant petition	2024-25	2025-26	2026-27	2027-28	2028-29
<b>400KV SUB-STATION</b>					
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



### 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
<b>A) Normative O&amp;M</b>					
Transmission Line	152.37	160.33	168.66	177.50	186.88
Substation	118.12	124.32	130.84	137.72	144.92
Communication System	0.00	0.00	0.00	0.00	0.00
<b>Total Normative O&amp;M</b>	<b>270.49</b>	<b>284.65</b>	<b>299.50</b>	<b>315.22</b>	<b>331.80</b>
<b>B) O&amp;M Claimed under Regulation 35 (3)(C) (* The same is not being claimed and will be claimed through separate Petition )</b>					
*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
<b>Total O&amp;M</b>	<b>270.49</b>	<b>284.65</b>	<b>299.50</b>	<b>315.22</b>	<b>331.80</b>

(Petitioner)



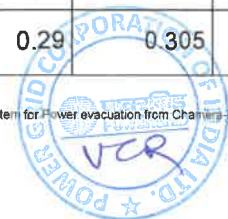
**Normative parameters considered for tariff computations**

Form No. - 3

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	Transmission System associated with Chamera III		
Element Description	Combined Asset under Transmission System for Power evacuation from Chamera-III HEP		
Region	Northern Region	DOC Date	Feb 7, 2013

(Amount in Rs. Lakh)

Particulars	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29
<b>Base Rate of Return of Equity (in %)</b>						
Tax Rate (in %)	17.472	17.472	17.472	17.472	17.472	17.472
<b>Effective tax rate (in %)</b>						
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
<b>Norms for sub-station Bays (Rs Lakh per bay)</b>						
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
<b>Norms for Transformers (Rs Lakh per MVA)</b>						
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
<b>Norms for Reactor (Rs Lakh per MVAR)</b>						
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
<b>Norms for AC and HVDC lines (Rs Lakh per km)</b>						
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
<b>Norms for HVDC stations (Rs Lakh/MW)</b>						
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	Transmission System associated with Chamera III		
Element Description	Combined Asset under Transmission System for Power evacuation from Chamera-III HEP		
Region	Northern Region	DOC Date	Feb 7, 2013

(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	11,406.21	11,406.21	11,406.21	11,406.21	11,406.21
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)	11,406.21	11,406.21	11,406.21	11,406.21	11,406.21
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	11,406.21	11,406.21	11,406.21	11,406.21	11,406.21
Average Normative Equity	11,406.21	11,406.21	11,406.21	11,406.21	11,406.21
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	2,142.31	2,142.31	2,142.31	2,142.31	2,142.31
Pro rata return on Equity	2,142.31	2,142.31	2,142.31	2,142.31	2,142.31



**Calculation of WAR of interest on actual loan**

Form No. - 9C

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	Transmission System associated with Chamera III		
Element Description	Combined Asset under Transmission System for Power evacuation from Chamera-III HEP		
Region	Northern Region	DOC Date	Feb 7, 2013

(Amount in Rs. Lakh)

Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
<b>BOND XXVIII -DOC O DRAWL ON 01-APR</b>					
Gross Loan- Opening	1,385.00	1,385.00	1,385.00	1,385.00	1,385.00
Cumulative repayments of Loans upto previous year	1,385.00	1,385.00	1,385.00	1,385.00	1,385.00
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

<b>BOND XXVIII -DOC O DRAWL ON 01-NOV</b>					
Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
Gross Loan- Opening	140.00	140.00	140.00	140.00	140.00
Cumulative repayments of Loans upto previous year	140.00	140.00	140.00	140.00	140.00
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

<b>BOND XXIX -DOCO DRAWL ON 01-APR</b>					
Gross Loan- Opening	1,875.00	1,875.00	1,875.00	1,875.00	1,875.00
Cumulative repayments of Loans upto previous year	1,875.00	1,875.00	1,875.00	1,875.00	1,875.00
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

<b>BOND XXIX -DOCO DRAWL ON 01-NOV</b>					
Gross Loan- Opening	200.00	200.00	200.00	200.00	200.00
Cumulative repayments of Loans upto previous year	200.00	200.00	200.00	200.00	200.00
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



<b>BOND XXX -DOCO DRAWL ON 01-APR</b>					
Gross Loan- Opening	5,247.00	5,247.00	5,247.00	5,247.00	5,247.00
Cumulative repayments of Loans upto previous year	4,809.75	5,247.00	5,247.00	5,247.00	5,247.00
Net loan-Opening	437.25	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	437.25	0.00	0.00	0.00	0.00
Net Loan-Closing	0.00	0.00	0.00	0.00	0.00
Average Net Loan	218.63	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	19.2394	0.00	0.00	0.00	0.00

<b>BOND XXX -DOCO DRAWL ON 01-NOV</b>					
Gross Loan- Opening	550.00	550.00	550.00	550.00	550.00
Cumulative repayments of Loans upto previous year	504.17	550.00	550.00	550.00	550.00
Net loan-Opening	45.83	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	45.83	0.00	0.00	0.00	0.00
Net Loan-Closing	0.00	0.00	0.00	0.00	0.00
Average Net Loan	22.92	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	2.017	0.00	0.00	0.00	0.00

<b>BOND XXXI -DOCO DRAWL ON 01-APR</b>					
Gross Loan- Opening	3,240.00	3,240.00	3,240.00	3,240.00	3,240.00
Cumulative repayments of Loans upto previous year	2,970.00	3,240.00	3,240.00	3,240.00	3,240.00
Net loan-Opening	270.00	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	270.00	0.00	0.00	0.00	0.00
Net Loan-Closing	0.00	0.00	0.00	0.00	0.00
Average Net Loan	135.00	0.00	0.00	0.00	0.00
Rate of Interest on Loan on Annual Basis	8.90	8.90	8.90	8.90	8.90
Interest on loan	12.015	0.00	0.00	0.00	0.00

#### BOND XXXI -DOCO DRAWL ON 01-NOV

Gross Loan- Opening	330.00	330.00	330.00	330.00	330.00
Cumulative repayments of Loans upto previous year	302.50	330.00	330.00	330.00	330.00
Net loan-Opening	27.50	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	27.50	0.00	0.00	0.00	0.00
Net Loan-Closing	0.00	0.00	0.00	0.00	0.00
Average Net Loan	13.75	0.00	0.00	0.00	0.00
Rate of Interest on Loan on Annual Basis	8.90	8.90	8.90	8.90	8.90
Interest on loan	1.2238	0.00	0.00	0.00	0.00

#### BOND XXXIII -DOCO DRAWL ON 01-APR

Gross Loan- Opening	1,951.00	1,951.00	1,951.00	1,951.00	1,951.00
Cumulative repayments of Loans upto previous year	1,625.83	1,788.42	1,951.00	1,951.00	1,951.00
Net loan-Opening	325.17	162.58	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	162.58	162.58	0.00	0.00	0.00
Net Loan-Closing	162.59	0.00	0.00	0.00	0.00
Average Net Loan	243.88	81.29	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	21.0712	7.0235	0.00	0.00	0.00

<b>BOND XXXIII -DOCO DRAWL ON 01-NOV</b>					
Gross Loan- Opening	200.00	200.00	200.00	200.00	200.00
Cumulative repayments of Loans upto previous year	166.67	183.33	200.00	200.00	200.00
Net loan-Opening	33.33	16.67	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	16.67	16.67	0.00	0.00	0.00
Net Loan-Closing	16.66	0.00	0.00	0.00	0.00
Average Net Loan	25.00	8.34	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	2.16	0.7206	0.00	0.00	0.00

<b>BOND-XXXIV -DOCO DRAWL ON 01-APR</b>					
Gross Loan- Opening	5,797.00	5,797.00	5,797.00	5,797.00	5,797.00
Cumulative repayments of Loans upto previous year	4,830.83	5,313.92	5,797.00	5,797.00	5,797.00
Net loan-Opening	966.17	483.08	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	483.08	483.08	0.00	0.00	0.00
Net Loan-Closing	483.09	0.00	0.00	0.00	0.00
Average Net Loan	724.63	241.54	0.00	0.00	0.00
Rate of Interest on Loan on Annual Basis	8.84	8.84	8.84	8.84	8.84
Interest on loan	64.0573	21.3521	0.00	0.00	0.00

**BOND-XXXIV -DOCO DRAWL ON 01-NOV**



Gross Loan- Opening	603.00	603.00	603.00	603.00	603.00
Cumulative repayments of Loans upto previous year	502.50	552.75	603.00	603.00	603.00
Net loan-Opening	100.50	50.25	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	50.25	50.25	0.00	0.00	0.00
Net Loan-Closing	50.25	0.00	0.00	0.00	0.00
Average Net Loan	75.38	25.13	0.00	0.00	0.00
Rate of Interest on Loan on Annual Basis	8.84	8.84	8.84	8.84	8.84
Interest on loan	6.6636	2.2215	0.00	0.00	0.00

#### BOND XXXVI -ADDCAP FOR 2011-2012

Gross Loan- Opening	67.30	67.30	67.30	67.30	67.30
Cumulative repayments of Loans upto previous year	35.89	40.38	44.87	49.35	53.84
Net loan-Opening	31.41	26.92	22.43	17.95	13.46
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	4.49	4.49	4.49	4.49	4.49
Net Loan-Closing	26.92	22.43	17.94	13.46	8.97
Average Net Loan	29.17	24.68	20.19	15.71	11.22
Rate of Interest on Loan on Annual Basis	9.35	9.35	9.35	9.35	9.35
Interest on loan	2.7274	2.3076	1.8878	1.4689	1.0491

#### BOND XXXVI -DOCO

Gross Loan- Opening	196.00	196.00	196.00	196.00	196.00
Cumulative repayments of Loans upto previous year	104.53	117.60	130.67	143.73	156.80
Net loan-Opening	91.47	78.40	65.33	52.27	39.20
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00



Less: Repayment(s) of loan during the year	13.07	13.07	13.07	13.07	13.07
Net Loan-Closing	78.40	65.33	52.26	39.20	26.13
Average Net Loan	84.94	71.87	58.80	45.74	32.67
Rate of Interest on Loan on Annual Basis	9.35	9.35	9.35	9.35	9.35
Interest on loan	7.9419	6.7198	5.4978	4.2767	3.0546

**BOND XXXVI -DOCO DRAWL ON 01-APR**

Gross Loan- Opening	36.70	36.70	36.70	36.70	36.70
Cumulative repayments of Loans upto previous year	19.57	22.02	24.47	26.91	29.36
Net loan-Opening	17.13	14.68	12.23	9.79	7.34
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	2.45	2.45	2.45	2.45	2.45
Net Loan-Closing	14.68	12.23	9.78	7.34	4.89
Average Net Loan	15.91	13.46	11.01	8.57	6.12
Rate of Interest on Loan on Annual Basis	9.35	9.35	9.35	9.35	9.35
Interest on loan	1.4876	1.2585	1.0294	0.8013	0.5722

**BOND XXXVIII -DOCO DRAWL ON 01-APR**

Gross Loan- Opening	1,100.00	1,100.00	1,100.00	1,100.00	1,100.00
Cumulative repayments of Loans upto previous year	0.00	0.00	0.00	1,100.00	1,100.00
Net loan-Opening	1,100.00	1,100.00	1,100.00	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	1,100.00	0.00	0.00
Net Loan-Closing	1,100.00	1,100.00	0.00	0.00	0.00
Average Net Loan	1,100.00	1,100.00	550.00	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	101.75	101.75	50.875	0.00	0.00
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**BOND XL -DOCO DRAWL ON 01-APR**

Gross Loan- Opening	568.00	568.00	568.00	568.00	568.00
Cumulative repayments of Loans upto previous year	378.67	426.00	473.33	520.67	568.00
Net loan-Opening	189.33	142.00	94.67	47.33	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	47.33	47.33	47.33	47.33	0.00
Net Loan-Closing	142.00	94.67	47.34	0.00	0.00
Average Net Loan	165.67	118.34	71.01	23.67	0.00
Rate of Interest on Loan on Annual Basis	9.30	9.30	9.30	9.30	9.30
Interest on loan	15.4073	11.0056	6.6039	2.2013	0.00

**BOND - XLI -DOCO DRAWL ON 01-APR**

Gross Loan- Opening	318.00	318.00	318.00	318.00	318.00
Cumulative repayments of Loans upto previous year	212.00	238.50	265.00	291.50	318.00
Net loan-Opening	106.00	79.50	53.00	26.50	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	26.50	26.50	26.50	26.50	0.00
Net Loan-Closing	79.50	53.00	26.50	0.00	0.00
Average Net Loan	92.75	66.25	39.75	13.25	0.00
Rate of Interest on Loan on Annual Basis	8.85	8.85	8.85	8.85	8.85
Interest on loan	8.2084	5.8631	3.5179	1.1726	0.00

**BOND - XLII -ADDCAP FOR 2012-2013**

Gross Loan- Opening	135.90	135.90	135.90	135.90	135.90
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Cumulative repayments of Loans upto previous year	135.90	135.90	135.90	135.90	135.90
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	8.80	8.80	8.80	8.80	8.80
Interest on loan	0.00	0.00	0.00	0.00	0.00

#### BOND - XLII -ADDCAP FOR 2013-2014

Gross Loan- Opening	394.97	394.97	394.97	394.97	394.97
Cumulative repayments of Loans upto previous year	394.97	394.97	394.97	394.97	394.97
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	8.80	8.80	8.80	8.80	8.80
Interest on loan	0.00	0.00	0.00	0.00	0.00

#### BOND - XLII -DOCO DRAWL ON 01-APR

Gross Loan- Opening	1,324.98	1,324.98	1,324.98	1,324.98	1,324.98
Cumulative repayments of Loans upto previous year	1,324.98	1,324.98	1,324.98	1,324.98	1,324.98
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





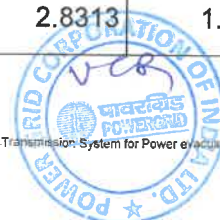
Net Loan-Closing	0.00	0.00	0.00	0.00	0.00
Average Net Loan	0.00	0.00	0.00	0.00	0.00
Rate of Interest on Loan on Annual Basis	8.80	8.80	8.80	8.80	8.80
Interest on loan	0.00	0.00	0.00	0.00	0.00

**BOND - XLIII -ADDCAP FOR 2013-2014**

Gross Loan- Opening	150.00	150.00	150.00	150.00	150.00
Cumulative repayments of Loans upto previous year	87.50	100.00	112.50	125.00	137.50
Net loan-Opening	62.50	50.00	37.50	25.00	12.50
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	12.50	12.50	12.50	12.50	12.50
Net Loan-Closing	50.00	37.50	25.00	12.50	0.00
Average Net Loan	56.25	43.75	31.25	18.75	6.25
Rate of Interest on Loan on Annual Basis	7.93	7.93	7.93	7.93	7.93
Interest on loan	4.4606	3.4694	2.4781	1.4869	0.4956

**BOND - XLV -ADDCAP FOR 2013-2014**

Gross Loan- Opening	140.83	140.83	140.83	140.83	140.83
Cumulative repayments of Loans upto previous year	82.15	93.89	105.62	117.36	129.09
Net loan-Opening	58.68	46.94	35.21	23.47	11.74
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	11.74	11.74	11.74	11.74	11.74
Net Loan-Closing	46.94	35.20	23.47	11.73	0.00
Average Net Loan	52.81	41.07	29.34	17.60	5.87
Rate of Interest on Loan on Annual Basis	9.65	9.65	9.65	9.65	9.65
Interest on loan	5.0962	3.9633	2.8313	1.6984	0.5665





<b>BOND - XLV -ADDCAP FOR 2013-2014</b>					
Gross Loan- Opening	445.01	445.01	445.01	445.01	445.01
Cumulative repayments of Loans upto previous year	259.59	296.67	333.76	370.84	407.93
Net loan-Opening	185.42	148.34	111.25	74.17	37.08
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	37.08	37.08	37.08	37.08	37.08
Net Loan-Closing	148.34	111.26	74.17	37.09	0.00
Average Net Loan	166.88	129.80	92.71	55.63	18.54
Rate of Interest on Loan on Annual Basis	9.65	9.65	9.65	9.65	9.65
Interest on loan	16.1039	12.5257	8.9465	5.3683	1.7891

<b>SBI (2014-15) -ADDCAP</b>					
Gross Loan- Opening	3.10	3.10	3.10	3.10	3.10
Cumulative repayments of Loans upto previous year	1.55	1.86	2.17	2.48	2.79
Net loan-Opening	1.55	1.24	0.93	0.62	0.31
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	0.31	0.31	0.31	0.31	0.31
Net Loan-Closing	1.24	0.93	0.62	0.31	0.00
Average Net Loan	1.40	1.09	0.78	0.47	0.16
Rate of Interest on Loan on Annual Basis	8.20	8.20	8.20	8.20	8.20
Interest on loan	0.1148	0.0894	0.064	0.0385	0.0131

<b>BOND XLVI -ADDCAP</b>					
Gross Loan- Opening	124.22	124.22	124.22	124.22	124.22
Cumulative repayments of Loans upto previous year	41.41	82.81	82.81	82.81	82.81



Net loan-Opening	82.81	41.41	41.41	41.41	41.41
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	41.41	0.00	0.00	0.00	0.00
Net Loan-Closing	41.40	41.41	41.41	41.41	41.41
Average Net Loan	62.11	41.41	41.41	41.41	41.41
Rate of Interest on Loan on Annual Basis	9.30	9.30	9.30	9.30	9.30
Interest on loan	5.7762	3.8511	3.8511	3.8511	3.8511

### Summary

Gross Loan- Opening	26,523.01	26,523.01	26,523.01	26,523.01	26,523.01
Cumulative repayments of Loans upto previous year	22,390.96	24,081.00	24,949.05	26,204.50	26,359.97
Net loan-Opening	4,132.05	2,442.01	1,573.96	318.51	163.04
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	1,690.04	868.05	1,255.47	155.47	81.64
Net Loan-Closing	2,442.01	1,573.96	318.49	163.04	81.40
Average Net Loan	3,287.08	2,008.02	946.25	240.80	122.24
Rate of Interest on Loan on Annual Basis	9.0512	9.1693	9.2558	9.2874	9.3188
Interest on loan	297.5216	184.1212	87.5828	22.364	11.3913

(Petitioner)



**Calculation of interest on Normative loan**

Form No. - 9E

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	Transmission System associated with Chamera III		
Element Description	Combined Asset under Transmission System for Power evacuation from Chamera-III HEP		
Region	Northern Region	DOCO Date	Feb 7, 2013

(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	26,699.45	26,699.45	26,699.45	26,699.45	26,699.45
Cumulative repayments of Normative loan upto previous year	22,255.81	24,262.67	24,718.69	25,174.71	25,630.73
Net normative loan-Opening	4,443.64	2,436.78	1,980.76	1,524.74	1,068.72
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	2,006.86	456.02	456.02	456.02	456.02
Adjustment of cumulative repayment pertaining to the decapitalised asset	0.00	0.00	0.00	0.00	0.00
Net normative loan - closing	2,436.78	1,980.76	1,524.74	1,068.72	612.70
Average normative loan	3,440.21	2,208.77	1,752.75	1,296.73	840.71
Weighted Average Rate of interest on actual loan	9.0512	9.1693	9.2558	9.2874	9.3188
Interest on normative loan	311.38	202.53	162.23	120.43	78.34
Pro rata interest on normative loan	311.38	202.53	162.23	120.43	78.34

(Petitioner)



**Calculation of Depreciation Rate on Original Project Cost**

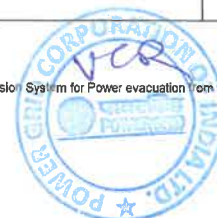
Form No. - 10

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	Transmission System associated with Chamera III		
Element Description	Combined Asset under Transmission System for Power evacuation from Chamera-III HEP		
Region	Northern Region	DOCO Date	Feb 7, 2013

(Amount in Rs. Lakh)

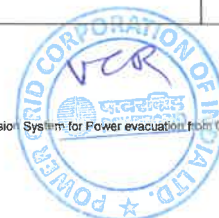
Name of Assets	Gross block at the beginning of the year	Add Cap during the year	Gross block at the end of the year	Average Gross Block	Depreciation Rate as per CERC's Depreciation Rate Schedule	Depreciation Amount for each year upto 31.03.2029
<b>2024-25</b>						
Land(Freehold)	0.00	0.00	0.00	0.00	0.00	0.00
Civil & Building	330.80	0.00	330.80	330.80	3.34	11.05
Transmission Line	35,313.03	0.00	35,313.03	35,313.03	5.28	1,864.53
Sub Station	2,448.49	0.00	2,448.49	2,448.49	5.28	129.28
Comm. Sys. excluding Fiber Optic	13.34	0.00	13.34	13.34	15.00	2.00
Leasehold Land	0.00	0.00	0.00	0.00	3.34	0.00
IT/Software/UNMS/URTDMS/SCADA,etc	0.00	0.00	0.00	0.00	15.00	0.00
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
<b>TOTAL</b>	<b>38,105.66</b>	<b>0.00</b>	<b>38,105.66</b>	<b>38,105.66</b>	<b>0.00</b>	<b>2,006.86</b>
<b>Weighted Average Rate of Depreciation(%)</b>					<b>5.266567</b>	

<b>2025-26</b>						
Land(Freehold)	0.00	0.00	0.00	0.00	0.00	0.00



Civil & Building	330.80	0.00	330.80	330.80	3.34	5.74
Transmission Line	35,313.03	0.00	35,313.03	35,313.03	5.28	420.99
Sub Station	2,448.49	0.00	2,448.49	2,448.49	5.28	29.22
Comm. Sys. excluding Fiber Optic	13.34	0.00	13.34	13.34	15.00	0.07
Leasehold Land	0.00	0.00	0.00	0.00	3.34	0.00
IT/Software/UNMS/URTDSM/SCADA,etc	0.00	0.00	0.00	0.00	15.00	0.00
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
<b>TOTAL</b>	<b>38,105.66</b>	<b>0.00</b>	<b>38,105.66</b>	<b>38,105.66</b>	<b>0.00</b>	<b>456.02</b>
<b>Weighted Average Rate of Depreciation(%)</b>					<b>1.196725</b>	

<b>2026-27</b>						
Land(Freehold)	0.00	0.00	0.00	0.00	0.00	0.00
Civil & Building	330.80	0.00	330.80	330.80	3.34	5.74
Transmission Line	35,313.03	0.00	35,313.03	35,313.03	5.28	420.99
Sub Station	2,448.49	0.00	2,448.49	2,448.49	5.28	29.22
Comm. Sys. excluding Fiber Optic	13.34	0.00	13.34	13.34	15.00	0.07
Leasehold Land	0.00	0.00	0.00	0.00	3.34	0.00
IT/Software/UNMS/URTDSM/SCADA,etc	0.00	0.00	0.00	0.00	15.00	0.00
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
<b>TOTAL</b>	<b>38,105.66</b>	<b>0.00</b>	<b>38,105.66</b>	<b>38,105.66</b>	<b>0.00</b>	<b>456.02</b>
<b>Weighted Average Rate of Depreciation(%)</b>					<b>1.196725</b>	



2027-28						
Land(Freehold)	0.00	0.00	0.00	0.00	0.00	0.00
Civil & Building	330.80	0.00	330.80	330.80	3.34	5.74
Transmission Line	35,313.03	0.00	35,313.03	35,313.03	5.28	420.99
Sub Station	2,448.49	0.00	2,448.49	2,448.49	5.28	29.22
Comm. Sys. excluding Fiber Optic	13.34	0.00	13.34	13.34	15.00	0.07
Leasehold Land	0.00	0.00	0.00	0.00	3.34	0.00
IT/Software/UNMS/URTDISM/SCADA,etc	0.00	0.00	0.00	0.00	15.00	0.00
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
<b>TOTAL</b>	<b>38,105.66</b>	<b>0.00</b>	<b>38,105.66</b>	<b>38,105.66</b>	<b>0.00</b>	<b>456.02</b>
<b>Weighted Average Rate of Depreciation(%)</b>					<b>1.196725</b>	

2028-29						
Land(Freehold)	0.00	0.00	0.00	0.00	0.00	0.00
Civil & Building	330.80	0.00	330.80	330.80	3.34	5.74
Transmission Line	35,313.03	0.00	35,313.03	35,313.03	5.28	420.99
Sub Station	2,448.49	0.00	2,448.49	2,448.49	5.28	29.22
Comm. Sys. excluding Fiber Optic	13.34	0.00	13.34	13.34	15.00	0.07
Leasehold Land	0.00	0.00	0.00	0.00	3.34	0.00
IT/Software/UNMS/URTDISM/SCADA,etc	0.00	0.00	0.00	0.00	15.00	0.00
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
<b>TOTAL</b>	<b>38,105.66</b>	<b>0.00</b>	<b>38,105.66</b>	<b>38,105.66</b>	<b>0.00</b>	<b>456.02</b>





<b>Weighted Average Rate of Depreciation(%)</b>					1.196725	
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(Petitioner)



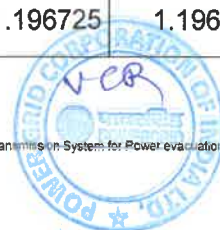
**Statement of Depreciation**

Form No. - 10A

Name of the Transmission Licensee	Power Grid Corporation of India Limited				
Project	Transmission System associated with Chamera III				
Element Description	Combined Asset under Transmission System for Power evacuation from Chamera-III HEP				
Region	Northern Region	DOCO Date	Feb 7, 2013		

(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
<b>Life at the beginning of the year</b>					
1.1 Weighted Average useful life of the Asset/ Project	34.00	34.00	34.00	34.00	34.00
1.2 Lapsed Weighted Average useful life of the Asset/Project(in completed no. of year)	11.00	12.00	13.00	14.00	15.00
1.3 Balance Weighted Average useful life of the Asset/Project(in completed no. of year)	23.00	22.00	21.00	20.00	19.00
<b>Capital Base</b>					
1.4 Opening capital cost	38,105.66	38,105.66	38,105.66	38,105.66	38,105.66
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	38,105.66	38,105.66	38,105.66	38,105.66	38,105.66
1.8 Average capital cost	38,105.66	38,105.66	38,105.66	38,105.66	38,105.66
1.9 Freehold land included in 1.8	0.00	0.00	0.00	0.00	0.00
1.10 Asset having NIL salvage value included in 1.8	0.00	0.00	0.00	0.00	0.00
1.11 Asset having 10% salvage value included in 1.8	38,105.66	38,105.66	38,105.66	38,105.66	38,105.66
1.12 Depreciable Value(1.10+90% of 1.11)	34,295.10	34,295.10	34,295.10	34,295.10	34,295.10
<b>Depreciation for the period and Cum. Depreciation</b>					
1.13 Weighted Average Rate of depreciation	5.266567	1.196725	1.196725	1.196725	1.196725



1.14 Depreciation(for the period)	2,006.86	456.02	456.02	456.02	456.02
1.15 Depreciation(Annualised)	2,006.86	456.02	456.02	456.02	456.02
Unrecovered Depreciation for DECAP	0.00	0.00	0.00	0.00	0.00
1.16 Cumulative depreciation at the beginning of the period	22,255.81	24,262.67	24,718.69	25,174.71	25,630.73
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	24,262.67	24,718.69	25,174.71	25,630.73	26,086.75

(Petitioner)



**Calculation of interest on working Capital**

Form No. - 11

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	Transmission System associated with Chamera III		
Element Description	Combined Asset under Transmission System for Power evacuation from Chamera-III HEP		
Region	Northern Region	DOCOC Date	Feb 7, 2013

(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	22.54	23.72	24.96	26.27	27.65
Maintenance spares 15% of O&M Expenses	40.57	42.70	44.93	47.28	49.77
Receivables equivalent to 45 days of AFC	592.90	387.06	383.93	379.66	377.58
Total Working capital	656.01	453.48	453.82	453.21	455.00
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	78.07	53.96	54.00	53.93	54.15
Pro rata interest on working capital	78.07	53.96	54.00	53.93	54.15

(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	Transmission System associated with Chamera-III HEP
5. Investment Approval date	
6. SCOD of the Project	
7. Actual COD of the project	01.04.2013 & 01.11.2011
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	Rs.386.92 Cr
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.	Rs.381.05 Crore
15. No. of Assets covered in instant petition and having cost overrun.	NIL
16	<b>Prayer in brief</b>
17	<b>Key details and any Specific issue involved:</b> 1) There is No add-cap in 2019-24 and 2024-29
18	<b>Respondents</b>
<b>Name of Respondents</b>	
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)



## Summary of Capital Cost &amp; 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	Transmission System associated with Chamera-III HEP
COD of the Project (if entire scope of project is completed)	01.04.2013 & 01.11.2011

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

Rupees in lakh

S. No.	Asset No.	COD	Cut-off Date	i) Apportioned 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			
1	Asset-1	07.02.2013	31.03.2016	3	4	5	6	7	8	9	10				11=(5+6+7+8+9+10)	12
		<b>Total Capital Cost Claimed</b>			38632	38105.66	-	-	-	-	-	-	-	-	38105.66	38105.66

## 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
1	Asset-1	Combined Asset comprising of Asset-I:400 KV D/C Chamera Pooling Station-Jalandhar Transmission Line along with bays and Line Reactor at Jalandhar, Asset-II: 220 KV D/C Transmission Line from GIS Pooling Station Chamera-Chamera-III HEP	4809.11	3139.47	3114.06	3087.91	3062.62
<b>Total AFC for all the Assets</b>			4809.11	3139.47	3114.06	3087.91	3062.62

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

VER

(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	NA
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	NA
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	NA
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

**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.

