

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 under **Northern Region System Strengthening Scheme- XXIII 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: 23.09.2024

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 under Northern Region System Strengthening Scheme- XXIII 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.

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INDEX

Sl. No.	Description	Enclosure No.	Page No.
	Cover Page	-	1
1	Index	-	2-3
2	Letter for registration	-	4-5
3	Memo of Parties	-	6-8
4	Memo of appearance		9-10
5	Petition for truing up of transmission tariff for 2019-24 and determination of transmission tariff for 2024-29 tariff block	-	11-25
6	Supporting affidavit		26-27



7	Power of attorney	-	28
ANNEXURES:			
8	CERC order dated 31.12.2021 in petition no.6/TT/2021	Encl -1	29-72
9	Auditor Certificate	Encl -2	73-74
10	Liability flow statement	Encl -3	75
11	True up tariff forms for 2019-24 block	Encl -4	76-108
12	Tariff Forms for 2024-29 block	Encl -5	109-147
13	Checklist	Encl -6	148-149

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

GURGAON

DATED: 23.09.2024

REPRESENTED BY

C. Sekhar
Sr. General Manager (Regulatory Cell)

BEFORE
THE CENTRAL ELECTRICITY REGULATORY COMMISSION
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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 under **Northern Region System Strengthening Scheme- XXIII 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.

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Uttar Pradesh Power Corporation Ltd.

Shakti Bhawan, 14, Ashok Marg

Lucknow - 226 001

Represented by Its Chairman

And others

----- RESPONDENT(S)

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

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



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

GURGAON

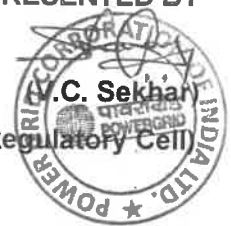
FILED BY

DATED:- 23.09.2024

POWER GRID CORPORATION OF INDIA LTD.

REPRESENTED BY

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



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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 under **Northern Region System Strengthening Scheme- XXIII 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.

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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: 23.09.2024

PETITIONER
POWER GRID CORPORATION OF INDIA LTD.
REPRESENTED BY

Sr. General Manager (Regulatory Cell)



**BEFORE
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Uttar Pradesh Power Corporation Ltd.

Shakti Bhawan, 14, Ashok Marg

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. **Shri V.C. Sekhar, Sr. GM (Commercial-RC), POWERGRID**
4. Shri Zafrul Hasan, GM (Comml- Petition), POWERGRID
5. Shri Angaru Naresh Kumar, DGM, POWERGRID
6. Smt Suchitra Gautam, DGM, POWERGRID
7. Shri Vishal Sagar, DGM, POWERGRID



8. Shri G. Vijay, DGM, POWERGRID
9. Shri Vivek Kumar Singh, DGM, POWERGRID
10. Shri Amit Kumar Chachan, DGM, POWERGRID
11. Smt. Supriya Kumari, CM (Law), POWERGRID
12. Shri Arjun Malhotra, Manager (Law), POWERGRID
13. Smt. Tanushree Rao, DM (Law), 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 September 2024.

PETITIONER
POWER GRID CORPORATION OF INDIA LTD.

GURGAON

DATED:- 23.09.2024

Sr. General Manager (Regulatory Cell)



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Uttar Pradesh Power Corporation Ltd.

----- RESPONDENT(S)

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Represented by Its Chairman

And others

A. Executive Summary of the Petition:

(i) Brief Background of the Petitioner

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



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

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

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

(iii) Background of Transmission Assets:

2. POWERGRID has filed the present petition for truing up of transmission tariff for 2019-24 and determination of transmission tariff for 2024-29 tariff block for the below assets which have been implemented under **Northern Region System Strengthening Scheme-XXIII in Northern Region:**

Asset No	Asset Name	Actual DOCO
Asset-1&2	Combined Assets of 500 MVA 400/220 kV ICT-III and 500 MVA 400/220 kV ICT-IV along with associated bay at Maharanibagh Substation	01.12.2010
Asset-3	500 MVA, 400/220 kV ICT-II along with associated bays at Lucknow Sub-station;	01.02.2012
Asset-4	400/220 kV ICT along with associated bays at Bahadurgarh Substation.	01.11.2011

(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 apportioned approved cost vis-a-vis claimed capital cost as on COD 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	Apportioned approved cost as per RCE	Expenditure Up to DOCO /31.03.2019	Expenditure during 2019-24 tariff block					Capital Cost as on 31.03.2024
				2019-20	2020-21	2021-22	2022-23	2023-24	
Combined Asset	10972.44	11727.00	11165.40	No add-cap					11165.40

Rs in lakhs

Asset No.	Apportioned Approved Cost as per FR	Apportioned approved cost as per RCE	Expenditure Up to 31.03.2024	Projected expenditure during 2024-29 tariff block					Estimated completion Cost as on 31.03.2029
				2024-25	2025-26	2026-27	2027-28	2028-29	
Combined Asset	10972.44	11727.00	11165.40	39.30	0.00	0.00	0.00	0.00	11204.70

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	2602.92	2587.47	2569.07	2557.52	2544.29
	Revised AFC based on truing up	2599.35	2579.87	2561.73	2550.76	2544.53

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	1743.76	1773.76	1806.00	1850.91	1905.16

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
Asset-1&2	Combined Assets of 500 MVA 400/220 kV ICT-III and 500 MVA 400/220 kV ICT-IV along with associated bay at Maharaniabagh Substation	01.12.2010	Earlier covered under petition no. 6/TT/2021 now covered under instant petition Effective COD: 02.05.2011
Asset-3	500 MVA, 400/220 kV ICT-II along with associated bays at Lucknow Sub-station;	01.02.2012	
Asset-4	400/220 kV ICT along with associated bays at Bahadurgarh Substation.	01.11.2011	

10. Approval of the Scheme:

The Investment Approval (IA) for the transmission system was accorded by the Board of Directors of the Petitioner's Company vide Memorandum No. C/CP/NRSS-XXIII dated 10.12.2009, at an estimated cost of ₹10972 lakh, including IDC of ₹641 lakh, based on 2nd quarter of 2009 price level.

The Revised Cost Estimate (RCE) for the transmission system was approved by the Board of Directors of the Petitioner's Company vide Memorandum dated 1.6.2016 at an estimated cost of ₹11727 lakh, including IDC of ₹301 lakh, based on December 2015 price level.

11. Cost details:

The details of Capital Cost admitted for 2019-24 tariff block vide order dated 31.12.2021 in petition no.6/TT/2021 for the asset covered in instant petition and capital cost claimed as per auditor certificate for the truing up of 2019-24 are as tabulated below:



Combined Asset

Rs in Lakhs

Capital Cost allowed vide order dated: 31.12.2021 in petition no.6/TT/2021								
Apportioned cost		Capital cost as on DOCO/ 31.03.2019	Add -Cap 2019-24					Capital cost as on 31.03.2024
As per FR	As per RCE		2019-20	2020-21	2021-22	2022-23	2023-24	
10972.44	11727.00	11165.40	39.31	0.00	0.00	0.00	0.00	11204.71
Capital Cost claimed in the instant petition								
Apportioned cost		Capital cost as on DOCO/ 31.03.2019	Add -Cap 2019-24					Capital cost as on 31.03.2024
As per FR	As per RCE		2019-20	2020-21	2021-22	2022-23	2023-24	
10972.44	11727.00	11165.40	0.00	0.00	0.00	0.00	0.00	11165.40

Copy of orders is enclosed as **Encl-1**.

Capital cost for 2024-29 tariff block:

Rs in Lakhs

Asset Details	Apportioned cost		Expenditure as on 31.03.2024	Actual/Projected Add Cap 2024-29 as per auditor's certificate					Estimated completion cost as on 31.03.2029
	As per FR	As per RCE		2024-25	2025-26	2026-27	2027-28	2028-29	
Combined Asset	10972.44	11727.00	11165.40	39.30	0.00	0.00	0.00	0.00	11204.70

The overall Completion cost as on 31.03.2029 of the project is within the RCE apportioned cost. A copy of the auditor certificate is enclosed at **Encl-2**.

12. Details of the Additional Capitalization

Additional capitalization claims under Regulation:

SI No.	Asset	DOCO date	Cutoff date
1	Asset-1&2	01.12.2010	31.03.2013
2	Asset-3	01.02.2012	31.03.2015
3	Asset-4	01.11.2011	31.03.2014

Add cap for 2019-24 block: There is No Add-cap in 2019-24



Add cap for 2024-29 block: There is add-cap only in case on Asset-4.

Asset	Add cap detail (₹ in Lakhs)				
	2024-25	2025-26	2026-27	2027-28	2028-29
Asset-4	39.30	0	0	0	0
	Applicable regulation				
	25(1)(d)	NA	NA	NA	NA

It is submitted that the additional capitalization claimed for the Asset is within the original scope of the work. As on date there is nil 'previously recognized liabilities' to be discharged beyond 2024-29 tariff period.

The additional capital expenditure claimed in the 2024-29 period is spillover of add-cap approved by Hon'ble Commission in 2019-24 and is on account of undischarged liability/retention payment. A liability flow statement having Package/ Contractor wise detail along with applicable regulation is enclosed at **Encl-3**.

13. Capital cost claimed for tariff purpose for 2019-24 and 2024-29 block:

Combined Asset:

Rs in Lakhs

Sl.No	Expenditure	Building and civil works	S/S	Commu Sys. Excluding OPGW	IT Equip.	Total
1	Admitted Expenditure upto 31.03.2019	229.80	10899.65	17.85	18.10	11165.40
2	Expenditure during 2019-24 (As per auditor certificate)	0.00	0.00	0.00	0.00	0.00
3	Estimated expenditure during 2024-25 (As per auditor certificate)	0.00	39.30	0.00	0.00	39.30
4	Total Estimated Completion Cost	229.80	10938.95	17.85	18.10	11204.70

14. Debt: Equity Ratio: The debt: equity ratio of 70:30 have been admitted by Hon'ble Commission as on 31.03.2019 and the same have been considered for cost as on 31.03.2019. Further for add-cap during 2024-29, normative debt: equity ratio of 70:30 have been considered. It is prayed to Hon'ble Commission to consider debt: equity ratio as claimed in the petition and tariff forms for tariff computation.



15. 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 Regulations, 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 Regulations, 2019:

Quote

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

Unquote

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



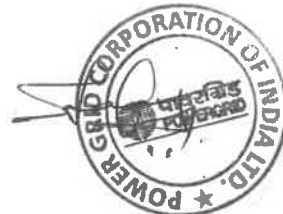
As such, basis of year wise effective tax rate and Grossed up ROE to be trued up accordingly for the block period 2019-24 is summarized as under:-

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

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

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

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



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

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

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

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

Rs in Lakh

Project		2019-20	2020-21	2021-22	2022-23	2023-24
Combined Asset	AFC approved	2602.92	2587.47	2569.07	2557.52	2544.29
	Revised AFC based on truing up	2599.35	2579.87	2561.73	2550.76	2544.53

Tariff filing forms along with the other relevant information and supporting documents are attached hereto as **Encl-4**.

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



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

Rs in Lakh

Project	2024-25	2025-26	2026-27	2027-28	2028-29
Combined Asset	1743.76	1773.76	1806.00	1850.91	1905.16

Tariff filing forms along with the other relevant information and supporting documents are attached hereto as **Encl-5**.

18. The asset has completed 12 Yrs of life in 2023-24 and thus depreciation from 2024-25 has 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.
19. 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.
20. 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 16 and para 17 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.

21. 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.

22. The transmission charges at para-16 & 17 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.
23. 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 FY 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.

24. 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.

25. 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.

26. The Transmission Charges and other related Charges indicated at para 16 & 17 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.

27. **Sharing of Transmission Charges**

Tariff for Transmission of Electricity (Annual Fixed Cost) for 2019-24 as per para 16 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, 2020, as amended from to time.

Tariff for Transmission of Electricity (Annual Fixed Cost) for 2024-29 as per para 17 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 to time.

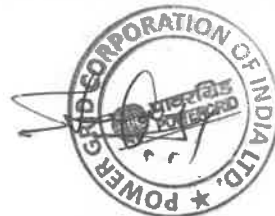
28. In the circumstances mentioned above, it will be just and proper that the transmission tariff for the asset covered under this petition be allowed to be charged from the beneficiaries on the basis set out above. **The Petitioner submits that Encl.-1 to Encl.-6 may please be treated as integral part 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 16 & 17 above.
- b) Admit the capital cost claimed and additional capitalization projected to be incurred during 2024-29.
- c) 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 16 & 17 above for respective block.
- d) 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.
- e) 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.
- f) 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.
- g) 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 23 above.
- h) 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 23 above.



- i) 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 23 above.
- j) Allow the petitioner to claim expenses of CTUIL borne by POWERGRID through a separate petition as mentioned at para 24 above.
- k) 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.

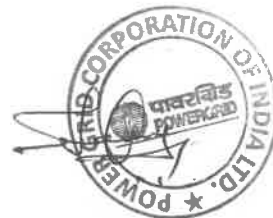
and pass such other relief as Hon'ble Commission deems fit and appropriate under the circumstances of the case and in the interest of justice

GURGAON
DATED:- 23.09.2024

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 under **Northern Region System Strengthening Scheme- XXIII 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.

--- **PETITIONER**

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

Uttar Pradesh Power Corporation Ltd.

----- **RESPONDENT(S)**

Shakti Bhawan, 14, Ashok Marg

Lucknow - 226 001

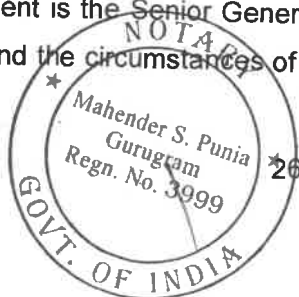
Represented by Its Chairman

And others

AFFIDAVIT VERIFYING THE PETITION

I, V.C. Sekhar, S/O Late Sh. V. Devaiah, working as Senior General Manager (Regulatory Cell) in the Powergrid 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.



26



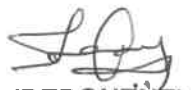
2. That the accompanying Petition under Section 62 of the Electricity Act, 2003, has been filed by my authorized representative/nominated counsel under my instruction and the contents of the same are true and correct to the best of my knowledge and belief.
3. That the contents of Para 01 to 28 of the 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 28 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 23rd day of September' 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)



ATTESTED
27
MAHENDER S. PUNIA
ADVOCATE & NOTARY
Distt. Gurugram (Haryana) India



Ref: CC/Commercial/2024

Date: 28.08.2024


LETTER OF AUTHORIZATION

In reference to the POWER OF ATTORNEY dated 14.08.2024 and in supersession of letter of authorization dated 13.12.2022 I hereby authorize following executives to sign Petitions, Appeals, Vakalatnama, Affidavits, etc. and to represent POWERGRID before various forums/ courts / tribunals i.e Central Electricity Regulatory Commission, State Electricity Regulatory Commission, Appellate Tribunal for Electricity, High courts and Supreme Court etc. :

1. Sh. Mohd. Mohsin, Chief General Manager
2. Sh. V. C. Sekhar, Senior General Manager
3. Sh. Zafrul Hasan, General Manager

Further, following executives are authorised to represent cases before Central Electricity Regulatory Commission and Appellate Tribunal for Electricity

1. Sh. Angaru Naresh Kumar, Deputy General Manager
2. Smt. Suchitra Gautam, Deputy General Manager
3. Sh. Vishal Sagar, Deputy General Manager
4. Sh. G. Vijay, Deputy General Manager
5. Sh. Vivek Kumar Singh, Deputy General Manager
6. Sh. Amit Kumar Chachan, Deputy General Manager
7. Smt. Supriya Singh, Chief Manager (Law)
8. Sh. Arjun Malhotra, Manager (Law)
9. Smt. Tanushree Rao, Deputy Manager (Law)


28/08/2024
Dilip Nagesh Rozekar

Executive Director (Commercial & RC)

दिलीप रोजेकर / DILIP ROZEKAR

Executive Director (Commercial & Regulatory Cell)
पावर ग्रिड कॉर्पोरेशन ऑफ इंडिया लिमिटेड
Power Grid Corporation of India Ltd.
(भारत सरकार का उद्यम)/(A Govt. of India Enterprise)
Plot No.-2, Sector-29, Gurgaon- 122 001 (Haryana)



केन्द्रीय कार्यालय : "सौदामिनी" प्लॉट सं. 2, सेक्टर-29, गुरुग्राम-122001, (हरियाणा), दूरभाष : 0122-26560112, 26564812, 26564812, 26564892, सीआईएन : L40101DL1989GOI038121
Corporate Office : "Saudamini", Plot No. 2, Sector-29, Gurugram-122001, (Haryana) Tel. : 0122-26560112, 26564812, 26564812, 26564892, CIN : L40101DL1989GOI038121

पंजीकृत कार्यालय : बी-9, कुतुब इंस्टीट्यूशनल एरिया, कटवारिया सराय, नई दिल्ली-110016, टेल. : 011-26560112, 26564812, 26564812, 26564892, सीआईएन : L40101DL1989GOI038121
Registered Office : B-9, Qulab Institution Area, Katwaria Sarai, New Delhi-110016. Tel. : 011-26560112, 26564812, 26564812, 26564892, CIN : L40101DL1989GOI038121
Website : www.powergridindia.com

End-1

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 6/TT/2021

Coram:

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

Date of order: 31.12.2021

In the matter of:

Approval under Regulation 86 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 for truing up of transmission tariff of 2009-14 period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009, truing up of transmission tariff of the 2014-19 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff of the 2019-24 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 in respect of **Combined Asset** comprising of **Asset-1& 2:** Combined Assets of 500 MVA 400/220 kV ICT-III & 500 MVA 400/220 kV ICT-IV along with associated bay at Maharaniabagh Sub-station; **Asset-3:** 500 MVA, 400/220 kV ICT-II along with associated bays at Lucknow; **Asset-4:** 400/220 kV ICT along with associated bays at Bahadurgarh Sub-station covered under the Transmission System associated with "Northern Region System Strengthening Scheme- XXIII" in the Northern Region.

And in the matter of:

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

.....Petitioner

Versus

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

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Page - 29 to 72
Authorised Signatory
Power Grid Corporation of India Ltd
Plot No. 2, Sector-29, Gurgaon-122001 (HARYANA)



Order in Petition No. 6/TT/2021

4. Caligiri Road, Malviya Nagar, Jaipur - 302017 (Rajasthan).
Jodhpur Vidyut Vitran Nigam Limited,
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 -134109 (Haryana).
8. Power Development Department,
Government of Jammu & Kashmir,
Mini Secretariat,
Jammu.
9. Uttar Pradesh Power Corporation Limited,
(Formerly Uttar Pradesh State Electricity Board),
Shakti Bhawan, 14, Ashok Marg,
Lucknow - 226001 (Uttar Pradesh).
10. Delhi Transco Limited,
Shakti Sadan, Kotla Road,
New Delhi - 110002.
11. BSES Yamuna Power Limited,
B-Block, Shakti Kiran, Building (Near Karkadooma Court),
Karkadooma 2nd Floor,
New Delhi - 110092.
12. BSES Rajdhani Power Limited,
BSES Bhawan, Nehru Place,
New Delhi - 110019.
13. Tata Power Delhi Distribution Limited,
NDPL house, Hudson Lines Kingsway Camp
Delhi - 110009.
14. Chandigarh Administration,
Sector-9,
Chandigarh.



15. Uttarakhand Power Corporation Limited,
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.

...Respondent(s)

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

For Respondent: None

ORDER

The instant petition has been filed by Power Grid Corporation of India Limited, for truing of transmission tariff for the period from COD to 31.3.2014 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as "the 2009 Tariff Regulations"), truing of transmission tariff for the period from 1.4.2014 to 31.3.2019 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as "the 2014 Tariff Regulations") and for determination of transmission tariff for the period from 1.4.2019 to 31.3.2024 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as "the 2019 Tariff Regulations") in respect of the following transmission assets forming part of **Combined Asset** under the Transmission System associated with "Northern Region System Strengthening Scheme- XXIII" (hereinafter referred to as "the transmission system"):



Asset-1&2 (combined): Combined Assets of 500 MVA 400/220 kV ICT-III and 500 MVA 400/220 kV ICT-IV along with associated bay at Maharaniyagh Sub-station;

Asset-3: 500 MVA, 400/220 kV ICT-II along with associated bays at Lucknow Sub-station; and

Asset-4: 400/220 kV ICT along with associated bays at Bahadurgarh Sub-station.

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

“(i) Approve the Additional Capitalisation expenditure incurred during 2009-14, 2014-19 and 2019-24 tariff block.

(ii) Approve the trued up Transmission Tariff for 2009-14 and 2014-19 block and transmission tariff for 2019-24 block for the assets covered under this petition, as per para 19, 25.1 and 29 above.

(iii) 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.

(iv) 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.

(v) 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.

(vi) 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.

(vii) Allow the Petitioner to file a separate petition before Hon’ble Commission for claiming the overall security expenses and consequential Interest on Working Capital on that security expenses.

(viii) Allow the Petitioner to claim the capital spares at the end of tariff block as per actual.

(ix) 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 brief facts of the case are as follows:

a) The Investment Approval (IA) for the transmission system was accorded by the Board of Directors of the Petitioner's Company *vide* Memorandum No. C/CP/NRSS-XXIII dated 10.12.2009, at an estimated cost of ₹10972 lakh, including IDC of ₹641 lakh, based on 2nd quarter of 2009 price level.

b) The scope of work covered under the transmission system is as follows:

Sub-station

- a) Maharaniabagh 400/220 kV GIS Sub-station (Extension) - 2x500 MVA, 400/220 kV transformer.
- b) Bahadurgarh 400/220 kV Sub-station (Extension) - 1x500 MVA, 400/220 kV transformer.
- c) Lucknow 400/220 kV Sub-station (Extension) - 1x500 MVA, 400/220 kV transformer.

c) All the assets under the transmission system are completed and covered under the instant petition.

d) As per IA, the scheduled date of commercial operation (SCOD) of the transmission system was 10.12.2011. COD of Asset-1&2 (combined) having been approved as 1.12.2010, there was no time over-run in their case. The Commission *vide* order dated 16.5.2012 in Petition No. 3/TT/2011 allowed the transmission tariff for Asset-1&2 (combined) for the period from COD to 31.3.2014 based on the 2009 Tariff Regulations.

e) The Commission *vide* order dated 9.7.2012 in Petition No. 146/TT/2011 allowed COD in respect of Asset-3 as 1.2.2012 (and condoned time over-run of one month) and allowed the transmission tariff for the period from COD to 31.3.2014.

f) The Commission *vide* order dated 8.2.2013 in Petition No. 189/TT/2011 allowed COD for Asset-4 as 1.11.2011 and allowed the transmission tariff for the period from COD to 31.3.2014. There was no delay in commissioning of Asset-4.



g) The transmission tariff from COD to 31.3.2014 allowed during 2009-14 tariff period for Asset-1&2 (combined), Asset-3 and Asset-4 was trued up and the transmission tariff of 2014-19 period was allowed *vide* order dated 29.3.2016 in Petition No. 5/TT/2015.

h) Due to non-submission of Revised Cost Estimate (RCE) by the Petitioner in Petition No. 5/TT/2015, the Commission in order dated 29.3.2016, had restricted the capital cost of Asset-1&2 (combined) to the approved apportioned cost i.e. ₹6177.21 lakh.

i) The Petitioner, in the instant petition, has submitted RCE in respect of the transmission system approved by the Board of Directors of the Petitioner's Company *vide* Memorandum dated 1.6.2016 at an estimated cost of ₹11727 lakh, including IDC of ₹301 lakh, based on December 2015 price level.

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

5. The Petitioner has served the petition on the Respondents and notice regarding the filing of this petition has been published in the newspaper in accordance with Section 64 of the Electricity Act, 2003. No comments/ or objections have been received from the general public in response to the aforesaid notice published in the newspaper by the Petitioner. None of the Respondents have filed any reply in the matter.

6. The hearing in this matter was held on 31.8.2021 through video conference and the order was reserved.

7. Having heard the representatives of the Petitioner and after perusal of the material record, we proceed to dispose of the petition.



8. This order is issued considering the submissions made by the Petitioner in the petition and affidavits dated 9.7.2021 and 27.8.2021.

TRUING UP OF ANNUAL FIXED CHARGES FOR THE 2009-14 TARIFF PERIOD

9. The Petitioner has submitted that due to non-submission of RCE, while truing up the transmission tariff for 2009-14 period, the Commission *vide* order dated 29.3.2016 in Petition No. 5/TT/2015 had restricted the capital cost of Asset-1&2 (combined) to ₹6177.21 lakh (the apportioned approved cost as per FR) against total estimated completed cost of ₹6820.42 lakh. Aggrieved by the order dated 29.3.2016 in Petition No.5/TT/2015 against the disallowance of capital cost in respect of Asset-1&2 (combined), the Petitioner filed Review Petition No. 33/RP/2017 for revision of capital cost. The Commission *vide* order 20.3.2018 in Petition No. 33/RP/2017 dismissed the Review Petition on the ground that the Review Petition was filed after statutory period of 45 days from the date of order without going into the merits of the review petition and granted liberty to the Petitioner to submit RCE for consideration at the time of truing up of the transmission tariff of 2014-19 period.

10. In compliance to the Commission's direction *vide* order dated 20.3.2018 in the Review Petition No. 33/RP/2017, the Petitioner has furnished the copy of RCE in the instant petition and has submitted that the completion cost for Asset-1&2 (combined) is within the apportioned approved cost as per RCE and has prayed to allow the trued-up transmission charges for 2009-14 tariff period as claimed in this petition. The Petitioner has submitted the following revised apportioned approved cost along with completion cost in respect of the transmission assets:



(₹ in lakh)

Particulars	Apportioned Approved Cost as per (FR)	Revised Apportioned Approved Cost
Asset-1 & Asset-2 (combined)	6177.21	7039
Asset-3	2417.45	2503
Asset-4	2377.78	2185
Total	10972.44	11727

11. The Petitioner has claimed the following transmission charges (after taking into account RCE) for the 2009-14 tariff period in respect of the transmission assets:

(₹ in lakh)

Asset	Particulars	2010-11 (Pro-rata)	2011-12 (Pro-rata)	2012-13	2013-14
Asset-1 & Asset-2 (combined)	Annual Fixed Tariff approved vide order dated 29.3.2016 in Petition No. 5/TT/2015	327.06	1200.39	1258.54	1246.11
	Revised Annual Fixed Tariff based on truing up	328.04	1230.12	1315.91	1315.27
Asset-3	Annual Fixed Tariff approved vide order dated 29.3.2016 in Petition No. 5/TT/2015	-	104.55	661.12	692.51
	Revised Annual Fixed Tariff based on truing up	-	104.61	661.57	692.97
Asset-4	Annual Fixed Tariff approved vide order dated 29.3.2016 in Petition No. 5/TT/2015	-	181.65	529.69	542.90
	Revised Annual Fixed Tariff based on truing up	-	181.72	529.83	543.15

12. We have considered the submissions of the Petitioner. In view of the non-submission of RCE, the Commission while truing-up the transmission tariff for the 2009-14 period in respect of the transmission assets covered in Petition No. 5/TT/2015 had restricted the capital cost of Asset-1&2 (combined) to the apportioned approved cost as per FR i.e. ₹6177.21 lakh. The relevant portion of the order dated 29.3.2016 in Petition No. 5/TT/2015 is as follows:

“19. The approved apportioned cost as per investment approval is as ₹3124.59 lakh, ₹3052.62 lakh, ₹2417.45 lakh and ₹2377.78 lakh in case of Asset-I, II, III and IV, respectively. The total capital cost as on 31.3.2014 in case of Asset-III and Asset-IV is within the approved apportioned cost. However, the total capital cost as on 31.3.2012 of Asset-I and Asset-II exceed the approved apportioned cost. In this regard, the petitioner was directed to submit the revised RCE for the transmission assets, if any. The petitioner, vide affidavit dated 4.2.2016, has requested for revision in tariff after approval of RCE. The petitioner is yet to submit the RCE for Asset-I and II. Therefore, we have restricted the capital cost including additional capitalisation to approved apportioned cost of ₹3124.59 lakh and ₹3052.62 lakh of Asset-I and Asset-II, respectively, after deducting excess initial spares from actual cost as on COD.”

13. Aggrieved by the disallowance of capital cost in respect of Asset-1&2 (combined), the Petitioner had filed Review Petition No. 33/RP/2017 for the revision of capital cost. The Commission vide order dated 20.3.2018 in Review Petition No. 33/RP/2017 held that the Review Petitioner may submit RCE dated 1.6.2016 for consideration of the Commission at the time of truing up of the 2014-19 period. The relevant portion of the order dated 20.3.2018 in Review Petition No. 33/RP/2017 is as follows:

“8. The review petition is disallowed on the ground of non-compliance with the statutory time limit for filing the review petition and we are not expressing any opinion on the merit of the review petition. The Review Petitioner may submit the RCE dated 1.6.2016 for consideration of the Commission at the time of truing up of the 2014-19 tariff which will be dealt with in accordance with law.”

14. Accordingly, RCE submitted by the Petitioner in the instant petition has been considered. However, as there is no provision of revising tariff once the same has been trued up in terms of the 2009 Tariff Regulations, we are not inclined to re-open the tariff of the 2009-14 period based upon RCE submitted after the truing-up exercise. Therefore, RCE submitted in the instant petition has been considered for the purpose of truing up the transmission tariff for the 2014-19 tariff period and for determination of the transmission tariff for the 2019-24 tariff period.

TRUING UP OF ANNUAL FIXED CHARGES FOR 2014-19 TARIFF PERIOD

15. The details of the transmission charges claimed by the Petitioner for the Combined Asset (after combining all the four transmission assets) is as follows:



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	577.73	577.78	577.78	579.89	584.76
Interest on Loan	523.87	472.22	420.23	370.28	323.22
Return on Equity	646.99	650.02	649.69	652.05	659.26
O&M Expenses	645.78	667.20	689.38	712.20	735.88
Interest on Working Capital	75.93	75.99	76.01	76.22	76.73
Total	2470.30	2443.21	2413.09	2390.64	2379.85

16. The details of the Interest on Working Capital (IWC) claimed by the Petitioner in respect of the Combined Asset is as follows:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses	53.82	55.60	57.45	59.35	61.32
Maintenance Spares	96.87	100.08	103.41	106.83	110.38
Receivables	411.72	407.20	402.18	398.44	396.64
Total Working Capital	562.41	562.88	563.04	564.62	568.34
Rate of Interest on working capital (in %)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	75.93	75.99	76.01	76.22	76.73

Capital Cost

17. The capital cost of the Combined Asset has been calculated in accordance with Regulation 9(3) of the 2014 Tariff Regulations. The details of capital cost approved *vide* order dated 29.3.2016 in Petition No. 5/TT/2015 are as follows:

(₹ in lakh)

Assets	Apportioned Approved Cost as per FR	Capital cost as on 1.4.2014	Additional Capital Expenditure (ACE) during 2014-19 period	Capital cost as on 31.3.2019
Asset-1 & Asset-2 (Combined)	6177.21	6177.21	0.00	6177.21
Asset-3	2417.45	2366.78	0.00	2366.78
Asset-4	2377.78	1963.21	121.31	2084.52
Total	10972.44	10507.20	121.31	10628.51

18. The details of capital cost claimed by the Petitioner in the instant petition are as follows:

(₹ in lakh)

Assets	Apportioned Approved Cost as per FR	RCE Approved Cost	Capital cost as on 1.4.2014 as per Auditor's Certificate	ACE during			Capital cost as on 31.3.2019
				2014-15	2017-18	2018-19	
Asset-1 & Asset-2 (Combined)	6177.21	7039.00	6954.42	0.00	0.00	0.00	6954.42
Asset-3	2417.45	2503.00	2387.59	0.00	0.00	104.18	2491.77
Asset-4	2377.78	2185.00	2027.29	2.00	80.00	0.00	2109.29
Total	10972.44	11727.00	11369.30	2.00	80.00	104.18	11174.40

19. The Petitioner has claimed capital cost of ₹10988.22 lakh as on 1.4.2014 in the instant petition as against the capital cost of ₹10507.20 lakh as on 1.4.2014 approved *vide* order dated 29.3.2016 in Petition No. 5/TT/2015. The difference in the capital cost claimed is on account of adding back of capital cost deducted by the Commission due to cost over-run *vide* order dated 29.3.2016 in Petition No. 5/TT/2015 and the Petitioner has submitted RCE regarding the same in the instant petition.

20. We have considered the submissions of the Petitioner. As discussed above, RCE submitted by the Petitioner has been considered for the purpose of truing-up of tariff of the 2014-19 period and determination of tariff of the 2019-24 period. We observe that the completion cost as on 31.3.2019 as claimed by the Petitioner in respect of the Combined Asset is within the apportioned approved cost as per RCE.

21. The Commission *vide* order dated 29.3.2016 in Petition No. 5/TT/2015 had also deducted the excess initial spares after restricting the capital cost as per FR cost. The Petitioner has claimed the revised initial spares in the instant petition and the same is as follows:



(₹ in lakh)

Assets	Cost for Spare Calculation	Initial spares claimed	Ceiling limit (in %)	Initial spares worked out	Excess initial spares
Asset-1 & Asset-2 Combined	6954.42	533.22	3.50	232.89	300.33
Asset-3	2491.77	79.98	2.50	61.84	18.14
Asset-4	2084.52	113.16	2.50	50.55	62.61

22. The Petitioner has reduced the above amount of excess initial spares while claiming the tariff for the Combined Asset.

23. We have considered the submissions of the Petitioner. The initial spares computed and allowed as per the 2009 Tariff Regulations are as follows:

Asset	Particulars	Capital Cost up to cut-off date (A) (₹ in lakh)	Initial Spares claimed (B) (₹ in lakh)	Ceiling limit (%) (C)	Initial Spares worked out	Excess Initial Spares	Initial Spares allowed (₹ in lakh)
					$D = [(A-B) \times C / (100-C)]$ (₹ in lakh)	$E = D-B$ (₹ in lakh)	
Asset-1 & Asset-2 Combined	GIS Sub-Station	6820.42	533.22	3.50	228.03	305.19	228.03
Asset-3	Sub-station	2387.59	79.98	2.50	59.17	20.81	59.17
Asset-4	Sub-station	2027.29	113.16	2.50	49.08	64.08	49.08
Total		11235.30	726.36		336.28	390.08	336.28

24. Accordingly, the capital cost considered as on 1.4.2014 for truing-up of transmission tariff for the 2014-19 tariff period is as follows:

(₹ in lakh)

Assets	Apportioned Approved Cost as per FR	RCE Apportioned Approved Cost	Capital cost as on 1.4.2014 as per Auditors Certificate	Excess Initial Spares	Capital cost as on 1.4.2014
Asset-1 & Asset-2 (combined)	6177.21	7039.00	6954.42	305.19	6649.23
Asset-3	2417.45	2503.00	2387.59	20.81	2366.78
Asset-4	2377.78	2185.00	2027.29	64.08	1963.21
Combined Asset	10972.44	11727.00	11369.30	390.08	10979.22



Additional Capital Expenditure ("ACE")

25. The Commission *vide* order dated 29.3.2016 in Petition No. 5/TT/2015 had allowed following ACE in respect of the Combined Asset during the 2014-19 tariff period in accordance with Regulation 14(3)(v) of the 2014 Tariff Regulations:

(₹ in lakh)

ACE allowed in 2014-19 period				
2014-15	2015-16	2016-17	2017-18	2018-19
121.31	0.00	0.00	0.00	0.00

26. The Petitioner *vide* affidavit dated 9.7.2021 has submitted package-wise and vendor-wise details of ACE claimed (beyond cut-off date) as per Regulation 14(3)(v) of the 2014 Tariff Regulations, for the 2014-19 tariff period and the same is as follows:

Year	ACE (₹ in lakh)	Party Name	Package
Asset-3			
2018-19	104.18	BHEL	Sub-station
Asset-4			
2014-15	2.00	BHEL	Sub-station
2017-18	80.00	BHEL	Sub-station

27. The Petitioner has further submitted that ACE claimed during 2014-19 tariff period pertains to the balance and retention payment for works executed prior to the cut-off date as per Regulation 14(3)(v) of the 2014 Tariff Regulations. Accordingly, the details of the capital cost claimed by the Petitioner are as follows:

Assets	Apportioned Approved Cost as per FR	RCE Approved Cost	Capital cost as on 1.4.2014	ACE during			Capital cost as on 31.3.2019
				2014-15	2017-18	2018-19	
Asset-1 & Asset-2 (Combined)	6177.21	7039.00	6654.09	0.00	0.00	0.00	6654.09
Asset-3	2417.45	2503.00	2369.45	0.00	0.00	104.18	2473.63
Asset-4	2377.78	2185.00	1964.68	2.00	80.00	0.00	2046.68
Combined Asset	10972.44	11727.00	10988.22	2.00	80.00	104.18	11174.40



28. We have considered the submissions of the Petitioner. ACE claimed for 2014-15, 2017-18 and 2018-19 is beyond the cut-off date and pertains to the balance and retention payments for works executed within the cut-off date, hence, it is allowed under Regulation 14(3)(v) of the 2014 Tariff Regulations. Accordingly, the details of capital cost as on 1.4.2019 and as on 31.3.2019 considered for truing up of tariff of the 2014-19 tariff period is as follows:

Assets	Capital cost as on 1.4.2014	ACE during			Capital cost as on 31.3.2019
		2014-15	2017-18	2018-19	(₹ in lakh)
Asset-1 & Asset-2 (Combined)	6649.23	0.00	0.00	0.00	6649.23
Asset-3	2366.78	0.00	0.00	104.18	2470.96
Asset-4	1963.21	2.00	80.00	0.00	2045.21
Combined Asset	10979.22	2.00	80.00	104.18	11165.40

Debt-Equity ratio

29. Debt-equity ratio has been allowed in accordance with Regulation 19(3) of the 2014 Tariff Regulations. As per Regulation 19(3) of the 2014 Tariff Regulations, debt-equity ratio allowed by the Commission for determination of tariff for the period ending on 31.3.2014 shall be considered. Accordingly, debt-equity ratio for the period ending on 31.3.2014, considered for the purpose of determination of tariff of 2014-19 tariff period has been considered for the purpose of truing up of the tariff of the Combined Asset for 2014-19 tariff period. The details of the debt-equity ratio as on 1.4.2014 and 31.3.2019 in respect of the Combined Asset is as follows:

Combined Asset				
Particulars	Capital Cost as on 1.4.2014 (₹ in lakh)	(in %)	Capital Cost as on 31.3.2019 (₹ in lakh)	(in %)
Debt	7685.46	70.00	7815.78	70.00
Equity	3293.77	30.00	3349.62	30.00
Total	10979.22	100.00	11165.40	100.00



Depreciation

30. The Petitioner's claim towards depreciation in respect of the Combined Asset is found to be higher than the depreciation allowed in respect of the transmission assets in order dated 29.3.2016 in Petition No. 5/TT/2015. The Petitioner has neither given any justification for claiming higher depreciation than that allowed earlier vide order dated 29.3.2016 in Petition No. 5/TT/2015 nor made any specific prayer for allowing higher depreciation in the instant petition. It is observed that in Petition No. 5/TT/2015, the Petitioner had claimed IT equipment as part of sub-station despite there being a clear provision in the 2014 Tariff Regulations for higher depreciation for IT equipment. However, in this Petition, to claim higher depreciation, the Petitioner has segregated the IT equipment from sub-station. Similar issue had come up in Petition No.19/TT/2020. The Commission vide order dated 9.5.2020 in Petition No. 19/TT/2020, has considered depreciation for IT equipment @5.28% as part of the sub-station up to 31.3.2019 while truing up the capital expenditure for 2014-19 period. However, for 2019-24 tariff period, IT equipment has been considered separately and depreciation has been allowed @15% for balance depreciable value of IT equipment in accordance with Regulation 33 read with Sr. No. (p) of the Appendix-I (Depreciation Schedule) of the 2019 Tariff Regulations. The Gross Block during 2014-19 tariff period has been depreciated at Weighted Average Rate of Depreciation (WAROD) (as placed in Annexure-I). WAROD has been worked out after taking into account the depreciation rates of the Combined Asset as prescribed in the 2014 Tariff Regulations and depreciation allowed during 2014-19 period is as follows:

	(₹ in lakh)				
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation					
Opening Gross Block	10979.22	10981.22	10981.22	10981.22	11061.22
ACE	2.00	0.00	0.00	80.00	104.18
Closing Gross Block	10981.22	10981.22	10981.22	11061.22	11165.40

Page 15 of 44



Average Gross Block	10980.22	10981.22	10981.22	11021.22	11113.31
Weighted Average Rate of Depreciation (in %)	5.24	5.24	5.24	5.24	5.24
Balance useful life of the asset at the beginning of the year (Year)	23	22	21	20	19
Elapsed life at the beginning of the year (Year)	2	3	4	5	6
Aggregate Depreciable Value at the beginning of the year	9882.20	9883.10	9883.10	9919.10	10001.98
Combined Depreciation during the year	575.49	575.54	575.54	577.65	582.51
Cumulative aggregate depreciation at the end of the year	2082.77	2658.30	3233.84	3811.49	4394.00
Remaining aggregate Depreciable Value at the end of the year	7799.44	7224.80	6649.26	6107.61	5607.98

31. The details of depreciation approved *vide* order dated 29.3.2016 in Petition No. 5/TT/2015, claimed by the Petitioner in the instant petition and trued-up depreciation allowed in respect of the Combined Asset is as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 29.3.2016 in Petition No. 5/TT/2015	554.35	558.19	558.19	558.19	558.19
Claimed by the Petitioner in the instant petition	577.73	577.78	577.78	579.89	584.76
Allowed after true-up in this order	575.49	575.54	575.54	577.65	582.51

Interest on Loan (“IoL”)

32. The Petitioner has claimed the Weighted Average Rate of IoL (WAROI), based on its actual loan portfolio and rate of interest.

33. We have considered the submissions of the Petitioner and, accordingly, calculated IoL based on actual interest rate submitted by the Petitioner in accordance with Regulation 26 of the 2014 Tariff Regulations. Trued-up IoL allowed in respect of the Combined Asset for the 2014-19 tariff period is as follows:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Interest on Loan					
Gross Normative Loan	7685.46	7686.86	7686.86	7686.86	7742.86
Cumulative Repayments up to Previous Year	1507.28	2082.77	2658.30	3233.84	3811.49
Net Loan-Opening	6178.18	5604.09	5028.55	4453.02	3931.37
Additions	1.40	0.00	0.00	56.00	72.93
Repayment during the year	575.49	575.54	575.54	577.65	582.51
Net Loan-Closing	5604.09	5028.55	4453.02	3931.37	3421.78
Average Loan	5891.13	5316.32	4740.78	4192.19	3676.57
Weighted Average Rate of Interest on Loan (in %)	8.9592	8.9602	8.9555	8.9405	8.9195
Interest on Loan	527.80	476.35	424.56	374.80	327.93

34. The details of IoL approved *vide* order dated 29.3.2016 in Petition No. 5/TT/2015, claimed by the Petitioner in the instant petition and trued up IoL allowed in the instant order in respect of the Combined Asset is as follows:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 29.3.2016 in Petition No. 5/TT/2015	502.89	457.26	407.33	357.35	307.36
Claimed by the Petitioner in the instant petition	523.87	472.22	420.23	370.28	323.22
Allowed after true-up in this order	527.80	476.35	424.56	374.80	327.93

Return on Equity ("RoE")

35. The Petitioner has claimed RoE in respect of the Combined Asset in terms of Regulation 24 and Regulation 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 2014-19 tariff period:

Year	Claimed effective tax rate (in %)	Grossed up RoE (in %) [Base Rate/(1-t)]
2014-15	21.018	19.625
2015-16	21.382	19.715
2016-17	21.338	19.705
2017-18	21.337	19.704
2018-19	21.549	19.758

36. We have considered the submissions made by the Petitioner. 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 and the same is as follows:

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

37. 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 2014-19 period in terms of the provisions of the 2014 Tariff Regulations which is as follows:

Year	Notified MAT rates (in %) (inclusive of surcharge & cess)	Base rate of RoE (in %)	Grossed up RoE (in %) [(Base Rate)/(1-t)]
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

38. Accordingly, RoE is trued up on the basis of the MAT rate applicable in the respective years and the same is allowed as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	3293.77	3294.37	3294.37	3294.37	3318.37
Additions	0.60	0.00	0.00	24.00	31.25
Closing Equity	3294.37	3294.37	3294.37	3318.37	3349.62
Average Equity	3294.07	3294.37	3294.37	3306.37	3333.99
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (%)	20.961	21.342	21.342	21.342	21.549
Rate of Return on Equity (%)	19.610	19.705	19.705	19.705	19.758
Return on Equity	645.97	649.15	649.15	651.52	658.73

39. The details of RoE approved *vide* order dated 29.3.2016 in Petition No. 5/TT/2015, claimed by the Petitioner in the instant petition and trued up in respect of Combined Asset in the instant order is as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 29.3.2016 in Petition No. 5/TT/2015	621.71	625.28	625.28	625.28	625.28
Claimed by the Petitioner in the instant petition	646.99	650.02	649.69	652.05	659.26
Allowed after true-up in this order	645.97	649.15	649.15	651.52	658.73

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

40. O&M Expenses claimed by the Petitioner in respect of the Combined Asset are as follows:

O&M Expenses					
	2014-15	2015-16	2016-17	2017-18	2018-19
Sub-station					
400 kV bays at: Bahadurgarh:ICT BAY Lucknow:ICT II BAY					
Number of bays	2	2	2	2	2
220 kV bays at: Bahadurgarh:ICT BAY Bahadurgarh:LINE III BAY Bahadurgarh:LINE IV Lucknow:ICT II BAY Lucknow:LINE III BAY Lucknow:LINE IV BAY Lucknow:LINE V BAY Lucknow:LINE VI BAY					
Number of bays	8	8	8	8	8
400 kV GIS bays at: Maharanibagh:ICT-III BAY Maharanibagh:ICT-IV BAY					
Number of bays	2	2	2	2	2
220 kV GIS bays at: Maharanibagh:ICT-III BAY Maharanibagh:ICT-IV BAY					
Number of bays	2	2	2	2	2
Total O&M Expenses (₹ in lakh)	645.78	667.20	689.38	712.20	735.88



41. Regulation 29(3) of the 2014 Tariff Regulations specifies the norms for O&M Expenses for the transmission system. The norms specified in respect of the elements covered in the transmission asset are as follows:

Element	Norms for 2014-15	Norms for 2015-16	Norms for 2016-17	Norms for 2017-18	Norms for 2018-19
400 kV Sub-station (₹ lakh/ bay)	60.30	62.30	64.37	66.51	68.71
220 kV Sub-station (₹ lakh/ bay)	42.21	43.61	45.06	46.55	48.10
400 kV GIS Sub-station (₹ lakh/ bay)	51.54	53.25	55.02	56.84	58.73
220 kV GIS Sub-station (₹ lakh/ bay)	42.21	43.61	45.06	46.55	48.10

42. We have considered the submissions of the Petitioner. O&M Expenses are allowed under Regulation 29(3) of the 2014 Tariff Regulations and are as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
2 Numbers of 400 kV Sub-station	120.60	124.60	128.74	133.02	137.42
8 Numbers of 220 kV Sub-station	337.68	348.88	360.48	372.40	384.80
2 Numbers of 400 kV GIS Sub-station	103.08	106.50	110.04	113.68	117.46
2 Numbers of 220 kV GIS Sub-station	84.42	87.22	90.12	93.10	96.20
Total	645.78	667.20	689.38	712.20	735.88

43. The details of O&M Expenses approved *vide* order dated 29.3.2016 in Petition No. 5/TT/2015, claimed by the Petitioner in the instant petition and true-up in respect of the Combined Asset in the instant order are as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 29.3.2016 in Petition No. 5/TT/2015	645.78	667.20	689.38	712.20	735.88
Claimed by the Petitioner in the instant petition	645.78	667.20	689.38	712.20	735.88
Allowed after true-up in this order	645.78	667.20	689.38	712.20	735.88



Interest on Working Capital ("IWC")

44. IWC has been worked out as per the methodology provided in Regulation 28 of the 2014 Tariff Regulations and trued-up IWC has been allowed in respect of the Combined Asset as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Interest on Working Capital					
Working Capital for O&M Expenses (O&M Expenses for one month)	53.82	55.60	57.45	59.35	61.32
Working Capital for Maintenance Spares (15% of O&M Expenses)	96.87	100.08	103.41	106.83	110.38
Working Capital for Receivables (Equivalent to two months of annual transmission charges)	411.83	407.38	402.45	398.74	396.97
Total Working Capital	562.51	563.06	563.30	564.92	568.68
Rate of Interest on working capital (in %)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	75.94	76.01	76.05	76.26	76.77

45. The details of IWC approved *vide* order dated 29.3.2016 in Petition No. 5/TT/2015, claimed by the Petitioner in the instant petition and trued up IWC in respect of the Combined Asset in the instant order is as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 29.3.2016 in Petition No. 5/TT/2015	74.32	74.62	74.70	74.81	74.97
Claimed by the Petitioner in the instant petition	75.93	75.99	76.01	76.22	76.73
Allowed after true-up in this order	75.94	76.01	76.05	76.26	76.77

Approved Annual Fixed Charges for 2014-19 Tariff Period

46. The trued up Annual Fixed Charges (AFC) approved in respect of the Combined Asset for 2014-19 tariff period is as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	575.49	575.54	575.54	577.65	582.51
Interest on Loan	527.80	476.35	424.56	374.80	327.93
Return on Equity	645.97	649.15	649.15	651.52	658.73
O&M Expenses	645.78	667.20	689.38	712.20	735.88



Interest on Working Capital	75.94	76.01	76.05	76.26	76.77
Total	2470.97	2444.26	2414.68	2392.43	2381.83

47. Accordingly, the Annual Transmission Charges approved *vide* order dated 29.3.2016 in Petition No. 5/TT/2015, claimed by the Petitioner in the instant petition and approved after truing up in the instant order is as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 29.3.2016 in Petition No. 5/TT/2015	2399.05	2382.55	2354.88	2327.82	2301.67
Claimed by the Petitioner in the instant petition	2470.30	2443.21	2413.09	2390.64	2379.85
Allowed after true-up in this order	2470.97	2444.26	2414.68	2392.43	2381.83

DETERMINATION OF ANNUAL FIXED CHARGES FOR 2019-24 TARIFF PERIOD

48. The Petitioner has claimed the following transmission charges for 2019-24 tariff period in respect of the Combined Asset:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	587.20	586.86	586.86	586.86	586.86
Interest on Loan	275.23	224.14	171.84	119.65	67.40
Return on Equity	630.74	631.85	631.85	631.85	631.85
O&M Expenses	1037.28	1074.54	1112.22	1152.22	1190.76
Interest on Working Capital	67.66	68.63	69.49	70.44	71.23
Total	2598.11	2586.02	2572.26	2561.02	2548.10

49. The details of IWC claimed by the Petitioner for 2019-24 tariff period in respect of the Combined Asset is as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	86.44	89.55	92.69	96.02	99.23
Maintenance Spares	155.59	161.18	166.83	172.83	178.61
Receivables	319.44	318.82	317.13	315.74	313.29
Total Working Capital	561.47	569.55	576.65	584.59	591.13
Rate of Interest on working capital (in %)	12.05	12.05	12.05	12.05	12.05



Interest on Working Capital	67.66	68.63	69.49	70.44	71.23
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Capital Cost

50. Regulation 19 of the 2019 Tariff Regulations provide as follows:

"19 Capital Cost: (1) *The Capital cost of the generating station or the transmission system, as the case may be, as determined by the Commission after prudence check in accordance with these regulations shall form the basis for determination of tariff for existing and new projects.*

(2) *The Capital Cost of a new project shall include the following:*

- (a) *The expenditure incurred or projected to be incurred up to the date of commercial operation of the project;*
- (b) *Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed;*
- (c) *Any gain or loss on account of foreign exchange risk variation pertaining to the loan amount availed during the construction period;*
- (d) *Interest during construction and incidental expenditure during construction as computed in accordance with these regulations;*
- (e) *Capitalised Initial Spares subject to the ceiling rates in accordance with these regulations;*
- (f) *Expenditure on account of additional capitalization and de-capitalisation determined in accordance with these regulations;*
- (g) *Adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the date of commercial operation as specified under Regulation 7 of these regulations;*
- (h) *Adjustment of revenue earned by the transmission licensee by using the assets before the date of commercial operation;*
- (i) *Capital expenditure on account of ash disposal and utilization including handling and transportation facility;*
- (j) *Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal 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 ash disposal and utilization including handling and transportation facility;
- (d) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;
- (e) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal up to the receiving end of generating station but does not include the transportation cost and any other appurtenant cost paid to the railway; and
- (f) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.”

(4) The capital cost in case of existing or new hydro generating station shall also include:

- (a) cost of approved rehabilitation and resettlement (R&R) plan of the project in conformity with National R&R Policy and R&R package as approved; and
- (b) cost of the developer's 10% contribution towards Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) and Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) project in the affected area.

(5) The following shall be excluded from the capital cost of the existing and new projects:

- (a) The assets forming part of the project, but not in use, as declared in the tariff petition;
- (b) De-capitalised Assets after the date of commercial operation on account of replacement or removal on account of obsolescence or shifting from one project to another project:

Provided that in case replacement of transmission asset is recommended by Regional Power Committee, such asset shall be decapitalised only after its redeployment;

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

- (c) In case of hydro generating stations, any expenditure incurred or committed to be incurred by a project developer for getting the project site allotted by the State Government by following a transparent process;
- (d) Proportionate cost of land of the existing project which is being used for generating power from generating station based on renewable energy; and
- (e) Any grant received from the Central or State Government or any statutory body or authority for the execution of the project which does not carry any liability of repayment.”



51. The Petitioner has claimed a capital cost of ₹11174.40 lakh as on 31.3.2019 in respect of the Combined Asset. The capital cost of ₹11165.40 lakh admitted by the Commission as on 31.3.2019 has been considered as the opening capital cost as on 1.4.2019 for determination of tariff in accordance with Regulation 19 of the 2019 Tariff Regulations.

Additional Capital Expenditure (“ACE”)

52. Regulation 24 and Regulation 25 of the 2019 Tariff Regulations provides as follows:

“24. Additional Capitalisation within the original scope and upto the cut-off date

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

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

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

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

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

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

- (a) *Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority, or order or decree of any court of law;*
- (b) *Change in law or compliance of any existing law;*
- (c) *Deferred works relating to ash pond or ash handling system in the original scope of work;*
- (d) *Liability for works executed prior to the cut-off date;*
- (e) *Force Majeure events;*



- (f) Liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments; and
 (g) Raising of ash dyke as a part of ash disposal system.”

53. The Petitioner has claimed ACE of ₹39.31 lakh for 2019-24 period in respect of the Combined Asset in accordance with Regulation 25(1)(d) of the 2019 Tariff Regulations. The Petitioner has claimed ACE on account of un-discharged liability towards final payment after the cut-off date for works executed within cut-off date as follows:

(₹ in lakh)		
Capital cost as on 1.4.2019	ACE claimed for 2019-20	Capital cost as on 31.3.2024
11174.40	39.31	11213.71

54. The Petitioner vide affidavit dated 9.7.2021 has submitted the following details of ACE incurred/ projected to be incurred after cut-off date:

Year	ACE (₹ in lakh)	Party's Name	Package
2019-20	39.31	BHEL	Sub-station

55. We have considered the submissions of the Petitioner. ACE has been claimed in respect of Asset-4 and it is allowed under Regulation 25(1)(d) of the 2019 Tariff Regulations, as it is towards liabilities for works executed prior to the cut-off date and is within apportioned approved cost. Accordingly, the capital cost considered for 2019-24 tariff period is as follows:

(₹ in lakh)		
Capital cost as on 1.4.2019	ACE claimed for 2019-20	Capital cost as on 31.3.2024
11165.40	39.31	11204.71

Debt-Equity ratio

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



“18. Debt-Equity Ratio: (1) For new projects, the debt-equity ratio of 70:30 as on date of commercial operation shall be considered. If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:

Provided that:

- i. where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff:
- ii. the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:
- iii. any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt: equity ratio.

Explanation.-The premium, if any, raised by the generating company or the transmission licensee, as the case may be, while issuing share capital and investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on equity, only if such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station or the transmission system.

(2) The generating company or the transmission licensee, as the case may be, shall submit the resolution of the Board of the company or approval of the competent authority in other cases regarding infusion of funds from internal resources in support of the utilization made or proposed to be made to meet the capital expenditure of the generating station or the transmission system including communication system, as the case may be.

(3) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2019, debt: equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2019 shall be considered:

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

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

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

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



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

Combined Asset				
Particulars	Capital Cost as on 1.4.2019 (₹ in lakh)	(in %)	Capital Cost as on 31.3.2024 (₹ in lakh)	(in %)
Debt	7815.78	70.00	7843.30	70.00
Equity	3349.62	30.00	3361.41	30.00
Total	11165.40	100.00	11204.71	100.00

Depreciation

58. Regulation 33 of the 2019 Tariff Regulations provides as follows:

"33. Depreciation: (1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system or element there of 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."

59. WAROD has been worked out at Annexure-II to this order and the same is based on the rates of depreciation specified in the 2019 Tariff Regulations. Depreciation is approved considering ACE as on 31.3.2019 and accumulated depreciation up to 31.3.2019. Depreciation allowed in respect of the Combined Asset for 2019-24 tariff period is as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation					
Opening Gross Block	11165.40	11204.71	11204.71	11204.71	11204.71
Addition during the year	39.31	0.00	0.00	0.00	0.00

Page 29 of 44



2019-24 due to projected ACE					
Closing Gross Block	11204.71	11204.71	11204.71	11204.71	11204.71
Average Gross Block	11185.06	11204.71	11204.71	11204.71	11204.71
Weighted average rate of Depreciation (WAROD) (in %)	5.26	5.26	5.26	5.26	5.26
Balance useful life at the beginning of the year (Year)	18	17	16	15	14
Lapsed Life at the beginning of the year (in year)	7	8	9	10	11
Aggregate Depreciable Value	10068.36	10086.05	10086.05	10086.05	10086.05
Combined Depreciation during the year	588.06	589.10	589.10	589.10	589.10
Cumulative Aggregate Depreciation at the end of the year	4982.06	5571.16	6160.26	6749.36	7338.45
Remaining Aggregate Depreciable Value at the end of the year	5086.30	4514.89	3925.79	3336.70	2747.60

Interest on Loan ("IoL")

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

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

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

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

61. 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. Therefore, IoL has been allowed in accordance with Regulation 32 of the 2019 Tariff Regulations. IoL allowed in respect of the Combined Asset for 2019-24 tariff period is as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Gross Normative Loan	7815.78	7843.30	7843.30	7843.30	7843.30
Cumulative Repayments up to Previous Year	4394.00	4982.06	5571.16	6160.26	6749.36
Net Loan-Opening	3421.78	2861.24	2272.14	1683.04	1093.94
Additions due to ACE	27.52	0.00	0.00	0.00	0.00
Repayment during the year	588.06	589.10	589.10	589.10	589.10
Net Loan-Closing	2861.24	2272.14	1683.04	1093.94	504.85
Average Loan	3141.51	2566.69	1977.59	1388.49	799.40
Weighted Average Rate of Interest on Loan (in %)	8.9129	8.9133	8.9138	8.9224	8.9380
Interest on Loan	280.00	228.78	176.28	123.89	71.45

Return on Equity (“RoE”)

62. Regulation 30 and Regulation 31 of the 2019 Tariff Regulations provides as follows:

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

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



Provided that return on equity in respect of additional capitalization after cut-off date beyond the original scope 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."

63. The Petitioner has submitted that MAT rate is applicable to it. We have considered the submissions of the Petitioner. Accordingly, MAT rate applicable in 2019-20 has been considered for the purpose of RoE, which shall be trued-up with actual tax rate in accordance with Regulation 31(3) of the 2019 Tariff Regulations.

RoE allowed in respect of the Combined Asset for 2019-24 tariff period is as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Equity	3349.62	3361.41	3361.41	3361.41	3361.41
Additions	11.79	0.00	0.00	0.00	0.00
Closing Equity	3361.41	3361.41	3361.41	3361.41	3361.41
Average Equity	3355.52	3361.41	3361.41	3361.41	3361.41
Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50	15.50
MAT Rate for respective year (in %)	17.472	17.472	17.472	17.472	17.472
Rate of Return on Equity (in %)	18.782	18.782	18.782	18.782	18.782
Return on Equity	630.23	631.34	631.34	631.34	631.34



Operation & Maintenance Expenses (“O&M Expenses”)

64. O&M Expenses claimed by the Petitioner in respect of the transmission asset for the various elements included in the Combined Asset for 2019-24 tariff period are as follows:

O&M Expenses					
	2019-20	2020-21	2021-22	2022-23	2023-24
Sub-station					
400 kV bays at: Bahadurgarh:ICT BAY Lucknow:ICT II BAY					
Number of bays	2	2	2	2	2
220 kV bays at: Bahadurgarh:ICT BAY Bahadurgarh:LINE III BAY Bahadurgarh:LINE IV Lucknow:ICT II BAY Lucknow:LINE III BAY Lucknow:LINE IV BAY Lucknow:LINE V BAY Lucknow:LINE VI BAY					
Number of bays	8	8	8	8	8
400 kV GIS bays at: Maharanibagh:ICT-III BAY Maharanibagh:ICT-IV BAY					
Number of bays	2	2	2	2	2
220 kV GIS bays at: Maharanibagh:ICT-III BAY Maharanibagh:ICT-IV BAY					
Number of bays	2	2	2	2	2
Transformers					
400 kV ICT Bays at: Maharanibagh:2 Numbers 500 MVA ICT AT MAHARANI BAGH, 1 Number 500 MVA ICT at Lucknow and 1 Number 500 MVA ICT at Bahadurgarh					
MVA Capacity	2000	2000	2000	2000	2000
PLCC (2% of ₹17.85 lakh)	17.85	17.85	17.85	17.85	17.85
Total O&M Expenses (₹ in lakh)	1037.28	1074.54	1112.22	1152.22	1190.76

65. The norms specified under Regulation 35(3)(a) of the 2019 Tariff Regulations provides as follows:



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

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Norms for sub-station Bays (₹ Lakh per bay)					
765 kV	45.01	46.60	48.23	49.93	51.68
400 kV	32.15	33.28	34.45	35.66	36.91
220 kV	22.51	23.30	24.12	24.96	25.84
132 kV and below	16.08	16.64	17.23	17.83	18.46
Norms for Transformers (₹ Lakh per MVA)					
765 kV	0.491	0.508	0.526	0.545	0.564
400 kV	0.358	0.371	0.384	0.398	0.411
220 kV	0.245	0.254	0.263	0.272	0.282
132 kV and below	0.245	0.254	0.263	0.272	0.282
Norms for AC and HVDC lines (₹ Lakh per km)					
Single Circuit (Bundled Conductor with six or more sub-conductors)	0.881	0.912	0.944	0.977	1.011
Single Circuit (Bundled conductor with four sub-conductors)	0.755	0.781	0.809	0.837	0.867
Single Circuit (Twin & Triple Conductor)	0.503	0.521	0.539	0.558	0.578
Single Circuit (Single Conductor)	0.252	0.260	0.270	0.279	0.289
Double Circuit (Bundled conductor with four or more sub-conductors)	1.322	1.368	1.416	1.466	1.517
Double Circuit (Twin & Triple Conductor)	0.881	0.912	0.944	0.977	1.011
Double Circuit (Single Conductor)	0.377	0.391	0.404	0.419	0.433
Multi Circuit (Bundled Conductor with four or more sub-conductor)	2.319	2.401	2.485	2.572	2.662
Multi Circuit (Twin & Triple Conductor)	1.544	1.598	1.654	1.713	1.773
Norms for HVDC stations					
HVDC Back-to-Back stations (Rs Lakh per 500 MW) (Except Gazuwaka BTB)	834	864	894	925	958
Gazuwaka HVDC Back-to-Back station (₹ Lakh per 500 MW)	1,666	1,725	1,785	1,848	1,913
500 kV Rihand-Dadri HVDC bipole scheme (Rs Lakh) (1500 MW)	2,252	2,331	2,413	2,498	2,586
±500 kV Talcher- Kolar HVDC bipole scheme (Rs Lakh) (2000 MW)	2,468	2,555	2,645	2,738	2,834



±500 kV Bhiwadi-Balia HVDC bipole scheme (Rs Lakh) (2500 MW)	1,696	1,756	1,817	1,881	1,947
±800 kV, Bishwanath-Agra HVDC bipole scheme (Rs Lakh) (3000 MW)	2,563	2,653	2,746	2,842	2,942

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

Provided further that:

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

(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.”

66. We have considered the submissions of the Petitioner. The Petitioner has claimed O&M Expenses separately for PLCC under Regulation 35(4) of the 2019 Tariff Regulations @2% of its original project cost in the instant petition. The Petitioner has made similar claim in other petitions as well. Though PLCC is a communication system, it has been considered as part of the sub-station in the 2014 Tariff Regulations and the 2019 Tariff Regulations and the norms for sub-station have been specified accordingly. Accordingly, the Commission vide order dated 24.1.2021 in Petition No. 126/TT/2020 has already concluded that no separate O&M Expenses can be allowed for PLCC under Regulation 35(4) of the 2019 Tariff Regulations even though PLCC is a communication system. Therefore, the Petitioner’s claim for separate O&M Expenses for PLCC @ 2% is not allowed.

67. Accordingly, O&M expenses have been worked out as per the norms specified in the 2019 Tariff Regulations and the same are allowed as follows:

(₹ in lakh)					
Details	2019-20	2020-21	2021-22	2022-23	2023-24
2 Numbers of 400 kV Sub-station bays					
Norm (₹ lakh per bay)	32.15	33.28	34.45	35.66	36.91
O&M Expenses	64.30	66.56	68.90	71.32	73.82
8 Numbers of 220 kV Sub-station bays					
Norm (₹ lakh per bay)	22.51	23.30	24.12	24.96	25.84
O&M Expenses	180.08	186.40	192.96	199.68	206.72
2 Numbers of 400 kV GIS Sub-station bays					
Norm (₹ lakh per bay)	22.505	23.296	24.115	24.962	25.837
O&M Expenses	45.01	46.59	48.23	49.92	51.67
2 Numbers of 220 kV GIS Sub-station bays					
Norm (₹ lakh per bay)	15.757	16.31	16.884	17.472	18.088
O&M Expenses	31.51	32.62	33.77	34.94	36.18
2000 MVA Transformation Capacity					
Norm (₹ lakh per MVA)	0.358	0.371	0.384	0.398	0.411
O&M Expenses	716.00	742.00	768.00	796.00	822.00
Total O&M Expenses	1036.90	1074.17	1111.86	1151.87	1190.39



Interest on Working Capital (“IWC”)

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

“34. Interest on Working Capital

(1)...

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

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

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

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

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

“3. Definitions ...

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

69. The Petitioner has submitted that it has computed IWC for 2019-24 period considering the SBI Base Rate plus 350 basis points as on 1.4.2019. The Petitioner has considered the rate of IWC as 12.05%. IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The Rate of Interest (ROI) considered is 12.05% (SBI 1-year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points) for 2019-20, 11.25% (SBI 1-year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points) for 2020-2021 and from 2021-22 onwards as 10.50% (SBI 1-year MCLR

Page 38 of 44



applicable as on 1.4.2021 of 7.00% plus 350 basis points). The components of the working capital and interest thereon allowed in respect of Combined Asset for 2019-2024 tariff period is as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Working Capital for O&M Expenses (O&M Expenses for one month)	86.41	89.51	92.65	95.99	99.20
Working Capital for Maintenance Spares (15% of O&M Expenses)	155.54	161.13	166.78	172.78	178.56
Working Capital for Receivables (Equivalent to 45 days of annual transmission cost)	320.03	319.00	316.73	315.31	312.82
Total Working Capital	561.97	569.64	576.17	584.08	590.58
Rate of Interest on working capital (in %)	12.05	11.25	10.50	10.50	10.50
Interest on Working Capital	67.72	64.08	60.50	61.33	62.01

Annual Fixed Charges for 2019-24 Tariff Period

70. The transmission charges allowed in respect of the Combined Asset for 2019-24 tariff period is as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	588.06	589.10	589.10	589.10	589.10
Interest on Loan	280.00	228.78	176.28	123.89	71.45
Return on Equity	630.23	631.34	631.34	631.34	631.34
O&M Expenses	1036.90	1074.17	1111.86	1151.87	1190.39
Interest on Working Capital	67.72	64.08	60.50	61.33	62.01
Total	2602.92	2587.47	2569.07	2557.52	2544.29

Filing Fee and Publication Expenses

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



Licence Fee & RLDC Fees and Charges

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

Goods and Services Tax

73. The Petitioner has submitted that, if GST is levied at any rate and at any point of time in future on charges of transmission of electricity, the same shall be borne and additionally paid by the Respondent(s) to the Petitioner and the same shall be charged and billed separately by the Petitioner. Further additional taxes, if any, are to be paid by the Petitioner on account of demand from Government / Statutory authorities, the same may be allowed to be recovered from the beneficiaries.

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

Security Expenses

75. The Petitioner has submitted that security expenses in respect of the Combined Asset are not claimed in the instant petition and it would file a separate petition for claiming the overall security expenses and the consequential IWC.

76. We have considered the submissions of the Petitioner. The Petitioner has claimed consolidated security expenses on projected basis for 2019-24 tariff period on the basis of actual security expenses incurred in 2018-19 in Petition No. 260/MP/2020. The said petition has already been disposed of by the Commission vide order dated 3.8.2021 in Petition No. 260/MP/2020. Therefore, security expenses will be shared in



terms of the order dated 3.8.2021 in Petition No. 260/MP/2020. Therefore, the Petitioner's prayer in the instant petition for allowing it to file a separate petition for claiming the overall security expenses and consequential IWC has become infructuous.

Capital Spares

77. 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

78. With effect from 1.7.2011, sharing of transmission charges for inter-State transmission systems was governed by the provisions of the 2010 Sharing Regulations. However, with effect from 1.11.2020 (after repeal of the 2010 Sharing Regulations), sharing of transmission charges is governed by the Central Electricity Regulatory Commission (Sharing of Transmission Charges and Losses) Regulations, 2020 (in short "the 2020 Sharing Regulations"). Accordingly, the liabilities of the DICs for arrears of the transmission charges determined through this order shall be computed DIC-wise in accordance with the provisions of respective Tariff Regulations and shall be recovered from the concerned DICs through Bill under Regulation 15(2)(b) of the 2020 Sharing Regulations. Billing, collection and disbursement of transmission charges for subsequent period shall be recovered in terms of the provisions of the 2020 Sharing Regulations as provided in Regulation 57 of the 2019 Tariff Regulations.

79. To summarise:



(a) The trued-up AFC allowed in respect of the transmission asset for 2014-19 tariff period are:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
AFC	2470.97	2444.26	2414.68	2392.43	2381.83

(b) AFC approved in respect of the Combined Asset for 2019-24 tariff period are:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
AFC	2602.92	2587.47	2569.07	2557.52	2544.29

80. Annexure-I and Annexure-II to this order form part of this order.

81. This order disposes of Petition No. 6/TT/2021 in terms of the above discussion and findings.

sd/-
(P. K. Singh)
Member

sd/-
(Arun Goyal)
Member

sd/-
(P. K. Pujari)
Chairperson



Annexure-I

2014-19 Capital Expenditure	Combined Admitted Capital Cost as on 1-4-2014 (₹ in lakh)	ACE (₹ in lakh)			Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)					
		2014-15	2017-18	2018-19			2014-15	2015-16	2016-17	2017-18	2018-19	
Building Civil Works & Colony	229.80	0.00	0.00	0.00	229.80	3.34%	7.68	7.68	7.68	7.68	7.68	7.68
Sub Station	10713.47	2.00	80.00	104.18	10899.65	5.28%	565.72	565.78	565.78	565.78	567.89	572.75
PLCC	17.85	0.00	0.00	0.00	17.85	6.33%	1.13	1.13	1.13	1.13	1.13	1.13
IT Equipment (Including Software)	18.10	0.00	0.00	0.00	18.10	5.28%	0.96	0.96	0.96	0.96	0.96	0.96
Total	10979.22	2.00	80.00	104.18	11165.40	Total	575.49	575.54	575.54	575.54	577.65	582.51
Average Gross Block (₹ in lakh)							10980.22	10981.22	10981.22	11021.22	11113.31	
Weighted Average Rate of Depreciation							5.24%	5.24%	5.24%	5.24%	5.24%	5.24%



Annexure-II

2019-24 Particulars	Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Projected ACE (₹ in lakh)	Admitted Capital Cost as on 31.3.2024 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciations as per Regulations (₹ in lakh)				
					2019-20	2020-21	2021-22	2022-23	2023-24
Building Civil Works & Colony	229.80	0.00	229.80	3.34%	7.68	7.68	7.68	7.68	7.68
Sub Station	10899.65	39.31	10938.96	5.28%	576.54	577.58	577.58	577.58	577.58
PLCC	17.85	0.00	17.85	6.33%	1.13	1.13	1.13	1.13	1.13
IT Equipment (Including Software)	18.10	0.00	18.10	15.00%	2.72	2.72	2.72	2.72	2.72
Total	11165.40	39.31	11204.71		588.06	589.10	589.10	589.10	589.10
			Average Gross Block (₹ in lakh)		11185.06	11204.71	11204.71	11204.71	11204.71
			Weighted Average Rate of Depreciation		5.26%	5.26%	5.26%	5.26%	5.26%



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COST ACCOUNTANTS

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E mail: bbhco1994@gmail.com
Website: bbcostaccountants.com

Certificate Ref. No. BB/CERT/24-25/15

Dated: 05/08/2024

CERTIFICATE

This is to certify that we have verified the relevant records and other documents of Power Grid Corporation of India Limited having its Registered Office at B-9, Qutab Institutional Area, Katwaria Sarai, New Delhi-110016 and on the basis of our verification, we certify that Capital Cost for "500 MVA 400/220 KV ICT Along with associated bays AT BAHADURGARH under NRSS XXIII project in NRTS II" of Power Grid Corporation of India Limited, which is under commercial operation w.e.f. 01.11.2011 is detailed as under:

(Rs. in Lakhs)					
S/N	Particulars	Capital Cost	IEDC	IDC	Total
1	Capital Cost as on 31.03.2019 as admitted by CERC vide order dated 31.12.2021 in Petition No. 6/TT/2021*	1,990.31	17.38	37.52	2,045.21
2	Expenditure from 01.04.2019 to 31.03.2020	0.00	0.00	0.00	0.00
3	Expenditure from 01.04.2020 to 31.03.2021	0.00	0.00	0.00	0.00
4	Expenditure from 01.04.2021 to 31.03.2022	0.00	0.00	0.00	0.00
5	Expenditure from 01.04.2022 to 31.03.2023	0.00	0.00	0.00	0.00
6	Expenditure from 01.04.2023 to 31.03.2024	0.00	0.00	0.00	0.00
7	Estimated Expenditure from 01.04.2024 to 31.03.2025	39.30	0.00	0.00	39.30
	Total	2,029.61	17.38	37.52	2,084.51

Remarks*

S/N	Particulars	Capital Cost	IEDC	IDC	Total
1	Cost as per books and submitted to CERC up to 31.03.2019	2054.39	17.38	37.52	2109.29
2	Dissallowed by CERC vide order dated 29.03.2016	64.08	0.00	0.00	64.08

We certify that we have verified the expenditure up to 31-03-2024 as referred above on the basis of the information drawn from the audited Statement of Accounts of Power Grid Corporation of India Ltd. (NR-2) as on 31.03.2024.

The estimated expenditure is based on Management estimate.

For Bandyopadhyaya Bhaumik & Co.
Cost Accountants

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Ray
Date: 2024.08.05 13:56:48
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Sarbajit Ray

(CMA SARBAJIT RAY)
PARTNER

FRN: 000041
M.No. 27784

UDIN: 2427784B21T0ZIDDFB

Place:- Haryana
Date:- 05/08/2024



BANDYOPADHYAYA BHAUMIK & CO.
COST ACCOUNTANTS

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Certificate Ref. No. **BB/CERT/24-25/15 (A)**

Dated: **05/08/2024**

CERTIFICATE

This is to certify that we have verified the relevant records and other documents of Power Grid Corporation of India Limited having its Registered Office at B-9, Qutab Institutional Area, Katwaria Sarai, New Delhi-110016 and on the basis of our verification, we certify that Capital Cost for "500 MVA 400/220 KV ICT Along with associated bays AT BAHADURGARH under NRSS XXIII project in NRTS II" of Power Grid Corporation of India Limited, which is under commercial operation w.e.f. 01.11.2011 is detailed as under:

(Rs. in Lakhs)

S/N	Particulars	Free hold Land	Lease hold Land	Building and Civil Works	Tr. Line	Sub Station	OP GW	Comm system (excl. OPGW)	IT Equipment incl. software, UNMS, URTDSM, EMS, Cyber Security System, REMC, WAMS, SCADA System	Batteries	Total
1	Capital Cost as on 31.03.2019 as admitted by CERC vide order dated 31.12.2021 in Petition No. 6/TT/2021*	0.00	0.00	0.00	0.00	2,027.36	0.00	17.85	0.00	0.00	2,045.21
2	Expenditure from 01.04.2019 to 31.03.2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	Expenditure from 01.04.2020 to 31.03.2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	Expenditure from 01.04.2021 to 31.03.2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Expenditure from 01.04.2022 to 31.03.2023	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	Expenditure from 01.04.2023 to 31.03.2024	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	Estimated Expenditure from 01.04.2024 to 31.03.2025	0.00	0.00	0.00	0.00	39.30	0.00	0.00	0.00	0.00	39.30
	Total	0.00	0.00	0.00	0.00	2066.66	0.00	17.85	0.00	0.00	2,084.51

S/N	Particulars	Sub-station
1	Initial Spares included above	49.08

We certify that we have verified the expenditure up to 31-03-2024 as referred above on the basis of the information drawn from the audited Statement of Accounts of Power Grid Corporation of India Ltd. (NR-2) as on 31.03.2024.

The estimated expenditure is based on Management estimate.

For Bandyopadhyaya Bhaumik & Co.
Cost Accountants

Sarbajit Ray

Digitally signed by Sarbajit Ray
Date: 2024.08.05 13:57:25
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Place:- Haryana
Date:- 05/08/2024

(CMA SARBAJIT RAY)
PARTNER
FRN: 000041
M.No. 27784
UDIN: 2427784821TOZIDDFB



Liability Flow Statement

Name of Petitioner : POWERGRID Corporation of India Ltd.
 Project Name : Northern Region System Strengthening Scheme- XXIII
 Name of the Asset: 400/220 kV ICT along with associated bays at Bahadurgarh Substation.
 Actual DOCO: 01.11.2011

Asset No	Party name	Particular's (TL/SS)	Year of Actual Capitalization	Outstanding Liability as on COD/31.03.2019	Discharge						Total (19-24)	Additional Liability Reconciled* (Differed work for execution)						Outstanding Liability as on 31.03.2024 (To be discharged during 2024-29)
					2019-20	2020-21	2021-22	2022-23	2023-24	2024-25		2025-26	2026-27	2027-28	2028-29	Total (19-24)		
Asset-4	M/S BHEL	Substation work	2011	39.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	39.30
Total				39.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	39.30

Asset No	Party name	Particular's (TL/SS)	Year of Actual Capitalization	Outstanding Liability as on 31.03.2024	Discharge						Total (24-29)	Additional Liability Reconciled* (Differed work for execution)						Outstanding Liability as on 31.03.2029
					2024-25	2025-26	2026-27	2027-28	2028-29	2024-25		2025-26	2026-27	2027-28	2028-29	Total (24-29)		
Asset-4	M/S BHEL	Substation work	2011	39.30	39.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total				39.30	39.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00



Summary of Tariff

Name of the Transmission Licensee:	Power Grid Corporation of India Limited		
Project	Northern Region System Strengthening-XXIII		
Element Description	Combined elements of NRSS-XXIII		
Region	Northern Region	DOCO Date	May 2, 2011

(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	587.03	587.03	587.03	586.97	584.31
Interest on Loan-Form No. 9E	278.60	225.55	173.31	121.56	69.82
Return on Equity-Form No. 8	629.13	629.13	629.13	629.13	629.13
Int. on Working capital-Form No.11	67.67	63.98	60.40	61.24	70.87
Op. and maintenance-Form No.2	1,036.92	1,074.18	1,111.86	1,151.86	1,190.40
Total AFC	2,599.35	2,579.87	2,561.73	2,550.76	2,544.53

(Petitioner)



Name of the Transmission Licensee		Power Grid Corporation of India Limited	
Project	Northern Region System Strengthening-XXIII		
Element Description	Combined elements of NRSS-XXIII		
Region	Northern Region	DOCO Date	May 2, 2011

1. Transmission Lines

(Amount in Rs. Lakh)

Summary:



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 Yes/No
				765 KV	400 KV	220 KV	132 KV	765 KV	400 KV	220 KV	132 KV		
Bahadurgarh:ICT BAY	Conventional	400 KV		1.000								May 2, 2011	Y
Bahadurgarh:ICT BAY	Conventional	220 KV			1.000							May 2, 2011	Y
Bahadurgarh:LINE III BAY	Conventional	220 KV			1.000							May 2, 2011	Y
Bahadurgarh:LINE IV	Conventional	220 KV			1.000							May 2, 2011	Y
Maharanibagh:ICT-III BAY	GIS	400 KV			1.000							May 2, 2011	Y
Maharanibagh:ICT-III BAY	GIS	220 KV			1.000							May 2, 2011	Y
Maharanibagh:ICT-IV BAY	GIS	400 KV			1.000							May 2, 2011	Y
Maharanibagh:ICT-IV BAY	GIS	220 KV			1.000							May 2, 2011	Y
Maharanibagh:2 NOS 500 MVA ICT AT MAHARANI BAGH	GIS	400 KV	2.000							500.00		May 2, 2011	Y



Lucknow:ICT II BAY	Conventional	400 KV								1.000							May 2, 2011	Y
Lucknow:ICT II BAY	Conventional	220 KV								1.000							May 2, 2011	Y
Lucknow:LINE III BAY	Conventional	220 KV								1.000							May 2, 2011	Y
Lucknow:LINE IV BAY	Conventional	220 KV								1.000							May 2, 2011	Y
Lucknow:LINE V BAY	Conventional	220 KV								1.000							May 2, 2011	Y
Lucknow:LINE VI BAY	Conventional	220 KV								1.000							May 2, 2011	Y
Lucknow:ICT-II	Conventional	400 KV	1.000														May 2, 2011	Y
Bahadurgarh:ICT AT BAHADURGARH	Conventional	400 KV	1.000														May 2, 2011	Y

Summary:



O&M Expenses For Substations Covered in the instant petition

400KV SUB-STATION		2019-20	2020-21	2021-22	2022-23	2023-24
Normative Rate of O&M as per Regulation		32.15	33.28	34.45	35.66	36.91
No. of Units		2.00	2.00	2.00	2.00	2.00
O&M Claimed		64.30	66.56	68.90	71.32	73.82

220KV SUB-STATION						
Normative Rate of O&M as per Regulation	22.51	23.30	24.12	24.96	25.84	
No. of Units	8.00	8.00	8.00	8.00	8.00	
O&M Claimed	180.08	186.40	192.96	199.68	206.72	
400 KV GIS SUBSTATION						
Normative Rate of O&M as per Regulation	22.505	23.296	24.115	24.962	25.837	
No. of Units	2.00	2.00	2.00	2.00	2.00	
O&M Claimed	45.02	46.60	48.24	49.92	51.68	
400KV SUB-STATION ICT						
Normative Rate of O&M as per Regulation	0.358	0.371	0.384	0.398	0.411	
No. of Units	4.00	4.00	4.00	4.00	4.00	
O&M Claimed	716.00	742.00	768.00	796.00	822.00	
220 KV GIS Substation						
Normative Rate of O&M as per Regulation	15.757	16.31	16.884	17.472	18.088	
No. of Units	2.00	2.00	2.00	2.00	2.00	
O&M Claimed	31.52	32.62	33.76	34.94	36.18	



3. Communication System

Summary:



Summary of O&M Expenses claim

(Amount in Rs. Lakh)

Particular	2019-20	2020-21	2021-22	2022-23	2023-24
A) Normative O&M					
Transmission Line	0.00	0.00	0.00	0.00	0.00
Substation	1,036.92	1,074.18	1,111.86	1,151.86	1,190.40
Communication System	0.00	0.00	0.00	0.00	0.00
Total Normative O&M	1,036.92	1,074.18	1,111.86	1,151.86	1,190.40
B) O&M Claimed under Regulation 35 (3)(C) (* The same is not being claimed and will be claimed through separate Petition)					
*Security Expenses	0.00	0.00	0.00	0.00	0.00
*Actual Capital Spare consumed	0.00	0.00	0.00	0.00	0.00
*Insurance Premium Paid	0.00	0.00	0.00	0.00	0.00
Total O&M	1,036.92	1,074.18	1,111.86	1,151.86	1,190.40



(Petitioner)

Normative parameters considered for tariff computations

Form No. - 3

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	Northern Region System Strengthening-XXIII		
Element Description	Combined elements of NRSS-XXIII		
Region	Northern Region	DOCO Date	May 2, 2011

(Amount in Rs. Lakh)

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



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

(Petitioner)



Financial Package upto COD

Form No. - 6

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	Northern Region System Strengthening-XXIII		
Element Description	Combined elements of NRSS-XXIII		
Region	Northern Region	DOC Date	May 2, 2011

(Amount in Rs. Lakh)

Particulars	Financial Package as Approved		Financial Package as on COD 01/04/2019		As Admitted on COD 01/04/2019	
	Currency	Amount	Currency	Amount	Currency	Amount
Loans		0.00		0.00		0.00
Loan-Domestic		0.00		0.00		0.00
Loan-Foreign		0.00		0.00		0.00
Total Loans	INR	8,208.90	INR	7,815.78		0.00
Equity		0.00		0.00		0.00
Foreign		0.00		0.00		0.00
Domestic	INR	3,518.10	INR	3,349.62		0.00
Total Equity	INR	3,518.10	INR	3,349.62		0.00
Debt Equity Ratio					70:30	
Total Cost	INR	11,727.00	INR	11,165.40		0.00

Particulars	Debt	Equity	Total
Addcap for 2019 - 2020			0.00
Addcap for 2020 - 2021			0.00
Addcap for 2021 - 2022			0.00
Addcap for 2022 - 2023		85	0.00



Addcap for 2023 - 2024			0.00	
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Particulars	Actual	Normative	
Addcap for 2019 - 2020			
Equity		0.00	
Debt		0.00	
Total		0.00	
Addcap for 2020 - 2021			
Equity		0.00	
Debt		0.00	
Total		0.00	
Addcap for 2021 - 2022			
Equity		0.00	
Debt		0.00	
Total		0.00	
Addcap for 2022 - 2023			
Equity		0.00	
Debt		0.00	
Total		0.00	
Addcap for 2023 - 2024			
Equity		0.00	
Debt		0.00	
Total		0.00	
Total Capital cost with Addcap		11,165.40	

(Petitioner)



Calculation of ROE

Form No. - 8

Name of the Transmission Licensee		Power Grid Corporation of India Limited	
Project	Northern Region System Strengthening-XXIII		
Element Description	Combined elements of NRSS-XXIII		
Region	Northern Region	DOC Date	May 2, 2011

(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	3,349.62	3,349.62	3,349.62	3,349.62	3,349.62
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)	3,349.62	3,349.62	3,349.62	3,349.62	3,349.62
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	3,349.62	3,349.62	3,349.62	3,349.62	3,349.62
Average Normative Equity	3,349.62	3,349.62	3,349.62	3,349.62	3,349.62
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	629.13	629.13	629.13	629.13	629.13
Pro rata return on Equity	629.13	629.13	629.13	629.13	629.13



(Petitioner)

Calculation of WAR of interest on actual loan

Form No. - 9C

Name of the Transmission Licensee	Power Grid Corporation of India Limited				
Project	Northern Region System Strengthening-XXIII				
Element Description	Combined elements of NRSS-XXIII				
Region	Northern Region	DOC Date	May 2, 2011		

(Amount in Rs. Lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
BOND XXXIII -ADDCAP FOR 2010-2011					
Gross Loan- Opening	126.76	126.76	126.76	126.76	126.76
Cumulative repayments of Loans upto previous year	52.82	63.38	73.94	84.51	95.07
Net loan-Opening	73.94	63.38	52.82	42.25	31.69
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	10.56	10.56	10.56	10.56	10.56
Net Loan-Closing	63.38	52.82	42.26	31.69	21.13
Average Net Loan	68.66	58.10	47.54	36.97	26.41
Rate of Interest on Loan on Annual Basis	8.64	8.64	8.64	8.64	8.64
Interest on loan	5.9322	5.0198	4.1075	3.1942	2.2818

BOND XXXIII -DOCO					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Gross Loan- Opening	2,021.30	2,021.30	2,021.30	2,021.30	2,021.30
Cumulative repayments of Loans upto previous year	842.21	1,010.65	1,179.09	1,347.53	1,515.98
Net loan-Opening	1,179.09	1,010.65	842.21	673.77	505.32
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	168.44	168.44	168.44	168.44	168.44
Net Loan-Closing	1,010.65	842.21	673.77	505.33	336.88



Average Net Loan	1,094.87	926.43	757.99	589.55	421.10
Rate of Interest on Loan on Annual Basis	8.64	8.64	8.64	8.64	8.64
Interest on loan	94.5968	80.0436	65.4903	50.9371	36.383

BOND XXXIII -DOCO DRAWL ON 01-NOV

Gross Loan- Opening	49.64	49.64	49.64	49.64	49.64
Cumulative repayments of Loans upto previous year	20.68	24.82	28.96	33.09	37.23
Net loan-Opening	28.96	24.82	20.68	16.55	12.41
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	4.14	4.14	4.14	4.14	4.14
Net Loan-Closing	24.82	20.68	16.54	12.41	8.27
Average Net Loan	26.89	22.75	18.61	14.48	10.34
Rate of Interest on Loan on Annual Basis	8.64	8.64	8.64	8.64	8.64
Interest on loan	2.3233	1.9656	1.6079	1.2511	0.8934

BOND XXXII -DOCO DRAWL ON 01-DEC

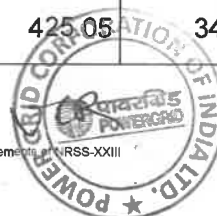
Gross Loan- Opening	350.00	350.00	350.00	350.00	350.00
Cumulative repayments of Loans upto previous year	175.00	204.17	233.33	262.50	291.67
Net loan-Opening	175.00	145.83	116.67	87.50	58.33
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	29.17	29.17	29.17	29.17	29.17
Net Loan-Closing	145.83	116.66	87.50	58.33	29.16
Average Net Loan	160.42	131.25	102.09	72.92	43.75
Rate of Interest on Loan on Annual Basis	8.84	8.84	8.84	8.84	8.84
Interest on loan	14.1811	11.6025	9.0248	6.4461	3.8675



BOND XXXII -DOCO DRAWL ON 01-FEB					
Gross Loan- Opening	150.00	150.00	150.00	150.00	150.00
Cumulative repayments of Loans upto previous year	75.00	87.50	100.00	112.50	125.00
Net loan-Opening	75.00	62.50	50.00	37.50	25.00
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	62.50	50.00	37.50	25.00	12.50
Average Net Loan	68.75	56.25	43.75	31.25	18.75
Rate of Interest on Loan on Annual Basis	8.84	8.84	8.84	8.84	8.84
Interest on loan	6.0775	4.9725	3.8675	2.7625	1.6575

BOND XXXII -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	100.00	116.67	133.33	150.00	166.67
Net loan-Opening	100.00	83.33	66.67	50.00	33.33
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	83.33	66.66	50.00	33.33	16.66
Average Net Loan	91.67	75.00	58.34	41.67	25.00
Rate of Interest on Loan on Annual Basis	8.84	8.84	8.84	8.84	8.84
Interest on loan	8.1036	6.63	5.1573	3.6836	2.21

BOND-XXXIV -ADDCAP FOR 2010-2011					
Gross Loan- Opening	1,020.13	1,020.13	1,020.13	1,020.13	1,020.13
Cumulative repayments of Loans upto previous year	425.05	510.07	595.08	680.09	765.10
Net loan-Opening	595.08	510.06	425.05	340.04	255.03



Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	85.01	85.01	85.01	85.01	85.01
Net Loan-Closing	510.07	425.05	340.04	255.03	170.02
Average Net Loan	552.58	467.56	382.55	297.54	212.53
Rate of Interest on Loan on Annual Basis	8.84	8.84	8.84	8.84	8.84
Interest on loan	48.8481	41.3323	33.8174	26.3025	18.7877

BOND-XXXIV -DOCO					
Gross Loan- Opening	1,172.00	1,172.00	1,172.00	1,172.00	1,172.00
Cumulative repayments of Loans upto previous year	488.33	586.00	683.67	781.33	879.00
Net loan-Opening	683.67	586.00	488.33	390.67	293.00
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	97.67	97.67	97.67	97.67	97.67
Net Loan-Closing	586.00	488.33	390.66	293.00	195.33
Average Net Loan	634.84	537.17	439.50	341.84	244.17
Rate of Interest on Loan on Annual Basis	8.84	8.84	8.84	8.84	8.84
Interest on loan	56.1199	47.4858	38.8518	30.2187	21.5846

BOND-XXXIV -DOCO DRAWL ON 01-NOV					
Gross Loan- Opening	196.00	196.00	196.00	196.00	196.00
Cumulative repayments of Loans upto previous year	81.67	98.00	114.33	130.67	147.00
Net loan-Opening	114.33	98.00	81.67	65.33	49.00
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	16.33	16.33	16.33	16.33	16.33
Net Loan-Closing	98.00	81.67	65.34	49.00	32.67
Average Net Loan	106.17	89.84	73.91	57.17	40.84



Rate of Interest on Loan on Annual Basis	8.84	8.84	8.84	8.84	8.84
Interest on loan	9.3854	7.9419	6.4983	5.0538	3.6103

BOND-XXXV -ADDCAP FOR 2010-2011					
Gross Loan- Opening	22.00	22.00	22.00	22.00	22.00
Cumulative repayments of Loans upto previous year	7.33	9.17	11.00	12.83	14.67
Net loan-Opening	14.67	12.83	11.00	9.17	7.33
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	1.83	1.83	1.83	1.83	1.83
Net Loan-Closing	12.84	11.00	9.17	7.34	5.50
Average Net Loan	13.76	11.92	10.09	8.26	6.42
Rate of Interest on Loan on Annual Basis	9.64	9.64	9.64	9.64	9.64
Interest on loan	1.3265	1.1491	0.9727	0.7963	0.6189

BOND-XXXV -ADDCAP FOR 2011-2012					
Gross Loan- Opening	675.60	675.60	675.60	675.60	675.60
Cumulative repayments of Loans upto previous year	225.20	281.50	337.80	394.10	450.40
Net loan-Opening	450.40	394.10	337.80	281.50	225.20
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	56.30	56.30	56.30	56.30	56.30
Net Loan-Closing	394.10	337.80	281.50	225.20	168.90
Average Net Loan	422.25	365.95	309.65	253.35	197.05
Rate of Interest on Loan on Annual Basis	9.64	9.64	9.64	9.64	9.64
Interest on loan	40.7049	35.2776	29.8503	24.4229	18.9956

BOND-XXXV -DOCO



Gross Loan- Opening	383.90	383.90	383.90	383.90	383.90
Cumulative repayments of Loans upto previous year	127.97	159.96	191.95	223.94	255.93
Net loan-Opening	255.93	223.94	191.95	159.96	127.97
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	31.99	31.99	31.99	31.99	31.99
Net Loan-Closing	223.94	191.95	159.96	127.97	95.98
Average Net Loan	239.94	207.95	175.96	143.97	111.98
Rate of Interest on Loan on Annual Basis	9.64	9.64	9.64	9.64	9.64
Interest on loan	23.1302	20.0464	16.9625	13.8787	10.7949

BOND-XXXV -DOCO

Gross Loan- Opening	25.50	25.50	25.50	25.50	25.50
Cumulative repayments of Loans upto previous year	8.50	10.63	12.75	14.88	17.00
Net loan-Opening	17.00	14.87	12.75	10.62	8.50
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	2.13	2.13	2.13	2.13	2.13
Net Loan-Closing	14.87	12.74	10.62	8.49	6.37
Average Net Loan	15.94	13.81	11.69	9.56	7.44
Rate of Interest on Loan on Annual Basis	9.64	9.64	9.64	9.64	9.64
Interest on loan	1.5366	1.3313	1.1269	0.9216	0.7172

BOND XXXVI -ADDCAP FOR 2011-2012

Gross Loan- Opening	48.00	48.00	48.00	48.00	48.00
Cumulative repayments of Loans upto previous year	9.60	12.80	16.00	19.20	22.40
Net loan-Opening	38.40	35.20	32.00	28.80	25.60
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00



Less: Repayment(s) of loan during the year	3.20	3.20	3.20	3.20	3.20
Net Loan-Closing	35.20	32.00	28.80	25.60	22.40
Average Net Loan	36.80	33.60	30.40	27.20	24.00
Rate of Interest on Loan on Annual Basis	9.35	9.35	9.35	9.35	9.35
Interest on loan	3.4408	3.1416	2.8424	2.5432	2.244

BOND XXXVII -ADDCAP FOR 2011-2012

Gross Loan- Opening	241.65	241.65	241.65	241.65	241.65
Cumulative repayments of Loans upto previous year	80.55	100.69	120.83	140.96	161.10
Net loan-Opening	161.10	140.96	120.82	100.69	80.55
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	20.14	20.14	20.14	20.14	20.14
Net Loan-Closing	140.96	120.82	100.68	80.55	60.41
Average Net Loan	151.03	130.89	110.75	90.62	70.48
Rate of Interest on Loan on Annual Basis	9.25	9.25	9.25	9.25	9.25
Interest on loan	13.9703	12.1073	10.2444	8.3824	6.5194

BOND XXXVII -ADDCAP FOR 2011-2012

Gross Loan- Opening	65.35	65.35	65.35	65.35	65.35
Cumulative repayments of Loans upto previous year	21.78	27.23	32.68	38.12	43.57
Net loan-Opening	43.57	38.12	32.67	27.23	21.78
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	5.45	5.45	5.45	5.45	5.45
Net Loan-Closing	38.12	32.67	27.22	21.78	16.33
Average Net Loan	40.85	35.40	29.95	24.51	19.06
Rate of Interest on Loan on Annual Basis	9.25	9.25	9.25	9.25	9.25



Interest on loan	3.7786	3.2745	2.7704	2.2672	1.7631
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BOND XXXVIII -ADDCAP FOR 2011-2012					
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Gross Loan- Opening	298.77	298.77	298.77	298.77	298.77
Cumulative repayments of Loans upto previous year	0.00	0.00	0.00	0.00	0.00
Net loan-Opening	298.77	298.77	298.77	298.77	298.77
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	298.77	298.77	298.77	298.77	298.77
Average Net Loan	298.77	298.77	298.77	298.77	298.77
Rate of Interest on Loan on Annual Basis	9.25	9.25	9.25	9.25	9.25
Interest on loan	27.6362	27.6362	27.6362	27.6362	27.6362

SBI (21.03.2012) -ADDCAP FOR 2011-2012					
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Gross Loan- Opening	100.00	100.00	100.00	100.00	100.00
Cumulative repayments of Loans upto previous year	27.24	36.32	45.40	54.48	63.56
Net loan-Opening	72.76	63.68	54.60	45.52	36.44
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	9.08	9.08	9.08	9.08	9.08
Net Loan-Closing	63.68	54.60	45.52	36.44	27.36
Average Net Loan	68.22	59.14	50.06	40.98	31.90
Rate of Interest on Loan on Annual Basis	7.995219	6.898405	6.65	7.233189	8.134574
Interest on loan	5.4543	4.0797	3.329	2.9642	2.5949

BOND - XLII -ADDCAP FOR 2012-2013					
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Gross Loan- Opening	24.60	24.60	24.60	24.60	24.60
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Cumulative repayments of Loans upto previous year	0.00	0.00	0.00	0.00	24.60
Net loan-Opening	24.60	24.60	24.60	24.60	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	24.60	0.00
Net Loan-Closing	24.60	24.60	24.60	0.00	0.00
Average Net Loan	24.60	24.60	24.60	12.30	0.00
Rate of Interest on Loan on Annual Basis	8.80	8.80	8.80	8.80	8.80
Interest on loan	2.1648	2.1648	2.1648	1.0824	0.00

BOND - XLII -ADDCAP FOR 2012-2013

Gross Loan- Opening	11.46	11.46	11.46	11.46	11.46
Cumulative repayments of Loans upto previous year	0.00	0.00	0.00	0.00	11.46
Net loan-Opening	11.46	11.46	11.46	11.46	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	11.46	0.00
Net Loan-Closing	11.46	11.46	11.46	0.00	0.00
Average Net Loan	11.46	11.46	11.46	5.73	0.00
Rate of Interest on Loan on Annual Basis	8.80	8.80	8.80	8.80	8.80
Interest on loan	1.0085	1.0085	1.0085	0.5042	0.00

BOND - XLII -ADDCAP FOR 2012-2013

Gross Loan- Opening	65.49	65.49	65.49	65.49	65.49
Cumulative repayments of Loans upto previous year	0.00	0.00	0.00	0.00	65.49
Net loan-Opening	65.49	65.49	65.49	65.49	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	65.49	0.00



Net Loan-Closing	65.49	65.49	65.49	0.00	0.00
Average Net Loan	65.49	65.49	65.49	32.75	0.00
Rate of Interest on Loan on Annual Basis	8.80	8.80	8.80	8.80	8.80
Interest on loan	5.7631	5.7631	5.7631	2.882	0.00

BOND - XLII -ADDCAP FOR 2013-2014

Gross Loan- Opening	56.31	56.31	56.31	56.31	56.31
Cumulative repayments of Loans upto previous year	0.00	0.00	0.00	0.00	56.31
Net loan-Opening	56.31	56.31	56.31	56.31	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	56.31	0.00
Net Loan-Closing	56.31	56.31	56.31	0.00	0.00
Average Net Loan	56.31	56.31	56.31	28.16	0.00
Rate of Interest on Loan on Annual Basis	8.80	8.80	8.80	8.80	8.80
Interest on loan	4.9553	4.9553	4.9553	2.4781	0.00

BOND - XLII -ADDCAP FOR 2013-2014

Gross Loan- Opening	93.80	93.80	93.80	93.80	93.80
Cumulative repayments of Loans upto previous year	0.00	0.00	0.00	0.00	93.80
Net loan-Opening	93.80	93.80	93.80	93.80	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	93.80	0.00
Net Loan-Closing	93.80	93.80	93.80	0.00	0.00
Average Net Loan	93.80	93.80	93.80	46.90	0.00
Rate of Interest on Loan on Annual Basis	8.80	8.80	8.80	8.80	8.80
Interest on loan	8.2544	8.2544	8.2544	4.1272	0.00



BOND - XLII -ADDCAP FOR 2013-2014					
Gross Loan- Opening	120.12	120.12	120.12	120.12	120.12
Cumulative repayments of Loans upto previous year	0.00	0.00	0.00	0.00	120.12
Net loan-Opening	120.12	120.12	120.12	120.12	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	120.12	0.00
Net Loan-Closing	120.12	120.12	120.12	0.00	0.00
Average Net Loan	120.12	120.12	120.12	60.06	0.00
Rate of Interest on Loan on Annual Basis	8.80	8.80	8.80	8.80	8.80
Interest on loan	10.5706	10.5706	10.5706	5.2853	0.00

SBI (2014-15) -ADD CAP 2017-18					
Gross Loan- Opening	56.00	56.00	56.00	56.00	56.00
Cumulative repayments of Loans upto previous year	0.00	5.60	11.20	16.80	22.40
Net loan-Opening	56.00	50.40	44.80	39.20	33.60
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	5.60	5.60	5.60	5.60	5.60
Net Loan-Closing	50.40	44.80	39.20	33.60	28.00
Average Net Loan	53.20	47.60	42.00	36.40	30.80
Rate of Interest on Loan on Annual Basis	7.993319	6.894349	6.65	7.243625	8.135644
Interest on loan	4.2524	3.2817	2.793	2.6367	2.5058

BOND XLIX -ADD CAP 2014-15					
Gross Loan- Opening	1.40	1.40	1.40	1.40	1.40
Cumulative repayments of Loans upto previous year	0.00	0.47		0.47	0.47



Net loan-Opening	1.40	0.93	0.93	0.93	0.93
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	0.47	0.00	0.00	0.00	0.00
Net Loan-Closing	0.93	0.93	0.93	0.93	0.93
Average Net Loan	1.17	0.93	0.93	0.93	0.93
Rate of Interest on Loan on Annual Basis	8.15	8.15	8.15	8.15	8.15
Interest on loan	0.0954	0.0758	0.0758	0.0758	0.0758

BOND60 (LX) -ADD CAP 2018-19

Gross Loan- Opening	67.29	67.29	67.29	67.29	67.29
Cumulative repayments of Loans upto previous year	0.00	0.00	0.00	0.00	0.00
Net loan-Opening	67.29	67.29	67.29	67.29	67.29
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	67.29	67.29	67.29	67.29	67.29
Average Net Loan	67.29	67.29	67.29	67.29	67.29
Rate of Interest on Loan on Annual Basis	7.20	7.20	7.20	7.20	7.20
Interest on loan	4.8449	4.8449	4.8449	4.8449	4.8449

SBI-04 -ADD CAP 2018-19

Gross Loan- Opening	5.64	5.64	5.64	5.64	5.64
Cumulative repayments of Loans upto previous year	0.00	0.00	0.51	0.53	0.53
Net loan-Opening	5.64	5.64	5.13	5.11	5.11
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	0.51	0.02	0.00	0.56
Net Loan-Closing	5.64	5.13	5.11	5.11	4.55



Average Net Loan	5.64	5.39	5.12	5.11	4.83
Rate of Interest on Loan on Annual Basis	8.027596	6.902593	6.65	7.225616	8.126549
Interest on loan	0.4528	0.372	0.3405	0.3692	0.3925

Summary

Gross Loan- Opening	7,648.71	7,648.71	7,648.71	7,648.71	7,648.71
Cumulative repayments of Loans upto previous year	2,768.93	3,345.63	3,922.32	4,498.53	5,446.53
Net loan-Opening	4,879.78	4,303.08	3,726.39	3,150.18	2,202.18
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	576.68	576.72	576.23	947.99	576.77
Net Loan-Closing	4,303.10	3,726.36	3,150.16	2,202.19	1,625.41
Average Net Loan	4,591.49	4,014.77	3,438.32	2,676.24	1,913.84
Rate of Interest on Loan on Annual Basis	8.9058	8.8754	8.8685	8.8911	8.9338
Interest on loan	408.9085	356.3288	304.9285	237.9481	170.979

(Petitioner)



Calculation of interest on Normative loan

Form No. - 9E

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	Northern Region System Strengthening-XXIII		
Element Description	Combined elements of NRSS-XXIII		
Region	Northern Region	DOCO Date	May 2, 2011

(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	7,815.78	7,815.78	7,815.78	7,815.78	7,815.78
Cumulative repayments of Normative loan upto previous year	4,394.00	4,981.03	5,568.06	6,155.09	6,742.06
Net normative loan-Opening	3,421.78	2,834.75	2,247.72	1,660.69	1,073.72
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	587.03	587.03	587.03	586.97	584.31
Adjustment of cumulative repayment pertaining to the decapitalised asset	0.00	0.00	0.00	0.00	0.00
Net normative loan - closing	2,834.75	2,247.72	1,660.69	1,073.72	489.41
Average normative loan	3,128.27	2,541.24	1,954.21	1,367.21	781.57
Weighted Average Rate of interest on actual loan	8.9058	8.8754	8.8685	8.8911	8.9338
Interest on normative loan	278.60	225.55	173.31	121.56	69.82
Pro rata interest on normative loan	278.60	225.55	173.31	121.56	69.82

(Petitioner)



Calculation of Depreciation Rate on Original Project Cost

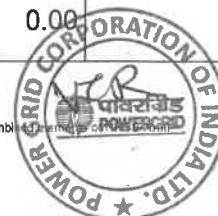
Form No. - 10

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	Northern Region System Strengthening-XXIII		
Element Description	Combined elements of NRSS-XXIII		
Region	Northern Region	DOCO Date	May 2, 2011

(Amount in Rs. Lakh)

Name of Assets	Gross block at the beginning of the year	Add Cap during the year	Gross block at the end of the year	Average Gross Block	Depreciation Rate as per CERC's Depreciation Rate Schedule	Depreciation Amount for each year upto 31.03.2024
2019-20						
Land(Freehold)	0.00	0.00	0.00	0.00	0.00	0.00
Civil & Building	229.80	0.00	229.80	229.80	3.34	7.68
Transmission Line	0.00	0.00	0.00	0.00	5.28	0.00
Sub Station	10,899.65	0.00	10,899.65	10,899.65	5.28	575.50
Comm. Sys. excluding Fiber Optic	17.85	0.00	17.85	17.85	6.33	1.13
Leasehold Land	0.00	0.00	0.00	0.00	3.34	0.00
IT/Software/UNMS/URTDSM/SCADA,etc	18.10	0.00	18.10	18.10	15.00	2.72
Batteries	0.00	0.00	0.00	0.00	5.28	0.00
Fiber Optic/OPGW	0.00	0.00	0.00	0.00	6.33	0.00
TOTAL	11,165.40	0.00	11,165.40	11,165.40	0.00	587.03
Weighted Average Rate of Depreciation(%)					5.257581	

2020-21						
Land(Freehold)	0.00	0.00	0.00	0.00	0.00	0.00



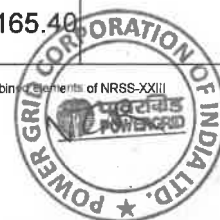
Civil & Building	229.80	0.00	229.80	229.80	3.34	7.68
Transmission Line	0.00	0.00	0.00	0.00	5.28	0.00
Sub Station	10,899.65	0.00	10,899.65	10,899.65	5.28	575.50
Comm. Sys. excluding Fiber Optic	17.85	0.00	17.85	17.85	6.33	1.13
Leasehold Land	0.00	0.00	0.00	0.00	3.34	0.00
IT/Software/UNMS/URTDISM/SCADA,etc	18.10	0.00	18.10	18.10	15.00	2.72
Batteries	0.00	0.00	0.00	0.00	5.28	0.00
Fiber Optic/OPGW	0.00	0.00	0.00	0.00	6.33	0.00
TOTAL	11,165.40	0.00	11,165.40	11,165.40	0.00	587.03
Weighted Average Rate of Depreciation(%)					5.257581	

2021-22						
Land(Freehold)	0.00	0.00	0.00	0.00	0.00	0.00
Civil & Building	229.80	0.00	229.80	229.80	3.34	7.68
Transmission Line	0.00	0.00	0.00	0.00	5.28	0.00
Sub Station	10,899.65	0.00	10,899.65	10,899.65	5.28	575.50
Comm. Sys. excluding Fiber Optic	17.85	0.00	17.85	17.85	6.33	1.13
Leasehold Land	0.00	0.00	0.00	0.00	3.34	0.00
IT/Software/UNMS/URTDISM/SCADA,etc	18.10	0.00	18.10	18.10	15.00	2.72
Batteries	0.00	0.00	0.00	0.00	5.28	0.00
Fiber Optic/OPGW	0.00	0.00	0.00	0.00	6.33	0.00
TOTAL	11,165.40	0.00	11,165.40	11,165.40	0.00	587.03
Weighted Average Rate of Depreciation(%)					5.257581	



2022-23						
Land(Freehold)	0.00	0.00	0.00	0.00	0.00	0.00
Civil & Building	229.80	0.00	229.80	229.80	3.34	7.68
Transmission Line	0.00	0.00	0.00	0.00	5.28	0.00
Sub Station	10,899.65	0.00	10,899.65	10,899.65	5.28	575.50
Comm. Sys. excluding Fiber Optic	17.85	0.00	17.85	17.85	6.33	1.13
Leasehold Land	0.00	0.00	0.00	0.00	3.34	0.00
IT/Software/UNMS/URTDSM/SCADA,etc	18.10	0.00	18.10	18.10	15.00	2.66
Batteries	0.00	0.00	0.00	0.00	5.28	0.00
Fiber Optic/OPGW	0.00	0.00	0.00	0.00	6.33	0.00
TOTAL	11,165.40	0.00	11,165.40	11,165.40	0.00	586.97
Weighted Average Rate of Depreciation(%)					5.257044	

2023-24						
Land(Freehold)	0.00	0.00	0.00	0.00	0.00	0.00
Civil & Building	229.80	0.00	229.80	229.80	3.34	7.68
Transmission Line	0.00	0.00	0.00	0.00	5.28	0.00
Sub Station	10,899.65	0.00	10,899.65	10,899.65	5.28	575.50
Comm. Sys. excluding Fiber Optic	17.85	0.00	17.85	17.85	6.33	1.13
Leasehold Land	0.00	0.00	0.00	0.00	3.34	0.00
IT/Software/UNMS/URTDSM/SCADA,etc	18.10	0.00	18.10	18.10	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
TOTAL	11,165.40	0.00	11,165.40	11,165.40	0.00	584.31



Weighted Average Rate of Depreciation(%)					5.23322	
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(Petitioner)



Statement of Depreciation

Form No. - 10A

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	Northern Region System Strengthening-XXIII		
Element Description	Combined elements of NRSS-XXIII		
Region	Northern Region	DOCO Date	May 2, 2011

(Amount in Rs. Lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
No of Days in the year	366.00	365.00	365.00	365.00	366.00
No of days for which tariff claimed	366.00	365.00	365.00	365.00	366.00
Life at the beginning of the year					
1.1 Weighted Average useful life of the Asset/ Project	25.00	25.00	25.00	25.00	25.00
1.2 Lapsed Weighted Average useful life of the Asset/Project(in completed no. of year)	7.00	8.00	9.00	10.00	11.00
1.3 Balance Weighted Average useful life of the Asset/Project(in completed no. of year)	18.00	17.00	16.00	15.00	14.00
Capital Base					
1.4 Opening capital cost	11,165.40	11,165.40	11,165.40	11,165.40	11,165.40
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	11,165.40	11,165.40	11,165.40	11,165.40	11,165.40
1.8 Average capital cost	11,165.40	11,165.40	11,165.40	11,165.40	11,165.40
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	18.10	18.10	18.10	18.10	18.10
1.11 Asset having 10% salvage value included in 1.8	11,147.30	11,147.30	11,147.30	11,147.30	11,147.30
1.12 Depreciable Value(1.10+90% of 1.11)	10,050.68	10,050.68	10,050.68	10,050.68	10,050.68
Depreciation for the period and Cum. Depreciation					
1.13 Weighted Average Rate of depreciation	5.257581	5.257581	5.257581	5.257044	5.23322



1.14 Depreciation(for the period)	587.03	587.03	587.03	586.97	584.31
1.15 Depreciation(Annualised)	587.03	587.03	587.03	586.97	584.31
Unrecovered Depreciation for DECAP	0.00	0.00	0.00	0.00	0.00
1.16 Cumulative depreciation at the beginning of the period	4,394.00	4,981.03	5,568.06	6,155.09	6,742.06
1.17 Less:Adj of Cum. Dep pertaining to decapitalised Asset	0.00	0.00	0.00	0.00	0.00
1.18 Cumulative depreciation at the end of the period	4,981.03	5,568.06	6,155.09	6,742.06	7,326.37

(Petitioner)



Calculation of interest on working Capital

Form No. - 11

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	Northern Region System Strengthening-XXIII		
Element Description	Combined elements of NRSS-XXIII		
Region	Northern Region	DOCO Date	May 2, 2011

(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	86.41	89.52	92.66	95.99	99.20
Maintenance spares 15% of O&M Expenses	155.54	161.13	166.78	172.78	178.56
Receivables equivalent to 45 days of AFC	319.59	318.07	315.83	314.48	312.85
Total Working capital	561.54	568.72	575.27	583.25	590.61
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	67.67	63.98	60.40	61.24	70.87
Pro rata interest on working capital	67.67	63.98	60.40	61.24	70.87

(Petitioner)



End-5

Summary of Tariff

Form No. - 1

Name of the Transmission Licensee:	Power Grid Corporation of India Limited		
Project	Northern Region System Strengthening-XXIII		
Element Description	Combined elements of NRSS-XXIII		
Region	Northern Region	DOC Date	May 2, 2011

(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	210.92	212.39	212.39	212.41	212.39
Interest on Loan-Form No. 9E	35.59	17.93	4.12	0.00	0.00
Return on Equity-Form No. 8	630.23	631.34	631.34	631.34	631.34
Int. on Working capital-Form No.11	48.32	49.96	51.67	53.56	55.87
Op. and maintenance-Form No.2	818.70	862.14	906.48	953.60	1,005.56
Total AFC	1,743.76	1,773.76	1,806.00	1,850.91	1,905.16

(Petitioner)



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

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	Northern Region System Strengthening-XXIII		
Element Description	Combined elements of NRSS-XXIII		
Region	Northern Region	DOCO Date	May 2, 2011

1. Transmission Lines

(Amount in Rs. Lakh)

Summary:



2. Sub Station

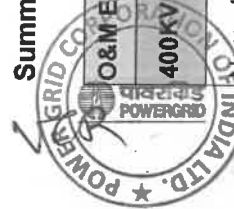
Name of Sub-station	Type of Substation	Voltage Level KV	No. of Transfor ms/ Reactor/ SVC etc. (with capacity)	No. of Bays				MVA/MVAR Capacity				Date of Comm. operation	Covered in the present petition	
				765 KV	400 KV	220 KV	132 KV	765 KV	400 KV	220 KV	132 KV			
Bahadurgarh:ICT BAY	Conventio nal	400 KV		1.000									May 2, 2011	Y
Bahadurgarh:ICT BAY	Conventio nal	220 KV			1.000								May 2, 2011	Y
Bahadurgarh:LINE III BAY	Conventio nal	220 KV			1.000								May 2, 2011	Y
Bahadurgarh:LINE IV	Conventio nal	220 KV			1.000								May 2, 2011	Y
Maharanibagh:ICT-III BAY	GIS	400 KV		1.000									May 2, 2011	Y
Maharanibagh:ICT-III BAY	GIS	220 KV			1.000								May 2, 2011	Y
Maharanibagh:ICT-IV BAY	GIS	400 KV		1.000									May 2, 2011	Y
Maharanibagh:ICT-IV BAY	GIS	220 KV			1.000								May 2, 2011	Y
Maharanibagh:2 NOS 500 MVA ICT AT MAHARANI BAGH	GIS	400 KV	2.000							500.00			May 2, 2011	Y



Lucknow:ICT II BAY	Conventional	400 KV						1.000									May 2, 2011	Y
Lucknow:ICT II BAY	Conventional	220 KV						1.000									May 2, 2011	Y
Lucknow:LINE III BAY	Conventional	220 KV						1.000									May 2, 2011	Y
Lucknow:LINE IV BAY	Conventional	220 KV						1.000									May 2, 2011	Y
Lucknow:LINE V BAY	Conventional	220 KV						1.000									May 2, 2011	Y
Lucknow:LINE VI BAY	Conventional	220 KV						1.000									May 2, 2011	Y
Lucknow:ICT-II	Conventional	400 KV	1.000							500.00							May 2, 2011	Y
Bahadurgarh:ICT AT BAHADURGARH	Conventional	400 KV	1.000							500.00							May 2, 2011	Y

Summary:

O&M Expenses For Substations Covered in the instant petition		2024-25	2025-26	2026-27	2027-28	2028-29
400 KV SUB-STATION						
Normative Rate of O&M as per Regulation						
No. of Units		29.53	31.08	32.71	34.43	36.23
O&M Claimed		2.00	2.00	2.00	2.00	2.00
		59.06	62.16	65.42	68.86	72.46



220KV SUB-STATION						
Normative Rate of O&M as per Regulation	20.67	21.75	22.90	24.10	25.36	
No. of Units	8.00	8.00	8.00	8.00	8.00	
O&M Claimed	165.36	174.00	183.20	192.80	202.88	
400 KV GIS SUBSTATION						
Normative Rate of O&M as per Regulation	20.671	21.756	22.897	24.101	25.361	
No. of Units	2.00	2.00	2.00	2.00	2.00	
O&M Claimed	41.34	43.52	45.80	48.20	50.72	
400KV SUB-STATION ICT						
Normative Rate of O&M as per Regulation	0.262	0.276	0.29	0.305	0.322	
No. of Units	4.00	4.00	4.00	4.00	4.00	
O&M Claimed	524.00	552.00	580.00	610.00	644.00	
220 KV GIS Substation						
Normative Rate of O&M as per Regulation	14.469	15.225	16.03	16.87	17.752	
No. of Units	2.00	2.00	2.00	2.00	2.00	
O&M Claimed	28.94	30.46	32.06	33.74	35.50	



3. Communication System

Summary:



Summary of O&M Expenses claim

(Amount in Rs. Lakh)

Particular	2024-25	2025-26	2026-27	2027-28	2028-29
A) Normative O&M					
Transmission Line	0.00	0.00	0.00	0.00	0.00
Substation	818.70	862.14	906.48	953.60	1,005.56
Communication System	0.00	0.00	0.00	0.00	0.00
Total Normative O&M	818.70	862.14	906.48	953.60	1,005.56
B) O&M Claimed under Regulation 35 (3)(C) (* The same is not being claimed and will be claimed through separate Petition)					
*Security Expenses	0.00	0.00	0.00	0.00	0.00
*Actual Capital Spare consumed	0.00	0.00	0.00	0.00	0.00
*Insurance Premium Paid	0.00	0.00	0.00	0.00	0.00
Total O&M	818.70	862.14	906.48	953.60	1,005.56



(Petitioner)

Normative parameters considered for tariff computations

Form No. - 3

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	Northern Region System Strengthening-XXIII		
Element Description	Combined elements of NRSS-XXIII		
Region	Northern Region	DOCOC Date	May 2, 2011

(Amount in Rs. Lakh)

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



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

(Petitioner)



Financial Package upto COD

Form No. - 6

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	Northern Region System Strengthening-XXIII		
Element Description	Combined elements of NRSS-XXIII		
Region	Northern Region	DOC Date	May 2, 2011

(Amount in Rs. Lakh)

Particulars	Financial Package as Approved		Financial Package as on COD 01/04/2024		As Admitted on COD 01/04/2024	
	Currency	Amount	Currency	Amount	Currency	Amount
Loans		0.00		0.00		0.00
Loan-Domestic		0.00		0.00		0.00
Loan-Foreign		0.00		0.00		0.00
Total Loans	INR	8,208.90	INR	7,815.78		0.00
Equity		0.00		0.00		0.00
Foreign		0.00		0.00		0.00
Domestic	INR	3,518.10	INR	3,349.62		0.00
Total Equity	INR	3,518.10	INR	3,349.62		0.00
Debt Equity Ratio					70:30	
Total Cost	INR	11,727.00	INR	11,165.40		0.00

Particulars	Debt	Equity	Total
Addcap for 2024 - 2025			39.30
Addcap for 2025 - 2026			0.00
Addcap for 2026 - 2027			0.00
Addcap for 2027 - 2028		118	0.00



Addcap for 2028 - 2029			0.00
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Particulars	Actual	Normative	
Addcap for 2024 - 2025			
Equity		11.79	
Debt		27.51	
Total		39.30	
Addcap for 2025 - 2026			
Equity		0.00	
Debt		0.00	
Total		0.00	
Addcap for 2026 - 2027			
Equity		0.00	
Debt		0.00	
Total		0.00	
Addcap for 2027 - 2028			
Equity		0.00	
Debt		0.00	
Total		0.00	
Addcap for 2028 - 2029			
Equity		0.00	
Debt		0.00	
Total		0.00	
Total Capital cost with Addcap		11,204.70	



Statement of Additional Capitalisation after COD

Form No. - 7

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	Northern Region System Strengthening-XXIII		
Element Description	Combined elements of NRSS-XXIII		
Region	Northern Region	DOCO Date	May 2, 2011

(Amount in Rs. Lakh)

Particulars	Addition into Gross Block as per books of Account during the year (2)	De-Cap into Gross Block as per books of Account during the year	Less: Deductions dr. the year towards				Add: Discharge of earlier admitted liability	ACE on cash basis for tariff purpose	Admitted Cost in final tariff (Rs Lakh)
			Grants Received (if any) (3)	Asset pertaining to other businesses (If any) (4)	Other Deduction (if any) (5)	Less: Undischarged liability included in (2-4-5)			
ACE for the year :2024-25 (Actual/Projected)									
Land (Freehold Land)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building & Civil Works	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Transmission Lines	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Substations	0.00	0.00	0.00	0.00	0.00	0.00	39.30	39.30	0.00
Comm. Sys. excluding Fiber Optic	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Land (Leasehold)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IT/Software/UNMS/URTDSM/SCADA,etc	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Batteries	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fiber Optic/OPGW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	39.30	39.30	0.00
ACE for the year :2025-26 (Actual/Projected)									



Land (Freehold Land)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building & Civil Works	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Transmission Lines	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Substations	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Comm. Sys. excluding Fiber Optic	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Land (Leasehold)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IT/Software/UNMS/URTDSM/SCADA,etc	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Batteries	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fiber Optic/OPGW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ACE for the year :2026-27 (Actual/Projected)									
Land (Freehold Land)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building & Civil Works	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Transmission Lines	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Substations	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Comm. Sys. excluding Fiber Optic	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Land (Leasehold)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IT/Software/UNMS/URTDSM/SCADA,etc	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Batteries	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fiber Optic/OPGW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ACE for the year :2027-28 (Actual/Projected)									
Land (Freehold Land)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building & Civil Works	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00



Transmission Lines	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Substations	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Comm. Sys. excluding Fiber Optic	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Land (Leasehold)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IT/Software/UNMS/URTDISM/ SCADA,etc	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Batteries	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fiber Optic/OPGW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ACE for the year :2028-29 (Actual/Projected)									
Land (Freehold Land)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building & Civil Works	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Transmission Lines	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Substations	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Comm. Sys. excluding Fiber Optic	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Land (Leasehold)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IT/Software/UNMS/URTDISM/ SCADA,etc	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Batteries	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fiber Optic/OPGW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

(Petitioner)



Financing of Additional Capitalisation

Form No. - 7A

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	Northern Region System Strengthening-XXIII		
Element Description	Combined elements of NRSS-XXIII		
Region	Northern Region	DOCO Date	May 2, 2011

Financial Year (Starting of COD)	Actual/Projected					Admitted				
	2024-25	2025-26	2026-27	2027-28	2028-29	2024-25	2025-26	2026-27	2027-28	2028-29
Amount capitalized in Work/ Equipment										
Financing Details										
Total Loan	27.51	0.00	0.00	0.00	0.00					
Equity	11.79	0.00	0.00	0.00	0.00					
Total	39.30	0.00	0.00	0.00	0.00					

(Amount in Rs. Lakh)



(Petitioner)

Calculation of ROE

Form No. - 8

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	Northern Region System Strengthening-XXIII		
Element Description	Combined elements of NRSS-XXIII		
Region	Northern Region	DOCO Date	May 2, 2011

(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	3,349.62	3,361.41	3,361.41	3,361.41	3,361.41
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)	3,349.62	3,361.41	3,361.41	3,361.41	3,361.41
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	11.79	0.00	0.00	0.00	0.00
Closing Normative Equity	3,361.41	3,361.41	3,361.41	3,361.41	3,361.41
Average Normative Equity	3,355.52	3,361.41	3,361.41	3,361.41	3,361.41
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	630.23	631.34	631.34	631.34	631.34
Pro rata return on Equity	630.23	631.34	631.34	631.34	631.34



Calculation of WAR of interest on actual loan

Form No. - 9C

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	Northern Region System Strengthening-XXIII		
Element Description	Combined elements of NRSS-XXIII		
Region	Northern Region	DOCO Date	May 2, 2011

(Amount in Rs. Lakh)

Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
BOND XXXIII -ADDCAP FOR 2010-2011					
Gross Loan- Opening	126.76	126.76	126.76	126.76	126.76
Cumulative repayments of Loans upto previous year	105.63	116.20	126.76	126.76	126.76
Net loan-Opening	21.13	10.56	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	10.56	10.56	0.00	0.00	0.00
Net Loan-Closing	10.57	0.00	0.00	0.00	0.00
Average Net Loan	15.85	5.28	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	1.3694	0.4562	0.00	0.00	0.00

BOND XXXIII -DOCO					
Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
Gross Loan- Opening	2,021.30	2,021.30	2,021.30	2,021.30	2,021.30
Cumulative repayments of Loans upto previous year	1,684.42	1,852.86	2,021.30	2,021.30	2,021.30
Net loan-Opening	336.88	168.44	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	168.44	168.44	0.00	0.00	0.00
Net Loan-Closing	168.44	0.00	0.00	0.00	0.00



Average Net Loan	252.66	84.22	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	21.8298	7.2766	0.00	0.00	0.00

BOND XXXIII -DOCO DRAWL ON 01-NOV

Gross Loan- Opening	49.64	49.64	49.64	49.64	49.64
Cumulative repayments of Loans upto previous year	41.37	45.50	49.64	49.64	49.64
Net loan-Opening	8.27	4.14	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	4.14	4.14	0.00	0.00	0.00
Net Loan-Closing	4.13	0.00	0.00	0.00	0.00
Average Net Loan	6.20	2.07	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	0.5357	0.1788	0.00	0.00	0.00

BOND XXXII -DOCO DRAWL ON 01-DEC

Gross Loan- Opening	350.00	350.00	350.00	350.00	350.00
Cumulative repayments of Loans upto previous year	320.83	350.00	350.00	350.00	350.00
Net loan-Opening	29.17	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	29.17	0.00	0.00	0.00	0.00
Net Loan-Closing	0.00	0.00	0.00	0.00	0.00
Average Net Loan	14.59	0.00	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	1.2898	0.00	0.00	0.00	0.00



BOND XXXII -DOCO DRAWL ON 01-FEB					
Gross Loan- Opening	150.00	150.00	150.00	150.00	150.00
Cumulative repayments of Loans upto previous year	137.50	150.00	150.00	150.00	150.00
Net loan-Opening	12.50	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	12.50	0.00	0.00	0.00	0.00
Net Loan-Closing	0.00	0.00	0.00	0.00	0.00
Average Net Loan	6.25	0.00	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	0.5525	0.00	0.00	0.00	0.00

BOND XXXII -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	183.33	200.00	200.00	200.00	200.00
Net loan-Opening	16.67	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	16.67	0.00	0.00	0.00	0.00
Net Loan-Closing	0.00	0.00	0.00	0.00	0.00
Average Net Loan	8.34	0.00	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	0.7373	0.00	0.00	0.00	0.00

BOND-XXXIV -ADDCAP FOR 2010-2011					
Gross Loan- Opening	1,020.13	1,020.13	1,020.13	1,020.13	1,020.13
Cumulative repayments of Loans upto previous year	850.11	935.12	1,020.13	1,020.13	1,020.13
Net loan-Opening	170.02	85.01	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	85.01	85.01	0.00	0.00	0.00
Net Loan-Closing	85.01	0.00	0.00	0.00	0.00
Average Net Loan	127.52	42.51	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	11.2728	3.7579	0.00	0.00	0.00

BOND-XXXIV -DOCO

Gross Loan- Opening	1,172.00	1,172.00	1,172.00	1,172.00	1,172.00
Cumulative repayments of Loans upto previous year	976.67	1,074.33	1,172.00	1,172.00	1,172.00
Net loan-Opening	195.33	97.67	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	97.67	97.67	0.00	0.00	0.00
Net Loan-Closing	97.66	0.00	0.00	0.00	0.00
Average Net Loan	146.50	48.84	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	12.9506	4.3175	0.00	0.00	0.00

BOND-XXXIV -DOCO DRAWL ON 01-NOV

Gross Loan- Opening	196.00	196.00	196.00	196.00	196.00
Cumulative repayments of Loans upto previous year	163.33	179.67	196.00	196.00	196.00
Net loan-Opening	32.67	16.33	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	16.33	16.33	0.00	0.00	0.00
Net Loan-Closing	16.34	0.00	0.00	0.00	0.00
Average Net Loan	24.51	8.17	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	2.1667	0.7222	0.00	0.00	0.00

BOND-XXXV -ADDCAP FOR 2010-2011

Gross Loan- Opening	22.00	22.00	22.00	22.00	22.00
Cumulative repayments of Loans upto previous year	16.50	18.33	20.17	22.00	22.00
Net loan-Opening	5.50	3.67	1.83	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	1.83	1.83	1.83	0.00	0.00
Net Loan-Closing	3.67	1.84	0.00	0.00	0.00
Average Net Loan	4.59	2.76	0.92	0.00	0.00
Rate of Interest on Loan on Annual Basis	9.64	9.64	9.64	9.64	9.64
Interest on loan	0.4425	0.2661	0.0887	0.00	0.00

BOND-XXXV -ADDCAP FOR 2011-2012

Gross Loan- Opening	675.60	675.60	675.60	675.60	675.60
Cumulative repayments of Loans upto previous year	506.70	563.00	619.30	675.60	675.60
Net loan-Opening	168.90	112.60	56.30	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	56.30	56.30	56.30	0.00	0.00
Net Loan-Closing	112.60	56.30	0.00	0.00	0.00
Average Net Loan	140.75	84.45	28.15	0.00	0.00
Rate of Interest on Loan on Annual Basis	9.64	9.64	9.64	9.64	9.64
Interest on loan	13.5683	8.141	2.7137	0.00	0.00

BOND-XXXV -DOCO



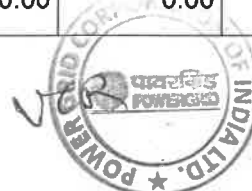
Gross Loan- Opening	383.90	383.90	383.90	383.90	383.90
Cumulative repayments of Loans upto previous year	287.93	319.92	351.91	383.90	383.90
Net loan-Opening	95.97	63.98	31.99	0.00	0.00
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	31.99	31.99	31.99	0.00	0.00
Net Loan-Closing	63.98	31.99	0.00	0.00	0.00
Average Net Loan	79.98	47.99	16.00	0.00	0.00
Rate of Interest on Loan on Annual Basis	9.64	9.64	9.64	9.64	9.64
Interest on loan	7.7101	4.6262	1.5424	0.00	0.00

BOND-XXXV -DOCO

Gross Loan- Opening	25.50	25.50	25.50	25.50	25.50
Cumulative repayments of Loans upto previous year	19.13	21.25	23.38	25.50	25.50
Net loan-Opening	6.37	4.25	2.12	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	2.13	2.13	2.13	0.00	0.00
Net Loan-Closing	4.24	2.12	-0.01	0.00	0.00
Average Net Loan	5.31	3.19	1.06	0.00	0.00
Rate of Interest on Loan on Annual Basis	9.64	9.64	9.64	9.64	9.64
Interest on loan	0.5119	0.3075	0.1022	0.00	0.00

BOND XXXVI -ADDCAP FOR 2011-2012

Gross Loan- Opening	48.00	48.00	48.00	48.00	48.00
Cumulative repayments of Loans upto previous year	25.60	28.80	32.00	35.20	38.40
Net loan-Opening	22.40	19.20	16.00	12.80	9.60
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00



Less: Repayment(s) of loan during the year	3.20	3.20	3.20	3.20	3.20
Net Loan-Closing	19.20	16.00	12.80	9.60	6.40
Average Net Loan	20.80	17.60	14.40	11.20	8.00
Rate of Interest on Loan on Annual Basis	9.35	9.35	9.35	9.35	9.35
Interest on loan	1.9448	1.6456	1.3464	1.0472	0.748

BOND XXXVII -ADDCAP FOR 2011-2012					
Gross Loan- Opening	241.65	241.65	241.65	241.65	241.65
Cumulative repayments of Loans upto previous year	181.24	201.38	221.51	241.65	241.65
Net loan-Opening	60.41	40.27	20.14	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	20.14	20.14	20.14	0.00	0.00
Net Loan-Closing	40.27	20.13	0.00	0.00	0.00
Average Net Loan	50.34	30.20	10.07	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	4.6565	2.7935	0.9315	0.00	0.00

BOND XXXVII -ADDCAP FOR 2011-2012					
Gross Loan- Opening	65.35	65.35	65.35	65.35	65.35
Cumulative repayments of Loans upto previous year	49.01	54.46	59.90	65.35	65.35
Net loan-Opening	16.34	10.89	5.45	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	5.45	5.45	5.45	0.00	0.00
Net Loan-Closing	10.89	5.44	0.00	0.00	0.00
Average Net Loan	13.62	8.17	2.73	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	1.2599	0.7557	0.2525	0.00	0.00
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BOND XXXVIII -ADDCAP FOR 2011-2012

Gross Loan- Opening	298.77	298.77	298.77	298.77	298.77
Cumulative repayments of Loans upto previous year	0.00	0.00	0.00	298.77	298.77
Net loan-Opening	298.77	298.77	298.77	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	298.77	0.00	0.00
Net Loan-Closing	298.77	298.77	0.00	0.00	0.00
Average Net Loan	298.77	298.77	149.39	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	27.6362	27.6362	13.8186	0.00	0.00

SBI (21.03.2012) -ADDCAP FOR 2011-2012

Gross Loan- Opening	100.00	100.00	100.00	100.00	100.00
Cumulative repayments of Loans upto previous year	72.64	81.72	90.80	100.00	100.00
Net loan-Opening	27.36	18.28	9.20	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	9.08	9.08	9.20	0.00	0.00
Net Loan-Closing	18.28	9.20	0.00	0.00	0.00
Average Net Loan	22.82	13.74	4.60	0.00	0.00
Rate of Interest on Loan on Annual Basis	8.20	8.20	8.20	8.20	8.20
Interest on loan	1.8712	1.1267	0.3772	0.00	0.00

BOND - XLII -ADDCAP FOR 2012-2013

Gross Loan- Opening	24.60	24.60	24.60	24.60	24.60
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Cumulative repayments of Loans upto previous year	24.60	24.60	24.60	24.60	24.60
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 2012-2013					
Gross Loan- Opening	11.46	11.46	11.46	11.46	11.46
Cumulative repayments of Loans upto previous year	11.46	11.46	11.46	11.46	11.46
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 2012-2013					
Gross Loan- Opening	65.49	65.49	65.49	65.49	65.49
Cumulative repayments of Loans upto previous year	65.49	65.49	65.49	65.49	65.49
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	56.31	56.31	56.31	56.31	56.31
Cumulative repayments of Loans upto previous year	56.31	56.31	56.31	56.31	56.31
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	93.80	93.80	93.80	93.80	93.80
Cumulative repayments of Loans upto previous year	93.80	93.80	93.80	93.80	93.80
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	120.12	120.12	120.12	120.12	120.12
Cumulative repayments of Loans upto previous year	120.12	120.12	120.12	120.12	120.12
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

SBI (2014-15) -ADD CAP 2017-18					
Gross Loan- Opening	56.00	56.00	56.00	56.00	56.00
Cumulative repayments of Loans upto previous year	28.00	33.60	39.20	44.80	50.40
Net loan-Opening	28.00	22.40	16.80	11.20	5.60
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	5.60	5.60	5.60	5.60	5.60
Net Loan-Closing	22.40	16.80	11.20	5.60	0.00
Average Net Loan	25.20	19.60	14.00	8.40	2.80
Rate of Interest on Loan on Annual Basis	8.20	8.20	8.20	8.20	8.20
Interest on loan	2.0664	1.6072	1.148	0.6888	0.2296

BOND XLIX -ADD CAP 2014-15					
Gross Loan- Opening	1.40	1.40	1.40	1.40	1.40
Cumulative repayments of Loans upto previous year	0.47	0.93	0.93	0.93	0.93



Net loan-Opening	0.93	0.47	0.47	0.47	0.47
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	0.47	0.00	0.00	0.00	0.00
Net Loan-Closing	0.46	0.47	0.47	0.47	0.47
Average Net Loan	0.70	0.47	0.47	0.47	0.47
Rate of Interest on Loan on Annual Basis	8.15	8.15	8.15	8.15	8.15
Interest on loan	0.0571	0.0383	0.0383	0.0383	0.0383

BOND60 (LX) -ADD CAP 2018-19

Gross Loan- Opening	67.29	67.29	67.29	67.29	67.29
Cumulative repayments of Loans upto previous year	0.00	0.00	0.00	0.00	67.29
Net loan-Opening	67.29	67.29	67.29	67.29	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	67.29	0.00
Net Loan-Closing	67.29	67.29	67.29	0.00	0.00
Average Net Loan	67.29	67.29	67.29	33.65	0.00
Rate of Interest on Loan on Annual Basis	7.20	7.20	7.20	7.20	7.20
Interest on loan	4.8449	4.8449	4.8449	2.4228	0.00

SBI-04 -ADD CAP 2018-19

Gross Loan- Opening	5.64	5.64	5.64	5.64	5.64
Cumulative repayments of Loans upto previous year	1.10	1.66	2.22	2.79	3.35
Net loan-Opening	4.54	3.98	3.42	2.85	2.29
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	0.56	0.56	0.56	0.56	0.56
Net Loan-Closing	3.98	3.42	2.86	2.29	1.73



Average Net Loan	4.26	3.70	3.14	2.57	2.01
Rate of Interest on Loan on Annual Basis	8.20	8.20	8.20	8.20	8.20
Interest on loan	0.3493	0.3034	0.2575	0.2107	0.1648

Summary

Gross Loan- Opening	7,648.71	7,648.71	7,648.71	7,648.71	7,648.71
Cumulative repayments of Loans upto previous year	6,023.29	6,600.51	7,118.93	7,554.10	7,630.75
Net loan-Opening	1,625.42	1,048.20	529.78	94.61	17.96
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	577.24	518.43	435.17	76.65	9.36
Net Loan-Closing	1,048.18	529.77	94.61	17.96	8.60
Average Net Loan	1,336.85	789.02	312.22	56.29	13.28
Rate of Interest on Loan on Annual Basis	8.9482	8.9733	8.7957	7.8305	8.8908
Interest on loan	119.6237	70.8015	27.4619	4.4078	1.1807

(Petitioner)



Calculation of interest on Normative loan

Form No. - 9E

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	Northern Region System Strengthening-XXIII		
Element Description	Combined elements of NRSS-XXIII		
Region	Northern Region	DOCO Date	May 2, 2011

(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	7,815.78	7,843.29	7,843.29	7,843.29	7,843.29
Cumulative repayments of Normative loan upto previous year	7,326.37	7,537.29	7,749.68	7,843.29	7,843.29
Net normative loan-Opening	489.41	306.00	93.61	0.00	0.00
Addition in normative loan towards the ACE	27.51	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	210.92	212.39	93.61	0.00	0.00
Adjustment of cumulative repayment pertaining to the decapitalised asset	0.00	0.00	0.00	0.00	0.00
Net normative loan - closing	306.00	93.61	0.00	0.00	0.00
Average normative loan	397.71	199.81	46.81	0.00	0.00
Weighted Average Rate of interest on actual loan	8.9482	8.9733	8.7957	7.8305	8.8908
Interest on normative loan	35.59	17.93	4.12	0.00	0.00
Pro rata interest on normative loan	35.59	17.93	4.12	0.00	0.00

(Petitioner)



Calculation of Depreciation Rate on Original Project Cost

Form No. - 10

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	Northern Region System Strengthening-XXIII		
Element Description	Combined elements of NRSS-XXIII		
Region	Northern Region	DOCO Date	May 2, 2011

(Amount in Rs. Lakh)

Name of Assets	Gross block at the beginning of the year	Add Cap during the year	Gross block at the end of the year	Average Gross Block	Depreciation Rate as per CERC's Depreciation Rate Schedule	Depreciation Amount for each year upto 31.03.2029
2024-25						
Land(Freehold)	0.00	0.00	0.00	0.00	0.00	0.00
Civil & Building	229.80	0.00	229.80	229.80	3.34	6.03
Transmission Line	0.00	0.00	0.00	0.00	5.28	0.00
Sub Station	10,899.65	39.30	10,938.95	10,919.30	5.28	204.71
Comm. Sys. excluding Fiber Optic	17.85	0.00	17.85	17.85	15.00	0.18
Leasehold Land	0.00	0.00	0.00	0.00	3.34	0.00
IT/Software/UNMS/URTDISM/SCADA,etc	18.10	0.00	18.10	18.10	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
TOTAL	11,165.40	39.30	11,204.70	11,185.05	0.00	210.92
Weighted Average Rate of Depreciation(%)					1.885731	

2025-26						
Land(Freehold)	0.00	0.00	0.00	0.00		0.00



Civil & Building	229.80	0.00	229.80	229.80	3.34	6.03
Transmission Line	0.00	0.00	0.00	0.00	5.28	0.00
Sub Station	10,938.95	0.00	10,938.95	10,938.95	5.28	206.18
Comm. Sys. excluding Fiber Optic	17.85	0.00	17.85	17.85	15.00	0.18
Leasehold Land	0.00	0.00	0.00	0.00	3.34	0.00
IT/Software/UNMS/URTDISM/SCADA,etc	18.10	0.00	18.10	18.10	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
TOTAL	11,204.70	0.00	11,204.70	11,204.70	0.00	212.39
Weighted Average Rate of Depreciation(%)					1.895544	

2026-27						
Land(Freehold)	0.00	0.00	0.00	0.00	0.00	0.00
Civil & Building	229.80	0.00	229.80	229.80	3.34	6.03
Transmission Line	0.00	0.00	0.00	0.00	5.28	0.00
Sub Station	10,938.95	0.00	10,938.95	10,938.95	5.28	206.18
Comm. Sys. excluding Fiber Optic	17.85	0.00	17.85	17.85	15.00	0.18
Leasehold Land	0.00	0.00	0.00	0.00	3.34	0.00
IT/Software/UNMS/URTDISM/SCADA,etc	18.10	0.00	18.10	18.10	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
TOTAL	11,204.70	0.00	11,204.70	11,204.70	0.00	212.39
Weighted Average Rate of Depreciation(%)					1.895544	



2027-28						
Land(Freehold)	0.00	0.00	0.00	0.00	0.00	0.00
Civil & Building	229.80	0.00	229.80	229.80	3.34	6.04
Transmission Line	0.00	0.00	0.00	0.00	5.28	0.00
Sub Station	10,938.95	0.00	10,938.95	10,938.95	5.28	206.19
Comm. Sys. excluding Fiber Optic	17.85	0.00	17.85	17.85	15.00	0.18
Leasehold Land	0.00	0.00	0.00	0.00	3.34	0.00
IT/Software/UNMS/URTDSM/SCADA,etc	18.10	0.00	18.10	18.10	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
TOTAL	11,204.70	0.00	11,204.70	11,204.70	0.00	212.41
Weighted Average Rate of Depreciation(%)					1.895722	

2028-29						
Land(Freehold)	0.00	0.00	0.00	0.00	0.00	0.00
Civil & Building	229.80	0.00	229.80	229.80	3.34	6.03
Transmission Line	0.00	0.00	0.00	0.00	5.28	0.00
Sub Station	10,938.95	0.00	10,938.95	10,938.95	5.28	206.18
Comm. Sys. excluding Fiber Optic	17.85	0.00	17.85	17.85	15.00	0.18
Leasehold Land	0.00	0.00	0.00	0.00	3.34	0.00
IT/Software/UNMS/URTDSM/SCADA,etc	18.10	0.00	18.10	18.10	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		0.00
TOTAL	11,204.70	0.00	11,204.70	11,204.70	0.00	212.39



Weighted Average Rate of Depreciation(%)					1.895544	
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(Petitioner)



Statement of Depreciation

Form No. - 10A

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	Northern Region System Strengthening-XXIII		
Element Description	Combined elements of NRSS-XXIII		
Region	Northern Region	DOCO Date	May 2, 2011

(Amount in Rs. Lakh)

Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
No of Days in the year	365.00	365.00	365.00	366.00	365.00
No of days for which tariff claimed	365.00	365.00	365.00	366.00	365.00
Life at the beginning of the year					
1.1 Weighted Average useful life of the Asset/ Project	25.00	25.00	25.00	25.00	25.00
1.2 Lapsed Weighted Average useful life of the Asset/Project(in completed no. of year)	12.00	13.00	14.00	15.00	16.00
1.3 Balance Weighted Average useful life of the Asset/Project(in completed no. of year)	13.00	12.00	11.00	10.00	9.00
Capital Base					
1.4 Opening capital cost	11,165.40	11,204.70	11,204.70	11,204.70	11,204.70
1.5 Additional Capital Expenditure dr. the year	39.30	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	11,204.70	11,204.70	11,204.70	11,204.70	11,204.70
1.8 Average capital cost	11,185.05	11,204.70	11,204.70	11,204.70	11,204.70
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	18.10	18.10	18.10	18.10	18.10
1.11 Asset having 10% salvage value included in 1.8	11,166.95	11,186.60	11,186.60	11,186.60	11,186.60
1.12 Depreciable Value(1.10+90% of 1.11)	10,068.36	10,086.05	10,086.05	10,086.05	10,086.05
Depreciation for the period and Cum. Depreciation					
1.13 Weighted Average Rate of depreciation	1.885731	1.895544	1.895544	1.895722	1.895544



1.14 Depreciation(for the period)	210.92	212.39	212.39	212.41	212.39
1.15 Depreciation(Annualised)	210.92	212.39	212.39	212.41	212.39
Unrecovered Depreciation for DECAP	0.00	0.00	0.00	0.00	0.00
1.16 Cumulative depreciation at the beginning of the period	7,326.37	7,537.29	7,749.68	7,962.07	8,174.48
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	7,537.29	7,749.68	7,962.07	8,174.48	8,386.87

(Petitioner)



Calculation of interest on working Capital

Form No. - 11

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	Northern Region System Strengthening-XXIII		
Element Description	Combined elements of NRSS-XXIII		
Region	Northern Region	DOC Date	May 2, 2011

(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	68.23	71.85	75.54	79.47	83.80
Maintenance spares 15% of O&M Expenses	122.81	129.32	135.97	143.04	150.83
Receivables equivalent to 45 days of AFC	214.98	218.68	222.66	227.57	234.88
Total Working capital	406.02	419.85	434.17	450.08	469.51
Bank Rate as on 01.04.2024 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	48.32	49.96	51.67	53.56	55.87
Pro rata interest on working capital	48.32	49.96	51.67	53.56	55.87

(Petitioner)



Summary of issue involved in the petition

**PART-III
FORM- 15**

1. Name of the Petitioner	Power Grid Corporation of India Ltd
2. Petition Category	Transmission
3. Tariff Period	2024-29
4. Name of the Project	Northern Region System Strengthening Scheme- XXIII
5. Investment Approval date	10.12.2009
6. SCOD of the Project	
7. Actual COD of the project	10.12.2011 02.05.2011 (E-COD)
8. Whether entire scope is covered in the present petition.	Yes
9. No. of Assets covered in instant petition	1 (Combined Asset)
10. No. of Assets having time over run	
11. Estimated Project Cost as per IA	Rs.10972.44 Lakhs
12. Is there any REC? if so, provide the date	Rs.11727.00 Lakhs
13. Revised Estimated Project Cost (if any)	
14. Completion cost for all the assets covered in the instant petition.	Rs.11204.70 Lakhs
15. No. of Assets covered in instant petition and having cost overrun.	NIL
16	Prayer in brief
17	Key details and any Specific issue involved:
18	Respondents
Name of Respondents	
1	AJMER VIDYUT VITRAN NIGAM LTD
2	JAIPUR VIDYUT VITRAN NIGAM LTD
3	JODHPUR VIDYUT VITRAN NIGAM LTD
4	HIMACHAL PRADESH STATE ELECTRICITY BOARD LTD
5	PUNJAB STATE POWER CORPORATION LIMITED
6	HARYANA POWER PURCHASE CENTRE
7	POWER DEVELOPMENT DEPTT
8	UTTAR PRADESH POWER CORPORATION LTD.
9	BSES YAMUNA POWER Ltd
10	BSES RAJDHANI POWER Ltd
11	TATA POWER DELHI DISTRIBUTION LTD
12	CHANDIGARH ADMINISTRATION
13	UTTARAKHAND POWER CORPORATION LTD
14	NORTH CENTRAL RAILWAY
15	NEW DELHI MUNICIPAL COUNCIL

(Petitioner)



PART-III

Summary of Capital Cost & Annual Fixed Cost (AFC) Claimed for ALL the assets covered in the present petition.	
Name of the Petitioner	Power Grid Corporation of India Ltd
Tariff Period	2024-29
Name of the Transmission Project	Northern Region System Strengthening Scheme- XXIII
COD of the Project (if entire scope of project is completed)	02.05.2011 (B-COD)

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	ii) Summary of Actual / Projected Capital Cost										
				i) Appropriated Approved Cost			ii) Summary of Actual / Projected Capital Cost							
				As per Investment approval	As per RCE	As on COD/ 31.03.2024	2024-25	2025-26	2026-27	2027-28	2028-29	Capital Cost as on 31.03.2029	Total Completion Cost	
1	Combined Asset	1	2	3	4	5	6	7	8	9	10	11=(5+6+7+8+9+10)	12	
				10972.44	11727.00	11165.40	39.30	0.00	0.00	0.00	0.00	11204.70	11204.70	
Total Capital Cost Claimed				10972.44	11727.00	11165.40	39.30	0.00	0.00	0.00	0.00	11204.70	11204.70	

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	Combined Asset	Comined Asset under Northern Region System Strengthening Scheme-XXIII	1743.76	1773.76	1806.00	1850.91	1905.16
Total AFC for all the Assets			1743.76	1773.76	1806.00	1850.91	1905.16

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

(Petitioner)



End-6

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	✓
FORM- 7	Statement of Additional Capitalisation after COD	✓
FORM- 7A	Financing of Additional Capitalisation	✓
FORM- 7B	Statement of Additional Capitalisation during five year before the end of the useful life of the project.	NA
FORM- 8	Calculation of Return on Equity	✓
FORM-8A	Details of Foreign Equity	NA
FORM-9	Details of Allocation of corporate loans to various transmission elements	NA
FORM-9A	Details of Project Specific Loans	NA
FORM-9B	Details of Foreign loans	NA
FORM-9C	Calculation of Weighted Average Rate of Interest on Actual Loans	✓
FORM-9D	Loans in Foreign Currency	NA
FORM-9E	Calculation of Interest on Normative Loan	✓
FORM- 10	Calculation of Depreciation Rate on original project cost	✓
FORM- 10A	Statement of Depreciation	✓
FORM- 10B	Statement of De-capitalisation	NA
FORM- 11	Calculation of Interest on Working Capital	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.

