

BEFORE
THE CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

Petition No. ___ /TT/ ___

IN THE MATTER OF: -

Subject matter: Petition for truing up of Transmission tariff for 2019-24 and determination of transmission tariff for 2024-29 tariff block for **2nd Spare Converter Transformers at Kolar and Talcher of Talcher-Kolar HVDC Link in Southern Region** under Section 62 read with Section 79 (1) (d) of 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 Condition of Tariff Regulations) 2019 and Central Electricity Regulatory Commission (Terms and Condition 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).

Tamil Nadu Generation and Distribution Corporation Ltd

--- RESPONDENTS

NPKRR Maaligai, 800, Anna Salai,
Chennai – 600 002
Represented by its Chairman & Managing Director
And others

Place: Gurgaon

Date: 27.07.2024

Petitioner


(Mohd Mohsin)

Chief General Manager (Commercial/RC)



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FILED BY

POWER GRID CORPORATION OF INDIA LTD.

GURGAON

DATED: 27.07.2024

REPRESENTED BY


(Mohd Mohsin)

Chief General Manager (Commercial/RC)



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Represented by its Chairman & Managing Director

And others

----- RESPONDENTS

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 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 Condition of Tariff Regulations) 2019 and



Central Electricity Regulatory Commission (Terms and Condition of Tariff Regulations) 2024 and same may be pleased to be registered and taken on record by the Hon'ble Commission.

GURGAON

FILED BY

DATED:27.07.2024

POWER GRID CORPORATION OF INDIA LTD.

REPRESENTED BY



Mohd Mohsin

Chief General Manager (Commercial/RC)



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Tamil Nadu Generation and Distribution Corporation Ltd

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Chennai – 600 002

Represented by its Chairman & Managing Director

And others

MEMO OF PARTIES

Power Grid Corporation of India Ltd.

--- PETITIONER

VERSUS

Southern Region

---RESPONDENTS

1. Tamil Nadu Generation and Distribution Corporation Ltd



NPKRR Maaligai, 800, Anna Salai,
Chennai – 600 002
Represented by its Chairman & Managing Director

2.Kerala State Electricity Board Ltd (KSEBL)
Vaidyuthi Bhavanam
Pattom, Thiruvananthapuram – 695 004
Represented by its Chairman

3.Electricity Department
Government of Goa
Vidyuti Bhawan, Panaji, Goa 403001
Represented by Chief Engineer (Electrical)

4.Electricity Department
Govt of Pondicherry,
137, Netaji Subash Chandra Bose Salai
Pondicherry - 605001
Represented by its Chief Secretary

5.Eastern Power Distribution Company of Andhra Pradesh
Limited (APEPDCL),
APEPDCL, P&T Colony,
Seethmmadhara, VISHAKHAPATNAM, Andhra Pradesh,
Represented by its Chairman & Managing Director

6.Southern Power Distribution Company of Andhra Pradesh Ltd
(APSPDCL)
#19-13-65/A, Srinivasapuram, Tiruchanoor Road
Tirupati – 517503, Andhra Pradesh
Represented by Its Chairman & Managing Director

7.Andhra Pradesh Central Power Distribution Company Limited
(APCPDCL)
Corporate Office, Beside Polytechnic College, ITI Road



Vijayawada - 520 008, Krishna District, Andhra Pradesh
Represented by Its Chairman & Managing Director

8.Southern Power Distribution Company of Telangana Limited
(TSSPDCL)

6-1-50, Corporate Office, Mint Compound,
HYDERABAD – 500 063, Telangana
Represented by Its Chairman & Managing Director

9.Northern Power Distribution Company of Telangana Limited
(TSNPDCL)

H.No 2-5-3 1/2, Vidyut Bhawan, Corporate Office,
Nakkal Gutta, Hanamkonda, WARANGAL – 506 001, Telangana
Represented by Its Chairman & Managing Director

10.Bangalore Electricity Supply Company Ltd., (BESCOM),
Corporate Office, K.R.Circle

BANGALORE – 560 001, Karanataka
Represented by Its Managing Director

11.Gulbarga Electricity Supply Company Ltd., (GESCOM)

Corporate Office, Station Main Road, Opp. Parivar Hotel,
Gulbarga (Kalburgi), KARNATAKA - 585102
Represented by Its Managing Director

12.Hubli Electricity Supply Company Ltd., (HESCOM)

Navanagar, PB Road, HUBLI, Karnataka- 580025
Represented by Its Managing Director

13.Mangalore Electricity Supply Company Ltd., (MESCOM)

Corporate Office,1st Floor, MESCOM Bhavan,
Kavoor Cross Road, Bejai, Mangalore – 575 004,Karnataka
Represented by Its Managing Director

14.Chamundeswari Electricity Supply Corporation Ltd., (CESC)



Corporate Office, #29, Vijayanagara 2nd Stage,
Hinkal, Mysuru-570017, KARNATAKA
Represented by Its Managing Director

GURGAON

DATED:27.07.2024

PETITIONER
POWER GRID CORPORATION OF INDIA LTD.
REPRESENTED BY



Mohd Mohsin

Chief General Manager (Commercial/RC)



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Represented by its Chairman & Managing Director

--- RESPONDENT

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/RC), POWERGRID**
3. Shri V. C. Sekhar, Sr. GM (Comml- RC), POWERGRID
4. Shri Zafrul Hasan, GM (Comml- Petition), POWERGRID

I, Mohd Mohsin, 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 27th day of July 2024.

PETITIONER
POWER GRID CORPORATION OF INDIA LTD.

GURGAON

DATED:27.07.2024


Mohd Mohsin
Chief General Manager (Commercial/RC)



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Tamil Nadu Generation and Distribution Corporation Ltd
NPKRR Maaligai, 800, Anna Salai,
Chennai – 600 002
Represented by its Chairman & Managing Director

----- RESPONDENTS

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, maintain and operate an efficient, coordinated and economical interstate 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 Central Commission**”). Tariff for the transmission system established by POWERGRID is required to be determined by this Hon’ble Central Commission in accordance with the Tariff Regulations as notified by this Hon’ble Central 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 department of the respective states which are engaged in distribution of electricity mainly in Southern Region of India. The respondents are also ‘Designated Inter State Transmission Customer’ (hereinafter referred to as ‘DICS’) in terms of the 2020 Sharing Regulations from Southern region.

(iii) Background of Transmission Assets:

- 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 following Assets which are implemented under “**2nd Spare Converter Transformers at Kolar and Talcher of Talcher-Kolar HVDC Link** ” for the following:

Asset No	Asset Name	DOCO	Remarks
Combined Asset	Transformer-I at Kolar	01.06.2011	Effective DOCO w.e.f. 1.10.2011
	Transformer-I at Talcher	01.10.2011	

(iv) Summary of Claims:

- POWERGRID is seeking truing up of transmission tariff for 2019-24 and determination of transmission tariff for 2024-29 tariff block for aforesaid transmission assets on capital cost comprising of capital cost admitted upto 31.03.2019 and additional capital expenditure during 2019-24 & 2024-29 in accordance with terms of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (“**Tariff Regulations, 2019**”) and Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2024 (“**Tariff Regulations, 2024**”).



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

Rs in lakhs

Asset No.	Approved Cost	Expenditure admitted Up to 31.03.2019	Expenditure during 2019-24 tariff block	Actual Cost as on 31.03.2024
			2019-24	
Combined Asset	13553.00	13531.95	No add cap	13531.95

Rs in lakhs

Asset No.	Approved Cost	Expenditure Up to 31.03.2024	Estimated expenditure during 2024-29 tariff block	Estimated completion Cost as on 31.03.2029
			2024-29	
Combined Asset	13553.00	13531.95	No add cap	13531.95

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

6. 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	1841.43	1774.65	1709.51	1644.23	1578.61
	Revised AFC based on truing up	1,841.43	1,774.65	1,707.91	1,642.68	1,580.08

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	1,062.15	1,039.18	1,026.56	1,025.49	1,025.53



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, maintain and operate an efficient, coordinated and economical interstate transmission system (ISTS). The tariff for the said transmission systems shall be determined by the Hon'ble Central Commission in accordance with the Tariff Regulations, 2019 and 2024.
9. That the subject project/petition covers approval of transmission tariff for following Assets:

Asset No	Asset Name	DOC	Effective DOC	Remarks
Combined Asset	Transformer-I at Kolar	01.06.2011	01.10.2011	Earlier covered under petition no. 349/TT/2019 (Now, covered under instant petition)
	Transformer-I at Talcher	01.10.2011		

10. Cost detail:

The capital cost of Rs.13531.95 Lakhs for subject Asset has been admitted by Hon'ble commission vide order dated 28.08.2020 in petition no. 349/TT/2019. Copy of order is enclosed as **Encl-1**. In the current petition, no additional capital expenditure was incurred during the 2019-24 tariff block, and no additional capital expenditures are proposed during the 2024-29 tariff block.

11. Transmission tariff:

This truing up petition is being filed as per regulation 13 of Tariff Regulation 2019-24, given as here under:



Regulation 13 of Tariff Regulation 2019-24:

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 Regulation 2019-24 period dated 07.03.2019 in the truing up petition for 2019-24 tariff block.

Regulation 31 (3) of the tariff Regulation 2019-24:

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 has 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.



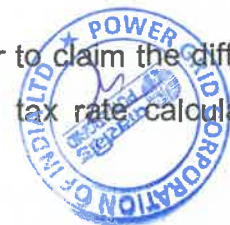
As such, basis of year wise effective tax rate and Grossed up ROE trued up accordingly for the block period 2019-24 is summarized as under.

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 @ 15.5 %, 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 28.08.2020 in petition no. 349/TT/2019, 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.

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

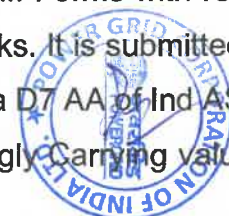
12. The trued up annual transmission tariff for the tariff period 2019-24 is summarized as below:

Rs in Lakh

Project		2019-20	2020-21	2021-22	2022-23	2023-24
Combined Asset	AFC approved	1841.43	1774.65	1709.51	1644.23	1578.61
	Revised AFC based on truing up	1,841.43	1,774.65	1,707.91	1,642.68	1,580.08

Tariff Filing Formats along with the other relevant information and supporting documentation are attached hereto as **Encl-2**.

That in the subject petition, details are provided in various Tariff Forms with respect to Capital Cost as per books / Gross Block amount as per Books. It is submitted that the petitioner has opted for deemed cost exemption as per Para D7 AA of Ind AS 101 'First-time Adoption of Indian Accounting Standards'. Accordingly, Carrying value i.e.



Gross Block less Accumulated Depreciation is considered as deemed cost as on the date of transition i.e. 1st April 2015. As such, in case of assets commissioned before 01.04.2015, the accumulated depreciation as on 1st April 2015 is added back to the deemed Capital Cost as per books / Gross Block amount as per Books for arriving at the figures to be provided in various Tariff Forms.

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

Rs in Lakh

Project		2024-25	2025-26	2026-27	2027-28	2028-29
Combined Asset	AFC	1,062.15	1,039.18	1,026.56	1,025.49	1,025.53

Tariff Filing Formats along with the other relevant information and supporting documentation are attached hereto as **Encl-3**.

14. The Combined Asset completes 12 years of life as on 31.3.2024 and thus depreciation till 2023-24 has been calculated based on the straight-line method and at rate specified in Appendix-I and as per clause 33 (5) of the CERC Tariff regulations 2019. Since the year 2024-25, depreciation has been calculated based on remaining depreciable value to be recovered in the balance useful life. The details have been computed and are provided in Form- 10 A.

15. That, it is submitted that the petitioner is currently liable to pay income tax at MAT rate specified in Income-Tax, 1961. Therefore, ROE has been calculated @ 18.782% after grossing up the ROE with MAT rate of 17.472% (Base Rate 15% + Surcharge 12% + Cess 4%) based on the formula given at regulation 31 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2024 for 2024-29 period. That as per clause 31 (3) of the above regulation, the grossed up rate of ROE at the end of every financial year shall be trued up based on actual tax paid together with any additional tax demand including interest thereon duly adjusted for any refund of tax including interest received from the IT authorities pertaining to the tariff period 2024-29 on actual gross income of any financial year. However, penalty, if any, arising on account of delay in deposit or short deposit of tax amount shall not be claimed by the generating company or the transmission licensee, as the case may be. Any under-recovery or over-recovery of grossed up rate on ROE after truing up shall be recovered or refunded to beneficiaries or the long term customers, as the



case may be on year to year basis. It is further submitted that adjustment due to any additional tax demand including interest duly adjusted for any refund of tax including interest received from IT authorities shall be recoverable /adjustable during the tariff period 2024-29 on year to year basis on receipt of Income Tax assessment order.

16. Under CGST Act, 2017 implemented w.e.f. 01.07.2017, the Govt. of India has exempted the charges of transmission of electricity vide notification no. 12/2017 – Central Tax (Rate) dated 28.06.2017 at serial no. 25 under the heading 9969 “Transmission or distribution of electricity by an electric transmission or distribution utility” by giving applicable GST rate as NIL. Hence, the Transmission Charges as indicated at para 8.4 above is exclusive of GST. Further, if GST is levied at any rate and at any point of time in future on Charges of Transmission of Electricity, the same shall be borne and additionally paid by the respondent(s) to the petitioner and the same shall be charged & billed separately by the petitioner. Further additional taxes, if any, are to be paid by the petitioner on account of demand from Govt. / Statutory authorities, the same may be allowed to be recovered from the beneficiaries.
17. In the tariff calculation 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 calculation 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. These documents/details will also be made available on our website www.powergrid.in.

18. Nil O&M have been claimed in the transmission charges at para-12 & 13 as the asset is spare in nature.
19. That as per Regulation 36(3)(d) of CERC Tariff Regulations, 2024, the Security Expenses, Insurance and Capital Spares more than Rs. 10 Lakh for transmission system shall be allowed separately after prudence check.



Security Expenses:

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

Insurance:

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

Capital Spares:

With regard to Capital Spares, the Petitioner has filed a separate Petition bearing No 45/MP/2024 for claiming the capital spares under Tariff Regulations 2019. 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 at the end of tariff block as per actual through a separate petition.

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

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

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



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

Tariff for Transmission of Electricity (Annual Fixed Cost) for 2019-24 as per para 12 above shall be recovered on monthly basis in accordance with Regulation 57 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 and shall be shared by the beneficiaries and long-term transmission customers in Central Electricity Regulatory Commission (Sharing of Inter State Transmission Charges and Losses) Regulations, 2010 & 2020 or as amended from to time.

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



24. In the circumstances mentioned above it will be just and proper that the transmission tariff for the asset covered under this petition be allowed to be charged from the beneficiaries on the basis set out above. **The Petitioner submits that Encl.-1 to Encl.-4 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 assets covered under this petition, as per para 12 and 13 above.
- b) Allow the petitioner to recover the shortfall or refund the excess Annual Fixed Charges, on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission as provided in Tariff Regulation 2019 and Tariff regulations 2024 as per para 12 and 13 above for respective block.
- c) Approve the reimbursement of expenditure by the beneficiaries towards petition filing fee, and expenditure on publishing of notices in newspapers in terms of Regulation 94 (1) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2024, and other expenditure (if any) in relation to the filing of petition.
- d) Allow the petitioner to bill and recover Licensee fee and RLDC fees & charges, separately from the respondents in terms of Regulation 94 (3) and (4) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2024.
- e) Allow the petitioner to bill and adjust impact on Interest on Loan due to change in Interest rate on account of floating rate of interest applicable during 2024-29 period, if any, from the respondents.



- f) Allow the petitioner to file a separate petition before Hon'ble Commission for claiming the overall security expenses and consequential IOWC on that security expenses as mentioned at para 19 above.
- g) Allow the petitioner to file a separate petition before Hon'ble Commission for claiming the overall insurance expenses and consequential IOWC on that insurance expenses as mentioned at para 19 above.
- h) Allow the petitioner to file a separate petition before Hon'ble Commission for claiming the overall capital spares at the end of tariff block as per actual as mentioned at Para 19 above.
- i) Allow the petitioner to claim expenses of CTUIL borne by POWERGRID through a separate petition as mentioned at para 20 above.
- j) Allow the Petitioner to bill and recover GST on Transmission Charges separately from the respondents, if GST on transmission is levied at any rate in future. Further, any taxes including GST and duties including cess etc. imposed by any statutory/Govt./municipal authorities shall be allowed to be recovered from the beneficiaries.

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

GURGAON

DATED:27.07.2024

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

REPRESENTED BY


Mohd Mohsin

Chief General Manager (Commercial/RC)



BEFORE
THE CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

PETITION NO.:

IN THE MATTER OF:

Subject matter: Petition for truing up of Transmission tariff for 2019-24 and determination of transmission tariff for 2024-29 tariff block for **2nd Spare Converter Transformers at Kolar and Talcher of Talcher-Kolar HVDC Link in Southern Region** under Section 62 read with Section 79 (1) (d) of 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 Condition of Tariff Regulations) 2019 and Central Electricity Regulatory Commission (Terms and Condition 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).

Tamil Nadu Generation and Distribution Corporation Ltd

--- RESPONDENT

NPKRR Maaligai, 800, Anna Salai,
Chennai – 600 002

Represented by its Chairman & Managing Director

And others

AFFIDAVIT VERIFYING THE PETITION

I, Mohd Mohsin, S/o late Shri Akhtar Hasan, working as Chief General Manager (Commercial/RC) in the Powergrid Corporation of India Ltd., having its registered Office at B-9, Institutional Area, Katwaria Sarai, New Delhi-110 016, do hereby solemnly affirm and state as under: -

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



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



VERIFICATION

Solemnly affirmed at Gurgaon on this 27th day of July' 2024 that the contents of the above affidavit are true to my knowledge and belief and no part of it is false and nothing material has been concealed there from.



ATTESTED

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



पावर ग्रिड कॉर्पोरेशन ऑफ इंडिया लिमिटेड
केन्द्रीय वाणिज्यिक विभाग


Ref: CC/Commercial/2022

Date:-13.12.2022

LETTER OF AUTHORIZATION

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

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


13/12/22

Mukesh Khanna

ED (Commercial &RC)



केन्द्रीय कार्यालय : "सौदामिनी" प्लॉट सं. 2, सेक्टर-29, गुरुग्राम-122001, (हरियाणा), दूरभाष : 0124-2571700-719
Corporate Office : "Saudamini", Plot No. 2, Sector-29, Gurugram-122001, (Haryana) Tel. : 0124-2571700-719

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

Encl-1

CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

Petition No. 349/TT/2019

Coram:

**Shri I.S. Jha, Member
Shri Arun Goyal, Member**

Date of Order: 28.08.2020

In the matter of

Approval under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations 1999 and truing up of transmission tariff of 2014-19 period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff for 2019-24 period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations 2019 of 2nd Spare Converter Transformers at Kolar and Talcher of Talcher-Kolar HVDC Link in Southern Region.

And in the matter of

Power Grid Corporation of India Limited
"Saudamini", Plot No.2,
Sector-29, Gurgaon -122 001

.... **Petitioner**

Versus

1. Karnataka Power Transmission Corporation Ltd.,
(KPTCL), Kaveri Bhavan,
Bangalore - 560 009
2. Transmission Corporation of Andhra Pradesh Ltd.,
(APTRANSCO), Vidyut Soudha,
Hyderabad- 500082
3. Kerala State Electricity Board (KSEB)
Vaidyuthi Bhavanam Pattom,
Thiruvananthapuram - 695 004
4. Tamil Nadu Generation and Distribution Corporation Ltd,
(TANGEDCO), (Formerly Tamil Nadu Electricity Board -TNEB)
NPKRR Maaligai, 800, Anna Salai,
Chennai - 600 002

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Page no 28-57
Authorised Signatory
Power Grid Corporation of India Ltd
Plot No. 2, Sector-29, Gurgaon-122001/4400



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5. Electricity Department,
Govt of Pondicherry,
Pondicherry – 605 001
6. Eastern Power Distribution Company of Andhra Pradesh Limited
(APEPDCL), P&T Colony, Seethmmadhara,
Vishakhapatnam
7. Southern Power Distribution Company of Andhra Pradesh Limited
(APSPDCL), Srinivasasa Kalyana Mandapam Backside,
Tiruchanoor Road, Kesavayana Gunta, Tirupati-517 501
8. Central Power Distribution Company of Andhra Pradesh limited
(APCPDCL), Corporate Office, Mint Compound,
HYDERABAD - 500 063
9. Northern Power Distribution Company of Andhra Pradesh Limited
(APNPDCL), Opp. NIT Petrol Pump, Chaitanyapuri,
Kazipet, WARANGAL - 506 004
10. Bangalore Electricity Supply Company Ltd.,
(BESCOM), Corporate Office, K.R.Circle,
BANGALORE - 560 001, Karanataka
11. Gulbarga Electricity Supply Company Ltd.,
(GESCOM) Station Main Road,
Gulbarga, Karnataka
12. Hubli Electricity Supply Company Ltd.,
(HESCOM) Navanagar, PB Road,
Hubli, Karnataka
13. Mangalore Electricity Supply Company Ltd.,
(MESCOM), Corporate Office,
Paradigm Plaza, AB Shetty Circle,
Mangalore - 575001, Karnataka
14. Chamundeswari Electricity Supply Corporation Ltd.,
(CESC), # 927, L J Avenue Ground Floor,
New Kantharaj Urs Road, Saraswatipuram,
Mysore - 570 009, Karnataka
15. Electricity Department, Government of Goa
Vidyuti Bhawan, Panaji,
Goa 403001
16. Transmission Corporation of Telangana Limited,
Vidhyut Soudha, Khairatabad,
Hyderabad-500082
17. Tamil Nadu Transmission Corporation Limited,
, NPKRR Maaligai, 800,
Anna Salai, Chennai - 600 002



Respondent



Parties present:

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

For Respondent: None

ORDER

The present petition has been filed by Power Grid Corporation of India Ltd. ("the Petitioner") for truing up of the tariff for the 2014-19 tariff period under Regulation 8 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as "the 2014 Tariff Regulations") and for determination of tariff of the 2019-24 tariff period under Regulation 8 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as "the 2019 Tariff Regulations") of 2nd Spare Converter Transformers at Kolar and Talcher of Talcher-Kolar HVDC Link in Southern Region (hereinafter referred as "the transmission asset").

2. The Petitioner has made the following prayers:

- "1) Approve the trued-up Transmission Tariff for the tariff block 2014-19 and transmission tariff for 2019-24 block for the assets covered under this petition, as per para 5 and 6 above.*
- 2) Allow the Petitioner to recover the shortfall or refund the excess Annual Fixed Charges, on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission as provided in Tariff Regulations 2014 and Tariff Regulations 2019 as per para 9 and 10 above for respective block.*
- 3) Approve the reimbursement of expenditure by the beneficiaries towards petition filing fee, and expenditure on publishing of notices in newspapers in terms of Regulation 70(1) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019, and other expenditure (if any) in relation to the filing of petition.*
- 4) Allow the Petitioner to bill and recover Licensee fee and RLDC fees and charges, separately from the respondents in terms of Regulation 70(3) and (4) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019.*



- 5) Allow the Petitioner to bill and adjust impact on Interest on Loan due to change in Interest rate on account of floating rate of interest applicable during 2019-24 period, if any, from the respondents.
- 6) Allow the Petitioner to file a separate petition before the Commission for claiming the overall security expenses and consequential IOWC on that security expenses as mentioned at para 6.6 above.
- 7) Allow the petitioner to claim the capital spares at the end of tariff block as per actual.
- 8) Allow the Petitioner to bill and recover GST on Transmission Charges separately from the respondents, 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 the 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) Southern Regional Electricity Board (SREB), in its meeting held on 10.8.2004, agreed for procurement of two additional converter transformers for Talcher-Kolar HVDC Bi-pole, one each at Talcher and Kolar terminals. Accordingly, the administrative approval and expenditure sanction for the procurement of two nos. 397 MVA Converter Transformers was accorded by the Board of Directors of the Petitioner company in its 170th meeting held on 1.8.2005 at an estimated cost of ₹6525 lakh, including Interest During Construction (IDC) of ₹104 lakh. The Board of Directors of the Petitioner subsequently accorded approval for the revised estimated cost of ₹13553 lakh, including IDC of ₹527 lakh based on the 1st Quarter, 2011 price level. The revised approval was conveyed under order No C/CP/Spare Convrt. Talcher & Kolar dated 20.12.2011. The Petitioner has built the transmission asset in the Southern Region. The dates of the commercial operation of Converter Transformer at Kolar (Transformer-I) and Converter Transformer at Talcher (Transformer-II) are 1.6.2011 and 1.10.2011, respectively.

- (b) The details of assets i.e. 2nd Spare Converter Transformers at Kolar and Talcher of Talcher-Kolar HVDC Link, are as under:

Name of Asset	Actual COD	Remarks
Transformer-I at Kolar	1.6.2011	Commission Combined both assets for claiming



Transformer-II at Talcher	1.10.2011	tariff during 2009-14 w.e.f. 1.10.2011 in petition no 511/TT/2014
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(c) The tariff from 1.6.2011 to 30.9 .2011 for Transformer-I and tariff from 1.10.2011 to 31.03.2012 as well as for 2012-13 and 2013-14 for Combined Transformers- I & II was allowed vide order dated 20.1.2014 in Petition No. 111/TT/2011 in accordance with the 2009 Tariff Regulations.

(d) The Commission, vide order dated 29.2.2016 in petition no. 511/TT/2014, trued-up tariff for the 2009-14 tariff period and the admitted cost of Combined Transformer- I & II was ₹13531.95 lakh as on 31.3.2014.

(e) The Petitioner did not claim any additional capital expenditure for Combined Transformer- I & II for the tariff period 2014-19. Accordingly, final Transmission tariff for tariff period 2014-19 based on admitted cost ₹13531.95 lakh as on 1.4.2014 and as on 31.3.2019 of the said transmission system was approved by the Commission vide order dated 29.2.2016 in petition no. 511/TT/2014.

4. As provided under Regulation 8(1) of the 2014 Tariff Regulations, the tariff allowed for the period from 1.4.2014 to 31.3.2019 is being trued-up and the tariff for the 2019-24 period is being determined under Regulation 8 of the 2019 Tariff Regulations.

5. The respondents are distribution licensees and power departments, who are procuring transmission service from the Petitioner, mainly beneficiaries of Southern Region.

6. The Petitioner has served the petition on the respondents and notice of this application has been published in the newspaper in accordance with Section 64 of the Electricity Act, 2003. No comments/ objections have been received from the public in response to the notice in newspaper. The Respondent, Power Company of Karnataka Limited (PCKL), has submitted reply vide affidavit dated 20.8.2020 in the matter



7. The Petition was heard on 31.7.2020 and the Commission reserved the order in the Petition. Having heard the representatives of the Petitioner and perused the material on record, we proceed to dispose of the petition.

8. This order has been issued after considering the main petition dated 5.8.2019 and reply of PCKL vide affidavit dated 20.8.2020.

Analysis and Decision

Truing-Up of Annual Fixed Charges of 2014-19 Tariff Period

9. The Commission vide order 29.2.2016 in petition no. 511/TT/2014 had approved the tariff allowed for 2014-19 tariff period as below:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	714.49	714.49	714.49	714.49	714.49
Interest on Loan	655.05	591.58	527.98	464.27	400.50
Return on Equity	796.08	796.08	796.08	796.08	796.08
Interest on Working Capital	49.85	48.39	46.92	45.46	43.99
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Total	2215.47	2150.54	2085.47	2020.30	1955.06

10. The Petitioner has submitted the information as required under the 2014 Tariff Regulations for truing up of annual fixed charges for 2014-19 period. The tariff for 2014-19 tariff period has been trued up as discussed in the subsequent paragraphs.

11. The details of the trued-up transmission charges claimed by the Petitioner are as under:-

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	714.49	714.49	714.49	714.49	714.49
Interest on Loan	656.42	592.81	529.04	465.15	401.21
Return on Equity	796.69	800.35	799.94	799.94	802.09
Interest on Working Capital	49.89	48.51	47.04	45.57	44.14
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Total	2217.49	2156.16	2090.51	2025.15	1961.93



12. The details of the trued-up interest on working capital claimed by the Petitioner are as under: -

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	0.00	0.00	0.00	0.00	0.00
O&M expenses	0.00	0.00	0.00	0.00	0.00
Receivables	369.58	359.36	348.42	337.53	326.99
Total	369.58	359.36	348.42	337.53	326.99
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%
Interest on Working Capital	49.89	48.51	47.04	45.57	44.14

Capital Cost as on 1.4.2014

13. The capital cost of the transmission asset has been worked out in accordance with the Regulation 9(3) and Regulation 9(6) of 2014 Tariff Regulations. The Commission vide order dated 29.2.2016 in petition no. 511/TT/2014 had approved the transmission tariff for the Asset for the 2014-19 tariff period based on admitted capital cost of ₹13531.95 lakh as on 31.3.2014.

Additional Capital Expenditure (ACE)

14. The Petitioner has not claimed any additional expenditure for Combined Transformers-I and II for the tariff period 2014-19. Accordingly, the final transmission tariff for the tariff period 2014-19 is based on admitted cost ₹13531.95 lakh as on 1.4.2014 and 31.3.2019 as approved by the Commission vide order dated 29.2.2016 in petition no. 511/TT/2014.

15. Accordingly, the capital cost admitted for the purpose of true up of 2014-19 period as under:

(₹ in lakh)		
Capital Cost as on 1.4.2014	Additional Capitalisation in 2014-19	Total Capital Cost as on 31.3.2019
13531.95	0.00	13531.95



Debt-Equity Ratio

16. The 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, the debt-equity ratio allowed by the Commission for determination of tariff for the period ending on 31.3.2014 shall be considered. The Petitioner has claimed debt-equity ratio as on 31.3.2014 as approved by the Commission in its order dated 29.2.2016 in Petition No. 511/TT/2014. The same has been considered as opening debt-equity ratio as on 1.4.2014. The Petitioner has not claimed any ACE for instant asset for the tariff period 2014-19. Accordingly, the details of the debt-equity ratio considered by the Commission as on 1.4.2014 and 31.3.2019 of the instant transmission asset is as follows:

(₹ in lakh)

Particulars	Capital cost as on 1.4.2014	%	Capital cost as on 31.3.2019	%
Funding				
Debt	9472.37	70.00	9472.37	70.00
Equity	4059.59	30.00	4059.59	30.00
Total	13531.95	100.00	13531.95	100.00

Interest on Loan (IOL)

17. The Petitioner has claimed the weighted average rate of IOL based on its actual loan portfolio and rate of interest. Accordingly, IOL has been calculated based on actual interest rate submitted by the Petitioner, in accordance with the Regulation 26 of the 2014 Tariff Regulations. IOL worked out is as under:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	9472.37	9472.37	9472.37	9472.37	9472.37
Cumulative Repayment up to previous Year	1809.65	2524.14	3238.62	3953.11	4667.60
Net Loan-Opening	7662.72	6948.23	6233.75	5519.26	4804.77
Addition due to Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Repayment during the year	714.49	714.49	714.49	714.49	714.49
Net Loan-Closing	6948.23	6233.75	5519.26	4804.77	4090.29
Average Loan	7305.48	6590.99	5876.50	5162.02	4447.53
Weighted Average Rate of Interest on Loan (%)	8.9853%	8.9943%	9.0027%	9.0111%	9.0209%
Interest on Loan	656.42	592.81	529.04	465.15	401.21



Return on Equity (ROE)

18. The Petitioner is entitled for Return on equity for the instant assets in terms of Regulations 24 and 25 of the 2014 Tariff Regulations. The Petitioner has submitted that they are liable to pay income tax at MAT rates and has claimed following effective tax rates for the 2014-19 tariff period: -

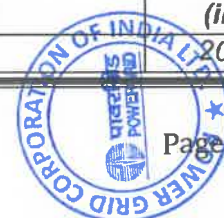
Year	Claimed effective tax (in %)	Grossed up ROE (Base Rate/1-t) (in %)
2014-15	21.02	19.625
2015-16	21.38	19.715
2016-17	21.34	19.705
2017-18	21.34	19.705
2018-19	21.55	19.758

19. The Commission in order dated 27.4.2020 in Petition No.274/TT/2019 has arrived at the effective tax rate based on the notified MAT rates. The relevant portion of the order dated 27.4.2020 is as under:

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

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

Year	Notified MAT rates (inclusive of surcharge & cess) (in %)	Effective tax (in %)
2014-15	20.9605	20.961



Year	Notified MAT rates (inclusive of surcharge & cess) (in %)	Effective tax (in %)
2015-16	21.3416	21.342
2016-17	21.3416	21.342
2017-18	21.3416	21.342
2018-19	21.5488	21.549

20. The same MAT rates as considered in the above order are considered for the purpose of grossing up of rate of ROE for truing up of the tariff of the 2014-19 tariff period in terms of the provisions of the 2014 Tariff Regulations.

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

21. The Petitioner has claimed ROE for the 2014-19 period after grossing up the ROE of 15.50% with Effective Tax rates (based on MAT rates) each year. ROE is trued up on the basis of the MAT rate applicable in the respective years and is allowed as follows:

Particulars	₹ in lakh				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	4059.59	4059.59	4059.59	4059.59	4059.59
Addition due to Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Closing Equity	4059.59	4059.59	4059.59	4059.59	4059.59
Average Equity	4059.59	4059.59	4059.59	4059.59	4059.59
Return on Equity (Base Rate) (%)	15.50%	15.50%	15.50%	15.50%	15.50%
MAT rate for the Respective year (%)	20.9605%	21.3416%	21.3416%	21.3416%	21.5488%
Rate of Return on Equity (Pre-tax) (%)	19.610%	19.705%	19.705%	19.705%	19.758%
Return on Equity (Pre-tax)	796.09	799.94	799.94	799.94	802.09

Depreciation

22. The Gross Block during the 2014-19 tariff period has been depreciated at Weighted Average Rate of Depreciation (WAROD) as placed in Annexure-1. WAROD has been worked out after taking into account the depreciation rates of assets as



prescribed in the 2014 Tariff Regulations and the depreciation allowed during the 2014-19 tariff period is as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	13531.95	13531.95	13531.95	13531.95	13531.95
Additional Capital expenditure	0.00	0.00	0.00	0.00	0.00
Closing Gross Block	13531.95	13531.95	13531.95	13531.95	13531.95
Average Gross Block	13531.95	13531.95	13531.95	13531.95	13531.95
Rate of Depreciation (%)	5.2800%	5.2800%	5.2800%	5.2800%	5.2800%
Depreciable Value	12178.76	12178.76	12178.76	12178.76	12178.76
Remaining Depreciable Value	10369.11	9654.62	8940.13	8225.64	7511.16
Depreciation	714.49	714.49	714.49	714.49	714.49

Operation and Maintenance Expenses (O&M Expenses)

23. Since the assets are spare in nature, O&M is not applicable. Also the Petitioner has not claimed O&M expenses and as such its entitlement to O&M expenses is NIL.

Interest on Working Capital (IWC)

24. The Petitioner is entitled for IWC as per Regulation 28 of the 2014 Tariff Regulations. The IWC allowed as per the methodology provided in the Regulation 28 of the 2014 Tariff Regulations is as under: -

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	0.00	0.00	0.00	0.00	0.00
O&M expenses	0.00	0.00	0.00	0.00	0.00
Receivables	369.48	359.29	348.42	337.52	326.99
Total	369.48	359.29	348.42	337.52	326.99
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%
Interest on Working Capital	49.88	48.50	47.04	45.57	44.14

25. The details of IWC approved earlier vide order dated 29.2.2016 in Petition No. 511/TT/2014, IWC claimed by the Petitioner in the instant petition and tried up in the instant order for the 2014-19 period is shown as under: -

(₹ in lakh)					
Particulars (IWC)	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 29.2.2016 in 511/TT/2014	49.85	48.39	46.92	45.46	43.99
Claimed by the Petitioner in the instant petition	49.89	48.51	47.04	45.57	44.14
Allowed after true-up in this order	49.88	48.50	47.04	45.57	44.14



Annual Transmission Charges for 2014-19 Tariff period

26. The trued up annual fixed charges for the transmission assets for the tariff period 2014-19 are summarised below: -

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	714.49	714.49	714.49	714.49	714.49
Interest on Loan	656.42	592.81	529.04	465.15	401.21
Return on Equity	796.09	799.94	799.94	799.94	802.09
Interest on Working Capital	49.88	48.50	47.04	45.57	44.14
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Total	2216.87	2155.75	2090.51	2025.15	1961.93

27. The details of Annual Transmission Charges approved earlier vide order dated 29.2.2016 in Petition No. 511/TT/2014, claimed by the Petitioner in the instant petition and trued up in the instant order for the 2014-19 period is shown as under: -

Particulars (AFC)	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 29.2.2016 in 511/TT/2014	2215.47	2150.54	2085.47	2020.30	1955.06
Claimed by the Petitioner in the instant petition	2217.49	2156.16	2090.51	2025.15	1961.93
Allowed after true-up in this order	2216.87	2155.75	2090.51	2025.19	1961.93

DETERMINATION OF ANNUAL FIXED CHARGES FOR 2019-24 TARIFF PERIOD

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

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	714.49	714.49	714.49	714.49	714.49
Interest on Loan	337.19	273.08	208.84	144.46	79.81
Return on Equity	802.09	802.09	802.09	802.09	802.09
Interest on Working Capital	27.88	26.99	26.02	25.05	24.01
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Total	1881.65	1816.65	1751.44	1686.09	1620.40

29. The details of the interest on working capital claimed by the Petitioner are as under: -



(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Maintenance Spares	0.00	0.00	0.00	0.00	0.00
O&M expenses	0.00	0.00	0.00	0.00	0.00
Receivables	231.35	223.97	215.93	207.87	199.23
Total	231.35	223.97	215.93	207.87	199.23
Rate of Interest	12.05%	12.05%	12.05%	12.05%	12.05%
Interest on Working Capital	27.88	26.99	26.02	25.05	24.01

30. The tariff for 2019-24 period is allowed as discussed in the subsequent paragraphs.

Capital Cost

31. Regulation 19 of the 2019 Tariff Regulations provides as follows: -

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

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

- (a) The expenditure incurred or projected to be incurred up to the date of commercial operation of the project;*
- (b) Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed;*
- (c) Any gain or loss on account of foreign exchange risk variation pertaining to the loan amount availed during the construction period;*
- (d) Interest during construction and incidental expenditure during construction as computed in accordance with these regulations;*
- (e) Capitalised initial spares subject to the ceiling rates in accordance with these regulations;*
- (f) Expenditure on account of additional capitalization and de-capitalisation determined in accordance with these regulations;*
- (g) Adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the date of commercial operation as specified under Regulation 7 of these regulations;*
- (h) Adjustment of revenue earned by the transmission licensee by using the assets before the date of commercial operation;*
- (i) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;*
- (j) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of the generating station but does not include the transportation cost and any other appurtenant cost paid to the railway;*
- (k) Capital expenditure on account of biomass handling equipment and facilities, for co-firing;*
- (l) Capital expenditure on account of emission control system necessary to meet the revised emission standards and sewage treatment plant;*
- (m) Expenditure on account of fulfilment of any conditions for obtaining environment clearance for the project;*
- (n) Expenditure on account of change in law and force majeure events; and*



(o) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries

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

- (a) Capital cost admitted by the Commission prior to 1.4.2019 duly tried up by excluding liability, if any, as on 1.4.2019.
- (b) Additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with these regulations.
- (c) Capital expenditure on account of renovation and modernisation as admitted by this Commission in accordance with these regulations;
- (d) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;
- (e) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal up to the receiving end of generating station but does not include the transportation cost and any other appurtenant cost paid to the railway; and
- (f) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.”

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

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

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

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

Provided that in case replacement of transmission asset is recommended by Regional Power Committee, such asset shall be 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.”



32. The Petitioner has claimed capital cost of ₹13531.95 lakh as on 31.3.2019 for the instant asset. The Commission has worked out capital cost of ₹13531.95 lakh as on 31.3.2019 and the same has been approved and 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)

33. Regulations 24 and Regulation 25 of the 2019 Tariff Regulations provide as under:

"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.

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

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

34. The Petitioner has not claimed/ projected any Additional Capital Expenditure during 2019-24 tariff period. Accordingly, the capital cost considered as on 1.4.2019 and 31.3.2014 is ₹13531.95 as under:

(₹ in lakh)

Capital Cost as on 1.4.2019	ACE claimed	Total Capital Cost as on 31.3.2024
	2019-24	
13531.95	Nil	13531.95

Debt-Equity Ratio

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

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

Provided that:

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

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



such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station or the transmission system.

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

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

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

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

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

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

36. The debt-equity ratio for the 2019-24 period is allowed as per Regulation 18(3) of the 2019 Tariff Regulations. The details of the debt-equity ratio considered for the purpose of tariff for 2019-24 tariff period is as follows:-

Particulars	Capital cost as on 1.4.2019 (₹ in lakh)	%	Total cost as on 31.3.2024 (₹ in lakh)	%
Funding				
Debt	9472.37	70.00	9472.37	70.00
Equity	4059.59	30.00	4059.59	30.00
Total	13531.95	100.00	13531.95	100.00

Return on Equity (ROE)

37. Regulation 30 and Regulation 31 of the 2019 Tariff Regulations specify as under:-



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

(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating station, transmission system including communication system and runoff 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 runoff river generating station with pondage:

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

Provided further that:

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

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

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

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

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

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

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

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

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



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

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

38. The Petitioner has submitted that MAT rate is applicable to the Petitioner's company. Accordingly, the MAT rate applicable in 2019-20 has been considered for the purpose of ROE, which shall be trued up with actual tax rate in accordance with Regulation 31(3) of the 2019 Tariff Regulations. ROE allowed is as under:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Equity	4059.59	4059.59	4059.59	4059.59	4059.59
Addition due to Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Closing Equity	4059.59	4059.59	4059.59	4059.59	4059.59
Average Equity	4059.59	4059.59	4059.59	4059.59	4059.59
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%	15.50%
MAT rate for the Financial year 2019-20	17.4720%	17.4720%	17.4720%	17.4720%	17.4720%
Rate of Return on Equity (Pre-tax)	18.782%	18.782%	18.782%	18.782%	18.782%
Return on Equity (Pre-tax)	762.47	762.47	762.47	762.47	762.47

Interest on Loan (IOL)

39. Regulation 32 of the 2019 Tariff Regulations provides that:

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

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



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

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

(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio after providing appropriate accounting adjustment for interest capitalized: Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered; Provided further that if the generating station or the transmission system, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company or the transmission licensee as a whole shall be considered.

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

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

40. 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.

41. The details of IOL allowed in accordance with Regulation 32 of 2019 Tariff Regulations, subject to true up, is as follows:

	(₹ in lakh)				
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Gross Normative Loan	9472.37	9472.37	9472.37	9472.37	9472.37
Cumulative Repayment upto previous Year	5382.10	6096.59	6811.07	7525.56	8240.05
Net Loan-Opening	4090.27	3375.78	2661.30	1946.81	1232.32
Addition due to ACE	0.00	0.00	0.00	0.00	0.00
Repayment during the year	714.49	714.49	714.49	714.49	714.49
Net Loan-Closing	3375.78	2661.30	1946.81	1232.32	517.84
Average Loan	3733.03	3018.54	2304.05	1589.57	875.08
Weighted Average Rate of Interest on Loan (%)	9.0325%	9.0466%	9.0639%	9.0882%	9.1205%
Interest on Loan	337.19	273.07	208.84	144.46	79.81



Depreciation

42. Regulation 33 of the 2019 Tariff Regulations provide that:-

"33. Depreciation: (1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system or element thereof including communication system. In case of the tariff of all the units of a generating station or all elements of a transmission system including communication system for which a single tariff needs to be determined, the depreciation shall be computed from the effective date of commercial operation of the generating station or the transmission system taking into consideration the depreciation of individual units:

Provided that effective date of commercial operation shall be worked out by considering the actual date of commercial operation and installed capacity of all the units of the generating station or capital cost of all elements of the transmission system, for which single tariff needs to be determined.

(2) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission. In case of multiple units of a generating station or multiple elements of a transmission system, weighted average life for the generating station of the transmission system shall be applied. Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis.

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

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

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

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

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

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

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

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



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

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

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

43. The depreciation has been worked out considering the admitted capital cost as on 31.3.2019 and accumulated depreciation up to 31.3.2019. The calculation of WAROD for the 2019-24 period is placed in Annexure-2. The depreciation worked out and allowed for the instant asset is as under:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Gross Block	13531.95	13531.95	13531.95	13531.95	13531.95
Additional Capital expenditure	0.00	0.00	0.00	0.00	0.00
Closing Gross Block	13531.95	13531.95	13531.95	13531.95	13531.95
Average Gross Block	13531.95	13531.95	13531.95	13531.95	13531.95
Rate of Depreciation (%)	5.2800%	5.2800%	5.2800%	5.2800%	5.2800%
Depreciable Value	12178.76	12178.76	12178.76	12178.76	12178.76
Remaining Depreciable Value	6796.66	6082.17	5367.68	4653.19	3938.71
Depreciation	714.49	714.49	714.49	714.49	714.49

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

44. Regulation 35(3)(a) of the 2019 Tariff Regulations specifies the norms for the O&M Expenses for the transmission system and it is as follows:-

“(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



Particulars	2019- 20	2020-21	2021-22	2022-23	2023- 24
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)	834.00	864.00	894.00	925.00	958.00
Gazuwaka HVDC Back-to-Back station (₹ Lakh per 500 MW)	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)	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)	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)	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)	2,563.0	2,653	2,746.00	2,842.00	2,942.00

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:

- 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;
- the O&M expenses norms for HVDC bi-pole line shall be considered as Double Circuit quad AC line;
- 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 Talcher-Kolar HVDC bi-pole scheme (2000 MW);
- the O&M expenses of ±800 kV Champa-Kurukshetra HVDC bi-pole scheme (3000 MW) shall be on the basis of the normative O&M expenses for ±800 kV, Bishwanath-Agra HVDC bi-pole scheme;



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

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

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

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

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

45. Since the assets are spare in nature, O&M is not applicable. Also the Petitioner has not claimed O&M expenses and as such Petitioner's entitlement to O&M expenses is NIL.

Interest on Working Capital (IWC)

46. 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) The working capital shall cover:

.....

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

- i. Receivables equivalent to 45 days of 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 triuing-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.”

iv. **“3.Definitions** – In these regulations, unless the context otherwise requires:-

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

47. 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 interest on working capital as 12.05%.

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

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Maintenance Spares	0.00	0.00	0.00	0.00	0.00
O&M expenses	0.00	0.00	0.00	0.00	0.00
Receivables	226.41	218.79	210.76	202.71	194.09
Total	226.41	218.79	210.76	202.71	194.09
Rate of Interest on working capital	12.05%	11.25%	11.25%	11.25%	11.25%
Interest on Working Capital	27.28	24.61	23.71	22.81	21.84

APPROVED ANNUAL TRANSMISSION CHARGES FOR 2019-24 TARIFF PERIOD

49. The transmission charges allowed for the instant transmission assets for the 2019-24 period are summarised as under:



(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	714.49	714.49	714.49	714.49	714.49
Interest on Loan	337.19	273.07	208.84	144.46	79.81
Return on Equity	762.47	762.47	762.47	762.47	762.47
Interest on Working Capital	27.28	24.61	23.71	22.81	21.84
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Total	1841.43	1774.65	1709.51	1644.23	1578.61

Filing Fee and Publication Expenses

50. 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.

License fee and RLDC Fees and Charges

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

Security Expenses

52. The Petitioner has submitted that security expenses for the instant 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. The Petitioner has requested to consider the actual security expenses incurred during 2018-19 for claiming estimated security expenses for 2019-20 which shall be subject to true up at the end of the year based on the actuals. The Petitioner has submitted that similar petition for security expenses for 2020-21, 2021-22, 2022-23 and 2023-24 will be filed on a yearly basis on the basis of the actual expenses of previous year subject to true up at the end of the year on actual expenses. The Petitioner has submitted that the difference, if any,



between the estimated security expenses and actual security expenses as the audited accounts may be allowed to be recovered from the beneficiaries on a yearly basis.

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

Goods and Services Tax

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

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

Capital Spares

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

Sharing of Transmission Charges

57. The billing, collection and disbursement of the transmission charges approved in this order shall be governed by the provisions of Central Electricity Regulatory



Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010, as amended from time to time as provided in Regulation 43 of 2014 Tariff Regulations for the 2014-19 tariff period and Regulation 57 of the 2019 Tariff Regulations for the 2019-24 tariff period.

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

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Annual Fixed Charges	2216.87	2155.75	2090.51	2025.15	1961.93

The Annual Fixed Charges allowed for the instant asset for the 2019-24 tariff period in this order are as under:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Annual Fixed Charges	1841.43	1774.65	1709.51	1644.23	1578.61

59. This order disposes of Petition No. 349/TT/2019.

Sd/-
(Arun Goyal)
Member

Sd/-
(I. S. Jha)
Member



(Handwritten signature)

Annexure-1

Capital Expenditures for 2014-19	Admitted Capital Cost as on 1.4.2014	Additional capitalisation (Rs. in lakh)				Admitted cap cost as on 31.3.2019	Rate of Depreciation as per Regulation	Annual Depreciation as per Regulations (Rs. in lakh)				
		2014-15	2015-16	2016-17	2017-18			2014-15	2015-16	2016-17	2017-18	2018-19
Freehold land	0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00	0.00	0.00	
Leasehold land	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00	
Building & Other Civil Works	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00	
Transmission line	0.00	0.00	0.00	0.00	0.00	5.28%	0.00	0.00	0.00	0.00	0.00	
Sub-Station Equipment	13531.95	0.00	0.00	0.00	0.00	5.28%	714.49	714.49	714.49	714.49	714.49	
PLCC	0.00	0.00	0.00	0.00	0.00	6.33%	0.00	0.00	0.00	0.00	0.00	
Total	13531.95	0.00	0.00	0.00	0.00	TOTAL	714.49	714.49	714.49	714.49	714.49	
Average Gross Block (Rs. in lakh)							13531.95	13531.95	13531.95	13531.95	13531.95	13531.95
Weighted Average Rate of Depreciation							5.2800%	5.2800%	5.2800%	5.2800%	5.2800%	5.2800%



Annexure-2

Capital Expenditures for 2019-24	Admitted Capital Cost as on 1.4.2019	Additional capitalisation (Rs. In lakh)					Admitted cap cost as on 31.3.2024	Rate of Depreciation as per Regulation	Annual Depreciation as per Regulations (Rs. in lakh)				
		2019-20	2020-21	2021-22	2022-23	2023-24			2019-20	2020-21	2021-22	2022-23	2023-24
Freehold land	0.00	0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00	0.00	0.00	
Leasehold land	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00	
Building & Other Civil Works	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00	
Transmission line	0.00	0.00	0.00	0.00	0.00	0.00	5.28%	0.00	0.00	0.00	0.00	0.00	
Sub-Station Equipment	13531.95	0.00	0.00	0.00	0.00	13531.95	5.28%	714.49	714.49	714.49	714.49	714.49	
PLCC	0.00	0.00	0.00	0.00	0.00	0.00	6.33%	0.00	0.00	0.00	0.00	0.00	
Total	13531.95	0.00	0.00	0.00	0.00	13531.95	TOTAL	714.49	714.49	714.49	714.49	714.49	
		Average Gross Block (Rs. In lakh)					13531.95		13531.95	13531.95	13531.95	13531.95	13531.95
		Weighted Average Rate of Depreciation					5.2800%		5.2800%	5.2800%	5.2800%	5.2800%	5.2800%



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Encl-2

Summary of Tariff

Form No. - 1

Name of the Transmission Licensee:	Power Grid Corporation of India Limited		
Project	2nd Spare Converter Transformers at Talcher & Kolar HVDC Terminals (One each at Talcher & Kolar)		
Element Description	Combined tariff of 2nd Spare Converter Transformers I & II at Talcher & Kolar HVDC Terminals (One each at Talcher & Kolar)		
Region	Southern Region	DOCQ Date	Oct 1, 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	714.49	714.49	714.49	714.49	714.49
Interest on Loan-Form No. 9E	337.19	273.08	208.84	144.46	79.81
Return on Equity-Form No. 8	762.47	762.47	762.47	762.47	762.47
Int. on Working capital-Form No.11	27.28	24.61	22.11	21.26	23.31
Op. and maintenance-Form No.2	0.00	0.00	0.00	0.00	0.00
Total AFC	1,841.43	1,774.65	1,707.91	1,642.68	1,580.08


 (Petitioner)


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Normative parameters considered for tariff computations

Form No. - 3

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	2nd Spare Converter Transformers at Talcher & Kolar HVDC Terminals (One each at Talcher & Kolar)		
Element Description	Combined tariff of 2nd Spare Converter Transformers I & II at Talcher & Kolar HVDC Terminals (One each at Talcher & Kolar)		
Region	Southern Region	DOC Date	Oct 1, 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



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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



Calculation of ROE

Form No. - 8

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	2nd Spare Converter Transformers at Talcher & Kolar HVDC Terminals (One each at Talcher & Kolar)		
Element Description	Combined tariff of 2nd Spare Converter Transformers I & II at Talcher & Kolar HVDC Terminals (One each at Talcher & Kolar)		
Region	Southern Region	DOC Date	Oct 1, 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	4,059.59	4,059.59	4,059.59	4,059.59	4,059.59
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)	4,059.59	4,059.59	4,059.59	4,059.59	4,059.59
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	4,059.59	4,059.59	4,059.59	4,059.59	4,059.59
Average Normative Equity	4,059.59	4,059.59	4,059.59	4,059.59	4,059.59
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	762.47	762.47	762.47	762.47	762.47
Pro rata return on Equity	762.47	762.47	762.47	762.47	762.47

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Calculation of WAR of interest on actual loan

Form No. - 9C

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	2nd Spare Converter Transformers at Talcher & Kolar HVDC Terminals (One each at Talcher & Kolar)		
Element Description	Combined tariff of 2nd Spare Converter Transformers I & II at Talcher & Kolar HVDC Terminals (One each at Talcher & Kolar)		
Region	Southern Region	DOC Date	Oct 1, 2011

(Amount in Rs. Lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
BOND XXXIII -DOCO					
Gross Loan- Opening	797.00	797.00	797.00	797.00	797.00
Cumulative repayments of Loans upto previous year	332.08	398.50	464.92	531.33	597.75
Net loan-Opening	464.92	398.50	332.08	265.67	199.25
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	66.42	66.42	66.42	66.42	66.42
Net Loan-Closing	398.50	332.08	265.66	199.25	132.83
Average Net Loan	431.71	365.29	298.87	232.46	166.04
Rate of Interest on Loan on Annual Basis	8.64	8.64	8.64	8.64	8.64
Interest on loan	37.2997	31.5611	25.8224	20.0845	14.3459

BOND XXXII -DOCO					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Gross Loan- Opening	84.00	84.00	84.00	84.00	84.00
Cumulative repayments of Loans upto previous year	42.00	49.00	56.00	63.00	70.00
Net loan-Opening	42.00	35.00	28.00	21.00	14.00
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	7.00	7.00	7.00	7.00	7.00
Net Loan-Closing	35.00	28.00	21.00	14.00	7.00



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Average Net Loan	38.50	31.50	24.50	17.50	10.50
Rate of Interest on Loan on Annual Basis	8.84	8.84	8.84	8.84	8.84
Interest on loan	3.4034	2.7846	2.1658	1.547	0.9282

BOND-XXXIV -DOCO					
Gross Loan- Opening	4,900.00	4,900.00	4,900.00	4,900.00	4,900.00
Cumulative repayments of Loans upto previous year	2,041.67	2,450.00	2,858.33	3,266.67	3,675.00
Net loan-Opening	2,858.33	2,450.00	2,041.67	1,633.33	1,225.00
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	408.33	408.33	408.33	408.33	408.33
Net Loan-Closing	2,450.00	2,041.67	1,633.34	1,225.00	816.67
Average Net Loan	2,654.17	2,245.84	1,837.51	1,429.17	1,020.84
Rate of Interest on Loan on Annual Basis	8.84	8.84	8.84	8.84	8.84
Interest on loan	234.6286	198.5323	162.4359	126.3386	90.2423

BOND-XXXV -DOCO					
Gross Loan- Opening	54.00	54.00	54.00	54.00	54.00
Cumulative repayments of Loans upto previous year	18.00	22.50	27.00	31.50	36.00
Net loan-Opening	36.00	31.50	27.00	22.50	18.00
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	4.50	4.50	4.50	4.50	4.50
Net Loan-Closing	31.50	27.00	22.50	18.00	13.50
Average Net Loan	33.75	29.25	24.75	20.25	15.75
Rate of Interest on Loan on Annual Basis	9.64	9.64	9.64	9.64	9.64
Interest on loan	3.2535	2.8197	2.3859	1.9521	1.5183



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BOND XXXVI -ADDCAP FOR 2011-2012					
Gross Loan- Opening	301.09	301.09	301.09	301.09	301.09
Cumulative repayments of Loans upto previous year	60.22	80.29	100.36	120.44	140.51
Net loan-Opening	240.87	220.80	200.73	180.65	160.58
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	20.07	20.07	20.07	20.07	20.07
Net Loan-Closing	220.80	200.73	180.66	160.58	140.51
Average Net Loan	230.84	210.77	190.70	170.62	150.55
Rate of Interest on Loan on Annual Basis	9.35	9.35	9.35	9.35	9.35
Interest on loan	21.5835	19.707	17.8305	15.953	14.0764

BOND XXXVI -DOCO					
Gross Loan- Opening	670.70	670.70	670.70	670.70	670.70
Cumulative repayments of Loans upto previous year	134.14	178.85	223.57	268.28	312.99
Net loan-Opening	536.56	491.85	447.13	402.42	357.71
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	44.71	44.71	44.71	44.71	44.71
Net Loan-Closing	491.85	447.14	402.42	357.71	313.00
Average Net Loan	514.21	469.50	424.78	380.07	335.36
Rate of Interest on Loan on Annual Basis	9.35	9.35	9.35	9.35	9.35
Interest on loan	48.0786	43.8983	39.7169	35.5365	31.3562

BOND XXXVII -ADDCAP FOR 2011-2012					
Gross Loan- Opening	288.89	288.89	288.89	288.89	288.89
Cumulative repayments of Loans upto previous year	96.30	120.37	144.45	168.52	192.59
Net loan-Opening	192.59	168.52	144.44	120.37	96.30

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Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	24.07	24.07	24.07	24.07	24.07
Net Loan-Closing	168.52	144.45	120.37	96.30	72.23
Average Net Loan	180.56	156.49	132.41	108.34	84.27
Rate of Interest on Loan on Annual Basis	9.25	9.25	9.25	9.25	9.25
Interest on loan	16.7018	14.4753	12.2479	10.0215	7.795

BOND XXXVIII -ADDCAP FOR 2011-2012

Gross Loan- Opening	1,960.41	1,960.41	1,960.41	1,960.41	1,960.41
Cumulative repayments of Loans upto previous year	0.00	0.00	0.00	0.00	0.00
Net loan-Opening	1,960.41	1,960.41	1,960.41	1,960.41	1,960.41
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	0.00	0.00	0.00	0.00	0.00
Net Loan-Closing	1,960.41	1,960.41	1,960.41	1,960.41	1,960.41
Average Net Loan	1,960.41	1,960.41	1,960.41	1,960.41	1,960.41
Rate of Interest on Loan on Annual Basis	9.25	9.25	9.25	9.25	9.25
Interest on loan	181.3379	181.3379	181.3379	181.3379	181.3379

BOND XXXVIII -DOCO

Gross Loan- Opening	79.59	79.59	79.59	79.59	79.59
Cumulative repayments of Loans upto previous year	0.00	0.00	0.00	0.00	0.00
Net loan-Opening	79.59	79.59	79.59	79.59	79.59
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	79.59	79.59	79.59	79.59	79.59
Average Net Loan	79.59	79.59	79.59	79.59	79.59

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Rate of Interest on Loan on Annual Basis	9.25	9.25	9.25	9.25	9.25
Interest on loan	7.3621	7.3621	7.3621	7.3621	7.3621

BOND - XLI -ADDCAP FOR 2012-2013					
Gross Loan- Opening	254.00	254.00	254.00	254.00	254.00
Cumulative repayments of Loans upto previous year	63.50	84.67	105.83	127.00	148.17
Net loan-Opening	190.50	169.33	148.17	127.00	105.83
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	21.17	21.17	21.17	21.17	21.17
Net Loan-Closing	169.33	148.16	127.00	105.83	84.66
Average Net Loan	179.92	158.75	137.59	116.42	95.25
Rate of Interest on Loan on Annual Basis	8.85	8.85	8.85	8.85	8.85
Interest on loan	15.9229	14.0494	12.1767	10.3032	8.4296

BOND - XLII -ADDCAP FOR 2012-2013					
Gross Loan- Opening	82.42	82.42	82.42	82.42	82.42
Cumulative repayments of Loans upto previous year	0.00	0.00	0.00	0.00	82.42
Net loan-Opening	82.42	82.42	82.42	82.42	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	82.42	0.00
Net Loan-Closing	82.42	82.42	82.42	0.00	0.00
Average Net Loan	82.42	82.42	82.42	41.21	0.00
Rate of Interest on Loan on Annual Basis	8.80	8.80	8.80	8.80	8.80
Interest on loan	7.253	7.253	7.253	3.6265	0.00

Summary



Gross Loan- Opening	9,472.10	9,472.10	9,472.10	9,472.10	9,472.10
Cumulative repayments of Loans upto previous year	2,787.91	3,384.18	3,980.46	4,576.74	5,255.43
Net loan-Opening	6,684.19	6,087.92	5,491.64	4,895.36	4,216.67
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	596.27	596.27	596.27	678.69	596.27
Net Loan-Closing	6,087.92	5,491.65	4,895.37	4,216.67	3,620.40
Average Net Loan	6,386.08	5,789.81	5,193.53	4,556.04	3,918.56
Rate of Interest on Loan on Annual Basis	9.0325	9.0466	9.0639	9.0882	9.1205
Interest on loan	576.825	523.7807	470.735	414.0629	357.3919

(Petitioner)



Calculation of interest on Normative loan

Form No. - 9E

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	2nd Spare Converter Transformers at Talcher & Kolar HVDC Terminals (One each at Talcher & Kolar)		
Element Description	Combined tariff of 2nd Spare Converter Transformers I & II at Talcher & Kolar HVDC Terminals (One each at Talcher & Kolar)		
Region	Southern Region	DOCO Date	Oct 1, 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	9,472.37	9,472.37	9,472.37	9,472.37	9,472.37
Cumulative repayments of Normative loan upto previous year	5,382.10	6,096.59	6,811.08	7,525.57	8,240.06
Net normative loan-Opening	4,090.27	3,375.78	2,661.29	1,946.80	1,232.31
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	714.49	714.49	714.49	714.49	714.49
Adjustment of cumulative repayment pertaining to the decapitalised asset	0.00	0.00	0.00	0.00	0.00
Net normative loan - closing	3,375.78	2,661.29	1,946.80	1,232.31	517.82
Average normative loan	3,733.03	3,018.54	2,304.05	1,589.56	875.07
Weighted Average Rate of interest on actual loan	9.0325	9.0466	9.0639	9.0882	9.1205
Interest on normative loan	337.19	273.08	208.84	144.46	79.81
Pro rata interest on normative loan	337.19	273.08	208.84	144.46	79.81



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Calculation of Depreciation Rate on Original Project Cost

Form No. - 10

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	2nd Spare Converter Transformers at Talcher & Kolar HVDC Terminals (One each at Talcher & Kolar)		
Element Description	Combined tariff of 2nd Spare Converter Transformers I & II at Talcher & Kolar HVDC Terminals (One each at Talcher & Kolar)		
Region	Southern Region	DOCO Date	Oct 1, 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	0.00	0.00	0.00	0.00	3.34	0.00
Transmission Line	0.00	0.00	0.00	0.00	5.28	0.00
Sub Station	13,531.95	0.00	13,531.95	13,531.95	5.28	714.49
Comm. Sys. excluding Fiber Optic	0.00	0.00	0.00	0.00	6.33	0.00
Leasehold Land	0.00	0.00	0.00	0.00	3.34	0.00
IT/Software/UNMS/URTDISM/SCADA,etc	0.00	0.00	0.00	0.00	15.00	0.00
Batteries	0.00	0.00	0.00	0.00	5.28	0.00
Fiber Optic/OPGW	0.00	0.00	0.00	0.00	6.33	0.00
TOTAL	13,531.95	0.00	13,531.95	13,531.95	0.00	714.49
Weighted Average Rate of Depreciation(%)					5.280022	

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

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Civil & Building	0.00	0.00	0.00	0.00	3.34	0.00
Transmission Line	0.00	0.00	0.00	0.00	5.28	0.00
Sub Station	13,531.95	0.00	13,531.95	13,531.95	5.28	714.49
Comm. Sys. excluding Fiber Optic	0.00	0.00	0.00	0.00	6.33	0.00
Leasehold Land	0.00	0.00	0.00	0.00	3.34	0.00
IT/Software/UNMS/URTDISM/SCADA,etc	0.00	0.00	0.00	0.00	15.00	0.00
Batteries	0.00	0.00	0.00	0.00	5.28	0.00
Fiber Optic/OPGW	0.00	0.00	0.00	0.00	6.33	0.00
TOTAL	13,531.95	0.00	13,531.95	13,531.95	0.00	714.49
Weighted Average Rate of Depreciation(%)					5.280022	

2021-22						
Land(Freehold)	0.00	0.00	0.00	0.00	0.00	0.00
Civil & Building	0.00	0.00	0.00	0.00	3.34	0.00
Transmission Line	0.00	0.00	0.00	0.00	5.28	0.00
Sub Station	13,531.95	0.00	13,531.95	13,531.95	5.28	714.49
Comm. Sys. excluding Fiber Optic	0.00	0.00	0.00	0.00	6.33	0.00
Leasehold Land	0.00	0.00	0.00	0.00	3.34	0.00
IT/Software/UNMS/URTDISM/SCADA,etc	0.00	0.00	0.00	0.00	15.00	0.00
Batteries	0.00	0.00	0.00	0.00	5.28	0.00
Fiber Optic/OPGW	0.00	0.00	0.00	0.00	6.33	0.00
TOTAL	13,531.95	0.00	13,531.95	13,531.95	0.00	714.49
Weighted Average Rate of Depreciation(%)					5.280022	



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2022-23						
Land(Freehold)	0.00	0.00	0.00	0.00	0.00	0.00
Civil & Building	0.00	0.00	0.00	0.00	3.34	0.00
Transmission Line	0.00	0.00	0.00	0.00	5.28	0.00
Sub Station	13,531.95	0.00	13,531.95	13,531.95	5.28	714.49
Comm. Sys. excluding Fiber Optic	0.00	0.00	0.00	0.00	6.33	0.00
Leasehold Land	0.00	0.00	0.00	0.00	3.34	0.00
IT/Software/UNMS/URTDISM/SCADA,etc	0.00	0.00	0.00	0.00	15.00	0.00
Batteries	0.00	0.00	0.00	0.00	5.28	0.00
Fiber Optic/OPGW	0.00	0.00	0.00	0.00	6.33	0.00
TOTAL	13,531.95	0.00	13,531.95	13,531.95	0.00	714.49
Weighted Average Rate of Depreciation(%)					5.280022	

2023-24						
Land(Freehold)	0.00	0.00	0.00	0.00	0.00	0.00
Civil & Building	0.00	0.00	0.00	0.00	3.34	0.00
Transmission Line	0.00	0.00	0.00	0.00	5.28	0.00
Sub Station	13,531.95	0.00	13,531.95	13,531.95	5.28	714.49
Comm. Sys. excluding Fiber Optic	0.00	0.00	0.00	0.00	6.33	0.00
Leasehold Land	0.00	0.00	0.00	0.00	3.34	0.00
IT/Software/UNMS/URTDISM/SCADA,etc	0.00	0.00	0.00	0.00	15.00	0.00
Batteries	0.00	0.00	0.00	0.00	5.28	0.00
Fiber Optic/OPGW	0.00	0.00	0.00	0.00	6.33	0.00
TOTAL	13,531.95	0.00	13,531.95	13,531.95	0.00	714.49

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Weighted Average Rate of Depreciation(%)					5.280022	
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(Petitioner)

Statement of Depreciation

Form No. - 10A

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	2nd Spare Converter Transformers at Talcher & Kolar HVDC Terminals (One each at Talcher & Kolar)		
Element Description	Combined tariff of 2nd Spare Converter Transformers I & II at Talcher & Kolar HVDC Terminals (One each at Talcher & Kolar)		
Region	Southern Region	DOC Date	Oct 1, 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	13,531.95	13,531.95	13,531.95	13,531.95	13,531.95
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	13,531.95	13,531.95	13,531.95	13,531.95	13,531.95
1.8 Average capital cost	13,531.95	13,531.95	13,531.95	13,531.95	13,531.95
1.9 Freehold land included in 1.8	0.00	0.00	0.00	0.00	0.00
1.10 Asset having NIL salvage value included in 1.8	0.00	0.00	0.00	0.00	0.00
1.11 Asset having 10% salvage value included in 1.8	13,531.95	13,531.95	13,531.95	13,531.95	13,531.95
1.12 Depreciable Value(1.10+90% of 1.11)	12,178.76	12,178.76	12,178.76	12,178.76	12,178.76
Depreciation for the period and Cum. Depreciation					
1.13 Weighted Average Rate of depreciation	5.280022	5.280022	5.280022	5.280022	5.280022

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1.14 Depreciation(for the period)	714.49	714.49	714.49	714.49	714.49
1.15 Depreciation(Annualised)	714.49	714.49	714.49	714.49	714.49
Unrecovered Depreciation for DECAP	0.00	0.00	0.00	0.00	0.00
1.16 Cumulative depreciation at the beginning of the period	5,382.10	6,096.59	6,811.08	7,525.57	8,240.06
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	6,096.59	6,811.08	7,525.57	8,240.06	8,954.55



(Petitioner)

Calculation of interest on working Capital

Form No. - 11

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	2nd Spare Converter Transformers at Talcher & Kolar HVDC Terminals (One each at Talcher & Kolar)		
Element Description	Combined tariff of 2nd Spare Converter Transformers I & II at Talcher & Kolar HVDC Terminals (One each at Talcher & Kolar)		
Region	Southern Region	DOC Date	Oct 1, 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	0.00	0.00	0.00	0.00	0.00
Maintenance spares 15% of O&M Expenses	0.00	0.00	0.00	0.00	0.00
Receivables equivalent to 45 days of AFC	226.41	218.79	210.56	202.52	194.27
Total Working capital	226.41	218.79	210.56	202.52	194.27
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	27.28	24.61	22.11	21.26	23.31
Pro rata interest on working capital	27.28	24.61	22.11	21.26	23.31



Encl-3

Summary of Tariff

Form No. - 1

Name of the Transmission Licensee:	Power Grid Corporation of India Limited		
Project	2nd Spare Converter Transformers at Talcher & Kolar HVDC Terminals (One each at Talcher & Kolar)		
Element Description	Combined tariff of 2nd Spare Converter Transformers I & II at Talcher & Kolar HVDC Terminals (One each at Talcher & Kolar)		
Region	Southern Region	DOCOC Date	Oct 1, 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	248.02	248.02	248.02	248.02	248.01
Interest on Loan-Form No. 9E	36.08	13.44	1.01	0.00	0.00
Return on Equity-Form No. 8	762.47	762.47	762.47	762.47	762.47
Int. on Working capital-Form No.11	15.58	15.25	15.06	15.00	15.05
Op. and maintenance-Form No.2	0.00	0.00	0.00	0.00	0.00
Total AFC	1,062.15	1,039.18	1,026.56	1,025.49	1,025.53



Normative parameters considered for tariff computations

Form No. - 3

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	2nd Spare Converter Transformers at Talcher & Kolar HVDC Terminals (One each at Talcher & Kolar)		
Element Description	Combined tariff of 2nd Spare Converter Transformers I & II at Talcher & Kolar HVDC Terminals (One each at Talcher & Kolar)		
Region	Southern Region	DOC Date	Oct 1, 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

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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 bipole scheme (Rs Lakh/MW)	0.00	1.04	1.10	1.16	1.22	1.28
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

(Petitioner)



Calculation of ROE

Form No. - 8

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	2nd Spare Converter Transformers at Talcher & Kolar HVDC Terminals (One each at Talcher & Kolar)		
Element Description	Combined tariff of 2nd Spare Converter Transformers I & II at Talcher & Kolar HVDC Terminals (One each at Talcher & Kolar)		
Region	Southern Region	DOCO Date	Oct 1, 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	4,059.59	4,059.59	4,059.59	4,059.59	4,059.59
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)	4,059.59	4,059.59	4,059.59	4,059.59	4,059.59
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	4,059.59	4,059.59	4,059.59	4,059.59	4,059.59
Average Normative Equity	4,059.59	4,059.59	4,059.59	4,059.59	4,059.59
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
Pro rata return on Equity	762.47	762.47	762.47	762.47	762.47
Return on Equity	762.47	762.47	762.47	762.47	762.47



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Calculation of WAR of interest on actual loan

Form No. - 9C

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	2nd Spare Converter Transformers at Talcher & Kolar HVDC Terminals (One each at Talcher & Kolar)		
Element Description	Combined tariff of 2nd Spare Converter Transformers I & II at Talcher & Kolar HVDC Terminals (One each at Talcher & Kolar)		
Region	Southern Region	DOCO Date	Oct 1, 2011

(Amount in Rs. Lakh)

Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
BOND XXXIII -DOCO					
Gross Loan- Opening	797.00	797.00	797.00	797.00	797.00
Cumulative repayments of Loans upto previous year	664.17	730.58	797.00	797.00	797.00
Net loan-Opening	132.83	66.42	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	66.42	66.42	0.00	0.00	0.00
Net Loan-Closing	66.41	0.00	0.00	0.00	0.00
Average Net Loan	99.62	33.21	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	8.6072	2.8693	0.00	0.00	0.00

BOND XXXII -DOCO					
Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
Gross Loan- Opening	84.00	84.00	84.00	84.00	84.00
Cumulative repayments of Loans upto previous year	77.00	84.00	84.00	84.00	84.00
Net loan-Opening	7.00	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	7.00	0.00	0.00	0.00	0.00
Net Loan-Closing	0.00	0.00	0.00	0.00	0.00

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Average Net Loan	3.50	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	0.3094	0.00	0.00	0.00	0.00

BOND-XXXIV -DOCO

Gross Loan- Opening	4,900.00	4,900.00	4,900.00	4,900.00	4,900.00
Cumulative repayments of Loans upto previous year	4,083.33	4,491.67	4,900.00	4,900.00	4,900.00
Net loan-Opening	816.67	408.33	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	408.33	408.33	0.00	0.00	0.00
Net Loan-Closing	408.34	0.00	0.00	0.00	0.00
Average Net Loan	612.51	204.17	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	54.1459	18.0486	0.00	0.00	0.00

BOND-XXXV -DOCO

Gross Loan- Opening	54.00	54.00	54.00	54.00	54.00
Cumulative repayments of Loans upto previous year	40.50	45.00	49.50	54.00	54.00
Net loan-Opening	13.50	9.00	4.50	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	4.50	4.50	4.50	0.00	0.00
Net Loan-Closing	9.00	4.50	0.00	0.00	0.00
Average Net Loan	11.25	6.75	2.25	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	1.0845	0.6507	0.2169	0.00	0.00



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BOND XXXVI -ADDCAP FOR 2011-2012					
Gross Loan- Opening	301.09	301.09	301.09	301.09	301.09
Cumulative repayments of Loans upto previous year	160.58	180.65	200.73	220.80	240.87
Net loan-Opening	140.51	120.44	100.36	80.29	60.22
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	20.07	20.07	20.07	20.07	20.07
Net Loan-Closing	120.44	100.37	80.29	60.22	40.15
Average Net Loan	130.48	110.41	90.33	70.26	50.19
Rate of Interest on Loan on Annual Basis	9.35	9.35	9.35	9.35	9.35
Interest on loan	12.1999	10.3233	8.4459	6.5693	4.6928

BOND XXXVI -DOCO					
Gross Loan- Opening	670.70	670.70	670.70	670.70	670.70
Cumulative repayments of Loans upto previous year	357.71	402.42	447.13	491.85	536.56
Net loan-Opening	312.99	268.28	223.57	178.85	134.14
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	44.71	44.71	44.71	44.71	44.71
Net Loan-Closing	268.28	223.57	178.86	134.14	89.43
Average Net Loan	290.64	245.93	201.22	156.50	111.79
Rate of Interest on Loan on Annual Basis	9.35	9.35	9.35	9.35	9.35
Interest on loan	27.1748	22.9945	18.8141	14.6328	10.4524

BOND XXXVII -ADDCAP FOR 2011-2012					
Gross Loan- Opening	288.89	288.89	288.89	288.89	288.89
Cumulative repayments of Loans upto previous year	216.67	240.74	264.82	288.89	288.89
Net loan-Opening	72.22	48.15	24.07	0.00	0.00

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Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	24.07	24.07	24.07	0.00	0.00
Net Loan-Closing	48.15	24.08	0.00	0.00	0.00
Average Net Loan	60.19	36.12	12.04	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	5.5676	3.3411	1.1137	0.00	0.00

BOND XXXVIII -ADDCAP FOR 2011-2012

Gross Loan- Opening	1,960.41	1,960.41	1,960.41	1,960.41	1,960.41
Cumulative repayments of Loans upto previous year	0.00	0.00	0.00	1,960.41	1,960.41
Net loan-Opening	1,960.41	1,960.41	1,960.41	0.00	0.00
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	0.00	0.00	1,960.41	0.00	0.00
Net Loan-Closing	1,960.41	1,960.41	0.00	0.00	0.00
Average Net Loan	1,960.41	1,960.41	980.21	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	181.3379	181.3379	90.6694	0.00	0.00

BOND XXXVIII -DOCO

Gross Loan- Opening	79.59	79.59	79.59	79.59	79.59
Cumulative repayments of Loans upto previous year	0.00	0.00	0.00	79.59	79.59
Net loan-Opening	79.59	79.59	79.59	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	79.59	0.00	0.00
Net Loan-Closing	79.59	79.59	0.00	0.00	0.00
Average Net Loan	79.59	79.59	39.80	0.00	0.00

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Rate of Interest on Loan on Annual Basis	9.25	9.25	9.25	9.25	9.25
Interest on loan	7.3621	7.3621	3.6815	0.00	0.00

BOND - XLI -ADDCAP FOR 2012-2013					
Gross Loan- Opening	254.00	254.00	254.00	254.00	254.00
Cumulative repayments of Loans upto previous year	169.33	190.50	211.67	232.83	254.00
Net loan-Opening	84.67	63.50	42.33	21.17	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	21.17	21.17	21.17	21.17	0.00
Net Loan-Closing	63.50	42.33	21.16	0.00	0.00
Average Net Loan	74.09	52.92	31.75	10.59	0.00
Rate of Interest on Loan on Annual Basis	8.85	8.85	8.85	8.85	8.85
Interest on loan	6.557	4.6834	2.8099	0.9372	0.00

BOND - XLII -ADDCAP FOR 2012-2013					
Gross Loan- Opening	82.42	82.42	82.42	82.42	82.42
Cumulative repayments of Loans upto previous year	82.42	82.42	82.42	82.42	82.42
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

Summary



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Gross Loan- Opening	9,472.10	9,472.10	9,472.10	9,472.10	9,472.10
Cumulative repayments of Loans upto previous year	5,851.71	6,447.98	7,037.27	9,191.79	9,277.74
Net loan-Opening	3,620.39	3,024.12	2,434.83	280.31	194.36
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loan during the year	596.27	589.27	2,154.52	85.95	64.78
Net Loan-Closing	3,024.12	2,434.85	280.31	194.36	129.58
Average Net Loan	3,322.28	2,729.51	1,357.60	237.35	161.98
Rate of Interest on Loan on Annual Basis	9.1608	9.2182	9.2628	9.3277	9.35
Interest on loan	304.3463	251.6109	125.7514	22.1393	15.1452

(Petitioner)



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Calculation of interest on Normative loan

Form No. - 9E

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	2nd Spare Converter Transformers at Talcher & Kolar HVDC Terminals (One each at Talcher & Kolar)		
Element Description	Combined tariff of 2nd Spare Converter Transformers I & II at Talcher & Kolar HVDC Terminals (One each at Talcher & Kolar)		
Region	Southern Region	DOC0 Date	Oct 1, 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	9,472.37	9,472.37	9,472.37	9,472.37	9,472.37
Cumulative repayments of Normative loan upto previous year	8,954.55	9,202.57	9,450.59	9,472.37	9,472.37
Net normative loan-Opening	517.82	269.80	21.78	0.00	0.00
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	248.02	248.02	21.78	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	269.80	21.78	0.00	0.00	0.00
Average normative loan	393.81	145.79	10.89	0.00	0.00
Weighted Average Rate of interest on actual loan	9.1608	9.2182	9.2628	9.3277	9.35
Interest on normative loan	36.08	13.44	1.01	0.00	0.00
Pro rata interest on normative loan	36.08	13.44	1.01	0.00	0.00



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Calculation of Depreciation Rate on Original Project Cost

Form No. - 10

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	2nd Spare Converter Transformers at Talcher & Kolar HVDC Terminals (One each at Talcher & Kolar)		
Element Description	Combined tariff of 2nd Spare Converter Transformers I & II at Talcher & Kolar HVDC Terminals (One each at Talcher & Kolar)		
Region	Southern Region	DOCOCO Date	Oct 1, 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	0.00	0.00	0.00	0.00	3.34	0.00
Transmission Line	0.00	0.00	0.00	0.00	5.28	0.00
Sub Station	13,531.95	0.00	13,531.95	13,531.95	5.28	248.02
Comm. Sys. excluding Fiber Optic	0.00	0.00	0.00	0.00	15.00	0.00
Leasehold Land	0.00	0.00	0.00	0.00	3.34	0.00
IT/Software/UNMS/URTDMS/SCADA,etc	0.00	0.00	0.00	0.00	15.00	0.00
Batteries	0.00	0.00	0.00	0.00	9.50	0.00
Fiber Optic/OPGW	0.00	0.00	0.00	0.00	6.33	0.00
TOTAL	13,531.95	0.00	13,531.95	13,531.95	0.00	248.02
Weighted Average Rate of Depreciation(%)					1.832847	

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

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Civil & Building	0.00	0.00	0.00	0.00	3.34	0.00
Transmission Line	0.00	0.00	0.00	0.00	5.28	0.00
Sub Station	13,531.95	0.00	13,531.95	13,531.95	5.28	248.02
Comm. Sys. excluding Fiber Optic	0.00	0.00	0.00	0.00	15.00	0.00
Leasehold Land	0.00	0.00	0.00	0.00	3.34	0.00
IT/Software/UNMS/URTDISM/SCADA,etc	0.00	0.00	0.00	0.00	15.00	0.00
Batteries	0.00	0.00	0.00	0.00	9.50	0.00
Fiber Optic/OPGW	0.00	0.00	0.00	0.00	6.33	0.00
TOTAL	13,531.95	0.00	13,531.95	13,531.95	0.00	248.02
Weighted Average Rate of Depreciation(%)					1.832847	

2026-27						
Land(Freehold)	0.00	0.00	0.00	0.00	0.00	0.00
Civil & Building	0.00	0.00	0.00	0.00	3.34	0.00
Transmission Line	0.00	0.00	0.00	0.00	5.28	0.00
Sub Station	13,531.95	0.00	13,531.95	13,531.95	5.28	248.02
Comm. Sys. excluding Fiber Optic	0.00	0.00	0.00	0.00	15.00	0.00
Leasehold Land	0.00	0.00	0.00	0.00	3.34	0.00
IT/Software/UNMS/URTDISM/SCADA,etc	0.00	0.00	0.00	0.00	15.00	0.00
Batteries	0.00	0.00	0.00	0.00	9.50	0.00
Fiber Optic/OPGW	0.00	0.00	0.00	0.00	6.33	0.00
TOTAL	13,531.95	0.00	13,531.95	13,531.95	0.00	248.02
Weighted Average Rate of Depreciation(%)					1.832847	



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2027-28						
Land(Freehold)	0.00	0.00	0.00	0.00	0.00	0.00
Civil & Building	0.00	0.00	0.00	0.00	3.34	0.00
Transmission Line	0.00	0.00	0.00	0.00	5.28	0.00
Sub Station	13,531.95	0.00	13,531.95	13,531.95	5.28	248.02
Comm. Sys. excluding Fiber Optic	0.00	0.00	0.00	0.00	15.00	0.00
Leasehold Land	0.00	0.00	0.00	0.00	3.34	0.00
IT/Software/UNMS/URTDSM/SCADA,etc	0.00	0.00	0.00	0.00	15.00	0.00
Batteries	0.00	0.00	0.00	0.00	9.50	0.00
Fiber Optic/OPGW	0.00	0.00	0.00	0.00	6.33	0.00
TOTAL	13,531.95	0.00	13,531.95	13,531.95	0.00	248.02
Weighted Average Rate of Depreciation(%)					1.832847	

2028-29						
Land(Freehold)	0.00	0.00	0.00	0.00	0.00	0.00
Civil & Building	0.00	0.00	0.00	0.00	3.34	0.00
Transmission Line	0.00	0.00	0.00	0.00	5.28	0.00
Sub Station	13,531.95	0.00	13,531.95	13,531.95	5.28	248.01
Comm. Sys. excluding Fiber Optic	0.00	0.00	0.00	0.00	15.00	0.00
Leasehold Land	0.00	0.00	0.00	0.00	3.34	0.00
IT/Software/UNMS/URTDSM/SCADA,etc	0.00	0.00	0.00	0.00	15.00	0.00
Batteries	0.00	0.00	0.00	0.00	9.50	0.00
Fiber Optic/OPGW	0.00	0.00	0.00	0.00	6.33	0.00
TOTAL	13,531.95	0.00	13,531.95	13,531.95	0.00	248.01

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Weighted Average Rate of Depreciation(%)					1.832774	
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Statement of Depreciation

Form No. - 10A

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	2nd Spare Converter Transformers at Talcher & Kolar HVDC Terminals (One each at Talcher & Kolar)		
Element Description	Combined tariff of 2nd Spare Converter Transformers I & II at Talcher & Kolar HVDC Terminals (One each at Talcher & Kolar)		
Region	Southern Region	DOC Date	Oct 1, 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	13,531.95	13,531.95	13,531.95	13,531.95	13,531.95
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	13,531.95	13,531.95	13,531.95	13,531.95	13,531.95
1.8 Average capital cost	13,531.95	13,531.95	13,531.95	13,531.95	13,531.95
1.9 Freehold land included in 1.8	0.00	0.00	0.00	0.00	0.00
1.10 Asset having NIL salvage value included in 1.8	0.00	0.00	0.00	0.00	0.00
1.11 Asset having 10% salvage value included in 1.8	13,531.95	13,531.95	13,531.95	13,531.95	13,531.95
1.12 Depreciable Value(1.10+90% of 1.11)	12,178.76	12,178.76	12,178.76	12,178.76	12,178.76
Depreciation for the period and Cum. Depreciation					
1.13 Weighted Average Rate of depreciation	1.832847	1.832847	1.832847	1.832847	1.832774



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1.14 Depreciation(for the period)	248.02	248.02	248.02	248.02	248.01
1.15 Depreciation(Annualised)	248.02	248.02	248.02	248.02	248.01
Unrecovered Depreciation for DECAP	0.00	0.00	0.00	0.00	0.00
1.16 Cumulative depreciation at the beginning of the period	8,954.55	9,202.57	9,450.59	9,698.61	9,946.63
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	9,202.57	9,450.59	9,698.61	9,946.63	10,194.64



Calculation of interest on working Capital

Form No. - 11

Name of the Transmission Licensee	Power Grid Corporation of India Limited		
Project	2nd Spare Converter Transformers at Talcher & Kolar HVDC Terminals (One each at Talcher & Kolar)		
Element Description	Combined tariff of 2nd Spare Converter Transformers I & II at Talcher & Kolar HVDC Terminals (One each at Talcher & Kolar)		
Region	Southern Region	DOCO Date	Oct 1, 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	0.00	0.00	0.00	0.00	0.00
Maintenance spares 15% of O&M Expenses	0.00	0.00	0.00	0.00	0.00
Receivables equivalent to 45 days of AFC	130.95	128.12	126.56	126.08	126.44
Total Working capital	130.95	128.12	126.56	126.08	126.44
Bank Rate as on 01.04.2019 or as on 01st April of the COD year, whichever is later.	11.90	11.90	11.90	11.90	11.90
Interest on working capital	15.58	15.25	15.06	15.00	15.05
Pro rata interest on working capital	15.58	15.25	15.06	15.00	15.05



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Encl-4

Summary of issue involved in the petition		PART-III FORM- 15	
1. Name of the Petitioner	Powergrid Corporation of India Ltd		
2. Petition Category	Transmission		
3. Tariff Period	2024-29		
4. Name of the Project	2nd Spare Converter Transformers at Kolar and Talcher of Talcher-Kolar HVDC Link in Southern Region		
5. Investment Approval date			
6. SCOD of the Project			
7. Actual COD of the project	1.10.2011		
8. Whether entire scope is covered in the present petition.	Yes		
9. No. of Assets covered in instant petition	01 no		
10. No. of Assets having time over run			
11. Estimated Project Cost as per IA			
12. Is there any REC? if so, provide the date			
13. Revised Estimated Project Cost (if any)			
14. Completion cost for all the assets covered in the instant petition.	Rs. 13531.95 Lakh		
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: No add-cap during 2019-24 & 2024-29		
18	Respondents		
	Name of Respondents		
	1	TANGEDCO	2. BESCOM
	3	KSEB	4. GESCOM.
	5	APCPDCL	6. HESCOM
	7	Electricity Department, Govt of Pondicherry	8. MESCOM
	9	APEPDCL	10. CESC
	11	APSPDCL	12. Electricity Department, Government of Goa
	13	TSSPDCL	14. TSNPDCL

(Petitioner)



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PART-III

Summary of Capital Cost & Annual Fixed Cost (AFC) Claimed for ALL the assets covered in the present petition.

Name of the Petitioner	Powergrid Corporation of India Ltd
Tariff Period	2024-29
Name of the Transmission Project	2nd Spare Converter Transformers at Kolar and Talcher of Talcher-Kolar HVDC Link in Southern Region
COD of the Project (if entire scope of project is completed)	1.10.2011

Rupees in lakh

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

S. No.	Asset No.	COD	Cut-off Date	i) Apportioned Approved Cost		ii) Summary of Actual / Projected Capital Cost										Capital Cost as on Cut-off Date
				As per IA	As per RCE	As on COD	2024-25	2025-26	2026-27	2027-28	2028-29	Capital Cost as on 31.03.2029				
							3	4	5	6	7	8	9	10	11=	
1	Asset-1	1.10.2011	31.03.2014	0.00	0.00	13531.95	13531.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13531.95	13531.95
Total Capital Cost Claimed				0.00	0.00	13531.95	13531.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13531.95	13531.95

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

S. No.	Asset No.	Asset Name and its location	2024-25	2025-26	2026-27	2027-28	2028-29
1	Asset-1	2nd Spare Converter Transformers at Kolar and Talcher of Talcher-Kolar HVDC Link in Southern Region	1062.15	1039.18	1026.56	1025.49	1025.53
Total AFC for all the Assets			1062.15	1039.18	1026.56	1025.49	1025.53

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



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

Form No.	Title of Tariff Filing Forms (Transmission& Communication System)	Tick
FORM- 1	Summary of Tariff	✓
FORM- 1A	Summary of Asset level cost	N.A.
FORM-2	Details of Transmission Lines and Substations and Communication System covered in the project scope and O&M for instant asset	N.A.
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.	N.A.
FORM- 4A	Statement of Capital cost	N.A.
FORM- 4B	Statement of Capital Works in Progress	N.A.
FORM- 4C	Abstract of Capital Cost Estimates and Schedule of Commissioning for the New Project/ Element	N.A.
FORM-5	Element wise Break-up of Project/ Asset/ Element Cost for Transmission System or Communication System	N.A.
FORM-5A	Break-up of Construction/Supply/Service packages	N.A.
FORM-5B	Details of all the assets covered in the project	N.A.
FORM- 6	Actual Cash Expenditure and Financial Package up to COD	N.A.
FORM- 7	Statement of Additional Capitalisation after COD	N.A.
FORM- 7A	Financing of Additional Capitalisation	N.A.
FORM- 7B	Statement of Additional Capitalisation during five year before the end of the useful life of the project.	N.A.
FORM- 8	Calculation of Return on Equity	✓
FORM-8A	Details of Foreign Equity	N.A.
FORM-9	Details of Allocation of corporate loans to various transmission elements	N.A.
FORM-9A	Details of Project Specific Loans	N.A.
FORM-9B	Details of Foreign loans	N.A.
FORM-9C	Calculation of Weighted Average Rate of Interest on Actual Loans	✓
FORM-9D	Loans in Foreign Currency	N.A.
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	N.A.
FORM- 11	Calculation of Interest on Working Capital	✓
FORM- 12	Details of time over run	N.A.
FORM- 12A	Incidental Expenditure during Construction	N.A.
FORM- 12B	Calculation of IDC & Financing Charges	N.A.
FORM- 13	Details of Initial spares	N.A.
FORM- 14	Non-Tariff Income	N.A.
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)	N.A.
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.	N.A.
3	Copies of relevant loan Agreements	N.A.
4	Copies of the approval of Competent Authority for the Capital Cost and Financial package.	N.A.
5	Copies of the Equity participation agreements and necessary approval for the foreign equity.	N.A.
6	Copies of the BPTA/TSA/PPA with the beneficiaries, if any	N.A.
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	N.A.
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.	N.A.
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.	N.A.
10.	Any other relevant information, (Please specify)	N.A.
<p>Note 1: Electronic copy of the petition (in words format) and detailed calculation as per these formats (in excel format) and any other information submitted has to be uploaded in the e-filing website and shall also be furnished in pen drive/flash drive.</p>		

