

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 175/TT/2017

Coram:

**Shri P.K. Pujari, Chairperson
Shri A. K. Singhal, Member
Shri A. S. Bakshi, Member
Dr. M. K. Iyer, Member**

Date of Order : 29.06.2018

In the matter of:

Approval under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and Regulation 6 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 read with Sections 62 and 79 of the Electricity Act, 2003 for determination of transmission tariff for 2014 -19 tariff block.

And in the matter of:

Delhi Transco Limited
Shakti Sadan, Kotla Road,
New Delhi – 110002

.....Petitioner

Vs

1. Power Grid Corporation of India Ltd.
"SAUDAMINI", Plot No-2,
Sector-29, Gurgaon -122001 (Haryana)
2. Rajasthan Rajya Vidyut Prasaran Nigam Limited
Vidyut Bhawan, Vidyut Marg, Jaipur - 302 005
3. Ajmer Vidyut Vitran Nigam Ltd
400 Kv GSS Building (Ground Floor), Ajmer Road,
Heerapura, Jaipur.
4. Jaipur Vidyut Vitran Nigam Ltd
400 Kv GSS Building (Ground Floor), Ajmer Road,
Heerapura, Jaipur.



5. Jodhpur Vidyut Vitran Nigam Ltd
400 kV GSS Building (Ground Floor), Ajmer Road,
Heerapura, Jaipur.
6. Himachal Pradesh State Electricity Board
Vidyut Bhawan
Kumar House Complex Building II
Shimla-171 004,
7. Punjab State Power Corporation Ltd.
Thermal Shed Tia
Near 22 Phatak
Patiala-147001,
8. Haryana Power Purchase Centre
Shakti Bhawan, Sector-6
Panchkula (Haryana) 134 109
9. Power Development Department
Government of Jammu & Kashmir
Mini Secretariat, Jammu
10. Uttar Pradesh Power Corporation Ltd.
(Formerly Uttar Pradesh State Electricity Board)
Shakti Bhawan, 14, Ashok Marg
Lucknow - 226 001
11. BSES Yamuna Power Ltd,
BSES Bhawan, Nehru Plakhe ,
New Delhi,
12. BSES Rajdhani Power Ltd,
BSES Bhawan, Nehru Plakhe,
New Delhi,
13. Tata Power Delhi Distribution Ltd.
Hudson Lane, Kingsway Camp
New Delhi
14. Chandigarh Administration
Sector-9, Chandigarh
15. Uttarakhand Power Corporation Ltd.
Urja Bhawan, Kanwali Road
Dehradun



16. North Central Railway
Allahabad.

17. New Delhi Municipal Council
Palika Kendra, Sansad Marg,
New Delhi-110002

.....Respondents

For Petitioner : Shri Anish Garg, DTL
Shri P.K. Shandilya, DTL
Shri Ajay Kumar Sharma, DTL

For Respondents : Shri Raunak Jain, Advocate, TPDDL
Shri Vishvendra Tomar, Advocate, TPDDL
Shri Vivek Kumar Singh, PGCIL
Shri Rakesh Prasad, PGCIL
Shri S.S. Raju, PGCIL
Shri S.K. Venkatesan, PGCIL
Shri V.P. Rastogi, PGCIL

ORDER

The petitioner, Delhi Transco Limited (DTL), has submitted that DTL is a Government Company within the meaning of Companies Act, 1956. In exercise of power under subsection (1) of section 38 of the Electricity Act, 2003, the Government of Delhi declared DTL as the State Transmission Utility (STU) and it being a STU is deemed to be a transmission licensee under section 14 of the Electricity Act, 2003. DTL being a STU and deemed transmission licensee, it is required to build, maintain and operate a co-ordinated and economical intra-State transmission system as per section 39 and 40 of the Electricity Act, 2003. This transmission system of petitioner also includes Asset-1: 400 KV D/C Mandaula-Bawana and Asset-2:400 KV D/C Bamnauli-Ballabhgarh (hereinafter referred to as "instant assets") which are being used for inter-State transmission of power. Therefore, the tariff for the said two lines being part of inter-State transmission



system is required to be determined by the Commission in accordance with the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter "2014 Tariff Regulations"), Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 read with provisions of the Electricity Act, 2003.

2. The petitioner has served the petition on the respondents and notice of this application has been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003 ("the Act"). No comments have been received from the public in response to the notices published by the petitioner under Section 64 of the Act. BSES Rajdhani Power Limited (BRPL), Respondent No.2 has filed its reply vide affidavit dated 25.5.2018. BRPL has submitted that the depreciation should be allowed as per the 2014 Tariff Regulations. BRPL has also submitted that the increase in the wages due to deprecation should be taken care by increasing their productivity and the liberty sought by the petitioner to approach the Commission for revising the O&M norms may be rejected. We have considered the submissions of BRPL. Tariff, including depreciation, for the instant assets has been allowed for the instant assets as per the methodology discussed in this order. As regards the petitioner's request to approach the Commission for revising the O&M Expenses on implementation of wage revision, it is clarified that any application filed by the petitioner will be dealt as per the prevailing tariff regulations.

3. The Commission vide order dated 14.3.2012 in Petition No. 15/SM/2012 gave the following directions:-



"5. It has come to the notice of the Central Commission that the some of the owners/developers of the inter-State transmission lines of 132 kV and above in North Eastern Region and 220 kV and above in Northern, Eastern, Western and Southern regions as mentioned in the Annexure to this order have approached the Implementing Agency for including their transmission assets in computation of Point of Connection transmission charges and losses under the Central Electricity Regulatory Commission (Sharing of inter-State Transmission Charges and Losses) Regulations, 2010 (hereinafter "Sharing Regulations").

6. As a first step towards inclusion of non-ISTS lines in the POC transmission charges, the Commission proposes to include the transmission lines connecting two States, for computation of POC transmission charges and losses. However, for the disbursement of transmission charges, tariff for such assets needs to be approved by the Commission in accordance with the provisions of Sharing Regulations. Accordingly, we direct the owners of these inter-State lines to file appropriate application before the Commission for determination of tariff for facilitating disbursement.

7. We direct the respondents to ensure that the tariff petition for determination of tariff is filed by the developers/owners of the transmission line or by State Transmission Utilities where the transmission lines are owned by them in accordance with the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009, by 20.4.2012."

4. DTL has submitted that two D/C transmission lines of DTL were identified as inter-State transmission lines in order dated 14.3.2012 in Petition No. 15/SM/2012 and DTL was directed to file tariff petition for the purpose of inclusion of the following transmission lines in the POC charges:-

Srl. No.	From	To	Voltage Level (kV)	Length of line Ckt. km	Connecting States
1	Mandaula	Bawana 1 & 2	400	23.801	Uttar Pradesh-Delhi (S. No. 24 and 25 of Annexure under NR of order dated 14.3.2012)
2	Bamnauli	Ballabgarh 1 & 2	400	52.803	Delhi-Haryana (S. No. 26 and 27 of Annexure under NR of order dated 14.3.2012)

5. The petitioner filed Petition No. 218/TT/2013 for approval of transmission tariff for the said assets for the period 1.7.2011 to 31.3.2014 and the same was approved vide order dated 21.3.2016. The details of the tariff allowed for the 2011-12 to 2013-



14 period is as follows:-

(₹ in lakh)				
Srl. No.	Asset	2011-12	2012-13	2013-14
1	Asset-1	439.97	581.58	562.36
2	Asset-2	724.87	961.48	931.37

6. We have considered the submissions of DTL and respondents placed on record. The instant petition has been filed by DTL claiming tariff for the two inter-State transmission lines owned by DTL for the 2014-19 tariff period as per the 2014 Tariff Regulations. Similar petitions have been filed by other States claiming tariff for inter-State transmission lines owned by them. The information submitted by some State Utilities were incomplete and inconsistent. Further, some of the lines were more than 25 years old and the States were not having the details of the capital cost, funding, etc. To overcome these difficulties, the Commission has evolved a methodology for allowing transmission charges for such transmission lines connecting two States in orders dated 19.12.2017 in Petition Nos. 88/TT/2017, 173/TT/2016 and 168/TT/2016 filed by Madhya Pradesh Power Transmission Corporation Limited, Maharashtra State Electricity Regulatory Commission and Uttar Pradesh Power Transmission Corporation Limited respectively. The Commission adopted the same methodology in order dated 4.5.2018 in Petition No.112/TT/2017, while granting tariff for ISTS connecting Rajasthan with other States and owned by Rajasthan Rajya Vidyut Prasaran Limited. The Commission derived the benchmark cost on the basis of the transmission lines owned by PGCIL. The useful life of the transmission line was considered as 25 years and for lines more than or equal to 25 years, only O & M Expenses and Interest on Working Capital (IWC) has been



decided to be allowed as per the existing Tariff Regulations. For assets put into commercial operation on or after 1.4.2014, tariff has been decided to be allowed on the basis of the audited financial capital cost. The relevant portion of the order dated 4.5.2018 is extracted hereunder:-

“13. It is observed that the information submitted by the petitioner States for computation of transmission charges for the deemed ISTS lines are not uniform, thereby causing divergence in working out the tariff. In some cases, the data related to funding and depreciation was not available and in some cases the assets have already completed, or nearing, their useful life. In most of the petitions, the states have expressed their inability to furnish the audited capital cost of transmission lines as the lines are old. As a result, tariff workings for old assets are ending in skewed results. It is further observed that the YTC figures emerging out by the existing ARR methodology are on the higher side. Considering these facts, we have conceptualized a modified methodology for determining the tariff of the inter-State transmission lines. The methodology is broadly based on the following:-

- (a) PGCIL's Annual Report data has been used as the reference data; based on which, year wise benchmark cost has been derived.
- (b) Useful life of Transmission Line has been considered as 25 years. Thus, if life is more than or equal to 25 years as on 1.4.2014, only O & M Expenses and Interest on Working Capital (IWC) shall be allowed as per the existing Tariff Regulations, in lieu of complete tariff.
- (c) It is expected that the States do have the audited financial data of recently commissioned (i.e. on or after 1.4.2014) lines.

Tariff Methodology

14. As per the petitions filed by the states, their ISTS lines generally have the configuration of 132 kV, 220 kV or 400 kV. In the absence of an established tariff data base, in order to develop this methodology Annual Reports of PGCIL from 1989-90 to 2013-14 have been referred to. The Annual Reports depict, inter alia, the information pertaining to year wise total length of transmission lines in ckt-km and corresponding Gross Block. This pan-India data represents all the five transmission regions and is a composite mix of parameters like terrains, wind-zones, tower and conductor type etc. +/- 500 kV HVDC and 765 kV and above voltage level AC lines too have come up in between and the data also includes those lines. Voltage level-wise data as on 30th April 2017, obtained from PGCIL indicates that the percentage of 220 kV, 132 kV and 66 kV Transmission Line taken together makes it around 8.3 % of the total line length owned by PGCIL. Further, 132 kV Transmission Lines were established in NER prior to 1990, and Transmission Lines of 220 kV voltage levels were last commissioned in around the year 2004 in NR. Majority of the transmission lines consist of 400 kV which corresponds to 66% of the total transmission line lengths. Thus, the 400 kV and lesser voltage levels account for approximately 75% of the transmission lines. Assuming the above referred spread of voltage wise percentages for earlier years too, it can be said that the year wise average Transmission Line cost figures derived from PGCIL data, when further reduced by 25%, fairly represent the average transmission line capital cost



corresponding to a 400 kV S/C line. Considering 400 kV S/C transmission line cost as reference cost, analysis of PGCIL's indicative cost data (P/L Feb 2017) suggests the following:-

	Reference cost of 400 kV S/C TL	₹X lakh/km
1.	400 kV D/C TL	1.39 X
2.	220 kV D/C TL	0.57 X
3.	220 kV S/C TL	0.36 X
4.	132 kV D/C TL	0.43 X
5.	132 kV S/C TL	0.31 X

15. Therefore, for arriving at the costs of transmission lines of other voltage levels and circuit configurations, the average transmission line cost data shall be multiplied by the factors illustrated in the above table. Lower voltage levels can be treated as part of 132 kV. The above table contemplates *Twin Moose* conductor which is widely used in State transmission lines.

16. Based on respective year end data, average transmission line length during the year has been worked out. Difference between a particular year's average transmission line length figures and that for the immediate preceding year provides us the transmission line length added during that year. Average gross block corresponding to transmission lines has been divided by the average transmission line length to arrive at the Average Cost of transmission line (in ₹ lakh per ckt-km) during the year. Thus, considering the year of COD of a State's ISTS line and its ckt-km, its cost would be worked out by relating it to PGCIL's transmission line cost during that year. Although the Commission has relied on PGCIL's Annual Reports, there are certain deviations in the cost data worked out. The year 1989-90 was the year of incorporation for PGCIL, and the transmission assets of NTPC, NHPC, NEEPCO etc. were taken over by PGCIL by mid 1991-92. Thus, as the base data for these years was not available, the corresponding average cost of transmission line could not be worked out. The average cost from 1992-93 onwards up to 2013-14 shows an increasing trend at a CAGR of 5.17%. Therefore, for the years 1989-90, 1990-91 and 1991-92, the average cost of transmission line has been back derived considering the 1992-93 average cost. Similarly, abnormal dip/spikes in the transmission line cost for the years 1996-97, 2001-02 and 2004-05 has been corrected by considering the average values of the transmission line costs in the immediate preceding and succeeding years.

17. While calculating tariff, the following has been considered:-

- (i) Useful life of the transmission line shall be deemed to be 25 years.
- (ii) Prevailing depreciation rates as per the 2014 Tariff Regulations shall be considered uniformly for all the previous tariff periods so as to do away with the Advance Against Depreciation which was in vogue during earlier tariff periods. Notwithstanding the depreciation considered as recovered earlier, for the purpose of these tariff calculations, remaining depreciable value shall be spread over the remaining useful life of the transmission line, where the elapsed life is more than or equal to 12 years.
- (iii) Normative Debt-Equity ratio shall be 70:30.



- (iv) Normative loan repayment during a year shall be deemed to be equal to the depreciation allowed for that year.
- (v) Rate of Interest on normative loan shall be the weighted average rate of interest as derived on the basis of PGCIL's Balance Sheet.
- (vi) In order to avoid complexity, grossing up of rate of Return on Equity with tax rate is being dispensed with.
- (vii) Bank rate as defined in 2014 Tariff Regulations, 2014 as on 1.4.2014 shall be applied for calculating the rate of interest on working capital on normative basis.
- (viii) O & M Expenses as per the 2014 Tariff Regulations shall be considered.
- (ix) Where the life of transmission line is more than or equal to 25 years as on 1.4.2014, only O & M Expenses and IWC shall be allowed in lieu of complete tariff.

18. Thus, in effect, this is a normative tariff working methodology which shall be applied in those cases where the audited capital cost information is not available.”

7. DTL has not submitted the Audited capital cost certificates in case of the instant assets. Accordingly, tariff is allowed for the instant two inter-State transmission lines in line with the methodology explained in foregoing paragraphs.

8. The annual transmission charges allowed for the instant assets are as follows:-

(₹ in lakh)					
Asset-1	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	59.39	23.05	23.05	23.05	23.05
Interest on Loan	7.43	4.53	2.89	1.23	0.20
Return on Equity	52.30	52.30	52.30	52.30	52.30
Interest on Working Capital	4.14	3.28	3.29	3.30	3.33
O & M Expenses	25.28	26.11	26.97	27.87	28.80
Total	148.54	109.27	108.50	107.76	107.68

(₹ in lakh)					
Asset-2	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	103.66	103.66	40.23	40.23	40.23
Interest on Loan	20.34	13.06	7.95	5.05	2.15
Return on Equity	91.30	91.30	91.30	91.30	91.30
Interest on Working Capital	8.05	7.99	6.52	6.56	6.61
O & M Expenses	56.08	57.92	59.83	61.83	63.89
Total	279.43	273.93	205.82	204.97	204.17



Filing Fee and Publication Expenses

9. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses, in terms of Regulation 52 of the 2014 Tariff Regulations. BRPL has submitted that the filing fee and the publication expenses may not be allowed. 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 clause (1) of Regulation 52 of the 2014 Tariff Regulations.

Service Tax

10. The petitioner has sought to recover service tax on transmission charges separately from the respondents, if at any time service tax on transmission is withdrawn from negative list in future. Service tax is not levied on transmission service. Further, service tax is subsumed by GST and hence petitioner's prayer has become infructuous.

Goods and Services Tax

11. The petitioner has prayed for reimbursement of tax, if any, on account of implementation of GST. MPPMCL has submitted that the petitioner's claim is premature. GST is not levied on transmission service at present and as such we are of the view that petitioner's prayer is premature.

Sharing of Transmission Charges

12. The transmission charges shall be recovered on monthly basis in accordance with Regulation 43 of the 2014 Tariff Regulations 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 as amended from time to time. Further, the transmission charges allowed in this order shall be adjusted against the ARR approved by the State Commission.

13. This order disposes of Petition No. 175/TT/2017.

sd/-
(Dr. M. K. Iyer)
Member

sd/-
(A. S. Bakshi)
Member

sd/-
(A.K. Singhal)
Member

sd/-
(P. K. Pujari)
Chairperson

