

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 119/TT/2014

Coram:

**Shri Gireesh B. Pradhan, Chairperson
Shri A.K. Singhal, Member
Shri A.S. Bakshi, Member**

Date of Hearing : 04.06.2015

Date of Order : 16.05.2016

In the matter of:

Determination of tariff in respect of H.P. Power Transmission Corporation Limited owned transmission lines/system connecting with other states and intervening transmission lines incidental to inter-State transmission of electricity as per the Central Electricity Regulatory Commission's order dated 14.3.2012 in Petition No.15/Suo-Moto/2012, for inclusion in POC charges in accordance with Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009.

And in the matter of:

H.P. Power Transmission Corporation Limited (HPPTCL)
Barowalias House, Khalini,
Shimla-2

.....**Petitioner**

Vs

1. Himachal Pradesh State Electricity Board,
Vidyut Bhawan,
Shimla-171 004
2. Power Transmission Corporation of Uttarakhand Limited,
Vidyut Bhawan, Saharanpur Road, Majara, Near ISBT,
Dehradun-248 001
3. Uttarakhand Power Corporation Limited,
Victoria Cross Vijeyta Gabar Singh Bhawan,
Kanwali Road, Balliwala Chowk,
Dehradun-248 001, Uttrakhand
4. Punjab State Transmission Corporation Limited,
PSEB Head Office, The Mall,
Patiala, Punjab-147 001



5. Punjab State Power Corporation Limited,
PSEB Head Office, The Mall,
Patiala, Punjab-147 001
6. Haryana Vidyut Prasaran Nigam Limited,
Shakti Bhawan, Sector-6,
Panchkula, Panchkula, District Ambala,
Haryana-134 109
7. Uttar Haryana Bijli Vitran Nigam Limited,
Vidyut Sadan, No.:C16, Sector-6, Panchkula,
Haryana-134 109

....Respondents

For petitioner : Shri A.K. Khanotia, HPPTCL
Shri S.K. Sharma, HPPTCL
Shri D.P. Sharda, HPPTCL
Shri Sheshank Gupta, HPPTCL
Shri Raj Rawat, HPPTCL

For respondents : Ms. Swapna Seshadri, Advocate for HPSEB Ltd.

ORDER

The petitioner, H.P. Power Transmission Corporation Limited (HPPTCL) is a deemed licensee under section 14 of the Electricity Act, 2003 for transmission of electricity in the State of Himachal Pradesh. The instant petition has been filed by HPPTCL for approval of the annual transmission charges of the transmission assets covered in the petition under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter "2014 Tariff Regulations") in compliance of the Commission's order dated 14.3.2012 in Petition No.15/SM/2012.

2. 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."

3. Four transmission lines of HPPTCL were identified as inter-State transmission lines, in order dated 14.3.2012 in Petition No. 15/SM/2012 and HPPTCL was directed to file petition claiming tariff for the said four lines for the purpose of inclusion in the POC charges. The details of the four transmission lines are as follows:-

S. No.	From	To	Voltage Level (kV)	Connecting States
1	Majri	Khodri	220	Himachal Pradesh-Uttarakhand (S. No. 9 of Annexure under NR of order dated 14.3.2012)
2	Jessore	Ranjitsagar	220	Himachal Pradesh-Punjab (S. No. 11 of Annexure under NR of order dated 14.3.2012)
3	Baddi	Panchkula	220	Himachal Pradesh-Haryana (S. No. 12 of Annexure under NR of order dated 14.3.2012)
4	Kunihar	Panchkula	220	Himachal Pradesh-Haryana (S. No. 13 of Annexure under NR of order dated 14.3.2012)



4. The petitioner has submitted that out of the four ISTS lines stated in order dated 14.3.2012 in Petition No. 15/SM/2012, two ISTS lines at S.No. 12 and 13, though identified as separate lines are treated as a single transmission element as the transmission line from Kunihar to Panchkula was made LILO at Baddi. Thus, the transmission element Kunihar-Panchkula being a single transmission element comprises of three components namely Baddi-Panchkula, Kunihar-Panchkula and LILO at Baddi for tariff purpose. The details of the assets covered in the instant petition, their date of commercial operation (COD) and the line length are as follows:-

S. No.	Name of the line	Connecting States	Length of line Ckt. km	COD
1	220 kV S/C Jessore-Ranjitsagar	Asset-I: Himachal Pradesh-Punjab (S. No. 11 of Annexure under NR of order dated 14.3.2012)	25.602	March, 2001
2	220 kV D/C Majri-Khodri	Asset-II: Himachal Pradesh-Uttarakhand (S. No. 9 of Annexure under NR of order dated 14.3.2012)	35.02	September, 1989
3	220 kV D/C Kunihar-Panchkula	Asset-III: Himachal Pradesh-Haryana (S. No. 12 and 13 of Annexure under NR of order dated 14.3.2012)	46.72	May, 1989

5. The petitioner had earlier filed tariff petitions as per the 2009 Tariff Regulations for tariff block 2009-14 vide Petition Nos. 209/TT/2013, 210/TT/2013 and 211/TT/2013. However, the petitioner filed application to withdraw these tariff petitions as transmission charges for 2009-14 period were already approved by the HPERC. Accordingly, the said petitions were disposed as withdrawn vide order dated 9.6.2014.



6. The petitioner has filed the instant petition for determination of tariff for 2014-19 tariff period. The petitioner has submitted that the tariff petition filed before the HPERC is only for the intra-state lines i.e. excluding these three ISTS lines.

7. We have perused the material on record. We proceed to determine the annual fixed charges in respect of the assets covered in the petition.

No. of assets to be covered

8. The instant petition has been filed in response to the Commission's directions for determination of tariff of transmission lines owned or controlled by the STU which carry inter-State power. Section 2(36) of the Act defines the ISTS as hereinafter:-

"2(36) inter-State transmission system includes-

- (i) Any system for the conveyance of electricity by means of main transmission line from the territory of one State to another state;
- (ii) The conveyance of electricity across the territory of any intervening State as well as conveyance within the State which is incidental to such inter-State transmission of electricity;
- (iii) The transmission of electricity within the territory of a State on a system built, owned, operated, maintained or controlled by a Central Transmission Utility"

9. The petitioner has submitted that the three transmission lines identified by the Commission satisfy the conditions of ISTS. The STU lines used for carrying inter-State power can be considered for inclusion in the PoC charges only if it is certified by RPC in terms of para 2.1.3 of Annexure-I to Central Electricity Regulatory Commission (Sharing of inter-State Transmission Charges and Losses) Regulations, 2010, which is extracted as under:-

"The line-wise YTC of the entire network shall be provided by the Transmission Licensees. In case a line is likely to be commissioned during the Application Period, the



data in respect of the same, along with the anticipated COD will be provided by the CTU/ Transmission Licensee to the Implementing Agency.

For the determination of the transmission charges based on Hybrid Methodology applicable in the next Application Period, all the above data shall be provided to the Implementing Agency as per the timelines specified by the Implementing Agency.

Overall charges to be allocated among nodes shall be computed by adopting the YTC of transmission assets of the ISTS licensees, deemed ISTS licensees and owners of the non-ISTS lines which have been certified by the respective Regional Power Committee (RPC) for carrying inter-State power. The Yearly Transmission Charge, computed for assets at each voltage level and conductor configuration in accordance with the provisions of these regulations shall be calculated for each ISTS transmission licensee based on indicative cost provided by the Central Transmission Utility for different voltage levels and conductor configuration. The YTC for the RPC certified non-ISTS lines which carry inter-State power shall be approved by the Appropriate Commission.

In case line-wise tariff for the RPC certified non-ISTS lines has not been specified by the Appropriate Commission, the tariff as computed for the relevant voltage level and conductor configuration shall be used. The methodology for computation of tariff of individual asset shall be similar to the methodology adopted for the ISTS transmission licensees and shall be based on ARR of the STU as approved by the respective State Commission.

Certification of non-ISTS lines carrying inter-State power, which were not approved by the RPCs on the date of notification of the Central Electricity Regulatory Commission (Sharing of Transmission Charges and Losses) Regulations, 2009, shall be done on the basis of load flow studies. For this purpose, STU shall put up proposal to the respective RPC Secretariat for approval. RPC Secretariat, in consultation with RLDC, using Web Net Software would examine the proposal. The results of the load flow studies and participation factor indicating flow of Inter State power on these lines shall be used to compute the percentage of usage of these lines as inter State transmission. The software in the considered scenario will give percentage of usage of these lines by home State and other than home State. For testing the usage, tariff of similar ISTS line may be used. The tariff of the line will also be allocated by software to the home State and other than home State. Based on percentage usage of ISTS in base case, RPC will approve whether the particular State line is being used as ISTS or not. Concerned STU will submit asset-wise tariff. If asset wise tariff is not available, STU will file petition before the Commission for approval of tariff of such lines. The tariff in respect of these lines shall be computed based on Approved ARR and it shall be allocated to lines of different voltage levels and configurations on the basis of methodology which is being done for ISTS lines.”

10. The certificate of NRPC is available in terms of the above provision in respect of the transmission lines which were included in the Commission’s order



dated 14.3.2012 in Petition No. 15/SM/2012. Accordingly, the three transmission lines are being considered in this petition for grant of annual transmission charges.

Capital Cost

11. The petitioner vide letter dated 18.10.2012 in petitions for the tariff block 2009-14, was directed to submit the capital cost duly certified by the auditors, funding pattern of the assets, repayment schedule and the interest rates of loans, if any, cumulative depreciation as on 31.3.2012, details of the ARR approved by the State Commission for the 2009-14 period and details of the O&M expenses of the instant assets.

12. The petition was heard on 4.6.2015 and the petitioner was directed to submit the ARR and network configurations in the prescribed pro-forma and the details of ARR approved by the SERC for period 2009-14 separately for the respective years mentioning total amount approved for each respective year. The petitioner, vide affidavit dated 21.5.2014 submitted that they have already claimed tariff for 2009-14 period from HPERC and the same has been approved by them.

13. The petitioner vide affidavit dated 31.10.2015 has submitted that initially the value of assets transferred from HPSEBL was ₹19900 lakh. However, the cost was reassessed by HPSEBL and the capital cost was reduced to ₹10200 lakh. Thus, the reassessed cost of the instant assets has been taken in its books of account. The capital cost and accumulated depreciation of the instant assets were certified vide Auditors' certificate dated 23.10.2015, are as follows:-



(₹ in lakh)

Particulars	Gross block of the asset (Reassessed)	Cumulative depreciation upto 31.3.2012
Asset-I	2114.33	581.44
Asset-II	3674.43	2020.94
Asset-III	2520.23	1386.13
Total	8308.99	3988.51

Additional Capitalisation

14. The petitioner has not claimed additional capital expenditure for the instant assets during 2014-19.

Return on equity

15. The petitioner has submitted that it is not holding any equity in the assets transferred by the HPSEBL. Thus, the petitioner has not claimed any RoE.

Interest on loan

16. The petitioner has submitted that there is no loan outstanding in respect of the instant assets. Thus, the petitioner has not claimed interest on loan.

Depreciation

17. Clause (2), (5) and (6) of Regulation 27 of the 2014 Tariff Regulations provide as follows:-

"27. Depreciation:

...(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 transmission system, weighted average life for the generating station of the transmission system shall be applied. Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis

...

(5) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in **Appendix-II** 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 1.4.2014 shall be worked out by deducting the cumulative depreciation as admitted by the Commission upto 31.3.2014 from the gross depreciable value of the assets.”

18. The petitioner has claimed actual depreciation as a component of annual fixed charges (AFC). The petitioner has submitted accumulated depreciation upto 31.3.2012 for the instant assets as discussed at para-13. In addition, the depreciation allowed in all three assets is as follows:-

Asset-I: The asset completes 12 years during 2012-13. Thus, the remaining depreciable value of the asset would be spread over the remaining life of the asset as per Proviso 4 of Regulation 17 of 2009 Tariff Regulations from 2013-14. Accordingly, depreciation worked out during 2012-13 is ₹111.64 lakh and for 2013-14 onwards the allowable depreciation is ₹52.60 lakh. The details of allowable depreciation are as under:-

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	52.60	52.60	52.60	52.60	52.60

Asset-II: The asset has already completed 12 years during 2001-02. Thus, the remaining depreciable value of the asset would be spread over the remaining life of the asset from 2002-03. Accordingly, allowable depreciation worked out during 2014-15 onwards is ₹98.93 lakh. The details of allowable depreciation are as follows:-

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	98.93	98.93	98.93	98.93	98.93



Asset-III: The asset also has already completed 12 years during 2001-02. Thus, the remaining depreciable value of the asset would be spread over the remaining life of the asset from 2002-03. Accordingly, allowable depreciation worked out during 2014-15 onwards is ₹67.85 lakh. The details of allowable depreciation are as under:-

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	67.85	67.85	67.85	67.85	67.85

Operation & maintenance expenses (O&M Expenses)

19. Regulation 29 (4) (a) of the 2014 Tariff Regulations specifies the norms for operation and maintenance expenses for the transmission system based on the type of sub-station and the transmission line. Norms specified in respect of the elements covered in the instant petition are as under:-

Elements	2014-15	2015-16	2016-17	2017-18	2018-19
S/C Single conductor T/L (₹ lakh per km)	0.202	0.209	0.216	0.223	0.230
D/C Single conductor T/L (₹ lakh per km)	0.303	0.313	0.324	0.334	0.346
220 kV bays (₹ lakh per bay)	42.21	43.61	45.06	46.55	48.10

20. The petitioner has claimed O&M Expenses accordingly, which have been allowed. The allowable O&M expenses for the instant transmission assets are as under:-

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
220 kV D/C Majri-Khodri	10.61	10.96	11.35	11.70	12.12
220 kV S/C Jessore-Ranjitsagar	5.17	5.35	5.53	5.71	5.89
220 kV D/C Kuniyar-Panchkula	14.16	14.62	15.14	15.60	16.17
Total	29.939	30.935	32.014	33.010	34.171



Interest on working capital

21. Clause 1 (c) of Regulation 28 and Clause 5 of Regulation 3 of the 2014 Tariff

Regulations specify as follows:-

“28. Interest on Working Capital

(c)(i) Receivables equivalent to two months of fixed cost;

(ii) Maintenance spares @ 15% of operation and maintenance expenses specified in regulation 29; and

(iii) Operation and maintenance expenses for one month”

“(5) ‘Bank Rate’ means the base rate of interest as specified by the State Bank of India from time to time or any replacement thereof for the time being in effect plus 350 basis points;”

22. The interest on working capital is worked out in accordance with Regulation 28 of the 2014 Tariff Regulations. The rate of interest on working capital considered is 13.50% (SBI Base Rate of 10% plus 350 basis points). The interest on working capital as determined is as under:-

(₹ in lakh)

Particulars	Asset-I				
	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	0.78	0.80	0.83	0.86	0.88
O & M expenses	0.43	0.45	0.46	0.48	0.49
Receivables	9.88	9.91	9.94	9.97	10.00
Total	11.08	11.16	11.23	11.31	11.38
Interest Rate	13.50%	13.50%	13.50%	13.50%	13.50%
Interest	1.50	1.51	1.52	1.53	1.54
Particulars	Asset-II				
	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	1.59	1.64	1.70	1.76	1.82
O & M expenses	0.88	0.91	0.95	0.98	1.01
Receivables	18.73	18.79	18.86	18.93	19.00
Total	21.21	21.35	21.51	21.66	21.83
Interest Rate	13.50%	13.50%	13.50%	13.50%	13.50%
Interest	2.86	2.88	2.90	2.92	2.95
Particulars	Asset-III				
	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	2.12	2.19	2.27	2.34	2.43
O & M expenses	1.18	1.22	1.26	1.30	1.35
Receivables	14.06	14.14	14.23	14.31	14.41
Total	17.36	17.55	17.76	17.95	18.19
Interest Rate	13.50%	13.50%	13.50%	13.50%	13.50%
Interest	2.34	2.37	2.40	2.42	2.46



Transmission charges

23. The transmission charges allowed for the instant transmission assets are summarized as under:-

(₹ in lakh)

Particulars	Asset-I				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	52.60	52.60	52.60	52.60	52.60
Interest on Loan	-	-	-	-	-
Return on Equity	-	-	-	-	-
Interest on Working Capital	1.50	1.51	1.52	1.53	1.54
O & M Expenses	5.17	5.35	5.53	5.71	5.89
Total	59.27	59.46	59.65	59.84	60.03
Particulars	Asset-II				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	98.93	98.93	98.93	98.93	98.93
Interest on Loan	-	-	-	-	-
Return on Equity	-	-	-	-	-
Interest on Working Capital	2.86	2.88	2.90	2.92	2.95
O & M Expenses	10.61	10.96	11.35	11.70	12.12
Total	112.40	112.77	113.18	113.55	113.99
Particulars	Asset-III				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	67.85	67.85	67.85	67.85	67.85
Interest on Loan	-	-	-	-	-
Return on Equity	-	-	-	-	-
Interest on Working Capital	2.34	2.37	2.40	2.42	2.46
O & M Expenses	14.16	14.62	15.14	15.60	16.17
Total	84.36	84.84	85.39	85.88	86.48

24. The billing, collection and disbursement of the transmission charges approved 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 the 2014 Tariff Regulations.



25. This order disposes of Petition No. 119/TT/2014.

sd/-
(A.S. Bakshi)
Member

sd/-
(A.K. Singhal)
Member

sd/-
(Gireesh B. Pradhan)
Chairperson

