

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 218/TT/2013

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 : 21.03.2016

In the matter of:

Determination of tariff in respect of Delhi Transco 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:

Delhi Transco Limited (DTL)
Shakti Sadan, Kotla Road,
New Delhi-110 002

.....**Petitioner**

Vs

1. Power Grid Corporation of India Limited,
"Saudamini", Plot No.2,
Sector-29, Gurgaon-122 001
2. Himachal Pradesh State Electricity Board,
Vidyut Bhawan, Kumar House Complex Building II,
Shimla-171 004
3. Punjab State Electricity Board,
220 kV Sub-Station, Ablawal,
Patiala-147 001
4. Haryana Power Purchase Centre,
IInd Floor, Shakti Bhawan, Sector-6,
Panchkula-134 109
5. Power Development Department,
Janipura Grid Station, Jammu (Tawi)-180 007



6. Uttar Pradesh Power Corporation Limited,
Shakti Bhawan Extn., 14, Ashok Marg,
Lucknow-226 001
7. Chandigarh Administration,
Sector-9, Chandigarh
8. Uttarakhand Power Corporation Limited,
Urja Bhawan, Kanwali Road, Dehradun
9. Rajasthan Power Procurement Centre,
Vidyut Bhawan, Janpath, Jaipur
10. Ajmer Vidyut Vitran Nigam Limited,
400 kV GSS Building,
Ajmer Road, Heerapura, Jaipur
11. Jodhpur Vidyut Vitran Nigam Limited,
400 kV GSS Building,
Ajmer Road, Heerapura, Jaipur
12. Jaipur Vidyut Vitran Nigam Limited,
400 kV GSS Building,
Ajmer Road, Heerapura, Jaipur
13. North Central Railway,
Allahabad
14. BSES Yamuna Power Limited,
Shakti Kiran Building, Karkardooma,
Delhi-110 092
15. BSES Rajdhani Power Limited,
BSES Bhawan, Building No. 20,
Nehru Place, New Delhi
16. North Delhi Power Limited,
Power Trading & Load Dispatch Group,
Cennet Building, Adjacent to 66/11kV Pitampura-3,
Grid Building, Near PP Jewellers,
Pitampura, New Delhi-110 034
17. New Delhi Municipal Council,
Palika Kendra, Sansad Marg,
New Delhi-110 002

.....Respondents



For petitioner : Shri Sumit Gupta, DTL
Shri S.K. Chalumedi, DTL
Shri S.P. Singh, DTL
Shri S.K. Sharma, DTL

For respondents : None

ORDER

The petitioner, Delhi Transco Limited (DTL) is a Government Company within the meaning of Companies Act, 1956. In exercise of power under sub-section (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. The instant petition has been filed by DTL 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, 2009 (hereinafter "2009 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. 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 vide the above mentioned order to file tariff petition for the purpose of inclusion in the POC charges, for the following two D/C transmission lines:-

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

4. The petitioner has submitted that four ISTS lines at S.No. 24, 25, 26 & 27, included in order dated 14.3.2012 in Petition No. 15/SM/2012, though identified as single circuit lines are treated as two double circuit lines for tariff purpose. The petitioner has given the line length in ckt. km. of these lines, as follows:-



| S. No. | Name of the line | Connecting States | Length of line Ckt. km |
|--------|--------------------------------|--|------------------------|
| 1 | 400 kV D/C Mandaula-Bawana | Uttar Pradesh-Delhi (S. No. 24 and 25 of Annexure under NR of order dated 14.3.2012) | 23.801 |
| 2 | 400 kV D/C Bamnauli-Ballabgarh | Delhi-Haryana (S. No. 26 and 27 of Annexure under NR of order dated 14.3.2012) | 52.803 |

5. In line with the submission of the petitioner, two double circuit lines have been considered for determination of tariff and for inclusion in the PoC charges. Further, we would like to clarify that the instant petition includes only the portions of ISTS lines upto the border of the State of Delhi.

6. The petitioner has submitted the acquisition cost of these lines vide their letter dated 1.7.2014 duly certified by their Auditors. Further, the petitioner has submitted the details of ARR approved by SERC for 2009-10 to 2012-13, but the ARR of the lines for 2013-14 has not been submitted.

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 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 two D/C transmission lines identified by the Commission satisfy the conditions of ISTS. Accordingly, these two D/C transmission lines are being considered in this petition for grant of annual transmission charges as decided in Petition No.15/SM/2012. Further, since the Central Electricity Regulatory Commission (Sharing of inter-State Transmission Charges and Losses) Regulations, 2010 came into force with effect from 1st July, 2011, Yearly Transmission Charges (YTC) for these two D/C transmission lines is allowable for the year 2011-12 (1.7.2011 to 31.3.2012), 2012-13 and 2013-14.

Capital Cost

10. The petitioner was directed vide letter dated 17.6.2014 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.

11. As discussed at para-6, the petitioner has submitted the acquisition cost of these lines vide their letter dated 1.7.2014 duly certified by their Auditors. The petitioner has also submitted the ARR for the period 2009-14 excluding 2013-14



as approved by SERC. However, the approved ARR of ₹58568 lakh for 2012-13 submitted by the petitioner was trued-up by DERC at ₹50616 lakh later i.e. after submission by the petitioner. The details are as given below:-

| Line * Type | 2009-10 | 2010-11 | 2011-12 | 2012-13 |
|-----------------------|-----------------|-----------------|-----------------|-----------------|
| +500 kV HVDC | - | - | - | - |
| +800 kV HVDC | - | - | - | - |
| 765 kV D/C | - | - | - | - |
| 765 kV S/C | - | - | - | - |
| 400 kV D/C | 227.202 | 227.238 | 227.238 | 248.224 |
| 400 kV D/C Quad Moose | - | - | - | - |
| 400 kV S/C | - | - | - | - |
| 220 kV D/C | 590.246 | 618.130 | 655.730 | 709.710 |
| 220 kV S/C | - | - | - | - |
| 132 kV D/C | - | - | - | - |
| 132 kV S/C | - | - | - | - |
| ARR approved** | 22858.00 | 31082.00 | 40743.00 | 50616.00 |

*Line length in Ckt. Km. **ARR (in ₹ lakh)

Procedure for calculating YTC for the transmission lines

12. In case where the capital cost of the transmission lines connecting two states and carrying inter-state power is not available, the Commission has adopted the indicative cost based on the ARR approved by the respective State Commission to arrive at the annual transmission charges. However, in the present case, the acquisition cost of the transmission lines as on the date of transfer is available, the Commission has determined the annual transmission charges in accordance with the 2009 Tariff Regulations. The details of acquisition cost of the instant lines is as follows:-

| S. No. | Name of the line | Acquisition cost (₹ in lakh) | Date of acquisition |
|---------------|--------------------------------|---|----------------------------|
| 1 | 400 kV D/C Mandaula-Bawana | 3743 | 1.7.2002 |
| 2 | 400 kV D/C Bamnauli-Ballabgarh | 5904 | 10.3.2004 |



13. Annual transmission charges of the two D/C transmission lines calculated on the methodology discussed above is as follows:-

| (₹ in lakh) | | | | | |
|--------------|---------------------------------|------------------|----------------|----------------|----------------|
| S. No. | Line Name | Length (Ckt. km) | 2011-12 | 2012-13 | 2013-14 |
| 1 | 400 kV D/C Mandaula-Bawana | 23.801 | 439.97 | 581.58 | 562.36 |
| 2 | 400 kV D/C Bamnauli-Ballabhgarh | 52.803 | 724.87 | 961.48 | 931.37 |
| Total | | | 1164.84 | 1543.06 | 1493.73 |

14. As the tariff of the above lines have already been included in the ARR of Delhi Transco Limited by the Learned Delhi Electricity Regulatory Commission (DERC), the annual transmission charges allowed in this order shall be adjusted against the ARR approved by DERC.

15. The details of annual transmission charges allowed are as per Annexure-1 and Annexure-2.

16. The transmission charges allowed in this order shall be included in the Yearly Transmission Charges in accordance with Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010, as amended from time to time.

17. This order disposes of Petition No. 218/TT/2013.

sd/-
(A.S. Bakshi)
Member

sd/-
(A.K. Singhal)
Member

sd/-
(Gireesh B. Pradhan)
Chairperson



Annexure-1
(₹ in lakh)

| 400 KV D/C Mandaula-Bawana line | | | | | |
|--|-----|-----------|---------|----------|---------|
| | | AS on COD | 2011-12 | 2012-13 | 2013-14 |
| Period | | | 0.75000 | 1 | 1 |
| Gross Block | | | | | |
| As on COD | | 3743.00 | 3743.00 | 3743.00 | 3743.00 |
| Addition during 2009-14 due to Projected Additional Capitalisation | | | 0.00 | 0.00 | 0.00 |
| Gross Block | | | 3743.00 | 3743.00 | 3743.00 |
| Average Gross Block | | | 3743.00 | 3743.00 | 3743.00 |
| Depreciation | | | | | |
| Rate of Depreciation | | | 5.2800% | 5.2800% | 5.2800% |
| Depreciable Value | 90% | | 3368.70 | 3368.70 | 3368.70 |
| Remaining Depreciable Value | | | 2273.75 | 2125.53 | 1927.90 |
| Depreciation | | | 148.22 | 197.63 | 197.63 |
| Cumulative Depreciation/ Advance against Depreciation | | 1094.95 | | | |
| Addition due to Additional Capitalisation | | 0.00 | | | |
| Cumulative Depreciation/ Advance against Depreciation | | 1094.95 | 1243.17 | 1440.80 | 1638.43 |
| Cumulative Repayment of Loan | | | | | |
| Cumulative Repayment of Loan | | 1094.95 | | | |
| Addition due to Additional Capitalisation | | 0.00 | | | |
| Cumulative Repayment of Loan | | 1094.95 | 1243.17 | 1440.80 | 1638.43 |
| Interest on Loan | | | | | |
| Gross Notional Loan | | 2620.10 | | | |
| Addition due to Additional Capitalisation | | 0.00 | | | |
| Gross Normative Loan | | 2620.10 | 2620.10 | 2620.10 | 2620.10 |
| Cumulative Repayment upto Previous Year | | | 1094.95 | 1243.17 | 1440.80 |
| Net Loan-Opening | | | 1525.15 | 1376.93 | 1179.30 |
| Addition due to Additional Capitalisation | | | 0.00 | 0.00 | 0.00 |
| Repayment during the year | | | 148.22 | 197.63 | 197.63 |
| Net Loan-Closing | | | 1376.93 | 1179.30 | 981.67 |
| Average Loan | | | 1451.04 | 1278.11 | 1080.48 |
| Weighted Average Rate of Interest on Loan (SBI Base Rate as on beginning of the period) | | | 9.2500% | 10.0000% | 9.7000% |
| Interest | | | 100.67 | 127.81 | 104.81 |
| Return on Equity | | | | | |
| Gross Notional Equity | | 1122.90 | | | |



| | | | | | |
|---|----------|---------|---------------|---------------|---------------|
| Addition due to Additional Capitalisation | | 0.00 | | | |
| Opening Equity | | 1122.90 | 1122.90 | 1122.90 | 1122.90 |
| Addition due to Additional Capitalisation | | | 0.00 | 0.00 | 0.00 |
| Closing Equity | | | 1122.90 | 1122.90 | 1122.90 |
| Average Equity | | | 1122.90 | 1122.90 | 1122.90 |
| Return on Equity (Base Rate) | | | 15.50% | 15.50% | 15.50% |
| Tax rate for the respective year | | | 20.008% | 20.008% | 20.961% |
| Rate of Return on Equity (Pre Tax) | | | 19.377% | 19.377% | 19.610% |
| Return on Equity (Pre Tax) | | | 163.19 | 217.58 | 220.20 |
| | | | | | |
| Interest on Working Capital | | | | | |
| Maintenance Spares | | | 3.75 | 3.97 | 4.19 |
| O & M expenses | | | 2.08 | 2.20 | 2.33 |
| Receivables | 2 Months | | 97.77 | 96.93 | 93.73 |
| Total | | | 103.61 | 103.10 | 100.25 |
| Interest (SBI Base Rate @8.25 % as on 01.04.2011 plus 350 points) | 11.75% | | 9.13 | 12.11 | 11.78 |
| | | | | | |
| Annual Transmission Charges | | | | | |
| Depreciation | | | 148.22 | 197.63 | 197.63 |
| Interest on Loan | | | 100.67 | 127.81 | 104.81 |
| Return on Equity | | | 163.19 | 217.58 | 220.20 |
| Interest on Working Capital | | | 9.13 | 12.11 | 11.78 |
| O & M Expenses | | | 18.76 | 26.44 | 27.94 |
| Total | | | 439.97 | 581.58 | 562.36 |



Annexure-2
(₹ in lakh)

| 400 KV D/C Bamnauli-Ballabhgarh | | | | | |
|---|-----|------------------|----------------|----------------|----------------|
| | | AS on COD | 2011-12 | 2012-13 | 2013-14 |
| Period | | | 0.75000 | 1 | 1 |
| Gross Block | | | | | |
| As on COD | | 5904.00 | 5904.00 | 5904.00 | 5904.00 |
| Addition during 2009-14 due to Projected Additional Capitalisation | | | 0.00 | 0.00 | 0.00 |
| Gross Block | | | 5904.00 | 5904.00 | 5904.00 |
| Average Gross Block | | | 5904.00 | 5904.00 | 5904.00 |
| | | | | | |
| Depreciation | | | | | |
| Rate of Depreciation | | | 5.2800% | 5.2800% | 5.2800% |
| Depreciable Value | 90% | | 5313.60 | 5313.60 | 5313.60 |
| Remaining Depreciable Value | | | 3844.85 | 3611.05 | 3299.32 |
| Depreciation | | | 233.80 | 311.73 | 311.73 |
| Cumulative Depreciation/ Advance against Depreciation | | 1468.75 | | | |
| Addition due to Additional Capitalisation | | 0.00 | | | |
| Cumulative Depreciation/ Advance against Depreciation | | 1468.75 | 1702.55 | 2014.28 | 2326.01 |
| | | | | | |
| Cumulative Repayment of Loan | | | | | |
| Cumulative Repayment of Loan | | 1468.75 | | | |
| Addition due to Additional Capitalisation | | 0.00 | | | |
| Cumulative Repayment of Loan | | 1468.75 | 1702.55 | 2014.28 | 2326.01 |
| | | | | | |
| Interest on Loan | | | | | |
| Gross Notional Loan | | 4132.80 | | | |
| Addition due to Additional Capitalisation | | 0.00 | | | |
| Gross Normative Loan | | 4132.80 | 4132.80 | 4132.80 | 4132.80 |
| Cumulative Repayment upto Previous Year | | | 1468.75 | 1702.55 | 2014.28 |
| Net Loan-Opening | | | 2664.05 | 2430.25 | 2118.52 |
| Addition due to Additional Capitalisation | | | 0.00 | 0.00 | 0.00 |
| Repayment during the year | | | 233.80 | 311.73 | 311.73 |
| Net Loan-Closing | | | 2430.25 | 2118.52 | 1806.79 |
| Average Loan | | | 2547.15 | 2274.38 | 1962.65 |
| Weighted Average Rate of Interest on Loan (SBI Base Rate as on beginning of the period) | | | 9.2500% | 10.0000% | 9.7000% |
| Interest | | | 176.71 | 227.44 | 190.38 |
| | | | | | |
| Return on Equity | | | | | |
| Gross Notional Equity | | 1771.20 | | | |
| Addition due to Additional Capitalisation | | 0.00 | | | |
| Opening Equity | | 1771.20 | 1771.20 | 1771.20 | 1771.20 |
| Addition due to Additional Capitalisation | | | 0.00 | 0.00 | 0.00 |



| | | | | | |
|--|-------------|--|---------------|---------------|---------------|
| Closing Equity | | | 1771.20 | 1771.20 | 1771.20 |
| Average Equity | | | 1771.20 | 1771.20 | 1771.20 |
| Return on Equity (Base Rate) | | | 15.50% | 15.50% | 15.50% |
| Tax rate for the respective year | | | 20.008% | 20.008% | 20.961% |
| Rate of Return on Equity (Pre Tax) | | | 19.377% | 19.377% | 19.610% |
| Return on Equity (Pre Tax) | | | 257.40 | 343.21 | 347.33 |
| | | | | | |
| Interest on Working Capital | | | | | |
| Maintenance Spares | | | 8.32 | 8.80 | 9.30 |
| O & M expenses | | | 4.62 | 4.89 | 5.17 |
| Receivables | 2 Months | | 161.08 | 160.25 | 155.23 |
| Total | | | 174.03 | 173.93 | 169.69 |
| Interest (SBI Base Rate @8.25 % as on 01.04.2011 plus 350 points) | 11.75% | | 15.34 | 20.44 | 19.94 |
| | | | | | |
| Annual Transmission Charges | | | | | |
| Depreciation | | | 233.80 | 311.73 | 311.73 |
| Interest on Loan | | | 176.71 | 227.44 | 190.38 |
| Return on Equity | | | 257.40 | 343.21 | 347.33 |
| Interest on Working Capital | | | 15.34 | 20.44 | 19.94 |
| O & M Expenses | | | 41.62 | 58.66 | 61.99 |
| Total | | | 724.87 | 961.48 | 931.37 |

