

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 88/TT/2017

Coram:

**Shri Jishnu Barua, Chairperson
Shri Arun Goyal, Member
Shri P. K. Singh, Member**

Date of Order: 10.05.2024

In the matter of:

Petition for determination of transmission tariff for 2014-15 to 2018-19 of the transmission lines belonging to the Petitioner (MPPTCL) conveying electricity as ISTS lines, for inclusion of these assets in computation of Point of Connection, Transmission Charges and Losses in accordance with the Central Electricity Regulatory Commission (Terms & Conditions of Tariff) Regulations 2014 and (Sharing of Inter-State Transmission Charges and Losses), Regulations, 2010

And in the matter of:

Madhya Pradesh Power Transmission Company Limited,
Block No. 2, Shakti Bhawan,
Rampur, Jabalpur-482008.

...Petitioner

Vs.

1. Power Grid Corporation of India Limited,
"Saudamini", Plot No. 2, Sector-29,
Gurugram – 122001, Haryana.
2. Maharashtra State Transmission Company Limited,
"Prakashganga" Bandra Kurla Complex, Bandra(East),
Mumbai-400051, Maharashtra.
3. Gujrat Energy Transmission Corporation Limited.,
Sardar Patel "Vidyut Bhawan",
Race Course, Vadodara-390007, Gujrat
4. Chhattishgarh State Power Transmission Company Limited,
"Energy Info Tech Centre", Danganiya,
Raipur-492013, Chhattishgarh.



5. Rajasthan Rajya Vidyut Prasaran Nigam Limited,
"Vidyut Bhawan", Jyoti Nagar, Jaipur-302005
Rajasthan.
6. UP Power Corporation Limited,
"Shakti Bhawan", 14, Ashok Marg
Lucknow, UP.

...Respondents

For Petitioner : Ms. Poorva Saigal, Advocate, MPPTCL
Shri Ravi Nair, Advocate, MPPTCL

For Respondents : None

ORDER

Madhya Pradesh Power Transmission Company Limited (MPPTCL) has filed the instant petition for determination of transmission tariff for the following 11 transmission lines, which have been held to be ISTS lines, for inclusion in Computation of Point of Connection (PoC) charges, for 2014-15 to 2018-19 period in accordance with the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as "the 2014 Tariff Regulations") and the Central Electricity Regulatory Commission (Sharing of inter-State Transmission Charges and Losses) Regulations, 2010 (hereinafter referred to as "the 2010 Sharing Regulations):

Asset	Transmission Line	COD	Length considered in km
Asset-1	220 kV Malanpur- Auraiya line	23.11.1993	147.00
Asset-2	220 kV Mehgaon-Auraiya line	23.11.1993	117.99
Asset-3	220 kV Badod-Kota line	12.8.1977	103.92
Asset-4	220 kV Badod-Modak line	27.12.1988	28.30
Asset-5	220 kV Kalmeshwar-Pandhurna line	1972	14.10
Asset-6	220 kV Kotmikala-Amarkantak line-1	March 1975	39.31



Asset	Transmission Line	COD	Length considered in km
Asset-7	220 kV Kotmikala-Amarkantak line-2	July 1979	39.31
Asset-8	400 kV Sardar Sarover-Rajgarh line-1	20.10.2004	113.65
Asset-9	400 kV Sardar Sarover-Rajgarh line-2	20.10.2004	113.65
Asset-10	400 kV Seoni(MP) - Sarni(MP)	25.09.1985	145.83
Asset-11	400 kV Seoni(MP)-Bhilai (CG) till MP Border	25.09.1985	150.90

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

- “(1) Approve the Yearly Transmission Charges (YTC) amounting to Rs. 780,27,51,750/- (Rs. Seven Hundred Eight Crores Twenty Seven Lacs Fifty One Thousand Seven Hundred Fifty only) for the Assets covered under this Petition as per Para-10 above.
- (2) Allow the Petitioner to recover the Yearly Transmission Charges (YTC) for the control period FY 2014-15 to FY 2018-19 as mentioned in Para-10, from beneficiaries through Billing Agency M/s PGCIL, as per the procedure mentioned in the CERC (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010.
- (3) Approve the reimbursement of expenditure by beneficiaries towards Petition fee, and other expenses in relation to filing of Petition.
- (4) Condone delay / inadvertent omission / errors / short comings if any and permit the Petitioner to add / modify / alter this filing and make further submission as may be required at a later stage.
- (5) Pass such orders, as Hon'ble Commission may deem fit and proper & necessary in the facts and circumstances of the case to grant relief to Applicant.”

Background

3. The brief facts of the case are as follows:

- (a) The Commission, in an order dated 14.3.2012 in Petition No. 15/SM/2012, proposed to include the transmission lines connecting two States for computation of Point of Connection Charges and Losses and directed the owners of such lines to file applications for determination of tariff. The relevant portion of the order dated 14.3.2012 is as follows:

“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 petitions 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.”

(b) Accordingly, the Petitioner filed Petition No. 217/TT/2013 as per the provisions of the 2009 Tariff Regulations for approval of transmission charges and inclusion of the same in the PoC in respect of nine natural/deemed ISTS transmission lines owned by MPPTCL. The Commission *vide* order dated 15.10.2015 allowed transmission charges for the period from 1.7.2011 to 31.3.2014 in respect of nine natural ISTS lines.

(c) Thereafter, the Petitioner filed Petition No. 87/TT/2017 for approval of transmission charges for the period from 1.7.2011 to 31.3.2014, in respect of 400 kV Seoni (MP)-Sarni (MP) transmission line and 400 kV Seoni (MP)-Bhilai (Chhattisgarh) transmission line owned by MPPTCL, as per the provisions of the 2009 Tariff Regulations. The Commission, *vide* order dated 3.11.2017, declined to grant a tariff for the two transmission lines. The relevant portion of the order is as follows:

“8. We have considered the submissions made by MPPTCL. MPPTCL has claimed transmission tariff for two inter-State transmission lines retrospectively for the 2009-14 tariff period. As in the case of RRVPNL, the instant transmission lines are part of the State network. MPERC has already granted ARR for the State network for the 2009-14 period which is inclusive of the YTC of the transmission lines covered in the instant petition. As such, MPPTCL has already recovered tariff for these lines. Further, PoC charges for the 2011-14 period have already been processed and recovered. Granting of tariff for these transmission lines afresh by



this Commission and inclusion in the PoC charges would lead to revision of the PoC charges retrospectively. It would also require revision/adjustment of the ARR already granted by MPERC for 2009-14 period. Hence, we are not inclined to allow YTC for these lines for the period 2011-14. MPPTCL has already filed the petition claiming tariff for the inter-State transmission lines owned by it for the 2014-19 tariff period under the 2014 Tariff Regulations and accordingly tariff will be allowed as per the relevant regulations.”

- (d) The Commission, vide order dated 12.5.2017 in Petition No.7/SM/2017, directed the State utilities to file tariff petitions for determination of the tariff for the transmission lines connecting two States for the 2014-19 tariff period as per the 2014 Tariff Regulations, along with the certificate from the concerned RPC.
- (e) Accordingly, the Petitioner filed Petition No. 88/TT/2017 in respect of eleven natural/ deemed ISTS lines for determination of transmission tariff in terms of the 2014 Tariff Regulations, and the same was allowed by the Commission vide order dated 19.12.2017 for the 2014-19 tariff period under the provisions of the 2014 Tariff Regulations. The Commission, in an order dated 19.12.2017 in Petition No. 88/TT/2017, adopted the methodology adopted in an order dated 15.10.2015 in Petition No. 217/TT/2013 for computation of tariff considering the useful life of the transmission lines as 25 years. The relevant portion of the order dated 19.12.2017 is as follows:

“9. 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 transmission lines’ length 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 & 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 TL taken together makes it around 8.3 % of the total line length owned by PGCIL. Further, 132 kV TLs 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 TL 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

Therefore, for arriving at the costs of transmission lines of other voltage levels and circuit configurations, the average TL 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 States' transmission lines.

10. Based on respective year end data, average TL length during the year has been worked out. Difference between a particular year's average TL 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 TL (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 TL 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 TL 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 TL has been back derived considering the 1992-93 average cost. Similarly, abnormal dip/spikes in the TL cost for the years 1996-97, 2001-02 and 2004-05 has been corrected by considering the average values of the TL costs in the immediate preceding and succeeding years.

11. 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."*

(f) As the Petitioner did not provide the audited capital cost certificate, the Commission, in an order dated 19.12.2017 in Petition No. 88/TT/2017, approved the tariff as per the methodology adopted in the case of the Petitioner for the 2011-14 period. Further, allowed Interest on Working Capital ("IWC") and Operation and Maintenance Expenses ("O&M Expenses") only for Asset-3, Asset-4, Asset-5, Asset-6, Asset-7, Asset-10, and Asset-11 as they had attained twenty-five years and approved AFC for Asset-1, Asset-2, Asset-8 and Asset-9 as per the 2014 Tariff Regulations considering their useful life as 25 years. The relevant portion of the order dated 19.12.2017 in Petition No. 88/TT/2017 is as follows:

"12. 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.

13. We observe that the petitioner company has not been able to provide the audited capital cost certificates. In line with the methodology explained in foregoing paragraphs, we now proceed to determine the tariff for the below stated transmission lines:



Sl. No.	Name of Line	COD	Line length (in Ckt-km)
1	220 kV Malanpur-Auraiya	23.11.1993	147.00
2	220 kV Mehgaon-Auraiya	23.11.1993	117.99
3	220 kV Badod-Kota	12.8.1977	103.92
4	220 kV Badod-Modak	27.12.1988	103.92
5	220 kV Kalmeshwar-Pandhurna	1972	14.10
6	220 kV Kotmilkala-Amarkantak-Ck.I	March, 1975	39.31
7	220 kV Kotmilkala-Amarkantak-Ck.II	July, 1979	39.31
8	400 kV Sardar Sarovar-Rajgarh-Ck-I	20.10.2004	113.65
9	400 kV Sardar Sarovar-Rajgarh-Ck-I	20.10.2004	113.65
10	400 KV Seoni (MP) – Sarni (MP)	25.09.1985	145.83
11	400 KV Seoni (MP) – Bhilai (Chattisgarh)	25.09.1985	150.90

14. It is clear from the above table that the Assets at Sl. No. (3), (4), (5), (6), (7), (10) and (11) have already completed twenty five years. Therefore, as per Commission's methodology, only IWC and O & M shall be allowable for these assets. For other assets, i.e. assets at sl no (1), (2), (8) and (9) in the table under para 13 above, transmission tariff has been worked out."

(g) Aggrieved with the order dated 19.12.2017 in Petition No. 88/TT/2017, the Petitioner filed the Review Petition No. 11/RP/2018 before the Commission on the ground (a) that the denial of all the components of transmission tariff constitutes an error apparent on the face of the record which requires modification and (b) the useful life of the transmission lines has been wrongly considered as 25 years instead of 35 years. The Commission rejected the review petition vide order dated 12.6.2019. The relevant portion of the order dated 12.6.2019 is as follows:

"12. The second contention of the Review Petitioner is that the Commission should consider the useful life of the transmission assets as 35 years and not 25 years and as such the transmission tariff of Assets-IV, VII, X and XI should be allowed with all the elements of tariff. We have carefully examined this contention of the Review Petitioner. We have, after due consideration of all the facts, held that the useful life of these transmission lines would be 25 years. Our finding was premised on the fact that the transmission lines which were commissioned way



back, were treated as dedicated transmission lines associated with generating stations and the useful life of generating stations was considered as 25 years. Keeping these facts in mind, the life of old transmission lines was also considered and fixed as 25 years. In order to bring uniformity in working out the tariff of State-owned transmission lines carrying inter-State power, the Commission evolved the modified methodology with useful life as 25 years and the same has been applied uniformly on all the States. We, however, observe that the concept of useful life of the assets contemplated under this methodology is at variance with the Commission's Tariff Regulations, but these are a separate class of transmission assets and is being applied uniformly across all the States. For these reasons, we do not consider it appropriate to enhance the useful life of the transmission lines as 35 years as submitted by the Review Petitioner. Consequently, we do not find any rationale to allow all the components of tariff for the Assets-IV, VII, X and XI. Thus, we see no error apparent on record on this ground. Review of the impugned order on this ground is accordingly rejected."

- (h) MPPTCL filed Appeal No. 415 of 2019 against the Commission's order dated 19.12.2017 in Petition No. 88/TT/2017 and order dated 12.6.2019 in Review Petition No. 11/RP/2018 before the APTEL with respect to the useful life of the transmission lines.
- (i) The APTEL, vide its common judgement dated 14.11.2022, allowed the Appeal Nos. 267 & 274 of 2018 filed by RRVPNL, and Appeal No. 415 of 2019 filed by MPPTCL. The relevant portions of the APTEL's judgment dated 14.11.2022 are as follows:

"10. During the hearing, the Appellants had submitted that the only issue which they are challenging is the consideration of useful life of the said deemed ISTS lines as 25 years for the purpose of computing the Transmission Charges under POC mechanism as against the 35 years of useful life as prescribed in the Tariff Regulations, 2014 and the earlier notified regulations for the ISTS lines owned by the ISTS licensees, this having resulted into a curtailment of useful life which have not completed even their 35 years of service as on 01.04.2014 and the tariff is restricted to O&M expenses and IWC only."

"30. Accordingly, as observed above, it is opined that the decision of the Central Commission for considering the useful life of the State owned Deemed ISTS lines as 25 years is not correct. The useful life of the subject transmission lines shall be the same as for the ISTS lines as specified in the Tariff Regulations 2014 and the Sharing Regulations, 2010 which is 35 years."



ORDER

For foregoing reasons as stated supra, we are of the considered view that the captioned Appeal No. 267 of 2018, Appeal No. 274 of 2018 and Appeal No. 415 of 2019 have merit and are allowed.

The impugned orders dated 20.06.2018 in Petition No. 215/TT/2017, dated 04.05.2018 in Petition No.112/TT/2017 and dated 19.12.2017 in Petition No. 88/TT/2017 read with the order dated 12.06.2019 in Review Petition 11/RP/2018 passed by the Central Electricity Regulatory Commission are set aside.

The Central Electricity Regulatory Commission is directed to revisit the impugned orders and pass the consequential orders in accordance with the observations made in the foregoing paragraphs.”

- (j) Aggrieved with the APTEL’s judgment dated 14.11.2022 in Appeal Nos. 267 and 274 of 2018, RRVPNL filed Review Petition Nos. 12 and 13 of 2022 before the APTEL. The grounds for review, as recorded by APTEL in its judgement dated 6.7.2023, are as follows:

“4. The Appeal Nos. 267 & 274 of 2018 were filed assailing the Impugned Orders passed by the Central Commission on two issues that is 1) consideration of the useful life of the Deemed Inter-State Transmission System (‘ISTS’) Lines to be 25 years instead of the 35 years as prescribed in the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations 2014 (‘Tariff Regulations, 2014’), and 2) direction to the Review Petitioner to file a fresh Petition in respect of ISTS lines on the purported ground that the data in the prescribed format (Line- wise format) was not provided.

5. However, while passing the judgment dated 14.11.2022, this Tribunal allowed the appeals to the extent of aforementioned issue no. 1), also noting that the Issue mentioned at 2) is not being pressed and accordingly, no finding has been passed on this issue, hence the captioned Review Petitions limited to this extent.”

- (k) The APTEL, vide common judgment dated 6.7.2023, allowed the Review Petition No. 12 of 2022 and Review Petition No. 13 of 2022 filed by RRVPNL while considering the similar issue raised by MPPTCL in Appeal No. 415 of 2019 and remitted Petition No. 215/TT/2017, Petition No. 112/TT/2017 and Petition No. 88/TT/2017 along with Review Petition No. 11/RP/2018 for



reconsideration of the Commission. The relevant portion of the judgment is as follows:

“7. As seen from above, the Review Petitioner herein i.e. the Appellant in 267 & 274 of 2018 has assailed both the issues in the said appeals, as such, both the issues required adjudication, therefore, the Review Petitions have merit and justify to be allowed for judicious conclusion of the appeals nos. 267 & 274 of 2018.

8. As the second issue assailed by the Appellant in Appeal Nos. 267 & 274 of 2018 has not been considered and decided, is an error which is evident on a mere relook at the prayers made in the aforesaid appeals and the written submissions placed on record by the Appellant, and does not require re-examination or detailed discussions.

9. Therefore, we find it most appropriate to review the earlier judgment of this Tribunal.”

“ORDER

For the foregoing reasons as stated above, we are of the considered view that the Review Petitions have merit and are allowed, the earlier judgment dated 14.11.2022 passed by this Tribunal in Appeal Nos. 267 & 274 of 2018 is amended to the extent as concluded above.

The orders dated 20.06.2018 in Petition No. 215/TT/2017, dated 04.05.2018 in Petition No.112/TT/2017 and dated 19.12.2017 in Petition No. 88/TT/2017 read with the order dated 12.06.2019 in Review Petition 11/RP/2018 passed by the Central Electricity Regulatory Commission are set aside.

The Central Commission shall pass consequential orders by considering the useful life of the State owned Deemed ISTS lines same as for the ISTS lines as specified in the Tariff Regulations 2014 and the Sharing Regulations, 2010 which is 35 years and determining the tariff in accordance with the Regulations specified.

The Review Petitions alongwith IAs, if any, are disposed of accordingly.”

4. Pursuant to the remand by the APTEL, the matter was heard by the Commission on 6.9.2023 and 6.2.2024 and the order was reserved in the matter.

5. The Petitioner has made the following submissions:

- a) The Petitioner has been filing the transmission tariff petitions before the State Electricity Regulatory Commission for the entire transmission network including transmission lines mentioned in the instant petition for its intra-State



transmission system. For the inter-State transmission system, the circuit length of the transmission lines has been considered on proportionate basis in the instant petition.

- b) The transmission tariff for deemed ISTS lines of MPPTCL are to be determined under the 2014 Tariff Regulations and the 2010 Sharing Regulations. The transmission lines have been constructed under various estimates. In many cases one portion of the line may have been constructed under certain estimate at a particular time, whereas the other portion may have been added under another estimate at a later date.
- c) Only the line length up to the border of the State is considered for the purposes of the present petition. Accordingly, for determining the cost of these lines, the proportionate cost of line is taken in the ratio of line length in the particular State.
- d) At the time of the achieving the commercial operation of the transmission lines, practice of obtaining Annual Auditor's certificate was not prevalent. Therefore, the details of line wise assets capitalized, scheme of funding, line-wise loans and equity employed etc. in case of the transmission assets are not available. However, these transmission assets have been included in the asset values transferred under the Transfer Scheme to the Petitioner by the Government of Madhya Pradesh through Opening Balance Sheet dated 12.6.2008 in the position of 31.5.2005 when the MPPTCL started independent functioning.



e) This petition has been filed on the basis of methodology adopted by the Commission in its order dated 15.10.2015 on Petition No. 217/TT/2013 and similar other petitions pertaining to various states. The Petitioner has submitted the information in the prescribed tariff Forms. As the transmission lines are quite old and the liabilities against them have been allocated to the Petitioner through Opening Balance Sheet, certain information is not available in the manner prescribed in the Formats. Therefore, the Petitioner has modified the information to the extent available. The tariff claimed by the Petitioner in the instant petition is as per the methodology considered by the Commission in order dated 15.10.2015 under Petition No. 217/TT/2013.

6. The Respondents, mainly beneficiaries of the Western Region, are distribution licensees, power departments, power utilities and transmission licensees, who are procuring transmission services from the Petitioner. The Petitioner has served the petition on the Respondents. The notice regarding the filing of this petition has been published by the Petitioner in the newspapers in accordance with Section 64 of the Electricity Act, 2003. No comments or suggestions have been received from the general public in response to the aforesaid notice published in the newspapers by the Petitioner. No reply has been received from any of the Respondents.

7. Having heard the learned counsel for the Petitioner and having perused the material on record, we proceed to dispose of the petition.



Determination of Annual Fixed Charges for the 2014-19 Period

8. As stated above, the Petitioner has filed the instant petition claiming tariff for the 2014-19 period for 11 transmission lines connecting the Petitioner with other States and intervening transmission lines incidental to the Inter-State transmission of electricity for inclusion in the computation of PoC transmission charges.

9. The Commission, in an order dated 19.12.2017 in Petition No. 88/TT/2017, while approving tariff for eleven transmission lines connecting two States/ deemed ISTS lines owned by the Petitioner for the period 2014-15 to 2018-19, adopted the methodology followed in the case of other States, where the useful life of the transmission lines is considered as 25 years. The relevant portion of the order dated 19.12.2017 is as follows:

“6. We have considered the submissions made by MPPTCL. MPPTCL has claimed transmission tariff for eleven inter-State transmission lines for the 2014-19 tariff period. Commission vide order dated 14.3.2012 in Petition No. 15/SM/2012 had directed 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 to file petitions under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 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. Some of the owners/developers of these lines had filed tariff petitions and accordingly, tariff was allowed for the period from 2011-12 to 2013-14. Further, the owners/developers of these lines were directed to file petitions for determination of tariff for the 2014-19 tariff period.

7. Commission has, in general, observed that petitioner States have been submitting the necessary information, required for determining the annual transmission charges of their inter-state transmission lines, in contrasting manner thereby causing divergence in working out the tariff. In some cases it was observed that the data related to funding and depreciation was not available and in other cases the assets have already completed, or nearing, their useful life. In most of the petitions, the states have expressed their inability in furnishing the audited capital cost of transmission lines where the lines are older. In such a scenario, tariff workings for older assets are believed to be ending in skewed results. It has been observed that the YTC figures emerging out by the existing methodology are on the higher side. Considering these facts, Commission has conceptualized a modified methodology for determining the tariff of States' inter-state transmission lines.



8. 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 TL shall be considered as 25 years. Thus, if life is more than or equal to 25 years as on 01.04.2014, only O & M 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 01.04.2014) lines.

Tariff Methodology:

9. 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 transmission lines' length 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 & 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 TL taken together makes it around 8.3 % of the total line length owned by PGCIL. Further, 132 kV TLs 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 TL 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		Rs 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

Therefore, for arriving at the costs of transmission lines of other voltage levels and circuit configurations, the average TL 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 States' transmission lines.

10. Based on respective year end data, average transmission line length during the year has been worked out. Difference between a particular year's average TL 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 TL length to arrive at the Average Cost of TL (in Rs 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 TL 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 TL 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 TL has been back derived considering the 1992-93 average cost. Similarly, abnormal dip/spikes in the TL cost for the years 1996-97, 2001-02 and 2004-05 has been corrected by considering the average values of the TL costs in the immediate preceding and succeeding years.

11. 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 CERC (Terms & Conditions of Tariff) Regulations, 2014 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 CERC (Terms & Conditions of 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 CERC (Terms & Conditions of Tariff) Regulations, 2014 shall be considered.
- (ix) Where the life of TL is more than or equal to 25 years as on 01.04.2014, only O & M expenses and IWC shall be allowed in lieu of complete tariff.

12. 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.

13. We observe that the petitioner company has not been able to provide the audited capital cost certificates. In line with the methodology explained in foregoing paragraphs, we now proceed to determine the tariff for the below stated transmission lines:

Sl. No.	Name of Line	COD	Line length (in Ckt-km)
1	220 kV Malanpur-Auraiya	23.11.1993	147.00



2	220 kV Mehgaon-Auraiya	23.11.1993	117.99
3	220 kV Badod-Kota	12.8.1977	103.92
4	220 kV Badod-Modak	27.12.1988	103.92
5	220 kV Kalmeshwar-Pandhurna	1972	14.10
6	220 kV Kotmilkala-Amarkantak-Ck.I	March, 1975	39.31
7	220 kV Kotmilkala-Amarkantak-Ck.II	July, 1979	39.31
8	400 kV Sardar Sarovar-Rajgarh-Ck-I	20.10.2004	113.65
9	400 kV Sardar Sarovar-Rajgarh-Ck-I	20.10.2004	113.65
10	400 KV Seoni (MP) – Sarni (MP)	25.9.1985	145.83
11	400 KV Seoni (MP) – Bhilai (Chattisgarh)	25.9.1985	150.90

10. As per the directions of APTEL in judgement dated 14.11.2022 in Appeal No.267 of 2018 and batch matters and the subsequent judgement dated 6.7.2023 in Review Petition No.12 of 2022 and 13 of 2022, we have considered the useful life of the transmission lines as 35 years. Accordingly, we have modified the methodology adopted by us earlier for approving the transmission charges for the transmission lines connecting two States/deemed ISTS lines considering the useful life of the transmission lines as 35 years. For determination of the transmission charges of the transmission assets which have not completed their 35 years of service as on 1.4.2014, the capital cost of the transmission lines is derived from 1979-80 onwards till 31.3.2014. As per the earlier methodology, the capital cost has been approved by the Commission from 1989-90 onwards till 31.3.2014. Further, in the earlier methodology, due to the unavailability of base data for 1989-90, 1990-91, and 1991-92, the average cost of transmission lines has been back derived considering the average cost from 1992-93 onwards up to 2013-14 at a Compound Annual Growth Rate (CAGR) of 5.17%. The methodology for deriving the average cost of transmission lines for 1989-90, 1990-91, and 1991-92 has been extrapolated backward to derive



the average cost of transmission lines for 1979-80 to 1988-89. Accordingly, the average capital cost of the transmission lines for 1979-80, 1980-81, 1981-82, 1982-83, 1983-84, 1984-85, 1985-86, 1986-87, 1987-88 and 1988-89 has been back derived by applying the Compound Annual Growth Rate (CAGR) factor of 5.17%. The capital cost of the transmission lines, which have not completed 35 years, is worked out as per the said methodology.

11. The completed useful life of the transmission assets are as follows:

Assets	Name of Line	Voltage Level	Connecting States	COD	useful life of 35 years completed as on	Whether useful life of 35 years completed as on 31.3.2014 or not	
						-	No
Asset-1	220 kV Malanpur-Auraiya	220 kV	MP-UP	23.11.1993	22.11.2028	-	No
Asset-2	220 kV Mehgaon-Auraiya	220 kV	MP-UP	23.11.1993	22.11.2028	-	No
Asset-3	220 kV Badod-Kota	220 kV	MP-Rajasthan	12.8.1977	11.08.2012	Yes	
Asset-4	220 kV Badod-Modak	220 kV	MP-Rajasthan	27.12.1988	26.12.2023	-	No
Asset-5	220 kV Kalmeshwar-Pandhurna	220 kV	MP-Maharashtra	1972	2007	yes	
Asset-6	220 kV Kotmilkala-Amarkantak-Ck.I	220 kV	MP-Chhattisgarh	March,1975	March,2010	Yes	
Asset-7	220 kV Kotmilkala-Amarkantak-Ck.II	220 kV	MP-Chhattisgarh	1.7.1979	30.6.2014	-	No
Asset-8	400 kV Sardar Sarovar-Rajgarh-Ck-I	400 kV	MP-Gujarat	20.10.2004	19.10.2039	-	No
Asset-9	400 kV Sardar Sarovar-Rajgarh-Ck-I	400 kV	MP-Gujarat	20.10.2004	19.10.2039	-	No
Asset-10	400 KV Seoni (MP) – Sarni (MP)	400 kV	MP-MP	25.9.1985	24.9.2020	-	No
Asset-11	400 KV Seoni (MP) – Bhilai (Chhattisgarh)	400 kV	MP-Chattisgarh	25.9.1985	24.9.2020	-	No



12. The Petitioner has claimed the following transmission charges for the transmission assets, considering their useful life as 35 years:

(₹ in lakh)

Particulars	Asset-1				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	92.77	92.77	92.77	92.77	92.77
Interest on Working Capital	3.78	3.98	3.68	3.74	3.79
O&M Expenses	29.69	30.72	31.75	32.78	33.81
Total	126.24	127.47	128.20	129.29	130.37

(₹ in lakh)

Particulars	Asset-2				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	0.92	0.92	0.92	0.92	0.92
Interest on Loan	0.32	0.26	0.23	0.19	0.15
Return on Equity	81.14	81.14	81.14	81.14	81.14
Interest on Working Capital	3.21	3.38	3.13	3.17	3.21
O&M Expenses	23.83	24.66	25.49	26.31	27.14
Total	109.42	110.36	110.91	111.73	112.56

(₹ in lakh)

Particulars	Asset-3				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	3.59	3.59	3.59	3.59	3.59
Interest on Loan	1.54	1.30	1.19	1.06	0.91
Return on Equity	11.33	11.33	11.33	11.33	11.33
Interest on Working Capital	2.12	2.25	2.11	2.16	2.23
O&M Expenses	31.49	32.53	33.67	34.71	35.96
Total	50.07	51.00	51.89	52.85	54.02

(₹ in lakh)

Particulars	Asset-4				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	3.59	3.59	3.59	3.59	3.59
Interest on Loan	1.54	1.30	1.19	1.06	0.91
Return on Equity	12.44	12.44	12.44	12.44	12.44
Interest on Working Capital	2.14	2.28	2.14	2.19	2.25
O&M Expenses	31.49	32.53	33.67	34.71	35.96
Total	51.20	52.14	53.03	53.99	55.15



(₹ in lakh)

Particulars	Asset-5				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	1.09	1.09	1.09	1.09	1.09
Interest on Loan	0.33	0.26	0.21	0.16	0.11
Return on Equity	1.62	1.62	1.62	1.62	1.62
Interest on Working Capital	0.23	0.24	0.22	0.23	0.23
O&M Expenses	2.85	2.95	3.05	3.14	3.24
Total	6.12	6.16	6.19	6.24	6.29

(₹ in lakh)

Particulars	Asset-6				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	1.90	1.90	1.90	1.90	1.90
Interest on Working Capital	0.70	0.75	0.71	0.73	0.75
O&M Expenses	11.91	12.30	12.74	13.13	13.60
Total	14.51	14.95	15.35	15.76	16.25

(₹ in lakh)

Particulars	Asset-7				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	1.70	1.70	1.70	1.70	1.70
Interest on Working Capital	0.70	0.75	0.70	0.72	0.75
O&M Expenses	11.91	12.30	12.74	13.13	13.60
Total	14.31	14.75	15.14	15.55	16.05

(₹ in lakh)

Particulars	Asset-8				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	369.90	369.90	369.90	369.90	369.90
Interest on Loan	86.92	64.49	48.67	30.12	9.15
Return on Equity	310.87	310.87	310.87	310.87	310.87
Interest on Working Capital	22.11	22.57	20.39	20.13	19.83
O&M Expenses	80.35	83.08	85.81	88.65	91.60
Total	870.15	850.91	835.64	819.67	801.35

(₹ in lakh)

Particulars	Asset-9				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	369.90	369.90	369.90	369.90	369.90
Interest on Loan	86.92	64.49	48.67	30.12	9.15
Return on Equity	310.87	310.87	310.87	310.87	310.87



Interest on Working Capital	22.11	22.57	20.39	20.13	19.83
O&M Expenses	80.35	83.08	85.81	88.65	91.60
Total	870.15	850.91	835.64	819.67	801.35

(₹ in lakh)

Particulars	Asset-10				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	62.20	62.20	62.20	62.20	62.20
Interest on Working Capital	4.69	4.98	4.65	4.76	4.87
O&M Expenses	58.92	60.96	63.00	65.04	67.23
Total	125.81	128.14	129.85	132.00	134.30

(₹ in lakh)

Particulars	Asset-11				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	64.36	64.36	64.36	64.36	64.36
Interest on Working Capital	4.85	5.15	4.81	4.92	5.04
O&M Expenses	60.96	63.08	65.19	67.30	69.56
Total	130.17	132.59	134.36	136.58	138.96

13. As stated above, the transmission charges are worked out as per the new methodology approved by the Commission, considering the useful life of the transmission lines as 35 years. As per the new methodology, the capital cost has been derived taking into consideration the length and configurations of the transmission line, the year of COD and the rationalized cost of the year. Accordingly, the derived capital cost of the transmission assets is as follows:

(₹ in lakh)

Assets	Name of transmission lines	Length considered in km	COD	Capital cost as on COD	Remarks
Asset-1	220 kV Malanpur-Auraiya	147.00 (S/C)	23.11.1993	1849.24	Nil
Asset-2	220 kV Mehgaon-Auraiya	117.99 (S/C)	23.11.1993	1484.30	Nil
Asset-3	220 kV Badod-Kota	103.92 (S/C)	12.8.1977	-	Already completed 35



Assets	Name of transmission lines	Length considered in km	COD	Capital cost as on COD	Remarks
					years as on 1.4.2014
Asset-4	220 kV Badod-Modak	28.30 (S/C)	27.12.1988	259.99	Nil
Asset-5	220 kV Kalmeshwar-Pandhurna	14.10 (S/C)	1972	-	Already completed 35 years as on 1.4.2014
Asset-6	220 kV Kotmilkala-Amarkantak-Ck.I	39.31 (S/C)	March,1975	-	Already completed 35 years as on 1.4.2014
Asset-7	220 kV Kotmilkala-Amarkantak-Ck.II	39.31 (S/C)	1.7.1979	229.43	Nil
Asset-8	400 kV Sardar Sarovar-Rajgarh-Ck-I	113.65 (D/C)	20.10.2004	4297.39	Nil
Asset-9	400 kV Sardar Sarovar-Rajgarh-Ck-II				
Asset-10	400 KV Seoni (MP)-Sarni (MP)	145.83 (S/C)	25.9.1985	3199.20	Nil
Asset-11	400 KV Seoni (MP)-Bhilai(Chattisgarh)	150.90 (S/C)	25.9.1985	3310.42	Nil

14. As on 31.3.2014, Asset-3, Asset-5, and Asset-6 have already completed thirty-five (35) years of their service . Therefore, as per the Commission's new methodology, 'NIL' capital cost has been considered for the above-mentioned transmission assets, and only 'O&M Expenses' and Interest on Working Capital (IWC) are allowable for these transmission assets.

15. Asset-8 and Asset-9 have completed their useful life of 12 years as on 1.4.2017. Therefore, no IoL is allowed for the combined asset during the period starting from 2017-18 to 2018-19. Asset-1, Asset-2, Asset-4, Asset-7, Asset-10, and Asset-11 have completed their useful life of 12 years on or before 1.4.2014. Therefore, no IoL is allowed for the transmission assets for the 2014-19 tariff period.



16. The Asset-7 has completed its useful life of 35 years as on 30.6.2014. Therefore, all the elements of the transmission charges, except for Interest on Loan (IoL), have been worked out for Asset-7 from 1.4.2014 to 30.6.2014. Further, only IWC and O&M Expenses have been allowed from 1.7.2014 to 31.3.2019 for Asset-7.

17. In view of the above, the 11 transmission assets have been categorized into three groups, i.e., assets that have already completed 35 years of their useful life [(Asset-3, Asset-5, and Asset-6) (Group-A)] as on 31.3.2014; transmission assets which are completing their useful life of 35 years during the 2014-19 tariff period [(Asset-7) (Group-B)]; and transmission assets which are completing their useful life of 35 years beyond 31.3.2019 [(Asset-1, Asset-2, Asset-4, Asset-8, Asset-9, Asset-10 and Asset-11) (Group-C)]. The tariff is allowed group-wise in the subsequent paragraphs.

18. Aggregated O&M Expenses are allowed for Asset-6 and Asset-7, which are two circuits of the 220 kV Kotmilkala-Amarkantak transmission line. Therefore, we have considered the proportionate O&M Expenses (i.e. 50% each for each of the assets) based on the line and length of the transmission assets. However, the transmission tariff for the assets is allowed separately as the COD of the assets is different.

GROUP-A

19. As stated above, the O&M Expenses and IWC is allowed for the Asset-3, Asset-5 and Asset-6 which have completed 35 years of life as on 31.3.2014.

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

20. The O&M expenses claimed by the Petitioner are as follows:



(₹ in lakh)

Assets	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-3	31.49	32.53	33.67	34.71	35.96
Asset-5	2.85	2.95	3.05	3.14	3.24
Asset-6	11.91	12.30	12.74	13.13	13.60

21. The O&M norms under Regulation 29(4) of the 2014 Tariff Regulations for the AC lines is as follows:

“(4) Transmission system

(a) The following normative operation and maintenance expenses shall be admissible for the transmission system:

Norms for AC lines (in ₹ Lakh per Km)					
	2014-15	2015-16	2016-17	2017-18	2018-19
Single circuit (Single conductor)	0.202	0.209	0.216	0.223	0.23
Single Circuit (Twin and Triple conductor)	0.404	0.418	0.432	0.446	0.461
Double circuit (Single conductor)	0.303	0.313	0.324	0.334	0.346
Double circuit (Twin and Triple conductor)	0.707	0.731	0.755	0.780	0.806

22. The O&M Expenses approved for Asset-3, Asset-5 and Asset-6 for the 2014-19 tariff period as per Regulation 29(4) of the 2014 Tariff Regulations is as follows:

(₹ in lakh)

Assets	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-3	31.49	32.53	33.67	34.71	35.96
Asset-5	2.85	2.95	3.05	3.14	3.24
Asset-6	5.96*	6.15*	6.37*	6.57*	6.80*

*As stated above, we have considered the proportionate O&M Expenses (i.e. 50% each for Asset-6 and Asset-7) based on the line-length of the assets.

Interest on Working Capital (“IWC”)

23. The IWC approved for Asset-3, Asset-5, and Asset-6 for the 2014-19 tariff period in accordance with Regulation 28 of the 2014 Tariff Regulations are as follows:



(₹ in lakh)

Particulars		Asset-3				
		2014-15	2015-16	2016-17	2017-18	2018-19
A	Working Capital for Maintenance Spares (Maintenance Spares @15% of O&M Expenses)	4.72	4.88	5.05	5.21	5.39
B	Working Capital for O&M Expenses (one month of O&M Expenses)	2.62	2.71	2.81	2.89	3.00
C	Working Capital for Receivables (Receivable equivalent to two months of annual fixed cost)	5.54	5.72	5.92	6.10	6.32
D	Total Working Capital (A+B+C)	12.89	13.31	13.78	14.20	14.72
E	Interest Rate (in %)	13.50	13.50	13.50	13.50	13.50
F	Interest of working capital (D*E)	1.74	1.80	1.86	1.92	1.99

(₹ in lakh)

Particulars		Asset-5				
		2014-15	2015-16	2016-17	2017-18	2018-19
A	Working Capital for Maintenance Spares (Maintenance Spares @15% of O&M Expenses)	0.43	0.44	0.46	0.47	0.49
B	Working Capital for O&M Expenses (one month of O&M Expenses)	0.24	0.25	0.25	0.26	0.27
C	Working Capital for Receivables (Receivable equivalent to two months of annual fixed cost)	0.50	0.52	0.54	0.55	0.57
D	Total Working Capital (A+B+C)	1.17	1.21	1.25	1.28	1.33
E	Interest Rate (in %)	13.50	13.50	13.50	13.50	13.50
F	Interest of working capital (D*E)	0.16	0.16	0.17	0.17	0.18

(₹ in lakh)

Particulars		Asset-6				
		2014-15	2015-16	2016-17	2017-18	2018-19
A	Working Capital for Maintenance Spares (Maintenance Spares @15% of O&M Expenses)	0.89	0.92	0.96	0.98	1.02
B	Working Capital for O&M Expenses (one month of O&M Expenses)	0.50	0.51	0.53	0.55	0.57
C	Working Capital for Receivables (Receivable equivalent to two months of annual fixed cost)	1.05	1.08	1.12	1.15	1.20
D	Total Working Capital (A+B+C)	2.44	2.52	2.61	2.69	2.78
E	Interest Rate (in %)	13.50	13.50	13.50	13.50	13.50
F	Interest of working capital (D*E)	0.33	0.34	0.35	0.36	0.38

24. Accordingly, the Annual Transmission Charges approved for Asset-3, Asset-5, and Asset-6 for the 2014-19 tariff period are as follows:



(₹ in lakh)

Particulars	Asset-3				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	1.74	1.80	1.86	1.92	1.99
O&M Expenses	31.49	32.53	33.67	34.71	35.96
Total	33.23	34.33	35.53	36.63	37.95

(₹ in lakh)

Particulars	Asset-5				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	0.16	0.16	0.17	0.17	0.18
O&M Expenses	2.85	2.95	3.05	3.14	3.24
Total	3.01	3.11	3.22	3.31	3.42

(₹ in lakh)

Particulars	Asset-6				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	0.33	0.34	0.35	0.36	0.38
O&M Expenses	5.96	6.15	6.37	6.57	6.80
Total	6.28	6.49	6.72	6.93	7.18

GROUP-B

25. As stated above, Asset-7 has completed its useful life of 35 years in the 2014-15 period. Accordingly, all the components of the tariff except for Interest on Loan (IoL) are allowed till it completes its useful life of 35 years, and thereafter, only O&M and IWC is allowed. The tariff allowed for Asset-7 is as follows:

Depreciation

26. The depreciation is allowed for Asset-7 only up to its useful life of 35 years. Accordingly, the depreciation approved for Asset-7 is as follows:



(₹ in lakh)

Particulars		Asset-7					
		1.4.2014 to 30.6.2014	1.7.2014 to 31.3.2015	2015-16	2016-17	2017-18	2018-19
A	Opening Gross Block	229.43	0.00	0.00	0.00	0.00	0.00
B	ACE	0.00	0.00	0.00	0.00	0.00	0.00
C	Closing Gross Block (A+B)	229.43	0.00	0.00	0.00	0.00	0.00
D	Average Gross Block (A+C)/2	229.43	0.00	0.00	0.00	0.00	0.00
E	Rate of Depreciation (in %)	1.1594	---	----	----	----	----
F	Depreciable value	206.49	0.00	0.00	0.00	0.00	0.00
G	Elapsed Life as on 31.3.2014	34.00	35.00	35.00	36.00	37.00	38.00
H	Balance useful life of the asset	1.00	0.00	0.00	0.00	0.00	0.00
I	Remaining Depreciable value (at the end of the year)	0.00	0.00	0.00	0.00	0.00	0.00
J	Cumulative Depreciation (at the end of the year)	206.49	0.00	0.00	0.00	0.00	0.00
K	Depreciation (D*E)	2.66	0.00	0.00	0.00	0.00	0.00

Return on Equity (“RoE”)

27. The Return on Equity (RoE) approved for Asset-7 as per Regulation 24 and 25 for the 2014-19 period is as follows:

Particulars		Asset-7					
		1.4.2014 to 30.6.2014	1.7.2014 to 31.3.2015	2015-16	2016-17	2017-18	2018-19
A	Opening Equity	68.83	0.00	0.00	0.00	0.00	0.00
B	ACE	0.00	0.00	0.00	0.00	0.00	0.00
C	Closing Equity	68.83	0.00	0.00	0.00	0.00	0.00
D	Average Equity (A+C)/2	68.83	0.00	0.00	0.00	0.00	0.00
E	Rate of Return on Equity (in %)	15.50	15.50	15.50	15.50	15.50	15.50
F	Return on Equity (D*E)	2.66	0.00	0.00	0.00	0.00	0.00

Interest on Working Capital (“IWC”)

28. The IWC approved for Asset-7 for the 2014-19 tariff period in accordance with Regulation 28 of the 2014 Tariff Regulations is as follows:



(₹ in lakh)

Particulars		Asset-7					
		1.4.2014 to 30.6.2014	1.7.2014 to 31.3.2015	2015-16	2016-17	2017-18	2018-19
A	Working Capital for Maintenance Spares (Maintenance Spares @15% of O&M Expenses)	0.89	0.89	0.92	0.96	0.98	1.02
B	Working Capital for O&M Expenses (one month of O&M Expenses)	0.50	0.50	0.51	0.53	0.55	0.57
C	Working Capital for Receivables (Receivable equivalent to two months of annual fixed cost)	4.68	1.05	1.08	1.12	1.15	1.20
D	Total Working Capital (A+B+C)	6.07	2.44	2.52	2.61	2.69	2.78
E	Interest Rate (in %)	13.50	13.50	13.50	13.50	13.50	13.50
F	Interest on working capital (D*E)	0.20	0.25	0.34	0.35	0.36	0.38

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

29. The O&M Expenses claimed by the Petitioner for Asset-7 is as follows:

(₹ in lakh)					
Asset	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-7	11.91	12.30	12.74	13.13	13.60

30. The O&M Expenses approved for Asset-7 for the 2014-19 tariff period as per Regulation 29(4) of the 2014 Tariff Regulations is as follows:

(₹ in lakh)					
Asset	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-7	5.96*	6.15*	6.37*	6.57*	6.80*

**As stated above, we have considered the proportionate O&M Expenses (i.e. 50% each for Asset-6 and Asset-7) based on the line-length of the assets.*

31. Accordingly, the Annual Transmission Charges approved for Asset-7 for the 2014-19 tariff period are as follows:



(₹ in lakh)

Particulars	Asset-7					
	1.4.2014 to 30.6.2014	1.7.2014 to 31.3.2015	2015-16	2016-17	2017-18	2018-19
Depreciation	2.66	0.00	0.00	0.00	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00	0.00	0.00
Return on Equity	2.66	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	0.20	0.25	0.34	0.35	0.36	0.38
O&M Expenses	1.48	4.47	6.15	6.37	6.57	6.80
Total	7.01	4.72	6.49	6.72	6.93	7.18

GROUP-C

32. As stated above, Asset-1, Asset-2, Asset-4, Asset-10, and Asset-11 have completed their useful life of 12 years on or before 1.4.2014 and completed their useful life of 35 years after the 2014-19 tariff period. Accordingly, all the components of the tariff, except for Interest on Loan (IoL), are allowed for these assets till they complete their useful life of 35 years, and thereafter only O&M and IWC are allowed. Further, the COD of Asset-8 & Asset-9 is 20.10.2004 and have completed their useful life of 12 years as on 31.3.2017. Therefore, Asset-8 & Asset-9 have been combined and considered as a combined asset. Further, all the components of the tariff are allowed for the combined asset (Asset-8 & Asset-9) till they complete their useful life of 12 years and thereafter, no IoL is allowed for the period starting from 1.4.2017 to 31.3.2019. The tariff allowed for these transmission assets is as follows.

Depreciation

33. The depreciation is allowed for the transmission assets up to their useful life of 35 years. Accordingly, depreciation approved for Asset-1, Asset-2, Asset-4, Asset-8 & Asset-9, Asset-10 and Asset-11 for the 2014-19 period is as follows:



(₹ in lakh)

Particulars		Asset-1				
		2014-15	2015-16	2016-17	2017-18	2018-19
A	Opening Gross Block	1849.24	1849.24	1849.24	1849.24	1849.24
B	ACE	0.00	0.00	0.00	0.00	0.00
C	Closing Gross Block (A+B)	1849.24	1849.24	1849.24	1849.24	1849.24
D	Average Gross Block (A+C)/2	1849.24	1849.24	1849.24	1849.24	1849.24
E	Rate of Depreciation (in %)	1.1583	1.1583	1.1583	1.1583	1.1583
F	Depreciable value	1664.32	1664.32	1664.32	1664.32	1664.32
G	Elapsed Life as on 31.3.2014	20.00	21.00	22.00	23.00	24.00
H	Balance useful life of the asset	15.00	14.00	13.00	12.00	11.00
I	Remaining Depreciable value (at the end of the year)	299.87	278.45	257.03	235.61	214.19
J	Cumulative Depreciation (at the end of the year)	1364.45	1385.87	1407.29	1428.71	1450.13
K	Depreciation (D*E)	21.42	21.42	21.42	21.42	21.42

(₹ in lakh)

Particulars		Asset-2				
		2014-15	2015-16	2016-17	2017-18	2018-19
A	Opening Gross Block	1484.30	1484.30	1484.30	1484.30	1484.30
B	ACE	0.00	0.00	0.00	0.00	0.00
C	Closing Gross Block (A+B)	1484.30	1484.30	1484.30	1484.30	1484.30
D	Average Gross Block (A+C)/2	1484.30	1484.30	1484.30	1484.30	1484.30
E	Rate of Depreciation (in %)	1.1581	1.1581	1.1581	1.1581	1.1581
F	Depreciable value	1335.87	1335.87	1335.87	1335.87	1335.87
G	Elapsed Life as on 31.3.2014	20.00	21.00	22.00	23.00	24.00
H	Balance useful life of the asset	15.00	14.00	13.00	12.00	11.00
I	Remaining Depreciable value (at the end of the year)	240.69	223.50	206.31	189.11	171.92
J	Cumulative Depreciation (at the end of the year)	1095.18	1112.37	1129.57	1146.76	1163.95
K	Depreciation (D*E)	17.19	17.19	17.19	17.19	17.19



(₹ in lakh)

Particulars		Asset-4				
		2014-15	2015-16	2016-17	2017-18	2018-19
A	Opening Gross Block	259.99	259.99	259.99	259.99	259.99
B	ACE	0.00	0.00	0.00	0.00	0.00
C	Closing Gross Block (A+B)	259.99	259.99	259.99	259.99	259.99
D	Average Gross Block (A+C)/2	259.99	259.99	259.99	259.99	259.99
E	Rate of Depreciation (in %)	1.1577	1.1577	1.1577	1.1577	1.1577
F	Depreciable value	233.99	233.99	233.99	233.99	233.99
G	Elapsed Life as on 31.3.2014	25.00	26.00	27.00	28.00	29.00
H	Balance useful life of the asset	10.00	9.00	8.00	7.00	6.00
I	Remaining Depreciable value (at the end of the year)	27.10	24.09	21.08	18.07	15.06
J	Cumulative Depreciation (at the end of the year)	206.89	209.90	212.91	215.92	218.94
K	Depreciation (D*E)	3.01	3.01	3.01	3.01	3.01

(₹ in lakh)

Particulars		Asset-8 and Asset-9				
		2014-15	2015-16	2016-17	2017-18	2018-19
A	Opening Gross Block	4297.39	4297.39	4297.39	4297.39	4297.39
B	ACE	0.00	0.00	0.00	0.00	0.00
C	Closing Gross Block (A+B)	4297.39	4297.39	4297.39	4297.39	4297.39
D	Average Gross Block (A+C)/2	4297.39	4297.39	4297.39	4297.39	4297.39
E	Rate of Depreciation (in %)	5.28	5.28	5.28	1.1584	1.1584
F	Depreciable value	3867.65	3867.65	3867.65	3867.65	3867.65
G	Elapsed Life as on 31.3.2014	9.00	10.00	11.00	12.00	13.00
H	Balance useful life of the asset	26.00	25.00	24.00	23.00	22.00
I	Remaining Depreciable value (at the end of the year)	1598.63	1371.73	1144.83	1095.05	1045.28
J	Cumulative Depreciation (at the end of the year)	2269.02	2495.93	2722.83	2772.60	2822.38
K	Depreciation (D*E)	226.90	226.90	226.90	49.78	49.78



(₹ in lakh)

Particulars		Asset-10				
		2014-15	2015-16	2016-17	2017-18	2018-19
A	Opening Gross Block	3199.20	3199.20	3199.20	3199.20	3199.20
B	ACE	0.00	0.00	0.00	0.00	0.00
C	Closing Gross Block (A+B)	3199.20	3199.20	3199.20	3199.20	3199.20
D	Average Gross Block (A+C)/2	3199.20	3199.20	3199.20	3199.20	3199.20
E	Rate of Depreciation (in %)	1.1584	1.1584	1.1584	1.1584	1.1584
F	Depreciable value	2879.28	2879.28	2879.28	2879.28	2879.28
G	Elapsed Life as on 31.3.2014	28.00	29.00	30.00	31.00	32.00
H	Balance useful life of the asset	7.00	6.00	5.00	4.00	3.00
I	Remaining Depreciable value (at the end of the year)	222.33	185.28	148.22	111.17	74.11
J	Cumulative Depreciation (at the end of the year)	2656.95	2694.00	2731.06	2768.11	2805.17
K	Depreciation (D*E)	37.06	37.06	37.06	37.06	37.06

(₹ in lakh)

Particulars		Asset-11				
		2014-15	2015-16	2016-17	2017-18	2018-19
A	Opening Gross Block	3310.42	3310.42	3310.42	3310.42	3310.42
B	ACE	0.00	0.00	0.00	0.00	0.00
C	Closing Gross Block (A+B)	3310.42	3310.42	3310.42	3310.42	3310.42
D	Average Gross Block (A+C)/2	3310.42	3310.42	3310.42	3310.42	3310.42
E	Rate of Depreciation (in %)	1.1582	1.1582	1.1582	1.1582	1.1582
F	Depreciable value	2979.38	2979.38	2979.38	2979.38	2979.38
G	Elapsed Life as on 31.3.2014	28.00	29.00	30.00	31.00	32.00
H	Balance useful life of the asset	7.00	6.00	5.00	4.00	3.00
I	Remaining Depreciable value (at the end of the year)	230.06	191.72	153.37	115.03	76.69
J	Cumulative Depreciation (at the end of the year)	2749.32	2787.67	2826.01	2864.35	2902.70
K	Depreciation (D*E)	38.34	38.34	38.34	38.34	38.34

Interest on Loan (“IoL”)

34. The Interest on the Loan is allowed for the transmission assets up to their useful life of 12 years. The combined asset (Asset-8 & Asset-9) has completed its useful life



of 12 years as on 31.3.2017. Accordingly, the Interest on the Loan allowed for the combined asset (Asset-8 & Asset-9) for the 2014-19 tariff period is as follows:

(₹ in lakh)

Particulars		Asset-8 and Asset-9				
		2014-15	2015-16	2016-17	2017-18	2018-19
A	Gross Normative Loan	3008.17	3008.17	3008.17	3008.17	3008.17
B	Cumulative Repayments up to Previous Year	2042.12	2269.02	2495.93	3008.17	3008.17
C	Net Loan-Opening (A-B)	966.05	739.15	512.25	0.00	0.00
D	Additions due to ACE	0.00	0.00	0.00	0.00	0.00
E	Repayment during the year	226.90	226.90	226.90	0.00	0.00
F	Net Loan-Closing (C+D-E)	739.15	512.25	285.35	0.00	0.00
G	Average Loan(C+F)/2	852.60	625.70	398.80	0.00	0.00
H	Weighted Average Rate of Interest on Loan (%)	7.1141	7.1680	7.2104	7.2773	7.5442
I	Interest on Loan	60.66	44.85	28.75	0.00	0.00

Return on Equity ("RoE")

35. The Return on Equity (RoE) approved for Asset-1, Asset-2, Asset-4, Asset-8 & Asset-9, Asset-10, and Asset-11 as per Regulation 24 and 25 of the 2014 Tariff Regulations for the 2014-19 tariff period and it is as follows:

(₹ in lakh)

Particulars		Asset-1				
		2014-15	2015-16	2016-17	2017-18	2018-19
A	Opening Equity	554.77	554.77	554.77	554.77	554.77
B	ACE	0.00	0.00	0.00	0.00	0.00
C	Closing Equity	554.77	554.77	554.77	554.77	554.77
D	Average Equity (A+C)/2	554.77	554.77	554.77	554.77	554.77
E	Rate of Return on Equity (in %)	15.50	15.50	15.50	15.50	15.50
F	Return on Equity (D*E)	85.99	85.99	85.99	85.99	85.99

(₹ in lakh)

Particulars		Asset-2				
		2014-15	2015-16	2016-17	2017-18	2018-19
A	Opening Equity	445.29	445.29	445.29	445.29	445.29
B	ACE	0.00	0.00	0.00	0.00	0.00
C	Closing Equity	445.29	445.29	445.29	445.29	445.29



D	Average Equity (A+C)/2	445.29	445.29	445.29	445.29	445.29
E	Rate of Return on Equity (in %)	15.50	15.50	15.50	15.50	15.50
F	Return on Equity (D*E)	69.02	69.02	69.02	69.02	69.02

(₹ in lakh)

Particulars		Asset-4				
		2014-15	2015-16	2016-17	2017-18	2018-19
A	Opening Equity	78.00	78.00	78.00	78.00	78.00
B	ACE	0.00	0.00	0.00	0.00	0.00
C	Closing Equity	78.00	78.00	78.00	78.00	78.00
D	Average Equity (A+C)/2	78.00	78.00	78.00	78.00	78.00
E	Rate of Return on Equity (in %)	15.50	15.50	15.50	15.50	15.50
F	Return on Equity (D*E)	12.09	12.09	12.09	12.09	12.09

(₹ in lakh)

Particulars		Asset-8 & Asset-9				
		2014-15	2015-16	2016-17	2017-18	2018-19
A	Opening Equity	1289.22	1289.22	1289.22	1289.22	1289.22
B	ACE	0.00	0.00	0.00	0.00	0.00
C	Closing Equity	1289.22	1289.22	1289.22	1289.22	1289.22
D	Average Equity (A+C)/2	1289.22	1289.22	1289.22	1289.22	1289.22
E	Rate of Return on Equity (in %)	15.50	15.50	15.50	15.50	15.50
F	Return on Equity (D*E)	199.83	199.83	199.83	199.83	199.83

(₹ in lakh)

Particulars		Asset-10				
		2014-15	2015-16	2016-17	2017-18	2018-19
A	Opening Equity	959.76	959.76	959.76	959.76	959.76
B	ACE	0.00	0.00	0.00	0.00	0.00
C	Closing Equity	959.76	959.76	959.76	959.76	959.76
D	Average Equity (A+C)/2	959.76	959.76	959.76	959.76	959.76
E	Rate of Return on Equity (in %)	15.50	15.50	15.50	15.50	15.50
F	Return on Equity (D*E)	148.76	148.76	148.76	148.76	148.76

(₹ in lakh)

Particulars		Asset-11				
		2014-15	2015-16	2016-17	2017-18	2018-19
A	Opening Equity	993.13	993.13	993.13	993.13	993.13
B	ACE	0.00	0.00	0.00	0.00	0.00
C	Closing Equity	993.13	993.13	993.13	993.13	993.13
D	Average Equity (A+C)/2	993.13	993.13	993.13	993.13	993.13
E	Rate of Return on Equity (in %)	15.50	15.50	15.50	15.50	15.50
F	Return on Equity (D*E)	153.93	153.93	153.93	153.93	153.93



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

36. The O&M Expenses claimed by the Petitioner for Asset-1, Asset-2, Asset-4, Asset-8 & Asset-9, Asset-10 and Asset-11 is as follows:

(₹ in lakh)					
Asset	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-1	29.69	30.72	31.75	32.78	33.81
Asset-2	23.83	24.66	25.49	26.31	27.14
Asset-4	31.49	32.53	33.67	34.71	35.96
Asset-8	80.35	83.08	85.81	88.65	91.60
Asset-9	80.35	83.08	85.81	88.65	91.60
Asset-10	58.92	60.96	63.00	65.04	67.23
Asset-11	60.96	63.08	65.19	67.30	69.56

37. The O&M Expenses approved for Asset-1, Asset-2, Asset-4, Asset-8 & Asset-9, Asset-10 and Asset-11 for the 2014-19 tariff period as per Regulation 29(4) of the 2014 Tariff Regulations is as follows:

(₹ in lakh)					
Asset	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-1	29.694	30.723	31.752	32.781	33.81
Asset-2	23.83	24.66	25.49	26.31	27.14
Asset-4	5.717	5.915	6.113	6.311	6.509
Asset-8 & Asset-9	80.35	83.08	85.81	88.65	91.60
Asset-10	58.92	60.96	63.00	65.04	67.23
Asset-11	60.96	63.08	65.19	67.30	69.56

Interest on Working Capital (“IWC”)

38. The IWC approved for Asset-1, Asset-2, Asset-4, Asset-8 & Asset-9, Asset-10, and Asset-11 for the 2014-19 tariff period in accordance with Regulation 28 of the 2014 Tariff Regulations are as follows:

Particulars		(₹ in lakh)				
		Asset-1				
		2014-15	2015-16	2016-17	2017-18	2018-19
A	Working Capital for Maintenance Spares (Maintenance Spares @15% of O&M Expenses)	4.45	4.61	4.76	4.92	5.07



B	Working Capital for O&M Expenses (one month of O&M Expenses)	2.47	2.56	2.65	2.73	2.82
C	Working Capital for Receivables (Receivable equivalent to two months of annual fixed cost)	23.54	23.72	23.90	24.08	24.26
D	Total Working Capital (A+B+C)	30.46	30.89	31.31	31.73	32.15
E	Interest Rate (in %)	13.50	13.50	13.50	13.50	13.50
F	Interest of working capital (D*E)	4.11	4.17	4.23	4.28	4.34

(₹ in lakh)

Particulars		Asset-2				
		2014-15	2015-16	2016-17	2017-18	2018-19
A	Working Capital for Maintenance Spares (Maintenance Spares @15% of O&M Expenses)	3.57	3.70	3.82	3.95	4.07
B	Working Capital for O&M Expenses (one month of O&M Expenses)	1.99	2.06	2.12	2.19	2.26
C	Working Capital for Receivables (Receivable equivalent to two months of annual fixed cost)	18.89	19.04	19.18	19.33	19.47
D	Total Working Capital (A+B+C)	24.45	24.79	25.13	25.47	25.81
E	Interest Rate (in %)	13.50	13.50	13.50	13.50	13.50
F	Interest of working capital (D*E)	3.30	3.35	3.39	3.44	3.48

(₹ in lakh)

Particulars		Asset-4				
		2014-15	2015-16	2016-17	2017-18	2018-19
A	Working Capital for Maintenance Spares (Maintenance Spares @15% of O&M Expenses)	0.86	0.89	0.92	0.95	0.98
B	Working Capital for O&M Expenses (one month of O&M Expenses)	0.48	0.49	0.51	0.53	0.54
C	Working Capital for Receivables (Receivable equivalent to two months of annual fixed cost)	3.58	3.62	3.65	3.68	3.72



D	Total Working Capital (A+B+C)	4.91	5.00	5.08	5.16	5.24
E	Interest Rate (in %)	13.50	13.50	13.50	13.50	13.50
F	Interest of working capital (D*E)	0.66	0.67	0.69	0.70	0.71

(₹ in lakh)

Particulars		Asset-8 & Asset-9				
		2014-15	2015-16	2016-17	2017-18	2018-19
A	Working Capital for Maintenance Spares (Maintenance Spares @15% of O&M Expenses)	12.05	12.46	12.87	13.30	13.74
B	Working Capital for O&M Expenses (one month of O&M Expenses)	6.70	6.92	7.15	7.39	7.63
C	Working Capital for Receivables (Receivable equivalent to two months of annual fixed cost)	97.23	95.02	92.75	58.15	58.67
D	Total Working Capital (A+B+C)	115.98	114.40	112.78	78.83	80.04
E	Interest Rate (in %)	13.50	13.50	13.50	13.50	13.50
F	Interest of working capital (D*E)	15.66	15.44	15.22	10.64	10.81

(₹ in lakh)

Particulars		Asset-10				
		2014-15	2015-16	2016-17	2017-18	2018-19
A	Working Capital for Maintenance Spares (Maintenance Spares @15% of O&M Expenses)	8.84	9.14	9.45	9.76	10.08
B	Working Capital for O&M Expenses (one month of O&M Expenses)	4.91	5.08	5.25	5.42	5.60
C	Working Capital for Receivables (Receivable equivalent to two months of annual fixed cost)	42.04	42.40	42.76	43.12	43.51
D	Total Working Capital (A+B+C)	55.79	56.63	57.46	58.30	59.19
E	Interest Rate (in %)	13.50	13.50	13.50	13.50	13.50
F	Interest of working capital (D*E)	7.53	7.64	7.76	7.87	7.99



(₹ in lakh)

Particulars		Asset-11				
		2014-15	2015-16	2016-17	2017-18	2018-19
A	Working Capital for Maintenance Spares (Maintenance Spares @15% of O&M Expenses)	9.14	9.46	9.78	10.10	10.43
B	Working Capital for O&M Expenses (one month of O&M Expenses)	5.08	5.26	5.43	5.61	5.80
C	Working Capital for Receivables (Receivable equivalent to two months of annual fixed cost)	43.51	43.88	44.25	44.62	45.02
D	Total Working Capital (A+B+C)	57.73	58.60	59.46	60.32	61.25
E	Interest Rate (in %)	13.50	13.50	13.50	13.50	13.50
F	Interest of working capital (D*E)	7.79	7.91	8.03	8.14	8.27

39. Accordingly, the Annual Transmission Charges approved for Asset-1, Asset-2, Asset-4, Asset-8 & Asset-9, Asset-10, and Asset-11 for the 2014-19 tariff period are as follows:

(₹ in lakh)

Particulars	Asset-1				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	21.42	21.42	21.42	21.42	21.42
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	85.99	85.99	85.99	85.99	85.99
Interest on Working Capital	4.11	4.17	4.23	4.28	4.34
O&M Expenses	29.69	30.72	31.75	32.78	33.81
Total	141.22	142.30	143.39	144.47	145.56

(₹ in lakh)

Particulars	Asset-2				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	17.19	17.19	17.19	17.19	17.19
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	69.02	69.02	69.02	69.02	69.02
Interest on Working Capital	3.30	3.35	3.39	3.44	3.48
O&M Expenses	23.83	24.66	25.49	26.31	27.14
Total	113.34	114.22	115.09	115.96	116.84



(₹ in lakh)

Particulars	Asset-4				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	3.01	3.01	3.01	3.01	3.01
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	12.09	12.09	12.09	12.09	12.09
Interest on Working Capital	0.66	0.67	0.69	0.70	0.71
O&M Expenses	5.72	5.92	6.11	6.31	6.51
Total	21.48	21.69	21.90	22.11	22.32

(₹ in lakh)

Particulars	Asset-8 & Asset-9				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	226.90	226.90	226.90	49.78	49.78
Interest on Loan	60.66	44.85	28.75	0.00	0.00
Return on Equity	199.83	199.83	199.83	199.83	199.83
Interest on Working Capital	15.66	15.44	15.22	10.64	10.81
O&M Expenses	80.35	83.08	85.81	88.65	91.60
Total	583.39	570.11	556.52	348.90	352.01

(₹ in lakh)

Particulars	Asset-10				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	37.06	37.06	37.06	37.06	37.06
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	148.76	148.76	148.76	148.76	148.76
Interest on Working Capital	7.53	7.64	7.76	7.87	7.99
O&M Expenses	58.92	60.96	63.00	65.04	67.23
Total	252.27	254.42	256.58	258.73	261.04

(₹ in lakh)

Particulars	Asset-11				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	38.34	38.34	38.34	38.34	38.34
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	153.93	153.93	153.93	153.93	153.93
Interest on Working Capital	7.79	7.91	8.03	8.14	8.27
O&M Expenses	60.96	63.08	65.19	67.30	69.56
Total	261.03	263.27	265.50	267.72	270.11

Filing Fee and Publication Expenses

40. The Petitioner has sought reimbursement of the fee paid by it for filing the Petition and publication expenses. The Petitioner shall be entitled to reimbursement of



the filing fees and publication expenses in connection with the present petition directly from the beneficiaries on a pro-rata basis in accordance with Regulation 52 of the 2014 Tariff Regulations.

Sharing of Transmission Charges

41. With effect from 1.7.2011, the sharing of transmission charges for inter-State transmission systems was governed by the provisions of the 2010 Sharing Regulations. However, with effect from 1.11.2020, the 2010 Sharing Regulations has been repealed, and the sharing of transmission charges is governed by the provisions of the 2020 Sharing Regulations. Accordingly, the transmission charges approved in this order for the transmission assets shall be recovered in accordance with the applicable Sharing Regulations as per Regulation 43 of the 2014 Tariff Regulations. Further, the transmission charges allowed in this order shall be adjusted against the ARR approved by the State Commission.

42. This order disposes of Petition No. 88/TT/2017 in terms of the above discussions and findings, as per the directions of the APTEL passed in the instant remand order.

**sd/-
(P.K. Singh)
Member**

**sd/-
(Arun Goyal)
Member**

**sd/-
(Jishnu Barua)
Chairperson**

