

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 212/TT/2022

Coram:

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

Date of Order: 20.03.2024

In the matter of:

Determination of transmission tariff for the year 2020-21 to 2023-24 in respect of RVPNL owned transmission lines/system connecting with other States and intervening transmission lines incidental to inter-State transmission of electricity for inclusion in the POC transmission charges in accordance with the Central Electricity Regulatory Commission (Terms and Condition of Tariff) Regulations, 2019 and Central Electricity Regulatory Commission (Sharing of Transmission Charges and Losses) Regulations, 2020 and its subsequent amendments.

And in the matter of:

Rajasthan Rajya Vidyut Prasaran Nigam Limited,
Vidyut Bhawan,
Jyoti Nagar, Jaipur,
Rajasthan-302005.

.....Petitioner

Vs.

1. Power Grid Corporation of India Limited,
"Saudamini", Plot No. 2,
Sector 29, Near IFFCO Chowk,
Gurgaon,
Haryana-122001.
2. Haryana Vidyut Prasaran Nigam,
Shakti Bhawan,
Sector-6, Pachkula,
Haryana-781001.
3. Haryana Power Purchase Centre,
2nd Floor, Shakti Bhawan,
Sector-6, Panchkula,



Haryana-134109.

4. Madhya Pradesh Power Transmission Company Limited,
Block No.2, Shakti Bhawan,
Rampur, Jabalpur,
Madhya Pradesh-482008.
5. Madhya Pradesh Power Management Company Limited,
Block No.11, 1st Floor, Shakti Bhawan,
Rampur, Jabalpur,
Madhya Pradesh-482008.
6. Delhi Transco Limited,
Shakti Sadan, Kotla Road,
New Delhi-110002.
7. BSES Yamuna Power Limited,
BSES Bhawan, Nehru Place,
New Delhi-110019.
8. BSES Rajdhani Power Limited,
BSES Bhawan, Nehru Place,
New Delhi-110019.
9. North Delhi Power Limited,
Power Trading and Load Dispatch Group,
CENNET Building, Pitampura,
New Delhi-110034.
10. Uttar Pradesh Power Transmission Corporation Limited,
Shakti Bhawan, 14,
Ashok Marg, Lucknow,
Uttar Pradesh-226001.
11. Uttar Pradesh Power Corporation Limited,
Shakti Bhawan, 14,
Ashok Marg, Lucknow,
Uttar Pradesh-226001.

...Respondents

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

For Respondents : None



ORDER

Rajasthan Rajya Vidyut Prasaran Nigam Limited (RRVPL) has filed the instant petition for determination of transmission tariff for the years 2020-21, 2021-22, 2022-23 and 2023-24 (i.e. from 1.4.2020 to 31.3.2024) in respect of the following 13 RRVPL owned transmission lines (hereinafter referred to as “the transmission assets”), connecting with other States and intervening transmission lines incidental to the inter-State transmission of electricity for inclusion in the computation of Point of Connection (PoC) transmission charges in accordance with the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”) and the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020 (hereinafter referred to as “the 2020 Sharing Regulations) and its subsequent amendments:

Sl. No.	Name of the line	Length of line in ckt. Km	COD	Remarks
1.	132 kV Single Circuit (“S/C”) Sadulpur (Rajgarh)-Hissar Line	78.00	3.10.1959	Natural ISTS (Rajasthan-Haryana)
2.	220 kV S/C Anta-Kota Line	67.00	1.3.1969	Deemed ISTS (Emanating from ISGS)
3.	132 kV S/C Amrapura Thedi-Sirsa Line	80.00	19.12.1970	Natural ISTS (Rajasthan-Haryana)
4.	220 kV S/C MIA (Alwar)-Badarpur Line	131.6	22.11.1975	Natural ISTS (Rajasthan-Delhi)
5.	220 kV S/C Kota (Sakatpura)-Badod (Rajasthan-Madhya Pradesh)	59.624	20.8.1977	Natural ISTS (Rajasthan-MP)
6.	220 kV S/C Khetri-Dadri Line I (Rajasthan-Haryana)	70.91	23.12.1977	Natural ISTS (Rajasthan-Haryana)
7.	220 kV S/C RAPP (B)-Kota Line	42.00	1.9.1977	Deemed ISTS (Emanating from ISGS)
8.	220 kV S/C RAPP (B)-RAPP (A) Line	2.00	1.9.1977	Deemed ISTS (Emanating from ISGS)
9.	220 kV S/C Agra-Bharatpur Line (Rajasthan-Uttar Pradesh)	48.12	30.12.1982	Natural ISTS (Rajasthan-UP)



Sl. No.	Name of the line	Length of line in ckt. Km	COD	Remarks
10.	220 kV S/C Khetri-Dadri Line II (Rajasthan-Haryana)	77.00	2.3.1985	Natural ISTS (Rajasthan-Haryana)
11.	220 kV S/C Modak-Barod (Bhanpura) (Rajasthan-Madhya Pradesh)	16.5	2.1.1988	Natural ISTS (Rajasthan-MP)
12.	132 kV S/C Khandar- Sheopur line	12.62	5.7.2008	Deemed ISTS (NRPC certified)
13.	220 kV S/C Chirawa-Hissar line (Rajasthan-Haryana)	118.00	27.11.2010	Natural ISTS (Rajasthan-MP)

2. The Petitioner has made the following amended prayers in the instant petition vide affidavit dated 28.2.2023:

“1) Approve the Yearly Transmission (YTC) Charges for the Lines covered under this petition, as per para 9 above for the years 2020-21, 2021-22, 2022-23 and 2023-24.

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

Background

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

(a) RRVPNL has filed the present petition as per the Commission's directions in its orders dated 14.3.2012 and 12.5.2017 in Petition Nos. 15/SM/2012 and 7/SM/2017, respectively, directing the State utilities to file tariff petitions for the ISTS lines connecting two States for the 2009-14 and 2014-19 tariff periods, respectively.

(b) RRVPNL earlier filed Petition No. 213/TT/2013, claiming tariff for 20 ISTS lines. The Commission, vide order dated 18.3.2015, allowed YTC from 1.7.2011 to 31.3.2014 for 6 assets, and YTC was not allowed for the remaining 14 ISTS lines, and the Petitioner was directed to approach the NRPC for required certification. The relevant portion of the order dated 18.3.2015 is as follows:



“14. The certificate of NRPC is available in terms of the above Regulation in respect of six transmission lines which were included in the Commission’s order dated 14.3.2012. Since the certification is not available for the 14 transmission lines, we direct the petitioner to approach NRPC for the required certification of these lines for inclusion in the PoC Charges. Accordingly, only the six transmission lines are being considered in this petition for grant of annual transmission charges. 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 six transmission lines have been calculated for the year 2011-12 (1.7.2011 to 31.3.2012), 2012-13 and 2013-14.”

(c) The tariff of the 6 ISTS lines for the 2011-14 period was trued-up vide order dated 9.3.2018 in Petition No. 111/TT/2017, wherein the Commission observed as follows:

“9. We have considered the submissions made by RRVPNL and UPPCL. YTC for the period 2011-12 to 2013-14 was already allowed only on the basis of certification by NRPC. We are satisfied with the certification issued by NRPC and there is no ambiguity on this issue. Accordingly, YTC granted for the said period for the six transmission lines owned by RRVPNL is trued up in the instant order.”

(d) Later, the Petitioner filed Petition No. 26/TT/2017 claiming tariff for Assets 1 to 7 for the 2011-14 period, whose tariff was not granted in Petition No. 213/TT/2013, as it would have led to revision of the PoC charges retrospectively. The relevant portion of the order dated 18.10.2017 is extracted as follows:

“6. We have considered the submissions made by RRVPNL. RRVPNL has claimed transmission tariff for seven inter-State transmission lines retrospectively for the 2009-14 tariff period. The instant transmission lines are part of the State network and are shared by STU. The State Commission has already granted ARR for the State network for the 2009-14 period which is inclusive of the tariff for the transmission lines covered in the instant petition. As such, RRVPNL 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. Further, it would require revision/adjustment of the ARR already granted by the State Commission for the 2011-14 period. Hence, we are not inclined to allow tariff for these lines retrospectively for the period 2011-14.



RRVPNL has already filed the petition claiming tariff for the inter-State transmission lines under its State network for the 2014-19 tariff period under the 2014 Tariff Regulations and will be granted tariff accordingly as per the relevant regulations.”

(e) The Petitioner, vide Petition No. 112/TT/2017, had prayed for approval of YTC for Assets 1 to 13 for the period 2014-17. Further, RRVPNL had prayed for approval of YTC for the year 2016-17 for Assets 14 to 19 and also for the 220 kV D/C Gajner-Bikaner (400 kV GSS) line. The Commission, vide order dated 4.5.2018, approved the tariff in Petition No 112/TT/2017 for Assets 1 to 17. The tariff for the 2014-19 period was not allowed for Assets 18 and 19 in Petition No 112/TT/2017, which were put into commercial operation after 31.3.2014, and RRVPNL was granted liberty to file a fresh petition for the determination of YTC of these lines along with the relevant cost data as per the 2014 Tariff Regulations. The relevant portion of the order dated 4.5.2018 is as follows:

“20. Assets-18 and 19 were put into commercial operation on 29.3.2015 and 25.3.2015 respectively and tariff is not allowed in this order for these assets as per the methodology mentioned above as RRVPNL must have the audited financial data of these transmission lines. RRVPNL is granted liberty to file a fresh petition for determination of YTC of these lines along with the relevant cost data as per the 2014 Tariff Regulations.”

(f) The Petitioner filed Petition No.215/TT/2017 for approval of tariff for 21 ISTS lines, wherein the Petitioner submitted that the tariff claimed was worked out on the basis of ARR methodology adopted by the Commission in its order dated 18.3.2015 in Petition No. 213/TT/2013. The Petitioner has prayed to approve the YTC for 21 ISTS lines as per the procedure adopted by the Commission in the order dated 18.3.2015 in Petition No. 213/TT/2013. The Petitioner has claimed YTC for the 13 natural inter-State lines for the year 2017-

18 and also claimed the YTC for the remaining 8 inter-State transmission lines for the year 2017-18. The Commission, vide order dated 20.6.2018, approved IWC and O&M Expenses for the transmission assets which have completed 25 years and approved all the components of tariff for the transmission assets which have not completed 25 years of life as per the methodology adopted in the case of all the other States. The relevant portion of the order dated 20.6.2018 is as follows:

“14. The petitioner has not submitted the Audited capital cost certificates for the instant assets. Accordingly, the tariff for the instant 21 ISTS lines is considered in line with the methodology explained in foregoing paragraphs. Assets 2, 3 and 5 to 13 have already completed twenty five years of their useful lives. Therefore, as per above said methodology, only IWC and O & M Expenses of tariff are allowed for the said assets. In case of Assets 1, 4, 14 to 17 and 21, all the components of tariff have been worked out for 2017-18. Assets 18, 19 and 20 were put into commercial operation on 29.3.2015, 25.3.2015 and 13.4.2016 respectively and therefore YTC is been worked out as the petitioner is expected to be in possession of the Audited capital cost and financial data. RRVPNL is directed to file a fresh petition for approval of tariff for Assets 18, 19 and 20 as per the provisions of the 2014 Tariff Regulations along with the required information specified in the Tariff Forms.”

(g) Subsequently, the Petitioner filed Petition No. 362/TT/2019 for the determination of transmission tariff for 19 transmission assets for the 2018-19 period (1.4.2018 to 31.3.2019) for inclusion in the PoC mechanism. The Commission, vide order dated 15.6.2020 in Petition No. 362/TT/2019, allowed tariff for only 17 transmission assets and disallowed tariff for 400 kV D/C Bhilwara-Ajmer Line and 400 kV D/C Chittorgarh-Bhilwara Line (Assets-15 and 16 in the present petition and Assets-18 and 19 in Petition No. 362/TT/2019), which were put into commercial operation after 1.4.2014. The relevant portion of the order dated 15.6.2020 is as follows:

“29. In the instant case, we note that the Petitioner has implemented the Asset-18 and Asset-19 as per directions of Rajasthan Electricity Regulatory



Commission (RERC). The Petitioner has neither approached this Commission for regulatory approval nor such approval has been granted for construction of these two assets. Further, the Petitioner has approached RPC/SCM after commissioning of the Assets for certification as ISTS transmission lines for inclusion in PoC.

30. In view of the above discussion, we observe that the Commission has not directed the Petitioner to approach this Commission to claim tariff in respect of Asset 18 and Asset-19. In order dated 18.3.2015 in Petition no. 213/TT/2013, due to non-availability of pre-requisite certification, the Petitioner was directed to approach NRPC for the required certification for 14 lines only (after granting tariff for six lines out of twenty lines proposed by the Petitioner) for inclusion in the PoC Charges. Therefore, tariff for Asset-18 and Asset-19 is not granted in the instant petition and the petitioner may approach RERC for determination of tariff.”

(h) The Commission, vide order dated 15.6.2020 in Petition No 362/TT/2019, granted tariff for the year 2018-19 for the following transmission lines:

Sl. No	Asset	Name of the line	Line Length (km)	COD
1	Asset-1	132 KV S/C Sadulpur (Rajgarh)- Hissar	78.00	3.10.1959
2	Asset-2	220 KV S/C Anta-Kota 67.00 1.3.1969	67.00	1.3.1969
3	Asset-3	132 KV S/C Amrapura-Sirsa Line	80.00	19.12.1970
4	Asset-4	220 KV S/C Alwar-Badarpur Line	131.6	22.11.1975
5	Asset-5	220 KV S/C Kota (Sakatpura)- Badod Line (Raj-MP)	59.624	20.8.1977
6	Asset-6	220 KV S/C Khetri-Dadri Line I (Rajasthan-Haryana)	70.91	23.12.1977
7	Asset-7	220 kV S/C RAPP (B)-Kota	42.00	1.9.1977
8	Asset-8	220 KV S/C RAPP (B)-RAPP(A)	2.00	1.9.1977
9	Asset-9	220 KV S/C Agra-Bharatpur Line (Rajasthan-Uttar Pradesh)	48.12	30.12.1982
10	Asset-10	220 KV S/C Khetri-Dadri Line II (Rajasthan-Haryana)	77.00	2.3.1985
11	Asset-11	220 KV S/C Modak-Badod Line (Rajasthan-Madhya Pradesh)	16.50	2.1.1988
12	Asset-12	400 kV S/C Jodhpur – Merta Line-I	106.86	15.9.2004
13	Asset-13	400 kV S/C Merta – Heerapura Line	178.07	13.7.2004
14	Asset-14	132 KV S/C Khandrar-Sheopur Line	12.62	5.7.2008
15	Asset-15	400 kV S/C Merta – Ratangarh Line	172.50	9.5.2008
16	Asset-16	220 KV S/C Chirawa- Hissar Line	118.00	27.11.2010
17	Asset-17	400 kV S/C Jodhpur – Merta Line-II	107.48	27.10.2012



(i) The Petitioner challenged the Commission's order dated 15.6.2020 in Petition No. 362/TT/2019 regarding the disallowance of tariff for 400 kV D/C Bhilwara-Ajmer Line and 400 kV D/C Chittorgarh-Bhilwara Line before the APTEL in Appeal No. 455 of 2022 and the matter is sub-judice.

(j) The Petitioner filed Petition No. 161/TT/2021 for the determination of transmission tariff in respect of the following 16 transmission lines for the year 2019-20 in respect of RVPNL owned transmission lines/systems connecting with other States and intervening transmission lines incidental to the inter-State transmission of electricity for inclusion in the POC transmission charges in accordance with the 2019 Tariff Regulations and the 2010 Sharing Regulations which also include the 13 transmission lines of the present petition. The Commission, vide order dated 14.3.2024 in Petition No. 161/TT/2021, granted tariff for the transmission lines at serial number 1 to 14 of the following table.

Sl. No.	Name of the line	Length of line in ckt. km	COD	Remarks
1.	132 kV Single Circuit ("S/C") Sadulpur (Rajgarh)-Hissar Line	78.00	3.10.1959	Natural ISTS (Rajasthan-Haryana)
2.	220 kV S/C Anta-Kota Line	67.00	1.3.1969	Deemed ISTS (Emanating from ISGS)
3.	132 kV S/C AmrapuraThedi-Sirsa Line	80.00	19.12.1970	Natural ISTS (Rajasthan-Haryana)
4.	220 kV S/C MIA (Alwar)-Badarpur Line	131.6	22.11.1975	Natural ISTS (Rajasthan-Delhi)
5.	220 kV S/C Kota (Sakatpura)-Badod (Rajasthan-Madhya Pradesh)	59.624	20.8.1977	Natural ISTS (Rajasthan-MP)
6.	220 kV S/C Khetri-Dadri Line I (Rajasthan-Haryana)	70.91	23.12.1977	Natural ISTS (Rajasthan-Haryana)
7.	220 kV S/C RAPP (B)-Kota Line	42.00	1.9.1977	Deemed ISTS (Emanating from ISGS)
8.	220 kV S/C RAPP (B)-RAPP (A) Line	2.00	1.9.1977	Deemed ISTS (Emanating from ISGS)
9.	220 kV S/C Agra-Bharatpur Line (Rajasthan-Uttar Pradesh)	48.12	30.12.1982	Natural ISTS (Rajasthan-UP)
10.	220 kV S/C Khetri-Dadri Line II (Rajasthan-Haryana)	77.00	2.3.1985	Natural ISTS (Rajasthan-Haryana)



Sl. No.	Name of the line	Length of line in ckt. km	COD	Remarks
11.	220 kV S/C Modak-Barod(Bhanpura) (Rajasthan-Madhya Pradesh)	16.5	2.1.1988	Natural ISTS (Rajasthan-MP)
12.	132 kV S/C Khandar- Sheopur line	12.62	5.7.2008	Deemed ISTS (NRPC certified)
13.	220 kV S/C Chirawa-Hissar line (Rajasthan-Haryana)	118.00	27.11.2010	Natural ISTS (Rajasthan-MP)
14.	400 kV S/C Merta – Heerapura Line	178.07	13.7.2004	Natural ISTS (Rajasthan- Haryana)
15.	400 kV D/C Bhilwara-Ajmer Line	160.2	26.1.2018	Deemed ISTS (NRPC certified)
16.	400 kV D/C Chittorgarh-Bhilwara Line	49.551	5.9.2018	Deemed ISTS (NRPC certified)

(k) The Petitioner has filed the instant petition claiming tariff for the 2020-21 to 2023-24 period for 13 transmission lines connecting the Petitioner with other States and the intervening transmission lines incidental to inter-State transmission of electricity for inclusion in computation of PoC transmission charges.

4. The Respondents are distribution licensees, power departments, power utilities and transmission licensees, who are procuring transmission services from the Petitioner, mainly beneficiaries of the Northern Region.

5. The Petitioner has served the petition on the Respondents. Madhya Pradesh Power Management Company Limited (MPPCL), Respondent No. 5, has filed its reply vide affidavit dated 18.11.2022. No rejoinder has been filed by the Petitioner.

6. MPPMCL has made the following submissions in its reply:

(a) The Petitioner's 220 kV S/C Kota (Sakatpura)-Badod line (Rajasthan-Madhya Pradesh), 220 kV S/C Madak-Badod line (Rajasthan-Madhya Pradesh) and 132



kV S/C Khandrar-Sheopur Line are connected to the MPPMCL transmission system.

(b) The Commission, vide order dated 15.6.2020 in Petition No. 362/TT/2019, derived the benchmark cost on the basis of transmission lines owned by PGCIL. In the said order, the useful life of transmission line was considered as 25 years and for lines more than or equal to 25 years, only Operation and Maintenance Expenses (“O&M Expenses”) and Interest on Working Capital (IWC) were decided to be allowed as per existing Tariff Regulations.

(c) 220 kV S/C Kota (Sakatpura)-Badod line (Rajasthan-Madhya Pradesh) and the 220 kV S/C Modak-Barod line (Rajasthan-Madhya Pradesh) have already elapsed more than 25 years of useful life, and the tariff claimed by the Petitioner is in line with the new methodology adopted by the Commission as per the 2019 Tariff Regulations.

(d) 132 kV S/C Khandrar-Sheopur line has not completed its useful life, and the tariff claimed by the Petitioner is in accordance with the 2019 Tariff Regulations.

7. Taking into consideration the APTEL’s judgment dated 14.11.2022 in Appeal No. 267 of 2018, wherein APTEL *inter alia* observed that the useful life of the deemed ISTS lines shall be the same as the ISTS lines specified in the 2014 Tariff Regulations, the Commission, vide RoP dated 9.1.2023, directed the Petitioner to file an amended petition in Petition No. 212/TT/2022 in light of the APTEL’s judgement. As per the directions of the Commission, the Petitioner filed the amended petition vide affidavit dated 28.2.2023. The gist of the submissions made by the Petitioner in the amended petition are as follows:



(a) The transmission charges for the following 13 transmission lines may be granted for the years 2020-21, 2021-22, 2022-23 and 2023-24 (i.e. from 1.4.2020 to 31.3.2024) for inclusion in PoC transmission charges:

Sl. No.	Name of the line	Voltage level	Length of line in Ckt km	COD
1.	132 kV S/C Sadulpur (Rajgarh)-Hissar line	132 kV	78.00	3.10.1959
2.	220 kV S/C Anta-Kota line	220 kV	67.00	1.3.1969
3.	132 kV S/C Amrapura Thedi-Sirsa line	132 kV	80.00	19.12.1970
4.	220 kV S/C MIA (Alwar)-Badarpur line	220 kV	131.6	22.11.1975
5.	220 kV S/C Kota (Sakatpura)-Badod (Rajasthan-Madhya Pradesh)	220 kV	59.624	20.8.1977
6.	220 kV S/C Khetri-Dadri line I (Rajasthan-Haryana)	220 kV	70.91	23.12.1977
7.	220 kV SC RAPP (B)-Kota line	220 kV	42.00	1.9.1977
8.	220 kV S/C RAPP (B)-RAPP (A) line	220 kV	2.00	1.9.1977
9.	220 kV S/C Agra-Bharatpur line (Rajasthan-Uttar Pradesh)	220 kV	48.12	30.12.1982
10.	220 kV S/C Khetri-Dadri line II (Rajasthan-Haryana)	220 kV	77.00	2.3.1985
11.	220 kV S/C Modak-Barod (Bhanpura) (Rajasthan-Madhya Pradesh)	220 kV	16.5	2.1.1988
12.	132 kV S/C Khandar- Sheopur line	132 kV	12.62	5.7.2008
13.	220 kV S/C Chirawa-Hissar line (Rajasthan-Haryana)	220 kV	118.00	27.11.2010

(b) The Rajasthan Electricity Regulatory Commission (RERC) has not determined asset-wise transmission tariff. The transmission lines at serial numbers 2, 7 and 8 in the above table are non-ISTS lines owned by RRVPNL, carrying inter-State power, and the same have been certified by NRPC for 2019-20 as per minutes of the meetings of the 45th NRPC and the 42nd TCC meetings dated 9.7.2019 and the minutes of the 48th NRPC and the 45th TCC meetings dated 20.11.2020 for inclusion in PoC transmission charges.



(c) The procedure adopted by the Commission in its order dated 18.3.2015 in Petition No. 213/TT/2013, i.e. ARR methodology and as per Regulation 7(1)(n) of the 2010 Sharing Regulations, was used for calculating and claiming the transmission charges for the instant transmission lines. Therefore, the transmission charges as per the procedure adopted by the Commission in its order dated 18.3.2015 may be applied in this case.

(d) The indicative costs of the transmission lines of various configurations owned and operated by the PGCIL are as follows:

For FY 2020-21

Sl. No.	Line type	Cost (₹ lakh/km)	Cost per circuit	Coefficient	Ratio w.r.t. g
(a)	(b)	(c)	(d)	(e)	(f)
1.	500 kV HVDC	121.00	121.00	a	0.81
2.	800 kV HVDC	246.00	246.00	b	0.40
3.	765 kV D/C	349.00	174.50	c	0.56
4.	765 kV S/C	156.00	156.00	d	0.63
5.	400 kV D/C	115.00	57.50	e	1.71
6.	400 kV D/C Twin-HTLS	133.00	66.50	f	1.48
7.	400 kV D/C Quad Moose	197.00	98.50	g	1.00
8.	400 kV S/C	65.00	65.00	h	1.52
9.	220 kV D/C	49.00	24.50	i	4.02
10.	220 kV S/C	37.00	37.00	j	2.66
11.	132 kV D/C	33.00	16.50	k	5.97
12.	132 kV S/C	18.00	18.00	l	5.47

For FY 2021-22

Sl. No.	Line type	Cost (₹ lakh/km)	Cost per circuit	Coefficient	Ratio w.r.t. g
(a)	(b)	(c)	(d)	(e)	(f)
1.	500 kV HVDC	126.00	126.00	a	0.82
2.	800 kV HVDC	258.00	258.00	b	0.40
3.	765 kV D/C	364.00	182.00	c	0.57
4.	765 kV S/C	163.00	163.00	d	0.63
5.	400 kV D/C	121.00	60.50	e	1.71



6	400 kV D/C Twin-HTLS	135.00	67.50	f	1.53
7	400 kV D/C Quad. Moose	207.00	103.50	g	1.00
8	400 kV S/C	68.00	68.00	h	1.52
9	220 kV D/C	51.00	25.50	i	4.06
10	220 kV S/C	39.00	39.00	j	2.65
11	132 kV D/C	35.00	17.50	k	5.91
12	132 kV S/C	20.00	20.00	l	5.18

For 2022-23

Sl. No.	Line type	Cost (₹ lakh/km)	Cost per circuit	Coefficient	Ratio w.r.t. g
(a)	(b)	(c)	(d)	(e)	(f)
1.	500 kV HVDC	170.00	170.00	a	0.83
2.	800 kV HVDC	348.00	348.00	b	0.41
3.	765 kV D/C	484.00	242.00	c	0.58
4.	765 kV S/C	221.00	221.00	d	0.64
5	400 kV D/C	163.00	81.50	e	1.73
6	400 kV D/C Twin-HTLS	199.00	99.50	f	1.42
7	400 kV D/C Quad. Moose	282.00	141.00	g	1.00
8	400 kV S/C	93.00	93.00	h	1.52
9	220 kV D/C	68.00	34.00	i	4.15
10	220 kV S/C	52.00	52.00	j	2.71
11	132 kV D/C	45.00	22.50	k	6.27
12	132 kV S/C	26.00	26.00	l	5.42

For 2023-24

Sl. No.	Line type	Cost (₹ lakh/km)	Cost per circuit	Coefficient	Ratio w.r.t. g
(a)	(b)	(c)	(d)	(e)	(f)
1.	500 kV HVDC	170.00	170.00	a	0.83
2.	800 kV HVDC	348.00	348.00	b	0.41
3.	765 kV D/C	484.00	242.00	c	0.58
4.	765 kV S/C	221.00	221.00	d	0.64
5	400 kV D/C	163.00	81.50	e	1.73
6	400 kV D/C Twin-HTLS	199.00	99.50	f	1.42
7	400 kV D/C Quad. Moose	282.00	141.00	g	1.00
8	400 kV S/C	93.00	93.00	h	1.52
9	220 kV D/C	68.00	34.00	i	4.15
10	220 kV S/C	52.00	52.00	j	2.71
11	132 kV D/C	45.00	22.50	k	6.27
12	132 kV S/C	26.00	26.00	l	5.42



(e) On the basis of the line-length, the total ARRs approved by RERC are as follows:

For 2020-21 (True-up)

The total ARR approved by RERC for 2020-21 is ₹2858.23 crore.

Sl. No.	Assets	For entire System of RRVPNL		
		Line length (ckt. km)	YTC (Per ckt. km)	YTC in ₹
1	765 kV S/C	425.50	3115911.46	1325820327.87
2	400 kV S/C	6899.39	1298296.44	8957453497.75
3	220 kV S/C	15835.78	739030.28	11703120976.40
4	132 kV S/C	18346.00	359528.25	6595905197.98
Total				28582300000.00

For 2021-22

The total ARR approved by RERC for 2021-22 is ₹3630.49 crore

Sl. No.	Assets	For entire System of RRVPNL		
		Line length (ckt. km)	YTC (Per ckt. km)	YTC in ₹
1	765 kV S/C	425.50	3853206.62	1639539416.43
2	400 kV S/C	6899.39	1607472.70	11090581071.62
3	220 kV S/C	16053.16	921932.87	14799935904.38
4	132 kV S/C	18559.86	472786.09	8774843607.57
Total				36304900000.00

For 2022-23

The total ARR approved by RERC for 2022-23 is ₹3841.90 crore

Sl. No.	Asset	For entire System of RVPNL		
		Line length (ckt. km)	YTC (Per ckt. km)	YTC in ₹
1	765 kV S/C	425.50	4013696.77	1707827977.24
2	400 kV S/C	7390.39	1689021.72	12482529223.92
3	220 kV S/C	16109.16	944399.24	15213478475.30
4	132 kV S/C	19091.85	472199.62	9015164323.55
Total				38419000000.00



For 2023-24

The total ARR approved by RERC for 2023-24 is ₹4035.96 crore

Sl. No.	Asset	For entire System of RVPNL		
		Line length (ckt. km)	YTC (Per ckt. km)	YTC in ₹
1	765 kV S/C	425.50	4216434.48	1794092871.50
2	400 kV S/C	7390.39	1774336.68	13113040070.42
3	220 kV S/C	16109.16	992102.23	15981933571.19
4	132 kV S/C	19091.85	496051.12	9470533486.89
Total				40359600000.00

(f) The transmission charges are claimed considering the per ckt-km for 400 kV S/C, 220 kV S/C and 132 kV S/C lines as follows:

Lines	Description	YTC for 2020-21 (in ₹)	YTC for 2021-22 (in ₹)	YTC for 2022-23 (in ₹)	YTC for 2023-24 (in ₹)
400 kV S/C	YTC per ckt km	1298296.44	1607472.70	1689021.72	1774336.68
220 kV S/C	YTC per ckt km	739030.28	921932.87	944399.24	992102.23
132 kV S/C	YTC per ckt km	359528.25	472786.09	472199.62	496051.12

(g) The transmission charges claimed for the natural ISTS and already approved for ISTS lines on the basis of ARR methodology are as follows:

Sl. No.	Name of transmission lines	Line length in km	YTC for 2020-21* (in ₹)	YTC for 2021-22 (in ₹)	YTC for 2022-23 (in ₹)	YTC for 2023-24 (in ₹)
1	132 kV S/C Sadulpur (Rajgarh)-Hissar line	78	28043203	36877315	36831570	38691987
2	220 kV S/C Anta-Kota line	67	49515029	61769502	63274749	66470849
3	132 kV S/C Amrapura-Sirsa line	80	28762260	37822887	37775970	79368178
4	220 kV S/C MIA (Alwar)-Badarpur line	131.6	97256385	121326366	124282940	130560654
5	220 kV S/C Kota (Sakatpura)-Badod (Rajasthan-Madhya Pradesh)	59.624	44063942	54969326	56308860	59153103
6	220 kV S/C Khetri-Dadri line I (Rajasthan-Haryana)	70.91	52404637	65374260	66967350	70349969
7	220 kV SC RAPP (B)-Kota line	42	31039272	38721181	39664768	41668294



Sl. No.	Name of transmission lines	Line length in km	YTC for 2020-21* (in ₹)	YTC for 2021-22 (in ₹)	YTC for 2022-23 (in ₹)	YTC for 2023-24 (in ₹)
8	220 kV S/C RAPP (B) – RAPP (A) line	2	1478061	1843866	1888798	1984204
9	220 kV S/C Agra-Bharatpur line (Rajasthan-Uttar Pradesh)	48.12	35562137	44363410	45444491	47739959
10	220 kV S/C Khetri-Dadri line II (Rajasthan-Haryana)	77	56905332	70988831	72718742	76391872
11	220 kV S/C Modak-Barod (Bhanpura) (Rajasthan-Madhya Pradesh)	16.50	12194000	15211892	15582587	16369687
12	132 kV S/C Khandar-Sheopur line	12.62	4537246	5966560	5959159	6260165
13	220 kV S/C Chirawa-Hissar line (Rajasthan-Haryana)	118	87205573	108788079	111439110	117068063
		TOTAL	528967077	664023475	678139094	752076984

* On the basis of true up ARR

(h) The Petitioner has claimed ₹2623206630 YTC for the 13 transmission lines as per the ARR methodology.

8. The Petitioner, vide affidavit dated 16.2.2023, has submitted that the lines between the State of Rajasthan and the State of Madhya Pradesh are covered by inter-State Power Supply Agreements dated 30.6.1948 read with Agreement dated 25.3.1955 and the Minutes of the Meetings of Chambal Control Board dated 4.9.1960, 8.9.1961 and 6.5.1969. The Petitioner has also submitted the operational status and daily average power flow in ISTS transmission lines covered in the instant petition during the period 2014-19 and the details of the availability of the transmission system.

9. Hearing in this matter was held on 30.8.2023 and 6.2.2024, and order in the matter was reserved.

10. This order is issued considering the submissions made by the Petitioner in the original petition and amended petition, which are supported by affidavits dated 7.6.2022 and 28.2.2023, the Petitioner's subsequent affidavit dated 16.2.2023, and



MPPMCL's reply filed vide affidavit dated 18.11.2023.

11. Having heard the learned counsel for the Petitioner, representatives of the Respondents, MPPMCL and CTUIL and having perused the material on record, we proceed to dispose of the petition.

Determination of Annual Fixed Charges for the 2020-24 Period

12. As stated above, the Petitioner has filed the instant petition claiming tariff for the 2020-24 period for 13 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.

13. The Petitioner has claimed the following Annual Transmission Charges in respect of the following transmission lines, considering their useful life as 25 years:

(₹ in lakh)

Asset No.	Name of the transmission line	2020-21	2021-22	2022-23	2023-24
1	132 kV S/C Sadulpur (Rajgarh)-Hissar Line	42.50	43.84	45.38	47.01
2	220 kV S/C Anta-Kota Line	36.51	37.66	38.98	40.38
3	132 kV S/C AmrapuraThedi-Sirsa Line	43.59	44.96	46.55	48.22
4	220 kV S/C MIA (Alwar)-Badarpur Line	71.71	73.96	76.57	79.32
5	220 kV S/C Kota (Sakatpura)-Badod (Rajasthan-Madhya Pradesh)	32.49	33.51	34.69	35.93
6	220 kV S/C Khetri-Dadri Line I (Rajasthan-Haryana)	38.64	39.85	41.26	42.74
7	220 kV S/C RAPP (B)-Kota Line	22.93	23.64	24.48	25.35
8	220 kV S/C RAPP (B)-RAPP (A) Line	1.09	1.12	1.16	1.21



9	220 kV S/C Agra-Bharatpur Line (Rajasthan-Uttar Pradesh)	26.22	27.05	28.00	29.00
10	220 kV S/C Khetri-Dadri Line II (Rajasthan-Haryana)	41.96	43.28	44.80	46.41
11	220 kV S/C Modak-Barod (Bhanpura) (Rajasthan-Madhya Pradesh)	8.99	9.27	9.60	9.94
12	132 kV S/C Khandar-Sheopur line	19.48	19.69	19.94	20.20
13	220 kV S/C Chirawa-Hissar line (Rajasthan-Haryana)	326.89	317.77	219.06	221.51

14. The Commission, vide order dated 20.6.2018 in Petition No. 215/TT/2017, while approving tariff for the transmission lines connecting two States/deemed ISTS lines owned by the Petitioner for the year 2017-18 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 20.6.2018 is as follows:

“13. Some of the State Utilities have filed similar petitions claiming tariff of inter-State transmission lines connecting two States for the 2014-19 tariff periods as per the directions of the Commission. The information submitted by the State Utilities is incomplete and inconsistent. Further, some of the lines were more than 25 years old and the States were not having the details of the capital cost, Funding, etc. To overcome these difficulties, the Commission evolved a methodology for allowing transmission charges for such transmission lines connecting two States in orders dated 19.12.2017 in Petition Nos. 88/TT/2017, 173/TT/2016 and 168/TT/2016 filed by Madhya Pradesh Power Transmission Corporation Limited, Maharashtra State Electricity Regulatory Commission and Uttar Pradesh Power Transmission Corporation Limited respectively. The Commission adopted the same methodology in order dated 4.5.2018 in Petition No.112/TT/2017, while granting tariff for ISTS connecting Rajasthan with other States and owned by Rajasthan Rajya Vidyut Prasaran Limited. The Commission derived the benchmark cost on the basis of the transmission lines owned by PGCIL. The useful life of the transmission line was considered as 25 years and for lines more than or equal to 25 years, only O & M Expenses and Interest on Working Capital (IWC) is decided to be allowed as per the existing Tariff Regulations. For assets put into commercial operation on or after 1.4.2014, tariff is decided to be allowed on the basis of the audited financial capital cost. The relevant portion of the order dated 4.5.2018 is extracted hereunder:-

“13. It is observed that the information submitted by the petitioner States for computation of transmission charges for the deemed ISTS lines are not uniform, thereby causing divergence in working out the tariff. In some cases, the data related to funding and depreciation was not available and in some cases the assets have already completed, or nearing, their useful life. In most of the petitions, the states have expressed their inability to furnish the audited capital cost of transmission lines as the lines are old. As a result, tariff workings for old assets



are ending in skewed results. It is further observed that the YTC figures emerging out by the existing ARR methodology are on the higher side. Considering these facts, we have conceptualized a modified methodology for determining the tariff of the inter-State transmission lines. The methodology is broadly based on the following:-

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

Tariff Methodology

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

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

15. Therefore, for arriving at the costs of transmission lines of other voltage levels and circuit configurations, the average transmission line cost data shall be



multiplied by the factors illustrated in the above table. Lower voltage levels can be treated as part of 132 kV. The above table contemplates Twin Moose conductor which is widely used in State transmission lines.

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

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

- (i) Useful life of the transmission line shall be deemed to be 25 years.
- (ii) Prevailing depreciation rates as per the 2014 Tariff Regulations shall be considered uniformly for all the previous tariff periods so as to do away with the Advance Against Depreciation which was in vogue during earlier tariff periods. Notwithstanding the depreciation considered as recovered earlier, for the purpose of these tariff calculations, remaining depreciable value shall be spread over the remaining useful life of the transmission line, where the elapsed life is more than or equal to 12 years.
- (iii) Normative Debt-Equity ratio shall be 70:30.
- (iv) Normative loan repayment during a year shall be deemed to be equal to the depreciation allowed for that year.
- (v) Rate of Interest on normative loan shall be the weighted average rate of interest as derived on the basis of PGCIL's Balance Sheet.
- (vi) In order to avoid complexity, grossing up of rate of Return on Equity with tax rate is being dispensed with.
- (vii) Bank rate as defined in 2014 Tariff Regulations, 2014 as on 1.4.2014 shall be applied for calculating the rate of interest on working capital on normative basis.
- (viii) O & M Expenses as per the 2014 Tariff Regulations shall be considered.
- (ix) Where the life of transmission line is more than or equal to 25 years as on 1.4.2014, only O & M Expenses and IWC shall be allowed in lieu of complete tariff.



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

15. This methodology of allowing tariff for the deemed ISTS lines, considering their useful life as 25 years, has been set aside by the APTEL, vide judgment dated 14.11.2022 in Appeal No. 267 of 2018 and batch matters, filed by the Petitioner and MPPTCL. Further, the APTEL, in the said judgment, has observed that the useful life of the deemed ISTS lines shall be the same as for the ISTS lines specified in the 2014 Tariff Regulations. The relevant portion of APTEL’s judgment dated 14.11.2022 is 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.”

16. In view of the above, 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 the determination of the transmission charges of the 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 backwards 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.

17. The life of the 13 transmission lines for which transmission tariff is allowed in the instant petition, as on 31.3.2020 is as follows:

Assets	Name of transmission lines	Line length (in km)	COD	Life of the asset as on 31.3.2020
Asset-1	132 kV S/C Sadulpur (Rajgarh)-Hissar Line	78	3.10.1959	60 years 5 months 28 days
Asset-2	220 kV S/C Anta-Kota Line	67	1.3.1969	51 years 0 months 30 days
Asset-3	132 kV S/C Amrapura Thedi-Sirsa Line	80	19.12.1970	49 years 3 months 12 days
Asset-4	220 kV S/C MIA (Alwar)-Badarpur Line	131.6	22.11.1975	44 years 4 months 9 days
Asset-5	220 kV S/C Kota (Sakatpura)-Badod (Rajasthan-Madhya Pradesh)	59.624	20.8.1977	42 years 7 months 11 days
Asset-6	220 kV S/C Khetri-Dadri Line I (Rajasthan-Haryana)	70.91	23.12.1977	42 years 3 months 8 days
Asset-7	220 kV S/C RAPP (B)-Kota Line	42	1.9.1977	42 years 6 months 30 days



Asset-8	220 kV S/C RAPP (B)-RAPP (A) Line	2	1.9.1977	42 years 6 months 30 days
Asset-9	220 kV S/C Agra-Bharatpur Line (Rajasthan-Uttar Pradesh)	48.12	30.12.1982	37 years 3 months 1 days
Asset-10	220 kV S/C Khetri-Dadri Line II (Rajasthan-Haryana)	77	2.3.1985	35 years 0 months 29 days
Asset-11	220 kV S/C Modak-Barod (Bhanpura) (Rajasthan-Madhya Pradesh)	16.5	2.1.1988	32 years 2 months 29 days
Asset-12	132 kV S/C Khandar- Sheopur line	12.62	5.7.2008	11 years 8 months 26 days
Asset-13	220 kV S/C Chirawa-Hissar line (Rajasthan-Haryana)	118	27.11.2010	9 years 4 months 4 days

18. From the above, it is observed that Assets-1 to 10 have already completed a useful life of 35 years on or before 1.4.2020. Accordingly, as per the Commission's methodology, only IWC and O&M Expenses are allowable for Assets-1 to 10.

19. Asset-11 has already completed 12 years of its useful life on or before 1.4.2020, therefore, Interest on Loan (IoL) for Asset-11 is not allowed during the period from 2020-21 to 2023-24. Further, Asset-11 has completed 35 years of its useful life on or before 1.4.2023; hence, Return on Equity (RoE) for the same is not allowed for the period 2023-24.

20. Asset-12 will complete its useful life of 12 years on or before 1.4.2021, and as such, IOL for the same is not allowed during the period from 2021-22 to 2023-24.

21. Asset-13 will complete its useful life of 12 years on or before 1.4.2023. Therefore, IOL for the said asset is not allowed for the period 2023-24.

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

22. Details of the transmission lines and length in kilometres (km) for Assets-1 to 13 are as follows:

Assets	Name of transmission lines	Line length (in km)
Asset-1	132 kV S/C Sadulpur (Rajgarh)-Hissar	78
Asset-2	220 KV S/C Anta-Kota	67
Asset-3	132 kV S/C Amrapura-Sirsa Line	80
Asset-4	220 KV S/C Alwar-Badarpur Line	131.6
Asset-5	220 kV S/C Kota (Sakatpura)-Badod Line	59.624
Asset-6	220 kV S/C Khetri-Dadri Line I	70.91
Asset-7	220 kV S/C RAPP(B)-Kota	42
Asset-8	220 kV S/C RAPP(B)-RAPP(A)	2
Asset-9	220 kV S/C Agra-Bharatpur Line	48.12
Asset-10	220 kV S/C Khetri-Dadri Line II	77
Asset-11	220 kV S/C Modak-Badod Line	16.5
Asset-12	132 kV S/C Khandar-Sheopur Line	12.62
Asset-13	220 kV S/C Chirawa- Hissar Line	118

23. We have considered the Petitioner’s claim. The O&M Expenses approved for Assets-1 to 13 for the period 2020-21 to 2023-24 as per Regulation 35(3)(a) of the 2019 Tariff Regulations are as follows:

Assets	(₹ in lakh)			
	2020-21	2021-22	2022-23	2023-24
Asset-1	40.64	42.04	43.52	45.08
Asset-2	34.91	36.11	37.39	38.73
Asset-3	41.68	43.12	44.64	46.24
Asset-4	68.56	70.93	73.43	76.06
Asset-5	31.06	32.14	33.27	34.46
Asset-6	36.94	38.22	39.57	40.99
Asset-7	21.88	22.64	23.44	24.28
Asset-8	1.04	1.08	1.12	1.16
Asset-9	25.07	25.94	26.85	27.81
Asset-10	40.12	41.50	42.97	44.51
Asset-11	8.60	8.89	9.21	9.54
Asset-12	6.58	6.80	7.04	7.29
Asset-13	61.48	63.60	65.84	68.20

Interest on Working Capital (“IWC”)

24. The IWC is approved for Assets-1 to 13 for the years 2020-21 to 2023-24 in accordance with Regulation 34 of the 2019 Tariff Regulations. The components of the working capital and interest allowed thereon for the transmission assets for the period 2020-21 to 2023-24 are as follows:

Asset-1

		(₹ in lakh)			
Particulars		2020-21	2021-22	2022-23	2023-24
A	Maintenance Spares	6.10	6.31	6.53	6.76
B	O & M Expenses	3.39	3.50	3.63	3.76
C	Receivables	5.21	5.38	5.57	5.78
D	Total	14.70	15.19	15.72	16.30
E	Interest Rate (in %)	11.25	10.50	10.50	12.00
F	Interest	1.65	1.59	1.65	1.96

Asset-2

		(₹ in lakh)			
Particulars		2020-21	2021-22	2022-23	2023-24
A	Maintenance Spares	5.24	5.42	5.61	5.81
B	O & M Expenses	2.91	3.01	3.12	3.23
C	Receivables	4.48	4.62	4.78	4.97
D	Total	12.62	13.05	13.51	14.01
E	Interest Rate (in %)	11.25	10.50	10.50	12.00
F	Interest	1.42	1.37	1.42	1.68

Asset-3

		(₹ in lakh)			
Particulars		2020-21	2021-22	2022-23	2023-24
A	Maintenance Spares	6.25	6.47	6.70	6.94
B	O & M Expenses	3.47	3.59	3.72	3.85
C	Receivables	5.35	5.52	5.71	5.93
D	Total	15.07	15.58	16.13	16.72
E	Interest Rate (in %)	11.25	10.50	10.50	12.00
F	Interest	1.70	1.64	1.69	2.01



Asset-4

		(₹ in lakh)			
Particulars		2020-21	2021-22	2022-23	2023-24
A	Maintenance Spares	10.28	10.64	11.01	11.41
B	O & M Expenses	5.71	5.91	6.12	6.34
C	Receivables	8.80	9.08	9.40	9.76
D	Total	24.79	25.63	26.53	27.50
E	Interest Rate (in %)	11.25	10.50	10.50	12.00
F	Interest	2.79	2.69	2.79	3.30

Asset-5

		(₹ in lakh)			
Particulars		2020-21	2021-22	2022-23	2023-24
A	Maintenance Spares	4.66	4.82	4.99	5.17
B	O & M Expenses	2.59	2.68	2.77	2.87
C	Receivables	3.99	4.11	4.26	4.42
D	Total	11.23	11.61	12.02	12.46
E	Interest Rate (in %)	11.25	10.50	10.50	12.00
F	Interest	1.26	1.22	1.26	1.50

Asset-6

		(₹ in lakh)			
Particulars		2020-21	2021-22	2022-23	2023-24
A	Maintenance Spares	5.54	5.73	5.94	6.15
B	O & M Expenses	3.08	3.19	3.30	3.42
C	Receivables	4.74	4.89	5.06	5.26
D	Total	13.36	13.81	14.30	14.82
E	Interest Rate (in %)	11.25	10.50	10.50	12.00
F	Interest	1.50	1.45	1.50	1.78

Asset-7

		(₹ in lakh)			
Particulars		2020-21	2021-22	2022-23	2023-24
A	Maintenance Spares	3.28	3.40	3.52	3.64
B	O & M Expenses	1.82	1.89	1.95	2.02
C	Receivables	2.81	2.90	3.00	3.11
D	Total	7.91	8.18	8.47	8.78
E	Interest Rate (in %)	11.25	10.50	10.50	12.00
F	Interest	0.89	0.86	0.89	1.05



Asset-8

		(₹ in lakh)			
Particulars		2020-21	2021-22	2022-23	2023-24
A	Maintenance Spares	0.16	0.16	0.17	0.17
B	O & M Expenses	0.09	0.09	0.09	0.10
C	Receivables	0.13	0.14	0.14	0.15
D	Total	0.38	0.39	0.40	0.42
E	Interest Rate (in %)	11.25	10.50	10.50	12.00
F	Interest	0.04	0.04	0.04	0.05

Asset-9

		(₹ in lakh)			
Particulars		2020-21	2021-22	2022-23	2023-24
A	Maintenance Spares	3.76	3.89	4.03	4.17
B	O & M Expenses	2.09	2.16	2.24	2.32
C	Receivables	3.22	3.32	3.44	3.57
D	Total	9.07	9.37	9.70	10.06
E	Interest Rate (in %)	11.25	10.50	10.50	12.00
F	Interest	1.02	0.98	1.02	1.21

Asset-10

		(₹ in lakh)			
Particulars		2020-21	2021-22	2022-23	2023-24
A	Maintenance Spares	6.02	6.23	6.45	6.68
B	O & M Expenses	3.34	3.46	3.58	3.71
C	Receivables	5.15	5.31	5.50	5.71
D	Total	14.51	14.99	15.52	16.10
E	Interest Rate (in %)	11.25	10.50	10.50	12.00
F	Interest	1.63	1.57	1.63	1.93

Asset-11

		(₹ in lakh)			
Particulars		2020-21	2021-22	2022-23	2023-24
A	Maintenance Spares	1.29	1.33	1.38	1.43
B	O & M Expenses	0.72	0.74	0.77	0.80
C	Receivables	2.15	2.18	2.22	1.22
D	Total	4.16	4.26	4.37	3.45
E	Interest Rate (in %)	11.25	10.50	10.50	12.00
F	Interest	0.47	0.45	0.46	0.41



Asset-12

		(₹ in lakh)			
Particulars		2020-21	2021-22	2022-23	2023-24
A	Maintenance Spares	0.99	1.02	1.06	1.09
B	O & M Expenses	0.55	0.57	0.59	0.61
C	Receivables	3.34	2.22	2.25	2.28
D	Total	4.88	3.81	3.89	3.98
E	Interest Rate (in %)	11.25	10.50	10.50	12.00
F	Interest	0.55	0.40	0.41	0.48

Asset-13

		(₹ in lakh)			
Particulars		2020-21	2021-22	2022-23	2023-24
A	Maintenance Spares	9.22	9.54	9.88	10.23
B	O & M Expenses	5.12	5.30	5.49	5.68
C	Receivables	40.34	39.26	38.25	24.84
D	Total	54.68	54.10	53.61	40.75
E	Interest Rate (in %)	11.25	10.50	10.50	12.00
F	Interest	6.15	5.68	5.63	4.89

Return on Equity ("RoE")

25. The Return on Equity (RoE) approved for Assets-11 to 13 for the 2020-24 period is as follows:

Asset-11

		(₹ in lakh)			
Particulars		2020-21	2021-22	2022-23	2023-24
	Opening Equity	43.24	43.24	43.24	0.00
	Average Equity	43.24	43.24	43.24	0.00
	Rate of Return on Equity (in %)	15.50	15.50	15.50	15.50
	Return on Equity	6.70	6.70	6.70	0.00

Asset-12

		(₹ in lakh)			
Particulars		2020-21	2021-22	2022-23	2023-24
	Opening Equity	55.79	55.79	55.79	55.79
	Average Equity	55.79	55.79	55.79	55.79
	Rate of Return on Equity (in %)	15.50	15.50	15.50	15.50
	Return on Equity	8.65	8.65	8.65	8.65



Asset-13

Particulars	(₹ in lakh)			
	2020-21	2021-22	2022-23	2023-24
Opening Equity	666.02	666.02	666.02	666.02
Average Equity	666.02	666.02	666.02	666.02
Rate of Return on Equity (in %)	15.50	15.50	15.50	15.50
Return on Equity	103.23	103.23	103.23	103.23

Depreciation

26. The depreciation approved for Assets-11 to 13 for the 2020-24 period is as follows:

Asset-11

Particulars	(₹ in lakh)			
	2020-21	2021-22	2022-23	2023-24
Rate of Depreciation (in %)	5.28	5.28	5.28	5.28
Depreciable value	129.72	129.72	129.72	129.72
Elapsed Life as on 31.3.2019	32.00	33.00	34.00	35.00
Balance useful life of the asset	3.00	2.00	1.00	0.00
Remaining Depreciable value	5.01	3.34	1.67	0.00
Cumulative Depreciation	126.38	128.05	129.72	129.72
Depreciation	1.67	1.67	1.67	0.00

Asset-12

Particulars	(₹ in lakh)			
	2020-21	2021-22	2022-23	2023-24
Rate of Depreciation (in %)	5.28	5.28	5.28	5.28
Depreciable value	167.37	167.37	167.37	167.37
Elapsed Life as on 31.3.2019	11.00	12.00	13.00	14.00
Balance useful life of the asset	24.00	23.00	22.00	21.00
Remaining Depreciable value	59.36	49.54	47.39	45.23
Cumulative Depreciation	117.83	119.98	122.14	124.29
Depreciation	9.82	2.15	2.15	2.15

Asset-13

Particulars	(₹ in lakh)			
	2020-21	2021-22	2022-23	2023-24
Rate of Depreciation (in %)	5.28	5.28	5.28	5.28
Depreciable value	1998.06	1998.06	1998.06	1998.06
Elapsed Life as on 31.3.2019	9.00	10.00	11.00	12.00
Balance useful life of the asset	26.00	25.00	24.00	23.00
Remaining Depreciable value	943.09	825.87	708.65	591.43



Cumulative Depreciation	1172.20	1289.42	1406.64	1432.35
Depreciation	117.22	117.22	117.22	25.71

Interest on Loan (“IoL”)

27. The Interest on Loan (IoL) allowed for Assets-12 and 13 for the 2020-24 period is as follows:

Asset-12

Particulars	(₹ in lakh)			
	2020-21	2021-22	2022-23	2023-24
Gross Normative Loan	130.18	130.18	130.18	130.18
Cumulative Repayment upto Previous Year	108.01	130.18	130.18	130.18
Net Loan-Opening	22.17	0.00	0.00	0.00
Addition due to Additional Capitalisation	0.00	0.00	0.00	0.00
Repayment during the year	9.82	0.00	0.00	0.00
Net Loan-Closing	12.35	0.00	0.00	0.00
Average Loan	17.26	0.00	0.00	0.00
Weighted Average Rate of Interest on Loan (in %)	8.88	8.88	8.88	8.88
Interest	1.53	0.00	0.00	0.00

Asset-13

Particulars	(₹ in lakh)			
	2020-21	2021-22	2022-23	2023-24
Gross Normative Loan	1554.05	1554.05	1554.05	1554.05
Cumulative Repayment upto Previous Year	1054.98	1172.20	1289.42	1554.05
Net Loan-Opening	499.07	381.85	264.63	0.00
Addition due to Additional Capitalisation	0.00	0.00	0.00	0.00
Repayment during the year	117.22	117.22	117.22	0.00
Net Loan-Closing	381.85	264.63	147.41	0.00
Average Loan	440.46	323.24	206.02	0.00
Weighted Average Rate of Interest on Loan (in %)	8.88	8.88	8.88	8.88
Interest	39.11	28.70	18.29	0.00

28. Accordingly, the Annual Transmission Charges approved for Assets-1 to 13 for the 2020-24 period is as follows:



Asset-1

(₹ in lakh)				
Annual Transmission Charges	2020-21	2021-22	2022-23	2023-24
Depreciation	0.00	0.00	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00
Return on Equity	0.00	0.00	0.00	0.00
Interest on Working Capital	1.65	1.59	1.65	1.96
O & M Expenses	40.64	42.04	43.52	45.08
Total	42.29	43.63	45.17	47.04

Asset-2

(₹ in lakh)				
Annual Transmission Charges	2020-21	2021-22	2022-23	2023-24
Depreciation	0.00	0.00	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00
Return on Equity	0.00	0.00	0.00	0.00
Interest on Working Capital	1.42	1.37	1.42	1.68
O & M Expenses	34.91	36.11	37.39	38.73
Total	36.33	37.48	38.81	40.41

Asset-3

(₹ in lakh)				
Annual Transmission Charges	2020-21	2021-22	2022-23	2023-24
Depreciation	0.00	0.00	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00
Return on Equity	0.00	0.00	0.00	0.00
Interest on Working Capital	1.70	1.64	1.69	2.01
O & M Expenses	41.68	43.12	44.64	46.24
Total	43.38	44.76	46.33	48.25

Asset-4

(₹ in lakh)				
Annual Transmission Charges	2020-21	2021-22	2022-23	2023-24
Depreciation	0.00	0.00	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00
Return on Equity	0.00	0.00	0.00	0.00
Interest on Working Capital	2.79	2.69	2.79	3.30
O & M Expenses	68.56	70.93	73.43	76.06
Total	71.35	73.62	76.22	79.36



Asset-5

(₹ in lakh)

Annual Transmission Charges	2020-21	2021-22	2022-23	2023-24
Depreciation	0.00	0.00	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00
Return on Equity	0.00	0.00	0.00	0.00
Interest on Working Capital	1.26	1.22	1.26	1.50
O & M Expenses	31.06	32.14	33.27	34.46
Total	32.32	33.36	34.53	35.96

Asset-6

(₹ in lakh)

Annual Transmission Charges	2020-21	2021-22	2022-23	2023-24
Depreciation	0.00	0.00	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00
Return on Equity	0.00	0.00	0.00	0.00
Interest on Working Capital	1.50	1.45	1.50	1.78
O & M Expenses	36.94	38.22	39.57	40.99
Total	38.44	39.67	41.07	42.77

Asset-7

(₹ in lakh)

Annual Transmission Charges	2020-21	2021-22	2022-23	2023-24
Depreciation	0.00	0.00	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00
Return on Equity	0.00	0.00	0.00	0.00
Interest on Working Capital	0.89	0.86	0.89	1.05
O & M Expenses	21.88	22.64	23.44	24.28
Total	22.77	23.50	24.33	25.33

Asset-8

(₹ in lakh)

Annual Transmission Charges	2020-21	2021-22	2022-23	2023-24
Depreciation	0.00	0.00	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00
Return on Equity	0.00	0.00	0.00	0.00
Interest on Working Capital	0.04	0.04	0.04	0.05
O & M Expenses	1.04	1.08	1.12	1.16
Total	1.08	1.12	1.16	1.21



Asset-9

(₹ in lakh)

Annual Transmission Charges	2020-21	2021-22	2022-23	2023-24
Depreciation	0.00	0.00	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00
Return on Equity	0.00	0.00	0.00	0.00
Interest on Working Capital	1.02	0.98	1.02	1.21
O & M Expenses	25.07	25.94	26.85	27.81
Total	26.09	26.92	27.87	29.02

Asset-10

(₹ in lakh)

Annual Transmission Charges	2020-21	2021-22	2022-23	2023-24
Depreciation	0.00	0.00	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00
Return on Equity	0.00	0.00	0.00	0.00
Interest on Working Capital	1.63	1.57	1.63	1.93
O & M Expenses	40.12	41.50	42.97	44.51
Total	41.75	43.07	44.60	46.44

Asset-11

(₹ in lakh)

Annual Transmission Charges	2020-21	2021-22	2022-23	2023-24
Depreciation	1.67	1.67	1.67	0.00
Interest on Loan	0.00	0.00	0.00	0.00
Return on Equity	6.70	6.70	6.70	0.00
Interest on Working Capital	0.47	0.45	0.46	0.41
O & M Expenses	8.60	8.89	9.21	9.54
Total	17.44	17.71	18.04	9.95

Asset-12

(₹ in lakh)

Annual Transmission Charges	2020-21	2021-22	2022-23	2023-24
Depreciation	9.82	2.15	2.15	2.15
Interest on Loan	1.53	0.00	0.00	0.00
Return on Equity	8.65	8.65	8.65	8.65
Interest on Working Capital	0.55	0.40	0.41	0.48
O & M Expenses	6.58	6.80	7.04	7.29
Total	27.13	18.00	18.25	18.57



Asset-13

	(₹ in lakh)			
Annual Transmission Charges	2020-21	2021-22	2022-23	2023-24
Depreciation	117.22	117.22	117.22	25.71
Interest on Loan	39.11	28.70	18.29	0.00
Return on Equity	103.23	103.23	103.23	103.23
Interest on Working Capital	6.15	5.68	5.63	4.89
O & M Expenses	61.48	63.60	65.84	68.20
Total	327.20	318.44	310.22	202.04

Sharing of Transmission Charges

29. The transmission charges approved in this order shall be recovered on a monthly basis in accordance with Regulation 57 of the 2019 Tariff Regulations and shall be shared by the beneficiaries and long-term transmission customers as per the applicable Sharing Regulations. Further, the transmission charges allowed in this order shall be adjusted against the ARR approved by the RERC.

30. The availability of the transmission lines covered in the instant tariff order should be certified by RPCs for the purpose of claiming incentive.

31. This order disposes of Petition No. 212/TT/2022 in terms of the above discussions and findings.

sd/-
(P.K. Singh)
Member

sd/-
(Arun Goyal)
Member

sd/-
(Jishnu Barua)
Chairperson

