

**Before the MP Electricity Regulatory Commission
E-5, Arera Colony, "Metro Plaza", 5th Floor, Bhopal.**

Petition No. ... of 2024

In the Matter of - **Filing of application for approval of Capital Investment Plan for Transmission works to coincide with the control period of MYT (2024-25 to 2028-29).**

Applicant - Madhya Pradesh Power Transmission Company Ltd., (MPPTCL), Block No. 2, Shakti Bhawan, Rampur, Jabalpur.

Respondents - i. MP Power Management Company Ltd., Shakti Bhawan , Jabalpur
 ii. MP Poorva Kshetra Vidyut Vitran Company Ltd., Shakti Bhawan, Jabalpur.
 iii. MP Madhya Kshetra Vidyut Vitran Company Ltd., Govindpura, Bhopal.
 iv. MP Paschim Kshetra Vidyut Vitran Company Ltd., Pologround, Indore.
 v. MP Audyogik Kendra Vikas Nigam, Indore (MPIDC/ SEZ), Indore.
 vi. The Indian Railways through West Central Railways (WCR), Jabalpur.

The above named applicant respectfully submits, as hereunder:

1. PREAMBLE -

The applicant is a Company registered under Companies Act 1956 on 22.11.2001 with its head quarter at Jabalpur, for the purpose of undertaking the Intra-State transmission activities in the State of Madhya Pradesh. The activities of Generation, Transmission and Distribution have been looked after in the State of Madhya Pradesh by an integrated utility i.e. Madhya Pradesh State Electricity Board (MPEB) constituted under Section 5 of the Electricity (Supply) Act 1948. The Government of Madhya Pradesh enacted Madhya Pradesh Vidyut Sudhar Adhiniyam 2000. In the spirit of the said Act, the unbundling process of the MPSEB was initiated by registering the following five Companies;

- | | | |
|--------|---------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| (i) | Madhya Pradesh Power Generating Co. Ltd., Jabalpur (MPPGCL) (GENCO). | To look after the electricity generation activities in the State of Madhya Pradesh. |
| (ii). | Madhya Pradesh Power Transmission Co. Ltd., Jabalpur (MPPTCL) (TRANSCO). | To look after the electricity transmission activities in the State of Madhya Pradesh. |
| (iii). | Madhya Pradesh Poorva Kshetra Vidyut Vitran Company Ltd. Jabalpur (MPPKVVCL) (EAST DISCOM). | To undertake distribution of electricity in Eastern part of MP (Board's Jabalpur, Sagar and Rewa Regions). |
| (iv). | | |

- | | |
|------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| <p>Madhya Pradesh Madhya Kshetra
Vidyut Vitran Company Ltd. Bhopal.
(MPMKVVCL) (CENTRAL
DISCOM).</p> | <p>To undertake distribution of electricity
in Central part of MP (Board's Bhopal
and Gwalior Regions).</p> |
| <p>(v). Madhya Pradesh Paschim Kshetra
Vidyut Vitran Company Ltd. Indore
(MPPKVVCL) (WEST DISCOM).</p> | <p>To undertake distribution of electricity
in Western part of MP (Board's Indore
and Ujjain Regions).</p> |

Above mentioned Five Companies which were registered in November 2001, entered into an Operation Management agreement with the MPSEB and worked as agent of the MPSEB from July 2002 to May 2005. The Companies started independent functioning w.e.f. 1.6.2005 under a Cash Flow Mechanism as decided by the State Government.

A sixth Company, namely the MP Power Management Company Ltd. (formerly M.P. Power Trading Co. Ltd.), has also been incorporated as per the State Government's notification dated 3.6.2006 specifying its functions, namely, sale/ purchase/ banking of electricity in bulk from Generating Companies / Traders, from within and outside the State and supply electricity in bulk to the Electricity Distribution Companies in the State of Madhya Pradesh. Apart from the above MP Audyogik Kendra Vikas Nigam, Indore (SEZ, Indore presently called MPIDC) and Indian Railways through West Central Railways (WCR), Jabalpur are also conventional LTOA customers of MPPTCL.

In compliance to Clause 5 of the State Government order dated 31.5.05, the Five Companies and MPSEB entered into a Transmission Service Agreement on 17th June 2005, as per the draft approved and forwarded by MPSEB to the State Government. Subsequently MPPTCL entered into Transmission Service Agreement with two Distribution Licensees on 17th November 2006 and with East Discom on 20.11.2006.

A mother agreement dated 29.01.2005 also exists between MPSEB and MPIDC (SEZ) which as of now stands between MPPTCL and MPIDC (MPAKVN), as per Transfer Scheme. Further, West Central Railways (WCR), on behalf of Indian Railways entered into Bulk Power Transmission Agreement, with MPPTCL on 7.10.2016 for transmission of power to the Traction Sub-Station (TSS) points of Railways in MP effective from 22.01.2016 for power schedule.

It is also to be submitted that the petitioner MPPTCL has been declared the State Transmission Utility w.e.f. 01.06.04 vide State Government's order No. 2491/13/64 Bhopal, dated 17.5.04. Section 39 (2-b) of Electricity Act 2003 provides for the STU to discharge the functions of planning and coordination relating to Intra-State Transmission system.

CHAPTER – II – INTRA-STATE TRANSMISSION CAPACITY –

2.1 INTRA-STATE TRANSMISSION SYSTEM -

Intra-State Transmission System of MPPTCL comprises of EHV Lines and Sub-stations of various voltages. Position as on 31.03.19 to 31.03.23 is tabulated hereunder;

S. No.	VOLTAGE LEVEL	YEARWISE TRANSMISSION SYSTEM (2017-22)				
		As on 31.3.2019	As on 31.3.2020	As on 31.3.2021	As on 31.3.2022	As on 31.3.2023
A.	TRANSMISSION LINES (Ckt.-Kms)-					
1	400KV Lines	3520.95	3570.85	3815	3815.07	4089.23
2	220KV Lines	12929.07	13594.28	14265	14838.7	14934.2
3	132KV Lines	18914.55	20084.79	21502	22191.4	22541.3
	TOTAL -	35364.57	37249.92	39582	40845.17	40845.3
B.	EHV SUB-STATIONS (MVA)-					
1	400 KV	8495	9440	10595	11015	11200
2	220 KV	23990	25900	28410	30035	31715
3	132 KV	28246	29831.5	31295.0	33076.0	33855.0
	TOTAL-	60731	65171.5	70300	74126.0	76770.0
C.	EHV SUB-STATIONS (Nos.)-					
1	400 KV	11	12	14	14	14
2	220 KV	78	81	84	86	88
3	132 KV	276	288	298	306	312
	TOTAL –	365	381	396	406	414

2.2 GENERATION CAPACITY –

MPPMCL in its role as nodal for the Distribution Companies has contracted/ expected to contract the following Generating Capacities in MW –

S N	Type of Generation	2024-25	2025-26	2026-27	2027-28	2028-29
a.	MP Thermal Generation	4570	4570	4570	4570	5890
b.	MP Hydel Generation	922	922	922	922	922
c.	Central Sector	5204	5204	5557	6084	6244
d.	JV Hydel Projects	2730	2824	2824	2824	2824
e.	DVC	100	100	100	100	100
f.	UMPP & IPPs	3780	3780	3780	5010	4632
g.	Share from Solar & Non-Solar plants	10549	12099	12638	12638	12638
h.	RTC Power	0	00	650	1050	1050
	GRAND TOTAL	27854	29498	31040	331989	34300

Along with the above a maximum energy handled in MPPTCL system in yuear 2022-23 is 88850 MU and maximum demand of 17170 MW was met in year 2022-23 (on 13th January'23).

It is to be submitted that in the event of abandoning of any generation project, the associated evacuation system planned are excluded from the plan, the same consequently shall not become a part in the truing up processes thus not burdening the consumer.

Further, it is to be intimated that the planning of transmission system at 400 KV and higher level including reactive compensation, is always done in consultation and approval of statutory bodies and other agencies like Central Electricity Authority /, Regional Power Committees/ CTU etc. The planning is backed by several crosschecks and feedbacks at various levels and the status of works for 220 KV and above is also monitored by the MoP, CEA, CTU, RPCs and even the State Govt.

It is also to be submitted that in its endeavor to ensure that the lack of availability of the transmission system does not act as an impediment to the economic growth and development of different regions/States, the Ministry of Power has decided to move towards a new mechanism of General Network Access.

The works are planned and executed in such a way that the best possible coordination is obtained between Central and State Network development.

CHAPTER – III – REVIEW OF UPDATED 13th PLAN (FY 2019-20 TO FY 2023-24)

3.1 13th PLAN (FY 2019-20 TO FY 2023-24) -

Hon'ble Commission has issued the MPERC (Term & Conditions for determination of Transmission Tariff) (Revision-IV) Regulations, 2020; for the new MYT control period of FY 2019-20 to FY 2023-24, notified on 14.02.2020. In partial fulfillment of the requirements of the same. The Petitioner had filed the updated 5 year Capital Investment Plan for the period 2019-20 to 2023-24 through the Petition No. 42/2020. Hon'ble Commission approved the aforesaid Capital Investment Plan with appropriate directions to the petitioner MPPTCL to fulfill various directions contained therein, vide its order dated 12.03.21.

A summary of the approved updated capital investment plan is submitted as below –

[A] FINANCIAL – TRANSMISSION PLAN PROGRAMME FOR 5 YEAR PERIOD of 2019-20 to 2023-24.

S. No.	Particulars	YEARWISE INVESTMENT IN Rs. Lakhs					TOTAL PLAN (2019-24)
		2019-20 (Need based)	2020-21 (Need based)	2021-22 (Need based)	2022-23 (Need based)	2023-24 (Need based)	
1	400KV Lines	16621	11193	949	0	181	28944
2	220KV Lines	43715	23754	17908	1500	3327	90204
3	132KV Lines	49852	41158	51561	38114	36443	217128
i	TOTAL (LINES)	110188	76105	70418	39614	39951	336276
4	400KV Substations	28698	21621	3207	2000	1241	56767
5	220KV Substations	44172	21058	11908	1300	2497	80935
6	132KV Substations	45458	63494	62279	41467	37171	249869
7	Misc. Works	52273	42072	29352	0	509	124206
ii	TOTAL (S/S)	170601	148245	106746	44767	41418	511777
	G. TOTAL (i+ii)	280789	224350	177164	84381	81368	848052

[B] PHYSICAL – TRANSMISSION PLAN PROGRAMME FOR 5 YEAR PERIOD of 2019-20 to 2023-24.

S. No.	PARTICULARS	YEARWISE PHYSICAL PROGRAMME					TOTAL PLAN (2019-24)
		2019-20	2020-21	2021-22	2022-23	2023-24	
A.	TRANSMISSION LINES (Ckt.-Kms) -						
1	400KV Lines	49.89	516	0	0	0	565.89
2	220KV Lines	660.96	864	710	120	74	2428.96
3	132KV Lines	888.94	1089	1769	500	1168	5414.94
	TOTAL -	1599.79	2469	2479	620	1242	8409.79
B.	EHV SUB-STATIONS (MVA) -						
1	400 KV	945	1900	0	0	100	2945
2	220 KV	2070	3476	1666	160	210	7362
3	132 KV	1778.5	1912	2935	1183	1300	10307

S. No.	PARTICULARS	YEARWISE PHYSICAL PROGRAMME					TOTAL PLAN (2019-24)
		2019-20	2020-21	2021-22	2022-23	2023-24	
	TOTAL	4793.5	6162	3883	1343	1610	20614
C.	EHV SUB-STATIONS (Nos.) -						
1	400 KV	1	2	0	0	0	3
2	220 KV	4	7	4	0	0	15
3	132 KV	16	10	25	6	16	73
	TOTAL -	21	19	29	6	16	91

Achievements during Updated 13th Plan (FY 20219-20 to 2023-24) are tabulated hereunder;

[A] PHYSICAL -

S. No.	PARTICULARS	YEARWISE PHYSICAL ACHIEVEMENT					TOTAL PLAN (2019-24)
		2019-20	2020-21	2021-22	2022-23	2023-24 (Estimated)	
A.	Lines in Circuit Km Added -						
1	400KV Lines	49.89	244.23	0	274.16	00.40	568.686
2	220KV Lines	665.21	671.11	573.410	95.45	157.848	2163.035
3	132KV Lines	1170.23	1416.76	689.937	349.87	360.484	3987.292
	TOTAL -	1885.33	2332.10	1263.34	719.48	518.732	6719.013
				7			
B.	Capacity in MVA Added						
1	400KV	945	1260	315	500	100	3120
2	220KV	1910	2660	1750	1720	1635	9675
3	132KV	1585.5	1890	1801	851.5	2030	8158
	TOTAL -	4440.5	5810	3866	3071.5	3765	20953
C.	No. of Sub-stations Added						
1	400KV	1	2	0	0	0	3
2	220KV	4	7	3	0	0	14
3	132KV	12	16	10	6	2	46
	TOTAL -	17	25	13	6	2	63

[B] FINANCIAL -

S. No.	Particulars	YEARWISE ACHIEVEMENT IN Rs. Lakhs					TOTAL PLAN (2019-24)
		2019-20	2020-21	2021-22	2022-23	2023-24 (Estimated)	
1	400KV Lines	15960	3529	6970	1811	536	28807
2	220KV Lines	38621	22034	14416	4897	1414	81381
3	132KV Lines	51460	45168	12573	5951	2853	118005
i	TOTAL (LINES)	106040	70732	33960	12659	4803	228193
4	400KV Substations	27569	18007	5318	6773	3053	60721
5	220KV Substations	29518	22592	16482	5682	3849	78124
6		34826	40478	28527	19060	22803	145694

S. No.	Particulars	YEARWISE ACHIEVEMENT IN Rs. Lakhs					TOTAL PLAN (2019-24)
		2019-20	2020-21	2021-22	2022-23	2023-24 (Estimated)	
	132KV Substations						
ii	TOTAL (S/S)	91913	81078	50327	31515	29705	284538
iii	Misc. Works	33831	8690	14681	29275	14935	101412
	G. TOTAL (i+ii)	231785	160499	98968	73449	49443	614144

3.2 Review of the 13th Plan -

Regarding the five year period i.e. FY 2019-20 to FY 2023-24 of the 13th updated Five Year Capital Investment Plan for Transmission works, in compliance to the directions of the Hon'ble Commission, the following is respectfully submitted –

MPPTCL has ensured that best possible use of financial resources while implementing the proposed plan. Further, it is submitted that in the process of execution MPPTCL examines the economic, technical and environmental aspects of viable alternatives prior to execution.

It is also to be submitted that the cost of items, instruments, spares, installation and commissioning charges, freight, etc. quoted/ charged by the suppliers/ vendors are properly analyzed and verified by MPPTCL to ensure that the cost incurred by it is in line with the lowest possible prevailing market price for desired quality work. Also, MPPTCL, as advised, ensures the best possible timely utilization of material being procured to avoid any extra financial liability. Here it is also to be submitted that the above are also subjected to the process of audit scrutiny by Auditing Agencies.

MPPTCL makes the best efforts for ensuring timely completion of the projects so that MPPTCL gets due benefits in terms of reduction of losses, capacity building, system strengthening, voltage improvement etc. The performance indicators as submitted in **Para 3.3** below, are a mark of such achievements.

As directed by the Hon'ble Commission, MPPTCL is regularly submitting the updated physical and financial progress of all works completed during each financial year as an annexure with each true-up petition filed by the Company. Along with the same, MPPTCL is also providing the details of capitalization including debt and equity date along with the true up petition. A summary of the progress achieved in the five years of the updated 13th Plan has also been submitted in the **Para 3.3** of this Petition.

It is also to be submitted that the works under Power System Development Fund (PSDF) have to be approved by the Board of Directors of the Company.

It is also submitted that approved updated 13th plan's, Sl. No. 476(in Annexure -I) were having provision of an additional/Augmentation/New S/s works and against this provision following works have completed during last five year (2019-24) –

- i) Additional Transformer
132/33 kV – 15 Nos.
- ii) Augmentation capacity

132/33 kV - 19 Nos.

Through **Para 5.2** of this petition, MPPTCL is applying for the in-principle approval of the Commission in case of works left out in the Capital Investment Plan filed previously (Annexure-IV).

Reasons for Downsizing of updated 13th Plan-

19 Nos. 132kV new Substation and related line of these 19 Nos S/s(at Baikhedi, Satpipaliya, Ahmadpur, Punaur, Bhaguapura, Baghchini, Dhote, Khajuri, Karariya, Bhadona, Rachhed, Keolari (Sagar), Chandiya, Chhapara, Shahpura, Simariya, Badwas, Dasai & Kshipravihar) proposed in FY 2022-23 & 2023-24 in 13th plan have not needed due to construction of PGCIL S/s or construction of S/s under TBCB scheme.

3.3 PERFORMANCE INDICATORS AS ACHIEVED DURING THE UPDATED 13TH PLAN (MYT 20219-24) -

During the five years of the 13th Plan (2019-20, 2020-21, 2021-22, 2022-23 & 2023-24), it is to be submitted that no transmission constraint was generally felt during handling the demanded power. Further, the Petitioner could achieve the targets of the performance indicators during this period, a brief of which is indicated in the following tables;

S. No.	Year	Max. Demand met	Energy Handled	Transmission System Availability (%)		Transmission Losses (%)	
		MW	MU	Target	Achieved	Target	Achieved
1	2019-20	14555	72278	98.00	99.64%	2.80%	2.59%
2	2020-21	15425	79385	98.00	99.60%	2.79%	2.62%
3	2021-22	15692	82079	98.00	99.29%	2.78%	2.63%
4	2022-23	17170	88850	98.00	99.45%	2.77%	2.63%
5	2023-24	18029 (Assessed)	95958 (Assessed)	98.00	99.50% (Assessed)	2.76%	2.60% (Assessed)

It may please be perused that company has achieved very good performance indicator during five year plan FY 20219-2024 and out of that during 2019-20 the best key performance indicator marks have been achieved.

CHAPTER – IV – PROCESS TO DEVELOP 14th PLAN (FY 2024-25 to 2028-29)–

- a) To develop a need based Plan, system studies were carried out by M/s Electrical Research & Development Association (ERDA), Vadodara (Gujrat) to identify the best solution to cater to the needs of system strengthening, keeping in view the various scenarios concerning availability of power, loss reduction and load growth potential.

ERDA studies have been carried out through load flow studies/ loading of equipment/ reactive power etc., considering the new projects along with the works programmed for completion during the years.

The studies cover areas like justification for taking up new works, voltage issues reliability matters and proposals to mitigate the conditions.

- b) M/s ERDA had been instructed to ensure that study report is based on the following points:

- Data validation.
- Adoption of detailed analysis methodology.
- Technology options/alternatives, basis of selection, cost with different alternatives & reasons thereof.
- Interconnection, Expansion & Strengthening of network in phased time bound manner.
- Proposed location for new substations and addition/ augmentation/ strengthening of existing transformers & substation. Exploring options like GIS/AIS/Hybrid S/s, existing lines & their upgradation / capacity enhancement, future network with high ampacity conductor (HTLS), tubular pole, other technological options.

- c) The ERDA studies regarding the proposed Capex plan have been conducted based on expected addition in Generation Capacity and growth of demand in the respective geographical area where the works are proposed.

It is submitted that in case of any slippage in planned generation capacity the connected works shall be deferred to keep in tandem with generation evacuation.

- d) The works not previously approved, covering the period FY 2024-25 to FY 2028-29, is based on System Studies carried out by M/s ERDA on the basis of following:

- i) Load flow Studies for identification of 132kV and above network required for transmission system strengthening during next 5 Years under customary contingency (N-1)/(N-1-1) conditions considering the present load conditions and future load growth as well as generation availability including Renewable Generation in Madhya Pradesh under following load scenarios of different distribution companies of MP:

Quarter-1 (January to March) : Maximum, Minimum and Average load

Quarter-2 (April to June) : Maximum, Minimum and Average load

Quarter-3 (July to September) : Maximum, Minimum and Average load

Quarter-4 (October to December) : Maximum, Minimum and Average load

- ii) Study for requirement of 400/220kV, 220/132kV and 132/33kV additional transformation capacity in existing EHV Substations based on anticipated load requirement.

- iii) Short circuit studies for determination of three phase to ground and single phase to ground sub-transient fault current for above scenarios considering the fault contribution from the various interstate circuits connected to Western Regional and Northern Regional power system.
- iv) Techno-economic feasibility and financial viability of the year-wise proposed transmission system works.
- v) Study and recommendation for power evacuation system from State Sector/Central Sector/Private Sector/Renewable Energy generating stations coming up in Madhya Pradesh under normal conditions on the basis of techno-economical consideration.
- vi) After various joint study meetings with CTUIL, MP SLDC, WRLDC & CEA. Consultation Meeting for Evolving Transmission Scheme in Western Region, for strengthening of Inter State Transmission System, creation of 3 Nos. 765/400/220 kV new Substation(PGCIL) in MP state at **Ishanagar (dist- Chhatarpur), Karera (dist- Datiya) & Kurawar (dist- Shujalpur)** alongwith associated downstream Intra-State Transmission works has been approved. The associated downstream Intra-State Transmission works are to be taken up by MPPTCL.
- vii) The MP Power Generation Co. Ltd. Has proposed installation of 1x660 MW new Super Critical unit at Amarkantak Thermal Power Station Chachai, Anuppur in place of Phase-I (2x30MW) and Phase-II (2x120 MW) units. The Evacuation arrangement of power from proposed 1x660 MW Super Critical unit Chachai (Anuppur) has been approved in the 11th consultation meeting for Evolving Transmission Scheme in Western Region (CMETS-WR).
- viii) To enable the increased drawl requirement from CTU/ISTS network, the ATC/TTC limit is to be enhanced. Accordingly, requirement of Transmission System Strengthening to meet the increased drawl requirement has been worked out through various joint study meetings with CTUIL, MP SLDC, WRLDC & CEA. In the 11th & 12th Consultation Meeting for Evolving Transmission Scheme in Western Region (CMETS-WR), additional 500MVA 400/220kV ICT(4th) at Satna (PGCIL) and creation of 220kV level at Jabalpur pooling substation (PGCIL) alongwith associated downstream Intra-State Transmission works has been approved. The associated downstream Intra-State Transmission works are to be taken up by MPPTCL.
- ix) Study of over/under voltage, over/under loading, voltage regulation as per regulatory norms.
- x) Location and sizing of shunt capacitors/shunt reactors etc. for improvement of dynamic performance of the system including the economic analysis.
- xi) Grid integration study of existing & forthcoming renewal energy sources and their effects on MP system as well as suggestion for mitigation measures in respect of integration issues.
- e) In some cases **internal technical studies** were also conducted for works like second circuiting, reactive power compensation and capacity enhancement in Sub-stations based on system conditions.

Apart from the above, some works pertaining to Bays for connecting lines and in addition some works pertaining to old equipment replacement, Meters, T&P and civil works have also been proposed through this petition.

- f) Based on the studies and analysis a need based plan for the works, have been planned so as to make the period of the subject Plan coincide with the MYT control period i.e. 2024-2029.
 - g) The guidelines for Capital Expenditures, also provided that the plan must be supported by detailed calculations and wherever possible discounted cash flows over the life of the investment are to be shown to demonstrate the payback period of the investment. Accordingly, discounted cash flows over the life of the assets created through works but were not included in the earlier petitioned plan are being submitted for the kind consideration of the Commission as **Annexure-IV**.
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CHAPTER – V – NEED BASED INVESTMENT PLAN–

5.1 NEED BASED INVESTMENT PLAN FOR FY 2024-25 To FY 2028-29 -

Based on studies and financial analysis as mentioned in preceding paras, need based plan has been chalked out for the next 5 years and tabulated as hereunder:

[A] FINANCIAL – TRANSMISSION PLAN PROGRAMME FOR 5 YEAR PERIOD of 2024-25 to 2028-29.

S. No.	Particulars	YEARWISE INVESTMENT IN Rs. Lakhs					TOTAL PLAN (2024-29)
		2024-25 (Need based)	2025-26 (Need based)	2026-27 (Need based)	2027-28 (Need based)	2028-29 (Need based)	
1	400KV Lines	5397	18807	18428	1000	1550	45182
2	220KV Lines	8315	31220	22303	10436	20397	92670
3	132KV Lines	59372	41569	35322	20698	14035	170996
i	TOTAL (LINES)	73084	91595	76053	32134	35981	308848
4	400KV Substations	5985	13596	6164	11500	11250	48495
5	220KV Substations	35406	20165	15977	9340	16690	99212
6	132KV Substations	54288	39186	25916	6914	4697	134013
ii	TOTAL (S/S)	95679	72947	48057	27754	32638	281720
iii	Misc. Works	24390	38966	43035	44832	29671	180894
	G. TOTAL (i+ii+iii)	193154	203508	167144	104720	98290	766816

[B] PHYSICAL – TRANSMISSION PLAN PROGRAMME FOR 5 YEAR PERIOD of 2024-25 zto 2028-29.

S. No.	PARTICULARS	YEARWISE PHYSICAL PROGRAMME					TOTAL PLAN (2024-29)
		2024-25	2025-26	2026-27	2027-28	2028-29	
A.	TRANSMISSION LINES (Ckt.-Kms) -						
1	400KV Lines	37.726	0	150.00	0.00	10.00	197.726
2	220KV Lines	00	108.00	714.00	22.00	240.00	1084.00
3	132KV Lines	1332.286	636.336	803.400	603.84	210.00	3585.862
	TOTAL -	1370.012	744.336	1667.400	625.840	460.000	4867.588
B.	EHV SUB-STATIONS (MVA) -						
1	400 KV	0	1500	815	1000	815	4130
2	220 KV	420	320	1200	0	1640	3580
3	132 KV	606	576	466	100	150	1898
	TOTAL	1026	2396	2481	1100	2605	9608
C.	EHV SUB-STATIONS (Nos.) -						
1	400 KV	0	0	0	0	1	1
2	220 KV	0	1	3	0	1	5
3	132 KV	2	4	3	1	0	10
	TOTAL -	2	5	6	1	2	16

The above is submitted for kind consideration and approval of the Hon'ble commission.

5.2. WORKS CAPITALISED EARLIER BUT TO BE INCLUDED IN THE PLAN PERIOD FY 2024-25 To FY 2028-29 -

It is to be submitted that as per directions contained in Order dated 04.01.2020 in the matter of True-up of Transmission Tariff for 2017-18 and contents of Para 1.4 of the Guidelines for capital expenditure by the licensee & Para XIII of the Hon'ble MPERC's Order dated 02.05.2018, approval of the Commission is required for the works carried out by the Petitioner but were not included earlier in the Petition.

A tabulated summary of such works which have been capitalized in 2019-20 to 2023-24, are tabulated hereunder for the kind consideration of the Hon'ble Commission: -

S. No	Year	Particulars	TOTAL (Nos.)	Estimated Value Rs Cr.
1	2019-20	EHV Lines/ Substations/ Bays / Transformer	02 Nos.	2.98
2	2019-20	Miscellaneous works	-	-
3	2020-21	EHV Line/ Substation/ Bay	08 Nos.	34.98
4	2020-21	Miscellaneous works	03 Nos.	1.97
5	2021-22	EHV Line/ Substation/ Bay	06 No.	52.34
6	2021-22	Miscellaneous works	46 No.	65.04
7	2022-23	EHV Line/ Substation/ Bay	14 No.	143.68
8	2022-23	Miscellaneous works	-	-
9	2023-24	EHV Line/ Substation/ Bay	31 Nos.	256.88
10	2023-24	Miscellaneous works	-	-
		TOTAL		557.86

The details of these works are submitted as **Annexure- II** of this petition. The same is consisting of brief outline of work, salient feature, project financing avenues and brief justifications. For convenience sake, as they are already completed works, the estimated expenses are lumped in to the figures of 2024-25.

It is requested that these works may kindly be considered for accordance of in-principal approval, please.

5.3. LIST OF WORKS FOR APPROVAL -

As submitted above the list of the works (*not previously approved*) covering the period FY 2024-25 to FY 2028-29 is tendered as Annexure -II and Annexure - III to the petition with the request that same may please be considered for grant of in-principle approval of the Hon'ble Commission, please.

5.4. CONSTITUTION OF THE PLAN LIST –

As directed and keeping in line with the guidelines, the plan list of unapproved works as mentioned above constitutes of the following: -

- a) Brief outline of the project/ Name of work along with voltage level, physical parameters and estimated cost.
- b) Salient features like new/ augmentation/ renovation and modernization etc. classification, along with scope and objectives are also indicated against each work.
- c) Regarding Project financing avenues it is to be submitted that presently available financing avenues have been indicated in the list, others are categorized as unfunded and when financial linkages become available shall be submitted through the prescribed Format TUT-18 during Tariff True-up process.
- d) The Book Volume, Page & S. No. of ERDA report is also submitted in the list for easy reference. The technical reports, design criteria, etc. are given in this Report where study is done by M/s Electrical Research and Development Association, Baroda.
- d) It is to be submitted that at this stage Contractor/supplier quotations is not submitted as they are the part of procurement process and shall be available during execution process only.
- e) Estimated cost is indicated in the list. Here it is to be submitted that estimates are in turn based on item wise approved schedule of rates of the Company. The cost estimates of components are amenable to physical verification.
- f) Justifications of the investment in light of existing operating conditions are provided in the Report prepared by M/s ERDA. For internal studies part they are based on loading and MVAR requirements if so required shall be submitted separately. It is submitted that Bays are connecting portion of lines already approved / filed for approval. Civil and other miscellaneous works do not form a part of load flow study.
- g) Cost benefit analysis is part of the ERDA studies. Techno-economic feasibility & financial viability of proposed works has been done considering methodology of least cost analysis in ERDA studies.
- (h) Physical & financial benefit analysis is part of the ERDA report. Factors such as transmission losses, reduction in the load on existing system, improvement in voltages, reliability of supply, and other benefits are a part of their study.

The discounted cash flows over the life of the investment of the unapproved works to demonstrate the payback period of the investment is submitted

with the Petition as **Annexure IV**.

- (i) Regarding the methodology of measurement of the benefits accruing out of the investment, it is to be submitted that the RoC Reports, MIS/ Performance Std. & SLDC reports submitted periodically to the Commission are a means of measurement of benefits.
- (j) The financial details related to the project such as the phasing of expenditure year wise and means of finances are submitted through the list annexed with this petition in Columns 8 to 12.
- (k) It is to be submitted for kind consideration that the final details regarding the Funding Agency and the loan terms and conditions such as interest rate, repayment schedule, moratorium period, exchange rate etc. shall be submitted through the true-up petitions.
- (l) It is to be submitted that the impact on upstream and downstream arrangements if any and their status for utilization of the benefits from the proposed Scheme is part of the ERDA Report.
- (m) Each proposal is sanctioned by the competent authority and statutory and safety clearances from concerned departments like Forest / Railway/ Ministries etc. if required, wherever such sanctions or clearances are required they are obtained by MPPTCL prior to execution.
- (n) Regarding the commissioning schedule for the works covered under the Plan, it is to be submitted Gantt Charts and other tools indicating commissioning schedule are prepared and used by the Company during execution stage.
- (o) The licensee in course of execution invites and finalizes tenders for procurement of equipment, material and/or services in accordance with a transparent tendering procedure through approved e-tender portal. The same is also subsequently scrutinized through various auditing processes.
- (p) It is to be submitted that physical constraints such as natural calamities and RoW problems occur at times but the same cannot be predicted at this stage. Also, arising of financial constraints such as withdrawing by financial agencies or unavailability of equity cannot be ruled out. However on occurrence of such instances other mode of completion can always be resorted to.
- (q) It is also to be submitted that the planning of transmission system at 400 KV and higher level including reactive compensation, is always done in consultation and approval of statutory bodies and other agencies like Central Electricity Authority / Regional Power Committees/ CTU etc. The planning is backed by several crosschecks and feedbacks at various levels and the status of works for 220 KV and above is also monitored by the MoP, CEA, CTU, RPCs and even the State Govt.

5.5 FINANCIAL RESOURCES TO EXECUTE THE PLAN –

After finalizing the works to be taken up during the plan period and assessment of financial need, efforts are made to find out the financial resources that may be available for the same. It is submitted that the process of getting the financial linkage is a continuous one, and at this point of time, the financial linkage for later years, may not be confirmed. Financial linkage for these works shall be firmed up in subsequent years.

The works are proposed to be taken up under the following modes of financing;

S. No.	Particulars	Financial Resources	Plan Expenditure (Rs. In Lacs)
1	Works to be taken up by MPPTCL with respect to financial linkage tied-up & proposed	Canara Bank	30483
		UBI	99912
		REC-II	45614
		REC-III	78679
		REC-IV	104812
		PSDF Grant Share work	24720
		<i>Un-Funded Works (Funding yet to be proposed)</i>	382596
		TOTAL INVESTMENT BY TRANSCO - F.Y. 2024-25 to 2028-29	766816

Although major portion of the works have been tied up with funding agencies others are in the process of being tied up, while in some cases the tying is in process. The rest shall be taken up as per the need of the work arising at a point of time.

Equity support may be provided by the State Government to supplement loan assistance. Apart from equity support from the GOMP, certain grants are also given by Govt. of India as per their policies and initiatives like grant under Green Energy Corridor project/ PSDF.

It is also expected that MPPTCL may start earning surplus in this Plan period which may be utilized to supplement the available Plan funds to some extent.

Apropos the planned works, it is also submitted that appropriate approval of the competent authorities of the company shall also be sought prior to execution of the same.

5.6 DOCUMENTS SUBMITTED WITH THE PETITION -

One copy of the discounted cash flows over the life of the petitioned assets for works which were not approved earlier and the ERDA Study Report in Soft Format is submitted for the kind consideration of the Hon'ble Commission, please.

CHAPTER – VI – SAVINGS & PRAYER:

6.1 SAVINGS –

The Plan is subject to be changed/ re-phased in case of factors like slippage of commissioning schedule of the Generating Stations /RE generators, load scenario,

availability of financial resources etc. The Petitioner submits that such changes shall be brought to the notice of Hon'ble Commission during subsequent annual reviews of the Plan, which Hon'ble Commission may kindly consider, in due course.

6.2 PRAYER -

In view of the submissions made in foregoing Paras, the Petitioner respectfully prays that the Hon'ble Commission may;

- (a) Kindly accord in principle approval to the Transmission Investment Plan amounting to Rs. 7668.16 Crores for the 5 Year period of FY 2024-25 to FY 2028-29, which is inclusive of approved works of value Rs. 1358.81 Crores and **unapproved new works & left out works amounting to Rs. 6309.35 Crores**, the details of these works which were previously not included in earlier petition have been submitted as **Annexure – II & III** of the instant petition.
- (b) Kindly condone any inadvertent omissions / errors / short comings/ delays and permit the Petitioner to add / change / modify / alter this filing and make further submission as may be required at a later stage.
- (c) Kindly pass such order that Hon'ble Commission may deem fit, proper and necessary in the facts and circumstances of the case so as to grant relief to the petitioner.

Submitted, please.

Dated :**24.01.2024**

Sd-
(Samir Kumar Nagotiya)
Executive Director (CRA), MPPTCL
For and on behalf of
MP Power Transmission Company Ltd.,
JABALPUR.