

MADHYA PRADESH ELECTRICITY REGULATORY COMMISSION, BHOPAL

Subject: MPPTCL's petition for approval of Capital Investment Plan for Transmission works to coincide with control period of MYT (FY 2019-20 to FY 2023-24).

Petition No. 42 of 2020

ORDER

(Date of Order: 12th March' 2021)

M. P. Power Transmission Co. Ltd. Jabalpur

- Petitioner

V/s.

- 1. M. P. Power Management Co. Ltd. Jabalpur**
- 2. M. P. Poorv Kshetra Vidyut Vitaran Co. Ltd. Jabalpur**
- 3. M. P. Madhya Kshetra Vidyut Vitaran Co. Ltd. Bhopal**
- 4. M. P. Paschim Kshetra Vidyut Vitaran Co. Ltd. Indore**
- 5. M. P. Industrial Development Corporation Ltd. Indore**
- 6. Indian Railways through W. C. Railways, Jabalpur**

- Respondents

Shri Ashish Anand Bernard, Advocate, Shri Debasish Chakraborty, SE, Shri M. M. Dhoke, SE and Shri Vincent D'Souza, SE appeared on behalf of the petitioner.

Shri Shailendra Jain, Dy. Director appeared on behalf of the Respondent no. 4.

None appeared on behalf of other Respondents.

M. P. Power Transmission Co. Ltd Jabalpur filed the subject petition seeking in principle approval of the updated Transmission Investment Plan to coincide with the control period of MYT from FY 2019-20 to FY 2023-24. The subject petition has been filed under "Guidelines for Capital Expenditure by Licensees in MP" (MPERC Capex Guidelines) issued by the Commission under Regulation 10.3 of the MPERC (The conditions of Transmission License for Transmission Licensee (including Deemed Licensee)) Regulations, 2004.

2. At the motion hearing held on the 18th August' 2020, the petitioner broadly submitted the following:
 - (i) The Capital Expenditure Plan of MPPTCL for FY 2017-18 to FY 2021-22 was approved by the Commission vide order dated 2nd May' 2018 in Petition No. 33 of 2017.
 - (ii) The updated Capital Expenditure Plan for FY 2019-20 to FY 2023-24 is filed in the subject petition so as to align the period of Capital Expenditure Plan with the new control period of MPERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2020 notified on 14th February' 2020.

- (iii) The works for FY 2017-18 to FY 2021-22 already approved under last capital expenditure plan approved by the Commission on 02.05.2018, have been rephased/ amended.
- (iv) The works having an estimated value of Rs. 2567 Crores, which are to be carried out as per the “Tariff Based Competitive bidding guidelines for Transmission Services” issued by the Government of India, Ministry of Power on 17th April’ 2006 are also filed separately for in principle approval of the Commission.

3. The following major shortcomings were observed in the subject petition:

- (i) Compliance with the directions issued by the Commission in order dated 2nd May’ 2018 (Petition No. 33 of 2017) while approving the last Capital Expenditure Plan for FY2017- 18 to FY 2021-22 was not reported in the subject petition.
- (ii) The petitioner submitted the financial analysis for re-phased/ amended works for FY 2019-20 to FY 2021-22 and new works for FY 2022-23 and FY 2023-24 and other details as per the Capex Guidelines. The details/ information filed with the subject petition were not fulfilling all the requirements under Clause 1.6 and 1.7 of the MPERC Capex Guidelines which provide as under:

“1.6 Along with the petition for approval of investment, the following documents need to be filed:

(a) Brief outline of the project, its salient features (including whether this is a new/ augmentation/ renovation and modernisation project) such as scope and objectives of this investment, technical reports, design criteria, project financing avenues, contractor/supplier quotations, etc.,

(b) Details and cost estimates of components amenable to physical verification along with the provision of price escalation, if any.

(c) Detailed justification of the investment in light of existing operating conditions such as the equipment is operating close to or above their rated capacity, to facilitate the backup system in conditions of exigency or during maintenance, to cater the normal load growth, the equipment has outlived its life, introduction of new and advance technology, etc.

1.7 The licensee shall satisfy the Commission that it has examined the economic, technical, financial and environmental aspects of all available reasonable options to meet the energy requirements of the consumers in its area of supply. This should be supported by a comprehensive cost benefit analysis.

(a) Least Cost analysis

(i) The study shall bring out various alternatives considered and show that the proposed Scheme is the least cost option of achieving the objectives. Detailed

description of the alternatives and the analysis done to evaluate them has to be submitted to the commission.

(ii) If the assessment suggests that the company has overestimated the amount needed for investments, the Commission shall be entitled to direct reduction of the amount in the ARR calculations.

(b) Benefits

(i) The short term and long-term benefits from such investment including the financial gains expected

(ii) Physical Benefits: The proposal shall bring out quantified physical benefits such as Reduction in transmission / distribution losses, Reduction in the load on existing system, Improvement in voltages, Reliability of supply, and any other benefits.

(iii) Financial Benefits: The proposal shall bring out the financial benefits; if possible work wise, by way of anticipated revenue in terms of additional energy sold, reduction in losses or reduction in costs. The financial benefits 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 (Annexure 2). The assumptions taken in these calculations should also be clearly mentioned.

(iv) The licensee shall also propose the methodology of measurement of the benefits accruing out of the investment.”

- (iii) It was not mentioned in the petition whether MPPTCL has carried out any planning process for identification of works consistent with the National Electricity Plan developed by the Central Electricity Authority in terms of Clause 1.22 of MPERC Capex Guidelines.
- (iv) The works proposed under Capital Expenditure Plan were not supported with the Load Flow Studies to be carried out by the petitioner. Expected benefits with the proposed works like transmission loss reduction, improvement in congestion of network and voltage condition were not mentioned in the petition as required under Clause 1.23 and 1.24 of MPERC Capex Guidelines.
- (v) Reasons for proposed addition of lines and transformation capacity in the Capex plan were not mentioned in light of expected addition in Generation Capacity and growth of demand in the respective geographical area where the works are proposed in the plan.
- (vi) The proposed Capex plan was not fulfilling the requirements under Clause 1.8 to 1.11 of the MPERC Capex Guidelines with regard to financial details related to project, phasing of year- wise expenditure, means of finance, funding

agency, terms and conditions of loan, sanctions of competent authority, statutory clearances from concerned departments/Ministry and planned commissioning schedule of each work etc. as required under aforesaid Clause 1.8 to 1.11 of MPERC Capex Guidelines.

(vii) The basis for selecting the projects under TBCB was not furnished. It was also not clarified whether load flow study has been carried out for selecting such projects. Financial analysis for these projects was also not submitted with the petition.

4. The petitioner had sought three weeks' time for submission of revised petition in light of observations of the Commission. The petitioner was allowed to file revised petition by the 15th September' 2020 and the case was fixed for motion hearing on 29.09.2020. Vide letter no. 1542 dated 15/09/2020, MPPTCL submitted that "*because of the effect of Covid-19 pandemic, many of the MPPTCL offices at Shakti Bhawan had to be closed on various days. Further officers concerned of this office were also unwell*". Therefore, MPPTCL sought one week's time extension for submission of the revised petition in the matter.

5. Vide letter No. 1581 dated 18/09/2020, MPPTCL filed the revised petition broadly submitting the following:

"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 and 31.03.20 is tabulated hereunder;

S. No.	Voltage Level	As on 31.3.2019			As on 31.3.2020		
		EHV Lines	EHV Sub-Stations		EHV Lines	EHV Sub-Stations	
		Ckt. KMs	Number	MVA Capacity	Ckt. KMs	Number	MVA Capacity
1	400 KV	3520.95	11	8495	3570.85	12	9440
2	220 KV	12929.07	78	23990	13594.28	81	25900
3	132 KV	18914.55	276	28246	20084.79	288	29831.5
4	66 KV	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL -		35364.57	365	60731	37249.92	381	65171.5

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. No.	Type of Generation	2019-20	2020-21	2021-22	2022-23	2023-24
a.	MP Thermal Generation (excluding MPIDC)	4941.77	4941.77	4192.86	4192.86	4192.86
b.	MP Hydel Generation (including share)	592.09	592.09	592.09	592.09	592.09
c.	Inter-state Hydel Projects	321.24	321.24	321.24	321.24	321.24
d.	JV Hydel Projects	2406.97	2406.97	2406.97	2406.97	2406.97
e.	Central Sector, ER, NR	4225.92	4951.66	4951.66	4951.66	4951.66
f.	Share from RE Projects	3834.11	5923.49	7494.84	8720.75	9739.61
g.	From Private Projects	3095.22	3095.22	3071.58	3071.58	3071.58
	Total for Discom	19417.32	22232.44	23031.24	24257.15	25276.01
h	Total for MPIDC (SEZ)	55.00	55.00	60.00	60.00	60.00
i	Total for WCR	270.00	320.00	330.00	340.00	340.00
	Grand total	19742.32	22607.44	23421.24	24657.15	25676.01

Along with the above a maximum of 465.1 MU were traded by MPPMCL in April'19 and maximum traded power of 2347 MW was also interacted in the month of November'19.

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.

3.1 Review of 13th Plan (FY 2017-18 to FY 2021-22).-

Hon'ble Commission through orders has directed that the Transmission Licensee shall file a comprehensive 5 years Capital Investment Plan. Accordingly, the Petitioner had filed the 5 year Capital Investment Plan for the period 2017-18 to 2021-22 through the Petition No. 33/2017. Hon'ble Commission approved the aforesaid Capital Investment Plan with appropriate directions to the petitioner MPPTCL to fulfil various directions contained therein, vide its order dated 02.05.18.

A summary of the approved 13th plan is submitted as below -

**[A] Financial – 13th Plan Transmission Programme
(2017-18 to 2021-22)**

S. No.	Particulars	Year wise Investment in Thirteenth Plan (2017-22) (Rs. Lakhs)					Total 13 th Plan (Need based)
		2017-18 (Need based)	2018-19 (Need based)	2019-20 (Need based)	2020-21 (Need based)	2021-22 (Need based)	
1	400KV Lines	17649	37548	52144	30100	21637	159078
2	220KV Lines	32172	36287	30063	22885	14414	135821
3	132KV Lines	33587	41851	35325	28591	29921	169275
i	TOTAL (LINES)	83408	115686	117532	81576	65972	464174

4	400KV S/s	19402	24003	25893	6478	7408	83184
5	220KV S/s	20517	19734	27956	23200	17727	119134
6	132KV S/s	26649	33957	32633	37758	28183	159181
7	Misc. Works	9870	12422	15654	61485	83813	163243
ii	Total (Sub stations)	76438	100115	102136	128921	117132	524742
	G. Total (i + ii)	159846	215801	219669	210497	183103	988915

**[B] Physical – 13th Plan Transmission Programme
(2017-18 to 2021-22)**

S. No.	Particulars	Year wise Physical Programme (2017-22)					Total 13 th Plan
		2017-18	2018-19	2019-20	2020-21	2021-22	
A.	Transmission Lines (Ckt.-Kms) -						
1	400KV Lines	0	457	690	10	0	1157
2	220KV Lines	482	211	1124	864	180	2861
3	132KV Lines	829	720	1965	562	275	4351
	TOTAL -	1311	1388	3779	1436	455	8369
B.	EHV Sub-Stations (MVA) -						
1	400 KV	630	830	1890	630	0	3980
2	220 KV	800	1200	2340	2170	960	7470
3	132 KV	1029.5	2050	2078	593	713	6463.5
	TOTAL	2459.5	4080	6308	3393	1673	17913.5
C.	EHV Sub – Stations (Nos.) -						
1	400 KV	0	2	3	0	0	5
2	220 KV	3	2	10	5	1	21
3	132 KV	9	15	21	8	7	60
	TOTAL -	12	19	34	13	8	86

3.2 Review of the 13th Plan_-

Regarding the three-year period i.e. FY 2017-18 to FY 2019-20 of the 13th 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 first three years of the 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 been approved by the Board of Directors of the Company.

Through Para 5.3 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.

3.3 Performance indicators as achieved during the first three years of the 13th Plan -

During the first three years of the 13th Plan (2017-18, 2018-19 & 2019-20), 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.	Particulars	Lines in Circuit Km Added			
		400 KV	220 KV	132 KV	Total
1	2017-18	0	114.19	786.81	901.00
2	2018-19	446.50	490.76	1217.91	2155.17
3	2019-20	49.89	665.21	1170.23	1885.33

S No.	Particulars	Capacity in MVA Added			
		400 KV	220 KV	132 KV	Total
1	2017-18	315	640	1509.5	2464.5
2	2018-19	830	1360	2680.5	4870.5
3	2019-20	945	1910	1585.5	4440.5

S No.	Particulars	No. of Sub-stations Added			
		400 KV	220 KV	132 KV	Total
1	2017-18	0	2	12	14
2	2018-19	2	5	17	24
3	2019-20	1	4	12	17

S. No.	Year	Max. Demand met	Energy Handled	Transmission System Availability (%)		Transmission Losses (%)	
		MW	MU	Target	Achieved	Target	Achieved
1	2017-18	12240	65351	98.00	99.15%	2.82%	2.75%
2	2018-19	14089	71945	98.00	99.59%	2.82%	2.71%
3	2019-20	14555	72278	98.00	99.64%	2.80%	2.59%

It may please be perused that during 2019-20 the best key performance indicator marks have been achieved.

4.1 Requirements for up-dation of 13th Plan –

The approved 13th Plan is primarily to be updated because of the following factors -

- a) *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 fulfilment of the requirements of the same, it is submitted that - for coinciding with the new MYT control period, the 13th Plan is to be modified and extended till FY 2023-24 to match with new MYT tenure.*
- b) *It may also kindly be perused that the works envisaged to be completed in FY 2017-18 to FY 2018-19 of the 13th Five-Year Plan were related to the previous MYT Control Period. Now the plan for the works to be carried out in FY 2022-23 & FY 2023-24 are being submitted so that the 13th Plan is extended till FY 2023-24 so as to coincide with the new MYT control period of FY 2019-20 to FY 2023-24.*

- c) *Here it is also to be submitted that the approved works of 13th Plan have been re-phased /amended as per need and incorporated suitably in this petitioned plan covering the new MYT control period of FY 2019-20 to FY 2023-24.*
- d) *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 02.05.18, approval of the Commission is required for the works carried out by the Petitioner but were not included earlier in the Petition for period FY 2017-2022.*
- e) *Apropos above, the works capitalized in 2017-18 but not previously submitted through the 13th Plan are also being petitioned for accordence of in-principle approval, herewith. Along with the same, the left out works capitalized in 2018-19 are also submitted for kind approval of the Hon'ble Commission.*

4.2 Process to develop Plan_–

- 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 2019-20 to FY 2023-24, 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) Study and recommendation for adequate interconnections for evacuation of power from the 765kV and 400kV substations being developed by Power Grid Corporation of India Ltd. and other transmission licensee including TBCB Developer in Madhya Pradesh under normal conditions on the basis of techno-economical consideration.*
- vii) Study of over/under voltage, over/under loading, voltage regulation as per regulatory norms.*
- viii) Location and sizing of shunt capacitors/shunt reactors etc. for improvement of dynamic performance of the system including the economic analysis.*
- ix) 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 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 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 new MYT control period i.e. 2019-2024.*
- 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-I.*

Need based Investment Plan–

5.1 Plan for Period FY 2019-20 to FY 2021-22 –

A comprehensive 5 years Capital Investment Plan had been filed for the period 2017-18 to 2021-22 through the Petition No. 33/2017. Hon'ble Commission had accorded an in-principle approval to the aforesaid vide its order dated 02.05.18. Out of the works approved vide the order referred above some works have been completed and balance 516 nos. works are proposed to be completed in FY 2020-21 to FY 2021-22 of the 13th Five Year Plan. Here it is to be submitted for the kind consideration of the Hon'ble Commission that although these works constitute a part of the overall Plan under this petition, but as these works have already been granted in-principle approval by Hon'ble Commission vide order dated 02.05.2018, therefore no separate details are submitted for the same.

A list of these 516 nos. works showing the reference to the already approved plan along with spread of year-wise estimated expenditures is submitted as Annexure-II of this Petition for the kind perusal and consideration of the Hon'ble Commission.

5.2 Need based Investment Plan for FY 2022-23 & FY 2023-24 -

Based on studies and analysis a need based plan for the works, including previously approved works, have been planned for further two years beyond the approved 13th Plan period up to FY 2024, so as to make the period of the subject Plan coincide with the new MYT control period i.e. 2019-2024. The same is tabulated as hereunder:

S. No.	Particulars	Year-wise Need Based Physical Plan for Extended Period		Total 2 Years
		2022-23	2023-24	
1	400KV Lines	0	0	0.0
2	220KV Lines	120	74	194
3	132KV Lines	500	1168	1668
	TOTAL (LINES: Ckt. km)	620	1242	1862
4	400KV MVA	0	100	100
5	220KV MVA	160	210	370
6	132KV MVA	1183	1300	2483
	TOTAL MVA (S/s)	1343	1610	2953
7	400KV Substations	0	0	0
8	220KV Substations	0	0	0
9	132KV Substations	6	16	22
	TOTAL Nos.	6	16	22

A list of the works planned for execution during 2022-23 & 2023-24 is contained in Annexure -III to the petition. Along with the above, few works not previously not envisaged earlier but are to proposed to be done during the period of this petition is also being submitted through the aforementioned Annexure -III.

This statement is bifurcated in to two segments;

Part (a) consisting of 100 nos. works costing more than Rs. 5 Crores of estimated value and

Part (b) depicting 115 nos. works costing less than Rs. 5 Crores of estimated value.

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

5.3. Works capitalized earlier but to be included in the plan period FY 2019-20 to FY 2023-24 -

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 02.05.18, approval of the Commission is required for the works carried out by the Petitioner but were not included earlier in the Petition for period FY 2017-2022.

A tabulated summary of such works which have been capitalized in 2017-18 & 2018-19, are tabulated hereunder for the kind consideration of the Hon'ble Commission: -

S. No	Year	Particulars	Total (Nos.)	Estimated Value Rs Cr.
1	2017-18	<i>EHV Lines/ Substations/ Bays / Transformer</i>	20 Nos.	118.87
2	2017-18	<i>Miscellaneous works</i>	77 Nos.	113.36
3	2018-19	<i>EHV Line/ Substation/ Bay</i>	2 Nos.	1.94
4	2018-19	<i>Miscellaneous works</i>	15 Nos.	100.9

The details of these works are submitted as Annexure- IV 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 2019-20.

As tabulated above, it is to be submitted that most of the works are of miscellaneous nature and all works have been sanctioned by competent authorities of the Company. The list is also broken up in to Part A & Part B for works above Rs 5 Crore and below that limit. It may kindly be perused that out of a total of 114 works only 17 nos. works are above limit of Rs. 5 Crores and 97 nos. are below the band of Rs. 5 Crores.

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

5.4. List of works for approval –

*As submitted above the list of the works (**not previously approved**) covering the period FY 2019-20 to FY 2023-24 is tendered as **Annexure -III** and **Annexure -IV** to the petition with the request that same may please be considered for grant of in-principle approval of the Hon'ble Commission, please.*

5.5. 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 I.*
- (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.

5.6 Updated plan position –

Apropos the above the updated position of the Plan, summarized for voltage-wise physical works and financial expenditure, proposed for the Plan period on yearly basis is as hereunder;

The finally revised table submitted by MPPTCL vide its letter no. 58 dated 12/01/2021 are as under;

[A] Financial – Transmission Plan Programme for 5 years period of FY 2019-20 to FY 2023-24.

S. No.	Particulars	Year wise Investment (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
ii	TOTAL (S/S)	118328	106173	77394	44767	40908	387570
7	Misc. Works	52273	42072	29352	0	509	124206
iii	TOTAL (Misc.)	52273	42072	29352	0	509	124206
	GRAND TOTAL (i + ii + iii)	280789	224350	177164	84381	81368	848052

[B] Physical – Transmission Plan Programme for 5 year period of FY 2019-20 to FY 2023-24.

S. No.	Particulars	Year wise 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	7582
3	132 KV	1778.5	1912	2935	1183	1300	9108.5
	TOTAL	4793.5	7288	4601	1343	1610	19635.5
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

The above rolled in plan details consists of the following –

- Already approved works of 13th Plan, re-phased / amended as per need.
- Need based plan for FY 2022-23 & FY 2023-24 and other new works, appended / added to coincide with the new MYT control period (TBCB works not included).
- Works capitalized during 2017-18 & 2018-19 but were not submitted earlier in the approved Plans.

5.7 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. Lacs)
1	Works to be taken up by MPPTCL with respect to financial linkage tied-up & proposed	ADB-III LOAN (ADB Financed Works)	37702
		ADB - III SAVING	5137
		JICA-I (JICA Financed Works)	7901
		PRIORITY NATURE(UF) -I	32248
		REC-I	14712
		GEC-I (Kfw financed work)	127138
		JICA-II LOAN	111049
		REC-II	73673
		UBI	84906
		PSDF GRANT	10263
		PMUs (PSDF Grant)	1780
		UF-II (Posed to Canara Bank) (to be finalised)	126851
		Internal source / Un-Funded Works (Funding yet to be proposed)	214692
Total Investment by MPPTCL - FY 2019-20 to FY 2023-24		848052	

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.

5.8 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.

6.0 Works to be carried out through Tariff based Competitive Bidding (TBCB) route

*In the present scenario the equity support from GoMP is reducing and the **shortage of funds is a major constraint** in timely completion of the new works, therefore, alternative agencies for implementation/execution of these projects needed to be explored. Accordingly, it was decided that the construction of few new EHV Substations and its associated lines may be taken up through Tariff Based Competitive Bidding route.*

It was also decided that the transmission works to be taken up under TBCB should be executed through separate packages broadly as per the geographic area and actual field condition.

It is further to be intimated for the kind perusal of the Hon'ble Commission that, apart from the works to be executed by MPPTCL, 87 works pertaining to 35 nos. Sub-stations and lines, amounting to Rs. 1889 Crores are presently envisaged to be carried out through the TBCB route to provide better transmission services in the state to the DISCOMs and other Long Term Consumers.

Apart from the above, 10 nos. works amounting to Rs. 678 Crores have been awarded through TBCB.

Regarding the above TBCB works, it is also submitted that the Techno-Economical Feasibility study of have been carried out by M/s ERDA by performing detailed load flow study by analyzing the load-generation scenario, reduction in ohmic loss due to reduction in feeder lengths and improvement in voltage profile. Taking an overall view, M/s ERDA through the study has concluded that the transmission works proposed by MPPTCL for the network of Madhya Pradesh to be techno-economically feasible.

The reference details of the ERDA Report are indicated against each work in the Annexure- V.

As these works shall come under the purview of Section 63 of Electricity Act 2003, discounted cash flows over the life of the investment to demonstrate the payback period of the investment is presently not being submitted.

*A list of all such works that are to be executed through TBCB route, amounting to Rs. 2567 Crores, is being submitted as **Annexure- V** to this petition for the kind information of the Hon'ble Commission as a part of the overall plan of the State Transmission Network. It is also to be intimated that the status of the same may change in future on alteration of any related Governmental policies in the future.*

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. With the above submissions, the petitioner prayed as under:

*(a) To accord in principle **approval to the updated Transmission Investment Plan** amounting to **Rs. 8480.52 Crores** for the 5 Year period of FY 2019-20 to FY 2023-24, which is inclusive of **approved works** of value **Rs. 6147.37 Crores** and **unapproved** new works & left out works amounting to **Rs. 2333.15 Crores**, the details of these works which were previously not included in earlier petition have been submitted as **Annexure – III & IV** of the instant petition.*

*(b) To accord in principle **approval to the works** having an estimated value of **Rs 2567 Crore**, which are to be carried out through **TBCB route**. The list of such works has been submitted as Annexure – V of the instant petition.*

7. Motion hearing on the revised petition was held on **29th September 2020**. Vide Commission's daily order dated 3rd October' 2020, the petition was admitted with directions to the petitioner to file an appropriate additional prayer for approval of the works mentioned in the revised petition under Tariff Based Competitive Bidding (TBCB) route and to explain the criteria for selection of various works under TBCB route. The petitioner was also directed to serve copy of petition on all the Respondents within a week. Further, the Respondents were directed to file their response on the petition latest by the 26th October, 2020.

8. Vide letter no. 1779 dated 12/10/2020, the petitioner served copy of the subject petition to all Respondents.

9. On 28/09/2020, MPPTCL submitted copy of the report submitted by its consultant Electrical Research and Development Association (**ERDA**), Vadodara. The petitioner submitted that under the said assignment, mainly two tasks will be carried out:

(i) Detailed review of transmission works proposed by MPPTCL during FY 2017-18 to FY 2021-22 and

(ii) Detailed study for identification of Transmission works for subsequent 5 years i.e. FY 2022-23 to FY 2026-27 for MPPTCL network.

The **objective** of the consultancy was to review the five year (2017 - 22) transmission plan of MPPTCL and to conduct detailed studies for identification of transmission works for subsequent five years (2022 - 27). The consultant had to undertake detailed system studies and prepare a study Report and assess MPPTCL's requirements in a clear and predictable manner with a view to ensure efficient, economical, integrated and coordinated transmission network with continuous reduction in Transmission Losses. The Report of ERDA includes cost estimate and various alternatives for implementation regarding reduction in Transmission Losses.

It was further submitted by MPPTCL that the Consultant has carried out detailed study and submitted comprehensive Techno economic feasibility report on MP system covering following points:

- i. Review of Five Year Transmission Plan (2017-22) of MPPTCL considering the following:
 - a. Latest Demand/ Generation Forecast issued by state planning cell.
 - b. Generation Capacity addition during next 10 years (2017-27)
 - c. Investment decision of MPPGCL for next 10 years (2017-27)
 - d. EHV substations, Lines, Transformers, Reactive Compensation planned upto 2021-22 including EHV Substations under TBCB and CTU substations.
- ii. The transmission works proposed by MPPTCL are quite feasible and a necessity for the network of Madhya Pradesh owing to several requirements, some of which are listed below:
 - To avoid overloading of lines or transformers due to load growth.
 - To improve voltage profile and thereby improving power quality.
 - To convert radial system to interconnected system through connection of various substations to multiple power sources or to create redundancy in existing network in order to improve system reliability and power continuity to loads.
 - To transmit the power at higher voltage level thereby enhancing system strength and reducing transmission losses.
 - To evacuate power from renewable energy sources like Wind Power Plant, Solar power plant, bagasse based thermal power plant, micro and mini hydro power plants etc.
 - Due to local industrial requirements or DISCOM requirements.

Taking an overall view, the study shows that the transmission works proposed by MPPTCL for the network of Madhya Pradesh are techno-economically feasible.

10. In response to the major shortcomings in the petition communicated by the Commission's letter mentioned at para 3 of this order, Issue wise response of MPPTCL is as under;

- (i) **Issue:** Compliance with the directions issued by the Commission in order dated 2nd May'2018 (Petition No. 33 of 2017) while approving the last Capital Expenditure Plan for FY2017- 18 to FY 2021-22 is not reported in the subject petition.

MPPTCL's Response:

Review of the 13th Plan -

Regarding the three year period i.e. FY 2017-18 to FY 2019-20 of the 13th 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, 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 first three years of the 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 been approved by the Board of Directors of the Company.

Through Para 5.3 of this petition, MPPTCL is applying for the in-principle approval of the Commission in case of works left out in the Plan filed previously.

- (ii) **Issue:** The petitioner has submitted only the financial analysis for re-phased/ amended works for FY 2019-20 to FY 2021-22 and new works for FY 2022-23 and FY 2023-24, without furnishing detail as required under Clause 1.6 and 1.7 of the MPERC Capex Guidelines. The details/ information filed with the subject petition are not fulfilling all the requirements under Clause 1.6 and 1.7 of the MPERC Capex Guidelines which provide as under:

“1.6 Along with the petition for approval of investment, the following documents need to be filed:

- (A) *Brief outline of the project, its salient features (including whether this is a new/ augmentation/ renovation and modernisation project) such as scope and objectives of this investment, technical reports, design criteria, project financing avenues, contractor/supplier quotations, etc.,*

MPPTCL's Response:

Constitution of the plan list_ –

As directed and keeping in line with the guidelines, the plan list of unapproved works as mentioned in Annexures 3 & 4 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.*
- e. 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.*

Issue:

- (B) Details and cost estimates of components amenable to physical verification along with the provision of price escalation, if any.

MPPTCL's Response:

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.

Issue:

- (C) Detailed justification of the investment in light of existing operating conditions such as the equipment is operating close to or above their rated capacity, to facilitate the back up system in conditions of exigency or during maintenance, to cater the normal load growth, the equipment has outlived its life, introduction of new and advance technology, etc.

MPPTCL's Response:

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.

Issue:

- (D) "1.7 The licensee shall satisfy the Commission that it has examined the economic, technical, financial and environmental aspects of all available reasonable options to meet the energy requirements of the consumers in its area of supply. This should be supported by a comprehensive cost benefit analysis.
- (a) Least Cost analysis (i) The study shall bring out various alternatives considered and show that the proposed Scheme is the least cost option of achieving the objectives. Detailed description of the alternatives and the analysis done to evaluate them has to be submitted to the Commission".

MPPTCL's Response:

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.

Issue:

- (E) "Benefits
- (i) The short term and long-term benefits from such investment including the financial gains expected.
- (ii) Physical Benefits: The proposal shall bring out quantified physical benefits such as Reduction in transmission / distribution losses, Reduction in the load on existing system, Improvement in voltages, Reliability of supply, and any other benefits.
- (iii) Financial Benefits: The proposal shall bring out the financial benefits; if possible work wise, by way of anticipated revenue in terms of additional energy sold, reduction in losses or reduction in costs. The financial benefits 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. The assumptions taken in these calculations should also be clearly mentioned.

(iv) The licensee shall also propose the methodology of measurement of the benefits accruing out of the investment.”

MPPTCL's Response:

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 I.

Regarding the methodology of measurement of the benefits accruing out of the investment, it is submitted that the RoC Reports, MIS/ Performance Std. & SLDC reports submitted periodically to Commission are a means of measurement of benefits.

Issue:

- (iii) It is not mentioned in the petition whether MPPTCL has carried out any planning process for identification of works consistent with the National Electricity Plan developed by the Central Electricity Authority in terms of Clause 1.22 of MPERC Capex Guidelines.

MPPTCL's Response:

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.

Issue:

- (iv) The proposed Capex plan is not fulfilling the requirements under Clause 1.8 to 1.11 of the MPERC Capex Guidelines with regard to financial details related to project, phasing of year- wise expenditure, means of finance, funding agency, terms and conditions of loan, sanctions of competent authority, statutory clearances from concerned departments/Ministry and planned commissioning schedule of each work etc. as required under aforesaid Clause 1.8 to 1.11 of MPERC Capex Guidelines.

MPPTCL's Response:

- a. *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.*
- b. *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.*
- c. *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.*
- d. *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.*
- e. *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.*
- f. *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.*
- g. *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.*

Issue:

- (v) The basis for selecting the projects under TBCB has not been mentioned. It is also not clarified whether load flow study was carried out for selecting such projects. Financial analysis for these projects was also not submitted with the petition.

MPPTCL's Response:

In the present scenario the equity support from GoMP is reducing and the shortage of funds is a major constraint in timely completion of the new works, therefore, alternative agencies for implementation/execution of these projects needed to be explored. Accordingly, it was decided that the construction of few new EHV Substations and its associated lines may be taken up through Tariff Based Competitive Bidding route.

Regarding the above TBCB works, it is also submitted that the Techno-Economical Feasibility study have been carried out by M/s ERDA by performing detailed load flow study by analysing the load-generation scenario, reduction in ohmic loss due to reduction in feeder lengths and improvement in voltage profile. Taking an overall view, M/s ERDA through the study has concluded that the transmission works proposed by MPPTCL for the network of Madhya Pradesh to be techno-economically feasible.

The reference details of the ERDA Report are indicated against each work in the Annexure- V.

As these works shall come under the purview of Section 63 of Electricity Act 2003, discounted cash flows over the life of the investment to demonstrate the payback period of the investment is presently not being submitted.

11. In response to the issue of criteria set by MPPTCL for selection of various works under TBCB route, as sought by the Commission during the hearing held on 29/09/2020, MPPTCL vide its letter no. 1922 dated 03/11/2020 on affidavit broadly submitted the following;

“As per requirement of the Discoms, a proposal for construction of new EHV substations along with transmission system strengthening was placed before Board of Directors of the Company. The funding of these works was proposed through loan from financing agencies and GoMP equity.

During the discussion it was deliberated that in the present scenario the equity support from GoMP was reducing and equity actually infused was less than the allocated through budget. The shortage of funds would be the major constraint towards completion of projects. Thus, alternative agencies for execution of projects had to be explored. Accordingly, it was directed to construct some of these projects consisting of some new EHV sub-stations and associated lines through TBCB route. Accordingly, proposals of the works to be taken through TBCB mode on the MoP model without viability gap funding were submitted to the State Government. The GoMP vide notifications dated 06/07/2018 & 08/05/2020 has notified the projects to be taken up through TBCB.

The transmission works to be taken up under TBCB were divided into separate packages broadly as per the geographic area and actual field condition”.

12. At the hearing held on 09/11/2020, the petitioner was directed to submit a draft public notice in Hindi & English on the gist of the petition by 20/11/2020. The representative of Respondent No. 4 had sought two weeks' time to file reply to the subject petition. No one appeared on behalf of the Respondents No. 1, 2, 3, 5 and 6. In view of the aforesaid, the Respondents were directed to file their replies to the subject petition within two weeks.

13. Vide letter no. 2047 dated 20/11/2020, the petitioner submitted its reply on the issues raised vide Commission's letter no. 1278 dated 03/11/2020. The reply submitted by MPPTCL on each issue is as under;

i. Issue:

In table under para 2.2 of the petition, it is observed that the increase in capacity has been shown for Central sector plants (4225.92 MW to 4951.66 MW during FY 2020-21) and for Renewable energy plants (3834.11 MW in FY 2019-20 to 9739.61MW in FY 2023-24). However, the anticipated drawl of power by the Open Access consumers is not envisaged in the subject petition. The petitioner was asked to mention the steps taken to ensure that the open access customers should also not face any congestion or other technical problems after implementation of the subject plan.

MPPTCL's Response:

Regarding the table under Para 2.2 of the petition, it is to be submitted that apart from the Discoms, lower part of this table contains the expected contracted capacity for the other LTOA consumers viz. MPIDC (SEZ) and WCR also. The same are on the basis of projection of MPPMCL and no objection has been received regarding the same.

*Here it is also to be submitted that the system has to be designed for the anticipated peak demand, which is for around three to four months of the Rabi season only. Also it may kindly be perused that although for 2019-20 the contracted capacity was 19742 MW, the peak demand reached only 14555 MW. Thus **there is always spare capacity available.***

Further, it is to be submitted that some consumers like WCL which are embedded consumers of Discom in the future may seek Open Access, in such cases only the source shall change but the load shall remain constant. Therefore, no change in transmission capacity shall be experienced.

*In case of new consumers in absence primary data the anticipated drawl cannot be envisaged at this stage, however, it is to be submitted that till now **no application has been denied open access** for want of margin in the Transmission network. It is expected that in future also **open access customers may not face any congestion** or other technical problems in Transmission network after implementation of the subject plan.*

ii. Issue:

In para 2.2 of the petition, it is mentioned 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*”. The petitioner was asked to elaborate this issue for more clarity.

MPPTCL's Response:

With respect to the observation made on contents of Para 2.2 of the petition, wherein it has been 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”, in this matter it is to be submitted for kind consideration that through this it was meant to be stated that when a Generating Station is proposed the corresponding Power evacuation system is also proposed in the Transmission Plan. However, on abandonment of the Generating project the corresponding Transmission evacuation work is also shelved. Thus, although the approved Plan will be depicting some financial burden in the Plan stage, but actually, consequent to its shelving, the same is neither constructed, nor therefore any capitalization occurs. Ergo, no unnecessary loading is experienced at the retail end.

iii. Issue:

In tables under para 3.1 of the petition, both financial & physical parameters of the 13th plan have been mentioned. However, in tables under para 3.3 of the petition, only physical achievements are mentioned. The petitioner was asked to submit financial parameters also for FY 2017-18, FY 2018-19 & FY 2019-20 with regard to lines, sub stations & capacity in similar formats at both places.

MPPTCL's Response:

As directed, regarding the tables under Para 3.3 of the petition, the financial parameters for FY 2017-18, FY 2018-19 & FY 2019-20 with regards to lines, sub stations & capacity achievements is submitted herewith as Annexure-A to this letter.

iv. Issue:

A comparative table showing year-wise plan, actual achievement & percentage achievement in both physical & financial terms was sought for the period FY 2017-18 to FY 2019-20. The petitioner was also asked to explain the reasons for slippage.

MPPTCL's Response:

*As desired, comparative table showing year-wise plan, actual achievement & percentage achievement in both physical & financial terms be submitted for the period FY 2017-18 to FY 2019-20 is being submitted as Annexure-B enclosed herewith. Here it is to be also submitted that **financial booking arise out of the progress as it is achieved during the year.***

*Regarding slippages it is to be submitted that although Plans are created out of **optimistic intentions**, the chief reasons for works being adversely affected can be attributed to factors such as –*

- a. Right of way issues caused due to court cases, geo-political matters or delay in receiving clearances from concerned other departments like Forest, Railways.*
- b. Delays caused by Contractor factors*
- c. Crop conditions in the field*
- d. Non-availability of shutdowns for Feeder crossings*
- e. Other issues such as during 2019-20 due to impact of Covid-19, followed by rains unfavorably affected work progress.*

v. Issue:

In para 4.1(e) of the petition, it is stated that “the works capitalized in FY 2017-18 but not previously submitted through the 13th Plan and also left out works capitalized in FY 2018-19 are also submitted for approval”. The petitioner was asked to submit a separate year wise list of these items along with the detail for obtaining ex-post-facto approval.

MPPTCL's Response:

Apropos to the observation, a separated year wise list of the works which have been completed in 2017-18 & 2018-19 but not previously submitted through the 13th plan, along with the detail are submitted as Annexure-C herewith for obtaining ex-post-facto approval.

vi. Issue:

In para 5.5(q) of the petition, it is stated that the planning of transmission system at 400 KV & higher level including reactive compensation, is always done in consultation and approval of statutory bodies and agencies like CEA, RPC, CTU, etc. In this regard, the petitioner was asked to explain how the events of over voltages at 400 KV level at 400 KV EHV s/s at Ashta, Badnawar, Chhegaon, Pithampur, Kirnapur and other substations, as reported by MPPTCL in the reports on Transmission Performance Standard, will be addressed by the works proposed in the plan.

MPPTCL's Response:

Regarding the events of over voltages at 400 KV level at 400 KV EHV s/s at Ashta, Badnawar, Chhegaon, Pithampur, Kirnapur and other substations, and addressing of the issues it is to be submitted that to minimize the voltage variation, measures have been taken at 400 KV sub-Station Ashta, Badnawar, Chhegaon, Pithampur & Kirnapur by Installing Bus and line reactors of different capacities which are as follows;

- a. The bus reactor (1 x 50 MVAR) and 2 No. Line reactors (2x50 MVAR) have been installed at 400 KV Ashta.*
- b. 1 x 50 MVAR bus reactor is installed at 400 KV S/s Chhegaon.*
- c. At 400 KV S/s Pithampur, 2 Nos. Bus reactors (2x50 MVAR) had been installed.*
- d. At 400 KV S/s Badnawar, 1 No. bus Reactor (1x 125 MVAR) has been installed.*

Apart from the above, the submitted Plan has provisions for the following Reactors for limitations of over voltage–

At 400 KV S/s Kirnapur, 1 No. bus reactor (1x 125 MVAR)

At 400 KV S/s Bina, 2 Nos. line reactor (2x 80 MVAR)

At 400 KV S/s Mandsaur, 1 No. bus reactor (1x 125 MVAR)

At 400 KV S/s Sagar, 1 No. bus reactor (1x 125 MVAR)

At 400 KV S/s Ujjain, 1 No. bus reactor (1x 125 MVAR)

At 400 KV S/s Chhegaon, 1 No. bus reactor (1x 125 MVAR)

At 400 KV S/s Pithampur, 2 Nos. Line reactors (2x125 MVAR)

At 400 KV S/s Katni, 1 No. bus reactor (1x 125 MVAR)

*It is further to be tendered that the Intra State Transmission System of MPPTCL is directly connected with Generating Plants and integrated with PGCIL System through interface points. The PGCIL System is designed for the Voltages 400 KV and above; as such the **phenomena of State Transmission System Voltage going beyond the permissible limits in light load conditions cannot be completely eliminated. Also, during off peak load conditions, the lines become lightly loaded, which causes increase in voltage.***

Although the installation of 400 KV Bus and Line Reactors are among the main remedial measures which have been adopted to limit the excessive voltages at 400 KV bus throughout the State. However, it is to be submitted for kind consideration that due to the factors outlined above, sporadic instances of over voltages cannot be ruled out. It is also pertinent to mention here that the SLDC monitors on day to day basis, the voltage stability parameters and corrective measures, depending upon the load conditions, like opening or closing of lines, Generator reactive voltage control are also undertaken.

vii. Issue:

The Commission has been raising concern on the transmission outages, overloading of certain lines and transformers repeated in the quarterly / monthly reports being submitted by SLDC in compliance of the MP Electricity Grid Code. The petitioner was asked to submit the details of all such works proposed in the plan which will reduce the transmission outages and overloading of lines & transformers.

MPPTCL's Response:

*In the matter of monthly reports being submitted by SLDC in compliance of the MP Electricity Grid Code, it is to be submitted that transmission outages are primarily a factor of tripping caused by various incidences. Regarding these reports pertaining to the Plan period, it is to be submitted that the reports mention that **no Transmission Constraint has been faced**, the same has also been indicated in the Report of the Reporter of Compliance.*

In this context, it may also please be perused that for faster replacement of damaged transformers provisions for spare units, along with replacements of old transformers that have completed useful life, have been made in the Plan.

Further, it is to be submitted that regarding matter of overloading as submitted through the Quarterly MIS reports sent to the Hon'ble MPERC, remedial measures have been incorporated in the Plan. The detail of the MIS formats from 01.04.19 onwards, indicating the works proposed in the plan along with reference is submitted as Annexure D of this submission. It is expected that these works which will provide reduction in overloading of respective lines.

viii. Issue:

In table under para 5.7 of the petition, financial linkage for works of Rs 4742.61 Cr has been mentioned out of total plan expenditure of Rs 8480.52 Cr. The plan / efforts for arranging finance of the remaining works of Rs 3737.91 Cr was sought from the petitioner.

MPPTCL's Response:

*Regarding financial linkage for remaining works of Rs 3737.91 Cr it is to be submitted the **process of getting the financial linkage is a continuous one, and linkages for balance works are firmed up in subsequent years.***

Presently major portion of the works have been tied up with funding agencies, the same has been mentioned in the Petition. Other works are in the process of being tied up.

Presently tying-up activities with Canara Bank for an amount of Rs. 800 Crores is under process, on obtaining the approval from the Government the same shall be executed. It is also to be submitted that the regarding the others, financial tying up shall be taken up at a later point of time and the same shall be duly intimated to the Hon'ble Commission, please.

ix. Issue:

Documents in support of the environment clearances and other necessary approvals were sought.

MPPTCL's Response:

Apropos clearances & approvals to be sought from other agencies, it is to be submitted that the requirement of such permission arise during the execution process. The same mostly comprise of the following events-

- a) Forest Clearances*
- b) Wild life area related clearances*
- c) Road Crossing Clearances*
- d) Railway crossing clearances.*

Specimen Documents in support of the above clearances and approvals from the past are submitted as Annexure-E (a to d, covering each case mentioned above respectively), for kind perusal of the Hon'ble Commission.

x. Issue:

In annexure IV of the petition, the sub-total and year wise total was not mentioned. The petitioner was asked to mention the totals and reconcile the same with the corresponding figures of the petition.

MPPTCL's Response:

The Annexure IV of the petition is being submitted herewith containing the desired subtotals and year wise totals as Annexure-F with reference to the corresponding figures of the petition.

xi. Issue:

In Annexure – V, a list of 87 works which are proposed to be awarded through TBCB with estimated cost of Rs 1889 Crores are mentioned in list A. Further, 10 works of Rs 678 Cr awarded through TBCB are mentioned in list B. These works are shown in piecemeal manner, which should however be shown package wise for the purpose of bidding, so that estimated amount of the project could be ascertained more accurately.

MPPTCL's Response:

The works to be carried out through TBCB route has been submitted as Annexure – V of the Petition, this Annexure consists of two Parts.

Part A depicts those works which are yet to be awarded i.e. 87 works with estimated cost of Rs 1889 Crores and Part B consists of works which have been awarded through TBCB made up of 10 works of Rs 678 Crores.

Now, as desired, the same are being submitted on the basis of packages for the purpose of bidding, through Annexure-G enclosed herewith for kind perusal of the Hon'ble MPERC.

14. Vide letter no. 2042 dated 20/11/2020, MPPTCL submitted draft public notice in English and Hindi version. Vide letter no. 2127 dated 27/11/2020, MPPTCL informed that no reply has been received from any of the Respondents till date on this petition. Vide e-mail letter dated 04/01/2021, MPPTCL submitted revised draft public notice. Vide Commission's letter no. 29 dated 11/01/2021, MPPTCL was directed to publish the approved public notice in widely circulated newspapers in both English and Hindi version to invite comments/suggestions from the stakeholders. The public hearing was fixed on 9th February, 2021 in this matter.
15. Vide letter no. 58 dated 12/01/2021, MPPTCL submitted copies of the public notice published by it in Hindi in Indore Samachar, Indore and Patrika, Jabalpur and in English in Central Chronicle, Bhopal on 11th January' 2021. Further, vide letter no. 248 dated 02/02/2021, MPPTCL confirmed that it has not received any objection / comment / suggestion from any person / respondent / public in the matter.
16. The public hearing on the subject petition was held on **09th February, 2021** through video conferencing. In the public hearing no objection / comment / suggestion was received. Only the representatives of MPPTCL appeared before the Commission in the public hearing.

Commission's Analysis and Order:

17. On examination of the subject petition, it is observed that the prayers as mentioned at para 5 of this Order are for:
 - (a) In principle **approval to the updated Transmission Investment Plan** amounting to Rs. 8480.52 Crores for the 5 Year period of FY 2019-20 to FY 2023-24, which is inclusive of approved works of value Rs. 6147.37 Crores and **unapproved** new works & left out works amounting to **Rs. 2333.15** Crores, the details of these works have been submitted as **Annexure – III & IV** of the instant petition.
 - (b) In principle **approval to the works** having an estimated value of Rs 2567 Crore, which are to be carried out through **TBCB route**. The list of such works has been submitted as Annexure – V of the instant petition.

18. A table showing summary of the subject petition is as under;

S. No.	Particulars	Mentioned in Annex. No.	No. of works	Amount (Rs. Cr.)	Total Amount (Rs. Cr.)
1	Works already approved vide Commission's order dt. 2/5/2018 in P.No. 33/20017	II	516	6147.37	6147.37
2a	Tentative works for Approval in the subject petition	III	215	1999.47	2333.15
2b	Works capitalized earlier, but to be included in plan	IV	114	333.68	
		Total (1+ 2a + 2b)			8480.52
3a	Works to be awarded through TBCB	V (list A)	87	1889.00	2567.00
3b	Works already awarded through TBCB	V (list B)	10	678.00	

The above table shows that the petitioner has prayed for approval of Plan of Rs 8480.52 Cr, but the works of Rs 6147.37 Cr. have already been approved by the Commission in P.No. 33/2017, **thus the present petition is confined to seeking in-principle approval of new works and left out works of Rs 2333.15 Cr.** The petition also seeks **in principle approval to the works** of estimated value of Rs 2567 Crore, which are to be carried out through TBCB route.

19. The five-year Capital Investment Plan proposed and filed by MPPTCL in the subject petition is in accordance with the "Guidelines for capital expenditure by licensees in Madhya Pradesh" issued by the Commission. It is further observed that the aforesaid investment plan has been developed/ formulated by MPPTCL after carrying out system studies considering expected availability of power and load growth during the plan period. The system studies have been conducted by the Consultant M/s. Electrical Research & Development Association (ERDA), Vadodara for the period in proposed investment plan. The works which are proposed in the Capex Plan have been identified on the basis of system studies carried out by MPPTCL through consultant. All the works identified after system studies and proposed in the Capital Investment Plan have been tabulated and submitted as Annexure with the petition mentioning requisite details. The petitioner has also stated various financial institutions/sources to fund the proposed capital investment.

20. Considering the submissions of the petitioner, the Commission considers the MPPTCL's prayer in this matter, under clause 1.15 of the "Guidelines for Capital expenditure by licensees in Madhya Pradesh" and **hereby accords in principle approval to works of Rs. 2333.15 Crores mentioned in Annexure - III & IV of the petition, which are enclosed as Appendix No. 1 & 2 of this Order.** The works under updated Transmission Investment Plan amounting to Rs. 8480.52 Crores for five year period of FY 2019-20 to FY 2023-24, also includes the works of Rs. 6147.37 Crores already approved vide Commission's order dated 02/05/2018 in Petition No. 33 of 2017 mentioned in Annexure - II of the petition and enclosed as **Appendix No. 3** of this Order for ready reference.
21. It is further observed that vide order dated 15th January' 2021 in the matter of the threshold limit for intra-state transmission projects in Madhya Pradesh in accordance with Clause 5.3 of the Tariff Policy dated 28/01/2016, the Commission has decided that "*in the State of Madhya Pradesh, the intra-state transmission projects shall be developed by State Government through competitive bidding process for projects costing above a **threshold limit of Rs. 250 Crore (Rupees Two Hundred and Fifty Crores)** in accordance with Clause 5.3 of the Tariff Policy dated 28/01/2016*".
22. With regard to the works to be carried out under TBCB route as filed in the petition, the Commission has observed the following:
- (i). MPPTCL has submitted details of the works to be carried under TBCB route in Annexure - G (a, b & c) of its letter no. 2047 dated 20/11/2020. This information shows that the 87 works mentioned in Annexure - V (list A) of the petition has been clubbed into two packages. **Package - 1** consists of works with estimated cost of **Rs 941.21 Cr.** and **Package - 2** consists of works with estimated cost of **Rs 947.79 Cr.** Thus Package - 1 & 2 together consists of works with estimated cost of Rs (941.21 + 947.79) Cr. = Rs 1889.00 Cr. The list of these works is enclosed as **Appendix No. 4 (a & b)** of this Order. The bidding process is being carried by the Bid Process Coordinator M/s REC Transmission Projects Co. Ltd. (RECTPCL) for selecting the successful bidder through a transparent process of competitive bidding in accordance with the Guidelines issued by the Ministry of Power, Government of India under section 63 of the Electricity Act, 2003.
- (ii). Further 10 works of estimated cost of **Rs 678.00 Cr.** mentioned in Annexure -V (List B) of the petition are basically **one project** of Bhind - Guna Transmission under TBCB which has been awarded to POWERGRID Bhind Guna Transmission Ltd. Vide Order dated 16th December' 2020 in Petition No. 39 of 2019. The Commission has also issued Transmission Licence to the Company. The list of these works is enclosed as **Appendix No. 4 (c)** of this Order.

(iii). It is observed that the Package – 1, Package -2 & the Bhind -Guna project under TBCB are costing above the threshold limit of Rs 250 Crore. In view of all aforesaid, **the Commission has considered the petitioner’s prayer in this matter and hereby accords in principle approval to the works** having an estimated value of Rs 2567 Crore selected through load flow and technical study and are to be carried out through **TBCB route**.

23. Based on the foregoing observations, the updated Transmission Capital Investment Plan for FY 2019-20 to FY 2023-24 is summarised as under:

[A] Financial – Transmission CAPEX Plan for 5 year period of FY 2019-20 to FY 2023-24.

S. No.	Particulars	Year wise 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
ii	TOTAL (S/S)	118328	106173	77394	44767	40908	387570
7	Misc. Works	52273	42072	29352	0	509	124206
iii	TOTAL (Misc.)	52273	42072	29352	0	509	124206
	GRAND TOTAL (i + ii + iii)	280789	224350	177164	84381	81368	848052

[B] Physical – Transmission CAPEX Plan for 5 year period of FY 2019-20 to FY 2023-24.

S. No.	Particulars	Year wise Physical Programme (FY)					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	7582
3	132 KV	1778.5	1912	2935	1183	1300	9108.5
	TOTAL	4793.5	7288	4601	1343	1610	19635.5
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

24. The in-principle approval of the Commission to the aforesaid Capital Investment Plan is subject to the following terms and conditions:

Terms and Conditions:

- (i) MPPTCL shall always ensure most efficient use of financial resources while implementing the proposed plan so that the cost burden on the beneficiaries/users of the transmission system is minimal.
- (ii) MPPTCL shall examine the economic, technical system and environmental aspects of all viable alternatives before execution of the proposals and investing in or acquiring new transmission system assets.
- (iii) The schemes which have been tied up either through an agreement with the funding agency or with due sanction of the funding agency and certified as completed & capitalized by the MPPTCL shall be considered for the purpose of allowing depreciation, interest & finance charges and Return on Equity etc., while determining the Annual Revenue Requirement/True-up of ARR for MPPTCL.
- (iv) The works under schemes like Power System Development Fund (PSDF), National Clean Energy Fund (NCEF), etc shown as funded through grant should be approved by the competent authority and the tariff for all such works shall be considered appropriately by the Commission in accordance with the terms and conditions under each scheme.
- (v) The cost incurred by MPPTCL on capital works shall be considered by the Commission for tariff purpose after exercising prudent check in accordance with the provisions under applicable MPERC (Terms and Conditions for determination of Transmission Tariff) Regulations.

- (vi) The cost of items, instruments, spares, installation and commissioning charges, freight, etc. quoted/ charged by the suppliers/ vendors should be properly analyzed and verified by MPPTCL to ensure that least cost is incurred without compromising on quality.
- (vii) MPPTCL shall file the updated physical and financial progress of all works completed during each financial year with respective true-up petition. MPPTCL shall also provide the details of completion cost, details of capitalization including debt and equity on project completion date along with the true up petition.
- (viii) MPPTCL shall ensure timely utilization of material being procured against base cost in the proposal to avoid any extra financial liability. MPPTCL shall also ensure that cost escalations are consistent with market conditions. Any unjustified escalated cost shall not be considered for the purpose of tariff determination.
- (ix) MPPTCL shall ensure timely completion of projects so as to earn benefits in terms of reduction of losses and also in capacity addition, system strengthening, voltage improvement, and for improving the reliability of supply. The beneficiaries should also get timely benefits from these projects. MPPTCL should ensure timely completion of the projects in the best possible manner within the approved financial resources.
- (x) MPPTCL shall comply with the Guide-lines for capital expenditure issued by the Commission and the various Regulations/codes issued from time to time.
- (xi) MPPTCL shall obtain the in-principle approval of the Commission in case of any change in the Capital Investment Plan approved in the subject petition.
25. The Order along with the petition and its annexures be uploaded on MPPTCL's website.

With the above directions, the subject petition stands disposed of.

(Shashi Bhushan Pathak)
Member

(Mukul Dhariwal)
Member

(S. P. S. Parihar)
Chairman